South Dakota Department of Social Services

Medicaid P&T Committee Meeting December 13, 2024



Table of Contents

Agenda	2
Minutes	3
PA update	5
Top 15 Therapeutic Classes	9
Top 50 Drugs	10
Opioid update	12
PA forms & criteria	17
Daybue	.185
Dupixent	.187
Fintepla	.188
Voquezna	.190

DEPARTMENT OF SOCIAL SERVICES



DIVISION OF MEDICAL SERVICES 700 GOVERNORS DRIVE PIERRE, SD 57501-2291 PHONE: 605-773-3495 FAX: 605-773-5246

WEB: dss.sd.gov

SOUTH DAKOTA MEDICAID P&T COMMITTEE MEETING AGENDA

https://prdgov-rxadmin.optum.com/rxadmin/SDM/welcome.html

December 13, 2024 1:00 – 3:00 PM CT 12:00 – 2:00 PM MT

Meeting Link:

https://teams.microsoft.com/l/meetupjoin/19%3ameeting YmZhMTY3ZTAtYmRmNC00ZTgxLTk5NWEtMDBmYmVmNGM0NTRk%40thread.v2/0?co ntext=%7b%22Tid%22%3a%22db05faca-c82a-4b9d-b9c5-0f64b6755421%22%2c%22Oid%22%3a%22b6efd724-b34e-4a86-b34c-e34f07dd4ceb%22%7d

Join with a video conferencing device

<u>425899727@t.plcm.vc</u> Video Conference ID: 116 118 889 06

Join by phone +1 952-222-7450

Phone Conference ID: 678 379 597#

Call to order

Approval of previous meeting minutes

PA update
Review of top 15 therapeutic categories/top 50 drugs
Old business
Opioid update

Review PA forms & criteria

New business

Daybue Dupixent Fintepla Voquezna

Public input accepted after individual topic discussion Next meeting date March 21, 2025 & adjournment

South Dakota Department of Social Services, Division of Medicaid Services Pharmacy & Therapeutics (P&T) Committee Meeting Minutes

Friday, September 20, 2024 1:00 – 3:00 pm CT

Members and DSS Staff

Michelle Baack, MD	-	Matthew Stanley, DO	Х
Bill Ladwig, RPh	Χ	Brandi Tackett, PharmD	Χ
Mark List, MD	Χ	Deidra Van Gilder, PharmD, Chair	Χ
Kelley Oehlke, PharmD	Χ	Clarissa Barnes, MD, DSS Staff	Χ
Lenny Petrik, PharmD	Χ	Mike Jockheck, DSS Staff	Χ
Heather Preuss, MD	Х	Taylor Koerner, DSS Staff	Х

Administrative Business

Van Gilder called the meeting to order at 1:02 pm. Jockheck introduced new committee member Mark List, family physician at Avera in Sioux Falls. The minutes of the June meeting were presented. Ladwig made a motion to approve. Stanley seconded the motion. The motion to approve the minutes was approved unanimously.

Prior Authorization Update (PA) and Statistics

The committee reviewed the PA activity report from April 1, 2024, to June 30, 2024. A total of 3,408 PAs were reviewed of which 126 requests (3.7%) were received via telephone, 102 requests (3%) were received via fax, 1,389 (40.7%) were reviewed electronically, and 1,789 requests (52.5%) were received via ePA. There was a 2.5% decrease in PAs received compared to the previous quarter. There was a 38% decrease in number of appeals.

Analysis of the Top 15 Therapeutic Classes and Drug Spend

The committee reviewed the top 15 therapeutic classes by total cost of claims from April 1, 2024, to June 30, 2024. The top five therapeutic classes based on paid amount were atypical antipsychotics, disease-modifying anti-rheumatic agents, skin and mucous membrane agents, incretin mimetics, and antineoplastic agents. These top 15 therapeutic classes comprise 22.02% of total claims. The committee also reviewed the top 50 drugs based on amount paid and number of claims. The top 50 drugs by amount paid constitute 8.32% of total claims.

Old Business

CGM review

Committee reviewed CGM utilization and compliance data. Van Gilder commented on the data showing some members had increased utilization of test strips with concurrent use of CGMs. Committee discussed implementing tighter glucose test strip limits for patients concurrently receiving CGMs. Mariham Fahim, Medical Outcomes Liaison from Abbott Diabetes Care, provided public comment. Ladwig stressed the importance of CGM data and asked about using a student to analyze A1C/outcomes data. Jockheck is open to working with Ladwig's or Van Gilder's students to review A1C and outcomes. Van Gilder asked to consider adding quantity limit for members using CGM. Ladwig discussed the appropriate number of strips for members using CGM. Van Gilder stated testing once per day is appropriate. Preuss made a motion to limit blood glucose test strips to #50 strips per month when using a CGM. Stanley second the

motion. The motion was approved unanimously. Jockheck asked for public comment on CGM compliance. Kimbra Brooks, Senior Regional Account Manager with Abbott Diabetes Care, provided input.

Veozah review

Veozah utilization and adherence data were presented for review. Committee will continue to monitor Veozah. Jeenal Choksi, Associate Director from Medical Value and Access at Astellas, provided public comment.

Zurvuvae review

Zurzuvae utilization and PA data were presented for review. Daphne Ni, Medical Liaison with Biogen, provided public comment. Stanley requested to monitor Zuzuvae and repoll other state policies. Ladwig asked to continue monitoring. Lisa Gronneberg, Regional Account Director from Biogen, provided information from other states. Anne Carroll-Palmer, National Account Director with Sage, provided public comment. Crystal McAuley from the Policy Center from Maternal Mental Health provided public comment. The committee took no action.

Opioid Update

The committee reviewed 2Q2024 opioid outcomes compared to the previous quarter from the opioid initiatives. There was an increase in opioid utilization and utilizers during 2Q2024 with corresponding increase in total eligibility and utilizers. The committee also reviewed the average MME/day/utilizer graph.

New Business

GLP-1 review

Glucagon-like peptide-1 receptor (GLP-1) agonist multi-part review was presented to the committee. Committee was asked to consider step therapy on preferred drugs before non-preferred drug. Ladwig made a motion for a trial of one preferred drug for three months before allowing non-preferred product. Stanley seconded the motion. Van Gilder inquired if there was any public comment. There were none. The motion was approved unanimously.

Next the Committee reviewed the indication for major adverse cardiovascular event (MACE). Barnes provided insight on starting to expand access to these mediations starting with MACE. Shawn Hansen, Medical Account Director with Novo Nordisk, provided public comment. The committee discussed PA criteria. Tackett expressed concern with the suggested age range. Stanley made a motion to implement criteria A with coverage expanded to 18 years and older with the caveat to revisit the criteria again. Preuss seconded the motion. Motion passed unanimously.

ADHD review

This agenda item has been tabled until the next meeting.

Daybue

This agenda item has been tabled until the next meeting.

Adjournment

The next meeting is scheduled on December 13, 2024. The March meeting is scheduled for March 21, 2025. Preuss motioned to adjourn the meeting and Oehlke seconded the motion. The motion to adjourn the meeting was unanimous and the meeting adjourned at 3:03 pm CT.

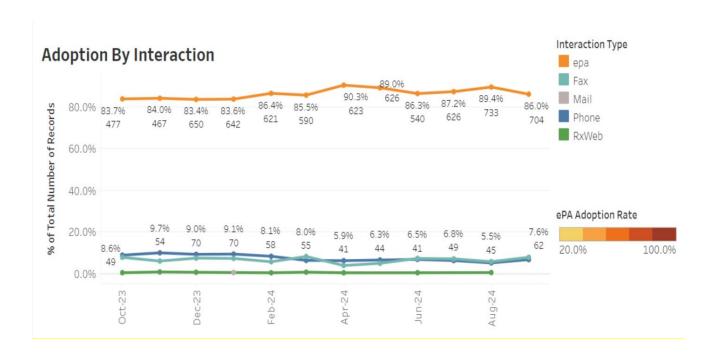
PA Report 7/1/2024 – 9/30/2024

Compliance Summary

Priority	Total PAs	PAs Compliant	PAs Not Compliant	% PAs Compliant	% PAs Not Compliant
Standard	3,322	3,322	0	100.00%	0.00%
Urgent	414	414	0	100.00%	0.00%
Grand Total	3,736	3,736	0		

Priority	Standard	Urgent
ePA	1,675	388
Fax	150	6
Phone	118	18
Real-Time	1,379	0
RxWeb	0	2

Request	Total # of	Phone Requests		Fax Rec	uests	Real-Ti	me PA	ePA	PA
Summary	Requests	#	%	#	%	#	%	#	%
Total	3,736	136	3.6%	156	4.2%	1,379	36.9%	2,063	55.2%



PA Initial Requests Summary

Month	Approved	Denied	Total
Jul-24	931	185	1,116
Aug-24	1,092	188	1,280
Sep-24	1,117	223	1,340
3Q24	3,140	596	3,736
Percent of Total	84.05%	15.95%	

Top Therapeutic Classes for PA

Top Therapeutic Glasses Id. Th								
Drug Class	Approved	Denied	Total	Approval Rate	% of Total Requests	Most Requested Products		
ANTIDIABETICS	628	62	690	91.01%	18.47%	, OZEMPIC		
ANTIPSYCHOTICS/ANTIMANIC	477	35	512	93.16%	13.70%	, VRAYLAR		
MEDICAL DEVICES & SUPPLIES	254	109	363	69.97%	9.72%	, DEXCOM G7 SENSOR		
ANALGESICS - OPIOID	276	44	320	86.25%	8.57%	HYDROCODONE/APAP		
DERMATOLOGICALS	233	51	284	82.04%	7.60%	DUPIXENT, STELARA		
OTHERS -	1,272	295	1567	81.17%	41.94%			
3Q24	3,140	596	3,736	84.05%				

PA Appeals Summary

Month	Approved	Approved %	Denied	Denied %	Total
Jul-24	19	76.00%	6	24.00%	25
Aug-24	17	70.83%	7	29.17%	24
Sep-24	13	56.52%	10	43.48%	23
3Q24	49	68.06%	23	31.94%	72

PA Drug Class Summary

PA Drug Class Sullilliary				
Drug Class	Approved	Denied	Total	Approval Rate
27 - ANTIDIABETICS*	628	62	690	91.01%
59 - ANTIPSYCHOTICS/ANTIMANIC AGENTS*	477	35	512	93.16%
97 - MEDICAL DEVICES AND SUPPLIES*	254	109	363	69.97%
65 - ANALGESICS - OPIOID*	276	44	320	86.25%
90 - DERMATOLOGICALS*	233	51	284	82.04%
58 - ANTIDEPRESSANTS*	211	30	241	87.55%
67 - MIGRAINE PRODUCTS*	153	27	180	85.00%
52 - GASTROINTESTINAL AGENTS - MISC.*	156	18	174	89.66%
61 - ADHD/ANTI-NARCOLEPSY/ANTI-OBESITY/ANOREX	91	53	144	63.19%
49 - ULCER DRUGS/ANTISPASMODICS/ANTICHOLINERG	124	10	134	92.54%
66 - ANALGESICS - ANTI-INFLAMMATORY*	101	19	120	84.17%
54 - URINARY ANTISPASMODICS*	56	17	73	76.71%
62 - PSYCHOTHERAPEUTIC AND NEUROLOGICAL AGENT	58	5	63	92.06%
28 - THYROID AGENTS*	38	5	43	88.37%
12 - ANTIVIRALS*	35	8	43	81.40%
72 - ANTICONVULSANTS*	33	7	40	82.50%
16 - ANTI-INFECTIVE AGENTS - MISC.*	29	5	34	85.29%
94 - DIAGNOSTIC PRODUCTS*	11	23	34	32.35%
41 - ANTIHISTAMINES*	30	3	33	90.91%
44 - ANTIASTHMATIC AND BRONCHODILATOR AGENTS*	20	7	27	74.07%
21 - ANTINEOPLASTICS AND ADJUNCTIVE THERAPIES	24	1	25	96.00%
60 - HYPNOTICS/SEDATIVES/SLEEP DISORDER AGENT	7	17	24	29.17%
30 - ENDOCRINE AND METABOLIC AGENTS - MISC.*	11	4	15	73.33%
50 - ANTIEMETICS*	11	3	14	78.57%
33 - BETA BLOCKERS*	6	4	10	60.00%
36 - ANTIHYPERTENSIVES*	5	5	10	50.00%
34 - CALCIUM CHANNEL BLOCKERS*	4	6	10	40.00%
75 - MUSCULOSKELETAL THERAPY AGENTS*	8	1	9	88.89%
42 - NASAL AGENTS - SYSTEMIC AND TOPICAL*	3	6	9	33.33%
39 - ANTIHYPERLIPIDEMICS*	7	0	7	100.00%
40 - CARDIOVASCULAR AGENTS - MISC.*	7	0	7	100.00%
83 - ANTICOAGULANTS*	5	2	7	71.43%
99 - MISCELLANEOUS THERAPEUTIC CLASSES*	6	0	6	100.00%
74 - NEUROMUSCULAR AGENTS*	5	1	6	83.33%
19 - PASSIVE IMMUNIZING AND TREATMENT AGENTS*	5	0	5	100.00%
02 - CEPHALOSPORINS*	3	1	4	75.00%
86 - OPHTHALMIC AGENTS*	3	1	4	75.00%
79 - MINERALS & ELECTROLYTES*	2	1	3	66.67%
03 - MACROLIDES*	1	1	2	50.00%
45 - RESPIRATORY AGENTS - MISC.*	1	1	2	50.00%
57 - ANTIANXIETY AGENTS*	1	1	2	50.00%
85 - HEMATOLOGICAL AGENTS - MISC.*	1	0	1	100.00%
15 - ANTHELMINTICS*	0	1	1	0.00%
55 - VAGINAL AND RELATED PRODUCTS*	0	1	1	0.00%
3Q24	3,140	596	3,736	
Percent of Total	84.05%	15.95%		

Appeals Detail

Drug Class	Approved	Denied	Total	Approval Rate
LINZESS	3	2	5	60.00%
EMGALITY	4	0	4	100.00%
ONETOUCH VERIO TEST STRIPS	2	2	4	50.00%
LUBIPROSTONE	2	1	3	66.67%
MIRABEGRON ER	2	1	3	66.67%
AJOVY	2	0	2	100.00%
BELSOMRA	1	1	2	50.00%
DEXCOM G7 SENSOR	0	2	2	0.00%
DUPIXENT	2	0	2	100.00%
FREESTYLE LIBRE 3/SENSOR	1	1	2	50.00%
MOUNJARO	0	2	2	0.00%
OTEZLA	1	1	2	50.00%
QELBREE	0	2	2	0.00%
QULIPTA	1	1	2	50.00%
RINVOQ	2	0	2	100.00%
VRAYLAR	2	0	2	100.00%
XIFAXAN	2	0	2	100.00%
ADBRY	0	1	1	0.00%
AIMOVIG	1	0	1	100.00%
ARIPIPRAZOLE	1	0	1	100.00%
AUVELITY	1	0	1	100.00%
AZELASTINE /FLUTICASONE PROPIONATE	1	0	1	100.00%
CEPHALEXIN	1	0	1	100.00%
CLINDAMYCIN/BENZOYL PEROXIDE	0	1	1	0.00%
COSENTYX SENSOREADY PEN	1	0	1	100.00%
DAPSONE	1	0	1	100.00%
ESCITALOPRAM OXALATE	1	0	1	100.00%
FREESTYLE LIBRE 3/READER	1	0	1	100.00%
GEMTESA	0	1	1	0.00%
HUMIRA PEN	0	1	1	0.00%
IVERMECTIN	1	0	1	100.00%
MAVYRET	1	0	1	100.00%
MODAFINIL	0	1	1	0.00%
NORDITROPIN FLEXPRO	1	0	1	100.00%
NURTEC	1	0	1	100.00%
OLANZAPINE ODT	1	0	1	100.00%
ONETOUCH ULTRA	1	0	1	100.00%
OZEMPIC	0	1	1	0.00%
PULMOZYME	0	1	1	0.00%
QUVIVIQ	1	0	1	100.00%
SAPHRIS	1	0	1	100.00%
SOFOSBUVIR/VELPATASVIR	1	0	1	100.00%
TALTZ	1	0	1	100.00%
TAVALISSE	1	0	1	100.00%
TAZAROTENE	1	0	1	100.00%
TRAMADOL	1	0	1	100.00%

Top 15 Therapeutic Classes & Top 50 Drugs

	TOP 15 THERAPEUTIC CLASSES BASED ON NUMBER OF CLAIMS FROM 7/1/2024 – 9/30/2024								
	AHFS Description	Total Rxs	Plan Paid Amount	Paid/Rx	% Total Claims				
1	SELECTIVE-SEROTONIN REUPTAKE INHIBITORS	17,850	\$222,185.67	\$12.45	6.13%				
2	ATYPICAL ANTIPSYCHOTICS	12,103	\$4,241,965.15	\$350.49	4.15%				
3	RESPIRATORY AND CNS STIMULANTS	9,334	\$1,009,984.50	\$108.20	3.20%				
4	PROTON-PUMP INHIBITORS	9,205	\$223,020.19	\$24.23	3.16%				
5	SELECTIVE BETA-2-ADRENERGIC AGONISTS	9,092	\$487,537.78	\$53.62	3.12%				
6	SECOND GENERATION ANTIHISTAMINES	8,555	\$95,687.89	\$11.19	2.94%				
7	AMPHETAMINES	8,375	\$1,004,217.86	\$119.91	2.88%				
8	GABA-MEDIATED ANTICONVULSANTS	7,899	\$212,357.99	\$26.88	2.71%				
9	ADRENALS	7,659	\$949,245.69	\$123.94	2.63%				
10	OPIOID AGONISTS	7,457	\$224,336.47	\$30.08	2.56%				
11	ANTICONVULSANTS, MISCELLANEOUS	7,348	\$853,424.97	\$116.14	2.52%				
12	SEROTONIN MODULATORS	6,898	\$185,695.37	\$26.92	2.37%				
13	AMINOPENICILLIN ANTIBIOTICS	6,421	\$94,632.87	\$14.74	2.20%				
14	HMG-COA REDUCTASE INHIBITORS	6,351	\$77,391.46	\$12.19	2.18%				
15	SEL.SEROTONIN, NOREPI REUPTAKE INHIBITOR	5,867	\$115,116.12	\$19.62	2.01%				
Tot	al	130,414	\$9,996,799.98	\$76.65	44.77%				

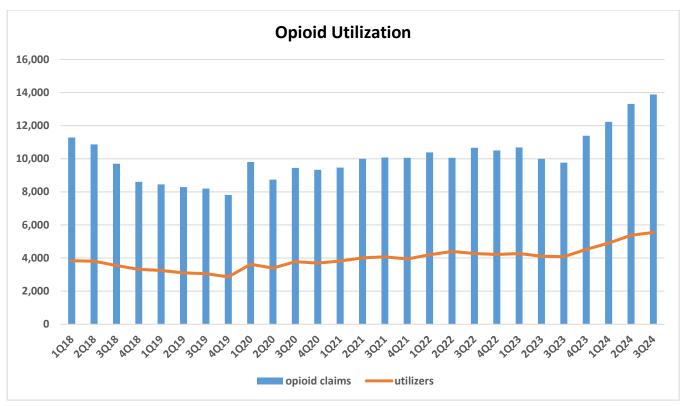
	TOP 15 THERAPEUTIC CLASSES BASED ON AMOUNT PAID FROM 7/1/2024 – 9/30/2024									
	AHFS Description	Total Rxs	Plan Paid Amount	Paid/Rx	% Total Claims					
1	ATYPICAL ANTIPSYCHOTICS	12,103	\$4,241,965.15	\$350.49	4.15%					
2	INTERLEUKIN-MEDIATED AGENTS, MISC	220	\$2,838,258.97	\$12,901.18	0.08%					
3	INCRETIN MIMETICS	2,970	\$2,824,398.99	\$950.98	1.02%					
4	ANTINEOPLASTIC AGENTS	471	\$2,031,481.27	\$4,313.12	0.16%					
5	SKIN AND MUCOUS MEMBRANE AGENTS, MISC.	474	\$1,811,240.65	\$3,821.18	0.16%					
6	CYSTIC FIBROSIS (CFTR) CORRECTORS	75	\$1,791,933.74	\$23,892.45	0.03%					
7	TUMOR NECROSIS FACTOR INHIBITORS, MISC	207	\$1,699,025.72	\$8,207.85	0.07%					
8	HEMOSTATICS	60	\$1,362,817.11	\$22,713.62	0.02%					
9	HIV INTEGRASE INHIBITOR ANTIRETROVIRALS	291	\$1,051,331.77	\$3,612.82	0.10%					
10	RESPIRATORY AND CNS STIMULANTS	9,334	\$1,009,984.50	\$108.20	3.20%					
11	AMPHETAMINES	8,375	\$1,004,217.86	\$119.91	2.88%					
12	IMMUNOMODULATORY AGENTS	236	\$961,841.45	\$4,075.60	0.08%					
13	ADRENALS	7,659	\$949,245.69	\$123.94	2.63%					
14	SODIUM-GLUC COTRANSPORT 2 (SGLT2) INHIB	1,709	\$933,301.67	\$546.11	0.59%					
15	CENTRAL NERVOUS SYSTEM AGENTS, MISC.	3,101	\$929,878.13	\$299.86	1.06%					
Tot	al	47,285	\$25,440,922.67	\$538.03	16.23%					

Total Rx Claims from 7/1/2024 – 9/30/2024	291,303
---	---------

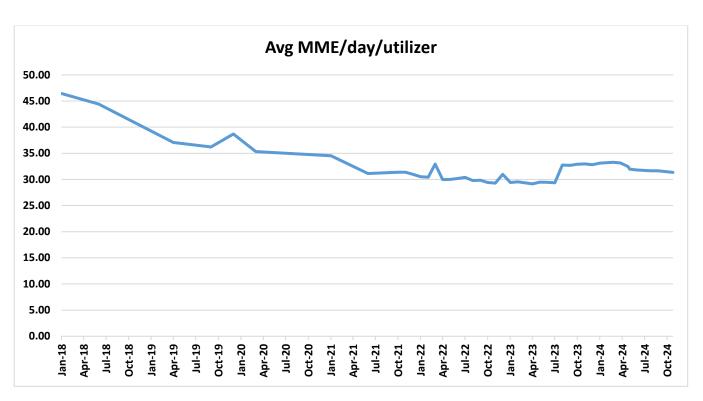
	TOP 50 DRUGS BASED ON NUMBER OF CLAIMS FROM 7/1/2024 – 9/30/2024							
	Therapeutic Class Name	Drug Label Name	Total Rxs	Plan Paid Amount	Paid/Rx	% Total Claims		
1	Antidepressants	FLUOXETINE	6,020	\$70,355.53	\$11.69	2.07%		
2	Inhaled Bronchodilator	ALBUTEROL SULFATE HFA	5,740	\$199,731.49	\$34.80	1.97%		
3	Antidepressants	SERTRALINE	5,582	\$67,965.04	\$12.18	1.92%		
4	Anticonvulsants - 2nd Generation	GABAPENTIN	5,478	\$87,513.76	\$15.98	1.88%		
5	Proton Pump Inhibitors	OMEPRAZOLE	5,367	\$62,213.24	\$11.59	1.84%		
6	ADHD & Narcolepsy Medications	METHYLPHENIDATE	5,030	\$273,709.13	\$54.42	1.73%		
7	Antidepressants	TRAZODONE	4,881	\$53,795.71	\$11.02	1.68%		
8	Thyroid Hormones	LEVOTHYROXINE	4,507	\$50,821.12	\$11.28	1.55%		
9	Antihistamines	CETIRIZINE	4,491	\$47,416.91	\$10.56	1.54%		
10	Penicillins	AMOXICILLIN	4,452	\$58,551.27	\$13.15	1.53%		
11	Antidepressants	ESCITALOPRAM	4,414	\$54,846.66	\$12.43	1.52%		
12	ADHD & Narcolepsy Medications	AMPHETAMINE/DEXTROAMP	4,274	\$122,196.83	\$28.59	1.47%		
13	Antidepressants	BUPROPION	3,921	\$72,664.70	\$18.53	1.35%		
14	Biguanides & Combos	METFORMIN	3,790	\$43,349.15	\$11.44	1.30%		
15	Statins & Combos	ATORVASTATIN	3,677	\$43,732.22	\$11.89	1.26%		
16	ACE Inhibitors & Combos	LISINOPRIL	3,599	\$35,272.08	\$9.80	1.24%		
17	Leukotriene Modulators	MONTELUKAST	3,218	\$40,675.62	\$12.64	1.10%		
18	Antidepressants	DULOXETINE	3,181	\$48,423.21	\$15.22	1.09%		
19↑	ADHD & Narcolepsy Medications	GUANFACINE	2,965	\$47,560.87	\$16.04	1.02%		
20	Antiadrenergic Antihypertensives	CLONIDINE	2,881	\$26,674.42	\$9.26	0.99%		
21	Opioid Agonists & Combos	HYDROCODONE BIT/AC	2,854	\$50,395.20	\$17.66	0.98%		
22	Antianxiety Agents	HYDROXYZINE	2,806	\$35,451.28	\$12.63	0.96%		
23	Atypical Antipsychotics	ARIPIPRAZOLE	2,592	\$37,021.85	\$14.28	0.89%		
24	Antianxiety Agents	BUSPIRONE	2,440	\$30,469.99	\$12.49	0.84%		
25	Angiotensin II Receptor Antagonists & Combo	LOSARTAN	2,429	\$27,798.62	\$11.44	0.83%		
26↑	ADHD & Narcolepsy Medications	LISDEXAMFETAMINE	2,428	\$346,625.70	\$142.76	0.83%		
27	Cephalosporins	CEPHALEXIN	2,379	\$35,864.18	\$15.08	0.82%		
28	Atypical Antipsychotics	QUETIAPINE	2,315	\$30,987.16	\$13.39	0.79%		
29	Calcium Channel Blockers	AMLODIPINE	2,314	\$22,642.64	\$9.79	0.79%		
30	Anticonvulsants - 2nd Generation	LAMOTRIGINE	2,272	\$30,627.32	\$13.48	0.78%		
31	Glucocorticosteroids	PREDNISONE	2,211	\$22,212.56	\$10.05	0.76%		
32	Antiemetics	ONDANSETRON ODT	2,174	\$30,590.83	\$14.07	0.75%		
33	Muscle Relaxants & Combos	CYCLOBENZAPRINE	2,082	\$21,724.69	\$10.43	0.71%		
34	Proton Pump Inhibitors	PANTOPRAZOLE	2,073	\$25,982.28	\$12.53	0.71%		
35	Penicillins	AMOXICILLIN/CLAVULANATE	1,968	\$36,067.41	\$18.33	0.68%		
36	Atypical Antipsychotics	RISPERIDONE	1,958	\$24,017.16	\$12.27	0.67%		
37	Beta Blockers & Combos	METOPROLOL SUCCINATE ER	1,944	\$24,659.33	\$12.68	0.67%		
38	Anticonvulsants - 2nd Generation	CLONAZEPAM	1,941	\$22,739.01	\$11.72	0.67%		
39	Antidepressants	VENLAFAXINE	1,928	\$29,309.07	\$15.20	0.66%		
40	Statins & Combos	ROSUVASTATIN	1,923	\$23,922.24	\$12.44	0.66%		
41	Anticonvulsants - 2nd Generation	TOPIRAMATE	1,891	\$23,763.04	\$12.57	0.65%		
42	Nonsteroidal Anti-Inflammatory Agents	MELOXICAM	1,789	\$17,163.47	\$9.59	0.61%		
43	Corticosteroids - Topical	TRIAMCINOLONE ACETONIDE	1,738	\$25,311.05	\$14.56	0.60%		
44	Nasal Steroids	FLUTICASONE PROPIONATE	1,719	\$29,263.69	\$17.02	0.59%		
45	Antihistamines	ALLERGY RELIEF	1,693	\$18,332.40	\$10.83	0.58%		
46	Antidepressants	MIRTAZAPINE	1,684	\$22,003.39	\$13.07	0.58%		
47	Anticonvulsants - 2nd Generation	LEVETIRACETAM	1,668	\$33,112.47	\$19.85	0.57%		
48↑	Diuretics & Combos	FUROSEMIDE	1,587	\$14,233.86	\$8.97	0.54%		
49	Opioid Agonists & Combos	TRAMADOL	1,563	\$19,073.39	\$12.20	0.54%		
50	Macrolides	AZITHROMYCIN	1,526	\$22,360.42	\$14.65	0.52%		
	Total Top 50 Drugs		149,357	\$2,641,194.66	\$17.68	51.27%		
<u> </u>		<u> </u>	1 -,	. , , ,		l		

TOP 50 DRUGS BASED ON AMOUNT PAID FROM 7/1/2024 – 9/30/2024							
	Therapeutic Class Name	Drug Label Name	Total Rxs	Plan Paid Amount	Paid/Rx	% Total Claims	
1	Chronic Inflammatory Disease	DUPIXENT	495	\$1,879,728.10	\$3,797.43	0.17%	
2	Chronic Inflammatory Disease	HUMIRA	203	\$1,879,138.68	\$9,256.84	0.07%	
3	Cystic Fibrosis	TRIKAFTA	75	\$1,791,933.74	\$23,892.45	0.03%	
4	Chronic Inflammatory Disease	STELARA	60	\$1,462,309.21	\$24,371.82	0.02%	
5	GLP-1 Receptor Agonists	OZEMPIC	1,463	\$1,351,545.66	\$923.82	0.50%	
6	Atypical Antipsychotics	INVEGA SUSTENNA -TRINZA-HAFYERA	402	\$1,329,596.52	\$3,307.45	0.14%	
7	GLP-1 Receptor Agonists	MOUNJARO	1,144	\$1,149,595.01	\$1,004.89	0.39%	
8	Atypical Antipsychotics	VRAYLAR	733	\$952,614.68	\$1,299.61	0.25%	
9	Chronic Inflammatory Disease	COSENTYX SENSOREADY-UNOREADY	95	\$899,418.13	\$9,467.56	0.03%	
10	Rett Syndrome Agent	DAYBUE	14	\$774,399.70	\$55,314.26	0.00%	
11	Chronic Inflammatory Disease	SKYRIZI PEN	38	\$771,853.97	\$20,311.95	0.01%	
12	HIV-Multiclass Combo	BIKTARVY	195	\$740,702.91	\$3,798.48	0.07%	
13	SGLT-2 Inhibitors & Combos	JARDIANCE	1,075	\$620,927.55	\$577.61	0.37%	
14	Chronic Inflammatory Disease	TALTZ	70	\$598,488.10	\$8,549.83	0.02%	
15	Atypical Antipsychotics	ARISTADA	185	\$529,086.90	\$2,859.93	0.06%	
16	ADHD & Narcolepsy Medications	VYVANSE	1,400	\$496,447.15	\$354.61	0.48%	
17	Antihemophilic Products	HEMLIBRA	20	\$473,753.22	\$23,687.66	0.01%	
18	Chronic Inflammatory Disease	ENBREL SURECLICK -MINI	64	\$457,938.84	\$7,155.29	0.02%	
19	Anticonvulsants - 2nd Generation	EPIDIOLEX	152	\$451,096.59	\$2,967.74	0.05%	
20	Diabetes Monitoring & Testing	DEXCOM	1,296	\$444,473.08	\$342.96	0.44%	
21	Oral Anticoagulants	ELIQUIS/STARTER PACK	712	\$385,876.67	\$541.96	0.24%	
22	Atypical Antipsychotics	ABILIFY MAINTENA/ASIMTUFII	124	\$347,403.30	\$2,801.64	0.04%	
23	ADHD & Narcolepsy Medications	LISDEXAMFETAMINE	2,428	\$346,625.70	\$142.76	0.83%	
24	Atypical Antipsychotics	REXULTI	242	\$327,681.85	\$1,354.06	0.08%	
25	Atypical Antipsychotics	CAPLYTA	214	\$324,254.33	\$1,515.21	0.07%	
26	Inhaled Asthma/COPD Combo	TRELEGY ELLIPTA	475	\$301,221.33	\$634.15	0.16%	
27	Oncology	SPRYCEL	21	\$297,164.37	\$14,150.68	0.01%	
28↑	PIK3CA-Related Overgrowth	VIJOICE	9	\$292,594.95	\$32,510.55	0.00%	
29	Spinal Muscular Atrophy (SMA) Agt	EVRYSDI	11	\$284,872.61	\$25,897.51	0.00%	
30	Hepatitis C	SOFOSBUVIR/VELPATASVIR	35	\$280,369.25	\$8,010.55	0.01%	
31	ADHD & Narcolepsy Medications	METHYLPHENIDATE	5,030	\$273,709.13	\$54.42	1.73%	
32	Movement Disorder Drug Therapy	INGREZZA	40	\$268,133.85	\$6,703.35	0.01%	
33	Metabolic Modifiers	PALYNZIQ	5	\$264,652.75	\$52,930.55	0.00%	
34	Growth Hormones	NORDITROPIN FLEXPRO	73	\$260,951.52	\$3,574.68	0.03%	
35	Chronic Inflammatory Disease	RINVOQ	40	\$255,368.53	\$6,384.21	0.01%	
36	Irritable Bowel Syndrome (IBS) Agt	LINZESS	471	\$248,380.64	\$527.35	0.16%	
37	Oncology	KISQALI	18	\$244,247.83	\$13,569.32	0.01%	
38	Oncology	KOSELUGO	14	\$242,248.02	\$17,303.43	0.00%	
39	Antihemophilic Products	NOVOSEVEN RT	3	\$241,231.65	\$80,410.55	0.00%	
40↓	Anti-Infective Agents - Misc.	XIFAXAN	81	\$238,177.61	\$2,940.46	0.03%	
41	Glucagon-Like Peptide-2 (GLP-2)	GATTEX	5	\$227,687.15	\$45,537.43	0.00%	
42	Chronic Inflammatory Disease	TREMFYA	16	\$214,710.28	\$13,419.39	0.01%	
43	Hepatitis C	MAVYRET	16	\$205,223.79	\$12,826.49	0.01%	
44	Oncology	REVLIMID	15	\$204,473.31	\$13,631.55	0.01%	
45	Inhaled Bronchodilator	ALBUTEROL HFA	5,740	\$199,731.49	\$34.80	1.97%	
46↑	Migraine Products	NURTEC	181	\$199,153.42	\$1,100.30	0.06%	
47	Pulmonary Arterial Hypertension	OPSUMIT	15	\$188,477.90	\$12,565.19	0.01%	
48↑	Chronic Inflammatory Disease	OTEZLA	42	\$185,284.94	\$4,411.55	0.01%	
49	GLP-1 Receptor Agonists	TRULICITY	187	\$180,231.46	\$963.80	0.06%	
50	Psychotherapeutic And Neurological	LYBALVI	129	\$178,707.66	\$1,385.33	0.04%	
	Total Top 50 Drugs		25,560	\$26,704,809.91	\$1,044.79	8.77%	

Opioid Summary



- 1Q18 to 4Q19 excludes IHS
- 1Q20 to current includes IHS
- March 13, 2020 Pandemic Closure



Opioid Initiatives:

- 1. June 1, 2018 early refill threshold for controlled substance changed from 75% to 85%
- 2. July 1, 2028 PA for more than one LAO and one SAO
- 3. August 1, 2018 opioid Naïve PA (initial 7-day supply and 60 MED limit)
- 4. October 1, 2018 to October 1, 2019 decrease from 300 MED to 90 MED (cancer diagnosis excluded)

Other Initiatives:

- Buprenorphine PA (Bunavail/Suboxone/Zubsolv/Subutex) and ST (Belbuca/Butrans) removed 10/14/2019
- Lidoderm PA removed 8/1/2020

Total Eligibles and Utilizers

Total Eligibles al	14 011112013	Avg utilizing	% utilizing
Quarter	Avg eligible members	members of all drugs	members of all drugs
1Q2020	123,573	27,090	21.9%
2Q2020	126,777	20,746	16.4%
3Q2020	132,373	23,417	17.7%
4Q2020	136,262	23,489	17.2%
1Q2021	139,748	24,407	17.5%
2Q2021	142,872	26,206	18.3%
3Q2021	146,023	27,933	19.1%
4Q2021	149,034	29,317	19.7%
1Q2022	151,735	29,092	19.2%
2Q2022	154,608	28,370	18.3%
3Q2022	157,627	29,167	18.5%
4Q2022	160,060	32,124	20.1%
1Q2023	162,684	31,612	19.4%
2Q2023	142,001	27,296	19.2%
3Q2023	131,292	26,218	19.9%
4Q2023	134,270	29,320	21.8%
1Q2024	141,162	32,891	23.3%
2Q2024	149,613	32,686	21.8%
3Q2024	159,160	35,263	22.2%

Opioid Utilization Snapshot

3Q2024 Jun 24 to Sep 24

8

Opioid Claims 13,315

3.1% prescription claims filled for an opioid

1.2% higher than Medicaid FFS benchmark

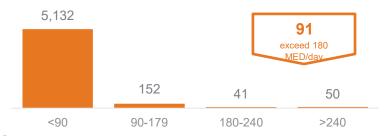


Utilizers **5,375 30.2%** are high utilizers

2.8% higher than high utilizers Medicaid FFS

Utilizers by Cumulative MED⁴

Current CDC Guidelines⁵ urge doses of 90 MME⁶ or less in chronic opioid utilizers⁵





450 Shoppers: Poly Prescriber opioid utilizing members with 3+ prescribers



Opioid Claims 13,885

3.1% prescription claims filled for an opioid

1.2% higher than Medicaid FFS benchmark

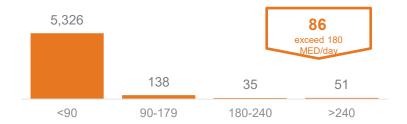


Utilizers **5,550 31.0%** are high utilizers

4.4% higher than high utilizers Medicaid FFS

Utilizers by Cumulative MED⁴

Current CDC Guidelines⁵ urge doses of 90 MME⁶ or less in chronic opioid utilizers⁵





Shoppers: Poly Pharmacy

68 opioid utilizing members with 3+ pharmacies



516 Shoppers: Poly Prescriber opioid utilizing members with 3+ prescribers



Opioid Utilization

Opportunities date range: Jun - Sep 2024

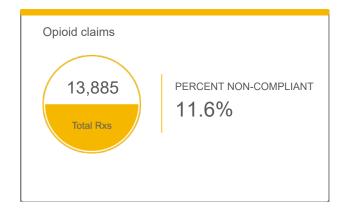
Benchmark: MEDICAID FEE FOR SERVICE

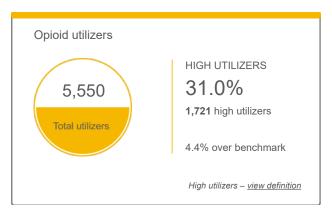
Utilizers: 5,550

3.1% of all Rx claims are filled for an Opioid

Opioid dependence can start in just a few days, and the risk of chronic opioid use increases with each additional day of opioid supplied, starting with the third day. Our Opioid Risk Management program, which includes point of sale, utilization management and retrospective drug utilization edits, are tightly aligned with CDC opioid prescribing guidelines which can help reduce exposure to excessive doses and prevent more members from transitioning from acute to chronic use.

- · Opioid prescriptions account for 3.1% of all prescriptions this period, which is 1.2% higher than the benchmark
- · 1,721 high opioid utilizers were identified this period, which is 4.4% higher than the benchmark





Claim breakdown



73.0% of all opioid Rxs were filled for short acting opioids. **2,904** Rxs were for medication assisted therapy (MAT) and **126** were for rescue therapy. CDC guidelines advise prescribers to manage pain with the lowest effective dose and to avoid or carefully justify doses for chronic users >90mg MME/day.

MAT – <u>view definition</u> Overdose rescue therapy – <u>view definition</u> MME – <u>view definition</u>

Utilizers by cumulative MED

86 utilizers exceed 180 MED/day

MED Scores	<90	90-179	180-240	>240
Utilizers	5,326	138	35	51

MED - view definition

TERMS OF USE

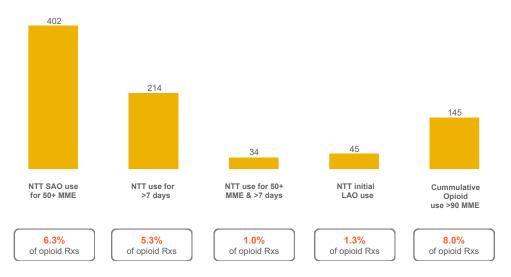
Opioid Opportunity Assessment

Opportunities date range: Jun - Sep 2024 Benchmark: MEDICAID FEE FOR SERVICE

Percent non-compliant: 11.6%

Utilizers non-compliant to opioid Rx CDC guidelines

(new to therapy and chronic use)



NTT - view definition | SAO - view definition | LAO - view definition | MME - view definition



DID YOU KNOW?

68 opioid utilizing members use 3 or more pharmacies and 516 opioid utilizing members use 3 or more prescribers.

Identification, management and prevention of fraudulent or potential abuse of opioid medications are monitored and addressed by OptumRx through various means in pharmacy network audit capabilities and high touch clinical programs that include care coordination with opioid prescribers.

Opioid utilizers with potentially contraindicated medication use

SKELETAL MUSCLE **RELAXANTS**

1,152

BENZODIAZEPINES

750

ANTICONVULSANTS

1,049

MEDICATION ASSISTED

THERAPY

569

PRENATAL

148

Anticonvulsants -view definition

Language Assistance / Non-Discrimination Notice

Asistencia de Idiomas / Aviso de no Discriminación

語言協助 / 不歧視通知

Table of Contents

1.	Administrative PA	
	a. DAW	
	b. General PA	
	c. Max Units Override	
	d. Medications > \$5000	23
2.	Acne Agents Topical	
3.	Rosacea Agents Topical	25
4.	Allergen Extract: Grastek, Oralair, Ragwitek	26
5.	Altabax	27
6.	Antidepressants	28
7.	Auvelity	29
8.	Brisdelle	30
9.	Antipsychotics	31
10.	Lybalvi	32
11.	Antiemetics: Akynzeo, Bonjesta, Diclegis, Sancuso, Varubi	33-37
12.	Antihistamines: Non-Sedating Antihistamines	38
13.	ARBS: Edarbi, Edarbyclor	39
14.	Amrix, Fexmid	40
15.	Brexafemme	41
16.	Cambia, Lofena, Zipsor, Zorvolex	42
17.	Chronic Constipation: Amitiza, Ibsrela, Linzess, Motegrity, Movantik, Symproic, Trulance	43
18.	CGRP Inhibitors: Aimovig, Ajovy, Emgality	44
19.	Continuous Glucose Monitors (CGM)	45
20.	Desoxyn	46
21.	Dificid	47
22.	Durlaza	48
23.	Emflaza	49
24.	Epidiolex	50
25.	Onfi/Sympazan	51
26.	Eucrisa	52
27.	Evrysdi	53-55
28.	Genitourinary Smooth Muscle Relaxant	56
29.	GLP-1 Agonists	57
30.	Gralise, Horizant	58
31.	Growth Hormone: Adult-Pediatric, Serostim, Zorbtive	
32.	Head Lice Medication	
	Hemangeol	
	Hepatitis C	
	Idiopathic Pulmonary Fibrosis: Esbriet, Ofev	
	TIM, JAK, Monoclonal Antibody, etc	
	a. Actemra/ Tyenne	69-70
	b. Adbry	
	c. Arcalyst	
	d. Bimzelx	
	e. Cibingo	
	f. Cimzia	
	g. Cosentyx	
	h. Dupixent	
	i. Ebglyss	
	j. Enbrel	
	k. Enspryng	
	v. Fii3hi Aii9	02

	I.	Entyvio	83
	m.	Fasrena	84
	n.	Humira	85-86
	0.	Abrilada/Amjevita/Cyltezo/Hadlima/Hulio/Hymiroz/Idacio/Simlandi/Yuflyma/Yusimry	87-106
	p.	llaris	
	q.	llumya	
	r.	Kevzara	
	s.	Kineret	
	t.	Nemluvio	
	u.	Nucala	
	u. V.	Olumiant	
	w. W.	Omvoh	
		Orencia	
	х.	Otezla	
	у.		
	Z.	Rinvoq	
		Siliq	
		Simponi	
		Skyrizi	
		Sotyktu	
		Spevigo	
		Sterlara	
		Taltz	
		Tezspire	
	ii.	Tremfya	
	jj.	Velsipity	
		Xeljanz/XR	
	II.	Xolair	
~-		. Zymfentra	
	-	d	
		nazole Agents Topical: Extina, Xolegel/Duo	
		omycosis Agents Topical: Jublia, Kerydin, Onmel	
		du Circuit	
		olv-Gimoti	
	•	e Sclerosis	
	•		
		teroids	
		al	
	•	id	
		a	
	•	Provigil	
		Wakix	
	•		
	-		
		lmic Antihistamines: Bepreve, Lastacaft, Pataday, Patanol, Pazeo	
		Name Narcotics	
		odone-APAP	
		MED Limit	
	•	Naïve	
		LAO/SAO	
61.	Opzelu	ra	156

62.	Oracea, Solodyn, Seysara	157
	Otrexup	
64.	PCSK9 Inhibitors: Praluent, Repatha	159
65.	Proton Pump Inhibitors	160
66.	Duexis, Vimovo	161
67.	Qelbree	. 162
68.	Qualaquin	. 163
69.	Rayos	. 164
70.	Relistor	. 165
	Rezdiffra	
72.	Rukobia	167
73.	Seglentis	. 168
74.	Soma 250	. 169
75.	Tirosint (levothyroxine capsule)	. 170
76.	Tramadol: Ultram ER, tramadol ER/SR, Conzip, Synapryn	. 171
77.	Triptans: ODT-NS-Tablet	172
78.	Onzetra/Xsail	. 173
79.	Nurtec ODT, Reyvow, Ubrelvy	174
80.	Uloric	. 175
81.	Viberzi	. 176
82.	Vtama	. 177
83.	Xenazine	178
84.	Xepi	179
85.	Xifaxan	180
86.	Zolpidem (Ambien CR, Edluar, Intermezzo SL, Zolpimist)	181
	Belsomra, Dayvigo, Quivig	
	Zoryve	
	7.117.1117.20	10/

^{*}Red font denotes new PA/Fax Form since last review



Dispense As Written (DAW) Prior Authorization Request Form

Member Information (required)			Pr	Provider Information (required)				
Member Name:			Provider Nam	Provider Name:				
Insurance ID#:			NPI#:		Specialty:			
Date of Birth:		Office Phone:						
Street Address: Office Fax:								
City:	State:	Zip:	Office Street	Address:				
Phone:			City:	State:	Zip:			
		Medication	Information (r	equired)				
Medication Name	ə:		Strength:	. ,	Dosage Form:			
☐ Check if reque	esting brand		Directions for	Directions for Use:				
☐ Check if reque	est is for continuatio	n of therapy						
		Clinical In	formation (requ	uired)				
Clinical infor	mation:							
Has the patier	nt had a trial and	failure with the generi	ic product? 🗖 Ye	s 🗆 No				
•	nt had a trial with pleted)? ☐ Yes 〔		ind experienced a	n adverse reacti	on (a MedWatch form			
Does the patie	ent have a contra	indication to the gene	ric product? 🗖 Y	es □ No				
Is the generic	product unavaila	ble? 🗆 Yes 🗅 No						
Are there any other to this review?	er comments, diagnos	es, symptoms, medications	s tried or failed, and/or	any other information	n the physician feels is important			
Please note:		lenied unless all required info						

For urgent or expedited requests please call 1-855-401-4262.



Please note: All information below is required to process this request.

Fax to 1-844-403-1029

Mon-Sat: 7am to 7pm Central

Prior Authorization Request Form

Memb		OR FUTURE USE. FORMS ation (required)	S ARE UPDATED FREQUEN		E BARCODED mation (required)	
Member Name:		attion (required)	Provider Name:	vider iiiioi	rriation (required)	
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Add	dress:		
Phone:			City:	State:	Zip:	
		Modication	·		·	
Medication Name:		Medication	Information (requestrength:	uired)	Dosage Form:	
☐ Check if requesting	brand		Directions for Us		Dosage Form.	
☐ Check if request is		of therapy	Directions for es			
		Clinical Ir	nformation (require	ed)		
What is the patient	's diagnosis f	or the medication be	eing requested?			
			ICD-10 Code(s)·		
What medication(s	s) has the patie	ent tried and failed?	102 10 0000(o)		
Are there any supp	oorting labs or	test results? (Pleas	e specify)			
Titration or loadingPatient is on a doubedtime)Requested stren	requested per for exceeding ng dose purpos ose-alternating gth/dose is not	g the plan limitations ses schedule (e.g., one to commercially availab	ablet in the morning and		night, one to two tablets at	
Are there any other cor to this review?	mments, diagnose	es, symptoms, medication	ns tried or failed, and/or an	y other informatio	n the physician feels is important	
Please note: This		opied upless all required inf				

Please note:

This request may be defined unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Fax to 1-844-403-1029

Mon-Sat: 7am to 7pm Central

Quantity Limit Request Form
DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address	:		
Phone:	I		City:	State:		Zip:
	Λ	Medication Info	rmation (required)			
Medication Name:			Strength:		Dosage Fo	orm:
☐ Check if requesting			Directions for Use:			
☐ Check if request is	for continuation of the					
		Clinical Inforn				
What is the patien	t's diagnosis for the	medication being re	equested?			
			ICD-10 Code(s):			
	requested per DAY?					
What is the reasor Titration or loadi	n for exceeding the p	olan limitations?				
Patient is on a d		lule (e.g., one tablet in	the morning and two	tablets at i	night, one t	o two tablets at
bedtime)	ngth/dose is not comm	percially available				
		the treatment of a larg	ger surface area [Top	ical applic	ations onl	у]
☐ Other:						
Are there any other corto this review?	mments, diagnoses, sym	ptoms, medications tried	or failed, and/or any othe	er information	the physicia	an feels is important
Please note: This	request may be denied un	nless all required information	n is received.			

For urgent or expedited requests please call 1-855-401-4262.

Fax to 1-844-403-1029

Mon-Sat: 7am to 7pm Central

High Dollar/Claim Dollar Amount Override Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Pro	Provider Information (required)			
Member Name	e:		Provider Name	Provider Name:			
Insurance ID#	:		NPI#:		Specialty:		
Date of Birth:		Office Phone:					
Street Address	s:		Office Fax:				
City:	State:	Zip:	Office Street A	Address:			
Phone:			City:	State:	Zip:		
		Medication	Information (re	quired)			
Medication Na	ame:		Strength:	· · · · · ·	Dosage Form:		
☐ Check if red	questing brand		Directions for	Use:			
☐ Check if red	quest is for continuation o	of therapy					
		Clinical In	formation (requi	irod\			
What is the	e patient's diagnosis						
			ICD-10 Code	(s):			
Please indic	sules per day, 4 capsu	s and the quantity re	equested per pres	cription/fill/ or m	onth and the duration d is not sufficient		
Are there any of to this review?		, symptoms, medications	s tried or failed, and/or a	any other information	n the physician feels is important		
Please note:	For urgent or expedited	ied unless all required inforcequests please call 1-855-	-401-4262.	9.			

23



Topical Acne Agents Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)				Provider Information (required)			
Member Name:			Provider Na	me:			
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phon	e:			
Street Address:			Office Fax:				
City:	State:	Zip:	Office Stree	t Address:			
Phone:			City:	State:	Zip:		
		Medication	Information	(required)			
Medication Name:			Strength:	(Dosage Form:		
☐ Check if requesting	ng brand		Directions fo	or Use:			
☐ Check if request is	s for continuation	on of therapy					
		Clinical In	formation (required)			
Select the diagno	sis below:						
☐ Acne vulgaris							
Plaque psorias	is [Tazorac (ta	zarotene) only]					
Other diagnosis	s:		IC	D-10 Code(s):			
Medication histor	ry:						
		lure of a generic topical a um/sulfur, sulfacetamide			noin, clindamycin phosphate, ′es □ No		
Are there any other conthis review?	mments, diagnos	es, symptoms, medications t	ried or failed, and/o	or any other information	on the physician feels is important to		
Please note: This	request may be d	enied unless all required inform	nation is received.				

For urgent or expedited requests please call 1-855-401-4262.



Topical Rosacea Agents Prior Authorization Request Form

Member Information (required)			F	Provider Information (required)			
Member Name:			Provider Nam	ne:			
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street	Address:			
Phone:	I	I	City:	State:	Zip:		
		Medication	Information	(required)			
Medication Name:			Strength:	,	Dosage Form:		
☐ Check if reques	•		Directions for	Use:			
☐ Check if reques	t is for continuatio	n of therapy					
		Clinical In	nformation (re	equired)			
Select the diagr	nosis below:						
☐ Acne rosacea	-						
Other diagnos	sis:		ICD-	-10 Code(s):			
Medication hist	-						
sulfacetamide so	odium/sulfur, sulfa	neric topical acne agent cetamide sodium, tretino					
120 days? 🛚 Ye	es 🗆 No						
Are there any other this review?	comments, diagnos	ses, symptoms, medications	tried or failed, and/or	any other informatio	n the physician feels is important to		
Please note:	This request may be o	denied unless all required infor	mation is received.				

For urgent or expedited requests please call 1-855-401-4262.



Grastek®, Oralair®, Ragwitek® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Men		ation (required)	d) Provider Information (re			
Member Name:			Provider Name:	Provider Name:		
Insurance ID#:			NPI#:	NPI#: Specialty:		
Date of Birth:			Office Phone:	Office Phone:		
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Ac	ddress:		
Phone:			City:	State:	Zip:	
		Medication	Information (re	equired)		
Medication Name:		moaroation	Strength:	squireu)	Dosage Form:	
☐ Check if reques	ting brand		Directions for U	lse:		
☐ Check if reques	*	n of therapy				
		Clinical In	formation (requ	ired)		
What is the nati	ent's diagnosis	for the medication bei		<u> </u>		
	on o alagnoolo	Tor the modication so	mg roquootour (ma	indutery)		
ICD-10 Code(s)):					
Clinical informa	ition:					
•	iagnosis confirme	ed by a positive skin test	t or in vitro testing for	r pollen-specific	IgE antibodies? ☐ Yes ☐	
No Has the nationt h	and a history of fa	uilure or intolerance to si	uhcutaneous allergei	n immunotheran	oy (allergy shots)?	
No	iad a History of la	illule of illitolerance to si	ubcutarieous aliergei	пппппппопетар	y (allergy shots): La les La	
Does the patient	have severe, un	stable or uncontrolled as	sthma? 🗆 Yes 🗅 N	lo		
Select the medi	cation categorie	s that the patient has	tried and failed:			
	, -	, azelastine, olopatadine		•		
☐ Intranasal cor triamcinolone	, ,	, beclomethasone, bude	esonide, ciclesonide,	, flunisolide, flutio	casone, mometasone,	
	, -	ontelukast, zafirlukast, z	,			
Oral antihista	mines (e.g., cetir	izine, desloratadine, fex	ofenadine, levocetiriz	zine, or loratadir	ne)	
Are there any other o	comments, diagnose	es, symptoms, medications	tried or failed, and/or an	ny other information	n the physician feels is important to	
Please note: Th	nis request may be de	enied unless all required inforr	mation is received			

For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



Altabax® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)				Provider Information (required)			
Member Name:			Provider Name:	Provider Name:			
Insurance ID#:			NPI#:	NPI#: Specialty:			
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Ad	ldress:			
Phone:			City:	State:	Zip:		
		Medication	Information (re	equired)			
Medication Name:			Strength:	,	Dosage Form:		
☐ Check if requesting	g brand		Directions for Us	se:	<u> </u>		
☐ Check if request is	for continuation	of therapy					
		Clinical Ir	nformation (requi	ired)			
☐ Other diagnose Medication history Has the patient tr days? ☐ Yes ☐ Quantity limit re What is the quantity What is the rease	istant Staphylodis: ory: ied and failed g No quests: tity requested p on for exceedi	eneric mupirocin oi	intment or cream fo		of 5 days within the last 90		
Are there any other con this review?	nments, diagnoses,	symptoms, medications	tried or failed, and/or an	y other informatio	n the physician feels is important to		
Please note: This	request may be deni	ed unless all required infor	mation is received.				

For urgent or expedited requests please call 1-855-401-4262.



Antidepressants Prior Authorization Request Form

Member Information (required)				Provider Information (required)		
Member Name:			Provider Name:	Provider Name:		
Insurance ID#:			NPI#:	NPI#: Specialty:		
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Add	ress:		
Phone:		I	City:	State:	Zip:	
		Medication	on Information (req	uired)		
Medication Name	:		Strength:	,	Dosage Form:	
☐ Check if reque	sting brand		Directions for Use	e:		
☐ Check if reque	st is for continuatio	n of therapy				
		Clinica	Information (requir	ed)		
What is the pati	ent's diagnosis fo	the medication bei	ng requested?			
		IC	D-10 Code(s):			
Clinical inform	ation:					
Is the patient all	ready stabilized o	n therapy with the re	quested medication?	'es □ No		
Please list ALL	medications the p	atient has had a tria	I of within the past 12 mor	nths:		
			spension, Prozac solution	on, Remeron So	olTab, and Zoloft	
	•	wer the following:	lifficulty in swallowing?	Vos □ No		
Quantity limit r		s writeri coriiimis a c	iniculty in Swallowing?	res uno		
		er DAY?				
•		ng the plan limitation				
☐ Titration or lo	oading dose purpo	oses				
■ Patient is on bedtime)	a dose-alternatin	g schedule (e.g., on	e tablet in the morning an	d two tablets at i	night, one to two tablets at	
,	strenath/dose is no	ot commercially avai	lable			
☐ Other:						
Are there any other	comments, diagnose	es, symptoms, medicati	ons tried or failed, and/or any	other information	the physician feels is important to	
his review?	, ,		•			
Please note: 7	This request may be d	enied unless all required	information is received.			

For urgent or expedited requests please call 1-855-401-4262.



Auvelity® Prior Authorization Request Form

er Informa	tion (required)	Prov	vider Info	rmation (required)
		Provider Name:		
		NPI#: Specialty:		
		Office Phone:		
		Office Fax:		
State:	Zip:	Office Street Addr	Office Street Address:	
		City:	State:	Zip:
	Medication	Information (requ	iired)	
	moundation	Strength:	an cu j	Dosage Form:
brand		Directions for Use	•	
	of therapy			
	Clinical In	formation (require	ed)	
is below:			•	
			ICD-10 Code	(s):
empted) List all ttests that the re story of failure, on/SR/XL m	:equested medication is contraindication or into ☐ duloxetine ☐ escitalopram ☐	medically necessary lerance to at least 3 p luvoxamine mirtazapine	Document ra	ntionale for use: natives* in the last 3 years:
naxino Err		-		·
ne patient tried t	he above listed medica	ations?		
ests:	MONTH?	,		
	brand for continuation is below: e disorder n: nresponsive to dempted) List all ttests that the restory of failure, on/SR/XL m afaxine ER ne patient tried t	State: Zip: Medication brand for continuation of therapy Clinical In: sis below: disorder n: nresponsive to other treatment modalitempted) List all: empted) List all: ttests that the requested medication is story of failure, contraindication or into on/SR/XL	Provider Name: NPI#: Office Phone: Office Fax: State: Zip: Office Street Addr City: Medication Information (required for continuation of therapy Clinical Information (required for continuation of therapy Clinical Information (required for continuation of therapy Clinical Information (required for continuation of therapy The provider Name: NPI#: Office Phone: Office Fax: Office Street Addr Strength: Directions for Use of the continuation of therapy Clinical Information (required for continuation of therapy) The provider Name: NPI#: Office Phone: Office Fax: Office Street Addr Strength: Directions for Use of the continuation of therapy Clinical Information (required for continuation of therapy) The provider Addr Strength: Directions for Use of the continuation of therapy The provider Addr Strength: Directions for Use of the continuation of therapy The provider Addr Strength: Directions for Use of the continuation of therapy The provider Addr Strength: Directions for Use of the continuation of therapy The provider Addr Strength: Directions for Use of the continuation of therapy The provider Addr Strength: Directions for Use of the continuation of therapy The provider Addr Strength: Directions for Use of the continuation of therapy The provider Addr Strength: Directions for Use of the continuation of therapy The provider Addr Strength: Directions for Use of the continuation o	Provider Name: NPI#: Office Phone: Office Fax: State: Zip: Office Street Address: City: State: Medication Information (required) Strength: Directions for Use: Clinical Information (required) is below: disorder ICD-10 Code n: nresponsive to other treatment modalities, unless contraindicated (i.e. other period) it stall: Ittests that the requested medication is medically necessary. Document rates that the requested medication or intolerance to at least 3 preferred altern on/SR/XL

Please note:

This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Brisdelle™ Prior Authorization Request Form

Member Information (required)			Pı	Provider Information (required)			
Member Name) :		Provider Name				
Insurance ID#:	:		NPI#:	Specialty:			
Date of Birth:	irth:		Office Phone:				
Street Address	S:		Office Fax:				
City:	State:	Zip:	Office Street A	Office Street Address:			
Phone:	L	I	City:	State:	Zip:		
		Medication	Information (required)			
Medication Na	me:		Strength:				
☐ Check if req	uesting brand		Directions for	Jse:			
☐ Check if req	uest is for continuatio	n of therapy					
		Clinical In	formation (rec	uired)			
Medication	history:						
Has the pati	ient had a 60 day ti	rial and failure of parc	xetine oral tablets	s within the past	6 months? U Yes U No		
Are there any oth his review?	ner comments, diagnose	es, symptoms, medications	tried or failed, and/or a	any other information	n the physician feels is important to		
Please note:	This request may be de	enied unless all required infor	mation is received.				

For urgent or expedited requests please call 1-855-401-4262.



Atypical Antipsychotics Prior Authorization Request Form

Member Information (required)				Provider Information (required)		
Member Name:			Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Ad			
Phone:	I		City:	State:	Zip:	
		Medication	Information (re	quired)		
Medication Name	e:		Strength:		Dosage Form:	
☐ Check if reque	sting brand		Directions for Us	se:		
□ Check if reque	st is for continuation	on of therapy				
		Clinical I	nformation (requi	ired)		
Continuation of	therapy:					
		generation atypical antips	sychotic agent? Yes	□ No		
		the medication being re				
ICD-10 Code(s)	[Mandatory]:					
Clinical informat	tion:					
•	-	ession, has the patient trie		•		
	ger than 6 years of red in care? \(\begin{array}{c} \begin{array}{c} \begin{array}{c} Yes \end{array}	age, is a psychiatrist, dev D No	elopmental pediatrician,	child/adolescent p	sychiatrist or pediatric	
		rapid dissolve tablets, i	injectables, extended-r	elease), also ans	wer the following:	
•	ble to swallow?					
		age form from this drug cl	lass in the last 30 days?	⊔ Yes ⊔ No		
Quantity limit re	quests: tity requested per D	ΔΥ?				
•		he plan limitations?				
	ading dose purposes					
Patient is on a	dose-alternating so	chedule (e.g., one tablet in	n the morning and two ta	blets at night, one	to two tablets at bedtime)	
	ength/dose is not co	ommercially available				
Other:						
re there any other	comments, diagnose	es, symptoms, medications	s tried or failed, and/or an	y other information	the physician feels is important t	
iis review?						
Please note:	This request may be d	enied unless all required info	rmation is received			

For urgent or expedited requests please call 1-855-401-4262.



Lybalvi® Prior Authorization Request Form

	OO NOT COPY FOR FUT	JRE USE. FORMS ARE U	PDATED FREQUENTLY	AND MAY BE	BARCODE	0
Memb	er Informatior	(required)	Provid	ler Infor	rmation	(required)
Member Name:			Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:			City:	State:		Zip:
		Medication Inf	ormation (required	d)		
Medication Name:			Strength:		Dosage Fo	orm:
☐ Check if requesting	brand		Directions for Use:			
Check if request is	for continuation of the	erapy				
		Clinical Infor	mation (required)			
Select the diagnos	is below:		· · · /			
☐ Schizophrenia						
·	r: acute treatment of	manic or mixed episo	odes as monotherapy	and as adi	unct to lith	ium or valproate
·		·	adults with Bipolar I	-	,	
-			ICE		s):	
Clinical informatio					,	
		aindication or intolera	nce to at least 2 pref	erred altern	atives* in t	the last 3 years:
aripipr	azole [olanzapine	☐ risperidon	е		•
asena	pine [⊇ paliperidone	□ ziprasidon □ other	ie		
☐ clozap						
2. How long has th	ne patient tried the ab	ove listed medication	ıs?			
Quantity limit requ						
	requested per MON					
	for exceeding the	olan limitations?				
☐ Titration or loadi		lola /				(1 1 () () ()
	ose-aiternating scheo gth/dose is not comn		the morning and two ta	biets at nigh	t, one to two	tablets at bedtime)
Other:	gui/dose is not comi	icicially available				
Uniter.						
Are there any other comthis review?	ments, diagnoses, symp	toms, medications tried	or failed, and/or any othe	er information	n the physici	an feels is important to
Please note: This r	equest may be denied unl	ess all required informatior	n is received.			

For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



Akynzeo® Prior Authorization Request Form

Member Information (required)				Provider Information (required)					
Member Name	: :		Provider Nam	e:					
Insurance ID#:			NPI#:		Specialty:				
Date of Birth:				Office Phone:			Office Phone:		
Street Address	3:		Office Fax:	Office Fax:					
City:	State:	Zip:	Office Street A	Address:					
Phone:	l		City:	State:	Zip:				
		Medication	Information	(required)					
Medication Na	me:		Strength:	` ' '	Dosage Form:				
☐ Check if req	uesting brand		Directions for Use:						
☐ Check if req	uest is for continuatio	n of therapy							
		Clinical Ir	nformation (red	quired)					
Select the o	diagnosis below:								
☐ Prophyla	xis of chemothera	py-induced nausea/vo	omiting						
□ Other dia	agnosis:		ICD-10 C	ode(s):					
Clinical info	ormation:								
		/ emetogenic chemot 90 days? ☐ Yes ☐		or regimens inc	cluding anthracyclines and				
Are there any oth his review?	ner comments, diagnose	es, symptoms, medications	tried or failed, and/or	any other information	on the physician feels is important to				
Please note:	This request may be de	enied unless all required infor	mation is received.						

For urgent or expedited requests please call 1-855-401-4262.



Bonjesta® Prior Authorization Request Form

Member Information (required)					rmation (required)	
Member Name) :		Provider Name			
Insurance ID#:	:		NPI#: Specialty:			
Date of Birth:			Office Phone:			
Street Address	S:		Office Fax:			
City:	State:	Zip:	Office Street A	Address:		
Phone:		I	City:	State:	Zip:	
		Medication	Information (required)		
Medication Na	me:		Strength:	,	Dosage Form:	
☐ Check if req	uesting brand		Directions for	Use:		
☐ Check if req	uest is for continuatio	n of therapy				
		Clinical In	nformation (req	uired)		
Untity limit What is the quantity limit What is the quantity limit What is the quantity limit with the quantity limit with the quantity limit limit with limit lim	it requests: quantity requested pe reason for exceedin or loading dose purpo on a dose-alternating bedtime) d strength/dose is no	g the plan limitations	? ablet in the morning			
Are there any oth	ner comments, diagnose	s, symptoms, medications	tried or failed, and/or a	any other informatio	n the physician feels is important to	
Please note:		nied unless all required infor				



Diclegis® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			P	Provider Information (required)			
Member Name:			Provider Nam	e:			
Insurance ID#:			NPI#: Specialty:				
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street A	Address:			
Phone:			City:	State:	Zip:		
		Medication In	formation ((required)			
Medication Name:			Strength: Dosage Form:		Dosage Form:		
☐ Check if requesting			Directions for	Use:			
☐ Check if request is	for continuatio i	n of therapy					
		Clinical Info	ormation (red	quired)			
Select the diagno	osis below:						
Hyperemesis g	ıravidarum						
Other diagnosi	s:		ICD-10 Co	ode(s):			
Are there any other corthis review?	mments, diagnos	es, symptoms, medications trie	ed or failed, and/or	any other information	n the physician feels is important to		
Please note: This	request may be d	lenied unless all required informat	ion is received.				

For urgent or expedited requests please call 1-855-401-4262.



Sancuso® Prior Authorization Request Form

		FOR FUTURE USE. FORMS ARI				
Memb	er Inform	nation (required)	Provider Information (required)			
Member Name:			Provider Nam	ne:		
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:	:		
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:			City:	State:	Zip:	
		Medication In	nformation	(required)		
Medication Name:			Strength:	·	Dosage Form:	
☐ Check if requesting	brand		Directions for	Use:		
☐ Check if request is	for continuatio	n of therapy				
		Clinical Info	ormation (re	quired)		
Select the diagnos	is below:					
□ Prophylaxis of ch	nemotherapy-i	induced nausea/vomiting				
☐ Other diagnosis:			_ ICD-10 Code(s):		
Clinical informatio	n:					
Has the patient had days? ☐ Yes ☐ No	-	neric -Hydroxytryptamine ty	/pe 3 (5-HT3) re	ceptor antagonist f	for 14 days in the past 90	
Is the patient received days? Yes No	•	y and/or highly emetogenic	chemotherapy f	or up to 5 consecu	utive	
Is the patient unable	to tolerate or	ral medications for chemoth	nerapy-induced r	nausea and vomitir	ng due to a diagnosis of	
difficulty swallowing		NO				
Quantity limit requ What is the quantity		er MONTH?				
		ng the plan limitations?				
☐ Titration or loadin☐ Patient is on a de	ng dose purpo ose-alternating		t in the morning a	and two tablets at ı	night, one to two	
•		ot commercially available				
Other:						
Are there any other cor this review?	nments, diagnos	ses, symptoms, medications tri	ed or failed, and/or	any other information	n the physician feels is important to	
Please note: This	request may be	danied unless all required informa	tion is received			

Please note:

For urgent or expedited requests please call 1-855-401-4262.



Varubi Prior Authorization Request Form

Memb	er Informa	ation (required)	Provider Information (required)			
Member Name:			Provider Nam	ie:		
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street	Address:		
Phone:			City:	State:	Zip:	
		Medication In	formation	(required)		
Medication Name:			Strength:		Dosage Form:	
☐ Check if requesting	-		Directions for Use:			
☐ Check if request is	for continuation	n of therapy				
		Clinical Info	rmation (re	quired)		
Select the diagn						
	•	y-induced nausea/vomit	•			
Other diagnos	is:		ICD-10 C	Code(s):		
Clinical informat	ion:					
		emetogenic chemothera 90 days? ☐ Yes ☐ No		or regimens inc	luding anthracyclines and	
Are there any other com this review?	ments, diagnose	s, symptoms, medications tried	or failed, and/or	any other informatio	on the physician feels is important to	
Diagon poto: This		nied unless all required information				

Please note: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Non-Sedating Antihistamines Prior Authorization Request Form

	Member Information (required)			Provider Information (required)			
Member Name:			Provider Name	:			
Insurance ID#:			NPI#: Specialty:				
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Ad	ddress:			
Phone:			City:	State:		Zip:	
		Medication Ir	oformation (**	o accine d\			
Medication Name:			Strength:	equirea)	Dosage F	orm:	
☐ Check if requesting	brand		Directions for U	leo:	2000.90		
	for continuation of the	erany	Directions for C	JSE.			
			ormation (requ	ined)			
fexofenadine & psei	c rhinitis : I and failed a 14-day udoephedrine, lorata n:	trial of one of the fo	& pseudoephedrin	e, cetirizine & ps ne? □ Yes □ N		rine, fexofenadine,	
Quantity limit requivalent is the quantity What is the reason ☐ Titration or loadi ☐ Patient is on a debedtime)	requested per DAY' for exceeding the	? plan limitations? dule (e.g., one table	-		at night, one	e to two tablets at	
	ments, diagnoses, symp	otoms, medications trie	ed or failed, and/or a	ny other information	on the physici	an feels is important to	

<u>Please note</u>: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Edarbi and Edarbyclor Prior Authorization Request Form

Me	ember Inform	ation (required)	P	Provider Information (required)				
Member Name:			Provider Nan	Provider Name:				
Insurance ID#:			NPI#:		Specialty:			
Date of Birth:			Office Phone	:				
Street Address:			Office Fax:					
City:	State:	Zip:	Office Street	Address:				
Phone:			City:	State:	Zip:			
		Medication	Information	(required)				
Medication Nam	ne:		Strength:	, -,-	Dosage Form:			
☐ Check if requ	esting brand		Directions for	Directions for Use:				
☐ Check if requ	est is for continuatio	n of therapy						
		Clinical I	nformation (re	equired)				
Clinical info	rmation:							
Has the patie days? ☐ Ye		the requested angio	otensin II recep	otor blocker (A	ARB) for more than 60			
Has the patie days? ☐ Ye	9	ensin-converting enz	yme (ACE) inhibi	tor or a generic	ARB within the last 120			
	ient have an addit c renal failure? 📮	ional diagnosis of ch Yes □ No	ronic obstructive	pulmonary dise	ase (COPD) or			
Are there any othe	er comments, diagnose	es, symptoms, medications	s tried or failed, and/or	any other information	on the physician feels is important to			
Please note:		enied unless all required info I requests please call 1-855-						



Amrix® & Fexmid® (cyclobenzaprine) Prior Authorization Request Form

Member Information (required)				Provider Information (required)			
Member Name:			Provider Name:				
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Ac	ddress:			
Phone:		I	City:	State:	Zip:		
		Medication	Information (re	equired)			
Medication Name:			Strength:	2,,2/	Dosage Form:		
☐ Check if requestin	g brand		Directions for U	se:			
☐ Check if request is	-	on of therapy					
		Clinical l	nformation (requ	uired)			
		Omnour ii	TIOTITIACION (requ	ineu)			
Select the diagr							
1	t and physica	al therapy for relief of	muscle spasm asso	ociated with act	ute, painful musculoskeletal		
conditions							
Other diagnos	sis:		ICD-10 Co	de(s):			
Medication histo	ory:						
		60 day trial and failur days? ☐ Yes ☐ No		ne 5 mg tablets	OR cyclobenzaprine 10		
Quantity limit re	quests:	d per DAY?					
· ·	•	eding the plan limita					
☐ Titration or loa							
Patient is on a	a dose-alterna	ating schedule (e.g., o	one tablet in the mo	orning and two t	tablets at night, one to two		
tablets at bed							
		s not commercially av					
☐ Other:							
Are there any other cor	nments diagnos	as symptoms modications	s tried or failed and/or ar	ny other information	n the physician feels is important to		
this review?	illicitis, diagilos	es, symptoms, medications	strict of failed, and/or ar	ly other information	The physician reers is important to		
	·						
Please note: This	request may be d	enied unless all required info	rmation is received				

For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



Brexafemme® Prior Authorization Request Form

	er Informat	FUTURE USE. FORMS A			rmation (required)	
Member Name:			Provider Name:			
Insurance ID#:			NPI#:	NPI#: Specialty:		
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Ad	Office Street Address:		
Phone:			City:	State:	Zip:	
		Medication	Information (re	equired)		
Medication Name:		modioation	Strength:	,quireu)	Dosage Form:	
☐ Check if requesting	g brand		Directions for U	se:		
☐ Check if request is		of therapy				
		Clinical In	formation (requ	ired)		
Select the diagno	sis below:					
Vulvovaginal ca	ndidiasis					
Other diagnosis	:		_ ICD-10 Code(s): _			
Clinical information						
Has the patient trie	d and failed 3 tria	ls of fluconazole or c	lotrimazole in the pa	st 14 days? 🗖 \	∕es □ No	
Quantity limit requ		40NITUO				
What is the quantity		the plan limitations	2			
☐ Titration or load			ſ			
		chedule (e.g., one ta	blet in the morning a	nd two tablets a	at night, one to two	
tablets at bedtin						
•	ngth/dose is not c	commercially available	е			
☐ Other:						
Are there any other con this review?	nments, diagnoses,	symptoms, medications	tried or failed, and/or an	ny other informatio	on the physician feels is important to	
uns review:						

Please note:

This request may be denied unless all required information is received. For urgent or expedited requests please call 1-855-401-4262.



Cambia[®], LofenaTM, Zipsor[®], Zorvolex[®] Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required) Provider Information (required) Provider Name: Member Name: NPI#: Insurance ID#: Specialty: Date of Birth: Office Phone: Street Address: Office Fax: Office Street Address: City: State: Zip: Phone: City: State: Zip: Medication Information (required) Strength: Medication Name: Dosage Form: ☐ Check if requesting brand Directions for Use: ☐ Check if request is for continuation of therapy Clinical Information (required) **Medication history:** Has the patient had a documented 30 day trial of a generic diclofenac product within the last 120 days? ☐ Yes ☐ No Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?

<u>Please note</u>: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Amitiza[®], Ibsrela[®], Linzess[®], Motegrity[®], Movantik[™], Symproic[®], Trulance[®] Prior Authorization Request Form

	Member Information (required)			Provider Information (required)			
/lember Name:			Provider Nam	ne:			
nsurance ID#:			NPI#:	NPI#: Specialty:			
Date of Birth:			Office Phone:	:			
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street	Office Street Address:			
Phone:			City:	State:	Zip:		
		Madiantian	·		·		
A P C N		Medication I		(required)			
Medication Name:			Strength:		Dosage Form:		
Check if requesting			Directions for	Use:			
☐ Check if request is f	or continuation of						
		Clinical in	ormation (re	quired)			
Select the diagno	sis below:						
☐ Chronic idiopat	nic constipation						
☐ Irritable bowels	syndrome with c	constipation (IBS-C)				
■ Opioid-induced	constipation in	an adult patient wit	h chronic pain				
Other diagnosis	=	·		Code(s):			
For opioid-induce	d constipation	in an adult patie	nt with chronic	pain, answer t	he following:		
s the pain associa	-	-		, , , , , , , , , , , , , , , , , , , ,	.		
Quantity limit req	uests:						
What is the quantit		DAY?					
		g the plan limitati	ons?				
☐ Titration or load							
		g schedule (e.g., on	e tablet in the n	norning and two	tablets at night, one to tv		
tablets at bedtir	,						
•	ngth/dose is no	t commercially ava	ilable				
■ Otner:							
	ngth/dose is no	t commercially ava		any other informatic	on the physician feels i		

Please note:

This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Aimovig[™], Ajovy[™], Emgality[™] Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

	DO NOT COPT FOR FUT	UNE USE. FURINS ARE	OF DATED FREE	QUENTET AND MAT	BE BARCODE	.ט
Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phon	ie:		
Street Address:			Office Fax:			
City:	State:	Zip:	Office Stree	et Address:		
Phone:			City:	State:		Zip:
		Medication In	formation	O (no queino d)		
		Medication in		I (requirea)		
Medication Name:			Strength:		Dosage F	orm:
☐ Check if requesting	g brand for continuation of th	erany	Directions fo	or Use:		
- Check in request is	To Continuation of the	Clinical Info	rmation /	roquirod)		
Select the diagnosis	- holow:	Omnear inte	Tillation (required)		
☐ Chronic migraines						
☐ Episodic migraines						
☐ Other diagnosis: ICD-10 Code(s):						
Clinical information:	•		·	ob 10 0000(0)		
		r in consultation with a	neurologist or r	pain/headache spe	cialist? Yes	s 🗆 No
·		mbination with another		•		
Select the prophylacti		has had a trial and fail			of therapy witl	n greater than 80%
☐ Antidepressants (i	.e., venlafaxine or tricy	clic antidepressant suc	h as amitriptylii	ne or nortriptyline)		
Please specify:						
		oex sodium). Please sp				
☐ Beta-blockers (i.e.	, atenolol, propranolol,	nadolol, timolol, or met	toprolol). Pleas	se specify:		
_	es, also answer the fo					
	evaluated for rebound ISAIDs)? ☐ Yes ☐ N o	headaches caused by	medication ove	eruse (more than 12	doses per mo	onth of narcotics,
If diagnosed, will treat	tment include a plan to	taper off the offending	medication?	⊒ Yes □ No		
Does the patient have months? Yes		to 15 headache days p	er month, of w	hich at least 8 must	be migraine o	days for at least 3
For episodic migrain	nes, also answer the f	ollowing:				
Does the patient have	e 4 to 14 migraines per	month (but no more the	an 14 headach	e days per month)?	Yes 🗆 No)
Reauthorization:						
If this is a reauthoriz	zation request, answe	r the following:				
Has the patient exper intensity? ☐ Yes ☐ N		onse to therapy, demon	strated by a re	duction in headach	e frequency ai	nd/or
Has the use of acute	migraine medications (e.g., NSAIDs, triptans,	narcotics) decr	reased since the sta	art of CGRP th	nerapy? 🛘 Yes 🗘 No
Is the requested medication prescribed by or in consultation with a neurologist or pain/headache specialist? Yes No				s 🗆 No		



Continuous Glucose Monitors Prior Authorization Request Form

	r Information	E USE. FORMS ARE UP	DATED			
Member Name:		requirea)	Provider Information (required) Provider Name:			
Insurance ID#:			NPI#			Specialty:
Date of Birth:				e Phone:		Openiary.
Street Address:				e Fax:		
	I o	T =·				
City:	State:	Zip:		e Street Address:		T
Phone:			City:		State:	Zip:
	M	edication Info	rma	tion (required)		
Medication Name:			Strer	ngth:		Dosage Form:
☐ Check if requesting br	and		Direc	ctions for Use:		
☐ Check if request is for	continuation of thera	ру				
		Clinical Inforr	nati	On (required)		
Select the requested me Preferred Products: Dexcom G6		Guardian 3		Select the requirements Non-Preferred: List:		ication below:
☐ Dexcom G7		Guardian 4				
☐ FreeStyle Libre 14☐ FreeStyle Libre 2		Guardian Link 3 Guardian Connect				
☐ FreeStyle Libre 3	.	Guardian Connect				
Select the diagnosis be Type 1 diabetes mellit Gestational diabetes r Type II diabetes mellit Other diagnosis:	tus mellitus tus			ICD-10 Co	de(s):	
Clinical information:					(-)-	
For diagnosis of Type II o						
Is the patient using rapid	or short acting insulin'	? • Yes • No If ye	s, whic	ch one?		
How often does the patie Non-preferred product	nt use rapid or short a	cting insulin?				
If a request for a non-presummary for use of the n	ferred agent is medica			a particular memb	er, prescrib	er must provide a brief
Are there any other commer this review?	nts, diagnoses, sympto	ms, medications tried o	r failed	and/or any other in	nformation t	he physician feels is important to
Please note: This requi	est may be denied unless	all required information i	s receiv	ved		

Please note:

For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



Desoxyn® (methamphetamine) Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Pr	Provider Information (required)			
Member Name:			Provider Name:	Provider Name:			
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Ad	Idress:			
Phone:		I	City:	State:	Zip:		
		Medication	Information (re	equired)			
Medication Name:			Strength:		Dosage Form:		
☐ Check if requesting	brand		Directions for Us	se:			
☐ Check if request is	for continuation	of therapy					
		Clinical In	formation (requ	ired)			
Select the diagnos	is below:						
□ Attention Deficit	Disorder with H	yperactivity					
Other diagnosis:			ICD-10 Code(s):				
Medication history	7 :						
Has the patient had medications from ar	a trial and failu ny of the followi	re (after a mimimum of ng options in the past 9	a 60 day trial), contra 0 days? 🗖 Yes 🗖 N	aindication, or in	tolerance to any four		
 Atomoxet 	•		,				
 Guanfacir 							
 Long-acting 	ng amphetamin	e salts product					
	ng methylpheni	•					
Are there any other cor this review?	mments, diagnose	s, symptoms, medications	tried or failed, and/or an	ny other information	n the physician feels is important to		
Please note: This	request may be de	enied unless all required inform	mation is received.				

For urgent or expedited requests please call 1-855-401-4262.



Dificid® Prior Authorization Request Form

DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)				Provider Information (required)				
Member Name:			Provider Na	ame:				
Insurance ID#:			NPI#:	Specialty:				
Date of Birth:			Office Phon	ne:				
Street Address:			Office Fax:					
City:	State:	Zip:	Office Stree	et Address:				
Phone:		I	City:	State:	Zip:			
		Medication	Information	n (required)				
Medication Name:			Strength:		Dosage Form:			
☐ Check if requesting	g brand		Directions for	or Use:				
☐ Check if request is	s for continuatio	n of therapy						
		Clinical Ir	nformation ((required)				
Select the diagr	osis below:							
		ted diarrhea (CDAD)						
Other diagnos	3is:		ICD-10 Co	ode(s):				
Clinical informa								
•	•	er the current guideline	es? 🗆 Yes 🗅	No				
	•	patient has failed:						
•	`	erate severity) – metro	nidazole					
☐ Initial episode	•	·	n and matronid	07010				
· ·	•	nplicated) – vancomyci gimen as first episode	n and metronida	azule				
	7	ancomycin in tapered	regimen					
- Occord recui	Terioe orar v	ancomyon in tapered	regimen					
Are there any other co this review?	omments, diagno	ses, symptoms, medications	tried or failed, and/o	or any other information	on the physician feels is important to			
Diagon mater. Thi	:							

<u>Please note</u>: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



DurlazaTM Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Pr	Provider Information (required)			
Member Name:			Provider Name	Provider Name:			
Insurance ID#:	Insurance ID#:				Specialty:		
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Ac	ddress:			
Phone:			City:	State:	Zip:		
		Medication	n Information (r	equired)			
Medication Name:			Strength:		Dosage Form:		
☐ Check if requesting	brand		Directions for U	Jse:			
☐ Check if request is	for continuation	of therapy					
		Clinical I	nformation (requ	uired)			
Select the diagno	osis below:						
☐ Chronic corona	ary artery disea	ase (CAD)					
□ Ischemic strok	е						
☐ Transient ische	emic attack						
Other diagnosi	is:		ICD-10 Cod	de(s):			
Clinical informat	ion:						
Has the patient ha	ad a 90 day tria	al and failure with im	mediate release as	spirin? 🗖 Yes 🛭	⊒ No		
Please submit clin	nical rationale e	explaining why a fail	ure with the extend	ed-release prod	duct is not expected:		
Are there any other corthis review?	mments, diagnose	s, symptoms, medication	s tried or failed, and/or a	ny other information	n the physician feels is important to		
Please note: This		nied unless all required info					

For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



EmflazaTM Prior Authorization Request Form

Memb	nation (required)		Provider Information (required)				
Member Name:		racion (required)		Provider Name:			
Insurance ID#:			NPI#:	NPI#: Specialty:			
Date of Birth:			Office Phone:		, ,		
Street Address:			Office Fax:				
City: State: Zip:			Office Street A	Address:			
Phone:	Phone:			State:	Zip:		
		Medication I	nformation	(required)			
Medication Name:			Strength:	(Dosage Form:		
☐ Check if requesting	brand		Directions for Use:				
☐ Check if request is	for continuation	on of therapy					
		Clinical Info	ormation (red	quired)			
Select the diagn	osis below:						
□ Duchenne mus	scular dystro	phy					
Other diagnos	is:		ICD-10 Co	ICD-10 Code(s):			
Are there any other co this review?	mments, diagno	ses, symptoms, medications tri	ed or failed, and/or	any other information	n the physician feels is important to		
		denied unless all required informa ed requests please call 1-855-401					



Epidiolex® Prior Authorization Request Form OPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)				
Member Name:			Provider Name:	Provider Name:			
Insurance ID#:	Insurance ID#:				Specialty:	:	
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Addr	ess:			
Phone:			City:	State:		Zip:	
		Medication In	formation (requi	red)			
Medication Name:			Strength:	, cu	Dosage F	orm:	
☐ Check if requesting	brand		Directions for Use	:			
☐ Check if request is	☐ Check if request is for continuation of therapy						
		Clinical Info	rmation (required)			
Select the diagnos	is below:						
		drome, list ICD-10 Co	ode(s):				
□ Seizures associa	ated with Lennox-Ga	staut syndrome, list (LGS) ICD-10 Code(s):				
		Sclerosis Complex (T		le(s):			
		e(s):					
			ICD-	10 Code(s): _			
Clinical informatio							
Is Epidiolex prescrib	ped by or in consulta	tion with a neurologis	st? □ Yes □ No				
Are there any other com this review?	ments, diagnoses, sym	ptoms, medications tried	or failed, and/or any of	ther information	the physicia	n feels is important to	
Please note: This r	equest may be denied ur	lless all required information	on is received.				

For urgent or expedited requests please call 1-855-401-4262.



Onfi® & Sympazan® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			te of BATES TREE	Provider Information (required)				
Member Name:			Provider Nar	Provider Name:				
Insurance ID#:			NPI#:		Specialty:			
Date of Birth:			Office Phone	e:				
Street Address:			Office Fax:					
City:	State:	Zip:	Office Street	t Address:				
Phone:			City:	State:	Zip:			
		Medication I	Information	(required)	·			
Medication Nam	Medication Name:			· · · · · ·	Dosage Form:			
☐ Check if requ			Directions fo	Directions for Use:				
Check if requ	est is for continuatio	on of therapy						
		Clinical Inf	formation (r	required)				
☐ Intractable	associated with L	ant seizure disorder ennox-Gastaut syndroi		s):				
Prescriber s			·					
Is the reques	ted medication p	rescribed by or in cons	ultation with a r	neurologist? 🗖 🕻	Yes □ No			
Are there any othe this review?	er comments, diagnos	es, symptoms, medications tr	ried or failed, and/o	or any other information	on the physician feels is important to			
Please note:	This request may be d	enied unless all required inform	nation is received.					

For urgent or expedited requests please call 1-855-401-4262.



Eucrisa® Prior Authorization Request Form

Member Information (required)				RE UPDATED FREQUENTLY AND MAY BE BARCODED Provider Information (required)			
Member Name:			Provider Name:				
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Add	dress:			
Phone:			City:	State:	Zip:		
		Modioation	Information				
Medication Name:		Medication	Strength:	quired)	Dosage Form:		
					Dosage Form.		
☐ Check if requestir	-		Directions for Us	se:			
☐ Check if request i	s for continuatio i		nformation (requi				
within the last 120 How long has the Quantity limit req What is the quanti What is the reaso Titration or load Patient is on a bedtime) Requested streen	on: d a documented days? Yes patient tried the puests: ty requested per for exceeding dose purpor dose-alternating ength/dose is no	□ No If yes, which on above listed medication MONTH? g the plan limitations ses	neon?s? ablet in the morning and	is cream, or tacr	olimus ointmentointment night, one to two tablets at		
Are there any other conthis review?	mments, diagnose	s, symptoms, medications	s tried or failed, and/or an	y other information	the physician feels is important to		

This request may be denied unless all required information is received. Please note:

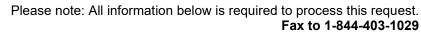
For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



Mon-Sat: 7am to 7pm Central

Evrysdi® Prior Authorization Request Form (Page 1 of 3) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

	Membe	er Information	(required)	Provide	r Inforr	nation (required)
Mem	ber Name:			Provider Name:		
Insu	ance ID#:			NPI#:		Specialty:
Date	of Birth:			Office Phone:		
Stree	et Address:			Office Fax:		
City:		State:	Zip:	Office Street Address:		
Phor	ne:			City:	State:	Zip:
		M	edication Infor	mation (required)		
Medi	cation Name:			Strength:		Dosage Form:
	neck if requesting br			Directions for Use:		
☐ CI	neck if request is for	continuation of therap				
			Clinical Inform	ation (required)		
	ct the diagnosis be					
		ohy (SMA): Type		ICD-10 Code(s)	١٠	
-	tilei diagilosis.			10D-10 Code(s)	·	
Clinical information: 1. Select if the requested medication is prescribed by or in consultation with one of the following specialists: Neurologist with expertise in the diagnosis and treatment of SMA Other					sts:	
2.						
3.	☐ Homozygous g☐ Compound het	gene deletion or mutatio	g., deletion of SMN1 exc	in the following: letion of exon 7 at locus on 7 [allele 1] and mutat		1 [allele 2])
4.	Is the patient depe	ndent on invasive ventil	ation or tracheostomy?	□ Yes □ No		
5.	Is the patient depe	ndent on use of non-inv	asive ventilation beyond	l use for naps and night	ime sleep?	□ Yes □ No
6.	ability by a board-c Hammersmith Hammersmith Upper Limb Mo Children's Hos	ertified neurologist? Functional Motor Scale Infant Neurological Exa odule (ULM) Test (Non	Expanded (HFMSE) m (HINE) (infant to early ambulatory) ant Test of Neuromuscu	•		establish baseline motor
7.	Is the patient on co ☐ Yes ☐ No	oncomitant chronic survi	val motor neuron (SMN)) modifying therapy for t	ne treatmen	t of SMA (e.g., Spinraza)?
8.	Has the patient pre	eviously received gene r	eplacement therapy for	the treatment of SMN (e	.g., Zolgens	sma)? Yes No



Mon-Sat: 7am to 7pm Central



Evrysdi[™] Prior Authorization Request Form (Page 2 of 3)
DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

9.	in: wo hig -	aded orse ghes HI HI	plate response to gene therapy (e.g., sustained decrease in at least one motor test score over a period of 6 months) or hing in clinical status since receiving gene therapy as demonstrated by a decline of minimally clinical important difference fro it score achieved on one of the following exams: FMSE: decline of at least points on kicking and points on any other milestones (excluding voluntary grasp) NE-2: decline of at least points HOP INTEND: decline of at least points
Wh	at is at is Titra Pati Rec	the the ation ient i	requests: quantity requested per DAY? reason for exceeding the plan limitations? or loading dose purposes s on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime) ted strength/dose is not commercially available
If ti	nis is	s a r	ation: eauthorization request, answer the following: any SMN2 copies?
2.	as (demo	documentation of positive clinical response to therapy (e.g., chart notes, laboratory values) from pretreatment baseline status constrated by the most recent results (less than 1 month prior to reauthorization request) from one of the following exams: e of the following HINE-2 milestones Improvement or maintenance of previous improvement of at least a 2-point (or maximal score) increase in ability to kick Improvement or maintenance of previous improvement of at least a 1-point increase in any other HINE-2 milestone (e.g., head control, rolling, sitting, crawling, etc.), excluding voluntary grasp Patient exhibited improvement, or maintenance of previous improvement in more HINE motor milestones than worsening, from pretreatment baseline (net positive improvement) Patient has achieved and maintained any new motor milestones when they would otherwise be unexpected to do so (e.g., sit unassisted, stand, walk)
			e of the following HFMSE milestones
			e of the following ULM test milestones Improvement or maintenance of a previous improvement of at least a 2-point increase in score from pretreatment baseline Patient has achieved and maintained any new motor milestone from pretreatment baseline when they would otherwise be unexpected to do so (e.g., sit unassisted, stand, walk)
			e of the following CHOP-INTEND milestones
			e of the following MFM-32 milestones
3.	ls tl	he pa	atient dependent on invasive ventilation or tracheostomy? Yes No

Evrysdi[™] Prior Authorization Request Form (Page 3 of 3) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

4.	Is the patient dependent on the use of non-invasive ventilation beyond use for naps and nighttime sleep? Yes No
5.	Is the requested medication prescribed by or in consultation with a neurologist with expertise in the diagnosis and treatment of SMA? Yes No
6.	Is the patient is receiving concomitant chronic survival motor neuron (SMN) modifying therapy for the treatment of SMA (e.g., Spinraza)? Yes No
7.	Has the patient previously received gene replacement therapy for the treatment of SMA (e.g., Zolgensma)? Yes No
8.	Was there inadequate response to gene therapy (e.g., sustained decrease in at least one motor test score over a period of 6 months)? If so, submit medical records (e.g., chart notes) documenting the inadequate response to gene therapy.
	here any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to review?
Pleas	Se note: This request may be denied unless all required information is received.



Genitourinary smooth muscle relaxants Prior Authorization Request Form

	Member Information (required)			Provider Information (required)			
Member Name:			Provider Name	Provider Name:			
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street A	ddress:			
Phone:		I	City:	State:	Zip:		
		Medication	Information (re	equired)			
Medication Name:			Strength:		Dosage Form:		
☐ Check if requesting			Directions for U	Jse:			
☐ Check if request is	for continuation	n of therapy					
		Clinical In	formation (requ	iired)			
What is the patien	t's diagnosis	for the medication bei	ing requested? (Ma	indatory)			
ICD-10 Code(s) [M	landatoryl:						
Medication history							
-		of oxybutynin, oxybutyr	nin ER, darifenacin E	R, fesoterodine	ER, solifenacin, tolterodine,		
tolterodine ER, tros		um ER ? 🗖 Yes 🗖 No		•	, , , , , , , , , , , , , , , , , , , ,		
List drug(s) tried_							
		ision, Oxytrol, or Vesion			following:		
•		s which confirms a diffic	uity in swallowing?	⊔ Yes ⊔ No			
Quantity limit requestion What is the quantity		r MONTH?					
What is the reason	n for exceedir	ng the plan limitations	?				
☐ Titration or loadi		oses g schedule (e.g., one ta	blot in the morning a	and two tablets at	t night, one to two		
tablets at bedtim		g scriedule (e.g., one ta	blet in the morning a	ind two tablets at	i flight, one to two		
		t commercially available	е				
☐ Other:							
Are there any other com this review?	nments, diagnose	es, symptoms, medications	tried or failed, and/or ar	ny other information	n the physician feels is important to		
Please note: This	request may be de	enied unless all required inforr	mation is received				

For urgent or expedited requests please call 1-855-401-4262.



GLP-1 Agonists Prior Authorization Request Form

Member Information (required)			Provider Information (required)					
Member Name:			Provider Nam	Provider Name:				
Insurance ID#:	Insurance ID#:				Specialty:			
Date of Birth:			Office Phone	:				
Street Address:			Office Fax:					
City:	State:	Zip:	Office Street	Address:				
Phone:		L	City:	State:	Zip:			
		Medication	Information	(required)				
Medication Name:			Strength:	(,,	Dosage Form:			
☐ Check if requesti	ng brand		Directions for	· Use:				
☐ Check if request	is for continuatio	on of therapy						
		Clinical Ir	nformation (re	equired)				
Select the diag	nosis below:							
☐ Type 2 diabe								
Other diagno	osis:		ICD-10 Co	ICD-10 Code(s):				
Quantity limit r	•	I per MONTH?						
·	• •	eding the plan limitati						
☐ Titration or lo	oading dose pu	ırposes						
		ating schedule (e.g., or	ne tablet in the m	orning and two ta	ablets at night, one to two			
tablets at bed	,	s not commercially ava	ilahla					
		s not commercially ava						
Are there any other of this review?	comments, diagno	ses, symptoms, medications	tried or failed, and/or	any other informatio	on the physician feels is important to			
Please note: T	his request may be	denied unless all required infor						

For urgent or expedited requests please call 1-855-401-4262.



Gralise® & Horizant® Prior Authorization Request Form

Member Information (required)				Provider Information (required)				
Member Name:			Provider Name	Provider Name:				
Insurance ID#:	Insurance ID#:				Specialty:			
Date of Birth:			Office Phone:					
Street Address:			Office Fax:					
City:	State:	Zip:	Office Street A	Address:				
Phone:			City:	State:	Zip:			
		Medicatio	n Information (required)				
Medication Nam	ne:		Strength:		Dosage Form:			
☐ Check if requ	esting brand		Directions for	Use:				
☐ Check if requ	est is for continuatio r	n of therapy						
		Clinical	Information (red	quired)				
Select the di	iagnosis below:							
□ Moderate	to severe primary	restless leg syndror	me (RLS) [Horizant	only]				
□ Neuropatl	hic pain associated	d with postherpetic n	euralgia (PHN)					
Other diag	gnosis:		ICD-10 Co	ICD-10 Code(s):				
	severe primary F							
		failure (to a minimun days? 🗖 Yes 🗖 No	n of a 90 day trial),	contraindicatio	n, or intolerance to ropinirole			
Neuropathic	pain associated	with PHN:						
		failure (to a minimun in the past 180 days		contraindicatio	n, or intolerance to an			
Are there any oth this review?	her comments, diagnos	es, symptoms, medicatior	ns tried or failed, and/or a	any other information	on the physician feels is important to			
Please note:		enied unless all required inf						



Growth Hormones Prior Authorization Request Form (Page 1 of 3) DO NOT COPY FOR FUTURE USE, FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)				Provider Information (required)			
Member Name:			F	Provider Name:			
Insurance ID#:			١	NPI#:		Specialty:	
Date of Birth:			(Office Phone:		1	
Street Address:			(Office Fax:			
City:	State:	Zip:	(Office Street Address:			
Phone:	1	1	(City:	State:	Zip:	
	N	dedication In	for	mation (required)			
Medication Name:			5	Strength:		Dosage Form:	
☐ Check if requesting			[Directions for Use:			
☐ Check if request is	for continuation of the						
		Clinical Info	rma	ation (required)			
Select the requested	I medication below:		Sele	ect the requested me	dication be	elow:	
Preferred Drugs:				-Preferred:			
☐ Genotropin				Humatrope			
□ Norditropin				Nutropin AQ			
				Omnitrope Nglena			
				Skytrofa			
				Sogroya			
				Saizen			
				Zomacton			
Select the diagnosis	below:		Sele	ect the diagnosis belo	ow:		
	<u>ts (less than 18 years o</u>	of age):		Adults (18 years of a	-		
Growth hormone d				Growth hormone defici	ency in adu	lts	
	to chronic renal insuffic	iency		Panhypopituitarism			
	to panhypopituitarism		шн	Prader-Willi syndrome			
	to Prader-Willi syndrom	ne .					
Idiopathic short staNoonan syndrome							
•	eobox containing gene (SHOY) deficiency					
☐ Small for gestation		or lox) deliciency					
☐ Turner's syndrome							
☐ Other diagnosis: _				ICD-10 Code	e(s):		
Contraindications/Ex	xclusions:						
	e acute critical illness du iratory failure? ☐ Yes		llowin	g open heart surgery,	abdominal	surgery, multiple accidental	
-	e active malignancy?						
	active proliferative or s		ve dial	betic retinopathy? 🗖 🕻	Yes □ No		



Growth Hormones Prior Authorization Request Form (Page 2 of 3) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

For Pediatric Patients (less than 18 years of age):
Is the requested medication prescribed by or in consultation with a pediatric endocrinologist? ☐ Yes ☐ No
Are the patient's epiphyses open? ☐ Yes ☐ No
Has the patient been screened for intracranial malignancy or tumor? Yes No
For growth hormone deficiency in children, also answer the following:
Has growth hormone deficiency been confirmed with provocative test and/or IGF-1 levels? ☐ Yes ☐ No
Has the patient had an inadequate response to two (2) pharmacological growth hormone stimulation tests* with peak level below 10 ng/mL? □ Yes □ No
Has the patient had an inadequate response to at least one (1) pharmacological growth hormone stimulation test* with peak level below 10 ng/mL for a patient with defined CNS pathology, multiple pituitary hormone deficiencies, history of irradiation, or proven genetic cause? Yes No
*Please note: acceptable tests include: arginine, clonidine, glucagon, insulin, and levodopa
Is the patient's height more than 3 standard deviations (SDs) below the mean for same age and gender? ☐ Yes ☐ No
Is the patient's height more than 2 SDs below the mean for same age and gender AND the patient has decreased growth velocity more than 1 SD below the mean for the same age and gender? U Yes U No
Is the patient's growth velocity measured 2 SDs below the mean over one year or 1.5 SDs below the mean sustained over 2 years for the same age and gender? □ Yes □ No
Have other causes of growth failure been ruled out (e.g., hypothyroidism, chronic systemic disease, skeletal disorders, malnutrition)? ☐ Yes ☐ No
For growth failure due to chronic renal insufficiency, also answer the following:
Has the patient's nutritional status been optimized and metabolic abnormalities been corrected? Yes No
Has the patient had a kidney transplant? ☐ Yes ☐ No
Is the patient's height less than the 3 rd percentile? □ Yes □ No
Is the patient's growth velocity measured over 1 year > 2 standard deviations below the mean for same age and gender? Yes No
For growth failure due to panhypopituitarism or Prader-Willi syndrome, also answer the following:
Has the patient's diagnosis of panhypopituitarism or Prader-Willi syndrome been confirmed by appropriate genetic testing? No
Is the diagnosis of panhypopituitarism caused by cranipharyngioma surgery? ☐ Yes ☐ No
Does the patient have severe obesity, history of upper airway obstruction or sleep apnea, or severe respiratory impairment? □ Yes □ No
Is the patient's height more than 2 standard deviations below the mean for same age and gender? ☐ Yes ☐ No
For idiopathic short stature, also answer the following:
Is the patient's height more than 2.25 standard deviations below the mean? ☐ Yes ☐ No
Is the patient's predicted height less than or equal to 65 inches for male or less than or equal to 60 inches for females? 🗖 Yes 🗖 No
For short stature homeobox-containing gene (SHOX) deficiency or Noonan syndrome, also answer the following:
Is the patient's height more than 3 standard deviations (SDs) below the mean for same age and gender? □ Yes □ No
Is the patient's height more than 2 SDs below the mean for same age and gender AND the patient has decreased growth velocity more
than 1 SD below the mean for the same age and gender? □ Yes □ No
Is the patient's growth velocity measured 2 SDs below the mean over one year or 1.5 SDs below the mean sustained over 2 years for
the same age and gender?
For small for gestational age (SGA), also answer the following:
Did the patient have post-natal growth failure at one year?
Is the patient below the 5 th percentile for height? ☐ Yes ☐ No
Was the patient's birth weight or length at least 2 standard deviations below the mean for gestational age? 🗖 Yes 🗖 No
For Turner's syndrome, also answer the following:
Has the patient's diagnosis of Turner's syndrome been confirmed by chromosome analysis? ☐ Yes ☐ No
Is the patient's height less than the 5 th percentile for same age and gender? □ Yes □ No



Mon-Sat: 7am to 7pm Central

Growth Hormones Prior Authorization Request Form (Page 3 of 3) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

For Adult Patients (18 years of age or older):
Is the requested medication prescribed by or in consultation with an endocrinologist? Yes No
For growth hormone deficiency in adults, also answer the following:
Has growth hormone deficiency been confirmed with two provocative tests and IGF-1 levels? Yes No
Has the patient been screened for intracranial malignancy or tumor? ☐ Yes ☐ No
Non-preferred drug request:
If a request for a non-preferred agent is medically necessary or required for a particular member, prescriber must provide a brief summary for use of the non-preferred agent over a preferred alternative
Nutropin and Nutropin AQ are non-preferred unless patient has a diagnosis of growth failure associated with chronic renal insufficiency. Humatrope and Zomacton are non-preferred unless member has a diagnosis of SHOX deficiency
Quantity limit requests:
What is the quantity requested per MONTH?
What is the reason for exceeding the plan limitations?
☐ Titration or loading dose purposes ☐ Patient is on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime) ☐ Requested strength/dose is not commercially available ☐ Other:
Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?
Please note: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Serostim® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address	s:		
Phone:	<u>l</u>	I	City:	State:	Zip:	
		Medication Info	ormation (required	1)		
Medication Name:			Strength:	<u></u>	Dosage Form:	
☐ Check if requesting	brand		Directions for Use:			
☐ Check if request is for continuation of therapy						
		Clinical Infor	mation (required)			
Clinical Information (required) Select the diagnosis below: HIV infection/AIDS wasting Other diagnosis: ICD-10 Code(s): Clinical information: Is Serostim prescribed by or in consultation with an infectious disease specialist? Yes No Has the patient tried and had an inadequate response or intolerance to dronabinol or megestrol? Yes No Is the patient currently receiving treatment with antiretrovirals? Yes No Does the patient have acute critical illness due to complications following open heart surgery, abdominal surgery, multiple accidental trauma, or those with acute respiratory failure? Yes No Has the patient been screened to verify the absence of any active malignancy? Yes No Does the patient have active proliferative or severe non-proliferative diabetic retinopathy? Yes No Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?						
Please note: This	request may be denied	I unless all required information	on is received.			

For urgent or expedited requests please call 1-855-401-4262.



Zorbtive® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Memb	er Informatio	n (required)			mation (required)
Member Name:			Provider Name:		
Insurance ID#:			NPI#:		Specialty:
Date of Birth:			Office Phone:		
Street Address:			Office Fax:		
City:	State:	Zip:	Office Street Ac	ldress:	
Phone:	I	1	City:	State:	Zip:
		Medication Info	ormation (red	quired)	
Medication Name:			Strength:		Dosage Form:
☐ Check if requesting	brand		Directions for U	se:	
☐ Check if request is for continuation of therapy					
		Clinical Inform	mation (requir	red)	
Select the diagnos Short bowel sync Other diagnosis:	drome		ICD-1	0 Code(s):	
Is the patient receiving Does the patient has accidental trauma, of	ed by or in consultation of specialized nutrition of acute critical illness or acute respiratory for	on with a gastroentero ional support (i.e., paress due to complications ailure?	enteral nutrition) s following open	?	bdominal surgery, multiple
Are there any other conthis review?	nments, diagnoses, syn	nptoms, medications tried	or failed, and/or ar	ny other information	n the physician feels is important to
Please note: This	request may be denied u	nless all required information	n is received		

For urgent or expedited requests please call 1-855-401-4262.



Lindane shampoo, Ovide® (malathion), NatrobaTM (spinosad), Sklice® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:		l	City: State: Zip:			Zip:
		Medication Inf	ormation	(required)		
Medication Name:			Strength: Dosage Form:			rm:
☐ Check if requesting brand			Directions for Use:			
□ Check if request	is for continuati	on of therapy				
		Clinical Info	rmation (re	equired)		
Medication his	story:					
		d failure, contraindication, 0 days? ☐ Yes ☐ No	or intolerance	e to a permethrir	n or pyrethr	ins-piperonyl
butoxide produc	or in the past s	o days! La res La No				
Are there any other cothis review?	omments, diagnos	ses, symptoms, medications tried	or failed, and/or	any other information	on the physicia	an feels is important to
		denied unless all required information de requests please call 1-855-401-4.				



Hemangeol[™] Prior Authorization Request Form

Member Information (required)			Provider Information (required)				
Member Name	:		Provider Name:				
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:	Date of Birth:						
Street Address	:		Office Fax:				
City:	State:	Zip:	Office Street A	Office Street Address:			
Phone:			City:	State:	Zip:		
		Medication	Information ((required)			
Medication Nar	me:		Strength:		Dosage Form:		
☐ Check if requ	uesting brand		Directions for	Use:			
☐ Check if requ	uest is for continuation	of therapy					
		Clinical Ir	nformation (red	quired)			
Select the d	liagnosis below:						
Proliferat	ing infantile heman	gioma requiring syste	mic therapy				
Other dia	agnosis:		ICD-10 Co	ode(s):			
Clinical info	ormation:						
		ms (kg) or greater?					
•		or a history of broncho	•				
•	•	dia (less than 80 bea	•				
•	•	han first-degree heart	•		ure? 🛘 Yes 🗎 No		
-	•	essure less than 50/30	•	i □ No			
Does the pa	tient have pheochro	omocytoma? Yes	□ No				
Are there any ot this review?	ther comments, diagnose	es, symptoms, medications	tried or failed, and/or	any other informatio	on the physician feels is important to		
Please note:		enied unless all required infor					



Hepatitis C Prior Authorization Request Form (Page 1 of 2)

	DO NOT COPY FOR FUTU	JRE USE. FORMS ARE UP	DATED FREQUENTLY A	ND MAY BE I	BARCODED	
Member Information (required) Member Name:			Provider Information (required) Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:			City:	State:		Zip:
		Medication Info	rmation (required)			
Medication Name:			Strength:		Dosage Fo	orm:
☐ Check if requesting	brand		Directions for Use:			
☐ Check if request is	for continuation of the	erapy				
		Clinical Inform	nation (required)			
Select the diagnosis						
•	☐ Hepatitis C virus infection					
☐ Other diagnosis: _			ICD-10 Cod	de(s):		
Clinical information:						
	's genotype: 's weight:					
		'\9 roviders may be asked to	nrovide documentation	١٠		
Does the patient ha	ave cirrhosis?	□ No	provide documentation).		
		lisease (Child-Pugh A)?				
	ave decompensated live nt naïve?	er disease (Child-Pugh B	or C)?			
•		n, does the patient have	a negative pregnancy to	set within 30	dave prior t	o initiation of
		test during treatment?		St Within 50	days prior t	o initiation of
-	-	svir, also answer the fo	-			
		e to ribavirin? 🛚 Yes 🗖				
•		th sofosbuvir or NS5A-ba	ased treatment? □ Yes	□ No		
	glycoprotein (P-gp) ind					
	nticancers (e.g., topoted	•	Ct Jahm's want sambans			
oxcarbazepine)?	loderate to potent C 1P	inducers (e.g., rifampin,	St. John's Wort, Carbaina	azepine, prie	enytoin, prie	nobarbitai,
For Harvoni or gene	ric ledipasvir/sofosbu	vir, also answer the fol	lowing:			
	taking any of the follow					
		excarbazepine, phenobar	bital, phenytoin)			
□ P-glycoprotein (P-gp) inducers (e.g., rifampin, St. John's wort)□ HIV antiretrovirals (e.g., tipranavir/ritonavir)						
☐ Tenofovir-containing HIV regimens						
☐ Anticaners (e.g., topotecan)						
		o answer the following				
	Select if the patient has been previously treated with a regimen containing the following (select all that applies): □ An HCV NS5A inhibitor					
☐ An NS3/4A prote						
☐ Interferon (including pegylated formulations), ribavirin, and/or Sovaldi (sofosbuvir)						



Hepatitis C Prior Authorization Request Form (Page 2 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

For Sovaldi (sofosbuvir), also answer the following:
Select if the patient will use Sovaldi in combination with the following:
Pegylated interferon and ribavirin
Ribavirin
Does the patient have severe renal impairment (eGFR < mL/min/1.73 m²)? ☐ Yes ☐ No
Does the patient have end-stage renal disease? \(\begin{align*} \text{Yes} \\ \begin{align*} \D \text{No} \\ \end{align*}
Does the patient have hepatocellular carcinoma that meets criteria for liver transplant? Yes No
For Vosevi (sofosbuvir-velpatasvir-voxilaprevir), also answer the following:
Has the patient been previously treated with a regimen containing an NS5A inhibitor? ☐ Yes ☐ No
Has the patient been previously treated with a regimen containing Sovaldi (sofosbuvir) without an NS5A inhibitor? Yes No
For Zepatier (elbasvir-grazoprevir), also answer the following:
Has the patient been tested for the presence of NS5A resistance-associated polymorphisms? Yes No
If yes to the above question, does the patient have baseline NS5A polymorphisms? Yes No
Does the patient have moderate to severe hepatic impairment? Yes No
Has the patient failed the 2-drug regimen of peginterferon alfa and ribavirin? ☐ Yes ☐ No
Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to
this review?
Please note: This request may be denied unless all required information is received

For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



Esbriet® & Ofev® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)				Provider Information (required)			
Member Name:			Provider Name	Provider Name:			
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street A	Address:			
Phone:			City:	State:	Zip:		
		Medication	Information (re	equired)			
Medication Name:			Strength:	. ,	Dosage Form:		
☐ Check if request	ing brand		Directions for	Directions for Use:			
☐ Check if request	is for continuatio	n of therapy					
		Clinical In	formation (requ	ired)			
Select the diagn	osis below:						
Idiopathic pulr	monary fibrosis (I	PF)					
Other diagnos	sis:		ICD-1	0 Code(s):			
Clinical informa	tion:						
		al capacity (FVC) great	er than or equal to 5	0% of predicted	in the last 60		
days? • Yes		ribed by or in consultati	ion with a nulmonolo	ogist2 D Vos E) No		
is the requested i	nedication presc	inbed by or in consultati	on with a pullifolioid	igist: Lifes L	INU		
	omments, diagnose	s, symptoms, medications	tried or failed, and/or ar	ny other information	n the physician feels is important to		
this review?							
		lenied unless all required info					



Actemra® Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Memb	er Information	(required)	Provide	er Infor	mation	(required)	
Member Name:			Provider Name:			· · · · · · · · · · · · · · · · · · ·	
Insurance ID#:			NPI#: Specialty:				
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Address:				
Phone:			City:	State:		Zip:	
		Madiaation Info	rmation				
Medication Name:		Medication Info	Strength:		Dosage F	orm:	
					Dosage F	OIIII.	
☐ Check if requesting		200 1/	Directions for Use:				
☐ Check if request is for continuation of therapy Clinical Information							
Clinical Information (required)							
	Select the diagnosis below:						
Moderately to severely active rheumatoid arthritis (RA)							
Active polyarticular juvenile idiopathic arthritis (pJIA)							
	□ Active systemic juvenile idiopathic arthritis (sJIA) □ Temporal arteritis or giant cell arteritis (GCA)						
	-associated interstitial lu	•					
☐ Other diagnosis:		ing disease	ICD-10 Cod	le(s):			
Clinical information:				(-).			
		tation with one of the fol	lowing specialists:				
☐ Allergist/Immuno	-	•		Other			
Will Actemra be used	in combination with ano	ther biologic agent or tai	rgeted immunomodulato	r? 🛚 Yes	□ No		
1	-	oid arthritis (RA), also	-				
Has the patient had an rheumatic drugs (DMA	n inadequate response t ARDs)? 및 Yes 및 No	o, intolerance to, or con List	traindication to one or m	ore non-bio	logic diseas	e modifying anti- 	
For active polyarticu	lar juvenile idiopathic	arthritis (pJIA), also ar	nswer the following:				
	n inadequate response t ARDs)? ☐ Yes ☐ No	o, intolerance to, or con List	traindication to one or m	ore non-biol	logic diseas	e modifying anti-	
For active systemic j	juvenile idiopathic arth	nritis (sJIA), also answ	er the following:				
Has the patient had ar (NSAIDs), corticostero		or intolerance to at least list	one oral systemic agent	[i.e., non-st	teroidal anti-	inflammatory drugs	
For temporal arteritis	s or giant cell arteritis	(GCA), also answer the	e following:				
Has the patient had an inadequate response to, intolerance to, or contraindication to oral or parenteral corticosteroid? Yes No List							
Quantity limit requests:							
What is the quantity requested per TREATMENT? syringe every weeks							
	What is the reason for exceeding the plan limitations?						
☐ Titration or loading		e.g., one tablet in the mo	orning and two tablets at	night one	to two tablet	s at hadtima\	
			טוווווט מווט נשט נמטופנג מו	i nigrit, one i	เบ เพบ เสมเยเ	s at Deutille)	
Requested strength/dose is not commercially available							



TyenneTM Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Name: Provider Name: Insurance ID#: NPI#: Specialty: Date of Birth: Office Phone: Street Address: Office Fax: City: State: Zip: Office Street Address:	Member Information		Provid		mation	(required)	
Date of Birth: Office Phone: Street Address: Office Fax:							
Street Address: Office Fax:	Insurance ID#:		NPI#:		Specialty:		
	Date of Birth:		Office Phone:				
City: State: Zip: Office Street Address:	Street Address:		Office Fax:				
	City: State:	Zip:	Office Street Address:				
Phone: City: State: Zip:	Phone:		City:	State:		Zip:	
Medication Information (required)		Modication Info	rmation (
Medication Name: Strength: Dosage Form:		Medication inic			Dosage F	orm:	
					Booago		
☐ Check if requesting brand Directions for Use: ☐ Check if request is for continuation of therapy		rany	Directions for Use:				
Clinical Information (required)							
Select the diagnosis below: Moderately to severely active rheumatoid arthritis (RA)	_	arthritia (DA)					
□ Active polyarticular juvenile idiopathic arthritis (pJIA)							
☐ Active systemic juvenile idiopathic arthritis (sJIA)							
☐ Temporal arteritis or giant cell arteritis (GCA)	1						
Systemic sclerosis-associated interstitial lung disease		,					
☐ Other diagnosis: ICD-10 Code(s):		g aleedee	ICD-10 Cod	de(s):			
Clinical information:				()			
Select if Actemra is prescribed by or in consultation with one of the following specialists: ☐ Allergist/Immunologist ☐ Rheumatologist ☐ Other	· · · · · · · · · · · · · · · · · · ·		• .				
Will Tyenne be used in combination with another biologic agent or targeted immunomodulator? Yes No	Will Tyenne be used in combination with anot	her biologic agent or tar	geted immunomodulato	? 🛚 Yes	□ No		
For moderately to severely active rheumatoid arthritis (RA), also answer the following:	For moderately to severely active rheumat	oid arthritis (RA), also	answer the following:				
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List			traindication to one or m	ore non-bio	ologic diseas	e modifying anti-	
For active polyarticular juvenile idiopathic arthritis (pJIA), also answer the following:			_				
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List			traindication to one or m	ore non-bio	ologic diseas	e modifying anti-	
For active systemic juvenile idiopathic arthritis (sJIA), also answer the following:							
Has the patient had an inadequate response or intolerance to at least one oral systemic agent [i.e., non-steroidal anti-inflammatory drugs (NSAIDs), corticosteroid]? Yes No List			one oral systemic agen	t [i.e., non-s	teroidal anti	-inflammatory drugs	
For temporal arteritis or giant cell arteritis (GCA), also answer the following:	For temporal arteritis or giant cell arteritis	(GCA), also answer the	e following:				
Has the patient had an inadequate response to, intolerance to, or contraindication to oral or parenteral corticosteroid? Yes No List							
Quantity limit requests:							
What is the quantity requested per TREATMENT? syringe every weeks							
What is the reason for exceeding the plan limitations? ☐ Titration or loading dose purposes ☐ Patient is on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime)	☐ Titration or loading dose purposes☐ Patient is on a dose-alternating schedule (e.g., one tablet in the mo	orning and two tablets a	t night, one	to two table	ts at bedtime)	
□ Requested strength/dose is not commercially available□ Other:		ally available					



Adbry® Prior Authorization Request Form

		ation (required)			rmation (required)	
Member Name:			Provider Nan	ne:		
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone	:		
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street	Office Street Address:		
Phone:			City:	State:	Zip:	
		Medication	Information (required)		
Medication Name:			Strength:		Dosage Form:	
☐ Check if requesting			Directions for	· Use:	L	
☐ Check if request is	for continuatio r					
		Clinical l	nformation (red	quired)		
Select the diagnosis						
Atopic dermatitis (cOther diagnosis:	describe severity	level)	IC	D-10 Code(s):		
Clinical information:				· · · ·		
Select if the requested Dermatologist	l medication is p ☐ Allerg	rescribed by or in consu ist/Immunologist	Iltation with one of the	following specialists	:	
Medication history:	<u>.</u>	<u> </u>				
Has the patient have a	a documented 14	l in combination with and 4-day trial of a topical co	rticosteroid, pimecrolir	nus cream, tacrolim	odulator?	
Are there any other com this review?	ments, diagnoses	s, symptoms, medications	s tried or failed, and/or a	any other information	the physician feels is important to	
Please note: This r	aguaat may ba day	nied unless all required info	rmation is received			

For urgent or expedited requests please call 1-855-401-4262.



Arcalyst® Prior Authorization Request Form

Member Information (required)			Pro	Provider Information (required)			
Member Name:	Member Name:			Provider Name:			
Insurance ID#:			NPI#:	Specialty:			
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street A	ddress:			
•	Otato.	p.		<u>, </u>	7:		
Phone:			City:	State:	Zip:		
		Medication	Information (re	quired)			
Medication Name:			Strength:		Dosage Form:		
☐ Check if requestin	g brand		Directions for U	Jse:			
☐ Check if request is	for continuatio	n of therapy					
		Clinical In	formation (requi	ired)			
syndrome (MWS) Deficiency of inte	ated periodic syn] rleukin-1 recepto	dromes (CAPS) [including or antagonist (DIRA)	familial cold autoinflam	nmatory syndrome ((FCAS) and Muckle-Wells		
Recurrent pericarOther diagnosis:	ditis		ICD	-10 Code(s):			
Clinical information			100-	-10 Code(s)			
Select if the requeste	ed medication is	diagnosed by, or upon con matologist Neurologist					
Will the requested m	edication be use	d in combination with anot	her biologic agent? 🗖	Yes □ No			
For recurrent period Has the patient had a glucocorticoids? Y	an inadequate re	the following: sponse or intolerance to, o	or contraindication to a	trial of colchcine or	one oral systemic		
Quantity limit reque What is the quantity What is the reason ☐ Titration or loadin ☐ Patient is on a do	ests: requested per The for exceeding to g dose purposes se-alternating so	REATMENT? syrin	nge every weel		to two tablets at bedtime)		
Are there any other cor this review?	nments, diagnose	es, symptoms, medications	tried or failed, and/or an	y other information t	the physician feels is important to		

Please note: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Bimzelx® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address	<u> </u>		
Phone:			City:	State:		Zip:
		Medication Info	ormation (************************************			
Medication Name:			Strength:		Dosage F	orm.
	b.u.ad		-		Dosage	OIIII.
☐ Check if requesting ☐ Check if request is	g brand s for continuation of the	erapy	Directions for Use:			
		Clinical Inform	mation (required)			
□ Active psoriatic ar□ Active ankylosing	re chronic plaque psoria thritis	sis	Traction (required)			
☐ Other diagnosis: _	•		ICD-10 Co	de(s):		
Dermatologist	d medication is prescrib	ed by or in consultation gist		·		Yes □ No
		oriasis (PsO), also ans				
following: photothera		to, intolerance to, or con ystemic treatments (i.e., List				
-	arthritis, also answer	the following: to, intolerance to, or con	itraindication to methotre	exate? 🛭 Y	es □ No	
	ng spondylitis, also an					
Has the patient had a (NSAIDs)? ☐ Yes 〔	an inadequate response ⊒ No List	to, intolerance to, or con	traindication to one or n	nore non-ste	eroidal anti-ir	nflammatory drugs
For active non-radiographic axial spondyloarthritis, also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to one or more immunosuppressive agents (e.g., azathioprine, mercaptopurine, methotrexate)? Yes No List						
What is the reason to Titration or loading ☐ Patient is on a dos	equested per TREATMI for exceeding the plan g dose purposes	(e.g., one tablet in the m	very weeks			



Cibinqo[™] Prior Authorization Request Form

	O NOT COPY FOR FUT	JRE USE. FORMS ARE UP	DATED FREQUENTLY A	AND MAY BE I	BARCODED	
Memb	er Informatio	1 (required)	Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address	3:		
Phone:	L		City:	State:	Zip:	
		Medication Info	rmation (required)		
Medication Name:			Strength:		Dosage Form:	
☐ Check if requesting			Directions for Use:			
☐ Check if request is	for continuation of th	erapy				
		Clinical Inforr	mation (required)			
	describe severity level)					
Other diagnosis:			ICD-10 Co	ode(s):		
Clinical information: Select if the requested Dermatologist		ed by or in consultation volunologist	with one of the following			
Has the patient have a	a documented 14-day t	nbination with another bio	roid, pimecrolimus crea			
Are there any other com this review?	ments, diagnoses, symp	otoms, medications tried o	r failed, and/or any othe	r information	the physician feels is important	

This request may be denied unless all required information is received. Please note:

For urgent or expedited requests please call 1-855-401-4262.



Cimzia® Prior Authorization Request Form (Page 1 of 2)

Member Information (required)			Provider Information (required)			
Member Name: Provider			Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address	:		
Phone:			City:	State:		Zip:
		Medication Info	rmation (required)			
Medication Name:					December To	rno.
			Strength:		Dosage Fo	rm:
☐ Check if requesting			Directions for Use:			
☐ Check if request is	for continuation of the					
		Clinical Inform	mation (required)			
Select the diagnosis	below:					
-	ve polyarticular juvenile i	diopatic arthritis (pJIA)				
☐ Active psoriatic art	hritis					
☐ Moderate to sever	e chronic plaque psorias	sis				
	erely active rheumatoid a					
•	erely active Crohn's dise					
☐ Active ankylosing	•					
-	aphic axial spondyloarth	ritis				
☐ Other diagnosis: _	aprilo axiai oporiayioara	uo	ICD-10 Co	de(s):		
Clinical information:				· ,		
Select if the requested Dermatologist	d medication is prescribe					
Will the requested me	edication be used in com	bination with another bid	ologic agent or targeted	immunomod	dulator? 🛭 Y	es 🗆 No
For moderately to se	everely active polyartic	ular juvenile idiopathi	c arthritis (pJIA), also	answer the	following:	
	n inadequate response t ARDs)? ☐ Yes ☐ No		traindication to one or n	nore non-bio	ologic disease	e modifying anti-
•	arthritis, also answer t	•				
	n inadequate response t			exate? 🛚 Y	es 🗆 No	
	vere chronic plaque ps	•	•			
	n inadequate response t					
following: phototherapy or one or more oral systemic treatments (i.e., methotrexate, cyclosporine, acitretin, sulfasalazine, calcipotriene, tazarotene, corticosteroid)? Yes No List						ne, calcipotherie,
For moderately to s	everely active rheuma	toid arthritis, also ansv	wer the following:			
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List						modifying anti-
For moderately to se	everely active Crohn's	disease, also answer t	he following:			
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more immunosuppressive agents (e.g., azathioprine, mercaptopurine, methotrexate)? Yes No List						agents (e.g.,



Cimzia® Prior Authorization Request Form (Page 2 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

For active ankylosing spondylitis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-steroidal anti-inflammatory drugs (NSAIDs)? Yes No List
For active non-radiographic axial spondyloarthritis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more immunosuppressive agents (e.g., azathioprine, mercaptopurine, methotrexate)? Yes No List
Quantity limit requests: What is the quantity requested per TREATMENT? syringe every weeks
What is the reason for exceeding the plan limitations? ☐ Titration or loading dose purposes ☐ Patient is on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime) ☐ Requested strength/dose is not commercially available ☐ Other:
Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?
,
Please note: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



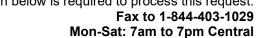
Cosentyx® Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)				
Member Name:			Provider Name:				
Insurance ID#:			NPI#: Specialty:				
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Address:				
Phone:			City:	State:		Zip:	
	N	Medication Info	rmation (required)				
Medication Name:	1		Strength:		Dosage F	orm.	
☐ Check if requesting	hrand		Directions for Use:		Dodago	OIIII.	
	for continuation of the	rapy	Directions for Ose.				
			nation (required)				
□ Active ankylosing s □ Active psoriatic art □ Moderate to severe □ Active Non-radiogr □ Active enthesitis-re □ Moderate to severe □ Other diagnosis: Clinical information: Select if the requested □ Dermatologist Will the requested me	Clinical information: Select if the requested medication is prescribed by or in consultation with one of the following specialists:						
_			lerance to one or more	non-steroida	al anti-inflam	nmatory drugs	
-	arthritis, also answer t	_	1				
-			lerance to methotrexate	? ∐ Yes L	No		
For moderate to severe plaque psoriasis, also answer the following: Has the patient had an inadequate response, contraindication, or intolerance to conventional therapy with at least one of the following: phototherapy or one or more oral systemic treatments (i.e., methotrexate, calcipotriene, cyclosporine, acitretin, sulfasalazine, tazarotene, corticosteroid)? Yes No List							
For active non-radiographic axial spondyloarthritis or enthesitis-related arthritis, also answer the following: Has the patient had an inadequate response, contraindication, or intolerance to one or more non-steroidal anti-inflammatory drugs (NSAIDs)? No List					nmatory drugs		
Has the patient had ar	ere hidradenitis suppu n inadequate response t ectable steroid therapy?	o, intolerance to, or con	e following: traindication to one or m	ore of the fo	ollowing: ora	ıl or topical antibiotic	



Dupixent® Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:	L	I	City:	State:		Zip:
		Medication Inf	ormation (required	d)		
Medication Name:			Strength:	-,	Dosage F	orm:
☐ Check if requesting	brand		Directions for Use:			
☐ Check if request is	for continuation of the	erapy				
		Clinical Infor	rmation (required)			
Select the diagnosis	below:					
Atopic dermatitis						
	sitis with nasal polyposi	s (CRSwNP)				
☐ Moderate to sever						
☐ Eosinophilic esoph	nagitis					
□ Prurigo nodularis□ Other diagnosis: _			ICD-1	0 Code(e):		
Clinical information:			10D-1	0 00dc(3)		
		ned by or in consultation	with one of the followin	a specialist	z·	
			gologist 📮 Pulmonolo			
Will the requested me	dication be used in cor	nbination with another b	piologic agent or targeted	d immunom	odulator?	Yes No
Atopic dermatitis:						
	documented trial of a t ys? ☐ Yes ☐ No Lis		mecrolimus cream, tacro	olimus ointm	ent, Eurisa	(crisaborole) ointment
Chronic rhinosinusi	tis with nasal polypos	is (CRSwNP):				
Does the patient have	a diagnosis of inadequ	uately controlled CRSwl	NP? 🗆 Yes 🗅 No			
Has the patient had a	documented trial of an	intranasal corticosteroi	d (INCS) within the last	120 days?	□ Yes □ N	lo
List						
Moderate to severe	asthma:					
-		· · · · · · · · · · · · · · · · · · ·	ICS) within the last 120	-		
•		rial of one of the followir	ng controller medications	s within the	last 120 day	/s:
□ Long-acting beta						
☐ LABA/ICS comb		MA)				
□ Long-acting muscarinic antagonists (LAMA) □ Leukotriene modifiers						
☐ Theophylline						
Eosinophilic esopha	-				<i>a</i>	
Has the patient had a suspension)? Yes		least 8 weeks of a prot	on pump inhibitor or cor	ticosteriod (e.g., fluticas	sone, budesonide





Dupixent® Prior Authorization Request Form (Page 2 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Prurigo nod	ularis
	ent had a documented trial of a topical corticosteroid, pimecrolimus cream, tacrolimus ointment, Eurisa (crisaborole) ointment to 120 days? Yes No List
Quantity lim	it requests: uantity requested per TREATMENT? syringe every weeks
What is the ☐ Titration of ☐ Patient is ☐ Requeste	reason for exceeding the plan limitations? or loading dose purposes on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime) d strength/dose is not commercially available
Are there any o	ther comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to
	ther comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to
	ther comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to
	ther comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to



Ebglyss[™] Prior Authorization Request Form

Member Information (required)				Provider Information (required)			
Member Name:	mber Name: Provider Name:						
Insurance ID#:			NPI#:	NPI#: Specialty:			
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street A	.ddress:			
Phone:	otato.		City:	State:	Zip:		
Priorie.			City.	State.	Ζίρ.		
		Medication	Information (re	equired)			
Medication Name) :		Strength:		Dosage Form:		
☐ Check if reque			Directions for U	Jse:	1		
☐ Check if reque	st is for continuatio						
		Clinical In	formation (requ	ired)			
Select the diagn							
☐ Atopic dermat	itis (describe severit	y level)	ICD-10 Code(s):				
			ICD	-10 Code(s):			
Clinical information Select if the requirements Dermatolog	ested medication is p	orescribed by or in consult jist/Immunologist					
Medication histo		· · · · · · · · · · · · · · · · · · ·	·				
		d in combination with anot					
		4-day trial of a topical cort			us ointment, or Eucrisa		
Quantity limit re What is the quant		REATMENT? syrir	nge every wee	·ks			
What is the reas	on for exceeding th	ne plan limitations?					
	ading dose purposes a dose-alternating sc		the morning and two ta	ablets at night, one	to two tablets at bedtime)		
Requested str	ength/dose is not co	mmercially available	Ü	3 ,	,		
Other:	<u> </u>						
Are there any other this review?	comments, diagnose	s, symptoms, medications	tried or failed, and/or an	y other information	the physician feels is important t		

This request may be denied unless all required information is received. Please note:

For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



Enbrel® Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)				
Member Name:			Provider Name:				
Insurance ID#:			NPI#: Specialty:			:	
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Address:				
Phone:			City:	State:		Zip:	
	N	Medication Info	rmation (required)				
Medication Name:			Strength:		Dosage F	form:	
☐ Check if requesting	brand		Directions for Use:				
	for continuation of the	rapy					
		Clinical Inform	nation (required)				
Select the diagnosis	below:						
□ Active ankylosing s	spondylitis (AS)						
	hritis (PsA)/Juvenile pso	oriatic arthritis (JPsA)					
□ Active juvenile idio	. , ,						
	e chronic plaque psorias						
•	• •	juvenile idiopathic arthri	itis (pJIA)				
· ·	erely active rheumatoid	arthritis (RA)					
Other diagnosis:			ICD-10 Cod	de(s):			
Clinical information:							
-		ed by or in consultation v	with one of the following	specialists:			
☐ Dermatologist	□ Rheumatolog						
-		bination with another bio		immunomo	dulator? 🔲	Yes □ No	
		o answer the following					
Has the patient had ar (NSAIDs)? ☐ Yes ☐		o, intolerance to, or con	traindication to one or m	ore non-st	eroidal anti-i	nflammatory drugs	
For active psoriatic a	arthritis (PsA) or juven	ile psoriatic arthritis (J	IPsA), also answer the	following:			
Has the patient had ar	n inadequate response t	o, intolerance to, or con	traindication to methotre	xate? 🛚 Y	es 🗆 No		
For active juvenile id	liopathic arthritis (PJI	A), also answer the foll	owing:				
		o, intolerance to, or con		xate? 🛚 Y	es 🛚 No		
		oriasis (PsO), also ans	•				
		o, intolerance to, or con					
following: phototherapy or one or more oral systemic treatments (i.e., methotrexate, cyclosporine, acitretin, sulfasalazine, calcil tazarotene, corticosteroid)? Yes No List				zine, calcipotriene,			
	<u> </u>				fallande		
		ular juvenile idiopathic			_	and the state of t	
	n inadequate response t ARDs)? ☐ Yes ☐ No	o, intolerance to, or con List	traindication to one or m	ore non-bic	logic diseas	e modifying anti-	
For moderately to se	verely active rheumat	oid arthritis (RA), also	answer the following:				
-				ore non-bio	logic diseas	se modifying anti-	
	Has the patient had an inadequate response to, intolerance to, or contrain rheumatic drugs (DMARDs)? Yes No List				•		



Enspryng® Prior Authorization Request Form

Member Information (required)			Pro	Provider Information (required)				
Member Name:			Provider Name	Provider Name:				
Insurance ID#:			NPI#:	NPI#: Specialty:				
Date of Birth:			Office Phone:					
Street Address:			Office Fax:					
City:	State:	Zip:	Office Street Ad	ddress:				
Phone:		I	City:	State:		Zip:		
		Medication	Information (red	quired)				
Medication Name:			Strength:		Dosage F	orm:		
☐ Check if requestir	ng brand		Directions for U	lse:				
☐ Check if request i	s for continuation	of therapy						
		Clinical In	formation (requi	red)				
Select the diagno	sis below:							
□ Neuromyelitis of		,						
Other diagnosis	s:		IC	D-10 Code(s): _				
Clinical informati Select if the reque • Neurologist	sted medication i	s prescribed by or in o		of the following s	specialists:			
•	medication be us	sed in combination with	n another biologic ag	ent? • Yes	No			
Are there any other conthis review?	mments, diagnoses	, symptoms, medications t	ried or failed, and/or any	other information	the physicia	n feels is important to		

For urgent or expedited requests please call 1-855-401-4262.
This form may be used for non-urgent requests and faxed to 1-844-403-1029.



Entyvio® Prior Authorization Request Form

		IRE USE. FORMS ARE UP	PDATED FREQUENTLY A	ND MAY BE I	BARCODED	
Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address	:		
Phone:	1	1	City:	State:	Zip:	
		Medication Info	ormation (required)			
Medication Name:			Strength:		Dosage Form:	
☐ Check if requesting	brand		Directions for Use:			
☐ Check if request is	for continuation of the	rapy				
		Clinical Inform	nation (required)			
•	erely active Crohn's dise					
,	erely active Ulcerative c		100 40 0-	-1 - / -) -		
Other diagnosis:			ICD-10 Co	de(s):		
Clinical information: Select if the requested Gastroenterologi	d medication is prescrib	ed by or in consultation	with one of the following	specialists:		
•		bination with another bi	ologic agent or targeted	immunomod	dulator? 🗆 Yes 🗆 No	
Has the patient had ar	n inadequate response	disease, also answer to, intolerance to, or cons (e.g., prednisone, method	traindication to one or n		tional therapies: azathioprine, 6- st	
For moderately to se	verely active ulcerative	e colitis, also answer	the following:			
following: corticosteroi	ids (i.e., prednisone, me		As (i.e., mesalamine, sı		with one or more of the balsalazide, olsalazine), non-	
	equested per TREATME	ENT? syringe ev	very weeks			
What is the reason for exceeding the plan limitations? ☐ Titration or loading dose purposes ☐ Patient is on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime) ☐ Requested strength/dose is not commercially available ☐ Other:						
Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?						
Please note: This re	equest may be denied unle	ess all required information	is received.			

For urgent or expedited requests please call 1-855-401-4262.



Fasenra[™] Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Memb	Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:				
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Add	ress:			
Phone:			City:	State:	Zip:		
	N	Medication Info	rmation (requ	ired)			
Medication Name:			Strength:	irea)	Dosage Form:		
☐ Check if requesting	brand		Directions for Use	e:			
☐ Check if request is	for continuation of the	rapy					
		Clinical Inform	nation (required	d)			
☐ Eosinophilic grad ☐ Other diagnosis: Clinical information Select if the request	ted medication is pres	angiitis	Itation with one o	Code(s): f the following s	specialists:		
For severe asthma Has the patient exp dose inhaled cortico	a with eosinophilic p erienced inadequate osteroid (ICS) and co	henotype: control of asthmatic sy	/mptoms after a r ng-acting beta2 a	ninimum of thre	ee months use of a high- or high-dose LABA/ICS		
Is the patient contin controlled medication unless there is a controlled leukotriene long-acting	on (e.g., leukotriene re	d corticosteroid (e.g., eceptor antagonist, lor erance to these medice.g., montelukast) salmeterol)	ng-acting beta-2 a	agonist, long-ad	without additional asthma cting muscarinic antagonist)		
			failed, and/or any ot	her information t	he physician feels is important to		
ease note: This r	equest may be denied unle	ess all required information	is received.				

For urgent or expedited requests please call 1-855-401-4262.



Humira® Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:		<u> </u>	
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:			City:	State:	Zip:	
	N	Medication Info	rmation (required)			
Medication Name:	·		Strength:		Dosage Form:	
☐ Check if requesting	brand		Directions for Use:			
	for continuation of the	rapy				
		Clinical Inforr	nation (required)			
Select the diagnosis	helow:		(loquilou)			
☐ Active ankylosing s						
☐ Active psoriatic art	•					
T	e chronic plaque psorias	sis				
		va (e.g., Hurley Stage II	or III)			
	erely active Crohn's dise	,	,			
-	•	juvenile idiopathic arthri	itis (JIA)			
☐ Moderately to seve	erely active rheumatoid a	arthritis (RA)	, ,			
☐ Moderately to seve	erely active ulcerative co	litis				
☐ Non-infectious uve	itis					
Other diagnosis:			ICD-10 Co	de(s):		
Clinical information:						
Select if the requested Dermatologist	d medication is prescribe ☐ Gastroenterologist	ed by or in consultation v Ophthalmologist	with one of the following Rheumatologist	specialists:		
Will the requested me	dication be used in com	bination with another bid	ologic agent or targeted	immunomo	dulator? 🛘 Yes 🗘 No	
If requesting a citrate-	free product, has the pa	tient tried citrate produc	t first? Yes No	When:		
For active ankylosing	g spondylitis (AS), als	o answer the following	<u>;</u>			
Has the patient had ar (NSAIDs)? ☐ Yes ☐	n inadequate response t I No List	o, intolerance to, or con	traindication to one or n	nore non-ste	eroidal anti-inflammatory dru્	gs —
For active psoriatic a	arthritis (PsA), also an	swer the following:				
Has the patient had an inadequate response to, intolerance to, or contraindication to methotrexate? Yes No						
For moderate to seve	ere chronic plaque pso	oriasis (PsO), also ans	wer the following:			
Has the patient had an inadequate response to, intolerance to, or contraindication to conventional therapy with at least one of the following: phototherapy or one or more oral systemic treatments (i.e., methotrexate, cyclosporine, acitretin, sulfasalazine, calcipotriene, tazarotene, corticosteroid)? No List						
For moderate to seve	ere hidradenitis suppu	rativa, also answer the	e following:			· <u>—</u>
	n inadequate response t			nore of the fo	ollowing: oral or topical antibi	iotic



Please note:

Fax to 1-844-403-1029 Mon-Sat: 7am to 7pm Central

Humira® Prior Authorization Request Form (Page 2 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

For moderately to severely active Crohn's disease, also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to one or more conventional therapies: azathioprine, 6mercaptopurine, methotrexate, corticosteroids (e.g., prednisone, methylprednisolone) **Yes \Q No** List For moderately to severely active polyarticular juvenile idiopathic arthritis (pJIA), also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying antirheumatic drugs (DMARDs)? ☐ Yes ☐ No List For moderately to severely active rheumatoid arthritis (RA), also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying antirheumatic drugs (DMARDs)? ☐ Yes ☐ No List For moderately to severely active ulcerative colitis, also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to conventional therapy with one or more of the following: corticosteroids (i.e., prednisone, methylprednisolone), 5-ASAs (i.e., mesalamine, sulfasalazine, balsalazide, olsalazine), nonbiologic DMARDs (i.e., azathioprine, methotrexate, mercaptopurine)? ☐ Yes ☐ No List For non-infectious uveitis, also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: methotrexate. mycophenolate, azathioprine, cyclosporine, tacrolimus, cyclophosphamide, oral/injectable steroid therapy?

Yes No List **Quantity limit requests:** What is the quantity requested per TREATMENT? ___ __ syringe every __ What is the reason for exceeding the plan limitations? ☐ Titration or loading dose purposes Patient is on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime) ☐ Requested strength/dose is not commercially available Other: Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review? This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



AbriladaTM Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)				
Member Name:			Provider Name:				
Insurance ID#:			NPI#: Specialty:				
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Address:				
Phone:			City:	State:		Zip:	
		Modication Info	ormation (required)				
Medication Name:		vieurcation inic			Dossago E	orm:	
			Strength:		Dosage F	OIIII.	
☐ Check if requesting		rony	Directions for Use:				
☐ Check if request is	for continuation of the		1.				
	Clinical Information (required)						
Select the diagnosis							
☐ Active ankylosing	•						
☐ Active psoriatic art	` '						
	e chronic plaque psorias						
	erely active Crohn's dise						
•	erely active polyarticular	•	itis (JIA)				
•	erely active rheumatoid						
•	erely active ulcerative co	olitis					
☐ Hidradenitis Supp	urativa						
☐ Uveitis							
☐ Other diagnosis: _			ICD-10 Cod	de(s):			
Clinical information:							
Select if the requested Dermatologist	d medication is prescribe ☐ Gastroenterologist		with one of the following t		er		
· ·			ologic agent or targeted		dulator? 🗖 `	Yes □ No	
If non-preferred agent	use of a non-preferred t is medically necessary	or required, provide a b	er a preferred product rief summary for use of t	(Humira): the non-pre	ferred agent	over a preferred	
For active ankylosing spondylitis (AS), also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-steroidal anti-inflammatory drugs (NSAIDs)? Yes No List							
For active psoriatic	arthritis (PsA), also an	swer the following:					
Has the patient had a	n inadequate response	to, intolerance to, or con	traindication to methotre	exate? 🛚 Y	es 🛚 No		
For moderate to sev	ere chronic plaque ps	oriasis (PsO), also ans	wer the following:				
following: phototherap	Has the patient had an inadequate response to, intolerance to, or contraindication to conventional therapy with at least one of the following: phototherapy or one or more oral systemic treatments (i.e., methotrexate, calcipotriene, cyclosporine, acitretin, sulfasalazine, tazarotene, corticosteroid)? Yes No List						



AbriladaTM Prior Authorization Request Form (Page 2 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

For moderately to severely active Crohn's disease, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more immunosuppressive agents (e.g., azathioprine, mercaptopurine, methotrexate)? Yes No List
For moderately to severely active polyarticular juvenile idiopathic arthritis (pJIA), also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List
For moderately to severely active rheumatoid arthritis (RA), also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List
For moderately to severely active ulcerative colitis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to conventional therapy with one or more of the following: corticosteroids (i.e., prednisone, methylprednisolone), 5-ASAs (i.e., mesalamine, sulfasalazine, balsalazide, olsalazine), non-biologic DMARDs (i.e., azathioprine, methotrexate, mercaptopurine)? Yes No List
For moderate to severe hidradenitis suppurativa, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: oral or topical antibiotic therapy OR oral retinoid therapy, dapsone, or acitretin? □ Yes □ No List
For non-infectious uveitis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: methotrexate, mycophenolate, azathioprine, cyclosporine, tacrolimus, cyclophosphamide, oral/injectable steroid therapy? No List
Quantity limit requests:
What is the quantity requested per TREATMENT? syringe every weeks
What is the reason for exceeding the plan limitations?
☐ Titration or loading dose purposes☐ Patient is on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime)
Requested strength/dose is not commercially available
Other:
Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?
Please note: This request may be depied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



AmjevitaTM Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:			City:	State:		Zip:
	N	Medication Info	rmation (required)			
Medication Name:			Strength:		Dosage Fo	orm:
☐ Check if requesting	brand		Directions for Use:			
☐ Check if request is	for continuation of the	rapy				
Clinical Information (required)						
Select the diagnosis	below:					
☐ Active ankylosing s						
□ Active psoriatic arti	hritis (PsA)					
■ Moderate to severe	e chronic plaque psorias	sis				
Moderately to seve	erely active Crohn's dise	ase				
Moderately to seve	erely active polyarticular	juvenile idiopathic arthri	tis (JIA)			
Moderately to seve	erely active rheumatoid a	arthritis (RA)				
Moderately to seve	erely active ulcerative co	litis				
☐ Hidradenitis Suppu	ırativa					
□ Uveitis						
Other diagnosis:			ICD-10 Cod	e(s):		
Clinical information:						
Select if the requested Dermatologist	d medication is prescribe Gastroenterologi		vith one of the following gist ❑ Rheumatolog		Other	
Will the requested me	dication be used in com	bination with another bid	ologic agent or targeted i	mmunomo	dulator? 🗖 🕻	Yes □ No
If non-preferred agent		or required, provide a bi	er a preferred product rief summary for use of t		erred agent	over a preferred
For active ankylosing	g spondylitis (AS), also	o answer the following	:			
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-steroidal anti-inflammatory drugs (NSAIDs)? Yes No List						
<u> </u>	arthritis (PsA), also an					
•			traindication to methotre	xate? 🛚 Y	es 🗆 No	
		oriasis (PsO), also ans				
following: phototherap		stemic treatments (i.e.,	traindication to convention methotrexate, calcipotrie			



AmjevitaTM Prior Authorization Request Form (Page 2 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

For moderately to severely active Crohn's disease, also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to one or more immunosuppressive agents (e.g., azathioprine, mercaptopurine, methotrexate, corticosteroids)? **Q Yes Q No** List For moderately to severely active polyarticular juvenile idiopathic arthritis (pJIA), also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying antirheumatic drugs (DMARDs)? ☐ Yes ☐ No List For moderately to severely active rheumatoid arthritis (RA), also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying antirheumatic drugs (DMARDs)? ☐ Yes ☐ No List For moderately to severely active ulcerative colitis, also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to conventional therapy with one or more of the following: corticosteroids (i.e., prednisone, methylprednisolone), 5-ASAs (i.e., mesalamine, sulfasalazine, balsalazide, olsalazine), nonbiologic DMARDs (i.e., azathioprine, methotrexate, mercaptopurine)?

Yes
No List For moderate to severe hidradenitis suppurativa, also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: oral or topical antibiotic therapy OR oral retinoid therapy, dapsone, or acitretin?

Yes
No List For non-infectious uveitis, also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: methotrexate, mycophenolate, azathioprine, cyclosporine, tacrolimus, cyclophosphamide, oral/injectable steroid therapy?

No **Quantity limit requests:** What is the quantity requested per TREATMENT? syringe every What is the reason for exceeding the plan limitations? ☐ Titration or loading dose purposes Patient is on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime) ☐ Requested strength/dose is not commercially available Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?

<u>Please note</u>: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Cyltezo® Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)		Provider Information (required)				
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:	1	1	City:	State:		Zip:
	N	Medication Info	rmation (required)			
Medication Name:			Strength:		Dosage F	orm:
☐ Check if requesting	brand		Directions for Use:			
☐ Check if request is	for continuation of the	rapy				
		Clinical Inforr	nation (required)			
Select the diagnosis below:						
☐ Active ankylosing s						
☐ Active psoriatic art	•					
☐ Moderate to severe	e chronic plaque psorias	sis				
■ Moderately to seve	erely active Crohn's dise	ease				
■ Moderately to seve	erely active polyarticular	juvenile idiopathic arthri	tis (JIA)			
■ Moderately to seve	erely active rheumatoid	arthritis (RA)				
■ Moderately to seve	erely active ulcerative co	olitis				
■ Moderately to seve	erely active ulcerative co	olitis				
☐ Hidradenitis Suppu	urativa					
Other diagnosis: _			ICD-10 Cod	le(s):		
Clinical information:						
Select if the requested Dermatologist	d medication is prescribe ☐ Gastroenterologist	ed by or in consultation valued by or in cons				
Will the requested me	dication be used in com	bination with another bid	ologic agent or targeted	immunomo	dulator? 🗖 `	Yes 🛭 No
	is medically necessary	product (Cyltezo) ove or required, provide a b			erred agent	over a preferred
For active ankylosing spondylitis (AS), also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-steroidal anti-inflammatory drugs (NSAIDs)? Yes No List						
For active psoriatic a	arthritis (PsA), also an	swer the following:		<u> </u>		
Has the patient had a	n inadequate response t	to, intolerance to, or con	traindication to methotre	xate? 🛚 Y	es 🗆 No	
For moderate to seve	ere chronic plaque pso	oriasis (PsO), also ans	wer the following:			
following: phototherap		to, intolerance to, or con ystemic treatments (i.e., List				



Cyltezo® Prior Authorization Request Form (Page 2 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

For moderately to severely active Crohn's disease, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more immunosuppressive agents (e.g., azathioprine, mercaptopurine, methotrexate)? Yes No List
For moderately to severely active polyarticular juvenile idiopathic arthritis (pJIA), also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List
For moderately to severely active rheumatoid arthritis (RA), also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List
For moderately to severely active ulcerative colitis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to conventional therapy with one or more of the following: corticosteroids (i.e., prednisone, methylprednisolone), 5-ASAs (i.e., mesalamine, sulfasalazine, balsalazide, olsalazine), non-biologic DMARDs (i.e., azathioprine, methotrexate, mercaptopurine)? Yes No List
For moderate to severe hidradenitis suppurativa, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: oral or topical antibiotic therapy OR oral retinoid therapy, dapsone, or acitretin? □ Yes □ No List
For non-infectious uveitis, also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: methotrexate, mycophenolate, azathioprine, cyclosporine, tacrolimus, cyclophosphamide, oral/injectable steroid therapy? No List
Quantity limit requests: What is the quantity requested per TREATMENT? syringe every weeks What is the reason for exceeding the plan limitations? □ Titration or loading dose purposes □ Patient is on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime) □ Requested strength/dose is not commercially available □ Other:
Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?
<u>Please note</u> : This request may be denied unless all required information is received.

This request may be denied unless all required information is received. For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



HadlimaTM Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)				
Member Name:			Provider Name:				
Insurance ID#:			NPI#: Specialty:				
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Address:				
Phone:	1		City:	State:		Zip:	
	Medication Info	rmation (required)					
Medication Name:	•		Strength:		Dosage Fo	orm:	
☐ Check if requesting	hrand		Directions for Use:				
	for continuation of the	rapy	Directions for esc.				
		Clinical Inforr	nation (required)				
Select the diagnosis below:							
☐ Active ankylosing s							
☐ Active psoriatic art	-						
■ Moderate to severe	e chronic plaque psorias	sis					
· ·	erely active Crohn's dise						
1	erely active polyarticular	•	tis (JIA)				
1	erely active rheumatoid a	` '					
1	erely active ulcerative co						
-	erely active ulcerative co	litis					
☐ Hidradenitis Suppu	ırativa		100 100				
☐ Other diagnosis: _			ICD-10 Cod	le(s):			
Clinical information:							
Select if the requested Dermatologist	d medication is prescribe Gastroenterologist		with one of the following Characterists		er		
-			ologic agent or targeted i		dulator? 🗖 🕻	Yes 🗆 No	
			er a preferred product (rief summary for use of t		erred agent	over a preferred	
Fan addison the last							
For active ankylosing spondylitis (AS), also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-steroidal anti-inflammatory drugs (NSAIDs)? Yes No List							
For active psoriatic a	arthritis (PsA), also an	swer the following:					
<u>-</u>	Has the patient had an inadequate response to, intolerance to, or contraindication to methotrexate? No						
For moderate to seve	ere chronic plaque pso	oriasis (PsO), also ans	wer the following:				
following: phototherap	Has the patient had an inadequate response to, intolerance to, or contraindication to conventional therapy with at least one of the following: phototherapy or one or more oral systemic treatments (i.e., methotrexate, cyclosporine, acitretin, sulfasalazine, calcipotriene, tazarotene, corticosteroid)? Ves. D.No. List						



HadlimaTM Prior Authorization Request Form (Page 2 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

For moderately to severely active Crohn's disease, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more immunosuppressive agents (e.g., azathioprine, mercaptopurine, methotrexate)? Yes No List
For moderately to severely active polyarticular juvenile idiopathic arthritis (pJIA), also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List
For moderately to severely active rheumatoid arthritis (RA), also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List
For moderately to severely active ulcerative colitis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to conventional therapy with one or more of the following: corticosteroids (i.e., prednisone, methylprednisolone), 5-ASAs (i.e., mesalamine, sulfasalazine, balsalazide, olsalazine), non-biologic DMARDs (i.e., azathioprine, methotrexate, mercaptopurine)? Yes No List
For moderate to severe hidradenitis suppurativa, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: oral or topical antibiotic therapy OR oral retinoid therapy, dapsone, or acitretin? □ Yes □ No List
For non-infectious uveitis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: methotrexate, mycophenolate, azathioprine, cyclosporine, tacrolimus, cyclophosphamide, oral/injectable steroid therapy? No List
Quantity limit requests:
What is the quantity requested per TREATMENT? syringe every weeks
What is the reason for exceeding the plan limitations? ☐ Titration or loading dose purposes
□ Patient is on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime) □ Requested strength/dose is not commercially available □ Other:
Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?

This request may be denied unless all required information is received.

This form may be used for non-urgent requests and faxed to 1-844-403-1029.

For urgent or expedited requests please call 1-855-401-4262.

Please note:

94



Hulio® Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Memb	er Information	(required)	Provide	er Infor	mation	(required)
Member Name:			Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:		II.	
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:			City:	State:		Zip:
	N	Medication Info	rmation (required)			
Medication Name:			Strength:		Dosage Fo	orm:
☐ Check if requesting			Directions for Use:			
Check if request is f	or continuation of the	rapy				
Clinical Information (required)						
Select the diagnosis below: Active ankylosing spondylitis Active psoriatic arthritis (PsA) Moderate to severe chronic plaque psoriasis Moderately to severely active Crohn's disease Moderately to severely active plaque psoriasis Moderately to severely active plaque psoriasis Moderately to severely active polyarticular juvenile idiopathic arthritis (JIA) Moderately to severely active ulcerative colitis Moderately to severely active ulcerative colitis Hidradenitis Suppurativa Other diagnosis:						
For active ankylosing	spondylitis (AS), also	o answer the following	:			
	inadequate response t		traindication to one or mo	ore non-ste	eroidal anti-ir	nflammatory drugs
-	rthritis (PsA), also ans	_				
•			traindication to methotre	xate? 🛚 Ye	s 🗆 No	
Has the patient had ar	n inadequate response to by or one or more oral s		wer the following: traindication to convention methotrexate, cyclospor			



Please note: All information below is required to process this request.

Fax to 1-844-403-1029

Mon-Sat: 7am to 7pm Central

Hulio® Prior Authorization Request Form (Page 2 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

For moderately to severely active Crohn's disease, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more immunosuppressive agents (e.g., azathioprine, mercaptopurine, methotrexate)? Yes No List
For moderately to severely active polyarticular juvenile idiopathic arthritis (pJIA), also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List
For moderately to severely active rheumatoid arthritis (RA), also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List
For moderately to severely active ulcerative colitis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to conventional therapy with one or more of the following: corticosteroids (i.e., prednisone, methylprednisolone), 5-ASAs (i.e., mesalamine, sulfasalazine, balsalazide, olsalazine), non-biologic DMARDs (i.e., azathioprine, methotrexate, mercaptopurine)? Yes No List
For moderate to severe hidradenitis suppurativa, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: oral or topical antibiotic therapy OR oral retinoid therapy, dapsone, or acitretin? □ Yes □ No List
For non-infectious uveitis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: methotrexate, mycophenolate, azathioprine, cyclosporine, tacrolimus, cyclophosphamide, oral/injectable steroid therapy? No List
Quantity limit requests:
What is the quantity requested per TREATMENT? syringe every weeks
What is the reason for exceeding the plan limitations?
☐ Titration or loading dose purposes ☐ Patient is on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime) ☐ Requested strength/dose is not commercially available
Other:
Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?
<u>Please note</u> : This request may be denied unless all required information is received.

This request may be denied unless all required information is received. For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



Hyrimoz® Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:		1	City:	State:		Zip:
	Medication Info	rmation (required)				
Medication Name:	•		Strength:		Dosage Fo	orm:
☐ Check if requesting	hrand		Directions for Use:			
	for continuation of the	rapy	- Billoctions for Goo.			
		Clinical Inforr	nation (required)			
Select the diagnosis below:						
☐ Active ankylosing						
☐ Active psoriatic art	•					
· ·	e chronic plaque psorias	sis				
	erely active Crohn's dise					
☐ Moderately to seve	erely active polyarticular	juvenile idiopathic arthri	itis (JIA)			
1	erely active rheumatoid	•	,			
•	erely active ulcerative co	, ,				
•	erely active ulcerative co					
☐ Hidradenitis Suppu	•					
			ICD-10 Cod	le(s):		
Clinical information:				()		
Select if the requested Dermatologist	d medication is prescribe Gastroenterologist		with one of the following The umatologist			
Will the requested me	dication be used in com	bination with another bid	ologic agent or targeted	immunomo	dulator? 🗖 🕻	Yes 🛭 No
Justification for the If non-preferred agent alternative:	is medically necessary	product (Hymiroz) ove or required, provide a bi	er a preferred product rief summary for use of t	(Humira): he non-pref	ferred agent	over a preferred
For active enlarged	a spondulitie (AS) ele	o answer the following	<u> </u>			
		_		ore non-et	aroidal anti-i	nflammatory drugs
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-steroidal anti-inflammatory drugs (NSAIDs)? Yes No List						
For active psoriatic a	arthritis (PsA), also an	swer the following:				
Has the patient had a	n inadequate response t	to, intolerance to, or con	traindication to methotre	xate? 🛚 Y	es 🛚 No	
For moderate to seve	ere chronic plaque pso	oriasis (PsO), also ans	wer the following:			
following: phototherap		stemic treatments (i.e.,	traindication to convention methotrexate, cyclospor			



Hyrimoz® Prior Authorization Request Form (Page 2 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

For moderately to severely active Crohn's disease, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more immunosuppressive agents (e.g., azathioprine, mercaptopurine, methotrexate)? Yes No List
For moderately to severely active polyarticular juvenile idiopathic arthritis (pJIA), also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List
For moderately to severely active rheumatoid arthritis (RA), also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List
For moderately to severely active ulcerative colitis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to conventional therapy with one or more of the following: corticosteroids (i.e., prednisone, methylprednisolone), 5-ASAs (i.e., mesalamine, sulfasalazine, balsalazide, olsalazine), non-biologic DMARDs (i.e., azathioprine, methotrexate, mercaptopurine)? Yes No List
For moderate to severe hidradenitis suppurativa, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: oral or topical antibiotic therapy OR oral retinoid therapy, dapsone, or acitretin? □ Yes □ No List
For non-infectious uveitis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: methotrexate, mycophenolate, azathioprine, cyclosporine, tacrolimus, cyclophosphamide, oral/injectable steroid therapy? No
List
Quantity limit requests: What is the quantity requested per TREATMENT? syringe every weeks What is the reason for exceeding the plan limitations? □ Titration or loading dose purposes □ Patient is on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime) □ Requested strength/dose is not commercially available □ Other:
Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?

<u>Please note</u>: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Idacio® Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:		I	
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:	<u> </u>	<u> </u>	City: State: Zip:		Zip:	
	N	dedication Info	rmation (required)			
Medication Name:			Strength:		Dosage Fo	orm:
☐ Check if requesting			Directions for Use:			
☐ Check if request is f	for continuation of the					
		Clinical Inforr	nation (required)			
Select the diagnosis below: Active ankylosing spondylitis Active psoriatic arthritis (PsA) Moderate to severe chronic plaque psoriasis Moderately to severely active Crohn's disease Moderately to severely active polyarticular juvenile idiopathic arthritis (JIA) Moderately to severely active rheumatoid arthritis (RA) Moderately to severely active ulcerative colitis Moderately to severely active ulcerative colitis Hidradenitis Suppurativa Other diagnosis: ICD-10 Code(s): Clinical information: Select if the requested medication is prescribed by or in consultation with one of the following specialists: Dermatologist Gastroenterologist Ophthalmologist Rheumatologist Other Will the requested medication be used in combination with another biologic agent or targeted immunomodulator? Yes No Justification for the use of a non-preferred product (Idacio) over a preferred product (Humira): If non-preferred agent is medically necessary or required, provide a brief summary for use of the non-preferred agent over a preferred alternative:						
For active ankylosing spondylitis (AS), also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-steroidal anti-inflammatory drugs (NSAIDs)? Yes No List						
For active psoriatic arthritis (PsA), also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to methotrexate? Yes No						
For moderate to severe chronic plaque psoriasis (PsO), also answer the following: Has the patient had an inadequate response to, intolerance to, or contraindication to conventional therapy with at least one of the following: phototherapy or one or more oral systemic treatments (i.e., methotrexate, calcipotriene, cyclosporine, acitretin, sulfasalazine, tazarotene, corticosteroid)? Yes No List						

Social Services

Please note: All information below is required to process this request.

Fax to 1-844-403-1029

Mon-Sat: 7am to 7pm Central

Idacio® Prior Authorization Request Form (Page 2 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

For moderately to severely active Crohn's disease, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more immunosuppressive agents (e.g., azathioprine, mercaptopurine, methotrexate)? Yes No List
For moderately to severely active polyarticular juvenile idiopathic arthritis (pJIA), also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List
For moderately to severely active rheumatoid arthritis (RA), also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List
For moderately to severely active ulcerative colitis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to conventional therapy with one or more of the following: corticosteroids (i.e., prednisone, methylprednisolone), 5-ASAs (i.e., mesalamine, sulfasalazine, balsalazide, olsalazine), non-biologic DMARDs (i.e., azathioprine, methotrexate, mercaptopurine)? Yes No List
For moderate to severe hidradenitis suppurativa, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: oral or topical antibiotic therapy OR oral retinoid therapy, dapsone, or acitretin? □ Yes □ No List
For non-infectious uveitis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: methotrexate, mycophenolate, azathioprine, cyclosporine, tacrolimus, cyclophosphamide, oral/injectable steroid therapy? No List
Quantity limit requests:
What is the quantity requested per TREATMENT? syringe every weeks
What is the reason for exceeding the plan limitations?
□ Titration or loading dose purposes □ Patient is on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime) □ Requested strength/dose is not commercially available □ Other:
Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?

Please note:

This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Simlandi® Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE, FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:			City:	State: Zip:		Zip:
		Medication Info	rmation (required)			
Medication Name:		vicalcation init	Strength:		Dosage Fo	orm:
					Dosage	OIIII.
☐ Check if request is	brand for continuation of the	rany	Directions for Use:			
Crieck in request is	ior continuation or the					
		Clinical Inform	mation (required)			
Select the diagnosis	below:					
☐ Active ankylosing s	spondylitis					
Active psoriatic art	hritis (PsA)					
Moderate to severe	e chronic plaque psorias	sis				
■ Moderately to seve	erely active Crohn's dise	ase				
☐ Moderately to seve	erely active polyarticular	juvenile idiopathic arthr	itis (JIA)			
-	erely active rheumatoid	•	,			
-	erely active ulcerative co	, ,				
☐ Hidradenitis Suppu	•					
☐ Uveitis						
☐ Other diagnosis:			ICD-10 Co	de(s)·		
Other diagnosis: ICD-10 Code(s): Clinical information:						
		ad by ar in consultation :	with one of the following	oposialista:		
☐ Dermatologist	Gastroenterologist	ed by or in consultation of the consultation o				
Will the requested medication be used in combination with another biologic agent or targeted immunomodulator? Yes No					Yes 🛭 No	
Justification for the If non-preferred agent alternative:	is medically necessary	product (Simlandi) ov or required, provide a b	rer a preferred product rief summary for use of	t (Humira): the non-pref	ferred agent	over a preferred
For active and all all	a an amabalist - (AO) - 1	a anamou the feller to				
		o answer the following		aara nan at	oroidal anti i	nflammatan, druga
(NSAIDs)? \(\text{U}\) Yes		to, intolerance to, or con	traindication to one or n	nore non-st	eroldal anti-li	ntiammatory drugs
For active psoriatic a	arthritis (PsA), also an	swer the following:				
Has the patient had a	n inadequate response t	to, intolerance to, or con	traindication to methotre	exate? 🛚 Y	es 🗆 No	
For moderate to seve	ere chronic plaque pse	oriasis (PsO), also ans	wer the following:			
Has the patient had an inadequate response to, intolerance to, or contraindication to conventional therapy with at least one of the following: phototherapy or one or more oral systemic treatments (i.e., methotrexate, calcipotriene, cyclosporine, acitretin, sulfasalazine,						



Simlandi® Prior Authorization Request Form (Page 2 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

For moderately to severely active Crohn's disease, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more immunosuppressive agents (e.g., azathioprine, mercaptopurine, methotrexate)? Yes No List
For moderately to severely active polyarticular juvenile idiopathic arthritis (pJIA), also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List
For moderately to severely active rheumatoid arthritis (RA), also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List
For moderately to severely active ulcerative colitis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to conventional therapy with one or more of the following: corticosteroids (i.e., prednisone, methylprednisolone), 5-ASAs (i.e., mesalamine, sulfasalazine, balsalazide, olsalazine), non-biologic DMARDs (i.e., azathioprine, methotrexate, mercaptopurine)? Yes No List
For moderate to severe hidradenitis suppurativa, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: oral or topical antibiotic therapy OR oral retinoid therapy, dapsone, or acitretin? □ Yes □ No List
For non-infectious uveitis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: methotrexate, mycophenolate, azathioprine, cyclosporine, tacrolimus, cyclophosphamide, oral/injectable steroid therapy? No List
Quantity limit requests:
What is the quantity requested per TREATMENT? syringe every weeks
What is the reason for exceeding the plan limitations?
 □ Titration or loading dose purposes □ Patient is on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime) □ Requested strength/dose is not commercially available □ Other:
Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?

<u>Please note</u>: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Yuflyma® Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#: NPI#: Specialty:						
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:			City:	City: State: Zip:		Zip:
		Modication Info	ormation (required)			
Medication Name:			Strength:		Dosage F	orm:
					Dosage F	OIIII.
☐ Check if requesting	g brand for continuation of the	rany	Directions for Use:			
□ Check if request is	ioi continuation of the		· · · · · · · · · · · · · · · · · · ·			
		Clinical Inforr	nation (required)			
Select the diagnosis						
☐ Active ankylosing	•					
☐ Active psoriatic art	, ,					
	e chronic plaque psorias					
1	erely active Crohn's dise		:t: - / II A \			
1	erely active polyarticular	•	itis (JIA)			
I	erely active rheumatoid					
I	erely active ulcerative co		- " III)			
	e hidradenitis suppurativ	/a (e.g., Hurley Stage II	or III)			
Uveitis			ICD 10 Coo	ام(م)،		
Other diagnosis: ICD-10 Code(s):						
Clinical information:						
☐ Dermatologist	d medication is prescribe ☐ Gastroenterologist					
-	edication be used in com				dulator? 🗖 `	Yes 🛚 No
Justification for the use of a non-preferred product (Yuflyma) over a preferred product (Humira): If non-preferred agent is medically necessary or required, provide a brief summary for use of the non-preferred agent over a preferred alternative:						
	ig spondylitis (AS), als n inadequate response t ☑ No List	•		ore non-st	eroidal anti-i	nflammatory drugs
	arthritis (PsA), also an	swar the following:				
<u> </u>	n inadequate response		traindication to methotre	xate? 🛚 Y	es 🗆 No	
·	ere chronic plaque ps					
Has the patient had an inadequate response to, intolerance to, or contraindication to conventional therapy with at least one of the following: phototherapy or one or more oral systemic treatments (i.e., methotrexate, calcipotriene, cyclosporine, acitretin, sulfasalazine, tazarotene, corticosteroid)? No List						



Yuflyma® Prior Authorization Request Form (Page 2 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

For moderately to severely active Crohn's disease, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more immunosuppressive agents (e.g., azathioprine, mercaptopurine, methotrexate)? Yes No List
For moderately to severely active polyarticular juvenile idiopathic arthritis (pJIA), also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List
For moderately to severely active rheumatoid arthritis (RA), also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List
For moderately to severely active ulcerative colitis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to conventional therapy with one or more of the following: corticosteroids (i.e., prednisone, methylprednisolone), 5-ASAs (i.e., mesalamine, sulfasalazine, balsalazide, olsalazine), non-biologic DMARDs (i.e., azathioprine, methotrexate, mercaptopurine)? Yes No Lisa
For moderate to severe hidradenitis suppurativa, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: oral or topical antibiotic therapy OR oral retinoid therapy, dapsone, or acitretin? □ Yes □ No List
For non-infectious uveitis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: methotrexate, mycophenolate, azathioprine, cyclosporine, tacrolimus, cyclophosphamide, oral/injectable steroid therapy? No List
Quantity limit requests:
What is the quantity requested per TREATMENT? syringe every weeks
What is the reason for exceeding the plan limitations?
 □ Titration or loading dose purposes □ Patient is on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime) □ Requested strength/dose is not commercially available □ Other:
Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?

<u>Please note</u>: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



YusimryTM Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:		1	
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:	1	I.	City:	State: Zip:		Zip:
	N	Medication Info	rmation (required)			
Medication Name:			Strength:		Dosage Fo	orm:
☐ Check if requesting	brand		Directions for Use:			
	for continuation of the	rapy				
		Clinical Inforr	nation (required)			
Select the diagnosis	below:		(***)			
☐ Active ankylosing s						
☐ Active psoriatic art	•					
■ Moderate to severe	e chronic plaque psorias	sis				
1	erely active Crohn's dise					
-	• • •	juvenile idiopathic arthri	itis (JIA)			
1	erely active rheumatoid a	` '				
1	erely active ulcerative co					
-	erely active ulcerative co	olitis				
☐ Hidradenitis Suppu	ıratıva		IOD 40 O	1- (-).		
Other diagnosis:			ICD-10 Cod	ie(s):		
Clinical information:						
□ Dermatologist	medication is prescribe Gastroenterologist		with one of the following Characterists		er	
· ·			ologic agent or targeted i		dulator? 🗖 🕻	Yes 🗆 No
Justification for the use of a non-preferred product (Yusimry) over a preferred product (Humira): If non-preferred agent is medically necessary or required, provide a brief summary for use of the non-preferred agent over a preferred alternative:						
For active ankylosing spondylitis (AS), also answer the following:						
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-steroidal anti-inflammatory drugs (NSAIDs)? Yes No List						
For active psoriatic arthritis (PsA), also answer the following:						
Has the patient had an inadequate response to, intolerance to, or contraindication to methotrexate? Yes No						
For moderate to seve	ere chronic plaque pso	oriasis (PsO), also ans	wer the following:			
Has the patient had an inadequate response to, intolerance to, or contraindication to conventional therapy with at least one of the following: phototherapy or one or more oral systemic treatments (i.e., methotrexate, cyclosporine, acitretin, sulfasalazine, tazarotene, corticosteroid)?						



Yusimry® Prior Authorization Request Form (Page 2 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

For moderately to severely active Crohn's disease, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more immunosuppressive agents (e.g., azathioprine, mercaptopurine, methotrexate)? Yes No List
For moderately to severely active polyarticular juvenile idiopathic arthritis (pJIA), also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List
For moderately to severely active rheumatoid arthritis (RA), also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying anti-rheumatic drugs (DMARDs)? Yes No List
For moderately to severely active ulcerative colitis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to conventional therapy with one or more of the following: corticosteroids (i.e., prednisone, methylprednisolone), 5-ASAs (i.e., mesalamine, sulfasalazine, balsalazide, olsalazine), non-biologic DMARDs (i.e., azathioprine, methotrexate, mercaptopurine)? Yes No List
For moderate to severe hidradenitis suppurativa, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: oral or topical antibiotic therapy OR oral retinoid therapy, dapsone, or acitretin? □ Yes □ No List
For non-infectious uveitis, also answer the following:
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more of the following: methotrexate, mycophenolate, azathioprine, cyclosporine, tacrolimus, cyclophosphamide, oral/injectable steroid therapy? No
List
Quantity limit requests: What is the quantity requested per TREATMENT? syringe every weeks What is the reason for exceeding the plan limitations? ☐ Titration or loading dose purposes ☐ Patient is on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime) ☐ Requested strength/dose is not commercially available ☐ Other:
Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?

<u>Please note</u>: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Ilaris® Prior Authorization Request Form

		OR FUTURE USE. FORMS A Nation (required)			mation (required)		
Member Name:				Provider Name:			
Insurance ID#:			NPI#: Specialty:				
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Address:				
Phone:			City:	State:	Zip:		
		Medication	Information (red	quired)			
Medication Name:			Strength:	₁ an ca)	Dosage Form:		
☐ Check if requesting	brand		Directions for U	se:			
☐ Check if request is	for continuatio	n of therapy					
		Clinical In	formation (requir	red)			
Select the diagnosis	below:		` '	,			
☐ Active systemic ju		arthritis					
•	•		familial cold autoinflam	matory syndrome	(FCAS) and Muckle-Wells		
☐ Tumor necrosis fac	•	sociated periodic syndrom	e or hyperimmunoglobu	ılin D syndrome (H	HDS)/mevalonate kinase		
deficiency (MKD) o	or familial medite	erranean fever					
☐ Still's disease							
Gout			ICD :	10 Codo(o):			
☐ Other diagnosis: _			ICD-	10 Code(s):			
	d medication is o	diagnosed by, or upon con			ollowing specialists:		
□ Allergist/Immunologist □ Dermatologist □ Neurologist □ Rheumatologist □ Other Will the requested medication be used in combination with another biologic agent? □ Yes □ No							
		thic arthritis or Still's dis					
	n inadequate res	sponse or intolerance to a		-	steroidal anti-inflammatory drugs		
For gout, answer the	following:						
Has the patient had an colchicine? ☐ Yes		sponse, intolerance, or co	ntraindication to BOTH	oral systemic ag	ents NSAIDs AND		
Are there any other com this review?	ments, diagnose	s, symptoms, medications	tried or failed, and/or any	other information	the physician feels is important to		

This request may be denied unless all required information is received. For urgent or expedited requests please call 1-855-401-4262. Please note:



Ilumya[™] Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)				
Member Name:			Provider Name:	Provider Name:			
Insurance ID#:			NPI#:	NPI#: Specialty:			
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Ac	Office Street Address:			
Phone:			City:	City: State: Zip:			
		Medication	nformation (red	quired)			
Medication Name:		ouroution	Strength:	quirou	Dosage Form:		
☐ Check if requesting	brand		Directions for U	lse:			
☐ Check if request is		of therapy					
		Clinical In	formation (requi	red)			
Select the diagnosis	below:		(1	,			
☐ Moderate-to-sever		S					
☐ Other diagnosis: _			ICD-	10 Code(s):			
Clinical information:							
Is Ilumya prescribed b	y or in consultati	on with a dermatologist?	□ Yes □ No				
_		n another biologic agent?					
	py or one or more	e oral systemic treatments		alcipotriene, cyclo	py with at least one of the sporine, acitretin, sulfasalazine,		
Quantity limit reques							
-		EATMENT? syring	ge every week	(S			
What is the reason for		e plan limitations?					
☐ Titration or loading☐ Patient is on a dos		edule (e.g. one tablet in t	he morning and two ta	blets at night, one	e to two tablets at bedtime)		
Requested strengt	h/dose is not con	nmercially available	no morning and two ta	aroto at mgm, on			
Other:							
Are there any other com this review?	ments, diagnoses	, symptoms, medications t	ried or failed, and/or any	y other information	n the physician feels is important to		
		ied unless all required inform					



Kevzara® Prior Authorization Request Form

	DO NOT COPY FOR FUT	<u>URE USE. FORMS ARE U</u>	PDATED FREQUENTLY A	ND MAY BE	BARCODED
Memb	er Information	(required)	Provide	er Infori	mation (required)
Member Name:			Provider Name:		
Insurance ID#:			NPI#: Specialty:		
Date of Birth:			Office Phone:		
Street Address:			Office Fax:		
City:	State:	Zip:	Office Street Address:		
Phone:		<u> </u>	City:	State:	Zip:
	N	Medication Info	rmation (required)		
Medication Name:			Strength:		Dosage Form:
☐ Check if requesting	brand		Directions for Use:		
	or continuation of the	rapy			
		Clinical Inforr	nation (required)		
	rely active rheumatoid a rely active polyarticular			:	
Clinical information:				-	
	medication is prescribe	ed by or in consultation v	vith one of the following	specialists:	
Will Kevzara be used i	n combination with anot	ther biologic agent? 🗖 🕻	Yes □ No		
For moderately to se	verely active rheumate	oid arthritis (RA), also	answer the following:		
	i inadequate response t .RDs)? □ Yes □ No		traindication to one or mo	ore non-bio	logic disease modifying anti-
For moderately to se	verely active polyartic	ular juvenile idiopathio	c arthritis (pJIA), also a	nswer the f	following:
	n inadequate response t .RDs)? □ Yes □ No		traindication to one or mo	ore non-bio	logic disease modifying anti-
	ımatica (PMR), also an ı inadequate response t		traindication to corticoste	eroids? 🛭 Ye	es 🗆 No List
Quantity limit requests: What is the quantity requested per TREATMENT? syringe every weeks What is the reason for exceeding the plan limitations? □ Titration or loading dose purposes □ Patient is on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime) □ Requested strength/dose is not commercially available □ Other:				o two tablets at bedtime)	
				· information	the physician feels is important to

Please note: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Kineret® Prior Authorization Request Form

D	O NOT COPY FOR FUT	URE USE. FORMS ARE U	PDATED FREQUENTLY A	ND MAY BE E	BARCODED	
Memb	er Informatio	n (required)	Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:			City:	State:	Zip:	
		Medication Info	ormation (required)			
Medication Name:			Strength:		Dosage Form:	
☐ Check if requesting			Directions for Use:			
☐ Check if request is t	for continuation of th	erapy				
		Clinical Infor	mation (required)			
Select the diagnosis	helow:					
☐ Cryopyrin-associate		c (CAPS)				
☐ Moderately to seve						
•	•	· · ·				
☐ Deficiency of interle		jonist (DIRA)	100 40 0 1 /	`		
Other diagnosis:			ICD-10 Code(s	s):		
Clinical information:						
		bed by or in consultation				
Allergist/ Immuno	ologist 📮 Dermato	logist Gastroentero	ologist 🔲 Neurologis	t 🛭 Rheu	ımatologist	
Other						
Will the requested med	dication be used in co	mbination with another bi	ologic agent? 🛭 Yes 🛭	□ No		
-		atoid arthritis (RA), also				
Has the patient had ar rheumatic drugs (DMA			traindication to one or r	nore non-biol	logic disease modifying anti-	
Quantity limit reques	sts:					
What is the quantity re	equested per TREATM	IENT? syringe e	very weeks			
What is the reason for		n limitations?				
☐ Titration or loading						
☐ Requested strength			orning and two tablets a	at night, one t	to two tablets at bedtime)	
Other:						
			or failed, and/or any other	r information t	the physician feels is important to	

This request may be denied unless all required information is received. Please note:

For urgent or expedited requests please call 1-855-401-4262.



Nemluvio® Prior Authorization Request Form

D	O NOT COPY FOR FUTU	RE USE. FORMS ARE UP	DATED FREQUENTLY AN	ID MAY BE E	BARCODED	
Memb	er Information	(required)	Provide	er Infor	mation	(required)
Member Name:			Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:		1	
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:			City:	State:		Zip:
		Medication Info	rmation (required)			
Medication Name:			Strength:		Dosage Fo	orm:
☐ Check if requesting	brand		Directions for Use:			
☐ Check if request is f	or continuation of the	rapy				
		Clinical Inform	nation (required)			
Select the diagnosis						
☐ Prurigo Nodularis (describe severity level)					
Other diagnosis:			ICD-10 Cod	e(s):		
Clinical information:						
•			vith one of the following			
☐ Dermatologist	☐ Allergist/imini	unologist 🔲 Oti	her			
Medication history:	dication he used in com	hination with another hic	ologic agent or targeted i	mmunomod	lulator2 🗖 🕽	Vos □ No
•			necrolimus cream, or tac			
		,,	, 			
Quantity limit reques		:NT? syringe ev	verv weeks			
	or exceeding the plan		ery weeks			
☐ Titration or loading						
☐ Patient is on a dose	e-alternating schedule (e.g., one tablet in the mo	orning and two tablets at	night, one t	to two tablet	s at bedtime)
Requested strengtrOther:	n/dose is not commercia	ally available				
- Other						
Are there any other comr this review?	nents, diagnoses, sympt	oms, medications tried o	r failed, and/or any other i	nformation t	the physiciar	n feels is important to

This request may be denied unless all required information is received. Please note:



Nucala® Prior Authorization Request Form

Membe	r Informa	tion (required)	Pro	Provider Information (required)		
Member Name:			Provider Name:			
Insurance ID#:			NPI#:	NPI#: Specialty:		
Date of Birth:			Office Phone:	Office Phone:		
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Ad	ldress:		
Phone:			City:	State:	Zip:	
		Medication	Information (red	quired)		
Medication Name:			Strength:		Dosage Form:	
☐ Check if requesting b	rand		Directions for U	se:		
Check if request is for	continuation	of therapy				
		Clinical In	formation (require	red)		
☐ Hypereosinophilic ☐ Chronic rhinosinus ☐ Other diagnosis: Clinical information: Select if the requested n ☐ Allergist/Immunologis For severe asthma w Has the patient experidose corticosteroid armonths? ☐ Yes ☐ N	lomatosis with syndrome sitis with nasal medication is pretable. Hematology with an eosing ienced inadequad controller mat least two asticles.	polyangiitis (Churg-Spolyps (CRWsNP) escribed by or in consult gist Otolaryngologist ophilic phenotype, all uate control of asthmatedication? UYes Onma exacerbations re	ation with one of the folding and the folding answer the followatic symptoms after a No quiring medical interv	Rheumatolgist	other months use of a high	
For chronic rhinosin Has the patient experi List intranasal corticos the there any other comments review?	ienced inadeq steroid tried by	uate response to nasa the patient and dura	al corticosteroid? tion of use:	Yes 🗆 No	physician feels is important	
ease note: This requ	uest may be denie	ed unless all required inform	nation is received.			

For urgent or expedited requests please call 1-855-401-4262.



Olumiant® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:	:		
Phone:			City:	State:	Zip:	
		Medication Info	rmation (required)			
Medication Name:			Strength:		Dosage Form:	
☐ Check if requesting	brand		Directions for Use:			
☐ Check if request is	for continuation of the	rapy				
		Clinical Inforr	nation (required)			
Select the diagnosis below: Moderately to severely active rheumatoid arthritis (RA) Other diagnosis:			ICD-10 Code(s):		
Clinical information:						
•	•	ith a rheumatologist? 🛚				
		other biologic agent?				
		o, intolerance to, or con	traindication to methotre	exate? LY	S U NO	
Quantity limit reques What is the quantity re	equested per MONTH?					
·	or exceeding the plan					
			orning and two tablets a	t night, one t	to two tablets at bedtime)	
		•				
			or failed, and/or any othe	r information	n the physician feels is important to	
Diagon noto: This	request may be deried	loca all required information	a in received			

This request may be denied unless all required information is received. Please note:



Omvoh™ Prior Authorization Request Form

Member Information (required)			Provider Information (required)				
Member Name:			Provider Name:				
Insurance ID#:			NPI#:	NPI#: Specialty:			
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Add	dress:			
Phone:		-	City:	State:	Zip:		
		Medication Ir	nformation (requ	uired)			
Medication Name:			Strength:		Dosage Form:		
☐ Check if requesting			Directions for Us	e:			
☐ Check if request is	for continuation o f	f therapy					
		Clinical Info	ormation (require	ed)			
Select the diagnosis Moderately to seve							
Other diagnosis:			ICD-1	0 Code(s):			
Gastroenterologi	ist 🔲 Othe	scribed by or in consultatier combination with anothe					
Has the patient had ar following: corticosteroi	n inadequate respoi ids (i.e., prednisone		contraindication to cor -ASAs (i.e., mesalami	ne, sulfasalazinė	y with one or more of the , balsalazide, olsalazine), non-		
What is the reason fo ☐ Titration or loading ☐ Patient is on a dos ☐ Requested strengt	equested per TREA or exceeding the p dose purposes e-alternating sched h/dose is not comm	ule (e.g., one tablet in the	e morning and two tab		to two tablets at bedtime)		
				other information	the physician feels is important to		
		d unless all required informat					



Orencia® Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)		Provider Information (required)				
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address	:		
Phone:			City:	State:		Zip:
		Medication Info	ormation (required)			
Medication Name:		modroation init	Strength:		Dosage F	orm:
☐ Check if requesting	brand		Directions for Use:			
☐ Check if request is		therapy				
		Clinical Infor	mation (required)			
Select the diagnosis	below:		() ,			
☐ Active psoriatic art						
■ Moderately to seven	erely active polyarticu	ılar juvenile idiopathic arthr	itis (pJIA)			
■ Moderately to seven	•	id arthritis (RA)				
Other diagnosis: _			ICD-10 Cod	de(s):		
Clinical information:						
	•	ribed by or in consultation	_			
1	d medication is presc ☐ Rheumatolog	ribed by or in consultation	with one of the following	specialists:		
DermatologistWill the requested me	•	ist □ Other ombination with another bi	ologic agent? □ Yes □	□ No		
· ·		answer the following:	<u> </u>			
=		se to, intolerance to, or cor	traindication to methotre	exate? 🗖 Ye	es 🗆 No	
For moderately to se	everely active polya	rticular juvenile idiopathi	c arthritis (pJIA), also	answer the	following:	
Has the patient had a rheumatic drugs (DM/	n inadequate respons ARDs)? ☐ Yes ☐ N	se to, intolerance to, or cor lo List	traindication to one or m	ore non-bio	logic diseas	e modifying anti-
For moderately to se	everely active rheun	natoid arthritis (RA), also	answer the following:			
Has the patient had an inadequate response to, intolerance to, or contraindication to one or more non-biologic disease modifying a rheumatic drugs (DMARDs)? Yes No List				e modifying anti-		
Quantity limit requests: What is the quantity requested per TREATMENT? syringe every weeks						
What is the reason f	or exceeding the pla	an limitations?				
☐ Titration or loading☐ Patient is on a dos☐ Requested strengt☐ Other:	se-alternating schedul	le (e.g., one tablet in the m rcially available	orning and two tablets a	t night, one	to two tablet	ts at bedtime)



Otezla® Prior Authorization Request Form

Memb		ation (required)	RARE UPDATED FREQUE		rmation (required)	
Member Name:			Provider Name:	Provider Name:		
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Ad	dress:		
Phone:		I	City:	City: State: Zip:		
		Medication	Information (req	uired)		
Medication Name:			Strength:	,,	Dosage Form:	
☐ Check if requesting	brand		Directions for Us	se:		
☐ Check if request is	for continuation	of therapy				
		Clinical Ir	nformation (requir	red)		
Clinical information: Select if the requested Dermatologist Will the requested me For active psoriatic a	d medication is programmed Gastroenidication be used	rescribed by or in consulterologist Rheulin combination with another answer the following the combination with another answer the following t	tation with one of the follomatologist	r ⁄es □ No	:	
-			or intolerance to methotr	exate? U Yes	⊔ No	
Has the patient had an phototherapy or one o	n inadequate res or more oral syste	mic treatments (i.e., met	or intolerance to convent	cyclosporine, ac	h at least one of the following: itretin, sulfasalazine, tazarotene,	
Quantity limit reques What is the quantity re What is the reason fe Titration or loading	equested per MO or exceeding the dose purposes e-alternating sch	NTH? e plan limitations? edule (e.g., one tablet in			e to two tablets at bedtime)	
Are there any other corthis review?	mments, diagnose	es, symptoms, medication	s tried or failed, and/or an	y other information	on the physician feels is important to	
		aniad unless all required infe				

Please note:

For urgent or expedited requests please call 1-855-401-4262.



Rinvoq® Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

	per Informatio		Provider Information (required)				
Member Name:		(Provider Name:				
Insurance ID#:			NPI#:		Specialty:	:	
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Address	:			
Phone:			City:	State:		Zip:	
		Medication Info	ormation (required)				
Medication Name:		Medication init	Strength:		Dosage F	form:	
☐ Check if requesting	hrand		Directions for Use:				
	for continuation of th	erapy	Directions for Osc.				
		Clinical Infor	mation (required)				
Select the diagnosis	helow:		rricerorr (requirea)				
	erely active rheumatoic	l arthritis (RA)					
· ·	erely active ulcerative	` '					
☐ Active psoriatic art							
☐ Active ankylosing							
☐ Active atopic derm	•						
☐ Moderately to seve	erely active Crohn's dis	sease					
☐ Moderately to seve	erely active polyarticula	ar juvenile idiopathic arthi	ritis (pJIA)				
☐ Non-radiographic a	axial spondyloarthritis						
Other diagnosis: _			IC	D-10 Code	(s):		
Clinical information:	1						
Select if the requested Dermatologist	d medication is prescri Gastroenterologis	bed by or in consultation at \square Rheumatologist	with one of the following Allergist/Immunology		: Other		
_	•	ther biologic agent, Janu	•	•		nx/XR), or other	
		ne, cyclosporine, methotr				· 	
		enile idiopathic arthriti			litis, Crohn	's disease, non-	
	-	ankylosing spondylitis		-	l (Cinamia Emband	
Humira, Simponi, Ren	n inadequate response nicade, etc)?	e to, intolerance to, or cor	itraindication to one or n	nore line bi	ockers (e.g.,	, Cimzia, Enbrei,	
For atopic dermatitis	s also answer the foll	owing:					
		to, intolerance to, or cor					
		aborole) ointment; or syst		e treatment	of atopic de	rmatitis (e.g., Adbry,	
Dupixent, etc)?							
0	. 4 .						
Quantity limit reques	sts: equested per MONTH1)					
	or exceeding the plan						
☐ Titration or loading							
☐ Patient is on a dos	e-alternating schedule	(e.g., one tablet in the m	orning and two tablets a	at night, one	to two table	ts at bedtime)	
	th/dose is not commerc	cially available					
☐ Other:							



Siliq® Prior Authorization Request Form

Memb	er Informati		Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Addres	s:		
Phone:			City:	State:	Zip:	
		Madiaatian lufe			·	
		Medication Info		d)		
Medication Name:			Strength:		Dosage Form:	
☐ Check if requesting			Directions for Use:			
☐ Check if request is t	or continuation of	therapy				
		Clinical Infor	mation (required)			
Select the diagnosis	below:					
☐ Moderate to severe		oriasis				
☐ Other diagnosis:			ICD-10 C	ode(s):		
Clinical information:						
Is Siliq prescribed by o	or in consultation wit	h a dermatologist? 🛚 Yes	□ No			
Will Siliq be used in co	mbination with anot	her biologic agent? 🛚 Yes	i □ No			
following: phototherap	y or one or more or	se to, intolerance to, or cor al systemic treatments (i.e. List	, methotrexate, calcipo	triene, cyclosi	with at least one of the porine, acitretin, sulfasalazine,	
Quantity limit reques	ts:					
		MENT? syringe e	very weeks			
What is the reason for		an limitations?				
☐ Titration or loading☐ Patient is on a dose		ıle (e.g., one tablet in the m	orning and two tablets	at night, one t	to two tablets at bedtime)	
☐ Requested strength			orning and two tablets	at riight, one	to two tablets at beatime)	
Other:		·				
Are there any other con this review?	nments, diagnoses, s	symptoms, medications tried	or failed, and/or any otl	ner information	n the physician feels is important	

This request may be denied unless all required information is received. Please note:

For urgent or expedited requests please call 1-855-401-4262.



Simponi® Prior Authorization Request Form (Page 1 of 2)

Member Information (required)				Provider Information (required)				
Member Name:				Provider Name:				
Insurance ID#:			NPI#:		Specialty	:		
Date of Birth:			Office Phone:					
Street Address:			Office Fax:					
City:	State:	Zip:	Office Street A	Address:				
Phone:			City:	State:		Zip:		
		Modication	nformation (r					
Medication Name:		Medication	Strength:	equirea)	Dosage F	orm:		
☐ Check if requesting	g brand		Directions for	Use:	<u> </u>			
☐ Check if request is	*	of therapy	Bil dollorio for	000.				
			formation (requ	uired)				
Select the diagnosis	s below:			an ou,				
☐ Active ankylosing								
☐ Active psoriatic ar	•							
☐ Moderately to sev	erely active rheur	matoid arthritis (RA)						
■ Moderately to sev	erely active ulcer	ative colitis						
Other diagnosis: _)-10 Code(s):				
Clinical information	:							
		rescribed by or in consulta		ollowing specialists	:			
☐ Dermatologist		•	Rheumatologist					
-		in combination with anoth		Yes U No				
		AS), also answer the follo		, .				
(NSAIDs)? U Yes		ponse, contraindication, o	r intolerance to one o	r more non-steroic	iai anti-intian	nmatory drugs		
For active psoriatic	arthritis (PsA), a	also answer the following	j:					
-	-	ponse, contraindication, o			□ No			
	-	neumatoid arthritis (RA),		-				
Has the patient had a rheumatic drugs (DM.		ponse, contraindication, or D No List	r intolerance to one o	r more non-biologi	c disease mo	odifying anti-		
For moderately to s	everely active ul	cerative colitis, also ans	wer the following:					
		ponse, contraindication, or						
		/lprednisolone), 5-ASAs (i. kate, mercaptopurine)? 🏻		asalazine, balsalazi		ie), non-biologic		
Quantity limit reque	ests:	· · · · · · · · · · · · · · · · · · ·						
		EATMENT? syring	ge every wee	eks				
What is the reason for exceeding the plan limitations?								
☐ Titration or loading		edule (e.g., one tablet in t	he morning and two t	ablets at night one	to two table	ts at		
bedtime)	so altornating 301	isaalo (s.g., siis tabiet iii t		asioto at riigitt, one	to two table			
☐ Requested streng								
_ ·	greater quantity f	for the treatment of a large	r surface area [Topic	cal applications or	nly]			
☐ Other:								



Skyrizi® Prior Authorization Request Form

D	O NOT COPY FOR FU	ITURE USE. FORMS ARE	<u>UPDATED FREQUENTI</u>	Y AND MAY BE	BARCODED
Memb	er Information	On (required)	Prov	ider Infor	mation (required)
Member Name:			Provider Name:		
Insurance ID#:			NPI#:		Specialty:
Date of Birth:			Office Phone:		<u> </u>
Street Address:			Office Fax:		
City:	State:	Zip:	Office Street Add	ress:	
Phone:	<u>I</u>	I	City:	State:	Zip:
		Medication In	formation (requi	red)	
Medication Name:			Strength:	·	Dosage Form:
☐ Check if requesting	brand		Directions for Use	:	
☐ Check if request is	for continuation of t	herapy			
		Clinical Info	rmation (required	I)	
Select the diagnos	is below:				
☐ Moderate to seve		s			
□ Active psoriatic a					
☐ Moderately to se	verely active Crohi	n's disease			
☐ Moderately to se	verely active ulcera	ative colitis			
☐ Other diagnosis:			ICD	-10 Code(s): _	
Clinical information	n:				
Select if the request Dermatologist		rescribed by or in cons terologist		the following s	
Will the requested m	nedication be used	in combination with a	nother biologic ager	t? 🗆 Yes 🚨	No
					onal therapy with at least one
What is the reason fo ☐ Titration or loading ☐ Patient is on a dosc ☐ Requested strengtl ☐ Other:	equested per TREAT or exceeding the plands of the plands of the purposes e-alternating schedulen/dose is not comme	le (e.g., one tablet in the rcially available	morning and two table		to two tablets at bedtime) the physician feels is important to
Please note: This re	eguest mav be denied i	unless all required information	on is received.		



Sotyktu® Prior Authorization Request Form

Provider Name: NPI#: Office Phone: Office Fax: Office Street Address:		Specialty:
Office Phone: Office Fax:		Specialty:
Office Fax:		1
Office Street Address:		
City:	State:	Zip:
ormation (required)		
Strength:		Dosage Form:
Directions for Use:		
mation (required)		
Triacion (required)		
ICD-10 Cod	de(s):	
with one of the following	specialists:	
— iologic agent or targeted	immunomod	dulator? 🛘 Yes 🗘 No
swer the following:		
very weeks		
norning and two tablets a	t night, one	to two tablets at bedtime)
or failed, and/or any other	information	the physician feels is important
•		
	piologic agent or targeted swer the following: ntraindication to convention, methotrexate, cyclospor every weeks	piologic agent or targeted immunomod swer the following: ntraindication to conventional therapy , methotrexate, cyclosporine, acitretin



Spevigo® Prior Authorization Request Form

DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Memb	er Inform	ation (required)	Pro	vider Info	rmation (required)
Member Name:			Provider Name:		
Insurance ID#:			NPI#:		Specialty:
Date of Birth:			Office Phone:		
Street Address:			Office Fax:		
City:	State:	Zip:	Office Street Ad	ldress:	
Phone:			City:	State:	Zip:
		Medication	Information (req	uired)	
Medication Name:			Strength:	,,	Dosage Form:
☐ Check if requesting	brand		Directions for Us	se:	
☐ Check if request is		of therapy			
·			formation (requir	ed)	
Select the diagnosis	helow:		(oquii	ou,	
_		stular psoriasis (GPP)			
	-		ICD-	10 Code(s):	
Clinical information:					
Does the patient have	presence of fres	sh pustules (new appearar	nce or worenign pustule	es)? 🗆 Yes 🔲 N	lo
s at least 5% of body	surface area cov	vered with erythema and p	presence of pustules?	Yes 🗆 No	
		iasis Physician Global Ass	sessment (GPPPGA) to	otal score?	
What is the patient's v					
Dermatologist	Other				
Will Spevigo be used	in combination w	ith another biologic agent	or targeted immunomo	dulator? 🛚 Yes	□ No
Medication history:					
Has the patient have	a documented 14	in combination with anoth	costeroid, pimecrolimus	-	
	equested per TRI	EATMENT? syrin	ge every week	s	
	dose purposes e-alternating sch	•	he morning and two tab	olets at night, one	e to two tablets at bedtime)

<u>Please note</u>: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Stelara® Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Memb	er Information	(required)	Provide	er Infor	mation	(required)
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:			City:	State:		Zip:
	N	Medication Info	rmation (required)			
Medication Name:	•		Strength:		Dosage Fo	orm:
☐ Check if requesting	brand		Directions for Use:			
	for continuation of the	rapy	Birodione for occ.			
		Clinical Inforr	nation (required)			
Select the diagnosis	holow:		ricition (required)			
☐ Active psoriatic arti						
•	e chronic plaque psorias	sis				
	erely active Crohn's dise					
•	erely active ulcerative co					
Other diagnosis:	•		ICD-10 Cod	de(s):		
Clinical information:						
Select if the requested	d medication is prescribe	ed by or in consultation v	with one of the following	specialists:		
Dermatologist	□ Gastroenterologi					
Will the requested me	dication be used in com	bination with another bid	ologic agent? 🛭 Yes 🛭	l No		
For active psoriatic a	arthritis (PsA), also an	swer the following:				
Has the patient had ar	n inadequate response t	to, intolerance to, or con	traindication to methotre	xate? 🛚 Y	es 🗆 No	
For moderate to seve	ere chronic plaque pso	oriasis, also answer the	e following:			
		to, intolerance to, or con				
the following: photothe	erapy or one or more or	al systemic treatments (i	.e., methotrexate, calcip	otriene, cyc	losporine, a	citretin,
	ene, corticosteroid)?	disease, also answer t	ho following:			
1	•	to, intolerance to, or con		anyontional	thorany (o a	azathionrina
		s)? I Yes I No List			шегару (е. <u>у</u>	., azatiliopilile,
For moderately to se	verely active Ulcerative	ve Colitis, also answer	the following:			
		to, intolerance to, or con				y (e.g.,
	amine, balsalazide, olsa	alazine, azathioprine, me	ercaptopurine, methotrex	(ate)? ☐ Ye	s 🗆 No	
List						
Quantity limit reques						
		NT? syringe ev	very weeks			
	or exceeding the plan	limitations?				
☐ Titration or loading☐ Patient is on a dose		e.g., one tablet in the mo	orning and two tablets a	t night, one	to two tablet	ts at bedtime)
	h/dose is not commercia					
☐ Other:		-				



Taltz® Prior Authorization Request Form (Page 1 or 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Memb	er Informatio		Provid	er Infor	mation	(required)
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address	•		
Phone:			City:	State:		Zip:
		Medication Inf	ormation (required)			
Medication Name:			Strength:		Dosage F	orm:
☐ Check if requesting	brand		Directions for Use:			
☐ Check if request is		nerapy	Birodione for occ.			
			mation (required)			
			IIIatiOII (required)			
Select the diagnosis						
☐ Active ankylosing s	•					
☐ Active psoriatic art						
☐ Moderate to severe						
• .	axial spondyloarthritis	with objective of inflamm				
Other diagnosis:			ICD-10 Co	de(s):		
Clinical information: Select if the requested Dermatologist		ibed by or in consultation ogist □ Other	with one of the following	specialists:		
•		mbination with another b	iologic agent? ☐ Yes 〔	⊒ No		
For active ankylosin	g spondylitis or non-	-radiographic axial spo	ndyloarthritis, also ans	wer the foll	owing:	
_	n inadequate response	e to, intolerance to, or co	-		_	nflammatory drugs
For active psoriatic a	arthritis, also answei	r the following:				
Has the patient had ar	n inadequate response	e to, intolerance to, or co	ntraindication to methotre	exate? 🛚 Y	es 🛚 No	
Has the patient had ar	n inadequate response	, also answer the follow e to, intolerance to, or co systemic treatments (i.e.	ntraindication to convent			
Quantity limit reques	sts:					
_ -		ΛΕΝΤ? syringe ε	every weeks			
What is the reason for			, <u> </u>			
□ Titration or loading	dose purposes					
		e (e.g., one tablet in the n	norning and two tablets a	ıt night, one	to two table	ts at bedtime)
☐ Requested strengt	n/dose is not commer	cially available				
☐ Other:						



Tezspire® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

	ber Informatio	n (required)			mation (required)
Member Name:			Provider Name:		
Insurance ID#:			NPI#:		Specialty:
Date of Birth:			Office Phone:		
Street Address:			Office Fax:		
City:	State:	Zip:	Office Street Add	ess:	
Phone:	1	 	City:	State:	Zip:
		Medication Info	ormation (requi	red)	
Medication Name:			Strength:	, cu	Dosage Form:
☐ Check if requesting	g brand		Directions for Use	:	
·	for continuation of th	erapy			
		Clinical Inform	nation (required)	
Select the diagnosis	s below:				
□ Severe asthma					
			ICD-10 Cod	e(s):	
Clinical information					
Select if the requeste Allergist/Immun	ed medication is prescril iologist □ Pulmonol	ped by or in consultation ogist Other	with one of the follow	ving specialists	:
	also answer the follow				
		cerbations requiring syst	temic corticosteroids	withn the past	12 months?
•	s, list corticosteroids trie				
		zation within the past 12 costeroid (ICS) (i.e., grea			nnate
-	Yes □ No If yes, list	, ,, -	ici tilali 500 meg na	licasone propio	mate
Has the patient tried	additional asthma contr	oller medication (e.g., le			montelukast],
		meterol], tiotropium) 🗆 \			ionate/ salmeterol], Symbicort
		asone/vilanterol]) 🗆 Yes			
Quantity limit reque		•			 :-
•		ENT? syringe e	very weeks		
	for exceeding the plar	limitations?			
☐ Titration or loading		(e.g. one tablet in the m	orning and two table	ets at night one	e to two tablets at bedtime)
	th/dose is not commerc		g and two table	at myrit, one	. 15 1175 tablete at boatime,
☐ Other:			<u></u>		
					s and the following below:
	าonstrates positive clinio in asthma exacerbatior	cal response to therapy a	is evidenced by one	of the following	j:
		olume in 1 second (FEV1	l) from baseline	Yes □ No	
are there any other comr					the physician feels is important to
nis review?					

This request may be denied unless all required information is received. For urgent or expedited requests please call 1-855-401-4262. Please note:



Tremfya® Prior Authorization Request Form

D	O NOT COPY FOR	FUTURE USE. FORMS ARE	UPDATED FREQUENTLY A	ND MAY BE E	BARCODED
Memb	er Informa	tion (required)	Provid	er Infor	mation (required)
Member Name:			Provider Name:		
Insurance ID#:			NPI#:		Specialty:
Date of Birth:			Office Phone:		
Street Address:			Office Fax:		
City:	State:	Zip:	Office Street Address:		
Phone:		l	City:	State:	Zip:
		Medication In	formation (required)		
Medication Name:			Strength:		Dosage Form:
☐ Check if requesting	brand		Directions for Use:		
☐ Check if request is f	for continuation	of therapy			
		Clinical Info	rmation (required)		
Select the diagnosis	below:		· · · ·		
☐ Moderate to severe					
■ Moderate to severe					
■ Moderate to severe	e ulcerative colitis				
Other diagnosis:			ICD-10 Cod	de(s):	
Clinical information:					
Is Tremfya prescribed	by or in consultat	ion with a dermatologist? 🗖	Yes 🛘 No		
Will Tremfya be used i	in combination wit	th another biologic agent? [⊒Yes □ No		
For moderate to seve	ere chronic plaqı	ue psoriasis (PsO), also ar	nswer the following:		
		onse to, intolerance to, or co			
following: phototherap tazarotene, corticoster	y or one or more or oid)? ☐ Yes ☐	oral systemic treatments (i.e No List	e., methotrexate, cyclospor	rine, acitretin	n, sulfasalazine, calcipotriene,
For active psoriatic a	arthritis (PsA), al	so answer the following:			
•		onse to, intolerance to, or co		exate? 🛚 Ye	es 🗆 No
	•	erative colitis, also answe			
		onse to, intolerance to, or co			
		ne, metnylprednisolone), 5- <i>F</i> ethotrexate, mercaptopurine		ııtasalazine,	balsalazide, olsalazine), non-
Quantity limit reques	sts:				
What is the quantity re	equested per TRE	ATMENT? syringe	every weeks		
What is the reason for		plan limitations?			
☐ Titration or loading		edule (e.g., one tablet in the	marning and two tablets a	t night one t	to two tablets at hadtime)
☐ Requested strength			morning and two tablets a	t flight, one i	to two tablets at bedfille)
Other:					
Are there any other comr this review?	ments, diagnoses,	symptoms, medications tried	l or failed, and/or any other	information t	the physician feels is important to

Please note: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Velsipity[™] Prior Authorization Request Form

	er Informatio	n (required)			mation (required)
Member Name:			Provider Name:		
Insurance ID#:			NPI#:		Specialty:
Date of Birth:			Office Phone:		
Street Address:			Office Fax:		
City:	State:	Zip:	Office Street Address:		
Phone:			City:	State:	Zip:
		Medication Info	ormation (required)		
Medication Name:			Strength:		Dosage Form:
☐ Check if requesting			Directions for Use:		
☐ Check if request is f	for continuation of th				
		Clinical Infor	mation (required)		
Select the diagnosis Moderately to seve		colitis			
Other diagnosis:			ICD-10 Cod	de(s):	
Gastroenterologi	st	bed by or in consultation			hilata 2 D.Van D.Na
•		mbination with another b		immunomod	dulator? U Yes U No
Has the patient had ar following: corticosteroi	n inadequate response ds (i.e., prednisone, n	ive colitis, also answer e to, intolerance to, or col nethylprednisolone), 5-As rexate, mercaptopurine)	ntraindication to conventi SAs (i.e., mesalamine, su		with one or more of the balsalazide, olsalazine), non-
Quantity limit reques					
What is the quantity re What is the reason for					
☐ Titration or loading☐ Patient is on a dose☐ Requested strength	dose purposes e-alternating schedule n/dose is not commerc	e (e.g., one tablet in the m	-	t night, one	to two tablets at bedtime)
				information	the physician feels is important to
					
Please note: This re	equest may be denied ur	nless all required information	is received.		



Xeljanz® & Xeljanz XR® Prior Authorization Request Form

Men	nber Informa	ation (required)	Pro	ovider Info	rmation (required)	
Member Name:			Provider Name	:		
Insurance ID#:			NPI#:	NPI#: Specialty:		
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street A	ddress:		
Phone:	I		City:	State:	Zip:	
		Medication	Information (re	quired)		
Medication Name:			Strength:	4	Dosage Form:	
☐ Check if requesti	ing brand		Directions for U	Jse:		
☐ Check if request	<u> </u>	of therapy				
		Clinical In	formation (requi	red)		
Select the diagnos	sis below:		(- 1	,		
☐ Active psoriatic						
☐ Moderately to se		natoid arthritis				
☐ Moderately to se	everely active ulcer	ative colitis				
		rticular juvenile idiopathic	arthritis (pJIA)			
Active ankylosin						
Other diagnosis	·		ICD-	-10 Code(s):		
Clinical information						
Dermatologist	d Gastroen		natologist 🔲 Othe	er		
Will the requested r	medication be used	in combination with anot	her biologic agent? 🚨	Yes 🛭 No		
		ponse to, intolerance to, on flexis, Remicade)? If so,			lockers (e.g., Cimzia, Enbrel,	
Requested strer	y requested per MC n for exceeding the ing dose purposes lose-alternating sch ngth/dose is not cor	e plan limitations?		blets at night, one	e to two tablets at bedtime)	
				y other information	n the physician feels is important t	

<u>Please note:</u> This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Xolair® Prior Authorization Request Form

DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

	per Information				mation (required)
Member Name:			Provider Name:		
Insurance ID#:			NPI#:		Specialty:
Date of Birth:			Office Phone:		
Street Address:			Office Fax:		
City:	State:	Zip:	Office Street Address:		
Phone:			City:	State:	Zip:
		Andication Info	ormation (required)		
Medication Name:	·		Strength:		Dosage Form:
	. h d				Dosage Form.
☐ Check if requesting☐ Check if request is	for continuation of the	rany	Directions for Use:		
= onesit ii request ie	ioi communication of the	Clinical Inforr	nation (married)		
☐ IgE Mediated Food	urticaria (CIU) inadequate response to	nasal steroid	ICD-10 Code	e(s):	
Clinical information:				-(-)-	
Select if the requested Allergist Derr	d medication is prescribe matologist 🔲 Immune	ologist 🛭 Pulmonolog	with one of the following gist Rheumatologis blogic agent? Yes	st 🗖 Othe	
-	a positive skin test or in	•	ennial aeroallergen? 🗖	Yes □ No	•
•	an elevated serum IgE otoms inadequately cont		costeroids?	No	
	ic urticaria, answer the				
Does the patient rema	ain symptomatic despite	H1 antihistamine treatm	nent? Yes No		
	h inadequate response ain symptomatic despite		_		
	od allergy, answer the		U NO		
Dose the patient have Does the patient have Does the patient have	a history of an IgE-med a positive skin prick tes a positive IgE screenin	liated (Type I) allergic re st (SPT) (≥ 4 mm wheal) g (≥ 6 kUA/L) to identifie	eaction to one or more for to identified foods? Used foods? Used foods? Uses Used foods?	Yes □ No	
Quantity limit reques					
What is the reason for ☐ Titration or loading ☐ Patient is on a dos		limitations? e.g., one tablet in the m	orning and two tablets a	t night, one	to two tablets at bedtime)



ZymfentraTM Prior Authorization Request Form COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Mem		ation (required)			rmation (required)	
Member Name:			Provider Name	Provider Name:		
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Ad	ddress:		
Phone:			City:	State:	Zip:	
		Modication	Information (red			
Medication Name:		Medication	Strength:	quirea)	Dosage Form:	
				1	Dosage Form.	
☐ Check if requestin☐ Check if request is	•	of thorony	Directions for U	Jse:		
□ Check if request is	3 lor continuation		formation.			
		Clinical in	formation (requi	red)		
Select the diagnosi						
☐ Moderately to sev						
☐ Moderately to sev			ICD	10 Codo(s):		
			10D-	10 Code(s)		
Clinical information		Itation with a gastroentero	logiet? 🗖 Voe 🞵 No			
		with another biologic age				
-		eatment?		ne IV infliximah tr	reatment?	
=		nse following IV infliximab	•	ic iv iiiiixiiiiab ti	Cathoriti	
, ,						
Quantity limit reque						
		EATMENT? syring	ge every week	KS		
What is the reason		e plan limitations?				
☐ Titration or loadin		adula (a.g. ana tahlat in t	he marning and two to	bloto at night on	e to two tablets at bedtime)	
☐ Requested streng			ne morning and two ta	biets at flight, on	e to two tablets at bedtime)	
Other:	ju // 4030 13 1101 0011	innercially available				
Are there any other corthis review?	nments, diagnoses	, symptoms, medications t	ried or failed, and/or any	y other informatio	n the physician feels is important to	
Please note: This	request may be der	aiod unloss all required inform	nation is received			

This request may be denied unless all required information is refor urgent or expedited requests please call 1-855-401-4262. Please note:



Juxtapid® Prior Authorization Request Form

Member Information (required)			P	Provider Information (required)			
Member Name:			Provider Name	e:			
Insurance ID#:			NPI#:	NPI#: Specialty:			
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street A	Address:			
Phone:	I	I	City:	State:	Zip:		
		Medication	Information	(required)			
Medication Nam	ne:		Strength:		Dosage Form:		
☐ Check if requ	esting brand		Directions for	Use:			
□ Check if requ	est is for continuatio	n of therapy					
		Clinical I	nformation (red	quired)			
Is the requeste Has the patien	s baseline LDL-C leved medication prescrit had trial and failur	vel greater than or equ ribed by or in consulta e of Praluent or Repat I failure with Praluent o	ation with a cardiolog tha? □ Yes □ No	gist or endocrinolog			
What is the me	edical rationale for ι	ıse of Juxtapid over Pr	raluent or Repatha?				
are there any other	er comments, diagnose	s, symptoms, medications	s tried or failed, and/or	any other information	the physician feels is important		

This request may be denied unless all required information is received. Please note:

For urgent or expedited requests please call 1-855-401-4262.



Extina, XolgelTM & XolegelTM Duo Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Addres	ss:		
Phone:		1	City:	State:		Zip:
		Medication In	formation (requir	ed)		
Medication Name:			Strength:		Dosage F	orm:
☐ Check if requesting	•		Directions for Use:		_	
☐ Check if request is	for continuation					
		Clinical Info	rmation (required			
Select the diagn	osis below:					
		unocompetent patients				
Other diagnos	is:		ICD-10 Code(s):		
Clinical informat	_					
Has the patient had 120 days? Yes		ilure (a minimum of 60 o	day trial) of ketocor	nazole crea	m or shan	npoo in the past
Quantity limit red What is the quant		er MONTH?	_			
•		ing the plan limitations	s?			
Patient require	es a larger quar	ntity to cover a larger su	rface area			
Other:	 					
Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?						
Please note: This	s request may be der	nied unless all required information	on is received.			

For urgent or expedited requests please call 1-855-401-4262.



Topical onychomycosis agents Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address	:		
Phone:			City:	State:		Zip:
		Medication Inf	ormation (required	d)		
Medication Name:			Strength:	/	Dosage F	orm:
☐ Check if requesting	g brand		Directions for Use:			
☐ Check if request is	for continuation of the	erapy				
		Clinical Infor	mation (required)			
Select the diagn	osis below:					
Onychomycos	sis of the toenails					
Other diagnos	sis:		_ ICD-10 Code(s):			
Clinical informa	tion:					
Has the patient h 12 months? ☐ Y		of 90 days of terbin	afine tablets and 90	days of to	pical cicl	opirox in the last
Are there any other co	omments, diagnoses, syn	nptoms, medications tried	or failed, and/or any othe	er information	the physici	an feels is important to
	s request may be denied u	nless all required informatio				



Luzu® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)				Provider Information (required)				
Member Name:			Provider Na	Provider Name:				
Insurance ID#:			NPI#:		Specialty:			
Date of Birth:			Office Phone	e:				
Street Address:			Office Fax:					
City:	State:	Zip:	Office Street	: Address:				
Phone:			City:	State:	Zip:			
		Medication I	nformation	(required)				
Medication Name:			Strength:		Dosage Form:			
☐ Check if requesting	•		Directions fo	r Use:				
☐ Check if request is	for continuation	on of therapy						
		Clinical Inf	ormation (r	equired)				
What is the patie	ent's diagno	sis for the medication	being request	ed? (Mandatory	()			
ICD-10 Code(s)	[Mandatory]:						
Medication histo	ory:							
Has the patient tr	ied and faile	d two topical antifungal a	agents in the la	st 365 days? 🚨	Yes □ No			
Has the patient tr	ied and faile	d two oral antifungal age	ents in the last	365 days? □ Ye s	s 🗖 No			
Are there any other co this review?	mments, diagno	ses, symptoms, medications to	ried or failed, and/o	r any other informatio	on the physician feels is important to			
Please note: This	s request may be	denied unless all required inform	ation is received.					

For urgent or expedited requests please call 1-855-401-4262.



Oravig® Prior Authorization Request Form

		FUTURE USE. FORMS ARE				
Memb	er Informati	ON (required)	Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Addr	ress:		
Phone:			City:	State:	Zip:	
		Medication Inf	formation (requ	uired)		
Medication Name:			Strength:		Dosage Form:	
☐ Check if requesting	brand		Directions for Use) :		
☐ Check if request is f	or continuation of	therapy				
		Clinical Info	rmation (require	ed)		
Select the diagno	sis below:					
□ Local treatment	t of oropharynge	al candidiasis (OPC)				
Other diagnosis	s:		_ ICD-10 Code((s):		
Clinical information	on:					
		re of clotrimazole troc	hes, fluconazole	tablets/suspe	ension, or nystatin	
suspension within		? U Yes U No				
Quantity limit req What is the quantit		DAY?				
•	• • •	g the plan limitations	. 2			
☐ Titration or load			•			
			ablet in the morni	ng and two ta	blets at night, one to two	
tablets at bedtir	,					
<u>-</u>	-	commercially availab	le			
Other:						
Are there any other com this review?	nments, diagnoses, s	ymptoms, medications tried	or failed, and/or any	other information	n the physician feels is important to	
Please note: This		d unless all required information				

This request may be denied unless all required information is received. Please note:

For urgent or expedited requests please call 1-855-401-4262.



Vusion® Prior Authorization Request Form

	DO NOT COPY FOR FUT					
	er Information	(required)	Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Add	dress:		
Phone:			City:	State:	Zip:	
		Medication Inf	ormation (re	quired)		
Medication Name:			Strength:		Dosage Form:	
☐ Check if requesting	brand		Directions for Us	se:		
☐ Check if request is	for continuation of the	rapy				
		Clinical Infor	mation (requi	ired)		
Select the diagnosis below: Adjunctive treatment of diaper dermatitis complicated by candidiasis Other diagnosis: ICD-10 Code(s): Clinical information: Has the patient had a trial and failure (a minimum of 14 day trial) to topical nystatin or topical OTC miconazole in the last 30 days? □ Yes □ No Quantity limit requests: What is the quantity requested per MONTH? What is the reason for exceeding the plan limitations? □ Patient requires a larger quantity to cover a larger surface area □ Other:						
this review?				y other information	n the physician feels is important to	
Please note: This	request may be denied un	less all required information	n is received.			



Metozolv[®] ODT (metoclopramide ODT) and Gimoti[®] nasal spray Prior Authorization Request Form

	OO NOT COPY FOR FUTU	RE USE. FORMS ARE U	PDATED FREQUENTLY	AND MAY BE	BARCODED	
Memb	er Information	(required)	Provi	der Info	rmation	(required)
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth: Office Phone:						
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:		<u>l</u>	City:	State:		Zip:
	N	Medication Inf	ormation (require	ed)		
Medication Name:			Strength:	,	Dosage F	orm:
☐ Check if requesting	brand		Directions for Use:			
Check if request is	for continuation of the	rapy				
		Clinical Infor	mation (required)			
☐ Symptomatic g☐ Postsurgical g☐ Other diagnos Clinical informat Has the patient ha within the last 90	is:	flux disease I failure of Brand R	eglan or generic m	ıetoclopran	nide tablet	
What is the reas ☐ Titration or loa ☐ Patient is on a tablets at bedt ☐ Requested str ☐ Other:	ity requested per DA on for exceeding to ding dose purposes dose-alternating sc	ne plan limitations hedule (e.g., one ta	ablet in the mornin			

<u>Please note</u>: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Multiple Sclerosis Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			MO ARE OF	Provider Information (required)			
Member Name:				Provider Name:			
Insurance ID#:				NPI#: Specialty:			
Date of Birth:	Date of Birth:			Office Phone:			
Street Address:				Office Fax:			
City:	State:	Zip:		Office Street Addres	ss:		
Phone:	l			City:	State:		Zip:
		Medicati	on Info	rmation (require	d)		
Medication Name:				Strength:	,	Dosage	Form:
☐ Check if requesting	brand			Directions for Use:			
☐ Check if request is	for continuation of tl	nerapy					
		Clinica	l Inforn	nation (required)			
Select the medication	n being requested:						
□ Ampyra	Briumvi		Gilenya	■ Mav		□ F	Rebif
□ Aubagio	Copaxone		Glatiramer	,			Гascenso ODT
☐ Avonex	Dalfampridine		Glatopa	☐ Pleg			Tecfidera
☐ Bafiertam	Extavia		Kesimpta	☐ Pon	vory		/umerity
☐ Betaseron						L	Zeposia
Select the diagnosis Multiple sclerosis							
☐ Other diagnosis: _				ICD-10 Co	ode(s):		
Prescriber's specials Select if the requested	-	had by ar in aa	noultation w	with and of the following	a aposislista:		
□ Neurologist	i illedication is presci	bed by or in co	risuitation v	viui one of the following	ig specialists.	•	
	yra (dalfampridine ER) only]					
For Ampyra (dalfam	oridine ER), also ans	wer the follow	ving:				
Does the patient have	a history of seizures?	Yes No)				
For Aubagio, Avone Mayzent, Plegridy, P						topa, Kesi	impta, Lemtrada,
	-		-	-		sina-remittir	ng disease, or active
	Does the patient have a relapsing form of multiple sclerosis, including clinically isolated syndrome, relapsing-remitting disease, or active secondary progressive disease? No						
For mitoxantrone, al		•					
Select the form of mu			ent:				
	psing multiple scleros						
	ressive multiple sclero						
☐ Worsening relapsing-remitting multiple sclerosis							



Multiple Sclerosis Prior Authorization Request Form (Page 2 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

For Maveno	lad, also answer the following:		
Does the particle disease?		ple sclerosis, including relapsing-remitting o	disease or active secondary progressive
	ent already received the FDA-reco □ Yes □ No	mmended lifetime limit of 2 treatment cours	es (or 4 treatment cycles total) of
Select the di		iple sclerosis the patient has failed after a t	trial of at least 4 weeks, has a contraindication
☐ Aubagio	o (teriflunomide)	Extavia (interferon beta-1b)	Plegridy (peginterferon beta-1a)
□ Avonex	(interferon beta-1a)	☐ Gilenya (fingolimod)	□ Rebif (interferon beta-1a)
□ Bafierta	m (monomethyl fumarate)	Kesimpta (ofatumumab)	Tecfidera (dimethyl fumarate)
Betaser	on (interferon beta-1b)	■ Lemtrada (alemtuzumab)	Tysabri (natalizumab)
Briumvi	(ublituximab-xiiy)	■ Mayzent (siponimod)	☐ Vumerity (diroximel)
□ Copaxo	ne/Glatopa (glatiramer acetate)	Ocrevus (ocrelizumab)	☐ Zeposia (ozanimod)
☐ Requeste	ed strength/dose is not commercial	g., one tablet in the morning and two table y available	to at highly one to two tablets at boatime)
Are there any o	ther comments, diagnoses, sympton	ns, medications tried or failed, and/or any oth	ner information the physician feels is important to
Please note:	For urgent or expedited requests p	s all required information is received. blease call 1-855-401-4262. gent requests and faxed to 1-844-403-1029.	



Tysabri® Prior Authorization Request Form

Member Information (required)				Provider Information (required)			
Member Name:			Provider Name:	Provider Name:			
Insurance ID#:			NPI#:	NPI#: Specialty:			
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Add	Office Street Address:			
Phone:	Phone: City:		City:	State:	Zip:		
		Medication	Information (req	uired)			
Medication Name:			Strength:	•,	Dosage Form:		
☐ Check if requesting	brand		Directions for Us	se:			
☐ Check if request is	for continuation o	f therapy					
		Clinical In	formation (require	ed)			
Crohn's Disease (s Other Prescriber's special Select if the requester Neurologist Gastroenterologist Other Quantity limit requester	ty: d medication is pres	scribed by or in consult	ation with one of the folk	IC	D-10 Code(s): D-10 Code(s): D-10 Code(s): S:		
Requested strengt	or exceeding the p dose purposes e-alternating sched h/dose is not comm	olan limitations?	-	lets at night, one	e to two tablets at bedtime)		
Are there any other comn his review?	nents, diagnoses, sy	mptoms, medications tr	ried or failed, and/or any o	ther information	the physician feels is important to		
		d unless all required inforruests please call 1-855-4					



Nasal Steroids Prior Authorization Request Form

DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)				
Member Name:				Provider Name:			
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Address:				
Phone:		<u> </u>	City: State: Zip:				
		Medication Ir	nformation	(required)			
Medication Name:			Strength:		Dosage Form:		
☐ Check if requesting	g brand		Directions for	Directions for Use:			
☐ Check if request is	for continuation	on of therapy					
		Clinical Info	ormation (re	equired)			
□ Nasal polyps□ Nonallergic (v.□ Perennial aller□ Seasonal aller□ Other diagnos	rgic rhinitis gic rhinitis		ICD-10 Co	ode(s):			
Medication histo	•						
-		I failure of a generic nasa	il steroid in the	past 6 months?	⊔ Yes ⊔ No		
☐ Titration or loa☐ ☐ Patient is on a tablets at bedt	city requested on for exceed ding dose plate dose-alternatime) ength/dose is	eding the plan limitation urposes ating schedule (e.g., one some some commercially availa	tablet in the m	orning and two ta	ablets at night, one to two		
Are there any other co	mments, diagno	eses, symptoms, medications tric	ed or failed, and/or	any other informatio	n the physician feels is important to		
Please note: This	s request may be	denied unless all required informa	tion is received.				

For urgent or expedited requests please call 1-855-401-4262.



Nascobal® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			P	Provider Information (required)				
Member Nam	e:		Provider Name	Provider Name:				
Insurance ID#:			NPI#:		Specialty:			
Date of Birth:			Office Phone:					
Street Addres	SS:		Office Fax:					
City:	State:	Zip:	Office Street A	Address:				
Phone:		I	City:	City: State: Zip				
		Medication	n Information (required)				
Medication Na	ame:		Strength:	Strength: Dosage Form:				
☐ Check if re	questing brand		Directions for	Directions for Use:				
☐ Check if re	quest is for continuation	of therapy						
		Clinical I	Information (req	uired)				
Has the pat	tient had a trial and f	ailure of injectable o	cyanocobalamin wit	hin the past 6 m	onths?			
Are there any of this review?	other comments, diagnose	es, symptoms, medication	ns tried or failed, and/or	any other informatio	n the physician feels is important to			
Please note:		enied unless all required in						



NuplazidTM Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Mem	Member Information (required)		THE OF BATEBINES	Provider Information (required)				
Member Name:			Provider Nam	Provider Name:				
Insurance ID#:			NPI#:		Specialty:			
Date of Birth:			Office Phone:	:				
Street Address:			Office Fax:					
City:	State:	Zip:	Office Street	Address:				
Phone:	L	<u> </u>	City:	State:	Zip:			
		Medication	Information	(required)				
Medication Name:			Strength:		Dosage Form:			
☐ Check if requesting brand			Directions for	Directions for Use:				
☐ Check if request is	s for continuatior							
		Clinical In	nformation (re	quired)				
Select the diagn								
		s associated with Park		. ,				
			ICD-10 Co	ode(s):				
Clinical informa				. . .				
Is Nuplazid preso	cribed by or in	consultation with a ne	urologist or psyc	hiatrist? U Yes	□ No			
Are there any other co	omments, diagnos	es, symptoms, medications	tried or failed, and/or	any other information	on the physician feels is important to			
Please note: Thi	s request may be d	enied unless all required infor	mation is received.					

For urgent or expedited requests please call 1-855-401-4262.



NuvessaTM Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)		F	Provider Info	rmation	(required)		
Member Name:			Provider Nam	Provider Name:			
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone	:	_		
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street	Address:			
Phone:		I	City:	State:		Zip:	
		Medication Ir	nformation	(required)			
Medication Name:			Strength:	Strength: Dosage Form:		orm:	
☐ Check if requesti	ing brand		Directions for	Directions for Use:			
☐ Check if request	is for continuatio	n of therapy					
		Clinical Info	ormation (re	equired)			
Has the patient	had a trial and	failure of metronidazole	vaginal gel 0.7	75% within the pa	ast 30 days	? 🛘 Yes 🗘 No	
Are there any other this review?	comments, diagnos	ses, symptoms, medications tric	ed or failed, and/or	any other informatio	n the physicia	an feels is important to	
Please note: T	his request may be o	denied unless all required informa	tion is received.				

For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



Hetlioz® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)		Pr	Provider Information (required)				
Member Name	e:		Provider Name	Provider Name:			
Insurance ID#:	Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:	I_			
Street Address	S:		Office Fax:				
City:	State:	Zip:	Office Street Ad	ddress:			
Phone:			City:	State:	Zip:		
		Medication	Information (r	equired)			
Medication Na	me:		Strength:		Dosage Form:		
☐ Check if req	questing brand		Directions for U	lse:			
☐ Check if req	uest is for continuatio	n of therapy					
		Clinical Ir	nformation (requ	uired)			
Select the di	iagnosis below:						
	our Sleep-Wake Disc						
•		n Smith-Magenis syndr					
Other diag	gnosis:			D-10 Code(s):			
	_		tic (estazolam, eszo	piclone, temazepa	am, triazolam, zaleplon,		
Are there any oth this review?	her comments, diagnose	s, symptoms, medications	tried or failed, and/or a	ny other information	the physician feels is important to		
Please note:		nied unless all required infor requests please call 1-855-					



Nuvigil® (armodafinil) and Provigil® (modafinil) Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Memb	er Information		Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:		1	
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:			City:	State:		Zip:
		Medication Inf	ormation (require	d)		
Medication Name:			Strength:		Dosage Fo	orm:
☐ Check if requesting	brand		Directions for Use:		l	
☐ Check if request is	for continuation of the	rapy				
		Clinical Infor	mation (required)			
Select the diagno	osis below:					
☐ Excessive slee	piness associated	with obstructive slee	p apnea/hypopnea	syndrome	;	
Narcolepsy						
Shift work slee	p disorder					
Other diagnosi	s:		_ ICD-10 Code(s):			
Quantity limit red What is the quanti	quests: ity requested per D <i>i</i>	AY?				
What is the reaso	on for exceeding t	he plan limitations	?			
	ding dose purposes					
		hedule (e.g., one tal	blet in the morning	and two ta	ıblets at niç	ght, one to two
tablets at bedti	,	mmoroially available	_			
•	•	mmercially available				
u Other.						
Are there any other cor this review?	mments, diagnoses, sym	ptoms, medications tried	or failed, and/or any othe	er informatior	the physicia	nn feels is important to

This request may be denied unless all required information is received. For urgent or expedited requests please call 1-855-401-4262. Please note:



Sunosi[™] & Wakix[®] Prior Authorization Request Form

Member Information (required)				Provider Information (required)			
Member Name:			Provider Name				
Insurance ID#:			NPI#:	NPI#: Specialty:			
Date of Birth:			Office Phone:		<u> </u>		
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Ad	Office Street Address:			
Phone:	_		City:	State:	Zip:		
		Medication I	nformation (red	quired)			
Medication Name:		modication	Strength:	quirea	Dosage Form:		
☐ Check if requesting	g brand		Directions for U	Jse:			
☐ Check if request is		of therapy					
		Clinical Inf	ormation (requi	ired)			
Select the diagnosis	s below:						
□ Narcolepsy with e	•	sleepiness					
☐ Obstructive sleep	•						
Other diagnosis: _			ICD-1	0 Code(s):			
		ime sleepiness, answer t					
		at least one of the following mine, methylphenidate?		gents: amphetami	ne/dextroamphetamine,		
Quantity limit reque What is the quantity r		V2					
What is the reason f		· · · · · · · · · · · · · · · · · · ·					
☐ Titration or loading	g dose purposes	•					
	se-alternating sch	nedule (e.g., one tablet in the	ne morning and two ta	blets at night, one	to two tablets at		
bedtime) Requested streng	th/dose is not cor	mmercially available					
□ Patient requires a	greater quantity	for the treatment of a large		al applications on	ily]		
Are there any other com this review?	nments, diagnoses	s, symptoms, medications tr	ied or failed, and/or any	y other information	the physician feels is important to		
Diagon noto: This	request may be de-	aind unloss all required inform	ation is nearly ad				

This request may be denied unless all required information is received. For urgent or expedited requests please call 1-855-401-4262. Please note:



Xyrem® Prior Authorization Request Form

			JPDATED FREQUENTLY A		
	er Informatio	(required)		er Infor	mation (required)
Member Name:			Provider Name:		
Insurance ID#:			NPI#:		Specialty:
Date of Birth:			Office Phone:		
Street Address:			Office Fax:		
City:	State:	Zip:	Office Street Address:		
Phone:			City:	State:	Zip:
		Medication Info	ormation (required)		
Medication Name:			Strength:		Dosage Form:
☐ Check if requesting	brand		Directions for Use:		
☐ Check if request is	for continuation of th	erapy			
		Clinical Infor	mation (required)		
Clinical Information (required) Select the diagnosis below: Narcolepsy with cataplexy Narcolepsy with excessive daytime sleepiness Other diagnosis:					
this review?	illilenis, ulagrioses, syn	ipionis, medications tried	or ranged, and/or any other	i illioimatior	n the physician feels is important t
Please note: This	request may be denied u	nless all required informatio	n is received.		

This request may be denied unless all required information is received. For urgent or expedited requests please call 1-855-401-4262.



Nuzyra® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Pro	Provider Information (required)		
Member Name:			Provider Name:	•		
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Ac	Office Street Address:		
Phone:			City:	State:	Zip:	
		Medication	Information (red	quired)		
Medication Name:			Strength:	'	Dosage Form:	
☐ Check if request	ing brand		Directions for U	lse:		
☐ Check if request	is for continuation	n of therapy				
		Clinical In	formation (requi	red)		
Select the diagnos	uired pneumonia		ICD	10 Codo(o):		
Clinical information			ICD-	10 Code(s):		
Has the patient had	l an inadequate res	sponse to, intolerance to, c inocycline, doxycycline, et				
Quantity limit requ What is the quantity		EATMENT?				
		e plan limitations?				
□ Requested strer	lose-alternating scl ngth/dose is not co	nedule (e.g., one tablet in t mmercially available	-	blets at night, one	e to two tablets at bedtime)	
Are there any other cothis review?	omments, diagnose	s, symptoms, medications t	ried or failed, and/or any	y other information	n the physician feels is important to	
Please note: Thi	is request may be de	nied unless all required inform	nation is received.			

For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



Bepreve[®], Lastacaft[®], Pataday[®], Patanol[®], Pazeo[®] Prior Authorization Request Form

	er Informatio	TURE USE. FORMS ARE ((required)			rmation (required)
Member Name:			Provider Name:		
Insurance ID#:			NPI#: Specialty:		
Date of Birth:			Office Phone:		
Street Address:			Office Fax:		
City:	State:	Zip:	Office Street Address:		
Phone:	1		City:	State:	Zip:
		Medication Inf	ormation (re	equired)	
Medication Name:			Strength:	2-1	Dosage Form:
☐ Check if requesting	brand		Directions for U	lse:	
	for continuation of th	erapy			
		Clinical Info	rmation (requ	ired)	
Select the diagnos	sis below:				
□ Allergic conjunc	tivitis				
Other diagnosis	::		ICD-10	0 Code(s):	
Medication history Has the patient had 120 days? ☐ Yes ☐	a 5 day trial of azela	astine, emedastine, e	pinastine, generi	ic olopatadine, o	or ketotifen in the last
What is the reasor ☐ Titration or loadi ☐ Patient is on a d bedtime)	requested per MON n for exceeding the ng dose purposes	plan limitations? dule (e.g., one tablet	in the morning a	and two tablets a	t night, one to two tablets at
Are there any other com this review?	ments, diagnoses, sym	ptoms, medications tried	or failed, and/or an	ny other informatio	n the physician feels is important to
Plane note: This r	request may be denied up				

This request may be denied unless all required information is received. Please note:

For urgent or expedited requests please call 1-855-401-4262.



Brand Name narcotics Prior Authorization Request Form (Page 1 of 2)

Member Information (required)			of DATED INC	Provider Information (required)				
Member Name:			Provider Na	Provider Name:				
Insurance ID#:			NPI#:	NPI#: Specialty:				
Date of Birth:			Office Phone:					
Street Address:			Office Fax:	Office Fax:				
City:	State:	Zip:	Office Stree	Office Street Address:				
Phone:			City:	Zip:				
		Medication	n Informatio	(required)				
Medication Name:		Medication	Strength:	T (required)	Dosage Form:			
☐ Check if requesting	g brand		Directions for	or Use:				
	for continuation of t	herapy						
		Clinical I	nformation (required)				
Medication history:								
· ·	a trial and failure (at lea	ast a 30 day trial) of	a generic narcotic in	the past 90 days?	⊒ Yes □ No			
Clinical information								
	e a diagnosis of cance							
· ·	e a diagnosis of a tern			omio oto)? 🗖 Ves [D No.			
-	e an <u>illness</u> associated diagnosis:	-	i (e.g., sickle cell an	emia, etc)? • res t	■ NO			
_ ·	e an <u>injury</u> associated		? 🗆 Yes 🗅 No					
	diagnosis:							
	ade to taper the patien edocumentation:			l No				
ii yes , piease piovide	e documentation.							
Reauthorization:								
	zation request, answ							
Is the prescriber mair If yes , please provide	ntaining the most cons	servative, effective tre	eatment? La Yes La	l No				
ii yes , piease provide	e documentation							
Quantity limit reque	ests:							
What is the patient's	s diagnosis for the m	nedication being red	-	ICD 40 Cada(a).				
What is the quantity r	equested per MONTH	 12		ICD-10 Code(s):				
	for exceeding the pla							
☐ Titration or loading	g dose purposes		the marning and to	o tobloto ot piaht	a to two toblots at hadtims			
Requested streng	se-aiternating schedul ith/dose is not comme	e (e.g., one tablet in ricially available	the morning and two	o tablets at hight, one	e to two tablets at bedtime)			
□ Other:								



Hydrocodone-acetaminophen (APAP) Products Prior Authorization Request Form (Page 1 of 2)

	DO NOT COPY FOR	R FUTURE USE. FORMS AF	E UPDATED FREQU	IENTLY AND MAY BE	BARCODED	
Mem	ber Informa	tion (required)	P	rovider Info	rmation (required)	
Member Name:			Provider Nam	Provider Name:		
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street A	Office Street Address:		
Phone:			City:	City: State: Zip:		
		Medication I	nformation	(required)		
Medication Name:		modioation	Strength:	required)	Dosage Form:	
☐ Check if requestin	g brand		Directions for	Use:		
☐ Check if request is	for continuation c	f therapy				
		Clinical Inf	ormation (red	guired)		
Medication histor	v:		()	,		
	d a history of a 60	day trial (in the past 90	days) with one o	f the following ger	nerics listed	
HydrocodoneHydrocodoneHydrocodone	-APAP 7.5-325					
Clinical information						
Does the patient ha	ave a diagnosis of	cancer in the past 365	days? □ Yes □	l No		
Does the patient ha	ave a diagnosis of	a terminal illness? 🗖	Yes □ No			
Does the patient ha	ave an <u>illness</u> ass	ociated with significant	pain (e.g., sickle o	cell anemia, etc)?	☐ Yes ☐ No	
If yes, please list the	ne diagnosis:					
		ciated with significant p		lo		
	· ·					
	•	patient to the lowest ef		Yes U No		
ii yes , picase prov	ide documentation					
Reauthorization:						
If this is a reautho	orization request	, answer the following):			
	-	st conservative, effectiv				
If yes , please provi	ide documentation	າ:				



Morphine Equivalent Dose (MED) Limit Prior Authorization Request Form

	DO NOT COPT FOR FUT	URE USE. FURMS ARE U	JPDATED FREQUE	NILI AND WAY BE	DARGUDED	
Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:			City:	State:	Zip:	
		Medication Inf	ormation (re	equired)		
Medication Name:			Strength:	2,	Dosage Form:	
☐ Check if requesting	brand		Directions for Us	se:		
: :	for continuation of the	erapy				
		Clinical Info	rmation (requ	ired)		
Clinical informatio	n:					
Does the patient ha	ve a diagnosis of can	cer in the past 365 da	ays? 🗆 Yes 🗅 I	No		
Does the patient ha	ve a diagnosis of a te	erminal illness? 🛚 Ye	s 🛘 No			
Does the patient ha	ve an <u>illness</u> associat	ted with significant pai	in (e.g., sickle ce	ell anemia, etc)?	☐ Yes ☐ No	
If yes , please list the	e diagnosis:					
· ·		ed with significant pair	n? 🗆 Yes 🗅 No	•		
	e diagnosis:					
	· · · · · · · · · · · · · · · · · · ·	ent to the lowest effec				
If yes , please provid	de documentation:					
Reauthorization:						
If this is a reauthor	rization request, ans	swer the following:				
·	•	nservative, effective t				
If yes , please provid	de documentation:					
Are there any other corthis review?	nments, diagnoses, sym	ptoms, medications tried	or failed, and/or an	y other information	n the physician feels is important to	

This request may be denied unless all required information is received. Please note:

For urgent or expedited requests please call 1-855-401-4262.



Opioid Naïve Prior Authorization Request Form

Member Information (required)			Provider Information (required)					
Member Name:			Provider Name:	Provider Name:				
Insurance ID#:			NPI#:		Specialty:			
Date of Birth:	Date of Birth:		Office Phone:	Office Phone:				
Street Address:			Office Fax:					
City:	State:	Zip:	Office Street Ad	Office Street Address:				
Phone:			City:	State:	Zip:			
		Medication	Information (re	equired)				
Medication Name:			Strength:	~(Dosage Form:			
☐ Check if requesting	g brand		Directions for Us	se:				
☐ Check if request is	for continuatio r	of therapy						
		Clinical In	formation (requi	ired)				
Clinical information	on:							
Does the patient ha	ave a diagnosis	of cancer in the past 369	5 days? ☐ Yes ☐ N	No				
Does the patient ha	ave a diagnosis	of a terminal illness?	Yes □ No					
Does the patient ha	ave an <u>illness</u> a	ssociated with significant	t pain (e.g., sickle ce	II anemia, majo	r surgery, etc)?			
If yes , please list th	ne diagnosis:	·						
Does the patient ha	ave an <u>injury</u> as	sociated with significant	pain? 🗆 Yes 🗅 No	•				
If yes , please list th	ne diagnosis:							
Have efforts been r	made to taper th	ne patient to the lowest e	effective dose? 🗖 Ye	es 🗆 No				
If yes , please provi	de documentat	ion:						
Are there any other co this review?	mments, diagnos	es, symptoms, medications t	tried or failed, and/or an	y other informatio	on the physician feels is important to			
Please note: This	e request may be d	enied unless all required inform	mation is received					

For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



Long Acting and Short Acting Opioid Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

 Member Information (required)

 Member Name:
 Provider Name:

 Insurance ID#:
 NPI#:
 Specialty:

 Date of Birth:
 Office Phone:

 Street Address:
 Office Fax:

Street Address:			Office Fax:	Office Fax:					
City:	State:	Zip:	Office Street A	Office Street Address:					
Phone: City: State: Zip:						Zip:			
		Medicatio	n Information (r	equired)					
Medication Name: Strength: Dosage Form:									
☐ Check if requesting			Directions for U	Jse:	<u> </u>				
☐ Check if request is f	or continuation	of therapy							
		Clinical	Information (requ	uired)					
Clinical information	n:								
Does the patient have a diagnosis of cancer in the past 365 days? ☐ Yes ☐ No									
Does the patient have a diagnosis of a terminal illness? ☐ Yes ☐ No									
Does the patient have	/e an <u>illness</u> ass	ociated with signif	icant pain (e.g., sickle	cell anemia, etc)?	□ Yes □	l No			
If yes, please list the	e diagnosis:								
•		ociated with signific	cant pain? 🛭 Yes 🗖 N	No					
If yes , please list the	-								
	-		est effective dose?	Yes □ No					
If yes , please provid	le documentatio	n:							
Reauthorization:									
If this is a reauthor	ization reques	, answer the follo	owing:						
•	•		fective treatment? 🗖	∕es □ No					
If yes , please provid	If yes , please provide documentation:								

Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to

Please note:

this review?

This request may be denied unless all required information is received. For urgent or expedited requests please call 1-855-401-4262.



Opzelura[™] Prior Authorization Request Form

DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODE!

Member Information (required)				Provider Information (required)				
Member Name:			Provider Name:					
Insurance ID#:			NPI#:	NPI#: Specialty:				
Date of Birth:			Office Phone:	I				
Street Address:			Office Fax:					
City:	State:	Zip:	Office Street Ad	Office Street Address:				
Phone:		I	City:	State:	Zip:			
		Medication	Information (re	equired)				
Medication Name:			Strength:		osage Form:			
☐ Check if requestin	•		Directions for Us	se:				
☐ Check if request is	s for continuatio	on of therapy						
		Clinical li	nformation (requ	ired)				
Select the diagno	sis below:							
□ Actopic dermati	itis							
Other diagnosis	s:		ICD-	·10 Code(s):				
Clinical information	on:							
1. Does the patier	nt have greater	than or equal to 3% bo	ody surface area invol	lvement? 🗖 Yes 🏻	□ No			
		areas (e.g., face, hand						
	•		apy with one of the fol	llowing: corticostero	oids, pimecrolimus and/or			
tacrolimus, cris								
				nase inhibitors, or po	otent immunosuppressants			
5. What is the req		sporine? 🗖 Yes 📮 N						
		sing Opzelura?			-			
o. How long will a	io pationi bo at	onig opzoidia:						
Are there any other cor this review?	nments, diagnos	es, symptoms, medications	s tried or failed, and/or an	ny other information the	e physician feels is important to			
Please note: This	request may be d	enied unless all required info	ormation is received.					

For urgent or expedited requests please call 1-855-401-4262.



Oracea®, Seysara®, and Solodyn® Prior Authorization Request Form

DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED Member Information (required) Provider Information (required) Member Name: Provider Name: Insurance ID#: NPI#: Specialty: Date of Birth: Office Phone: Street Address: Office Fax: Office Street Address: City: State: Zip: Phone: City: State: Zip: Medication Information (required) Medication Name: Strength: Dosage Form: Directions for Use: Check if requesting brand ☐ Check if request is for **continuation of therapy** Clinical Information (required) Select the diagnosis below: ☐ Inflammatory lesions of non-nodular moderate to severe acne vulgaris [Seysara and Solodyn only] ☐ Inflammatory lesions (papules and pustules) of rosacea [Oracea only] Other diagnosis: ICD-10 Code(s): Clinical information: Has the patient had a trial and failure (a minimum of 90 day trial) of doxycycline monohydrate, doxycycline hyclate, minocycline immediate-release, or tetracycline in the last 180 days?

Yes
No **Quantity limit requests:** What is the quantity requested per DAY? What is the reason for exceeding the plan limitations? □ Titration or loading dose purposes ☐ Patient is on a dose-alternating schedule (e.g., one tablet in the morning and two tablets at night, one to two tablets at bedtime) ☐ Requested strength/dose is not commercially available Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?

<u>Please note:</u> This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Otrexup® Prior Authorization Request Form

		FUTURE USE. FORMS ARE				
Memb	er Informati	On (required)	Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:			City:	State:	Zip:	
		Medication Inf	ormation (requi	red)		
Medication Name:			Strength:	,	Dosage Form:	
☐ Check if requesting t	orand		Directions for Use	e :		
☐ Check if request is for	r continuation of	therapy				
		Clinical Infor	mation (required	i)		
following: Is the patient intolera Has the patient tried a 180 days? Yes	ar juvenile idiopatle umatoid arthritis nt, disabling psorbular juvenile idiont of or has had a and failed one mo	(RA) iasis pathic arthritis (pJIA) an inadequate response onth of a standard dosage	to first-line therapy' e form of methotre:	heumatoid ar	thritis (RA), answer the	
Has the patient had in	nadequate respor and failed one mo	soriasis, answer the fonse to other forms of the onth of a standard dosag	rapy? 🗖 Yes 🗖 N		, injectable) within the last	
Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?						
Diagonata: This	request may be deni-	d uplace all required informati				

This request may be denied unless all required information is received. For urgent or expedited requests please call 1-855-401-4262.



Praluent® & Repatha® Prior Authorization Request Form

Member Information (required)			Provider Information (required)			
Member Name:			Provider Nam	ne:		
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:	:	<u> </u>	
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street	Address:		
Phone:		<u>I</u>	City:	State:	Zip:	
		Medication	n Information	(required)		
Medication Name:			Strength:	(roquirou)	Dosage Form:	
☐ Check if requesting	g brand		Directions for	Use:		
☐ Check if request is	for continuatio	n of therapy				
		Clinical I	nformation (re	quired)		
☐ Homozygous far ☐ Hyperlipidemia i ☐ Other diagnosis: Clinical information Is the patient's base Has the patient been 80 mg, rosuvastation Is the patient a non- rhabdomyolysis or informal [ULN])? ☐ Is the requested me	emilial hyperchemilial hyperchemilial hyperchemical high risk primary in a high risk primary in the LDL-C level receiving high tab 20 mg, ronguscle symptomuscle	suvastatin tab 40 mg)? high dose statin therap	al to 70 mg/dL? Yes No y (e.g., labeled cont nt with creatine kinas	Yes □ No (i.e., atorvastatin raindication to all see elevations great	tab 40 mg, atorvastatin tab statins, patient has experienced ater than 10 times upper limit of	
Reauthorization: If this is a reauthorization request, answer the following: Is there documentation of positive clinical response to therapy with LDL level less than 70 mg/dl or decreased 30% from baseline? Yes No Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important review?						

Please note: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



Proton Pump Inhibitor Prior Authorization Request Form

Me	mber Informa	ation (required)	P	rovider Infor	mation (required)		
Member Name:			Provider Nam	e:			
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone:	l.			
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street	Office Street Address:			
Phone:			City:	State:	Zip:		
		Medication	Information	required)			
Medication Name	e:		Strength:		Dosage Form:		
☐ Check if reque	•		Directions for	Use:			
☐ Check if reque	est is for continuation						
		Clinical Ir	nformation (red	quired)			
Select the diagn	osis below:						
■ Barrett's esop	-	Erosive esophagitis	_	☐ Zollinger-Ellison Syndrome			
□ Other diagnos		meprazole-bicarbonate)-10 Code(s):			
Does the patient For Dexilant, Ne bicarbonate cap	have a diagnosis whi exium capsule (eson esule) requests, ans		swallowing?	blet, and Zegerid ca	apsule (omeprazole-sodium		
lansoprazole, om	eprazole, pantoprazo	ole, or rabeprazole? 🗖 Y	es ☐ No				
		se reaction (must be doc pantoprazole, and rabepra			contraindication to <u>ALL</u> of the		
What is the reas ☐ Titration or los ☐ Patient is on a	tity requested per DA son for exceeding the ading dose purposes	e plan limitations? nedule (e.g., one tablet in	the morning and two	tablets at night, one	to two tablets at bedtime)		
Are there any other this review?	comments, diagnoses	s, symptoms, medications	tried or failed, and/or	any other information	the physician feels is important t		

This request may be denied unless all required information is received. Please note:

For urgent or expedited requests please call 1-855-401-4262.



Duexis® & Vimovo® Prior Authorization Request Form (Page 1 of 2) DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Memb	er Information	On (required)	Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:		l	
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address	:		
Phone:	1	-	City:	State:		Zip:
		Medication In	formation (required	d)		
Medication Name:			Strength:	<u>′</u>	Dosage Fo	orm:
☐ Check if requesting	g brand		Directions for Use:			
☐ Check if request is	for continuation of	therapy				
		Clinical Info	rmation (required)			
Select the diagnos	sis below:					
Ankylosing spon	ndylitis [Vimovo on	ly]				
Osteoarthritis						
☐ Rheumatoid arth						
☐ Other diagnosis:			ICD-10 Code(s	s):		
Clinical information						
	• • •	tic ulcer disease/gastro	` '			udanta abrania
corticosteroids)?		isk factor for gastrointe	sunai adverse evenis	(e.g., use	or anticoag	julants, chronic
Does the patient ha	eve a history of astl	nma or urticaria after ta	king aspirin or other N	ISAIDs?	Yes 🗆 N	0
For Duexis reques	sts, please also ar	nswer the following:				
		preferred generic H2-rein the last 180 days?		famotidine	cimetidine	e, ranitidine,
For Vimovo reque	sts, please also a	nswer the following:				
		preferred generic proto within the last 180 days		, omeprazo	ole, lansopi	razole,
Quantity limit requ						
What is the quantity						
		e plan limitations?				
☐ Titration or loadi☐ Patient is on a d		nedule (e.g., one tablet	in the morning and tw	o tablets a	t niaht one	e to two
tablets at bedtim	ne)		monning and the	- 100,010 G		
		mmercially available				
☐ Other:						



Qelbree® Prior Authorization Request Form

D	O NOT COPY FOR FUTU	JRE USE. FORMS ARE I	UPDATED FREQUENTLY A	ND MAY BE I	BARCODED	
Memb	er Information	(required)	Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address:			
Phone:		1	City: State: Zip:			
		Medication Inf	formation (required)			
Medication Name:			Strength:		Dosage Form:	
☐ Check if requesting	brand		Directions for Use:		_L	
☐ Check if request is f	or continuation of the	erapy				
		Clinical Info	rmation (required)			
Select the diagnosis	below:					
☐ Diagnosis			ICD-10 Co	de(s):		
Clinical information:						
Has the patient had a t						
How long was the trial	of atomoxetine					
Has the patient had a t	trial of stimulants? □ Y	es □ No				
· ·						
When did patient try th	e listed stimulant					
How long did the patie	nt try the stimulant					
Quantity limit reques	ts:					
What is the quantity re						
What is the reason for		limitations?				
☐ Titration or loading☐ Patient is on a dose		e.g., one tablet in the	morning and two tablets a	t night, one	to two tablets at bedtime)	
☐ Requested strength					,	
Other:						
Are there any other commithis review?	nents, diagnoses, symp	toms, medications tried	or failed, and/or any other	information	the physician feels is important to	

This request may be denied unless all required information is received. Please note:

For urgent or expedited requests please call 1-855-401-4262.



Qualaquin® (quinine) Prior Authorization Request Form

D/I o		OR FUTURE USE. FORMS					
	mber Informa	ation (required)	Provider Information (required)				
Member Name:			Provider Name	9:			
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street A	Address:			
Phone:	I	I	City:	State:	Zip:		
		Medication	Information (required)			
Medication Name	9:		Strength:	,	Dosage Form:		
☐ Check if reque	sting brand		Directions for	Use:			
•	st is for continuation	of therapy					
		Clinical Ir	nformation (red	juired)			
Select the dia	agnosis below:						
■ Malaria							
☐ Other diag	nosis:		ICD-10 Co	de(s):			
Quantity limit							
		per DAY?					
		ling the plan limitati	ions?				
	loading dose pur		no tablet in the me	urning and two to	ablets at night, one to two		
tablets at b		ing scriedule (e.g., or	ie tablet in the mo	and two to	ablets at hight, one to two		
	,	not commercially ava	ilable				
				any other informatio	on the physician feels is important to		
Please note:	This request may be de	enied unless all required infor	mation is received.				

For urgent or expedited requests please call 1-855-401-4262.



Rayos® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)		Р	Provider Information (required)				
Member Name:			Provider Nam	Provider Name:			
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street A	Address:			
Phone:			City:	State:		Zip:	
		Medication Ir	formation	(required)	<u>'</u>		
Medication Name:	:		Strength: Dosage Form:		rm:		
☐ Check if reques	sting brand		Directions for Use:				
☐ Check if reques	st is for continuatio	n of therapy					
		Clinical Info	ormation (red	quired)			
Has the patien	t had a trial and	failure of generic prednis	one tablets in	the past 60 days	? 🛚 Yes	□ No	
Are there any other this review?	r comments, diagnos	es, symptoms, medications trie	ed or failed, and/or	any other information	n the physicia	n feels is important to	
		lenied unless all required informat d requests please call 1-855-401-					



Relistor® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)		Provider Information (required)					
Member Name:			Provider Name:				
Insurance ID#:			NPI#:	NPI#: Specialty:			
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Address	:			
Phone:			City:	State:		Zip:	
		Medication Info	rmation (required)				
Medication Name:			Strength:		Dosage Fo	orm:	
☐ Check if requesting b i	rand		Directions for Use:				
☐ Check if request is for	continuation of ther	ару					
		Clinical Inform	nation (required)				
Select the diagnosis	below:						
Opioid-induced cor	nstipation in adult pa	atients with advanced i	llness				
Other diagnosis:			ICD-10 Code	(s):			
Clinical Information:							
Does the patient requi	•						
Has the patient had at last 30 days? ☐ Yes		and failure of one othe	r laxative (e.g., stimul	ant, osmoti	c, bulk forn	ning, etc.) in the	
Are there any other con this review?	nments, diagnoses, syr	nptoms, medications tried	or failed, and/or any othe	er information	the physicia	an feels is important to	
					· · · · · · · · · · · · · · · · · · ·		
Please note: This	request may be denied u	unless all required informatio	n is received.				

For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



RezdiffraTM Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Pr	Provider Information (required)			
Member Name:			Provider Name	Provider Name:			
Insurance ID#:			NPI#:	NPI#: Specialty:			
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street A	ddress:			
Phone:			City:	State:	Zip:		
		Medication	Information (re	equired)			
Medication Nam	e:		Strength:	., <i>,</i>	Dosage Form:		
☐ Check if requ	esting brand		Directions for U	Use:			
☐ Check if requ	est is for continuatior	n of therapy					
		Clinical In	formation (requ	ired)			
	noncirrhotic nonalcoh	ing scale and score belo olic steatohepatitis (NASH	l) or metabolic dysfund	ction associated ste -10 Code(s):	eatohepatitis (MASH)		
Patient does	fibrosis stage F2 or F3 not have decompens	s. Submit documentation ated cirrhosis (Child-Pugh th a gastroenterologist or	n Class B or C)	cords or tests con	firming fibrosis stage.		
Prescriber at	tests patient is particip	as been counseled and lating in a supervised comand increased physical ac	prehensive weight ma		n that encourages behavioral		
Are there any othe this review?	r comments, diagnoses	s, symptoms, medications t	tried or failed, and/or an	ny other information	the physician feels is important to		
Dloggo noto:	This request may be de-	aiod unloss all required inform	nation is received				

This request may be denied unless all required information is received. For urgent or expedited requests please call 1-855-401-4262. Please note:



Rukobia® Prior Authorization Request Form

			E UPDATED FREQUENTLY AND MAY BE BARCODED				
Memb	er Informa	ntion (required)	Provider Information (required)				
Member Name:			Provider Name:	:			
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Ac	Office Street Address:			
Phone:	l	'	City:	State:	Zip:		
		Medication	Information (red	quired)			
Medication Name:			Strength:		Dosage Form:		
☐ Check if requesting			Directions for U	se:	<u>-</u> L		
☐ Check if request is	for continuation						
		Clinical In	formation (requi	red)			
Select the diagnosis	below:						
☐ Diagnosis			ICD-	-10 Code(s):			
Clinical information:							
List optimized antiretro	oviral regimen						
Quantity limit reques	sts:						
What is the quantity re		NTH?					
What is the reason fo ☐ Titration or loading		plan limitations?					
		edule (e.g., one tablet in t	he morning and two tal	blets at night, one	to two tablets at bedtime)		
Requested strengt			· ·		,		
Other:							
Are there any other comp this review?	ments, diagnoses,	symptoms, medications to	ried or failed, and/or any	other information	the physician feels is important to		
Diagramata. This is			aktoro to manatana d				

Please note: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Seglentis® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address	3:		
Phone:			City:	State:		Zip:
		Medication Info	ormation (required	1)		
Medication Name:			Strength:		Dosage F	orm:
☐ Check if requesting			Directions for Use:			
☐ Check if request is	for continuation of th					
		Clinical Infor	mation (required)			
Select the diagnosis			105 10 0 1 ()			
			ICD-10 Code(s)	:		
Clinical information:		and generic tramadol?	□ Yes □ No			
1	ubmit a letter of medica	•				
Quantity limit reques	sts: equested per TREATM	ENT2				
-	or exceeding the plan					
□ Titration or loading	dose purposes					
	e-alternating schedule h/dose is not commerc	(e.g., one tablet in the m	orning and two tablets	at night, one	to two tablet	ts at bedtime)
		cially available				
a other.						
Are there any other com this review?	ments, diagnoses, sym	ptoms, medications tried of	or failed, and/or any othe	r information	the physicia	n feels is important to
uns review:						

Please note: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



Soma® 250 (carisoprodol) Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:		<u>I</u>	
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Address	:		
Phone:	<u> </u>		City:	State:	Zip:	
		Medication In	formation (require	d)		
Medication Name:		modioation iii	Strength:	ω,	Dosage Form:	
☐ Check if requesting	brand		Directions for Use:			
☐ Check if request is	for continuation of the	erapy				
		Clinical Info	rmation (required)			
Select the diagno	osis below:					
☐ Acute painful n	nusculoskeletal coi	ndition				
Other diagnosi	s:		ICD-10 Code(s):			
Medication histo	•					
Has the patient ha	ad a 6 month trial o	f carisoprodol 350 r	ng within the last 12	0 days? 🛭	l Yes □ No	
Quantity limit red	-	A)/O				
•	ity requested per D	AY? :he plan limitation	c?			
	ding dose purpose		5 (
			ablet in the morning	and two ta	ablets at night, one to two	
tablets at bedti	me)					
☐ Requested stre		ommercially availat	ole			
U Other.						
Are there any other corthis review?	mments, diagnoses, syn	nptoms, medications trie	d or failed, and/or any othe	er information	n the physician feels is important to	
Please note: This	request may be denied u	nless all required informati	ion is received.			

For urgent or expedited requests please call 1-855-401-4262.



Tirosint®capsule/levothyroxine capsule Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)		
Member Name:			Provider Name:		
Insurance ID#:			NPI#: Specialty:		
Date of Birth:			Office Phone:		
Street Address:			Office Fax:		
City:	State:	Zip:	Office Street Address:		
Phone:			City:	State:	Zip:
	N	Medication Info	rmation (required)		
Medication Name:	•		Strength:		Dosage Form:
☐ Check if requesting	brand		Directions for Use:		
☐ Check if request is	for continuation of the	rapy			
		Clinical Inforr	nation (required)		
Enter diagnosis belo					
			ICD-10 Code(s):		
-	ule or levothyroxine c	•			
•	•	tablets in the last 180 da	•		
nas the patient expen-	enced failure to levotriyo	orixine tablets? □ Yes	■ No II yes, explaili		· · · · · · · · · · · · · · · · · · ·
Submit documentation	of medication failure.				
			ction, or history of unacc		xic side effects with
Submit documentation tablets.	of allergy, contraindica	tion, drug-to-drug intera	ction, or history of unacc	ceptable/tox	ic side effects with levothyroxine
Patient is currently to	aking Tirosint capsule different levothyroxine	/levothyroxine capsule	e therapy: If yes, explain		
Submit documentation					
Quantity limit reques					
I	equested per MONTH? _ or exceeding the plan l	imitations?			
Titration or loading	dose purposes				
			orning and two tablets at	night, one	to two tablets at bedtime)
□ Requested strength/dose is not commercially available □ Other:					
Are there any other comithis review?	ments, diagnoses, sympt	oms, medications tried o	r failed, and/or any other	information ·	the physician feels is important to
					

This request may be denied unless all required information is received. For urgent or expedited requests please call 1-855-401-4262. Please note:



Conzip®, Synapryn®, tramadol extended-release (ER) biphasic capsule, tramadol ER biphasic tablet Prior Authorization Request Form (Page 1 of 2)

	DO NOT COPY FOR FUT	URE USE. FORMS ARE U	IPDATED FREQUENTLY A	ND MAY BE	BARCODED	1	
Member Information (required)			Provider Information (required)				
Member Name:			Provider Name:				
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Address:				
Phone:	,		City:	State:		Zip:	
		Medication Inf	ormation (required)			
Medication Name:			Strength:		Dosage Fo	orm:	
☐ Check if requesting			Directions for Use:				
☐ Check if request is t	for continuation of the	rapy					
		Clinical Infor	mation (required)				
Clinical information	n:						
Is the patient curren biphasic tablet?		Synapryn (tramadol s	uspension), tramadol	ER biphasi	c capsule,	or tramadol ER	
Has the patient faile	d a 30-day trial of ge	neric immediate-relea	se tramadol in the last	120 days?	Yes 🗆	l No	
Has the patient had MedWatch form? □		to generic immediate-	release tramadol and	the prescri	ber has do	cumented it on a	
Has the patient had documented it in the	a drug allergy or con patient's chart notes	traindication to generical records?	c immediate-release ti Yes □ No	ramadol an	d the preso	criber has	
Does the patient hav	ve a diagnosis of can	cer in the past 365 da	ys? 🛘 Yes 🗘 No				
Does the patient hav	ve a diagnosis of a te	rminal illness? 🗖 Yes	s □ No				
Does the patient have If yes , please list the		ed with significant pai	n (e.g., sickle cell ane	mia, etc)?	□ Yes □	No	
Does the patient hav		ed with significant pain	? 🗆 Yes 🗅 No				
Have efforts been m	nade to taper the pation	ent to the lowest effec	tive dose?	No			
ii yes , piease provid	de documentation						
Reauthorization:							
If this is a reauthor	rization request, ans	wer the following:					
Is the prescriber maintaining the most conservative, effective treatment? Yes No							
If yes , please provid	le documentation:						



Triptans Prior Authorization Request Form

Member Information (required)				Provider Information (required)			
Member Name:			Provider Name:				
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone:				
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street A	ddress:			
Phone:		L	City:	State:	Zip:		
		Medication	Information (r	equired)			
Medication Name:			Strength:		Dosage Form:		
☐ Check if requesting	hrand		Directions for U	lse·			
☐ Check if request is		on of therapy	Directions for e	,3C.			
			nformation (requ	uired)			
Select the diagno	osis below:		(,			
☐ Migraine with o		ra					
•			ICD	-10 Code(s): _			
B							
Medication histo	•	failure of a generic tr	inton within the les	et 6 months? F	I Voc. □ No.		
Clinical informat		lallure of a generic tr	ipian within the las	st o months?	I fes LI No		
	_	osis which confirms a	difficulty in swallo	wing? DYes	□ No		
Quantity limit red		oolo Willon oomiinilo a	announcy in ovvaile	g. _ 100			
		l per MONTH?					
		eding the plan limitat	tions?				
☐ Titration or loa			one tablet in the mo	orning and two	tablets at night, one to two		
tablets at bedti		alling scriedule (e.g., o	ine tablet in the mi	offiling and two	tablets at hight, one to two		
-	ength/dose is	s not commercially av	ailable				
☐ Other:							
Are there any other com this review?	ments, diagnos	es, symptoms, medications	tried or failed, and/or a	ny other informatio	n the physician feels is important to		

Please note:

This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029



Onzetra® Xsail® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Р	Provider Information (required)			
Member Name:			Provider Nam	Provider Name:			
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone	:			
Street Address:	:		Office Fax:				
City:	State:	Zip:	Office Street	Address:			
Phone:			City:	State:	Zip:		
		Medication In	formation	(required)			
Medication Nan	ne:		Strength:				
☐ Check if requ	uesting brand		Directions for Use:				
☐ Check if requ	uest is for continuatio	on of therapy					
		Clinical Info	rmation (re	equired)			
Has the patie	ent had a trial and	failure to at least six other	er triptans in t	the past 36 mont	hs? 🗆 Yes 🗅 No		
Are there any other this review?	er comments, diagnose	es, symptoms, medications tried	d or failed, and/or	any other informatio	n the physician feels is important to		
Please note:	This request may be de	enied unless all required information	on is received.				

For urgent or expedited requests please call 1-855-401-4262.



Mon-Sat: 7am to 7pm Central

Nurtec ODTTM, QuliptaTM, Reyvow[®], UbrelvyTM Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)			
Member Name:			Provider Name:			
Insurance ID#:			NPI#: Specialty:			
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City: S	State:	Zip:	Office Street Address:			
Phone:		,	City:	State:		Zip:
	M	edication Infor	mation (required)			
Medication Name:			Strength:		Dosage Fo	orm:
☐ Check if requesting bra			Directions for Use:			
Check if request is for						
		Clinical Inform	ation (required)			
□ Acute treatment of r□ Preventive treatmer□ Preventive treatmer	migraine with or with or with of episodic migraent of chronic migrai	aine in adults ne in adults	ICD-10 Coo	de(s):		
Clinical information:						
Has the patient had a t	trial and failure of a	triptan in the last 120	days? 🗖 Yes 🗖 No			
Has the patient had an	· · · · · · · · · · · · · · · · · · ·		contraindication to tri	ptans? 🗖 🕻	Yes □ No	
•		ease? Yes No				
What is the quantity red What is the reason fo ☐ Titration or loading ☐ ☐ Patient is on a dose bedtime) ☐ Requested strength ☐ Other:	equested per DAY? or exceeding the p or dose purposes e-alternating schede h/dose is not comm	ule (e.g., one tablet in ercially available	the morning and two	tablets at r	night, one to	o two tablets at
	ents, diagnoses, sympt	oms, medications tried or	failed, and/or any other i	information t	he physician	feels is important
Phone: Check if requesting brace Check if request is for the Check if request is for the Check if request is	rand below: migraine with or with ent of episodic migraine of the migraine of	edication Information aura aine in adults triptan in the last 120 ase, intolerance to, or ease? Ian limitations? ule (e.g., one tablet in ercially available	City: mation (required) Strength: Directions for Use: ation (required) ICD-10 Cod days? Yes No contraindication to trip the morning and two	de(s): ptans? □ `	Yes □ No	o two tablets at

<u>Please note</u>: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Uloric Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Prov	ider Info	rmatior	(required)	
Member Name:			Provider Name:				
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone:		I.		
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street Addres	SS:			
Phone:	1	.1	City:	State:		Zip:	
		Medication Inf	ormation (requir	ed)			
Medication Name:			Strength:	,	Dosage F	orm:	
☐ Check if requesting	brand		Directions for Use:				
☐ Check if request is	for continuation of the	erapy					
		Clinical Infor	mation (required				
Select the diagno	osis below:						
□ Chronic gout							
Other diagnosi	s:		_ ICD-10 Code(s):			
Clinical informat	ion:						
Has the patient re	ceived an adequate	e trial of at least 1 m	onth of allopurinol	? 🛚 Yes 🗀	l No		
Does the patient h	nave renal or hepat	ic dysfunction? 🗖 Y	es 🛚 No				
Are there any other conthis review?	mments, diagnoses, sym	ptoms, medications tried	or failed, and/or any ot	her informatior	the physici	an feels is important to	
Please note: This		nless all required information					

For urgent or expedited requests please call 1-855-401-4262.



ViberziTM Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)				Provider Information (required)				
Member Name:			Provider Name	Provider Name:				
Insurance ID#:			NPI#:		Specialty:			
Date of Birth:			Office Phone:					
Street Address:			Office Fax:					
City:	State:	Zip:	Office Street A	ddress:				
Phone:	-	'	City:	State:	Zip:			
		Medication	Information (r	equired)				
Medication Name	:		Strength:	trength: Dosage Form:				
☐ Check if reques			Directions for U	Directions for Use:				
☐ Check if reques	st is for continuation	of therapy						
		Clinical In	formation (req	uired)				
	gnosis below:							
☐ Irritable box	wel syndrome wit	h diarrhea (IBS-D)						
Other diagr	nosis:		ICD-10 Cod	ICD-10 Code(s):				
Are there any othe this review?	r comments, diagnose	es, symptoms, medications t	tried or failed, and/or a	ny other information	n the physician feels is important to			
Please note:		enied unless all required inform						

For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



Vtama® Prior Authorization Request Form

DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			Provider Information (required)				
Member Name:			Provider Name	Provider Name:			
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone:		<u> </u>		
Street Address:			Office Fax:				
City:	State:	Zip:	Office Street A	ddress:			
Phone:			City:	State:	Zip:		
		Medication	Information (r	eauired)			
Medication Name:			Strength:		Dosage Form:		
☐ Check if requesting	brand		Directions for U	Jse:			
☐ Check if request is	for continuation	of therapy					
		Clinical In	formation (req	uired)			
Select the diagnos	is below:						
☐ Plaque psoriasis							
☐ Other diagnosis:				_ ICD-10 Code	e(s):		
calcitriol, calcipotrie topical therapy (e.g. If yes, which one	ne), tazarotene, , vitamin D anal	calcineurin inhibitors og/corticosteroid) with	(e.g., tacrolimus, pi in the last 120 days	mecrolimus), an	vitamin D analogs (e.g., thralin, coal tar, or cominbation o		
How long has the pa	atient tried the a	bove listed medication	າ?				
Quantity limit requ What is the quantity	requested per						
☐ Titration or loadin☐ Patient is on a de	ng dose purpos ose-alternating		et in the morning and	two tablets at nig	ht, one to two tablets at bedtime)		
Are there any other comithis review?	ments, diagnoses,	symptoms, medications t	tried or failed, and/or a	ny other informatio	on the physician feels is important to		

Please note:

This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Xenazine® Prior Authorization Request Form

DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)				Provider Information (required)			
Member Name	: :		Provider Nam	ie:			
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone:				
Street Address	3:		Office Fax:				
City:	State:	Zip:	Office Street	Address:			
Phone:		I	City:	State:	Zip:		
		Medication	Information	(required)			
Medication Na	me:		Strength:	Strength: Dosage Form:			
☐ Check if req	uesting brand uest is for continuatio r	of therapy	Directions for	Directions for Use:			
			formation (re	quired)			
•	ient have a confirmed	diagnosis of chorea assibled by or in consultation		•			
<u> </u>		<u> </u>			n the physician feels is important to		
Please note:		enied unless all required inform					

For urgent or expedited requests please call 1-855-401-4262.



Xepi[™] Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			F	Provider Information (required)				
Member Name:			Provider Nam	ne:				
Insurance ID#:			NPI#:	NPI#: Specialty:				
Date of Birth:			Office Phone	:				
Street Address:			Office Fax:					
City:	State:	Zip:	Office Street	Address:				
Phone:		I	City:	State:	Zip:			
		Medication	Information	(required)				
Medication Name:			Strength:		Dosage Form:			
☐ Check if requesting brand			Directions for	Directions for Use:				
□ Check if request	t is for continuatio	n of therapy						
		Clinical In	nformation (re	equired)				
	to Staphylococcu	us aureus or Streptococo		CD-10 Code(s):				
Medication histo				()				
Has the patient h	ad a 10 day trial	and failure of mupirocin	ointment/cream wi	thin the past 6 mo	nths?			
Are there any other this review?	Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to							
Please note:	This request may be o	denied unless all required info						

For urgent or expedited requests please call 1-855-401-4262.



Xifaxan® Prior Authorization Request Form DO NOT COPY FOR FUTURE USE. FORMS ARE UPDATED FREQUENTLY AND MAY BE BARCODED

Member Information (required)			P	Provider Information (required)			
Member Name	9:		Provider Name	e:			
Insurance ID#:			NPI#:		Specialty:		
Date of Birth:			Office Phone:				
Street Address	S:		Office Fax:				
City:	State:	Zip:	Office Street A	Address:			
Phone:			City:	State:	Zip:		
		Medication	n Information (required)	·		
Medication Na	me:		Strength:		Dosage Form:		
☐ Check if req	uesting brand		Directions for U	Use:			
☐ Check if req	uest is for continuatio	n of therapy					
		Clinical I	nformation (req	uired)			
Select the d	diagnosis below:						
☐ Hepatic 6	encephalopathy (Hi	E)					
□ Irritable b	oowel syndrome wit	th diarrhea (IBS-D)					
□ Travelers	s' diarrhea						
Other dia	agnosis:		ICD-10 Co	de(s):			
Are there any o this review?	ther comments, diagnos	es, symptoms, medications	s tried or failed, and/or a	any other informatio	on the physician feels is important to		
Please note:	This request may be d	denied unless all required info	ormation is received.				

For urgent or expedited requests please call 1-855-401-4262. This form may be used for non-urgent requests and faxed to 1-844-403-1029.



Ambien CR[®], Edluar[™], Intermezzo[®] (zolpidem sublingual tablet [SL]), Zolpimist[™] **Prior Authorization Request Form**

		or future use. Forms ar ation (required)			ermation (required)
Member Name:			Provider Nam		
Insurance ID#: NPI#: Specialty:			Specialty:		
Date of Birth:			Office Phone:	:	
Street Address:			Office Fax:		
City:	State:	Zip:	Office Street	Address:	
Phone:			City:	State:	Zip:
		Medication I	nformation	(required)	
Medication Name:		Medication	Strength:	(required)	Dosage Form:
☐ Check if requestin	g brand		Directions for	Use:	ŭ
☐ Check if request is	*	n of therapy			
		Clinical Inf	ormation (re	guired)	
Select the diagn	osis below:		,	·	
☐ Insomnia					
☐ Other diagnos	sis:		ICD-10 C	Code(s):	
reaction (prescrib	ad a trial (at le per must have	east a 14 day trial in the documented it on a Me r brand Ambien tablets	edWatch form),	or contraindica	e response, adverse tion to generic immediate
Quantity limit re What is the quan		per DAY?	_		
		ding the plan limitation	ons?		
tablets at bedi	a dose-alterna time) rength/dose is		lable	norning and two	tablets at night, one to two
				any other information	on the physician feels is important to

Please note:

This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Belsomra[®], Dayvigo[®], Quviviq[™] Prior Authorization Request Form

Memb	er Informa	ntion (required)	Pro	ovider Infor	mation (required)	
Member Name:			Provider Name:	Provider Name:		
Insurance ID#:			NPI#:		Specialty:	
Date of Birth:			Office Phone:			
Street Address:			Office Fax:			
City:	State:	Zip:	Office Street Ad	ldress:		
Phone:			City:	State:	Zip:	
		Medication	Information (re	equired)		
Medication Name:			Strength:		Dosage Form:	
☐ Check if requesting	brand		Directions for U	se:		
☐ Check if request is		of therapy				
		Clinical I	nformation (requ	ired)		
Select the diagno	osis below:					
☐ Insomnia						
☐ Other diagnosi	s:		ICD-10 Co	de(s):		
Medication histo	ry:					
			the last 180 days) a			
				r contraindicati	on to generic immediate	
· · · · · · · · · · · · · · · · · · ·		brand Ambien table	ets? LI Yes LI No			
Quantity limit red		nor DAV2				
What is the quanti	•	ling the plan limita				
☐ Titration or load			1110115 ?			
			one tablet in the mo	orning and two t	ablets at night, one to two	
tablets at bedti	me)			•		
		not commercially av				
Uther:						
Are there any other com	ments, diagnoses	, symptoms, medications	s tried or failed, and/or an	y other information	the physician feels is important to	
his review?						
Please note: This re	equest may be den	ied unless all required info	rmation is received			

For urgent or expedited requests please call 1-855-401-4262.



Zoryve® Prior Authorization Request Form

Provide	er Information	(required)
Provider Name:		
NPI#:	Specialty	:
Office Phone:	l	
Office Fax:		
Office Street Address:		
City:	State:	Zip:
ormation (required)		
Strength:	Dosage F	Form:
Directions for Use:		
mation (required)		
igh B or C)?	tt	
	Provider Name: NPI#: Office Phone: Office Fax: Office Street Address: City: Ormation (required) Strength: Directions for Use: ICD-10 Cod Igh B or C)? Yes In Igq: List List List List No List All Yes No List azole) Yes No List norning and two tablets at	NPI#: Specialty Office Phone: Office Fax: Office Street Address: City: State: Ormation (required) Strength: Dosage F Directions for Use: ICD-10 Code(s): Igh B or C)? Yes No

this review?

Please note: This request may be denied unless all required information is received.

For urgent or expedited requests please call 1-855-401-4262.



Zurzuvae[™] Prior Authorization Request Form

	O NOT COPY FOR FUTU	RE USE. FORMS ARE UP	DATED FREQUENTLY A	ND MAY BE I	BARCODED
Memb	er Information	(required)	Provide	er Infor	mation (required)
Member Name:			Provider Name:		
Insurance ID#:			NPI#:		Specialty:
Date of Birth:			Office Phone:		
Street Address:			Office Fax:		
City:	State:	Zip:	Office Street Address:		
Phone:			City:	State:	Zip:
	Λ	Medication Info	rmation (required)		
Medication Name:			Strength:		Dosage Form:
☐ Check if requesting	hrand		Directions for Use:		<u> </u>
·	for continuation of the	rapy	Birodione for Goo.		
		Clinical Inforr	nation (required)		
☐ Diagnosis of sever (e.g., HAM-D, MAD	RS, PHQ-9, etc.)	n as indicated by DSM-	5 criteria and/or an appr		ression rating scale
List SSRI or S ☐ If disqualifying and SNRI clas	e, contraindication or in NRI tried and duration _ agents due to contrain	dications alone (without entation must be submit	e oral SSRI or SNRI (e.g history of previous failed tted indicating reasoning	d therapy), o	contraindications to both SSRI
☐ Other diagnosis:			ICD-10 Co	de(s):	
Clinical information:					
		ate:			
_	/ date? Provide date:		 		
•		, ,	s • No If yes, date:		
Prescriber attests that the patient has been counseled and has agreed to adhere to the following: Patient will follow instructions to not drive or operate machinery until at least 12 hours after taking each dose of Zurzuvae for the duration of the 14-day treatment course and that patients are informed that they may not be able to assess their own driving competence, or the degree of driving impairment caused by Zurzuvae Patient has ceased lactating or breastmilk produced will not be used for feedings during treatment and up to 7 days following last dose Females of reproductive potential should be advised to use effective contraception during treatment and for 1 week after the final dose Therapy will not be used in the same pregnancy as brexanolone (Zulresso) Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the physician feels is important to this review?					
Please note: This re	equest may be denied unle	ss all required information	is received.		

For urgent or expedited requests please call 1-855-401-4262.

New Business

Daybue (trofinetide) indicated for the treatment of Rett syndrome in adults and pediatric patients 2 years of age and older

	June-Dec 2023					Jan-Sept 2024				
Drug Name	Total Rx	Paid Amount	Paid/Rx	Mbr	Age Range	Total Rx	Paid Amount	Paid/Rx	Mbr	Age Range
Daybue	29	\$1,199,862.41	\$41,374.57	8	5 - 30	50	\$2,282,509.89	\$45,650.20	8	6 - 43

State A

Initial Authorization – 12 months

- 1. Patient is 2 years of age or older
- 2. Diagnosis of Rett Syndrome
- 3. Prescribed by, or in consultation with, a neurologist, clinical geneticist, or developmental pediatrician

Reauthorization – 12 months

1. Documentation of positive clinical response to Daybue® (e.g. improvement or stabilization in purposeful hand skills, spoken language, repetitive hand movements, and gait abnormalities)

State B

Initial Authorization - 6 months

- 1. Prescribed by or in consultation with one of the following:
 - a. Geneticist
 - b. Neurologist
 - c. Developmental pediatrician experienced in the treatment of Rett syndrome
- 2. Patient is 2 years of age or older
- 3. Diagnosis of Rett syndrome
- 4. The member has mutation(s) in the *methyl CpG binding protein 2 (MECP2)* gene confirmed by molecular genetic testing.
- 5. Member has documentation of one of the following baseline assessment scores (for verification of benefit on renewal request):
 - a. Rett Syndrome Behavioral Questionnaire (RSBQ) score
 - b. Clinical Global Impression-Severity (CGI-S) score

Reauthorization - 12 months

1. Member has experienced a positive clinical response to therapy as demonstrated by an improvement or stabilization of RSBQ or CGI-S score compared to baseline

State C

Initial Authorization: 6 months

Must meet all of the following:

- 1. Member is 2 years of age or older
- 2. Member weighs 9 kg or more [PAS note- add a field for submitter to provide member weight]
- 3. Diagnosis of Rett syndrome (RTT) with both of the following:
 - a. Genetic analysis demonstrating mutation(s) in the methyl-CpG binding protein-2 (MECP2) gene (documentation of genetic confirmation required)
 - b. Diagnosis of Typical or Classic Rett syndrome with a period of regression followed by recovery or stabilization, confirmed by ALL of the following:

- Partial or complete loss of acquired purposeful hand skills
- Partial or complete loss of acquired spoken language
- Gait abnormalities: impaired or absence of ability to walk
- Hand wringing/squeezing/clapping/tapping, mouthing, and/or washing/rubbing that seems habitual or uncontrollable
- 4. Prescribed by, or in consultation with, a neurologist or specialist with expertise in the management of RTT
- 5. Prescriber attests that member does not have any of the following:
 - Brain injury secondary to trauma (peri-or postnatally), neurometabolic disease, or severe infection that causes neurological problems
 - Moderate to severe renal impairment (eGFR < 45 mL/minute/1.73 m2)
- 6. Requested quantity does not exceed 120 mL per day or 8 bottles (450 mL) per 30 days

Reauthorization – 12 months

Must meet all of the following:

- 1. History of the requested agent for at least 90 days of the past 120 days, as confirmed by claims history or chart documentation (excluding claims with an emergency supply indicator)
- 2. Prescriber has submitted clinical documentation demonstrating ONE of the following (documentation must be provided):
 - Member has achieved disease stability
 - Member has achieved clinically significant improvement in core symptoms
 - Member has experienced less than expected decline in disease progression
- 3. Prescriber attests that member does NOT have any of the following:
 - Brain injury secondary to trauma (peri-or postnatally), neurometabolic disease, or severe infection that causes neurological problems
 - Moderate to severe renal impairment (eGFR < 45 mL/minute/1.73 m2)
- 4. Requested quantity does not exceed 120 mL per day or 8 bottles (450 mL) per 30 days

Commercial

Initial Authorization – 3 months

- 1. Diagnosis of Rett syndrome [submission of medical records (e.g., chart notes)]
- 2. Patient is 2 years of age or older
- 3. One of the following:
 - a. Submission of medical records (e.g., chart notes) confirming presence of ALL of the following clinical signs and symptoms:
 - A pattern of development, regression, then recovery or stabilization
 - Partial or complete loss of purposeful hand skills such as grasping with fingers, reaching for things, or touching things on purpose
 - Partial or complete loss of spoken language
 - Repetitive hand movements, such as wringing the hands, washing, squeezing, clapping, or rubbing
 - Gait abnormalities, including walking on toes or with an unsteady, wide-based, stiff-legged gait
 - b. Submission of medical records (e.g., chart notes) documenting molecular genetic testing confirms mutations in the MECP2 gene
- 4. Prescribed by or in consultation with one of the following:
 - a. Geneticist
 - b. Neurologist

Reauthorization – 12 months

1. Submission of medical records (e.g., chart notes) documenting positive clinical response to therapy

Dupixent (dupilumab) new indication for the add-on maintenance treatment of inadequately controlled chronic obstructive pulmonary disease (COPD), (e.g., chronic bronchitis or emphysema) in patients with eosinophilic phenotype

State A

Initial Criteria: 6 months

- 1. Chronic Obstructive Pulmonary Disease (COPD) Initial Criteria
- 2. Patient is ≥ 18 years of age
- Diagnosis of COPD AND Eosinophilic phenotype confirmed by peripheral blood eosinophil levels > 300 cells/mcL
- 4. COPD is inadequately controlled as shown by one of the following:
 - a. Two or more exacerbations requiring systemic corticosteroids and/or antibiotics within the past 12 months
 - b. COPD-related emergency treatment (e.g., hospitalization in the past 12 months, mechanical ventilation)
- 5. Patient is currently receiving standard of care COPD treatment, unless contraindicated (i.e., ICS/LAMA/LABA)
- 6. Post-bronchodilator FEV1/FVC ratio < 79%
- 7. Medication will be used as maintenance add-on therapy

Renewal Criteria:

- 1. Positive clinical response to treatment (e.g., improved FEV1 from baseline, reduction in COPD exacerbations)
- 2. Patient is currently receiving standard of care COPD treatment, unless contraindicated (i.e., ICS/LAMA/LABA)
- 3. Medication will be used as maintenance add-on therapy

Commercial

Approval Criteria

- 1. Diagnosis of chronic obstructive pulmonary disease (COPD)
- 2. Patient demonstrates a positive clinical response to therapy (e.g., improved lung function, a reduction in COPD exacerbations)
- 3. Patient continues to receive one of the following therapies at an optimized dose:
 - a. Triple therapy (i.e., an inhaled corticosteroid (ICS), a long-acting muscarinic antagonist (LAMA) and a long-acting beta agonist (LABA)
 - b. If ICS are contraindicated, a LAMA and a LABA
- 4. Prescribed by or in consultation with a pulmonologist

Fintepla (fenfluramine)

- Dravet Syndrome Indicated for the treatment of seizures associated with Dravet syndrome in patients 2 years of age and older.
- Lennox-Gastaut Syndrome Indicated for the treatment of seizures associated with Lennox-Gastaut syndrome in patients 2 years of age and older.

Time Period 7/1/2024 to 9/30/2024

Drug Name	Total Rx	Paid Amount	Paid/Rx	Avg Qty/DS	Utilizers	Age Range
Fintepla sol 2.2mg/ml	4	\$78,606.84	\$2,967.74	366 ml/30 days	1	16
Epidiolex sol 100mg/ml	152	\$451,096.59	\$19,654.21	206 ml/24 days	44	5 - 39
Diacomit (stiripentol)	0					
clobazam susp/tab	395	\$16,278.45	\$41.21		124	1 - 50
Onfi susp/tab	6	\$13,910.27	\$2,318.38		2	11 - 20
Sympazan film	19	\$32,474.04	\$1,709.16		7	8 - 31
valproic acid sol	104	\$3,395.26	\$32.65		70	3 - 64
Briviact (brivaracetam) tab/sol	62	\$86,116.70	\$1,388.98		24	6 - 55
levetiracetam tab/sol	1,770	\$52,348.66	\$29.58		667	0 - 69
topiramate cap/tab/sol	1,962	\$44,147.23	\$22.50		828	4 - 64
zonisamide cap/susp	36	\$7,644.34	\$212.34		34	1 - 58

^{*}Red font denotes drug is on PA

State A

Approval Criteria

- 1. Must meet ONE of the following:
 - a. Diagnosis of seizures associated with Dravet syndrome AND one of the following:
 - Previous trial and failure of Epidiolex (cannabidiol) AND Diacomit (stiripentol), confirmed by claims history or chart documentation
 - Prescriber has submitted valid medical justification for the use of Fintepla (fenfluramine) over Epidiolex (cannabidiol) AND Diacomit (stiripentol)
 - b. Diagnosis of seizures associated with Lennox-Gastaut syndrome AND one of the following:
 - Previous trial and failure of Epidiolex (cannabidiol), confirmed by claims history or chart documentation
 - Prescriber has submitted valid medical justification for the use of Fintepla (fenfluramine) over Epidiolex (cannabidiol)

Reauthorization

1. History of the requested antiseizure agent for 30 of the past 60 days, as confirmed by claims history or chart documentation

State B

Approval Criteria – 6 months

- 1. Patient must be 2 years of age or older
- 2. Diagnosis of ONE of the following:
 - Dravet syndrome (DS)
 - Lennox-Gastaut syndrome (LGS)
- 3. Prescribed by a neurologist or epileptologist
- 4. Patient has not received MAOI therapy within 14 days and will not receive during Fintepla therapy
- 5. Prescriber attests that baseline echocardiogram has been completed and will be monitored throughout treatment, and 3 to 6 months after final
- 6. Patient has had inadequate response to trials of 2 preferred anticonvulsant agents

Reauthorization - 6 months

- 1. Patient continues to meet initial criteria
- 2. Patient is responding to therapy (e.g., reduced seizure frequency and/or duration)
- 3. Patient has no treatment-limiting adverse effects (e.g., serotonin syndrome, abnormal AST/ALT, CrCl, abnormal echocardiogram)

Commercial

Approval Criteria – Dravet syndrome

- 1. Diagnosis of seizures associated with Dravet syndrome
- 2. Patient is 2 years of age or older
- 3. One of the following:
 - a. Both of the following:
 - i. Trial and failure, contraindication or intolerance to one of the following:
 - clobazam, valproic acid
 - ii. Trial and failure, contraindication or intolerance to one of the following:
 - Diacomit (stiripentol), Epidiolex (cannabidiol), Briviact (brivaracetam)
 - levetiracetam, topiramate, zonisamide
 - b. For continuation of prior therapy
- 4. Prescribed by or in consultation with a neurologist

Reauthorization

1. Patient demonstrates positive clinical response to therapy as evidenced by the reduction in seizure frequency from baseline

Approval Criteria – Lennox-Gastaut syndrome

- 1. Diagnosis of seizures associated with Lennox-Gastaut syndrome
- 2. Patient is 2 years of age or older
- 3. ONE of the following:
 - Trial and inadequate response, contraindication, or intolerance to TWO formulary anticonvulsants (e.g., topiramate, lamotrigine, valproate)
 - For continuation of prior therapy
- 4. Prescribed by or in consultation with a neurologist

Reauthorization

1. Patient demonstrates positive clinical response to therapy as evidenced by the reduction in seizure frequency from baseline

Voquezna (vonoprazan)

- for Helicobacter pylori (H. pylori) eradiation as part of dual or triple therapy
- for the treatment of erosive esophagitis (EE or erosive GERD) and pyrosis (heartburn) associated with EE
- to maintain healing of all grades of erosive esophagitis (EE) and relief of heartburn associated with EE
- for the treatment of non-erosive gastroesophageal reflux disease (GERD)

Time Period 7/1/2024 to 9/30/2024

Drug Name	Total Rx	Paid Amount	Paid/Rx	Avg Qty/DS	Utilizers	Age Range
Voquezna 10mg	0					
Voquezna 20mg	8	\$4,949.43	\$618.68	#30/30 days	3	31 - 40
Voquezna Dual Pak amoxicillin (trihydrate)- vonoprazan fumarate	0					
Voquezna Triple Pak amoxicillin (trihydrate)- clarithromycin- vonoprazan fumarate	0					
bismuth subsalicylate- metronidazole- tetracycline	3	\$1,112.95	\$370.98	#96/8 days	3	13 - 37
Omeclamox-Pak (amoxicillin- clarithromycin- omeprazole)	0					
Pylera (bismuth subcitrate potassium-metronidazole-tetracycline hcl)	0					
Talicia (omeprazole mag- amoxicillin-rifabutin)	0					

State A

Approval Criteria – Voquezna 10mg and 20mg – 2 months

- 1. Patient is 18 years of age or older
- 2. Request is for active treatment of erosive esophagitis
- 3. Trial and failure, contraindication, or intolerance to TWO preferred proton pump inhibitors (e.g. Dexilant, esomeprazole, lansoprazole, omeprazole, and pantoprazole)

Approval Criteria – Voquezna 10mg tablet – 6 months

- 1. Patient is 18 years of age or older
- 2. Request is for maintenance treatment of healed erosive esophagitis or non-erosive gastroesophageal reflux disease (GERD)
- 3. Trial and failure, contraindication, or intolerance to TWO preferred proton pump inhibitors (e.g. Dexilant, esomeprazole, lansoprazole, omeprazole, and pantoprazole)

Approval Criteria – Voquezna Dual and Triple Pak – 14 days

- 1. Documentation of recent positive H. Pylori test
- 2. Trial and failure, contraindication, or intolerance to one preferred combination agent

State B

Approval Criteria – 8 weeks to 6 months based on diagnosis

- 1. Diagnosis of erosive esophagitis with gastroesophageal reflux disease (GERD) symptoms needing active treatment of maintenance of healing of erosive esophagitis and one of the following:
 - Member has tried and failed two standard dose proton pump inhibitors (PPI) for total of 8 weeks in the past 6 months, as confirmed by claims history, chart documentation, or provider attestation including dates of trial
 - Prescriber has submitted medical justification for use of Voquezna (vonoprazan) over ALL PPIs
 (any medical justification regarding intolerance or adverse effects must be supported by
 documentation within submitted chart notes)
- 2. Requested dose and duration of therapy will not exceed one of both (as applicable) of the following:
 - Active treatment of erosive esophagitis: 20 mg once daily for 8 weeks
 - Maintenance treatment of healed erosive esophagitis: 10 mg once daily for 6 months
- 3. Member is 18 years of age or older

Approval Criteria – 4 weeks of therapy every 6 months

- 1. Diagnosis of symptomatic non-erosive esophagitis with gastroesophageal reflux disease (GERD) requiring heartburn relief and one of the following:
 - Member has tried and failed two standard dose proton pump inhibitors (PPI) for total of 8 weeks in the past 6 months, as confirmed by claims history, chart documentation, or provider attestation including dates of trial
 - Prescriber has submitted medical justification for use of Voquezna (vonoprazan) over ALL PPIs and/or H2Ras (any medical justification regarding intolerance of adverse effects must be supported by documentation within submitted chart notes)
- 2. Requested dose and duration of therapy will not exceed 10 mg once daily for 4 weeks
- 3. Member is 18 years of age or older

State C

Approval Criteria – Voquezan Dual, Triple Pak or Voquezna 20mg tablet – one month

- 1. Diagnosis of Helicobacter pylori infection
- 2. Trial and failure, contraindication, or intolerance to ONE of the following first line treatment regimens
 - Clarithromycin based therapy (e.g., clarithromycin based triple therapy, clarithromycin based concomitant therapy) [D]
 - Bismuth quadruple therapy (e.g., bismuth and metronidazole and tetracycline and proton pump inhibitor [PPI])

Approval Criteria – Voquezna 20mg tablet – 8 weeks

- 1. Diagnosis of erosive esophagitis
- 2. Used for healing of all grades of erosive esophagitis and relief of heartburn associated with erosive esophagitis:
 - Used in combination with amoxicillin and clarithromycin for the treatment of H. pylori infection
 - Used in combination with amoxicillin for the treatment of H. pylori infection
- 3. Trial (of a minimum 8-week supply) and inadequate response (within the last 365 days), contraindication, or intolerance to TWO of the following generic proton pump inhibitors (PPI's)
 - omeprazole
 - esomeprazole

- pantoprazole
- lansoprazole
- rabeprazole
- dexlansoprazole

Approval Criteria – Voquezna 10mg tablet – 6 months

- 1. Used to maintain healing and relief of heartburn associated
- 2. Trial (of a minimum 8-week supply) and inadequate response (within the last 365 days), contraindication, or intolerance to TWO of the following generic proton pump inhibitors (PPI's)
 - omeprazole
 - esomeprazole
 - pantoprazole
 - lansoprazole
 - rabeprazole
 - dexlansoprazole

Approval Criteria – Voquezna 10mg tablet – 1 month

- 1. Diagnosis of non-erosive Gastroesophageal Reflux Disease (GERD)
- 2. Both of the following:
 - Patient has history of heartburn for at least 6 months
 - Heartburn symptoms are present for at least 4 days during any consecutive 7-day period
- 3. Trial (of a minimum 8-week supply) and inadequate response (within the last 365 days), contraindication, or intolerance to TWO of the following generic proton pump inhibitors (PPI's)
 - omeprazole
 - esomeprazole
 - pantoprazole
 - lansoprazole
 - rabeprazole
 - dexlansoprazole



Therapeutic Class Overview

Insulin- Like Growth Factor-1 agents

Introduction

- Insulin-like growth factor 1 (IGF-1) is a hormone that plays a pivotal role in fetal development, adolescent growth, and
 adult tissue homeostasis. Imbalance in IGF production is associated with various pathologic conditions such as short
 stature, insufficient skeletal acquisition, alternations in body composition, metabolic disorders and reduced mental and
 physical capacity (Yakar and Adamo 2012).
- Growth hormone insensitivity (GHI) is a group of rare autosomal recessive disorders in which there is a reduction in or absence of the biologic effects of GH despite normal levels of GH. This is generally caused by loss-of-function mutations in the GH receptor gene or its downstream mediators, namely *IGF-1*, *STAT5b*, or *IGFALS*. In affected children, IGF-1 levels are abnormally low, referred to as primary IGF-1 deficiency, in that, no chronic medical condition can be identified causing the low levels. The most common form is known as Laron's syndrome; where abnormal GH receptor gene makes patients resistant to GH, resulting in low levels of IGF-1. There are less than 500 known cases of Laron Syndrome worldwide; 65% have Middle Eastern ancestry or are of Ecuadorian decent (*Food and Drug Administration [FDA] medical review 2005, National Organization for Rare Diseases [NORD] 2016, Richmond and Rogol 2022*).
- Severe primary IGF-1 deficiency is defined as both height and serum IGF-1 levels ≤ -3 standard deviations (SD) despite
 normal or elevated GH levels. Guidelines indicate basing diagnosis primary IGF deficiency on a combination of factors
 (eg, abnormally low serum IGF-1, secondary causes excluded, presence of characteristic features [eg, microcephaly,
 protruding forehead, saddle nose, small chin, high pitched voice]) (Grimberg et al 2016).
- Increlex (mecasermin) is a recombinant IGF-1 recommended for children with severe primary IGF-1 deficiency who are 2 years of age or older with open epiphyses and height and basal IGF-1 SD both ≤-3 due to GH gene deletion or who have developed neutralizing antibodies to GH (*Daybue prescribing information 2023*). Once diagnosed, patients should be treated chronically until epiphyseal plate closure (ie, until no further linear growth is possible) (*FDA Medical Review 2005*). If the cause of GHI has not been established, a trial of GH therapy may be recommended prior to initiating recombinant IGF-1 (*Grimberg et al 2016*).
- Rett syndrome is a neurodevelopmental disorder that affects mainly girls, and most cases result from mutations in the *MECP2* gene, but a small group are caused by mutations in *CDKL5* or *FOXG1* genes. Symptoms typically present between 6 and 18 months of age. Rett syndrome presents as loss of speech and hand use, stereotypic hand movements, and gait abnormalities. Additional features include deceleration of head growth, seizures, autistic features, and breathing abnormalities. There are 2 phenotypic types of Rett syndrome (*NORD* 2023, *Schultz and Suter* 2022[a-b]):
 - Typical (classic) form: Affected patients initially develop normally and then experience loss of speech and purposeful hand use and onset of stereotypic hand movement and gait abnormalities. Deceleration of head growth can be one of the first signs. Additional manifestations can include seizures, autistic features, intermittent breathing abnormalities, autonomic nervous system dysfunction, cardiac abnormalities, and sleep disturbances.
 - Atypical form: Often presents similarly to the typical form but may not have all of the clinical features of the typical form.
- Rett syndrome is the second most common cause of severe intellectual disability after Down syndrome. The incidence of Rett syndrome in the United States is estimated to be 1 in 10,000 girls by age 12. In a report from a large population-based registry in Texas, the prevalence of classic Rett syndrome was estimated as 1 per 22,800 females ages 2 through 18 years, or 0.44 per 10,000. The prevalence per 10,000 girls was 0.56 in France, 0.65 in Sweden and Scotland, and 0.72 in Australia (NORD 2023, Schultz and Suter 2023[a-b]).
- Daybue (Trofinetide) is the first therapy FDA-approved for Rett syndrome. Trofinetide is a synthetic analog of the aminoterminal tripeptide of IGF-1, which occurs naturally in the brain. The mechanism by which trofinetide exerts its therapeutic effect in Rett syndrome is unknown (*Daybue prescribing information 2023*). Currently, the mainstay of treatment includes symptomatic treatment. Specific issues that commonly require attention include growth failure and nutrition, bone quality, epilepsy, breathing dysfunction, cardiac abnormalities, scoliosis, sleep disturbance, and motor dysfunction. Therapy in areas of communication, physical and occupational disciplines may be warranted (*Schultz and Suter* 2023[a-b]).
- The marketing and distribution of mecasermin rinfabate (Iplex) was discontinued in the United States due to legal reasons between manufacturers (*Pollack 2007*).
- Medispan Class: Insulin-Like Growth Factors (Somatomedins)



Table 1. Medications Included Within Class Review

Drug	Alternative Available (same molecular entity)*		
Daybue (trofinetide) oral solution	-		
Increlex (mecasermin) injection	-		

^{*}For example, authorized generic, branded generic (unless not considered therapeutically equivalent by the Orange Book), generic, unbranded biologic, or interchangeable biologic.

(Drugs@FDA 2024, Orange Book: Approved Drug Products with Therapeutic Equivalence Evaluations 2024)

Indications

Table 2. Food and Drug Administration Approved Indications

Indication	Daybue (trofinetide)	Increlex (mecasermin)
Treatment of growth failure in pediatric patients 2 years of age and older with severe primary IGF-1 deficiency* or with GH gene deletion who have developed neutralizing antibodies to GH. †		~
Treatment of Rett syndrome in adults and pediatric patients 2 years of age and older	~	

^{*}Defined as height SD score and basal IGF-1 SD score ≤ -3 with normal or elevated GH.

(Prescribing information: Daybue 2023, Increlex 2024)

• Information on indications, mechanism of action, pharmacokinetics, dosing, and safety has been obtained from the prescribing information for the individual products, except where noted otherwise.

Clinical Efficacy Summary

- The FDA-approval of mecasermin was based on pooled efficacy analysis of 5 clinical studies (4 open-label [OL] and 1 double-blind [DB], placebo-controlled [PC] trials) in pediatric patients with severe primary IGF-1 deficiency. Patients were enrolled in the trials based on extreme short stature, slow growth rates, low IGF-1 serum concentrations, and normal GH levels. This study integrated 23 patients from 4 preceding OL clinical studies (treated with mecasermin twice daily for up to 2 years) into a single study named 1419 (N = 48) for a total of 71 patients. The primary endpoint was the increase in height velocity (FDA medical review 2005, Increlex prescribing information 2024).
 - Sixty-one patients had at least 1 year of treatment. Fifty-three (87%) had Laron Syndrome; 7 (11%) had GH gene deletion, and 1 (2%) had neutralizing antibodies to GH. Thirty-seven (61%) were male; forty-eight (79%) were Caucasian. Fifty-six (92%) patients were prepubertal at baseline.
 - Annual height results showed a statistically significant improvement in height velocity (cm/year) compared to baseline for years 1 to 6, but not year 7 or 8.
 - Year 1: + 5.2 cm/year, n = 58, p < 0.0001</p>
 - Year 2: + 2.9 cm/year, n = 48, p < 0.0001</p>
 - Year 3: + 2.3 cm/year, n = 38, p < 0.0001</p>
 - Year 4: + 1.5 cm/year, n = 23, p = 0.0045
 - Year 5: + 1.5 cm/year, n = 21, p = 0.0015
 - Year 6: + 1.5 cm/year, n = 20, p = 0.0009
 Year 7: + 1.0 cm/year, n = 16, p = 0.0897
 - Year 8: + 0.7 cm/year, n = 13, p = 0.3059
 - The major secondary analysis was the assessment of change in height SD score. The mean SD scores increased from -6.7 at baseline to a mean of -5.9 at year 1 and maintained through year 8. Bone maturation rate was also assessed in 49 patients, with bone age increasing 8.1% faster than chronological age (5.3 vs 4.9 years, respectively). Of note, approximately 42% of patients reported at least one hyperglycemic episode during their

course of therapy.

[†]Limitations of use: not a substitute to GH for approved GH indications, and not indicated for use in patients with secondary forms of IGF-1 deficiency, such as GH deficiency, malnutrition, hypothyroidism, or chronic treatment with pharmacologic doses of anti-inflammatory corticosteroids



- A multicenter, OL study evaluated the long-term efficacy of mecasermin in 76 children (treated for up to 12 years) with IGF-1 deficiency due to GH insensitivity. Inclusion criteria included patients over the age of 2 years old with SD scores for height and circulating IGF-I concentration less than 2 for age and sex, and evidence of resistance to GH. The primary outcome was the increase in height velocity (*Chernausek et al 2007*).
 - The baseline height velocity (2.8 cm/year on average) increased to 8.0 cm/year during the first year of treatment (p < 0.0001). The median increment in first-year height velocity over baseline was 5.3 cm/year (mean 5.2 cm/year; range 2.8 to 10.4).
 - The first-year growth was dose dependent, with those patients receiving 120 ug/kg twice daily growing the fastest (p < 0.001). For patients receiving an average dose of at least 100 ug/kg twice daily for 2 years (N = 19), first- and second year mean height velocities were 8.7 ± 1.7 and 6.1 ± 1.6 cm/year, respectively, significantly greater (p < 0.0001) than the baseline height velocity (2.8 ± 1.3 cm/year). Treatment effects persisted and remained above baseline up to year 8.</p>
- A 1-year, randomized, OL trial evaluated the safety and efficacy of mecasermin in 136 pediatric patients aged 3 or older with SD scores for height and circulating IGF-I concentration less than 2 and stimulated GH ≥ 7 ng/mL. Patients were randomized to observation or 1 of 2 doses of mecasermin; Initially, the 2 dose groups were 40 and 80 ug/kg. However, 40 ug/kg was replaced with 120 ug/kg by trial amendment when it was determined that the 40 ug/kg dose did not normalize serum IGF-I. The primary endpoint was the increase in first-year height velocity (centimeters per year, cm/year) (Midyett et al 2010).
 - o Mean first-year height velocities were significantly increased for the 80 and 120 ug/kg groups vs the untreated group using the intention to treat population (N = 136; 6.9 \pm 1.0, 7.7 \pm 1.5, and 5.2 \pm 1.0 cm/yr, respectively; p < 0.0001 vs the untreated group). Results were consistent with those patients who completed the study (N = 124; p < 0.0001 vs untreated group), and first-year height velocities were also significantly greater for the 120 vs the 80 g/kg group (1.0 cm/year; p < 0.0002).
- The approval of trofinetide was supported by results from the DB, PC, Phase 3, LAVENDER (N = 187) study that tested the efficacy and safety of trofinetide vs placebo in female patients with Rett syndrome, aged 5 to 20 years of age. A total of 93 patients were randomly assigned to trofinetide twice daily and 94 patients received placebo for 12 weeks. After 12 weeks, trofinetide showed a statistically significant improvement from baseline compared with placebo on both the caregiver-assessed Rett Syndrome Behavior Questionnaire (RSBQ; Least square mean difference [LSMD] vs placebo, -3.1; 95% confidence interval [CI], -5.7 to -0.6; p = 0.0175) and 7-point Clinical Global Impression-Improvement (CGI-I; LSMD, -0.3; 95% CI, -0.5 to -0.1; p = 0.003) scale (*Neul et al 2022*, *Neul et al 2023*).

Clinical Guidelines

- The 2016 Pediatric Endocrine Society guidelines for GH and IGF-1 treatment in children and adolescents: GH deficiency, idiopathic short stature, and primary insulin-like growth factor-1 deficiency recommends the use of IGF-1 therapy to increase height in patients with severe primary IGF-1 deficiency (*Grimberg et al 2016*).
 - Diagnosis of primary IGF-1 deficiency or GHI should be based on a combination of 4 factors including 1) screening (eg, growth parameters and low IGF-1 concentrations, 2) excluding causes of secondary IGF-1 deficiencies (eg, poor nutrition, hepatic disease, and GH deficiency), 3) circulating levels of GH binding protein (low levels suggesting Laron's Syndrome and normal levels considered non-informative), and 4) IGF-1 generation test and mutation analysis (limited usefulness).
 - A trial of GH therapy is recommended in patients with unexplained IGF-1 deficiency.
 - Patients with hormone signaling defects known to be unresponsive to GH treatment can start directly on IGF-1 replacement, including:
 - Very low or undetectable levels of GH binding protein and/or proven GH receptor gene mutations know to be associated with Laron Syndrome/GHI, GH-neutralizing antibodies, STAT5b gene mutations, and IGF1 gene deletion or mutation.
 - The guideline recommends a starting dose of 80 to 120 ug/kg 2 times daily, given after a carbohydrate containing meal. Patients and families should be educated on the symptoms and risks of hypoglycemia associated with treatment.
- The International Rett Syndrome Foundation published guidance and best practices to assist health professionals and families in care. The guidelines include a checklist and detailed references for guidance developed by consensus. The International Rett Syndrome Foundation states given the median life expectancy well into the sixth decade, guidance is provided to health professionals to achieve current best possible outcomes for these special-needs individuals.



Treatment is supportive and focuses on gastrointestinal, respiratory, neurological, cardiology, dermatological, orthopedics, urology, development and behavioral, sleep, pain, and physical symptoms and systems (*Fu et al 2020*).

Safety Summary

• Pediatric use: The safety and effectiveness of mecasermin or trofinetide have not been established in children less than 2 years of age.

Daybue (trofinetide)

- · Warnings and precautions:
 - Diarrhea: Most patients experience diarrhea during treatment. Counsel to stop laxatives prior to initiating therapy. If diarrhea occurs, patients should start antidiarrheal treatment, increase oral fluids, and notify their healthcare provider. Interrupt, reduce dose, or discontinue trofinetide if severe diarrhea occurs or if dehydration is suspected.
 - Weight loss: may occur in patients treated with trofinetide. Monitor weight and interrupt, reduce dose, or discontinue therapy if significant weight loss occurs.
- Adverse effects
 - Most common in clinical trials: diarrhea and vomiting.

Increlex (mecasermin)

- Contraindications:
 - Hypersensitivity to mecasermin
 - o Intravenous (IV) administration
 - Closed epiphyses
 - Malignant neoplasia (current or history of)
- · Warnings and precautions:
 - Risk of hypoglycemia: due to insulin-like effects.
 - Hypersensitivity and allergic reactions, including anaphylaxis: Parents and patients should be informed that such reactions are possible and that if a systemic allergic reaction occurs, treatment should be interrupted and prompt medical attention should be taken.
 - o Intracranial hypertension: funduscopic examination is recommended at the initiation and periodically during therapy.
 - Lymphoid tissue hypertrophy
 - Slipped capital femoral epiphysis (SCFE): characterized by limp or hip/knee pain.
 - Progression of scoliosis
 - Risk of malignant neoplasms: Several cases of malignant neoplasia have been observed in pediatric patients treated
 with mecasermin. Therapy should be discontinued if evidence of malignant neoplasia develops, and appropriate
 expert medical care sought.
 - Risk of serious adverse reactions (including death) in infants due to benzyl alcohol preserved solution: use in infants is not recommended.
- Adverse effects
 - o Most common in clinical trials: hypoglycemia, local and systemic hypersensitivity, and tonsillar hypertrophy.

Dosing and Administration

Table 3. Dosing and Administration

Drug	Available Formulations	Route	Usual Recommended Frequency	Comments
Daybue (trofinetide)	Solution	Oral	Twice daily in the morning and evening	Dosing is based on patient weight.
				May be administered with or without food.
				May be administered orally or via gastrostomy



Drug	Available Formulations	Route	Usual Recommended Frequency	Comments
				(G) tube through a G-port.
Increlex (mecasermin)	Injection	SC	Twice daily	Administer shortly before or after a meal or snack due to insulin-like hypoglycemic effect.
				Pre-prandial glucose monitoring is recommended at treatment initiation and until a well-tolerated dose is established.
				Injection sites should be rotated to a different site (upper arm, thigh, buttock, or abdomen) with each injection to help prevent lipohypertrophy.

See the current prescribing information for full details.

Conclusion

- IGF-1 is a hormone that manages the effects of GH. Together, they promote the normal linear growth of bones and tissues. GHI occurs when the body is unable to adequately use GH, generally caused by loss-of-function mutations.
- Mecasermin is an injectable recombinant IGF-1, that is FDA-approved for the long-term treatment of growth failure in pediatric patients with severe primary IGF-1 deficiency (defined as both height and serum IGF-1 concentration below –3 SD despite normal or elevated GH levels), or patients with GH gene deletion who developed neutralizing antibodies to GH after a trial of GH therapy. Eligible children must have an open epiphysis.
- In a pooled analysis of 5 clinical trials, mecasermin showed a statistically significant acceleration of linear growth as characterized by height velocity compared to baseline from year 1 through year 6. These results were also consistent in subsequent studies that demonstrated increased in mean first-year height velocities in patients with severe primary IGF-1 deficiency treated with 80 and 120 ug/kg twice daily mecasermin).
 - The safety and effectiveness have not been established in children less than 2 years of age.
 - Use in infants is not recommended due to risk of serious adverse reactions (including death) due to benzyl alcohol preservative content.
- The 2016 guidelines from the Pediatric Endocrine Society recommend starting directly on IGF-1 therapy to increase height in patients with severe primary IGF-1 deficiency and in patients with hormone signaling defects known to be unresponsive to GH treatment.
- Contraindications to the use of mecasermin include hypersensitivity to the drug, IV administration, individuals with closed epiphyses, or with current or history of cancer.
- IGF-1 is associated with insulin-like hypoglycemic effects, so it is recommended to be administered after a carbohydrate containing meal or snack.
- Long-term studies have demonstrated that recombinant IGF-1 (mecasermin) has proven efficacy in stimulating height velocity for a very small patient population that is affected by GHI characterized by a lack of normal growth due to mutations in GH receptor and IGF-1 and continues to be an important treatment option for these patients.
- Rett syndrome is a rare developmental disorder, and the second leading cause of intellectual disability in girls.

 Treatment is mostly supportive care across a wide range of body systems. In the LAVENDER trial, trofinetide demonstrated a statistically significant improvement from baseline in Rett Syndrome behaviors as assessed by caregiver questionnaire (RSBQ) and CGI-I scales; offering patients and families a potential option to treat a debilitating



range of symptoms. Trofinetide is administered orally twice daily, <mark>and most patients will experience diarrhea during treatment.</mark>

References

- Chernausek SD, Backeljauw PF, Frane J, Juntze J, Underwood LE: GH insensitivity syndrome collaborative group. Long-term treatment with recombinant insulin-like growth factor (IGF)-I in children with severe IGF-I deficiency due to growth hormone insensitivity. *J Clin Endocrinol Metab*. 2007;92(3):902-910.
- Daybue [package insert], San Diego, CA: Acadia Pharmaceuticals, Inc. March 2023.
- Drugs@FDA: FDA approved drug products. Food and Drug Administration Web site. https://www.accessdata.fda.gov/scripts/cder/daf/. Accessed April 18, 2024
- Food and Drug Administration. Increlex medical review. https://www.accessdata.fda.gov/drugsatfda docs/nda/2005/021839 S000 Increlex MedR.pdf.
 August 30, 2005. Accessed April 18, 2024.
- Fu C, Armstrong D, Marsh E, et al; for the International Rett Syndrome Foundation. Consensus guidelines on managing Rett syndrome across the lifespan. *BMJ Paediatr Open*. 2020;4(1):e000717.
- Grimberg A, DiVall SA, Polychronakos C, et al. Guidelines for growth hormone and insulin-like growth factor-1 treatment in children and adolescents: growth hormone deficiency, idiopathic short stature, and primary insulin-growth factor-1 deficiency. *Horm Res Paediatr.* 2016;86(6):361-397.
- Increlex [package insert], Cambridge, MA: Ipsen Biopharmaceuticals, Inc. March 2024.
- Micromedex Solutions Web site. http://www.micromedexsolutions.com/home/dispatch. Accessed April 18, 2024.
- Midyett, KL, Rogol AD, Van Meter QL, et al. Recombinant insulin-like growth factor (IGF)-1 treatment in short children with low IGF-I levels: First year results from a randomized clinical trial. J Clin Endocrinol Metab. 2010;95(2):611-619.
- National Organization for Rare Diseases (NORD). Growth hormone insensitivity. https://rarediseases.org/rare-diseases/growth-hormone-insensitivity/.
 Updated August 1, 2016. Accessed https://arediseases.org/rare-diseases/growth-hormone-insensitivity/.
- National Organization for Rare Diseases (NORD). Rett Syndrome. https://rarediseases.org/rare-diseases/rett-syndrome/. Updated March 15, 2023. Accessed April 18, 2024.
- Neul JL, Percy AK, Benke TA, et al. Design and outcome measures of LAVENDER, a phase 3 study of trofinetide for Rett syndrome. *Contemp Clin Trials*. 2022;114:106704.
- Neul JL, Percy AK, Benke TA, et al. Trofinetide for the treatment of Rett syndrome: a randomized phase 3 study. Nat Med. 2023;29(6):1468-1475. doi:10.1038/s41591-023-02398-1
- Orange Book: Approved drug products with therapeutic equivalence evaluations. Food and Drug Administration Web site. https://www.accessdata.fda.gov/scripts/cder/ob/default.cfm. Accessed April 18, 2024.
- Pollack A. To settle suit, maker agrees to withdraw growth drug [news release]. New York, NY. New York Times. March 7, 2007. https://www.nytimes.com/2007/03/07/business/07patent.html. Accessed April 18, 2024.
- Richmond EJ, Rogol AD. Growth hormone insensitivity syndromes. UpToDate Website. www.uptodate.com. Updated October 18, 2022. Accessed April 18, 2024.
- Schultz RJ and Suter B. Rett syndrome: Genetics, clinical features, and diagnosis. UpToDate Website. www.uptodate.com. Updated March 30, 2023[a]. Accessed April 18, 2024.
- Schultz RJ and Suter B. Rett syndrome: Treatment and prognosis. UpToDate Website. www.uptodate.com. Updated April 21, 2023[b]. Accessed April 18, 2024.
- Yakar S, Adamo ML. Insulin-like growth factor-1 physiology: lessons from mouse models. Endocrinol Metab Clin North Am. 2012 Jun;41(2):231-427.

Publication Date: May 16, 2024



Therapeutic Class Overview

Respiratory and allergy biologics

Introduction

- The respiratory and allergy biologics (ie, antiasthmatic monoclonal antibodies) include the interleukin-5 (IL-5) antagonists Cinqair (reslizumab), Fasenra (benralizumab), and Nucala (mepolizumab), the immunoglobulin E (IgE) inhibitor Xolair (omalizumab), the interleukin-4 (IL-4) inhibitor Dupixent (dupilumab), and the thymic stromal lymphopoietin (TSLP) blocker Tezspire (tezepelumab-ekko).
 - Respiratory and allergy biologics are a mainstay of treatment for severe asthma; in addition, various agents in this
 class are also indicated for use in chronic idiopathic urticaria (CIU), eosinophilic granulomatosis with polyangiitis
 (EGPA), chronic rhinosinusitis with nasal polyposis (CRSwNP), hypereosinophilic syndromes (HES), eosinophilic
 esophagitis (EoE), IgE-mediated food allergy, and chronic obstructive pulmonary disease (COPD).
- Asthma is a chronic lung disease that inflames and narrows the airways, making it difficult to breathe. Asthma causes recurring periods of wheezing, chest tightness, shortness of breath, and coughing. Asthma affects people of all ages but most often starts during childhood. In 2021, asthma affected an estimated 20.3 million adults and 4.6 million children in the United States (U.S.). The exact causes of asthma are unknown. A combination of factors such as genetics, certain respiratory infections during childhood, and contact with airborne allergens can contribute to its development. Most patients with asthma also have allergies (Centers for Disease Control and Prevention Web site 2024, National Heart, Lung, and Blood Institute [NHLBI] Web site 2024).
- Pharmacologic options for asthma management are categorized as: (1) controller medications to achieve and maintain control of persistent asthma or prevent exacerbations (also referred to as maintenance treatment, as appropriate), and (2) reliever medications for symptom relief and before exercise to prevent exercise-induced asthma symptoms (also referred to as rescue inhalers) (Cloutier et al 2020, NHLBI 2007, Global Initiative for Asthma [GINA] 2024).
 - Controller medications include:
 - Corticosteroids (inhaled corticosteroids [ICSs], or oral corticosteroids for severe exacerbations or severely uncontrolled asthma)
 - Long-acting beta₂-agonists (LABAs) in combination with ICS (ICS/LABA)
 - Leukotriene receptor antagonists (LTRAs) in select patients
 - Add-on immunomodulators (ie, omalizumab, mepolizumab, reslizumab, benralizumab, dupilumab, tezepelumabekko) in patients with severe asthma
 - Add-on tiotropium
 - Add-on azithromycin
 - Reliever medications include:
 - Short-acting beta₂-agonists (SABAs)
 - The GINA report no longer recommends treatment of asthma in adults and adolescents with a SABA alone. All adults and adolescents with asthma should receive ICS-containing reliever treatment (referred to by GINA as an anti-inflammatory reliever therapy) to reduce the risk of serious exacerbations and to control symptoms.
 - Anti-inflammatory relievers (AIRs) that contain both a low-dose ICS and a rapid-acting bronchodilator, including ICS (ie, budesonide)/formoterol and ICS/albuterol combinations
 - Short-acting muscarinic antagonists (ie, ipratropium bromide) as an alternative bronchodilator for those not tolerating a SABA (these agents have a slower onset of action vs SABA)
- Approximately 3.7% of asthma patients have severe disease and 17% have difficult-to-treat asthma. Difficult-to-treat asthma is asthma that is uncontrolled despite prescribing of medium- or high-dose ICS with a second controller (usually a LABA) or with maintenance OCS, or that requires high-dose treatment to maintain good symptom control and reduce exacerbations. Severe asthma is a subset of difficult-to-treat asthma; it is defined as asthma that is uncontrolled despite adherence with maximal optimized high-dose ICS/LABA treatment and management of contributory factors, or that worsens when high-dose treatment is decreased (GINA 2024).
 - While there are currently no widely accepted definitions of specific asthma phenotypes, several strategies have been proposed to categorize severe asthma phenotypes based on characteristics such as patient age, disease onset, corticosteroid resistance, chronic airflow obstruction, or type of cellular infiltrate in the airway lumen or lung tissue (Walford et al 2014). GINA guidelines on severe or difficult-to-treat asthma recommend assessing for Type 2 inflammation through blood and sputum eosinophil levels, exhaled nitric oxide levels, and allergic triggers to asthma (GINA 2024).



- CIU, also called chronic spontaneous urticaria (CSU), is defined by the presence of hives on most days of the week for 6 weeks or longer, with or without angioedema. The hives are circumscribed, raised, erythematous plaques, often with central pallor and variable in size. No external allergic cause or contributing disease process can be identified in 80 to 90% of adults and children with CIU (Khan 2023, Saini 2024).
 - CIU affects up to 1% of the general population in the U.S., and the prevalence is believed to be similar in other countries. The condition is more common in adults than children and typically begins in the third to fifth decades of life. CIU is a self-limited disorder in most patients although the condition generally has a prolonged duration of 2 to 5 years (Saini 2024).
 - Non-sedating H₁-antihistamines are the cornerstone of therapy for CIU. Limited courses of oral glucocorticoids are often used in combination with antihistamines for refractory symptoms. Other pharmacologic options for patients who do not respond to H₁-antihistamines include the use of H₂-antihistamines, leukotriene modifiers, cyclosporine, tacrolimus, mycophenolate, hydroxychloroquine, sulfasalazine, dapsone, and omalizumab (*Khan 2023, Maurer et al 2013, Sabroe et al 2021, Zuberbier et al 2022*).
- EGPA, previously called Churg-Strauss syndrome, is a systemic necrotizing vasculitis that affects small-to-medium-sized vessels. It is typically associated with eosinophilia and severe asthma (*Chung et al 2021, Connelly-Smith et al 2023, Groh et al 2015*).
 - EGPA is a rare condition with a prevalence of approximately 13 cases per 1 million persons and an annual incidence of approximately 7 new cases per 1 million persons. It has a higher incidence in patients with asthma (*Groh et al* 2015).
 - Systemic glucocorticoids are the mainstay of treatment for EGPA. For refractory EGPA, the addition of cyclophosphamide, azathioprine, mepolizumab, methotrexate, rituximab, or intravenous immunoglobulins (IVIG) can be considered (Chung et al 2021, Groh et al 2015). In more than 85% of patients with EGPA, remission can be achieved with glucocorticoids with or without an immunosuppressant; however, relapses occur in more than 33% of patients (Pagnoux and Groh 2016).
 - Biologic agents in this review that are Food and Drug Administration (FDA)-approved for EGPA include benralizumab and mepolizumab.
- CRSwNP has a prevalence of approximately 2.7% in adults, and peaks in the sixth decade of life. Symptoms include nasal obstruction, reduced sense of smell, and sleep disturbance, all of which can substantially impact the quality of life. The majority of cases are idiopathic but may be due to genetic, metabolic, or immunologic causes, resulting in inflammation characterized by eosinophilia and elevated levels of IL-4, IL-5, and interleukin-13 (IL-13) (*Hopkins 2019*).
 - Common treatment options for CRSwNP include saline irrigation and intranasal glucocorticoids in patients with mild symptoms, and short-term systemic glucocorticoids, surgery, and biologic agents in patients with severe symptoms (Hopkins 2019). Biologic agents in this review that are FDA-approved for CRSwNP include dupilumab, mepolizumab, and omalizumab.
- HES are disorders characterized by the overproduction of eosinophils, which causes organ damage (*Roufosse et al 2022*). Treatment for idiopathic HES may include systemic glucocorticoids, imatinib, hydroxyurea, interferon alfa, alemtuzumab, and Janus kinase inhibitors (eg, tofacitinib and ruxolitinib). Additionally, mepolizumab was FDA-approved for HES in 2020.
- EoE is a chronic allergic inflammatory disease in which eosinophils build up in the lining of the esophagus (*Hirano et al 2020a*). The presence of eosinophils cause inflammation in the esophagus, which may cause the following symptoms: vomiting, stomach or chest pain, failure to thrive (particularly in children), and difficulty swallowing. Front-line treatments for EoE include proton pump inhibitors and topical glucocorticoids. Additionally, dupilumab was FDA-approved for EoE in 2022.
- IgE-mediated food allergy is a leading cause of anaphylaxis (*Fleischer et al 2021, Sampson et al 2014*). Common food allergens include cow's milk, egg, peanut, tree nuts, fish/shellfish, wheat, sesame seed, and soy. Food-related reactions are associated with a broad range of signs and symptoms that can involve the skin, gastrointestinal tract, respiratory tract, and the cardiovascular system. Xolair is approved for IgE-mediated food allergy in adults and children ≥ 1 year of age for the reduction of allergic reactions with accidental exposure (*Xolair Prescribing Information 2024*). Guidelines for food allergies mostly focus on nutritional interventions and have not been updated to include recommendations for omalizumab.
- COPD is a chronic respiratory disease caused by abnormalities of the airways and/or alveoli. In 2021, 14.2 million adults
 in the U.S. (6.5% of the adult population) were estimated to have COPD (*Liu et al 2023*). Symptoms typically include
 dyspnea, chest tightness, fatigue, activity limitation, and cough with or without sputum production. Patients with COPD



may also experience exacerbations, which are periods of acute worsening of respiratory symptoms (*Global Initiative for* Chronic Obstructive Lung Disease [GOLD] 2024).

- Treatment goals in COPD aim to reduce symptoms and the risk of future exacerbations. Choice of therapy depends on a patient's severity of dyspnea and risk of exacerbations, and often includes the use of inhaled bronchodilators (ie, long-acting muscarinic antagonists [LAMAs] or LABAs) and ICSs (GOLD 2024).
- Type 2 inflammation is associated with an increased risk of exacerbations.
 - An estimated 885,000 (0.6% of the U.S. adult population) patients ≥ 40 years of age with COPD in the U.S. are treated with triple therapy; 36% (319,000) of these patients are in a subpopulation who have type 2 inflammation with blood eosinophils ≥ 300/µL and moderate-to-severe uncontrolled COPD (Dupixent formulary dossier 2024).
- Descriptions of the respiratory and allergy biologics are as follows:
 - Cinqair, Fasenra, and Nucala are humanized monoclonal antibody IL-5 antagonists. The mechanism of action of Fasenra is slightly different, in that it binds to the IL-5 receptor on immune effector cells, whereas Cinqair and Nucala bind to the IL-5 cytokine. Eosinophils play a key role in the pathobiology of airway disorders by contributing to inflammation through the release of leukotrienes and pro-inflammatory cytokines. Increases in eosinophils are often correlated with greater asthma severity. IL-5, a cytokine critical to eosinophil differentiation and survival, has been isolated as a potential target in eosinophilic asthma.
 - Xolair is a recombinant DNA-derived monoclonal antibody that selectively binds to human anti-IgE. Xolair, which reduces the allergic response mediators, is useful in a subset of patients with allergic asthma. In addition, Xolair is approved for CIU in patients ≥ 12 years of age who remain symptomatic despite antihistamine treatment, as add-on maintenance treatment of CRSwNP in adult patients with inadequate response to nasal corticosteroids, and for IgE mediated food allergy in patients ≥ 1 year of age for the reduction of allergic reactions with accidental exposure.
 - Dupixent is a human monoclonal antibody that inhibits signaling of IL-4 and IL-13. This results in a reduction of the
 release of inflammatory mediators including cytokines, chemokines, nitric oxide, and IgE. These actions are useful for
 eosinophilic asthma, EoE, add-on therapy for inadequately controlled COPD (with eosinophilic phenotype), and addon therapy for inadequately controlled CRSwNP. Dupixent is also approved to treat moderate to severe atopic
 dermatitis and prurigo nodularis; these indications for dermatologic conditions are not discussed in this review.
 - Tezspire, a human monoclonal antibody, is a TSLP blocker. Tezspire binds to human TSLP, an epithelial cell-derived cytokine, and blocks its interaction with the TSLP receptor to reduce biomarkers and cytokines associated with inflammation (eg, blood and airway submucosal eosinophils, IgE, fractional exhaled nitric oxide [FeNO], IL-5, and IL-13); however, the mechanism of tezepelumab-ekko action in asthma has not been definitively established.
 - TSLP has also been shown to affect non-Type 2 inflammatory processes between airway structural and immune cells, and there are many cell types activated by, or that respond to, TSLP (including mast cells, basophils, natural killer T cells, innate lymphoid cells, and neutrophils) that may play a role in inflammation in asthma beyond Type 2 inflammation (*Corren et al 2017a, Menzies-Gow et al 2021*).
- Medispan class: Antiasthmatic Monoclonal Antibodies

Table 1. Medications Included Within Class Review

Drug	Alternative Available (same molecular entity)*				
Cinqair (reslizumab)	-				
Dupixent (dupilumab)	-				
Fasenra (benralizumab)	-				
Nucala (mepolizumab)	-				
Xolair (omalizumab)	-				
Tezspire (tezepelumab-ekko)	-				

^{*}For example, authorized generic, branded generic (unless not considered therapeutically equivalent by the Orange Book), generic, unbranded biologic, or interchangeable biologic.

(Drugs@FDA 2024, Purple Book: Lists of Licensed Biological Products with Reference Product Exclusivity and Biosimilarity or Interchangeability Evaluations 2024)

Indications

Table 2. Food and Drug Administration Approved Indications

Data as of October 18, 2024 RLP/ALS

Page 3 of 31



Indication	Cinqair [†] (reslizumab)	Dupixent (dupilumab)	Fasenra† (benralizumab)	Nucala (mepolizumab)	Xolair <mark>‡</mark> (omalizumab)	Tezspire (tezepelumab- ekko)
Moderate to severe persistent asthma in patients ≥ 6 years of age with a positive skin test or in vitro reactivity to a perennial aeroallergen and symptoms that are inadequately controlled with ICS					•	
Add-on maintenance treatment for patients ≥ 6 years of age with severe asthma with an eosinophilic phenotype			~			
Add-on maintenance treatment for patients ≥ 12 years of age with severe asthma						•
Add-on maintenance treatment for patients ≥ 6 years of age with severe asthma with an eosinophilic phenotype				•		
Add-on maintenance treatment for patients ≥ 6 years of age with moderate-to-severe asthma with an eosinophilic phenotype or with oral corticosteroid dependent asthma		•				
Add-on maintenance treatment for patients ≥ 18 years of age with severe asthma with an eosinophilic phenotype Treatment of adult	~					
patients with EGPA Treatment of adults and adolescents ≥ 12 years of age with CIU who remain symptomatic despite			V	~	*	

Data as of October 18, 2024 RLP/ALS

Page 4 of 31



Indication	Cinqair [†] (reslizumab)	Dupixent (dupilumab)	Fasenra† (benralizumab)	Nucala (mepolizumab)	Xolair <mark>‡</mark> (omalizumab)	Tezspire (tezepelumab- ekko)
H ₁ -antihistamine treatment.						
Add-on maintenance treatment in adult patients with inadequately controlled CRSwNP				•	•	
Add-on maintenance treatment in adult and pediatric patients ≥ 12 years old with inadequately controlled CRSwNP		•				
Treatment of adult and pediatric patients ≥ 12 years of age with HES for ≥ 6 months without an identifiable non-hematologic secondary cause				~		
Treatment of adult and pediatric patients ≥ 1 year of age and weighing ≥ 15 kg with EoE		•				
IgE-mediated food allergy in adults and children ≥ 1 year of age for the reduction of allergic reactions with accidental exposure					*	
Add-on maintenance treatment of adult patients with inadequately controlled COPD with an eosinophilic phenotype		<mark>✓</mark>				

^{*} None of the agents are indicated for the relief of acute bronchospasm or status asthmaticus.

(Prescribing information: Cinqair 2020, Dupixent 2024, Fasenra 2024, Nucala 2023, Xolair 2024, Tezspire 2023)

• Information on indications, mechanism of action, pharmacokinetics, dosing, and safety has been obtained from the prescribing information for the individual products, except where noted otherwise.

[†] Not indicated for the treatment of other eosinophilic conditions.

[‡] Not indicated for other allergic conditions or other forms of urticaria. Not indicated for the emergency treatment of allergic reactions, including anaphylaxis.



Clinical Efficacy Summary

Xolair (omalizumab)

Asthma

- The original FDA approval of omalizumab was based on the results of 3 randomized, double-blind, placebo-controlled, multicenter trials conducted in patients ≥ 12 years of age with moderate to severe asthma for ≥ 1 year and a positive skin test reaction to a perennial aeroallergen. All patients were required to have a baseline IgE between 30 and 700 international unit (IU)/mL and body weight not more than 150 kg. Patients were treated according to a dosing table to administer at least 0.016 mg/kg/IU (IgE/mL) of omalizumab or placebo over each 4-week period.
 - Each study was comprised of a run-in period to achieve a stable conversion to a common ICS, followed by randomization to omalizumab or placebo. Patients received omalizumab for 16 weeks with an unchanged ICS dose unless an acute exacerbation necessitated an increase. Patients then entered an ICS reduction phase of 12 (*Busse* et al 2001, Solèr et al 2001) and 16 weeks (*Holgate et al 2004*) during which ICS dose reduction was attempted in a stepwise manner.
 - o In the 28-week study by Busse et al (N = 525), during the steroid stable phase, patients treated with omalizumab had fewer mean exacerbations/subject (0.28 vs 0.54; p = 0.006) and decreased mean duration of exacerbations (7.8 vs 12.7 days; p < 0.001) compared with placebo-treated patients. Similarly, during the steroid reduction phase, omalizumab was associated with fewer exacerbations/subject (0.39 vs 0.66; p = 0.003), and a shorter mean duration of exacerbations (9.4 vs 12.6 days; p = 0.021) (*Busse et al 2001*).
 - In the 28-week study by Solèr et al (N = 546), asthma exacerbations/patient, the primary endpoint, decreased more
 in the omalizumab group compared to placebo during both the stable steroid (0.28 vs 0.66; p < 0.001) and steroid
 reduction phases (0.36 vs 0.75; p < 0.001) (Solèr et al 2001).
 - o In the 32-week study by Holgate et al (N = 246), the percentage reduction in ICS dose, the primary endpoint, was greater among patients treated with omalizumab than among patients treated with placebo (median, 60% vs 50%; p = 0.003). The percentages of patients with ≥ 1 asthma exacerbation were similar between omalizumab and placebo groups during both the stable steroid and steroid reduction phases (p-value not reported). The absence of an observed treatment effect may be related to differences in the patient population compared with the first 2 studies, study sample size, or other factors (*Holgate et al 2004*).
- A meta-analysis of 3 of the previously mentioned trials (*Busse et al 2001*, *Holgate et al 2004*, *Solèr et al 2001*) and their extension studies assessed the efficacy of omalizumab in a subgroup of 254 patients at high risk of serious asthmarelated mortality and morbidity. Patients were defined as high-risk due to asthma histories that included the following: intubation history, emergency room visit within the last year, overnight hospitalization, or intensive care unit treatment. The primary outcome was an annualized rate of acute exacerbation episodes based on data from the initial 16-week stable steroid phase for high-risk patients. Two kinds of acute exacerbation episodes were considered as endpoints: significant acute exacerbation episodes and all acute exacerbation episodes (ie, all episodes recorded by the investigator). Significant acute exacerbation episodes were defined as those requiring a doubling of baseline ICS dose (*Busse et al 2001*, *Solèr et al 2001*) or use of systemic steroids (all 3 studies). During the stable steroid phase, mean significant acute exacerbation episode rates were 1.56 and 0.69/patient-year, respectively, a reduction of 56% with omalizumab (p = 0.007). Similar reductions in exacerbations in favor of omalizumab were observed for the whole study period and for all acute exacerbation episodes. The authors concluded that 113 significant acute exacerbation episodes were prevented for every 100 patients treated with omalizumab for 1 year (*Holgate et al 2001*).
- A Cochrane Review conducted in 2014 evaluated the efficacy of omalizumab in patients with allergic asthma. Treatment with omalizumab was associated with a significant reduction in the odds of a patient having an asthma exacerbation (odds ratio [OR], 0.55; 95% confidence interval [CI], 0.42 to 0.6; 10 studies; 3261 participants). This represents an absolute reduction from 26% for participants suffering an exacerbation on placebo to 16% on omalizumab, over 16 to 60 weeks. Additionally, in patients with moderate to severe asthma and in those who were receiving background ICS therapy, treatment with omalizumab resulted in a significant reduction in the odds of having an asthma exacerbation (OR, 0.50; 95% CI, 0.42 to 0.6; 7 studies; 1889 participants). A significant benefit was noted for subcutaneous (SC) omalizumab vs placebo with regard to reducing hospitalizations (OR, 0.16, 95% CI, 0.06 to 0.42; 4 studies; 1824 participants), representing an absolute reduction in risk from 3% with placebo to 0.5% with omalizumab over 28 to 60 weeks. The authors concluded that omalizumab was effective in reducing asthma exacerbations and hospitalizations as an adjunctive therapy to ICS and significantly more effective than placebo in increasing the numbers of participants who were able to reduce or withdraw their ICS. Omalizumab was generally well tolerated, although there were more injection



site reactions with omalizumab. However, the clinical value of the reduction in steroid consumption must be considered in light of the high cost of omalizumab (*Normansell et al 2014*).

- A systematic review of 8 randomized, placebo-controlled trials (N = 3429) evaluated the efficacy and safety of SC omalizumab as add-on therapy to corticosteroids in children and adults with moderate to severe allergic asthma. At the end of the steroid reduction phase, patients taking omalizumab were more likely to be able to withdraw corticosteroids completely compared with placebo (relative risk [RR], 1.8; 95% CI, 1.42 to 2.28; p = 0.00001). Omalizumab patients showed a decreased risk for asthma exacerbations at the end of the stable (RR, 0.57; 95% CI, 0.48 to 0.66; p = 0.0001) and adjustable-steroid phases (RR, 0.55; 95% CI, 0.47 to 0.64; p = 0.0001); post-hoc analysis suggests this effect was independent of duration of treatment, age, severity of asthma, and risk of bias. The frequency of serious adverse effects was similar between omalizumab (3.8%) and placebo (5.3%). However, injection site reactions were more frequent in the omalizumab patients (19.9% vs 13.2%). Omalizumab was not associated with an increased risk of hypersensitivity reactions, cardiovascular effects, or malignant neoplasms (*Rodrigo et al 2011*).
- In July 2016, the FDA expanded the indication of omalizumab to patients 6 to 11 years of age with moderate to severe persistent asthma. The approval was based primarily on a 52-week, randomized, double-blind, placebo-controlled, multicenter trial. The study evaluated the safety and efficacy of omalizumab as add-on therapy in 628 pediatric patients 6 to < 12 years of age with moderate to severe asthma inadequately controlled despite the use of an ICS (*Lanier et al 2009*).
 - Over the 24-week fixed-steroid phase, omalizumab reduced the rate of clinically significant asthma exacerbations (worsening symptoms requiring doubling of baseline ICS dose and/or systemic steroids) by 31% vs placebo (0.45 vs 0.64; RR, 0.69; p = 0.007). Over a period of 52 weeks, the exacerbation rate was reduced by 43% (p < 0.001). Other efficacy variables such as nocturnal symptom scores, beta-agonist use, and forced expiratory volume in 1 second (FEV₁) were not significantly different in omalizumab-treated patients compared to placebo.
- A 2017 systematic review of 3 randomized, placebo-controlled trials and 5 observational studies evaluated the safety and efficacy of omalizumab in children and adolescents. Omalizumab reduced exacerbations compared with placebo or baseline in all studies that included this outcome. The randomized controlled trials (RCTs) did not identify significant differences in FEV₁; however, 3 of the 4 observational studies that included this outcome did find significant FEV₁ improvement with omalizumab. Generally, ICS and rescue medication use were reduced with omalizumab in the studies. The authors concluded that the evidence strongly supports omalizumab safety and efficacy in patients 6 to 11 years of age (Corren et al 2017b).
- The EXCELS study was a multicenter, observational cohort study to evaluate the clinical effectiveness and long-term safety of omalizumab in patients with moderate-to-severe allergic asthma. Patients were evaluated as part of 3 groups: non-omalizumab users, those newly starting omalizumab, and those who have established users at study initiation.
 - o Interim efficacy results demonstrated that at month 24, the Asthma Control Test (ACT) score increased in all 3 patient groups: from 18.4 to 20 in non-omalizumab users, from 15.2 to 19.4 in those newly starting on omalizumab, and from 18.2 to 19.4 in established omalizumab users. For patients newly starting omalizumab treatment, 54% achieved at least a minimally important difference, defined as a ≥ 3-point increase from baseline in ACT. The study demonstrated that established users of omalizumab maintained asthma control during the study period (*Eisner et al 2012*).
 - To investigate the relationship between omalizumab and malignant neoplasms, safety information from the EXCELS trial was analyzed. Similar rates of primary malignancies in omalizumab- and non-omalizumab-treated patients were found. However, study limitations preclude definitively ruling out a malignancy risk with omalizumab (*Long et al* 2014).
 - A higher incidence of overall cardiovascular and cerebrovascular serious adverse events was observed in omalizumab-treated patients compared to non-omalizumab-treated patients (*Iribarren et al 2017*). To further evaluate the risk, a pooled analysis of 25 RCTs was conducted. An increased risk of cardiovascular and cerebrovascular serious adverse events was not noted, but the low number of events, the young patient population, and the short duration of follow-up prevent a definite conclusion about the absence of a risk (*FDA 2014*).
 - Patients from the EXCELS study were eligible for the XPORT trial, a 52-week, randomized, placebo-controlled trial evaluating the persistence of response to omalizumab in patients who discontinued omalizumab therapy after long-term use. Patients were randomized to continue their omalizumab therapy or to omalizumab discontinuation. More patients who continued omalizumab did not have an exacerbation compared to those who discontinued therapy (67.0% vs 47.7%; absolute difference, 19.3%; 95% CI, 5.0 to 33.6). The authors concluded that continuation of omalizumab after long-term use results in sustained benefit (*Ledford et al 2017*).



CIU

- The safety and efficacy of omalizumab for the treatment of CIU was assessed in 2 placebo-controlled, multiple-dose clinical studies. Patients received omalizumab 75, 150, or 300 mg or placebo by SC injection every 4 weeks in addition to their baseline level of H₁ antihistamine therapy for 24 or 12 weeks, followed by a 16-week washout observation period. In both studies, patients who received omalizumab 150 mg or 300 mg had greater decreases from baseline in weekly itch severity scores and weekly hive count scores than placebo at week 12. The 75 mg dose did not demonstrate consistent evidence of efficacy and is not approved for use (*Kaplan et al 2013*).
- Another randomized, double-blind, placebo-controlled study evaluated omalizumab as add-on therapy for 24 weeks in patients with CIU who remained symptomatic despite H₁ antihistamine therapy. Similar to previous studies, patients treated with omalizumab had significantly greater reductions in weekly itch severity score from baseline to week 12 compared to placebo (p ≤ 0.001) (*Saini et al 2015*).
- A meta-analysis of randomized clinical trials evaluating omalizumab for the treatment of CIU was published in 2016. The analysis included 7 randomized, placebo-controlled studies with 1312 patients with CIU. Patients treated with omalizumab (75 to 600 mg every 4 weeks) had significantly reduced weekly itch and weekly wheal scores compared with the placebo group. The effects of omalizumab were dose-dependent, with the strongest reduction in weekly itch and weekly wheal scores observed with 300 mg. Rates of complete response were significantly higher in the omalizumab group (p < 0.00001) and dose-dependent, with the highest rates in the 300 mg group. Rates of patients with adverse events were similar in the omalizumab and placebo groups (*Zhao et al 2016*). Similar results were identified in a 2019 meta-analysis of 6 trials and a 2020 meta-analysis of 9 trials, both comparing omalizumab with placebo (*Jia and He 2020, Rubini et al 2019*).
- A Phase 4 randomized clinical trial evaluated the effect of omalizumab in 205 patients with antihistamine-resistant CIU/chronic spontaneous urticaria. After an initial 24-week period of open-label treatment with omalizumab 300 mg every 4 weeks, patients randomized to continue omalizumab for another 24 weeks of double-blind therapy experienced a significantly lower rate of clinical worsening compared with patients randomized to double-blind placebo (21.0% vs 60.4%; p < 0.0001). No new safety signals were detected over the 48-week omalizumab treatment period (*Maurer et al 2018*).

CRSwNP

• The efficacy and safety of omalizumab for the treatment of CRSwNP in adult patients with an inadequate response to intranasal corticosteroids were based on results from 2 randomized, multicenter, double-blind, placebo-controlled, Phase 3 studies, POLYP 1 (n = 138) and POLYP 2 (n = 127) (*Gevaert et al 2020*). Patients were randomly assigned to omalizumab 75 to 600 mg SC every 2 or 4 weeks (based upon pretreatment serum total IgE level and body weight) or placebo for 24 weeks. All patients received background intranasal mometasone therapy. Results from both studies revealed that omalizumab was associated with a significantly greater improvement from baseline at week 24 in Nasal Polyp Score (NPS) and weekly average Nasal Congestion Score (NCS) as compared to placebo. In POLYP 1 and POLYP 2, the mean changes in NPS from baseline to week 24 for omalizumab compared to placebo were -1.08 vs 0.06 (p < 0.0001) and -0.9 vs -0.31 (p = 0.014), respectively, and mean changes in NCS from baseline were -0.89 vs -0.35 (p = 0.0004) and -0.7 vs -0.2 (p = 0.0017), respectively. Adverse events were similar between treatment groups.

IgE-mediated food allergy

• Omalizumab was FDA-approved for IgE-mediated food allergy in adults and children ≥ 1 year of age based on the results of a randomized, multicenter, double-blind, placebo-controlled trial in 180 patients with allergies to peanut and at least 2 other foods, including milk, egg, wheat, cashew, hazelnut, or walnut. Patients with a history of severe anaphylaxis (defined as neurological compromise or requiring intubation) were excluded from the study. Results demonstrated a significantly higher response with omalizumab vs placebo (67% vs 7%, respectively; p < 0.001) for the primary outcome (ie, the percentage of patients able to tolerate a single dose of ≥ 600 mg of peanut protein without experiencing dose-limiting symptoms [ie, moderate to severe skin, respiratory, or gastrointestinal symptoms]) (Wood et al 2024).

Fasenra (benralizumab)

Asthma

• The safety and efficacy of benralizumab were evaluated in a 52-week dose-ranging exacerbation trial, 4 confirmatory trials, and a 12-week lung function trial (*Bleecker et al 2016, Castro et al 2014, Ferguson et al 2017, Fitzgerald et al 2016, Nair et al 2017, Harrison et al 2021*).



- o In a randomized, controlled, double-blind, dose-ranging Phase 2b study, 324 adults with uncontrolled eosinophilic asthma were randomly assigned to placebo (n = 80), benralizumab 2 mg (n = 81), benralizumab 20 mg (n = 81), or benralizumab 100 mg (n = 82) and 285 adults with non-eosinophilic asthma were randomized to benralizumab 100 mg (n = 142) or placebo (n = 143) (*Castro et al 2014*). Treatments were given as 2 SC injections every 4 weeks for the first 3 doses, then every 8 weeks, for 1 year. Among adults with eosinophilic asthma, benralizumab 100 mg reduced exacerbation rates as compared to placebo (0.34 vs 0.57; rate reduction, 41%; 80% CI, 11 to 60; p = 0.096). A significant reduction in exacerbation rates was not seen with benralizumab 2 mg or 20 mg as compared to placebo in these patients. In patients with a baseline blood eosinophil count of ≥ 300 cells/µL, exacerbation rates were lower than in the placebo group for the benralizumab 20 mg (0.30 vs 0.68; rate reduction, 57%; 80% CI, 33 to 72; p = 0.015) and 100 mg (0.38 vs 0.68; rate reduction, 43%; 80% CI, 18 to 60; p = 0.049) groups.
- o SIROCCO was a randomized, multicenter, double-blind, placebo-controlled, 48-week, Phase 3 trial (N = 1205) involving patients with severe asthma with eosinophilia uncontrolled with high-dose ICS and LABAs (*Bleecker et al 2016*). Enrolled patients were randomly assigned to placebo (n = 407), benralizumab 30 mg every 4 weeks (n = 400), or benralizumab 30 mg every 8 weeks (n = 398). Compared with placebo, benralizumab reduced the annual asthma exacerbation rate over 48 weeks when administered every 4 weeks (RR, 0.55; 95% CI, 0.42 to 0.71; p < 0.0001) or every 8 weeks (RR, 0.49; 95% CI, 0.37 to 0.64; p < 0.0001). Both doses of benralizumab also significantly improved pre-bronchodilator FEV₁ in patients at week 48 vs placebo. Asthma symptoms were improved with benralizumab every 8 weeks, but not every 4 weeks, as compared to placebo.
- o CALIMA was a randomized, multicenter, double-blind, placebo-controlled, 56-week, Phase 3 trial that assessed benralizumab as add-on therapy (to high-dose ICS and LABA) for patients with severe, uncontrolled asthma and elevated blood eosinophil counts (*Fitzgerald et al 2016*). A total of 1306 patients were randomly assigned to benralizumab 30 mg every 4 weeks (n = 425), benralizumab 30 mg every 8 weeks (n = 441) or placebo (n = 440). When compared to placebo, significant reductions in annual exacerbation rates were seen with benralizumab every 4 weeks (RR, 0.64; 95% CI, 0.49 to 0.85; p = 0.0018) and every 8 weeks (RR, 0.72; 95% CI, 0.54 to 0.95; p = 0.0188). Benralizumab was also associated with significantly improved pre-bronchodilator FEV₁ and total asthma symptom scores vs placebo.
- o Patients enrolled in the SIROCCO and CALIMA trials who completed treatment were eligible for the BORA Phase 3 safety extension trial. This was a randomized, double-blind study that randomized patients to receive benralizumab 30 mg every 4 or 8 weeks. Adult patients received treatment for 52 weeks and adolescents (12 to 17 years of age) were treated for 108 weeks. A total of 1576 patients were included in the full analysis set with safety assessed at 56 weeks. Treatment discontinuation due to any adverse event occurred in approximately 2% of patients in each group. The most common adverse events were viral upper respiratory tract infections and worsening asthma. Serious adverse events included worsening asthma (3% in the every-8-week dosing group and 4% in the every-4-week dosing group), pneumonia (< 1% in both groups) and pneumonia caused by bacterial infection (< 1% in the every-4-week dosing group and 1% in the every-8-week dosing group). New malignancy occurred in 12 (1%) of the 1576 patients. Hypersensitivity related to treatment occurred in 3 patients. For the secondary efficacy outcome, patients with elevated blood eosinophil levels had similar exacerbation rates to that observed during the first year of treatment in the SIROCCO and CALIMA trials (*Busse et al 2019a*).
- BISE was a randomized, multicenter, double-blind, placebo-controlled, 12-week, Phase 3 trial that evaluated benralizumab therapy for patients with mild to moderate persistent asthma (*Ferguson et al 2017*). Patients (N = 211) had been receiving either low- to medium-dose ICS or low-dose ICS plus LABA therapy and were randomized to benralizumab 30 mg every 4 weeks (n = 106) or placebo (n = 105). Benralizumab resulted in an 80 mL (95% CI, 0 to 150; p = 0.04) greater improvement in pre-bronchodilator FEV₁ after 12 weeks as compared to placebo. Despite this improvement, this lung function result does not warrant the use of benralizumab in mild to moderate asthma because it did not reach the minimum clinically important improvement of 10%.
- ZONDA was a randomized, multicenter, double-blind, placebo-controlled, 28-week trial that primarily assessed whether benralizumab was effective as an oral glucocorticoid-sparing therapy in patients on oral steroids to manage severe asthma associated with eosinophilia (*Nair et al 2017*). Of the enrolled patients, 220 were randomly assigned to benralizumab 30 mg every 4 weeks (n = 72), benralizumab 30 mg every 8 weeks (n = 73), or placebo (n = 75). Results revealed that the 2 benralizumab dosing regimens significantly reduced the median final oral glucocorticoid doses from baseline by 75% vs a 25% reduction seen with placebo (p < 0.001 for both comparisons). Additionally, benralizumab administered every 4 weeks resulted in an annual exacerbation rate that was 55% lower than that seen with placebo (marginal rate, 0.83 vs 1.83; p = 0.003) and benralizumab administered every 8 weeks resulted in a 70% lower rate than that seen with placebo (marginal rate, 0.54 to 1.83; p < 0.001).

Data as of October 18, 2024 RLP/ALS

Page 9 of 31



- ANDHI was a randomized, multicenter, double-blind, placebo-controlled, Phase 3b study that assessed the effect of benralizumab in adults with severe eosinophilic asthma and at least 2 exacerbations in the previous year despite use of medium- to high-dose ICS plus another asthma controller (*Harrison et al 2021*). Patients were randomized to receive benralizumab 30 mg every 8 weeks (with the first 3 doses given 4 weeks apart; n = 427) or placebo (n = 229). Benralizumab significantly reduced annualized asthma exacerbation rate over the 24-week treatment period compared to placebo (RR, 0.51; 95% CI, 0.39 to 0.65; p < 0.0001).
- The safety of benralizumab in children 6 to 11 years of age with severe eosinophilic asthma was demonstrated in a 48-week, open-label, pharmacokinetic/pharmacodynamic study. A total of 28 children received benralizumab 10 mg (for those weighing < 35 kg) or 30 mg (for those weighing ≥ 35 kg) administered every 4 weeks for the first 3 doses, then every 8 weeks thereafter. Authors concluded that the pharmacokinetics, decrease in blood eosinophil levels, and safety profile in children 6 to 11 years of age were similar to findings in adolescents and adults (*Wedner et al 2024*).
- Fitzgerald et al conducted a study exploring the efficacy of benralizumab for patients with different baseline blood eosinophil thresholds and exacerbation histories. This study was a pooled analysis (N = 2295 patients) of the results from the SIROCCO and CALIMA Phase 3 studies. The annual exacerbation rate among patients with baseline blood eosinophil counts of ≥ 0 cells/µL was 1.16 (95% CI, 1.05 to 1.28) in patients who received placebo vs 0.75 (95% CI, 0.66 to 0.84) in patients who received benralizumab every 8 weeks (RR, 0.64; 95% CI, 0.55 to 0.75; p < 0.0001). In patients who received benralizumab every 4 weeks who had eosinophil counts of ≥ 0 cells/µL, the annual exacerbation rate was 0.73 (95% CI, 0.65 to 0.82); RR vs placebo was 0.63 (95% CI, 0.54 to 0.74; p < 0.0001). The extent to which exacerbation rates were reduced increased with increasing blood eosinophil thresholds and with greater exacerbation history in patients in the every-4-week and every-8-week benralizumab groups. Greater improvements in the annual exacerbation rate were seen with benralizumab compared with placebo for patients with a combination of high blood eosinophil thresholds and a history of more frequent exacerbations (*FitzGerald et al 2018*).
- The Phase 4 SHAMAL trial evaluated the reduction in daily maintenance ICS use with benralizumab in patients with severe eosinophilic asthma. Patients were randomized 3:1 to taper their high-dose ICS to a medium-dose, low-dose, and as-needed dose (collectively referred to as the reduction group; n = 168) or continue their ICS/formoterol therapy (reference group; n = 43) for 32 weeks, with maintenance follow up at 48 weeks. The primary endpoint was the proportion of patients an ICS/formoterol dose reduction by week 32. Results demonstrated that by the end of week 32, 92% of patients were able to reduce their ICS/formoterol dose: 61% to as-needed only, 17% to low-dose, and 15% to medium-dose. Of these patients, 96% of patients were able to maintain the dose that was used at week 32 to week 48. Throughout the entire study period, there were 16 asthma exacerbations in the reduction group and 5 in the refence group (rate ratio, 1.05; 95% CI, 0.41 to 2.68) (*Jackson et al 2024*).
- A 2017 meta-analysis evaluated the therapeutic efficacy and safety of benralizumab in patients with eosinophilic asthma. A total of 7 articles (n = 2321) met the inclusion criteria of the systematic review. The pooled analysis found that benralizumab significantly reduced exacerbations (RR, 0.63; 95% CI, 0.52 to 0.76; p < 0.00001) compared to placebo. There was no statistical trend for improvement in FEV₁ or asthma control indices such as Quality of Life Assessment (AQLQ) and Asthma Control Questionnaire (ACQ) score in benralizumab-treated patients. In addition, safety data indicated that benralizumab administration did not result in an increased incidence of adverse events and was well tolerated (RR, 1.00; 95% CI, 0.95 to 1.05; p = 0.96) (*Tien et al 2017*).

EPGA

• MANDARA was a Phase 3, multicenter, double-blind, active-controlled noninferiority trial comparing the efficacy of benralizumab vs mepolizumab in 140 adult patients with relapsing or refractory EGPA. For the primary endpoint, the adjusted proportion of patients with remission at weeks 36 and 48 was 59% in patients treated with benralizumab vs 56% with mepolizumab (difference, 3%; 95% CI, -13 to 18; p = 0.73), demonstrating the noninferiority of benralizumab to mepolizumab. For secondary endpoints, the accrued duration of remission and time to first relapse were similar between agents, and complete withdrawal of corticosteroids during weeks 48 to 52 was achieved in 41% of patients taking benralizumab and 26% of patients taking mepolizumab (*Wechsler et al 2024*).

Nucala (mepolizumab)

Asthma

• The safety and efficacy of mepolizumab were evaluated in 3 double-blind, placebo-controlled, multicenter RCTs in adolescent and adult patients with severe refractory asthma and signs of eosinophilic inflammation. Generally, patients were eligible for enrollment in the trials if they had eosinophils ≥ 150 cells/µL in the peripheral blood at screening or ≥



300 cells/µL at some time during the previous year. Patients also were required to be on a high-dose ICS as well as another controller medication (*Bel et al 2014, Ortega et al 2014, Pavord et al 2012*).

- DREAM was a dose-ranging, 52-week, Phase 2b/3 study (N = 621) that compared annual asthma exacerbation frequency and improvements in clinical symptoms between patients receiving 75 mg, 250 mg, and 750 mg intravenous (IV) mepolizumab and placebo. Mepolizumab decreased clinically significant exacerbation rates across all doses compared to placebo, at a rate of 2.40 per patient per year in the placebo group, 1.24 in the 75 mg mepolizumab group (p < 0.0001), 1.46 in the 250 mg mepolizumab group (p = 0.0005), and 1.15 in the 750 mg mepolizumab group (p < 0.0001). No significant improvements were found for secondary clinical symptom measures, which included change in pre-bronchodilator FEV₁ from baseline, or change in ACQ scores (*Pavord et al 2012*).
- MENSA was a 32-week Phase 3 trial (N = 576) that compared annual asthma exacerbation frequency and improvements in clinical symptoms between patients receiving SC and IV mepolizumab vs placebo. Patients were selected on the basis of frequent exacerbations, treatment with high doses of ICS, and a defined blood eosinophil count. Both SC and IV mepolizumab significantly decreased clinically significant exacerbation rates compared to placebo, at a rate of 1.74 per patient per year in the placebo group, 0.93 per patient per year in the IV mepolizumab group (p < 0.001), and 0.83 per patient per year in the SC mepolizumab group (p < 0.001). In both the SC and IV mepolizumab-treated groups, the ACQ scores met thresholds for minimal clinically important change and were significantly improved compared to placebo (p < 0.001) (Ortega et al 2014).
- SIRIUS was a 24-week Phase 3 trial (N = 135) that compared oral corticosteroid requirements between patients receiving SC mepolizumab and placebo. The likelihood of a reduction in the daily oral glucocorticoid dose was 2.39 times higher in the mepolizumab group (95% CI, 1.25 to 4.56; p = 0.008). The median reduction in daily oral corticosteroid dose was 50% (95% CI, 20 to 75) in the mepolizumab-treated group compared to 0% (95% CI, -20 to 33.3) in the placebo group (p = 0.007) (Bel et al 2014).
- A post-hoc analysis of data from DREAM and MENSA was conducted to assess the relationship between baseline blood eosinophil counts and efficacy of mepolizumab. Of 1192 patients, 846 received mepolizumab and 346 received placebo. The overall rate of mean exacerbations per person per year was reduced from 1.91 with placebo to 1.01 with mepolizumab (47% reduction; RR, 0.53; 95% CI, 0.44 to 0.62; p < 0.0001). The exacerbation rate reduction with mepolizumab vs placebo increased progressively from 52% (RR, 0.48; 95% CI, 0.39 to 0.58) in patients with a baseline blood eosinophil count of ≥ 150 cells/µL to 70% (RR, 0.30; 95% CI, 0.23 to 0.40) in patients with a baseline count of ≥ 500 cells/µL. At a baseline count < 150 cells/µL, predicted efficacy of mepolizumab was reduced. The authors concluded that the use of a baseline blood eosinophil count will help to select patients who are likely to achieve important asthma outcomes with mepolizumab (*Ortega et al 2016*).
- COSMOS was a 52-week, open-label extension study in patients who received mepolizumab or placebo in MENSA or SIRIUS. Patients received SC mepolizumab regardless of prior treatment allocation and continued to receive appropriate standard-of-care asthma therapy throughout. In total, 558 (86%; previous mepolizumab: 358; previous placebo: 200) and 94 (14%; previous mepolizumab: 58; previous placebo: 36) patients experienced on-treatment adverse events and serious adverse events, respectively. No fatal adverse events or instances of mepolizumab-related anaphylaxis were reported. Mepolizumab treatment was shown to exert a durable response, with patients who previously received mepolizumab in MENSA or SIRIUS maintaining reductions in exacerbation rate and oral corticosteroid dosing throughout COSMOS. Patients who previously received placebo in MENSA or SIRIUS demonstrated improvements in these endpoints following treatment with mepolizumab (*Lugogo et al 2016*).
- COLUMBA was an open-label extension study of patients enrolled in the DREAM trial who received mepolizumab 100 mg every 4 weeks plus standard of care until criterion for discontinuation was met (safety profile not positive for patient, patient withdrawn by their physician, patient withdrew consent, or drug became commercially available). There were 347 patients enrolled who received treatment for a mean of 3.5 years. Adverse events most frequently reported were respiratory tract infection (67%), headache (29%), bronchitis (21%), and worsening asthma (27%). Although 6 deaths occurred, none were considered related to study treatment. No anaphylaxis reactions were reported. Malignancy was reported in 2% (n = 6) of patients. The exacerbation rate for patients on treatment for 156 weeks or longer was 0.74 events/year, which was a 56% reduction from the off-treatment period between the 2 studies (*Khatri et al 2018*).
- A pharmacokinetic study of SC mepolizumab 40 and 100 mg (for bodyweight < 40 and ≥ 40 kg, respectively) every 4 weeks in 36 children 6 to 11 years of age with severe eosinophilic asthma and ≥ 2 exacerbations in the prior year demonstrated reductions in blood eosinophil count by 89% at week 12 (*Gupta et al 2019a*). A 52-week safety extension study of 30 children demonstrated no safety or immunogenicity concerns, as well as improvements in blood eosinophil



- counts and asthma control from baseline (*Gupta et al 2019b*). Findings of these studies supported FDA approval of mepolizumab for the treatment of severe eosinophilic asthma in children (*GlaxoSmithKline 2019*).
- A systematic review and meta-analysis compared hospitalization or hospitalization and/or emergency room visit rates in patients with severe eosinophilic asthma treated with mepolizumab or placebo in addition to standard of care for ≥ 24 weeks. Four studies (N = 1388) were eligible for inclusion. Mepolizumab significantly reduced the rate of exacerbations requiring hospitalization (relative rate, 0.49; 95% CI, 0.30 to 0.80; p = 0.004) and hospitalization/emergency room visit (relative rate, 0.49; 95% CI, 0.33 to 0.73; p < 0.001) vs placebo. Significant reductions of 45% and 38% were also observed for the proportion of patients experiencing 1 or more hospitalization and hospitalization and/or emergency room visit, respectively (*Yancey et al 2017*). *EGPA*
- A 52-week, randomized, placebo-controlled, double-blind, parallel-group, multicenter, Phase 3 trial assessed the efficacy and safety of mepolizumab as add-on therapy (to glucocorticoid treatment, with or without immunosuppressive therapy) for patients with relapsing or refractory EGPA (*Wechsler et al 2017*). A total of 136 patients were randomly assigned to mepolizumab 300 mg every 4 weeks (n = 68) or placebo (n = 68). Results demonstrated the following for the mepolizumab and placebo groups, respectively:
 - Percentage of patients with ≥ 24 weeks of accrued remission: 28% vs 3% (OR, 5.91; 95% CI, 2.68 to 13.03; p < 0.001).
 - Percentage of patients in remission at both week 36 and week 48: 32% vs 3% (OR, 16.74; 95% CI, 3.61 to 77.56; p < 0.001).
 - Annualized relapse rate: 1.14 vs 2.27 (RR, 0.50; 95% CI, 0.36 to 0.70; p < 0.001).
 - Percentage of patients able to reduce their daily dose of concomitant prednisone or prednisolone to 4 mg or less (average of weeks 48 to 52): 44% vs 7% (OR, 0.20; 95% CI, 0.09 to 0.41; p < 0.001).

HES

- A 32-week, double-blind, placebo-controlled, multicenter, RCT evaluated the efficacy and safety of mepolizumab in patients ≥ 12 years with HES (without an identifiable nonhematologic secondary cause) for at least 6 months (*Nucala prescribing information 2023, Roufosse et al 2020*). A total of 108 patients were assigned to mepolizumab 300 mg every 4 weeks (n = 54) or placebo (n = 54). Results demonstrated the following for mepolizumab and placebo groups, respectively:
 - Proportion of patients with ≥ 1 HES flare or withdrew from the trial: 28% vs 56% (OR, 0.28; 95% CI, 0.12 to 0.64; p = 0.002)
 - Adjusted mean rate of HES flares per year: 0.50 vs 1.46 (rate ratio, 0.34; 95% CI, 0.19 to 0.63; p < 0.001)
 - Probability of first HES flare by week 32: 26.3% vs 52.7% (hazard ratio, 0.34; 95% CI, 0.18 to 0.67; p = 0.002)

CRSwNP

• SYNAPSE, a 52-week, double-blind, randomized, placebo-controlled, multicenter trial, evaluated the efficacy and safety of mepolizumab in adult patients with CRSwNP. A total of 407 patients with recurrent, refractory, severe, bilateral nasal polyp symptoms despite standard care treatment were enrolled. Patients were randomly assigned to receive 100 mg mepolizumab (n = 206) or placebo (n = 201) every 4 weeks. The total endoscopic nasal polyp score significantly improved from baseline with mepolizumab vs placebo (adjusted difference in medians, -0.73; 95% CI, -1.11 to -0.34; p < 0.0001). The nasal obstruction visual analogue score (VAS) score during weeks 49 to 52 also significantly improved (adjusted difference in medians, -3.14; 95% CI, -4.09 to -2.18; p < 0.0001). Adverse events related to study treatment occurred in 15% of the mepolizumab group and 9% of the placebo group (*Han et al 2021*).

Cinqair (reslizumab)

Asthma

- The safety and efficacy of reslizumab were evaluated in 4 double-blind, placebo-controlled, multicenter RCTs. In all 4 studies, patients were required to be on at least a medium-dose ICS with or without additional controller medications (*Bjermer et al 2016, Castro et al 2015, Corren et al 2016*).
 - o Studies 3082 and 3083 were 52-week studies (N = 953) in patients with asthma who were required to have a blood eosinophil count ≥ 400 cells/μL, and ≥ 1 asthma exacerbation requiring systemic corticosteroid use over the past 12 months. These studies compared the asthma exacerbation rate and improvements in clinical symptoms between patients receiving reslizumab 3 mg/kg IV administered once every 4 weeks and placebo. In both studies, patients receiving reslizumab had a significant reduction in the frequency of asthma exacerbations (Study 3082: RR, 0.50; 95% CI, 0.37 to 0.67; Study 3083: RR, 0.41; 95% CI, 0.28 to 0.59; both p < 0.0001) compared with those receiving



- placebo. In both trials, an improvement in FEV₁ was evident for reslizumab vs placebo by the first on-treatment assessment at week 4, which was sustained through week 52. Reslizumab treatment also resulted in significant improvements compared with placebo in AQLQ total score, ACQ-7 score, and Asthma Symptom Utility Index (ASUI) score (*Castro et al 2015*).
- o Study 3081 was a 16-week study (N = 315) in patients who were required to have a blood eosinophil count ≥ 400 cells/μL. The study compared the change from baseline in FEV₁ and improvements in clinical symptoms between reslizumab 3 mg/kg vs placebo. Reslizumab 3 mg/kg significantly improved FEV₁ (difference vs placebo: 160 mL; 95% CI, 60 to 259; p = 0.0018). Reslizumab also statistically significantly improved ACQ and AQLQ; however, the minimally important difference was only reached for AQLQ (*Bjermer et al 2016*).
- Study 3084 was a 16-week study in 496 patients unselected for baseline blood eosinophil levels (approximately 80% of patients had a screening blood eosinophil count < 400 cells/µL). Patients were not allowed to be on maintenance oral corticosteroids. The study compared the change from baseline in FEV₁ and improvements in clinical symptoms between reslizumab 3 mg/kg vs placebo. In the subgroup of patients with baseline eosinophils < 400 cells/µL, patients treated with reslizumab showed no significant improvement in FEV₁ compared with placebo. In the subgroup with eosinophils ≥ 400 cells/µL, however, treatment with reslizumab was associated with much larger improvements in FEV₁, ACQ, and rescue SABA use compared with placebo (Corren et al 2016).</p>
- An open-label, non-randomized extension study of these placebo-controlled trials continued treatment of patients with eosinophilic asthma with reslizumab 3 mg/kg every 4 weeks for up to 24 months to assess the drug's safety. Patients initially randomized to placebo also received active drug. A total of 1051 patients were included (n = 480 reslizumab-naive and n = 571 reslizumab-treated patients). Of these, 740 patients received treatment for 12 months or longer, and 249 patients received treatment for 24 months or longer. Worsening asthma and nasopharyngitis were the most common adverse events. Serious adverse events occurred in 7% of patients and treatment discontinuation due to an adverse event occurred in 2% of patients. No deaths (n = 3) were related to treatment. Malignancy occurred in 15 (1%) patients. Patients previously on reslizumab maintained asthma control and those naive to treatment demonstrated improvement in asthma control and lung function. The authors concluded that reslizumab maintained asthma control for up to 2 years in patients with moderate-to-severe eosinophilic asthma (*Murphy et al 2017*).
- A post hoc analysis of pooled data from 2 randomized, placebo-controlled trials in patients with inadequately
 controlled asthma and elevated blood eosinophil levels compared the efficacy of reslizumab vs placebo among the
 subgroup of patients with oral corticosteroid-dependent asthma. Reslizumab was associated with a significant
 improvement in overall asthma exacerbations (RR, 0.32; 95% CI, 0.18 to 0.55) (Nair et al 2020).
- A 2017 meta-analysis of 5 RCTs comparing reslizumab to placebo (N = 1366) revealed improvements in exacerbations, FEV₁, and ACQ score with reslizumab. Asthma exacerbations occurred less frequently in reslizumab-treated patients vs placebo (OR, 0.46; 95% CI, 0.35 to 0.59; p < 0.00001). FEV₁ also improved with reslizumab compared to placebo (mean difference, 0.16; 95% CI, 0.10 to 0.23; p < 0.00001). Finally, ACQ score improved with reslizumab compared to placebo (mean difference, -0.26; 95% CI, -0.36 to -0.16; p < 0.00001). All studies included in the meta-analysis were of limited duration of 15 or 16 weeks (*Li et al 2017*).
- A 2019 meta-analysis of 6 RCTs (5 placebo-controlled trials and 1 open-label extension) evaluated the safety of reslizumab (n = 1028) with placebo (n = 730) in adults with uncontrolled asthma. Compared with placebo, reslizumab was associated with lower proportions of patients with ≥ 1 adverse event (67% vs 81%; RR, 0.83; 95% CI, 0.79 to 0.89) and with ≥ 1 serious adverse event (7% vs 10%; RR, 0.65; 95% CI, 0.48 to 0.89) (*Virchow et al 2020*).

Dupixent (dupilumab)

Asthma

• A 52-week randomized, double-blind, placebo-controlled study evaluated the efficacy of dupilumab in patients ≥ 12 years of age with moderate-to-severe asthma uncontrolled with a medium-to-high dose ICS plus up to 2 additional controller medications (LABA and/or LTRA). Approximately 1900 patients were randomized to add-on therapy with dupilumab (200 mg or 300 mg every 2 weeks) or matching placebo for 52 weeks. The annual rate of severe exacerbations during the 52-week study period and the absolute change in FEV₁ at week 12 were the primary endpoints. A subgroup analysis of patients with an elevated blood eosinophil count of 300 cells/µL was also planned. Both doses of dupilumab resulted in a reduced rate (46% and 47.7%, respectively) of asthma exacerbation compared to placebo (p < 0.0001). Patients with higher blood eosinophil levels had greater than 65% reduction in the annual exacerbation rate compared to placebo. The change in FEV₁ was also significantly improved with both doses of dupilumab compared to placebo and even more pronounced in patients with elevated blood eosinophil levels. Adverse

Data as of October 18, 2024 RLP/ALS

Page 13 of 31

This information is considered confidential and proprietary to Optum Rx. It is intended for internal use only and should be disseminated only to authorized recipients. The contents of the therapeutic class overviews on this website ("Content") are for informational purposes only. The Content is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Patients should always seek the advice of a physician or other qualified health provider with any questions regarding a medical condition. Clinicians should refer to the full prescribing information and published resources when making medical decisions.



events more common with dupilumab compared to placebo included injection-site reactions and eosinophilia (*Castro et al 2018*). In the subgroup of patients with baseline evidence of allergic asthma, dupilumab 200 mg and 300 mg every 2 weeks reduced severe asthma exacerbation rates by 36.9% and 45.5%, respectively (both p < 0.01) and improved FEV₁ at week 12 by 0.13 and 0.16 L, respectively (both p < 0.001) (*Corren et al 2020*).

- A total of 210 patients ≥ 12 years of age with oral glucocorticoid-dependent severe asthma were randomized to receive add-on therapy with dupilumab 300 mg or placebo every other week for 24 weeks. Glucocorticoid doses were tapered from week 4 to week 20 and then maintained at a stable dose for 4 weeks. The percentage in glucocorticoid dose reduction at week 24 was the primary outcome. The percentage change in glucocorticoid dose was -70.1% with dupilumab vs -41.9% with placebo (p < 0.001). A dose reduction of ≥ 50% was observed in 80% of dupilumab-treated patients compared to 50% of placebo patients. Almost 70% of patients in the dupilumab group achieved a glucocorticoid dose of less than 5 mg compared to 33% in patients who received placebo. The exacerbation rate was 59% lower with dupilumab compared to placebo. Injection site reactions and eosinophilia were more common with dupilumab compared to placebo (*Rabe et al 2018*).
- A meta-analysis and systematic review of 4 RCTs evaluated the safety and efficacy of dupilumab compared to placebo in approximately 3000 patients with uncontrolled asthma. The rate of severe asthma exacerbation was significantly reduced with dupilumab compared to placebo (RR, 0.44; 95% CI, 0.35 to 0.055; p < 0.01). FEV₁ was also significantly increased with dupilumab with a mean difference of 0.14 L (95% CI, 0.12 to 0.17; p < 0.01). With respect to adverse events, the risk of injection site reactions was higher with dupilumab compared to placebo (RR, 1.91; 95% CI, 1.14 to 2.59; p < 0.01) (Zayed et al 2018).
- A randomized, double-blind, placebo-controlled trial (Liberty Asthma VOYAGER) evaluated the safety and efficacy of dupilumab in pediatric patients 6 to 11 years of age with moderate-to-severe asthma on a medium- or high-dose ICS and a second controller medication or high-dose ICS alone. In the 52-week trial, patients were randomized to receive dupilumab (n = 273) or placebo (n = 135) every other week. Dosing was dependent on body weight: patients ≤ 30 kg received 100 mg every 2 weeks and those > 30 kg received 200 mg every 2 weeks. The annualized rate of severe asthma exacerbation events (the primary endpoint) during the study period was 0.31 for dupilumab and 0.75 for placebo (RR reduction, 59.5%; p < 0.001). Among patients with a baseline eosinophil count of ≥ 300 cells/µL, the annualized rate of asthma exacerbations was 0.24 with dupilumab and 0.67 with placebo (RR reduction, 64.7%; p < 0.001). Mean change from baseline in percent predicted FEV₁ was also significantly improved in the dupilumab group compared to placebo (least-squares mean difference vs placebo, 5.32; 95% CI, 1.76 to 8.88). The efficacy of dupilumab 300 mg every 4 weeks in patients 6 to 11 years of age with body weight 15 to < 30 kg was extrapolated from efficacy of a clinical trial of 100 mg every 2 weeks with support from population pharmacokinetic analyses. The risks of any adverse event, serious adverse events, and adverse events leading to treatment discontinuation were not significantly different between dupilumab and placebo with the addition of helminth infections (*Dupixent prescribing information 2024, Bacharier et al 2021*).

COPD

- Two identically designed, 52-week Phase 3, double-blind, placebo-controlled, randomized controlled trials (BOREAS and NOTUS) evaluated the efficacy of dupilumab in adult patients 40 to 80 years of age with inadequately controlled moderate-to-severe COPD. Inclusion criteria were FEV₁/forced vital capacity [FVC] ratio < 0.70 and post-bronchodilator FEV₁ % predicted > 30% and ≤ 70%, an elevated exacerbation risk (defined as ≥ 2 moderate exacerbations or ≥ 1 severe exacerbations within the year before screening) despite the use of standard triple therapy (LAMA/LABA/ICS), and a blood eosinophil count ≥ 300 cells/µL. A total of 98.2% of enrolled patients were receiving background triple therapy; double therapy (LAMA/LABA alone) was allowed if ICS was contraindicated. Patients were randomized 1:1 to receive dupilumab 300 mg via SC injection as add-on maintenance therapy or placebo every 2 weeks (*Bhatt et al 2023*, *Bhatt et al 2024*).
 - The primary end point, the annualized rate of moderate or severe exacerbations of COPD over the 52-week treatment period, demonstrated significant improvement with dupilumab vs placebo in both studies:
 - BOREAS: 0.78 events/year vs 1.10 events/year (rate ratio, 0.70; 95% CI, 0.58 to 0.86; p < 0.001).
 - NOTUS: 0.86 events/year vs 1.30 events/year (rate ratio, 0.66; 95% CI, 0.54 to 0.82; p < 0.001).

CRSwNP

 Two randomized, double-blind, placebo-controlled trials evaluated dupilumab added to standard of care in adults with severe bilateral CRSwNP (*Bachert et al 2019*). Patients had experienced symptoms despite receiving intranasal corticosteroids, systemic corticosteroids in the previous 2 years, or sinonasal surgery. In both the 24- and 52-week trials, dupilumab resulted in significant improvement as measured by least-squares mean differences in NPS (-2.06; 95%



CI, -2.43 to -1.69 and -1.80; 95% CI, -2.10 to -1.51, respectively), nasal congestion or obstruction score (-0.89; 95% CI, -1.07 to -0.71 and -0.87; 95% CI, -1.03 to -0.71, respectively), and Lund-Mackay computed tomography score (-7.44; 95% CI, -8.35 to -6.53 and -5.13; 95% CI, -5.80 to -4.46, respectively). The risks of any adverse event, serious adverse events, and adverse events leading to treatment discontinuation were not significantly different between dupilumab and placebo.

EoE

- A 2-part placebo-controlled clinical trial with two 24-week treatment periods evaluated the efficacy of weekly and twice monthly SC injections of dupilumab 300 mg in patients ≥ 12 years of age and weighing ≥ 40 kg with EoE. The coprimary endpoints in parts A and B of the study were 1) the proportion of patients achieving histological remission (defined as peak esophageal intraepithelial eosinophil count of ≤ 6 eosinophils/high-power field [hpf]) and 2) the absolute change in the patient-reported Dysphagia Symptom Questionnaire (DSQ) score (range, 0 to 84). Results for weekly dupilumab administration (FDA-approved dose for EoE in patients ≥ 12 years of age) are as follows (*Dellon et al 2022*):
 - o In part A (dupilumab, n = 42; placebo, n = 39), histologic remission was achieved in 60% of patients who received weekly dupilumab vs 5% who received placebo (difference, 55 percentage points; 95% CI, 40 to 71). The absolute reduction from baseline in DSQ score was also significantly higher with dupilumab vs placebo (21.9 vs 9.6; difference, -12.32; 95% CI, -19.11 to -5.54).
 - o In part B (dupilumab, n = 80; placebo, n = 79), histologic remission was achieved in 59% of patients who received weekly dupilumab vs 6% who received placebo (difference, 54 percentage points; 95% CI, 41 to 66). The absolute reduction from baseline in DSQ score was also significantly higher with dupilumab vs placebo (23.78 vs 13.86; difference, -9.92; 95% CI, -14.81 to -5.02).
 - The histological, symptomatic, endoscopic, and molecular features of EoE showed sustained or continued improvement up to week 52 with weekly dupilumab treatment (*Rothenberg et al 2023*).
- A 12-week Phase 2 study compared weekly injections of dupilumab 300 mg (n = 23) or placebo (n = 24) in adults with EoE (*Hirano et al 2020b*). The primary endpoint was change from baseline to week 10 in Straumann Dysphagia Instrument (SDI) patient-reported outcome score. At the beginning of the study, the mean SDI score was 6.4. After 10 weeks, SDI scores were reduced by a mean value of 3.0 in the dupilumab group compared with a mean reduction of 1.3 in the placebo group (p = 0.0304).
- A 2-part placebo-controlled clinical trial evaluated the efficacy of dupilumab in children 1 to 11 years of age and weighing ≥ 15 kg with EoE (*Dupixent prescribing information 2024*).
 - Part A evaluated dupilumab 200 mg every 2 weeks (if weight ≥ 15 to < 30 kg) or 300 mg every 2 weeks (if weight ≥ 30 to < 60 kg), or placebo, in 61 children during a 16-week treatment period. The primary outcome of histological remission, defined as a decrease in esophageal eosinophil count to ≤ 6 eosinophils/hpf, was achieved by 65.6% of children who received dupilumab vs. 3.4% of children who received placebo (difference, 62%; 95% CI, 44 to 79.95).
 - In Part B, histological remission was achieved at 52 weeks in 17 of 32 children treated with dupilumab in Parts A and B and 8 of 15 children treated with placebo in Part A and dupilumab in Part B.

Tezspire (tezepelumab-ekko)

Severe asthma

- A 52-week, Phase 3, randomized, double-blind, placebo-controlled study (NAVIGATOR) evaluated the efficacy of tezepelumab-ekko in 1061 patients ≥ 12 years of age with severe asthma uncontrolled with a medium-to-high dose ICS and ≥ 1 controller medication. Patients were randomized 1:1 to receive tezepelumab-ekko (210 mg SC injection every 4 weeks) or matching placebo. The annual rate of severe exacerbations during the 52-week study period was the primary outcome, with a subgroup analysis of patients with a baseline blood eosinophil count of < 300 cells/µL. Secondary endpoints included change in FEV₁ from baseline and changes in quality of life and asthma severity questionnaires (ACQ, AQLQ, and Asthma Symptom Diary [ASD]). Tezepelumab-ekko was associated with an annualized asthma exacerbation rate of 0.93 vs 2.10 with placebo (rate ratio, 0.44; p < 0.001). For a subgroup of patients with baseline eosinophil counts < 300 cells/µL, the annual rate of asthma exacerbations was 1.02 with tezepelumab-ekko vs 1.73 with placebo (rate ratio, 0.59; p < 0.001). Change from baseline in FEV₁ was 0.23 L with tezepelumab-ekko and 0.09 L with placebo (p < 0.001). Changes in AQLQ and asthma severity scores were also significant in favor of tezepelumab-ekko (Menzies-Gow et al 2021).
 - In a long-term extension study (DESTINATION), for patent initially enrolled in NAVIGATOR, the annualized asthma exacerbation rate ratio over 104 weeks was 0.42 (95% CI, 0.35 to 0.51) in favor of tezepelumab vs placebo (*Menzies-Gow et al 2023*).



- The PATHWAY trial was a 52-week, Phase 2b, randomized, double-blind, placebo-controlled, dose-ranging trial which evaluated the efficacy of tezepelumab-ekko in patients 18 to 75 years of age with asthma uncontrolled with medium-to-high dose ICS and a controller medication. A total of 550 patients were randomized to treatment with tezepelumab-ekko 70 mg every 4 weeks, tezepelumab-ekko 210 mg every 4 weeks, tezepelumab-ekko 280 mg every 2 weeks, or placebo every 2 weeks, administered via SC injection, for 52 weeks. The primary endpoint was the annualized rate of asthma exacerbations at week 52. Secondary endpoints included change in FEV₁ from baseline and quality of life/asthma severity scores. Outcomes were also assessed by baseline blood eosinophil counts (≥ 250 or ≤ 250 cells/µL) and Th2 lymphocyte status (high: IgE > 100 IU/mL and blood eosinophil ≥ 140 cells/µL; low: IgE ≤ 100 IU/mL and blood eosinophil < 140 cells/µL). At week 52, asthma exacerbation rates were lower with tezepelumab-ekko compared with placebo by 62%, 71%, and 66% for 70 mg, 210 mg, and 280 mg doses of tezepelumab-ekko, respectively (p < 0.001 for all comparisons). Asthma exacerbation rates were also lower with tezepelumab-ekko vs placebo, regardless of baseline eosinophil count or Th2 status. Change in FEV₁ was greater with tezepelumab-ekko than with placebo (differences from placebo ranging from 8.30 to 10.44 L). Quality of life and asthma severity scores (ACQ-6, AQLQ, and Asthma Symptom Scores) were also improved significantly with tezepelumab-ekko over placebo (Corren et al 2017a).
- In patients with severe uncontrolled asthma, a pooled analysis of 6 placebo-controlled RCTs demonstrated that treatment with tezepelumab improved FEV₁ by 0.15 L (95% CI, 0.12 to 0.17) and reduced the asthma exacerbation rate per year by 0.60 (95% CI, 0.51 to 0.70) when compared with placebo (Zoumot et al 2022).

Comparative reviews

Asthma

- In 2017, Cockle et al conducted a systematic review and indirect treatment comparison to assess the comparative effectiveness and tolerability of mepolizumab and omalizumab, as add-on therapy to standard of care, in patients with severe asthma. Studies included in the primary analysis were double-blind, RCTs, ≥ 12 weeks' duration enrolling patients with severe asthma with a documented exacerbation history and receiving a high-dose ICS plus ≥ 1 additional controller. Two populations were examined: patients potentially eligible for 1) both treatments (overlap population) and 2) either treatment (trial population) (Cockle et al 2017).
 - For the overlap population, no difference was found between mepolizumab and omalizumab. However, trends in favor of mepolizumab were observed, with median estimated RRs of 0.66 (95% CI, 0.37 to 1.19) for the rate of clinically significant exacerbations and 0.19 (95% CI, 0.02 to 2.32) for the rate of exacerbations requiring hospitalization.
 - Results of the trial population analysis showed that mepolizumab was associated with an estimated median RR of 0.63 (95% CI, 0.45 to 0.89) corresponding to a reduction of 37% in the rate of clinically significant exacerbations vs omalizumab. No difference between treatments was observed for the rate of exacerbations resulting in hospitalization; however, the median RR of 0.58 (95% CI, 0.16 to 2.13) demonstrated a trend for mepolizumab over omalizumab.
 - Both treatments had broadly comparable effects on lung function and similar tolerability profiles.
- Another 2017 systematic review was unable to detect differences in efficacy when comparing add-on therapy with mepolizumab or omalizumab in asthma patients who were not well controlled on ICS therapy. The analysis included both RCTs and cohort studies with duration of ≥ 12 weeks. A total of 18 omalizumab studies (N = 4854) and 4 mepolizumab studies (N = 1620) were included. Network meta-analysis did not find a significant difference in FEV₁ between groups (mean difference, 9.3 mL in favor of mepolizumab; 95% CI, -67.7 to 86.3). Both omalizumab and mepolizumab reduced the annualized rates of asthma exacerbations by approximately 50% compared with placebo. Although the authors were unable to identify significant differences in efficacy, there was high heterogeneity among the clinical trials and major differences in study inclusion criteria (*Nachef et al 2018*).
- A systematic review of the IL-5 antagonists, mepolizumab, reslizumab, and benralizumab, included 16 studies (N = 7600) conducted in patients with asthma poorly controlled by ICS. The majority of patients had severe eosinophilic asthma. All the IL-5 antagonists reduced asthma exacerbations by approximately 50% and improved FEV₁ by 0.08 L to 0.15 L. Overall, there was not an increase in serious adverse events with any IL-5 antagonist; however, more patients discontinued benralizumab (42/2026) than placebo (11/1227) due to adverse events (Farne et al 2022).
- A 2019 network meta-analysis of 11 studies aimed to indirectly compare the efficacy (n = 1855) and safety (n = 3462) of reslizumab with benralizumab in patients with eosinophilic asthma. The efficacy analysis compared a benralizumab subgroup with blood eosinophils ≥ 300 cells/μL (n = 1537) to a reslizumab subgroup in GINA step 4/5 with 2 or more previous exacerbations and blood eosinophils ≥ 400 cells/μL. Reslizumab was found to have significantly greater



improvement in the ACQ and AQLQ scores compared to benralizumab. No significant difference between the groups was observed in clinical asthma exacerbation, but a sensitivity analysis with the overall study population suggested a significantly greater reduction in exacerbations with reslizumab. There were fewer discontinuations due to adverse events with reslizumab; however, the frequency and types of adverse events were not significantly different between treatment groups (*Casale et al 2019*).

- A 2019 network meta-analysis of 11 studies compared efficacy of licensed doses of mepolizumab, benralizumab, and reslizumab in patients with severe eosinophilic asthma based on eosinophil levels. Mepolizumab reduced clinically significant exacerbations compared to benralizumab for patients with blood eosinophils ≥ 150 cells/µL (RR, 0.66; 95% CI, 0.49 to 0.89), ≥ 300 cells/µL (RR, 0.61; 95% CI, 0.37 to 0.99), and ≥ 400 cells/µL (RR, 0.55; 95% CI, 0.35 to 0.87) and with mepolizumab compared to reslizumab for patients with blood eosinophils ≥ 400 cells/µL (RR, 0.55; 95% CI, 0.36 to 0.85). Additionally, change from baseline in ACQ score was greater with mepolizumab compared to benralizumab in patients with baseline blood eosinophils ≥ 150 cells/µL (difference, -0.33; 95% CI, -0.54 to -0.11), ≥ 300 cells/µL (difference, -0.40; 95% CI, -0.76 to -0.03), and ≥ 400 cells/µL (difference, -0.36; 95% CI, -0.66 to -0.05) and compared to reslizumab with blood eosinophils ≥ 400 cells/µL (difference, -0.39; 95% CI, -0.66 to -0.12). There was no difference between reslizumab and benralizumab in clinically significant exacerbations or ACQ scores in patients with blood eosinophils ≥ 400 cells/µL (*Busse et al 2019b*).
- A 2019 systematic review and network meta-analysis of 30 RCTs compared biologic therapies for treatment of type 2
 (ie, eosinophilic) asthma. Mepolizumab, reslizumab, and benralizumab significantly reduced the risk of exacerbations
 compared with placebo; however, network meta-analysis showed no superiority of any biologic therapy for this outcome
 among benralizumab, dupilumab, mepolizumab, reslizumab, and other biologics not available in the U.S. (lebrikizumab,
 tralokinumab) (Edris et al 2019).
- In a 2020 meta-analysis including data from 3 trials (n = 2640), dupilumab and benralizumab were compared in patients with inadequately controlled asthma. While there were no significant differences in the annual exacerbation rates between both drugs in the overall population (RR, 0.83; 95% CI, 0.62 to 1.09) and in the subgroup with the blood eosinophil count < 150 cells/µL (RR, 1.57; 95% CI, 0.73 to 2.82), dupilumab was superior to benralizumab for the subgroup with a blood eosinophil count of ≥ 300 cells/µL (RR, 0.58; 95% CI, 0.39 to 0.84) and ≥ 150 to < 300 cells/µL (RR, 0.51; 95% CI, 0.29 to 0.92). The incidence of adverse events was similar between groups (OR, 1.023; 95% CI, 0.688 to 1.526) (*Ando et al 2020*).
- Additional meta-analyses have not found significant differences in asthma exacerbation rates between mepolizumab and reslizumab or between benralizumab and mepolizumab (Bourdin et al 2018, Henriksen et al 2018, Yan et al 2019).
- The magnitude of treatment effect of biologic agents (including benralizumab, reslizumab, dupilumab, mepolizumab, lebrikizumab [investigational], and tralokinumab [investigational]) in patients with eosinophilic asthma was evaluated in a network meta-analysis. The outcomes evaluated were change in FEV₁, ACQ score, and AQLQ score. Event rates for asthma exacerbation and associated RRs were determined for each drug. A total of 26 studies were included in the analysis (n = 7 benralizumab, n = 2 dupilumab, n = 4 lebrikizumab, n = 7 mepolizumab, n = 4 reslizumab, n = 2 tralokinumab) with a total of 8444 patients (n = 4406 on active treatment, n = 4038 in control groups). The duration of treatment ranged from 12 to 56 weeks. An increase in FEV₁, reduction in ACQ score, and increase in AQLQ score were observed with all treatments except tralokinumab. Compared to placebo, the greatest FEV₁ increase was with dupilumab (0.16 L; 95% CI, 0.08 to 0.24), followed by reslizumab (0.13 L; 95% CI, 0.10 to 0.17), and benralizumab (0.12 L; 95% CI, 0.08 to 0.17). Mepolizumab and lebrikizumab both had an increase of 0.09 L (95% CI, 0.03 to 0.15 with mepolizumab, 0.04 to 0.15 with lebrikizumab). Reduction in ACQ score (indicating better asthma control) in order of greatest to least reduction was mepolizumab, dupilumab, benralizumab, and reslizumab. The investigational agents had the least impact on the ACQ score. Quality of life scores were similarly increased with the 4 agents while the investigational agents had the least impact on quality of life. Compared to placebo, the calculated RR for annualized asthma exacerbation was significant only for dupilumab (RR, 0.37; 95% CI, 0.17 to 0.80) and reslizumab (RR, 0.64; 95% CI, 0.53 to 0.78). Comparisons between treatments did not show any significant difference for change in FEV₁, asthma control or quality of life except for superiority of mepolizumab to the 2 investigational agents in ACQ score reduction (Iftikhar et al 2018).
- In a 2020 network meta-analysis including 9 studies, treatment rankings estimated that dupilumab was most effective at reducing the risk of asthma exacerbation, followed by mepolizumab, reslizumab, and benralizumab. Similar to other indirect treatment comparisons, there were no within-group differences as related to the risk for asthma exacerbations (*Ramonell et al 2020*).
- A 2022 network meta-analysis of 8 RCTs (N = 6461) compared the safety and efficacy of mepolizumab, benralizumab, and dupilumab in patients with severe eosinophilic asthma. Dupilumab had the highest probability (> 95%) of having the



highest or second-best overall surface under the cumulative ranking curve (SUCRA) score in reducing exacerbation rates and improving lung function. Mepolizumab and benralizumab had a 30% and ~10% chance of being ranked best, respectively (*Akenroye et al 2022*).

- A 2023 network meta-analysis of 10 RCTs (N = 9201) compared the efficacy of tezepelumab compared to mepolizumab, benralizumab, and dupilumab in patients with eosinophilic asthma. Tezepelumab was associated with lower exacerbation rates compared to benralizumab (RR, 0.63; 95% CI, 0.46 to 0.86), but no difference was seen compared to dupilumab or mepolizumab. Improvements in FEV₁ were non-significantly larger with tezepelumab compared to mepolizumab and benralizumab. Tezepelumab had the highest SUCRA score for reducing exacerbation rate (89% probability of having the highest- or second-best rank), followed by dupilumab (38%), mepolizumab (6%), and benralizumab (< 1%) (Nopsopon et al 2023).
- A systematic review and network meta-analysis of 64 trials (N = 26,630) compared the efficacy of biologic therapies for asthma in adults with moderate, moderate-to-severe, or severe asthma. Key findings included (*Pitre et al 2023*):
 - Treatment with tezepelumab, dupilumab, benralizumab, mepolizumab, reslizumab, and omalizumab probably reduced exacerbations vs placebo in patients with blood eosinophil levels ≥ 300 cells/µL (moderate to high certainty).
 - Dupilumab, tezepelumab and reslizumab probably improved lung function vs to placebo (moderate to high certainty).
 - Dupilumab and tezepelumab were the most effective for reducing exacerbations in patients with blood eosinophil levels ≥ 300 cells/μL (RR, 0.32 [95% CI, 0.24 to 0.42] and 0.30 [95% CI, 0.22 to 0.43], respectively) and improving lung function compared to other agents (mean difference [MD], 0.25 L [95% CI, 0.21 to 0.29] and MD, 0.24 L [95% CI, 0.16 to 0.32], respectively) (high certainty for both outcomes); neither demonstrated superiority over the other for both endpoints.
 - Moderate-certainty evidence showed that dupilumab, omalizumab, and tezepelumab probably reduced hospitalizations compared to placebo (moderate certainty). The authors also concluded that in patients with low eosinophils, biologics likely do not improve asthma outcomes.

CRSwNP

• In a 2022 network meta-analysis including 9 RCTs, 4 different biologics (dupilumab [n = 3], omalizumab [n = 4], mepolizumab [n = 2]) and placebo were compared in patients with CRSwNP. Dupilumab was found to be the most efficacious in terms of NPS, Sino-Nasal Outcome Test-22 (SNOT-22) score, University of Pennsylvania Smell Identification Test (UPSIT) score, and NCS with SUCRA values of 0.900, 0.916, 1.000, and 0.807, respectively. Omalizumab ranked second in efficacy in SNOT-22, UPSIT, and NCS scores with SUCRA values of 0.606, 0.500, and 0.693, respectively. Mepolizumab had the highest risk of adverse events for SUCRA values of 0.746 (*Wu et al 2022*).

Clinical Guidelines

Asthma

- The National Asthma Education and Prevention Program (NAEPP) guideline from the NHLBI states that the initial treatment of asthma should correspond to the appropriate asthma severity category, and it provides a stepwise approach to asthma management. Long-term control medications such as ICSs, long-acting bronchodilators, leukotriene modifiers, cromolyn, and immunomodulators should be taken daily on a long-term basis to achieve and maintain control of persistent asthma. ICSs are the most potent and consistently effective long-term asthma control medication. Quick-relief medications such as SABAs and anticholinergics are used to provide prompt relief of bronchoconstriction and accompanying acute symptoms such as cough, chest tightness, and wheezing. Systemic corticosteroids are important in the treatment of moderate or severe exacerbations because these medications prevent progression of the exacerbation, speed recovery, and prevent relapses (NHLBI 2007).
- The 2024 GINA report also provides a stepwise approach to asthma management (GINA 2024).
 - Treatment recommendations are based on patient age, and stepping down should be considered when asthma symptoms have been well-controlled and lung function has been stable for ≥ 3 months.
 - ICS/beta₂-agonist combination products are recommended for both controller (ie, maintenance treatment) and reliever use in patients ≥ 6 years of age, while the preferred controller option in patients ≤ 5 years of age consists of low-dose ICS plus as-needed SABA as a reliever.
 - o In patients ≥ 6 years of age diagnosed with severe asthma and uncontrolled on Step 4 treatment (eg, with maintenance ICS/LABA therapy), phenotyping for Type 2 inflammation into categories such as severe allergic, aspirin-exacerbated, allergic bronchopulmonary aspergillosis, chronic rhinosinusitis, nasal polyposis, atopic dermatitis, or eosinophilic asthma is recommended. Add-on treatment with a biologic agent should be considered as follows:



- Severe allergic asthma: Anti-IgE treatment with omalizumab is recommended for patients ≥ 6 years of age.
- Severe eosinophilic asthma: Add-on anti-IL-5 therapy is recommended for patients ≥ 6 years of age (mepolizumab and benralizumab) or ≥ 18 years of age (reslizumab).
- Severe eosinophilic/Type 2 asthma: Anti-IL4 therapy (dupilumab) is recommended for patients ≥ 6 years of age.
- Adults or adolescents requiring oral corticosteroids for maintenance therapy: Anti-IL4 therapy (dupilumab) is recommended.
- Severe asthma: Anti-TSLP therapy (tezepelumab-ekko) is recommended for patients ≥ 12 years of age.
- Prior to initiation of a biologic agent, several factors should be considered including cost, insurance eligibility criteria, evaluation of predictors of response, delivery route, dosing frequency, and patient preference.
- The European Respiratory Society/American Thoracic Society guideline on the management of severe asthma suggests the use of anti-IL-5 therapy as an add-on in adults with severe uncontrolled eosinophilic asthma or severe corticosteroid-dependent asthma. A blood eosinophil count of ≥ 150 cells/µL is suggested as a cut-point to guide initiation of anti-IL-5 therapy in adults with severe asthma and prior exacerbations. A blood eosinophil count of ≥ 260 cells/µL or an exhaled nitric oxide level of 19.5 parts per billion or greater may be used to identify adolescents and adults with severe allergic asthma who are likely to benefit from anti-IgE treatment. Dupilumab is suggested for adults with severe eosinophilic asthma, and for those with severe corticosteroid-dependent asthma regardless of eosinophil levels (*Holguin et al 2020*).

CIU

- Guidelines developed by the Joint Council of Allergy, Asthma & Immunology, comprised of members from the American Academy of Allergy, Asthma & Immunology and the American College of Allergy, Asthma & Immunology, recommend a stepwise treatment approach for CIU. Treatment with omalizumab is recommended in patients inadequately controlled with antihistamines and a LTRA (*Bernstein et al 2014*).
- Joint guidelines by the European Academy of Allergy and Clinical Immunology, the Global Allergy and Asthma European Network, the European Dermatology Forum, and the World Allergy Organization recommend treatment with omalizumab in patients with symptoms despite treatment with a 4-fold dose of modern second-generation antihistamines. This is a change from previous guidelines in which use of either omalizumab or cyclosporine after failure of high-dose antihistamines was recommended. However, due to adverse effects and the lack of an approved indication, the new recommendation was that cyclosporine should only be considered if omalizumab does not provide an adequate response (*Zuberbier et al 2022*).
- Guidelines published by the British Association of Dermatologists similarly recommend omalizumab as a potential second-line agent in patients inadequately controlled on first-line second-generation antihistamines (Sabroe et al 2021).

EGPA

- In 2021, a joint guideline from the American College of Rheumatology and Vasculitis Foundation published recommendations for the management of EGPA along with other related conditions (*Chung et al 2021*). The following relevant conditional recommendations were provided:
 - Patients with active, severe EGPA should be treated with cyclophosphamide or rituximab over mepolizumab for remission induction.
 - Patients with active, nonsevere EGPA should be treated with mepolizumab and glucocorticoids over methotrexate, azathioprine, or mycophenolate mofetil and glucocorticoids.
 - Patients with severe EGPA whose disease has entered remission should be treated with methotrexate, azathioprine, or mycophenolate mofetil over mepolizumab for remission maintenance.
 - Patients with EGPA who have experienced relapse with nonsevere disease manifestations (ie, asthma and/or sinonasal disease) while receiving methotrexate, azathioprine, or mycophenolate mofetil: mepolizumab should be added over switching to another agent.
 - Patients with EGPA who have experienced relapse with nonsevere disease manifestations (asthma and/or sinonasal disease) while receiving low-dose glucocorticoids and no other therapy: mepolizumab should be added over adding methotrexate, azathioprine, or mycophenolate mofetil.
 - Patients with EGPA and high serum IgE levels who have experienced relapse with nonsevere disease manifestations (asthma and/or sinonasal disease) while receiving methotrexate, azathioprine, or mycophenolate mofetil: mepolizumab should be added over adding omalizumab.
- Both the EGPA (Churg-Strauss) Consensus Task Force recommendations and the American Society for Apheresis
 guideline recommend glucocorticoids alone for patients without life- and/or organ-threatening EGPA. For patients with



life- and/or organ-threatening EGPA, both glucocorticoids and an immunosuppressant are recommended, as well as maintenance therapy with azathioprine or methotrexate. Guidelines from the American Society for Apheresis recognized mepolizumab as a future treatment option, and the EGPA Consensus Task Force recommendations noted that mepolizumab held promise for this condition based on the pilot studies available at the time of guideline development. IVIG can be considered for refractory EGPA or for treatment during pregnancy (*Connelly-Smith et al 2023, Groh et al 2015*).

CRSwNP

- Treatment of CRSwNP is addressed in guidelines from the American Academy of Otolaryngology-Head and Neck Surgery; American Academy of Allergy, Asthma & Immunology, the American College of Allergy, Asthma & Immunology, and the Joint Council of Allergy, Asthma & Immunology; the International Forum of Allergy & Rhinology; the European Forum for Research and Education in Allergy and Airway Diseases (EUFOREA); and the International Consensus Statement on Allergy and Rhinology: Rhinosinusitus (ICAR-RS) (Orlandi et al 2021, Peters et al 2014, Rosenfeld et al 2015, Rank et al 2023).
- Routine treatment recommendations include saline irrigation and/or intranasal glucocorticoids in patients with mild symptoms, and short-term systemic glucocorticoids and surgery in patients with severe or refractory symptoms (*Orlandi* et al 2021, *Peters et al 2014*, *Rosenfeld et al 2015*, *Rank et al 2023*). Biologics rather than no biologics are recommended for patients with CRSwNP, and dupilumab is specifically recommended by ICAR-RS (*Orlandi et al 2021*, *Rank et al 2023*).
- In 2023, EUFOREA published an updated expert consensus focused on the use of biologics for CRSwNP. Biologics are indicated in patients with bilateral nasal polyps and previous sinus surgery who also meet 3 of the following criteria: evidence of type 2 inflammation (biological biomarkers); the need for systemic corticosteroids (≥ 2 courses per year or > 3 months of low dose steroids) or contraindications to systemic corticosteroids, significant quality-of-life impairment, significant loss of smell, and diagnosis of comorbid asthma. Once eligibility according to the EUFOREA 2023 criteria has been determined, a patient's preference for a surgical or non-surgical approach should be considered if funding within the healthcare system allows. In patients who have never had surgery, 4 of the aforementioned criteria need to be met before a biologic is indicated. Patients with previous sinus surgery plus severe asthma may also qualify for treatment in consultation with their pulmonologist. Lastly, biologics should not be initiated in the following situations: CRSwNP and lack of signs of type 2 inflammation, cystic fibrosis, unilateral nasal polyps, mucoceles, general contraindications for biological treatments (eg, immunodeficiencies), and patient-related factors such as noncompliance to therapy (*Fokkens et al 2023*).

HES

• The World Health Organization (WHO) guidance on eosinophilic disorders has stated that identification of rearranged PDGFRA or PDGFRB is important in the management of eosinophilic disorders as those variants respond to imatinib (Shomali and Gotlib 2024). For patients with idiopathic HES (without imatinib-sensitive variants), corticosteroids are first-line therapy; second-line options include hydroxyurea, interferon-alfa, other cytotoxic chemotherapy agents, and hematopoietic stem cell transplantation. The WHO states that mepolizumab is FDA-approved for idiopathic HES, but other biologic agents are considered investigational.

EoE

• In 2020, the American Gastroenterological Association and the Joint Task Force on Allergy Immunology Practice Parameters (AGA/JTF) published a guideline on the management of EoE (*Hirano et al 2020a*). In patients with symptomatic esophageal eosinophilia, the AGA/JTF suggests using proton pump inhibition over no treatment. Furthermore, for patients with EoE, topical glucocorticoids are recommended over no treatment and topical glucocorticoids are suggested rather than oral glucocorticoids. Authors did not recommend the use of the following therapies outside of a clinical trial setting based on the available data in patients with EoE at the time of guideline publication: anti-IL13, anti-IL4, anti-IL5, and anti-tumor necrosis factor therapies, montelukast, cromolyn sodium, and immunomodulators. The guideline suggested against the use of anti-IgE therapy for EoE. Similar recommendations are provided in an older guideline from the American College of Gastroenterology (*Dellon et al 2013*).

IgE-mediated food allergy



• National guidelines for food allergies focus on nutritional interventions and have not been updated to include recommendations for omalizumab (*Fleischer et al 2021*, *Sampson et al 2014*).

COPD

• The 2024 GOLD guidelines recommend that the choice of initial COPD maintenance therapy should be based on a patient's level of symptoms and exacerbation history (*GOLD 2024*). Regimens may include monotherapy with LAMA or LABA, double therapy with LAMA + LABA, or triple therapy with LAMA + LABA + ICS. Additional treatments appropriate for some patients include roflumilast, an oral phosphodiesterase (PDE) 4 inhibitor indicated to decrease the risk of COPD exacerbations in patients with chronic bronchitis and a history of exacerbation; azithromycin, an oral macrolide antibiotic; and Ohtuvayre (ensifentrine) inhalation suspension, a combined PDE3 and PDE4 inhibitor indicated for the maintenance treatment of COPD in adult patients (*GOLD 2024*, *Ohtuvayre prescribing information 2024*). National guidelines for COPD have not been updated to include recommendations for dupilumab or ensifentrine at the time this therapeutic class overview was published.

Safety Summary

- All the antiasthmatic monoclonal antibodies are contraindicated in patients with a history of hypersensitivity to the specific agent or excipients of the formulation.
- Abrupt discontinuation of systemic, topical, or inhaled corticosteroids is not recommended when treatment with any of these agents are initiated. If appropriate, the corticosteroid dosage should be reduced gradually.

Cinqair (reslizumab)

- Boxed warning: Anaphylaxis has been observed with Cinqair infusion in 0.3% of patients in placebo-controlled clinical studies. Anaphylaxis was reported as early as the second dose of Cinqair. Patients should be observed for an appropriate period of time after Cinqair administration by a healthcare professional prepared to manage anaphylaxis.
- Key warnings and precautions:
 - o In placebo-controlled clinical studies, 6/1028 (0.6%) patients receiving 3 mg/kg Cinqair had ≥ 1 malignant neoplasm reported compared to 2/730 (0.3%) patients in the placebo group. The observed malignancies in Cinqair-treated patients were diverse in nature and without clustering of any particular tissue type.
 - Pre-existing helminth infections should be treated before therapy with Cinqair. If patients become infected while receiving Cinqair and do not respond to anti-helminth treatment, Cinqair should be discontinued until the parasitic infection resolves.
- The most common adverse reaction (≥ 2%) included oropharyngeal pain.

Dupixent (dupilumab)

- Key warnings and precautions:
 - Hypersensitivity reactions (eg, anaphylaxis, erythema nodosum, erythema multiforme, serum sickness, angioedema, urticaria, and rash) have occurred after administration of Dupixent. Dupixent should be discontinued in the event of a hypersensitivity reaction.
 - For patients with asthma, cases of eosinophilic pneumonia and vasculitis consistent with EGPA have been reported.
 Occurrence of vasculitic rash, worsening pulmonary symptoms, and/or neuropathy, especially upon reduction of oral corticosteroids should be monitored.
 - New or worsening eye symptoms (conjunctivitis and keratitis) or new or worsening joint symptoms (arthralgias) should be evaluated. Visual disturbances associated with conjunctivitis or keratitis have been reported (except in patients taking dupilumab for EoE) and may require ophthalmological examination. Discontinuation of Dupixent may be necessary in some cases of arthralgia.
 - Dupilumab should not be used to treat acute symptoms or acute exacerbations of asthma or COPD.
 - Pre-existing helminth infections should be treated before therapy with Dupixent. If a patient becomes infected while
 receiving Dupixent and does not respond to anti-helminth treatment, Dupixent should be discontinued until the
 parasitic infection resolves.
 - Use of live vaccines should be avoided.
- Adverse reactions:
 - Asthma: the most common adverse reactions included injection site reactions, oropharyngeal pain, and eosinophilia.



- The safety profile in patients 6 to 11 years of age was similar to the safety profile from studies in adults and adolescents with the addition of helminth infections. Adverse reactions of helminth infections were reported in pediatric patients (5 cases of enterobiasis and 1 case of ascariasis) who participated in clinical studies.
- COPD: the most common adverse reactions included viral infection, headache, nasopharyngitis, back pain, diarrhea, arthralgia, urinary tract infection, local administration reactions, rhinitis, eosinophilia, toothache, and gastritis.
- CRSwNP: the most common adverse reactions included injection site reactions, eosinophilia, insomnia, toothache, gastritis, arthralgia, and conjunctivitis.
- EOE: the most common adverse reactions included injection site reactions, upper respiratory tract infections, arthralgia, and herpes viral infections.

Fasenra (benralizumab)

- Key warnings and precautions:
 - Hypersensitivity reactions (eg, anaphylaxis, angioedema, bronchospasm, hypotension, urticaria, rash) have occurred after administration of Fasenra. Fasenra should be discontinued in the event of a hypersensitivity reaction.
 - Pre-existing helminth infections should be treated before therapy with Fasenra. If patients become infected while
 receiving Fasenra and do not respond to anti-helminth treatment, Fasenra should be discontinued until the parasitic
 infection resolves.
- The most common adverse reactions (≥ 5%) included headache and pharyngitis.

Nucala (mepolizumab)

- Key warnings and precautions:
 - Hypersensitivity reactions (eg, anaphylaxis, angioedema, bronchospasm, hypotension, urticaria, rash) have occurred after administration of Nucala.
 - Herpes zoster infections have occurred in patients receiving Nucala. Vaccination should be considered if clinically appropriate.
 - Pre-existing helminth infections should be treated before therapy with Nucala. If patients become infected while
 receiving Nucala and do not respond to anti-helminth treatment, Nucala should be discontinued until the parasitic
 infection resolves.
- The most common adverse reactions (≥ 5%) included headache, injection site reaction, back pain, and fatigue. Mouth/throat pain and joint pain have been reported in patients with CRSwNP.

Xolair (omalizumab)

- Boxed warning: Anaphylaxis presenting as bronchospasm, hypotension, syncope, urticaria, and/or angioedema of the
 throat or tongue, has been reported. Initiate Xolair in a healthcare setting and closely observe patients for an appropriate
 period of time after administration. Health care providers administering Xolair should be prepared to manage
 anaphylaxis that can be life-threatening. Selection of patients for self-administration of Xolair should be based on criteria
 to mitigate risk from anaphylaxis.
 - Patients with a prior history of anaphylactic reactions to foods, medications, or other causes may be at an increased risk for anaphylaxis. The frequency of anaphylaxis is reported to be between 0.1 to 0.2% and may occur immediately or up to a year post-treatment. Approximately 60 to 70% of anaphylaxis cases have been reported to occur within the first 3 doses.
- Key warnings and precautions:
 - Malignant neoplasms were observed at a higher rate in Xolair-treated patients (0.5%) compared to control patients (0.2%) in clinical trials. A subsequent 5-year observational cohort study found similar rates of primary malignancies in Xolair- and non-Xolair-treated patients. However, study limitations preclude definitively ruling out a malignancy risk with Xolair (Long et al 2014).
 - Rarely, patients on therapy with Xolair may present with serious systemic eosinophilia, which may present with features of vasculitis consistent with Churg-Strauss syndrome. These events usually have been associated with the reduction of oral corticosteroid therapy.
 - Systemic or inhaled corticosteroids should not be abruptly discontinued upon initiation of Xolair therapy for asthma or nasal polyps.
 - Some patients have reported signs and symptoms similar to serum sickness, including arthritis/arthralgia, rash, fever, and lymphadenopathy; Xolair should be stopped for signs and symptoms of serum sickness.



- Serum IgE levels increase following Xolair therapy and may persist for up to 1 year following discontinuation of therapy.
- Xolair should not be used for emergency treatment of allergic reactions, including anaphylaxis.
- Adverse reactions:
 - o Asthma: In patients ≥ 12 years of age, commonly observed adverse reactions in clinical studies (≥ 1% in Xolair-treated patients and more frequently than reported with placebo) were arthralgia, pain (general), leg pain, fatigue, dizziness, fracture, arm pain, pruritus, dermatitis, and earache. In clinical studies with pediatric patients 6 to < 12 years of age, the most common adverse reactions were nasopharyngitis, headache, pyrexia, upper abdominal pain, streptococcal pharyngitis, otitis media, viral gastroenteritis, arthropod bites, and epistaxis.
 - Cardiovascular and cerebrovascular events in asthma studies: In a 5-year observational cohort study, a higher incidence of overall cardiovascular and cerebrovascular serious adverse events was observed in Xolair-treated patients compared to non-Xolair-treated patients. To further evaluate the risk, a pooled analysis of 25 randomized, controlled, clinical trials was conducted. An increased risk of cardiovascular and cerebrovascular serious adverse events was not noted, but the low number of events, the young patient population, and the short duration of follow-up prevent a definite conclusion about the absence of a risk (FDA 2014).
 - o CIU: Adverse reactions from 3 placebo-controlled, multiple-dose CIU studies that occurred in ≥ 2% of patients receiving Xolair and more frequently than in those receiving placebo included arthralgia, cough, headache, nasopharyngitis, nausea, sinusitis, upper respiratory tract infection, and viral upper respiratory tract infection.
 - CRSwNP: The most common adverse reactions (≥ 3% of patients) in clinical studies included headache, injection site reaction, arthralgia, upper abdominal pain, and dizziness.

Tezspire (tezepelumab-ekko)

- Key warnings and precautions:
 - Hypersensitivity reactions (eg, rash, allergic conjunctivitis) have occurred after administration of Tezspire, either within hours after administration or after days.
 - o Tezspire should not be used to treat acute asthma symptoms or asthma exacerbations.
 - Systemic or inhaled corticosteroids should not be abruptly discontinued upon initiation of Tezspire therapy for asthma; if appropriate, corticosteroid treatment should be reduced gradually.
 - Pre-existing helminth infections should be treated prior to therapy with Tezspire. If patients become infected while
 receiving Tezspire and do not respond to anti-helminth treatment, Tezspire should be discontinued until the parasitic
 infection resolves.
 - Use of live attenuated vaccines should be avoided in patients receiving Tezspire.
- Adverse reactions:
 - In patients ≥ 12 years of age, commonly observed adverse reactions in clinical studies (≥ 3%) were pharyngitis, arthralgia, and back pain.

Dosing and Administration

Table 3. Dosing and Administration

Drug	Available	Route	Usual Recommended	Comments
Cinqair (reslizumab)	Formulations Single-use vials	IV	Frequency Every 4 weeks	 Safety and effectiveness in pediatric patients ≤ 17 years of age have not been established. Cinqair should be administered by a healthcare professional by IV infusion over 20 to 50 minutes.
Dupixent (dupilumab)	Single-dose pre- filled syringe, single-dose pre- filled pen	SC	Asthma: In adults and pediatric patients (6 to 11 years of age) weighing ≥ 30 kg, every other week; in pediatric patients (6 to 11 years	 Safety and efficacy in patients < 6 years of age (asthma), < 1 year of age (EoE), and < 18 years of age (CRSwNP) have not been established. Dupixent may be administered by a healthcare professional or self-

Data as of October 18, 2024 RLP/ALS

Page 23 of 31



Drug	Available Formulations	Route	Usual Recommended Frequency	Comments
			of age) weighing 15 to < 30 kg, every 4 weeks COPD: Every other week CRSwNP: Every other week EoE: Weight-based dosing in adults and children ≥ 1 year of age: 15 to < 30 kg, 200 mg every other week; 30 to < 40 kg, 300 mg every other week; ≥ 40 kg, 300 mg every week	administered via pre-filled syringe or pen.
Fasenra (benralizumab)	Single-dose pre- filled syringe, single-dose pre- filled pen (autoinjector)	SC	Asthma: Every 4 weeks for first 3 doses, followed by every 8 weeks EGPA: Every 4 weeks	 Safety and efficacy in pediatric patients 6 years of age have not been established. Fasenra may be administered by a healthcare professional or selfadministered via an autoinjector.
Nucala (mepolizumab)	Single-dose vial for reconstitution, single-dose pre- filled pen (autoinjector), single-dose prefilled syringe	SC	Asthma: Every 4 weeks EGPA: Every 4 weeks HES: Every 4 weeks CRSwNP: Every 4 weeks	 Safety and efficacy in pediatric patients < 6 years (asthma), < 18 years (EGPA), < 12 years (HES) of age, and < 18 years of age (CRSwNP) have not been established. Nucala may be administered by a healthcare professional or selfadministered via an autoinjector or prefilled syringe. The 40 mg/0.4 mL prefilled syringe for patients 6 to 11 years of age should be administered by a healthcare professional or a patient caregiver.
Xolair (omalizumab)	Single-dose vial for reconstitution; single-dose prefilled syringe or autoinjector	SC	Allergic asthma: Every 2 or 4 weeks CIU: Every 4 weeks CRSwNP: Every 2 or 4 weeks IgE-mediated food allergy: Every 2 or 4 weeks	 Safety and efficacy in patients < 1 year of age (IgE-mediated food allergy); < 6 years of age (asthma), < 12 years of age (CIU), < 18 years of age (CRSwNP) have not been established. Xolair should be initiated in a healthcare setting: once therapy has been safely established, Xolair may be administered by a healthcare professional or self-administered via a pre-filled syringe. For allergic asthma, CRSwNP, and IgE-mediated food allergy, the dose and frequency are determined by serum

Data as of October 18, 2024 RLP/ALS

Page 24 of 31



Drug	Available Formulations	Route	Usual Recommended Frequency	Comments
				total IgE level (measured before the start of treatment) and body weight; dosage determination should be based on the primary diagnosis for which Xolair is being prescribed. • Doses should be adjusted for significant changes in bodyweight. • Dosing in CIU is not dependent on serum IgE level or body weight.
Tezspire (tezepelumab- ekko)	Single-dose glass vial, single-dose prefilled syringe, single-dose prefilled pen	SC	Asthma: Every 4 weeks	 Safety and efficacy in pediatric patients < 12 years of age have not been established. The Tezspire vial and prefilled syringe are intended for administration by a healthcare professional. The prefilled pen may be self-administered after proper training.

See the current prescribing information for full details.

Conclusion

- The respiratory and allergy biologics include the IgE inhibitor Xolair (omalizumab), the IL-4 inhibitor Dupixent (dupilumab), the IL-5 antagonists Cinqair (reslizumab), Fasenra (benralizumab), and Nucala (mepolizumab), and the TSLP blocker Tezspire (tezepelumab-ekko).
 - These agents are a mainstay of treatment for severe asthma; in addition, various agents in the class are indicated for use in EGPA, CIU, COPD, CRSwNP, HES, EoE, and IgE-mediated food allergy.
- Xolair (omalizumab) is a humanized monoclonal antibody that is FDA-approved for patients ≥ 6 years of age with moderate to severe persistent asthma who have a positive skin test or *in vitro* reactivity to a perennial aeroallergen and whose symptoms are inadequately controlled with an ICS. Xolair has been shown to decrease the incidence of asthma exacerbations in these patients.
 - Although clinical trial results have been mixed and several trials had an open-label design, there is some evidence to indicate that Xolair may decrease asthma-related emergency visits and hospitalizations, as well as decreasing the dose of ICS and rescue medication and increasing symptom-free days (Buhl et al 2002, Busse et al 2011, Holgate et al 2004, Lanier et al 2003, Solèr et al 2011).
 - Xolair carries a boxed warning due to the risk of anaphylaxis, and thus must be initiated in a healthcare setting. Once therapy has been safely established, select patients may be able to self-administer Xolair using a pre-filled syringe.
 - Although Xolair therapy is generally safe, analysis of a 5-year, observational cohort, epidemiological study (EXCELS) showed an increased number of cardiovascular and cerebrovascular adverse events in patients receiving Xolair compared to placebo (*Iribarren et al 2017*). However, a pooled analysis of 25 randomized, double-blind, placebo-controlled clinical trials did not find notable imbalances in the rates of cardiovascular and cerebrovascular serious adverse events (*FDA 2014*).
 - Asthma guidelines generally recommend Xolair therapy in patients with severe allergic asthma that is inadequately
 controlled with a combination of high-dose ICS and LABA (Cloutier et al 2020, GINA 2024, NHLBI 2007). Based on a
 limited place in therapy, Xolair is appropriate for a small percentage of patients with asthma.
- Xolair received FDA approval for the treatment of adults and adolescents (≥ 12 years of age) with CIU who remain symptomatic despite H₁-antihistamine treatment. Two randomized, placebo-controlled trials demonstrated its efficacy in reducing weekly itch severity scores and weekly hive count scores significantly greater than placebo at week 12. Xolair was well-tolerated, with a safety profile similar to that observed in asthma patients.
 - In patients with CIU, Xolair is administered at 150 or 300 mg SC every 4 weeks.
 - Guidelines for the treatment of CIU recommend treatment with Xolair in patients who are inadequately controlled with a 4-fold dose of modern second-generation antihistamines. Although previous guidelines suggested the use of



omalizumab after a LTRA, the most recent guideline from the European Academy of Allergy and Clinical Immunology, the Global Allergy and Asthma European Network, the European Dermatology Forum, and the World Allergy Organization state that a recommendation regarding use of a LTRA cannot be made due to a low level of evidence. Additionally, use of Xolair is recommended before treatment with cyclosporine (*Bernstein et al 2014, Zuberbier et al 2022, Sabroe et al 2021*).

- Xolair was approved as add-on maintenance treatment for CRSwNP in adult patients with an inadequate response to
 nasal corticosteroids, based on results from 2 identical, randomized, multicenter, double-blind, placebo-controlled,
 Phase 3 studies [POLYP 1 and POLYP 2] (Gevaert et al 2020). Results from both studies revealed that Xolair was
 associated with a significantly greater improvement from baseline at week 24 in NPS and weekly average NCS as
 compared to placebo. Adverse events were similar between groups.
- Xolair was approved for IgE-mediated food allergy in patients ≥ 1 year of age based on the results of a randomized, multicenter, double-blind, placebo-controlled trial in patients with allergies to peanut and at least 2 other foods (*Wood et al 2024*). Results demonstrated a significantly higher response with Xolair vs placebo for the primary outcome (percentage of patients able to tolerate a single dose of ≥ 600 mg of peanut protein without experiencing dose-limiting symptoms). Guidelines for food allergies mostly focus on nutritional interventions and have not been updated to include recommendations for omalizumab (*Fleischer et al 2021, Sampson et al 2014*).
- Dupixent (dupilumab) is an IL-4/IL-13 antagonist approved for the treatment of patients ≥ 6 years of age with moderate-to-severe asthma of the eosinophilic type or dependent on oral corticosteroids, patients ≥ 1 year of age and weighing ≥ 15 kg with EoE, and as an add-on treatment in adults with inadequately controlled CRSwNP.
 - According to GINA guidelines, the use of Dupixent for severe asthma with an eosinophilic phenotype can be considered for patients with severe eosinophilic/Type 2 asthma or patients taking oral corticosteroids.
- Dupixent was approved for CRSwNP after the publication of several guidelines, although some acknowledged the potential role for biologic therapies (*Orlandi et al 2021, Peters et al 2014, Rank et al 2023*).
 - o In a 2023 EUFOREA expert consensus publication focused on the use of biologics for CRSwNP, biologics were indicated in patients with bilateral nasal polyps and previous sinus surgery who also meet 3 of the following criteria: evidence of type 2 inflammation (biological biomarkers), need for systemic corticosteroids (≥ 2 courses per year or > 3 months of low dose steroids) or contraindications to systemic corticosteroids, significant quality-of-life impairment; significant loss of smell, and diagnosis of comorbid asthma (*Fokkens et al 2023*).
- Dupixent was approved for EoE after the publication of available guidelines (Dellon et al 2013, Hirano et al 2020a).
- Dupixent is the first biologic agent approved for COPD, and the first treatment specifically approved for type 2
 inflammation in COPD (eosinophil phenotype). 2024 GOLD guidelines do not include recommendations for its use in
 COPD.
- Cinqair (reslizumab), Fasenra (benralizumab), and Nucala (mepolizumab) are IL-5 antagonists approved as add-on treatment options for patients with severe eosinophilic asthma and have demonstrated effectiveness in reducing asthma exacerbations (*Bel et al 2014, Bjermer et al 2016, Castro et al 2015, Corren et al 2016, Pavord et al 2012, Ortega et al 2014, Bleecker et al 2016, Fitzgerald et al 2016*).
 - The mechanism of action of Fasenra is slightly different, in that it binds to the IL-5 receptor on immune effector cells, whereas Cinqair and Nucala bind to the IL-5 cytokine. All these agents provide a more targeted treatment option for patients with severe asthma and should be considered in patients who are uncontrolled despite a high-dose ICS/LABA, and who have allergic or eosinophilic biomarkers or need maintenance oral corticosteroids (GINA 2024).
- Nucala and Fasenra are approved for the treatment of adult patients with EGPA. In a head-to-head trial, benralizumab was shown to be non-inferior to mepolizumab in adult patients with relapsing or refractory disease. A joint guideline from the American College of Rheumatology and Vasculitis Foundation provides recommendations for the place in therapy for Nucala in the management of EGPA based on the severity of disease and prior treatments (*Chung et al 2021*). Nucala is also approved as an add-on treatment in adults with inadequately controlled CRSwNP, and in patients ≥ 12 years of age with HES.
- Tezspire (tezepelumab-ekko), a human monoclonal antibody, is a TSLP blocker approved for severe, uncontrolled asthma in patients ≥ 12 years of age. Efficacy of Tezspire was shown in the NAVIGATOR trial, with significant reductions in asthma exacerbations compared to placebo. While approximately one-half of enrolled patients had eosinophil counts of ≥ 300 cells/µL, efficacy was seen in patients with low and high eosinophil counts. (Menzies-Gow et al 2021).
- There are no head-to-head trials comparing Cinqair, Fasenra, Dupixent, Nucala, or Tezspire for the treatment of asthma.



- A systematic review of the IL-5 antagonists conducted in patients with asthma poorly controlled by ICS revealed that all of the IL-5 antagonists reduced asthma exacerbations by approximately 50% and improved FEV1 by 0.08 L to 0.15 L. Overall, there was not an increase in serious adverse events with any IL-5 antagonist; however, more patients discontinued benralizumab (42/2026) than placebo (11/1227) due to adverse events (*Farne et al 2022*).
- One network meta-analysis of IL-4, IL-5 and IL-13 antagonists demonstrated that all agents reduced FEV1 and improved ACQ and AQLQ scores, except for the investigational agent, tralokinumab; other analyses found that dupilumab, mepolizumab, reslizumab, and benralizumab significantly reduced the risk of exacerbations compared with placebo (Ando et al 2020, Edris et al 2019, Iftikhar et al 2018, Ramonell et al 2020).
- Treatment rankings in a 2020 network meta-analysis estimate that dupilumab is most effective at reducing the risk of asthma exacerbation, followed by mepolizumab, reslizumab, and benralizumab (*Ramonell et al 2020*).
- o A systematic review and network meta-analysis of 64 trials in 26,630 patients with moderate, moderate-to-severe, or severe asthma determined that treatment with benralizumab, dupilumab, mepolizumab, reslizumab, omalizumab, and tezepelumab probably reduce exacerbations vs placebo in patients with eosinophilic asthma (blood eosinophil levels ≥ 300 cells/µL; moderate to high certainty). Overall, dupilumab and tezepelumab were the most effective for reducing exacerbations in patients with eosinophilic asthma and improving lung function compared to other agents (both high certainty). Of note, the authors concluded that in patients with low eosinophils, biologics likely do not improve asthma outcomes (*Pitre et al 2023*).
- Compared to Dupixent, Nucala, and Fasenra, Cinqair has various limitations for use in eosinophilic asthma, including an indication for patients ≥ 18 years of age (vs ≥ 6 years with Nucala, Dupixent, and Fasenra), IV administration (SC for Dupixent, Nucala, and Fasenra), and a boxed warning for anaphylaxis.
- SC autoinjector formulations are available for Fasenra, Nucala, and Xolair; single-dose prefilled syringes and/or pens are available for Dupixent, Fasenra, Nucala, Xolair, and Tezspire.

References

- Akenroye A, Lassiter G, Jackson JW, et al. Comparative efficacy of mepolizumab, benralizumab, and dupilumab in eosinophilic asthma: A Bayesian network meta-analysis. J Allergy Clin Immunol. 2022;150(5):1097-1105.e12. doi:10.1016/j.jaci.2022.05.02.
- Ando K, Tanaka A, Sagara H. Comparative efficacy and safety of dupilumab and benralizumab in patients with inadequately controlled asthma: a systematic review. Int J Mol Sci. 2020;21(3):889. doi:10.3390/ijms21030889
- Bacharier LB, Maspero JF, Kaatelaris CH, et al. Dupilumab in children with uncontrolled moderate-to-severe asthma. N Engl J Med. 2021;385:2230-2240.
- Bachert C, Han JK, Desrosiers M, et al. Efficacy and safety of dupilumab in patients with severe chronic rhinosinusitis with nasal polyps (LIBERTY NP SINUS-24 and LIBERTY NP SINUS-52): results from two multicentre, randomised, double-blind, placebo-controlled, parallel-group phase 3 trials Lancet. 2019;394(10209):1638-1650. doi: 10.1016/s0140-6736(19)31881-1.
- Bel EH, Wenzel SE, Thompson PJ, et al. Oral glucocorticoid-sparing effect of mepolizumab in eosinophilic asthma. N Engl J Med. 2014;371:1189-1197
- Bernstein JA, Lang DM, Khan DA, et al. The diagnosis and management of acute and chronic urticaria: 2014 update. *J Allergy Clin Immunol*. 2014;133:1270-1277.
- Bhatt SP, Rabe KF, Hanania NA, et al. Dupilumab for COPD with blood eosinophil evidence of type 2 inflammation. N Engl J Med. 2024;390(24):2274-2283. doi:10.1056/NEJMoa2401304.
- Bhatt SP, Rabe KF, Hanania NA, et al. Dupilumab for COPD with type 2 inflammation indicated by eosinophil counts. N Engl J Med. 2023;389(3):205-214. doi:10.1056/NEJMoa2303951
- Bjermer L, Lemiere C, Maspero J, Weiss S, Zangrilli J, Germinaro M. Reslizumab for inadequately controlled asthma with elevated blood eosinophil levels: a randomized phase 3 study. *Chest.* 2016;150(4):789-798.
- Bleecker ER, Fitzgerald JM, Chanez P, et al. Efficacy and safety of benralizumab for patients with severe asthma uncontrolled with high-dosage inhaled corticosteroids and long-acting β2-agonists (SIROCCO): a randomized, multicenter, placebo-controlled phase 3 trial. *Lancet*. 2016:388(10056):2115-2127
- Bourdin A, Husereau D, Molinari N, et al. Matching-adjusted indirect comparison of benralizumab versus interleukin-5 inhibitors for the treatment of severe asthma: a systematic review. *Eur Respir J.* 2018;52(5). doi: 10.1183/13993003.01393-2018.
- Buhl R, Solèr M, Matz J, et al. Omalizumab provides long-term control in patients with moderate-to-severe allergic asthma. *Eur Respir J*. 2002;20(1):73-78.
- Busse W, Chupp G, Nagase H, et al. Anti-IL-5 treatments in patients with severe asthma by blood eosinophil thresholds: Indirect treatment comparison. J Allergy Clin Immunol. 2019b;143(1):190-200.e20. doi: 10.1016/j.jaci.2018.08.031.
- Busse W, Corren J, Lanier BQ, et al. Omalizumab, anti-IgE recombinant humanized monoclonal antibody, for the treatment of severe allergic asthma.
 J Allergy Clin Immunol. 2001;108(2):184-90.
- Busse WW, Bleecker ER, FitzGerald JM, et al; BORA study investigators. Long-term safety and efficacy of benralizumab in patients with severe, uncontrolled asthma: 1-year results from the BORA phase 3 extension trial. *Lancet Respir Med.* 2019a;7(1):46-59. doi: 10.1016/S2213-2600(18)30406-5.
- Casale TB, Pacou M, Mesana L, et al. Reslizumab compared with benralizumab in patients with eosinophilic asthma: a systematic literature review and network meta-analysis. *J Allergy Clin Immunol Pract*. 2019;7(1):122-130.e1. doi: 10.1016/j.jaip.2018.08.036.



- Castro M, Corren J, Pavord ID, et al. Dupilumab efficacy and safety in moderate-to-severe uncontrolled asthma. N Engl J Med. 2018;378(26):2486-2496. doi: 10.1056/NEJMoa1804092.
- Castro M, Wenzel SE, Bleecker ER, et al. Benralizumab, an anti-interleukin 5 receptor α monoclonal antibody, versus placebo for uncontrolled eosinophilic asthma: a phase 2b randomized dose-ranging study. *Lancet Respir Med*. 2014;2(11):879-890.
- Castro M, Zangrilli J, Wechsler ME, et al. Reslizumab for inadequately controlled asthma with elevated blood eosinophil counts: results from two multicentre, parallel, double-blind, randomised, placebo-controlled, phase 3 trials. *Lancet Respir Med*. 2015;3(5):355-366.
- Centers for Disease Control and Prevention (CDC). Most recent national asthma data. 2021. Updated July 2024. CDC Web site.
 https://www.cdc.gov/asthma/most recent national asthma data.htm. Accessed October 18, 2024.
- Chung SA, Langford CA, Maz M, et al. 2021 American College of Rheumatology/Vasculitis Foundation guideline for the management of antineutrophil cytoplasmic antibody-associated vasculitis. *Arthritis Care Res (Hoboken)*. 2021;73(8):1088-1105. doi:10.1002/acr.24634.
- Cinqair [package insert], information. Frazer, PA: Teva Pharmaceutical Industries Ltd.; June 2020.
- Cloutier MM, Dixon AE, Krishnan JA, et al. Managing asthma in adolescents and adults: 2020 asthma guideline update from the National Asthma Education and Prevention Program. *JAMA*. 2020;324(22):2301-2317. doi: 10.1001/jama.2020.21974.
- Cockle SM, Stynes G, Gunsoy NB, et al. Comparative effectiveness of mepolizumab and omalizumab in severe asthma: An indirect treatment comparison. *Respir Med.* 2017;123:140-148.
- Connelly-Smith L, Alquist CR, Aqui NA, et al. Guidelines on the use of therapeutic apheresis in clinical practice evidence-based approach from the Writing Committee of the American Society for Apheresis: The ninth special issue. *J Clin Apher*. 2023;38(2):77-278. doi: 10.1002/jca.22043.
- Corren J, Castro M, O'Riordan T, et al. Dupilumab efficacy in patients with uncontrolled, moderate-to-severe allergic asthma. *J Allergy Clin Immunol Pract*. 2020;8(2):516-526. doi: 10.1016/j.jaip.2019.08.050.
- Corren J, Kavati A, Ortiz B, et al. Efficacy and safety of omalizumab in children and adolescents with moderate-to-severe asthma: a systematic literature review. *Allergy Asthma Proc.* 2017b;38(4):250-263.
- Corren J, Parnes JR, Wang L, et al. Tezepelumab in adults with uncontrolled asthma. N Engl J Med. 2017a;377:936-946. doi: 19.10.1056/NEJMoa1704064
- Corren J, Weinstein S, Janka L, Zangrilli J, Garin M. Phase 3 study of reslizumab in patients with poorly controlled asthma: effects across a broad range of eosinophil counts. *Chest.* 2016;150(4):799-810.
- Delion ES, Gonsalves N, Hirano I, et al. ACG clinical guideline: Evidenced based approach to the diagnosis and management of esophageal eosinophilia and eosinophilic esophagitis (EoE). Am J Gastroenterol. 2013;108(5):679-693. doi:10.1038/ajg.2013.71
- Dellon ES, Rothenberg ME, Collins MH, et al. Dupilumab in adults and adolescents with eosinophilic esophagitis. N Engl J Med. 2022;387(25):2317-2330. doi:10.1056/NEJMoa2205982
- Drugs@FDA: FDA approved drug products. Food and Drug Administration Web site. https://www.accessdata.fda.gov/scripts/cder/daf/. Accessed October 18, 2024.
- Dupixent [formulary dossier], Bridgewater, NJ: Regeneron Pharmaceuticals Inc. and Sanofi; September 2024.
- Dupixent [package insert], Bridgewater, NJ: Sanofi-Aventis US, LLC and Tarrytown, NY: Regeneron Pharmaceuticals, Inc.; September 2024.
- Edris A, De Feyter S, Maes T, Joos G, Lahousse L. Monoclonal antibodies in type 2 asthma: a systematic review and network meta-analysis. *Respir Res.* 2019;20(1):179. doi: 10.1186/s12931-019-1138-3.
- Eisner MD, Zazzali JL, Miller MK, et al. Longitudinal changes in asthma control with omalizumab: 2-year interim data from the EXCELS study. *J Asthma*. 2012;49:642-648.
- Farne HA, Wilson A, Milan S, Banchoff E, Yang F, Powell C. Anti-IL5 therapies for asthma. *Cochrane Database Syst Rev.* 2022 Jul 12;7(7):CD010834. doi:10.1002/14651858.CD010834.pub4.
- Fasenra [package insert], Wilmington, DE: AstraZeneca Pharmaceuticals.; September 2024.
- Ferguson GT, Fitzgerald JM, Beecker ER, et al. Benralizumab for patients with mild to moderate, persistent asthma (BISE): a randomized, double-blind, placebo-controlled, phase 3 trial. Lancet Respir Med. 2017;5(7):568-576.
- FitzGerald JM, Bleecker ER, Menzies-Gow A, et al. Predictors of enhanced response with benralizumab for patients with severe asthma: pooled analysis of the SIROCCO and CALIMA studies. *Lancet Respir Med*. 2018;6(1):51-64.
- Fitzgerald JM, Bleecker ER, Nair P, et al. Benralizumab, an anti-interleukin-5 receptor α monoclonal antibody, as add-on treatment for patients with severe, uncontrolled, eosinophilic asthma (CALIMA): a randomized, double-blind, placebo-controlled phase 3 trial. *Lancet*. 2016;388(10056):2128-2141
- Fleischer DM, Chan ES, Venter C, et al. A consensus approach to the primary prevention of food allergy through nutrition: Guidance from the American Academy of Allergy, Asthma, and Immunology; American College of Allergy, Asthma, and Immunology; and the Canadian Society for Allergy and Clinical Immunology. *J Allergy Clin Immunol Pract*. 2021;9(1):22-43.e4. doi:10.1016/j.jaip.2020.11.002.
- Fokkens WJ, Viskens AS, Backer V, et al. EPOS/EUFOREA update on indication and evaluation of biologics in chronic rhinosinusitis with nasal polyps 2023. *Rhinology*. 2023;61(3):194-202. doi:10.4193/Rhin22.489.
- Food and Drug Administration press release. FDA Drug Safety Communication: FDA approves label changes for asthma drug Xolair, including
 describing slightly higher risk of heart and brain adverse events. September 26, 2014. FDA Web site. https://www.fda.gov/drugs/drug-safety-and-availability/fda-drug-safety-communication-fda-approves-label-changes-asthma-drug-xolair-omalizumab-including. Accessed October 18, 2024.
- Gevaert P, Omachi TA, Corren J, et al. Efficacy and safety of omalizumab in nasal polyposis: 2 randomized phase 3 trials. J Allergy Clin Immunol. 2020;146(3):595-605. doi: 10.1016/j.jaci.2020.05.032.
- GlaxoSmithKline. Nucala is the first biologic approved in the US for six to 11-year-old children with severe eosinophilic asthma. September 12, 2019.
 GlaxoSmithKline Web site. https://www.gsk.com/en-gb/media/press-releases/nucala-is-the-first-biologic-approved-in-the-us-for-six-to-11-year-old-children-with-severe-eosinophilic-asthma/. Accessed October 18, 2024.
- Global Initiative for Asthma (GINA). Global strategy for asthma management and prevention. 2024. http://www.ginasthma.org. Accessed October 18,
- Global Initiative for Chronic Obstructive Lung Disease (GOLD). Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease. 2024. https://goldcopd.org/2024-gold-report/. Accessed October 18, 2024



- Groh M, Pagnoux C, Baldini C, et al. Eosinophilic granulomatosis with polyangiitis (Churg-Strauss) (EGPA) Consensus Task Force recommendations for evaluation and management. Eur J Intern Med. 2015;26(7):545-553.
- Gupta A, Ikeda M, Geng B, et al. Long-term safety and pharmacodynamics of mepolizumab in children with severe asthma with an eosinophilic phenotype. *J Allergy Clin Immunol*. 2019b;144(5):1336-1342.e7. doi: 10.1016/j.jaci.2019.08.005.
- Gupta A, Pouliquen I, Austin D, et al. Subcutaneous mepolizumab in children aged 6 to 11 years with severe eosinophilic asthma. Pediatr Pulmonol. 2019a;54(12):1957-1967. doi: 10.1002/ppul.24508.
- Han JK, Bachert C, Fokkens W, et al. Mepolizumab for chronic rhinosinusitis with nasal polyps (SYNAPSE): a randomised, double-blind, placebo-controlled, phase 3 trial. Lancet Respir Med. 2021;9(10):1141-1153. doi:10.1016/S2213-2600(21)00097-7.
- Harrison TW, Chanez P, Menzella F, et al. Onset of effect and impact on health-related quality of life, exacerbation rate, lung function, and nasal polyposis symptoms for patients with severe eosinophilic asthma treated with benralizumab (ANDHI): a randomised, controlled, phase 3b trial. *Lancet Respir Med.* 2021;9(3):260-274. doi: 10.1016/S2213-2600(20)30414-8.
- Henriksen DP, Bodtger U, Sidenius K, et al. Efficacy, adverse events, and inter-drug comparison of mepolizumab and reslizumab anti-IL-5 treatments of severe asthma a systematic review and meta-analysis. *Eur Clin Respir J.* 2018;5(1):1536097. doi: 10.1080/20018525.2018.1536097.
- Hirano I, Chan ES, Rank MA, et al. AGA institute and the joint task force on allergy-immunology practice parameters clinical guidelines for the management of eosinophilic esophagitis. Ann Allergy Asthma Immunol. 2020a;124(5):416-423. doi:10.1016/j.anai.2020.03.020.
- Hirano I, Dellon ES, Hamilton JD, et al. Efficacy of dupilumab in a phase 2 randomized trial of adults with active eosinophilic esophagitis. *Gastroenterology*. 2020b;158(1):111-122.e10. doi:10.1053/j.gastro.2019.09.042.
- Holgate S, Bousquet J, Wenzel S, et al. Efficacy of omalizumab, an antiimmunoglobulin E antibody, in patients with allergic asthma at high risk of serious asthma-related morbidity and mortality. Curr Med Res Opin. 2001;17(4):233-240.
- Holgate ST, Chuchalin AG, Hébert J, et al. Efficacy and safety of a recombinant anti-immunoglobulin E antibody (omalizumab) in severe allergic asthma. Clin Exp Allergy. 2004;34(4):632-8.
- Holguin F, Cardet JC, Chung KF, et al. Management of severe asthma: a European Respiratory Society/American Thoracic Society guideline. *Eur Respir J.* 2020;55(1). pii: 1900588. doi: 10.1183/13993003.00588-2019.
- Hopkins C. Chronic Rhinosinusitis with Nasal Polyps. N Engl J Med. 2019;381(1):55-63. doi: 10.1056/NEJMcp1800215.
- Iftikhar IH, Schimmel M, Bender W, et al. Comparative efficacy of anti IL-4, IL-5 and IL-13 drugs for treatment of eosinophilic asthma: a network meta-analysis. Lung. 2018;196(5):517-530. doi: 10.1007/s00408-018-0151-5.
- Iribarren C, Rahmaoui A, Long AA, et al. Cardiovascular and cerebrovascular events among patients receiving omalizumab: Results from EXCELS, a prospective cohort study of moderate-to-severe asthma. *J Allergy Clin Immunol*. 2017;139(5):1489-1495.e5.
- Jackson DJ, Heaney LG, Humbert M, et al. Reduction of daily maintenance inhaled corticosteroids in patients with severe eosinophilic asthma treated with benralizumab (SHAMAL): a randomised, multicentre, open-label, phase 4 study. Lancet. 2024;403(10423):271-281. doi:10.1016/S0140-6736(23)02284-5.
- Jia HX, He YL. Efficacy and safety of omalizumab for chronic spontaneous urticaria: a systematic review and meta-analysis of randomized controlled trials. *Am J Ther.* 2020. doi:10.1097/MJT.00000000000012
- Kaplan A, Ledford D, Ashby M, et al. Omalizumab in patients with symptomatic chronic idiopathic/spontaneous urticaria despite standard combination therapy. *J Allergy Clin Immunol*. 2013;132:101-9.
- Khan DA. Chronic spontaneous urticaria: treatment of refractory symptoms. UpToDate Web site. https://www.uptodate.com/. Updated November 17, 2023. Accessed October 18, 2024.
- Khatri S, Moore W, Gibson PG, et al. Assessment of the long-term safety of mepolizumab and durability of clinical response in patients with severe eosinophilic asthma. *J Allergy Clin Immunol.* 2018;143(5):1742-1751. doi: 10.1016/j.jaci.2018.09.033.
- Lanier B, Bridges T, Kulus M, Taylor AF, Berhane I, Vidaurre CF. Omalizumab for the treatment of exacerbations in children with inadequately controlled allergic (IgE-mediated) asthma. *J Allergy Clin Immunol.* 2009;124(6):1210-6.
- Lanier BQ, Corren J, Lumry W, et al. Omalizumab is effective in the long-term control of severe allergic asthma. *Ann Allergy Asthma Immunol.* 2003;91(2):154-9.
- Ledford D, Busse W, Trzaskoma B, et al. A randomized multicenter study evaluating Xolair persistence of response after long-term therapy. *J Allergy Clin Immunol*. 2017;140(1):162-169.e2.
- Li J, Wang F, Lin C, et al. The efficacy and safety of reslizumab for inadequately controlled asthma with elevated blood eosinophil counts: a systematic
 review and meta-analysis. J Asthma. 2017;54(3):300-307.
- Liu Y, Carlson SA, Watson KB, Xu F, Greenlund KJ. Trends in the prevalence of chronic obstructive pulmonary disease among adults aged ≥ 18 years
 United States, 2011–2021. MMWR Morb Mortal Wkly Rep. 2023;72:1250-256. doi: http://dx.doi.org/10.15585/mmwr.mm7246a1.
- Long A, Rahmaoui A, Rothman KJ, et al. Incidence of malignancy in patients with moderate-to-severe asthma treated with or without omalizumab. J Allergy Clin Immunol. 2014;134:560-567.
- Lugogo N, Domingo C, Chanez P, et al. Long-term efficacy and safety of mepolizumab in patients with severe eosinophilic asthma: a multi-center, open-label, phase IIIb study. *Clin Ther.* 2016;38(9):2058-2070.
- Maurer M, Kaplan A, Rosen K, et al. The XTEND-CIU study: long term use of omalizumab in chronic idiopathic urticaria. *J Allergy Clin Immunol.* 2018;141(3):1138-1139.e7.
- Maurer M, Rosen K, Hsieh HJ, et al. Omalizumab for the treatment of chronic idiopathic or spontaneous urticaria. N Engl J Med. 2013;368:924-935.
- Menzies-Gow A, Corren J, Bourdin A, et al. Tezepelumab in adults and adolescents with severe, uncontrolled asthma. N Engl J Med. 2021;384:1800-1809. doi: 10.1056/NEJMoa2034975.
- Menzies-Gow A, Wechsler ME, Brightling CE, et al. Long-term safety and efficacy of tezepelumab in people with severe, uncontrolled asthma (DESTINATION): a randomised, placebo-controlled extension study. Lancet Respir Med. 2023;11(5):425-438. doi:10.1016/S2213-2600(22)00492-1.
- Murphy K, Jacobs J, Bjermer L, et al. Long-term safety and efficacy of reslizumab in patients with eosinophilic asthma. *J Allergy Clin Immunol Pract.* 2017;5(6):1572-1581.e3. doi: 10.1016/j.jaip.2017.08.024.
- Nachef Z, Krishnan A, Mashtare T, Zhuang T, Mador MJ. Omalizumab versus mepolizumab as add-on therapy in asthma patients not well controlled on at least an inhaled corticosteroid: a network meta-analysis. *J Asthma*. 2018;55(1):89-100.



- Nair P, Bardin P, Humbert M, et al. Efficacy of intravenous reslizumab in oral corticosteroid-dependent asthma. *J Allergy Clin Immunol Pract.* 2020;8(2):555-564. doi: 10.1016/j.jaip.2019.09.036.
- Nair P, Wenzel S, Rabe KF, et al. Oral glucocorticoid-sparing effect of benralizumab in severe asthma. N Engl J Med. 2017;376(25):2448-2458.
- National Heart, Lung, and Blood Institute Web site. Asthma. https://www.nhlbi.nih.gov/health-topics/asthma. Updated April 2024.
 Accessed October 18, 2024.
- National Heart, Lung, and Blood Institute Web site. Expert Panel Report 3: Guidelines for the diagnosis and management of asthma. http://www.nhlbi.nih.gov/health-pro/guidelines/current/asthma-guidelines.
 2007. Accessed October 18, 2024.
- Nopsopon T, Lassiter G, Chen ML, et al. Comparative efficacy of tezepelumab to mepolizumab, benralizumab, and dupilumab in eosinophilic asthma: A Bayesian network meta-analysis. *J Allergy Clin Immunol*. 2023;151(3):747-755. doi:10.1016/j.jaci.2022.11.021.
- Normansell R, Walker S, Milan SJ, et al. Omalizumab for asthma in adults and children. Cochrane Database Syst Rev. 2014 Jan 13;(1):CD003559.
- Nucala [package insert], Philadelphia, PA: GlaxoSmithKline LLC; March 2023.
- Ohtuvayre. Package insert. Raleigh, NC: Verona Pharma; June 2024.
- Orlandi RR, Kingdom TT, Smith TL, et al. International consensus statement on allergy and rhinology: Rhinosinusitis. *Int Forum Allergy Rhinol.* 2021;11(3):213-739. doi: 10.1002/alr.22741.
- Ortega HG, Liu MC, Pavord ID, et al. Mepolizumab treatment in patients with severe eosinophilic asthma. N Engl J Med. 2014;371(13):1198-1207.
- Ortega HG, Yancey SW, Mayer B, et al. Severe eosinophilic asthma treated with mepolizumab stratified by baseline eosinophil thresholds: a secondary analysis of the DREAM and MENSA studies. Lancet Respir Med. 2016;4(7):549-556.
- Pagnoux C, Groh M. Optimal therapy and prospects for new medicines in eosinophilic granulomatosis with polyangiitis (Churg-Strauss syndrome).
 Expert Rev Clin Immunol; 2016; 12(10): 1059-1067.
- Pavord ID, Korn S, Howarth P, et al. Mepolizumab for severe eosinophilic asthma (DREAM): a multicentre, double-blind, placebo-controlled trial. Lancet. 2012;380:651-659.
- Peters AT, Spector S, Hsu J, et al. Diagnosis and management of rhinosinusitis: a practice parameter update. *Ann Allergy Asthma Immunol.* 2014;113(4):347-85. doi: 10.1016/j.anai.2014.07.025.
- Pitre T, Jassal T, Angjeli A, et al. A comparison of the effectiveness of biologic therapies for asthma: A systematic review and network meta-analysis.
 Ann Allergy Asthma Immunol. 2023;130(5):595-606.
- Purple Book: Lists of licensed biological products with reference product exclusivity and biosimilarity or interchangeability evaluations. Food and Drug Administration Web site. https://www.fda.gov/drugs/biosimilars/purple-book-lists-licensed-biological-products-reference-product-exclusivity-and-biosimilarity-or. Accessed October 18, 2024.
- Rabe KF, Nair P, Brusselle G, et al. Efficacy and safety of dupilumab in glucocorticoid-dependent severe asthma. N Engl J Med. 2018;378(26):2475-2485. doi: 10.1056/NEJMoa1804093.
- Ramonell RP, Iftikhar IH. Effect of anti-IL5, anti-IL5r, anti-IL13 therapy on asthma exacerbations: a network meta-analysis. Lung. 2020;198(1):95-103. doi:10.1007/s00408-019-00310-8
- Rank MA, Chu DK, Bognanni A, et al. The Joint Task Force on Practice Parameters GRADE guidelines for the medical management of chronic rhinosinusitis with nasal polyposis. *J Allergy Clin Immunol.* 2023;151(2):386-398. doi:10.1016/j.jaci.2022.10.026.
- Rodrigo GJ, Neffen H, Castro-Rodriguez JA. Efficacy and safety of subcutaneous omalizumab vs placebo as add-on therapy to corticosteroids for children and adults with asthma: a systematic review. Chest. 2011:139(1):28-35.
- Rosenfeld RM, Piccirillo JF, Chandrasekhar SS, et al. Clinical practice guideline (update): adult sinusitis. *Otolaryngol Head Neck Surg.* 2015;152(2 Suppl):S1-S39. doi: 10.1177/0194599815572097.
- Rothenberg ME, Dellon ES, Collins MH, et al. Efficacy and safety of dupilumab up to 52 weeks in adults and adolescents with eosinophilic oesophagitis (LIBERTY EoE TREET study): a multicentre, double-blind, randomised, placebo-controlled, phase 3 trial. *Lancet Gastroenterol Hepatol*. 2023;8(11):990-1004. doi:10.1016/S2468-1253(23)00204-2.
- Roufosse F, Kahn JE, Rothenberg ME, et al; HES Mepolizumab study group. Efficacy and safety of mepolizumab in hypereosinophilic syndrome: A phase III, randomized, placebo-controlled trial. *J Allergy Clin Immunol*. 2020;146(6):1397-1405. doi: 10.1016/j.jaci.2020.08.037.
- Roufosse F, Klion AD, Weller PF. Hypereosinophilic syndromes: treatment. UpToDate Web site. http://www.uptodate.com. Updated November 30, 2022. Accessed October 18, 2024.
- Rubini NPM, Ensina LFC, Silva EMK, Sano F, Sole D. Effectiveness and safety of omalizumab in the treatment of chronic spontaneous urticaria: Systematic review and meta-analysis. *Allergol Immunopathol (Madr)*. 2019;47(6):515-522. doi: 10.1016/j.aller.2019.05.003.
- Sabroe RA, Lawlor F, Grattan CEH, et al. British Association of Dermatologists guidelines for the management of people with chronic urticaria 2021. *Br J Dermatol*. 2022;186(3):398-413. doi:10.1111/bjd.20892
- Saini S. Chronic spontaneous urticaria: clinical manifestations, diagnosis, pathogenesis, and natural history. UpToDate Web site. https://www.uptodate.com/. Updated June 6, 2024. Accessed October 18, 2024.
- Saini SS, Bindslev-Jensen C, Maurer M, et al. Efficacy and safety of omalizumab in patients with chronic idiopathic/spontaneous urticaria who remain symptomatic on H1 antihistamines: a randomized, placebo-controlled study. *J Invest Derm*. 2015;135:67-75.
- Sampson HA, Aceves S, Bock SA, et al. Food allergy: a practice parameter update-2014. J Allergy Clin Immunol. 2014;134(5):1016-25.e43. doi:10.1016/j.jaci.2014.05.013.
- Shomali W, Gotlib J. World Health Organization and International Consensus Classification of eosinophilic disorders: 2024 update on diagnosis, risk stratification, and management. *Am J Hematol*. 2024;99(5):946-968. doi:10.1002/ajh.27287.
- Solèr M, Matz J, Townley R, et al. The anti-IgE antibody omalizumab reduces exacerbations and steroid requirement in allergic asthmatics. *Eur Respir J*. 2001;18(2):254-61.
- Tezspire [package insert], Thousand Oaks, CA: Amgen Inc; May 2023.
- Virchow JC, Katial R, Brusselle GG, et al. Safety of reslizumab in uncontrolled asthma with eosinophilia: a pooled analysis from 6 trials. *J Allergy Clin Immunol Pract*. 2020;8(2):540-548. doi: 10.1016/j.jaip.2019.07.038.
- Walford HH, Doherty TA. Diagnosis and management of eosinophilic asthma: a US perspective. J Asthma and Allergy. 2014;7:53-65.
- Wechsler ME, Akuthota P, Jayne D, et al. Mepolizumab or placebo for eosinophilic granulomatosis with polyangiitis. N Engl J Med. 2017;376(20):1921-1932.



Wechsler ME, Nair P, Terrier B, et al. Benralizumab versus mepolizumab for eosinophilic granulomatosis with polyangiitis. N Engl J Med. 2024;390:911-921.

- Wedner HJ, Fujisawa T, Guilbert TW, et al. Benralizumab in children with severe eosinophilic asthma: Pharmacokinetics and long-term safety (TATE study). Pediatr Allergy Immunol. 2024;35(3):e14092. doi:10.1111/pai.14092.
- Wood RA, Togias A, Sicherer SH, et al. Omalizumab for the treatment of multiple food allergies. N Engl J Med. 2024;390(10):889-899. doi:10.1056/NEJMoa2312382.
- Wu Q, Zhang Y, Kong W, et al. Which is the best biologic for nasal polyps: dupilumab, omalizumab, or mepolizumab? A network meta-analysis. *Int Arch Allergy Immunol.* 2022;183(3):279-288. doi:10.1159/000519228.
- Xolair [package insert], South San Francisco, CA: Genentech, Inc. and East Hanover, NJ: Novartis Pharmaceuticals; August 2024.
- Yancey SW, Ortega HG, Keene ON, et al. Meta-analysis of asthma-related hospitalization in mepolizumab studies of severe eosinophilic asthma. J Allergy Clin Immunol. 2017;139(4):1167-1175.
- Zayed Y, Kheiri B, Banifadel M, et al. Dupilumab safety and efficacy in uncontrolled asthma: a systematic review and meta-analysis of randomized clinical trials. J Asthma. 2018:1-10. doi: 10.1080/02770903.2018.1520865.
- Zhao ZT, Ji CM, Yu WJ, et al. Omalizumab for the treatment of chronic spontaneous urticaria: A meta-analysis of randomized clinical trials. J Allergy Clin Immunol. 2016;137(6):1742-1750.
- Zoumot Z, Al Busaidi N, Tashkandi W, et al. Tezepelumab for patients with severe uncontrolled asthma: a systematic review and meta-analysis. J Asthma Allergy. 2022;15:1665-1679. doi:10.2147/JAA.S378062.
- Zuberbier T, Aberer W, Asero R, et al. di. Allergy. 2022;77(3):734-766.doi: 10.1111/all.15090.

Publication Date: November 4, 2024



Therapeutic Class Overview

Anticonvulsants

Introduction

- Epilepsy is a disease of the brain defined by any of the following (Fisher et al 2014):
 - At least 2 unprovoked (or reflex) seizures occurring > 24 hours apart;
 - 1 unprovoked (or reflex) seizure and a probability of further seizures similar to the general recurrence risk (at least 60%) after 2 unprovoked seizures, occurring over the next 10 years;
 - o Diagnosis of an epilepsy syndrome.
- Types of seizures include generalized seizures (previously called primary generalized), focal seizures (previously called partial), and seizures of unknown onset (*Fisher et al 2017A, Fisher et al 2017B, Nguyen et al 2023*). Seizure classifications from the International League against Epilepsy (ILAE) were updated in 2017.
 - Generalized seizures affect both sides of the brain and are classified by the type of symptoms:
 - Motor seizures: can be further classified by the type of motor symptoms
 - Tonic-clonic (previously called grand mal): begin with stiffening of the limbs, followed by jerking of the limbs and face
 - Myoclonic: characterized by rapid, brief contractions of body muscles, usually on both sides of the body at the same time
 - Atonic: characterized by abrupt loss of muscle tone; they are also called drop attacks or akinetic seizures and can result in injury due to falls
 - Nonmotor (absence) seizures (previously called petit mal): typical symptoms include brief lapses of awareness, sometimes with staring, that begin and end abruptly; they are more common in children than adults and may be accompanied by brief myoclonic jerking of the eyelids or facial muscles, a loss of muscle tone, or automatisms.
 - Focal seizures are located in just 1 area of the brain and are classified by the level of awareness and type of symptoms on onset of the seizure:
 - Focal aware (previously called simple) vs focal impaired awareness (previously called complex): retained awareness relates to ability for patient to remain aware of self and environment during a seizure
 - Motor onset vs nonmotor onset: grouped by earliest most prominent sign, either motor (eg, atonic, clonic, or tonic movements) or nonmotor (eg, autonomic or sensory symptoms)
 - Focal to bilateral tonic-clonic (previously called secondarily generalized seizures): describes pattern of a seizure that propagates to involve both sides of the brain
 - Seizures of unknown onset are classified by the type of symptoms, but onset is unable to be classified.
 - Any seizure type can lead to status epilepticus, which is characterized by prolonged, uninterrupted seizure activity.
- There is variation between the ILAE classifications and many of the Food and Drug Administration (FDA)-approved indications for antiepileptic drugs (AEDs) (*Nguyen et al 2023; Schachter 2024[a]*). For example, a "focal aware" seizure corresponds to the prior term "simple partial seizure," a "focal impaired awareness" seizure corresponds to the prior term "complex partial seizure," "generalized" seizure corresponds to the prior term "primary generalized," "generalized tonic-clonic" seizure corresponds to the prior term "grand mal," and "absence" seizure corresponds to the prior term "petit mal."
- A number of epilepsy syndromes have also been described; these are defined by groups of features that tend to occur together such as having a similar seizure type, age of onset, part of the brain involved, and electroencephalogram (EEG) pattern (*Epilepsy Foundation 2013*). An example is a childhood epilepsy syndrome called Lennox-Gastaut syndrome (LGS), which is characterized by several seizure types including tonic (stiffening) and atonic (drop) seizures. In LGS, there is a classic EEG pattern seen and intellectual development is usually impaired (*Epilepsy Foundation 2020*)
- Epilepsy management is focused on the goals of 1) controlling seizures, 2) avoiding treatment-related adverse effects (AEs), and 3) maintaining or restoring quality of life. Management options vary based on the seizure type. It is usually appropriate to refer patients to a neurologist to establish the epilepsy diagnosis and formulate the management strategy (Schachter 2024[b]).
 - A correct diagnosis is essential to proper treatment selection. For example, absence seizures are commonly
 confused with complex partial seizures. However, drugs that reduce absence seizures are generally ineffective for
 complex partial seizures, and the most effective drugs for complex partial seizures may be ineffective against or even
 increase the frequency of absence seizures.



- When possible, monotherapy with a single AED is the preferred treatment approach. Use of monotherapy increases the probability of treatment adherence, provides a wider therapeutic index, and is associated with fewer idiosyncratic reactions, teratogenic effects, and potential drug interactions. However, data are conflicting on the benefits of mono- vs polytherapy. When combination therapy is needed, it is recommended to select products with different mechanisms of action and AE profiles. There is little comparative clinical data to support the use of specific combinations (*Schachter* 2024[b]).
- Several broad classes of AEDs are available, including barbiturates, benzodiazepines, hydantoins, and miscellaneous agents (see Table 1).
- Several newer products with different mechanisms of action have been approved in the past several years for use in childhood epilepsy syndromes such as LGS and Dravet syndrome. These include cannabidiol (Epidiolex), stiripentol (Diacomit), and fenfluramine (Fintepla).
- In March 2022, ganaxolone (Ztalmy) was approved by the FDA as an orphan drug for the treatment of seizures associated with cyclin-dependent kinase-like 5 (CDKL5) deficiency disorder. In November 2022, phenobarbital injection (Sezaby) was approved by the FDA as an orphan drug for the treatment of neonatal seizures. Previous formulations of phenobarbital were not FDA-approved.
- Everolimus tablets for oral suspension (Afinitor Disperz) received an expanded indication in April 2018 for use in partialonset seizures associated with tuberous sclerosis complex (TSC). This product is a kinase inhibitor that also has several oncology indications.
- Intranasal formulations of benzodiazepines have also been recently approved for the acute treatment of seizures, including midazolam nasal spray (Nayzilam) and diazepam nasal spray (Valtoco).
- Several of the AEDs are used for additional indications beyond the management of epilepsy, including (but not limited to) bipolar disorder, migraine prophylaxis, and several types of neuropathic pain. These additional indications are listed in Table 2; however, this review primarily focuses on the use of AEDs for the management of epilepsy. Additionally, brands and formulations that are FDA-approved and marketed only for non-epilepsy indications are not included within this review; these include gabapentin tablets (Gralise), gabapentin enacarbil extended-release tablets (Horizant), pregabalin extended-release tablets (Lyrica CR), and everolimus oral tablets (Afinitor, Zortress).
- Medispan class: Antianxiety agents, benzodiazepines; Anticonvulsants, AMPA glutamate receptor antagonists;
 Anticonvulsants, anticonvulsants misc; Anticonvulsants, carbamates; Anticonvulsants, GABA modulators;
 Anticonvulsants, hydantoins; Anticonvulsants, succinimides; Anticonvulsants, valproic acid; Hypnotics/Sedatives/Sleep Disorder Agents, barbiturate hypnotics

Table 1. Medications Included Within Class Review

Drug	Alternative Available (same molecular entity)*
Barbiturates	
Pentobarbital (Nembutal)	>
Phenobarbital [†] (Sezaby)	>
Primidone (Mysoline)	>
Benzodiazepines	
Clobazam (Onfi, Sympazan)	>
Clonazepam (Klonopin§)	~
Clorazepate (Tranxene T-Tab§)	~
Diazepam (Diastat, Diastat AcuDial, Diazepam Intensol, Libervant,	>
Valium§, Valtoco)	¥ II
Midazolam (Nayzilam, Seizalam)	-
Hydantoins	
Fosphenytoin (Cerebyx)	→
Phenytoin (Dilantin [§] , Phenytek**)	✓
Miscellaneous	
Brivaracetam (Briviact)	-
Cannabidiol (Epidiolex)	-
Carbamazepine (Carbatrol, Epitol**, Equetro, Tegretol\$, Tegretol-XR)	→

Data as of August 20, 2024 KS-U/LK-U/BSH

Page 2 of 32



Drug	Alternative Available (same molecular entity)*
Cenobamate (Xcopri)	-
Divalproex sodium (Depakote, Depakote ER, Depakote Sprinkle)	✓
Eslicarbazepine (Aptiom)	-
Ethosuximide (Zarontin)	✓
Everolimus (Afinitor Disperz)	∨
Felbamate (Felbatol)	∨
Fenfluramine (Fintepla)	-
Gabapentin (Neurontin)	✓
Ganaxolone (Ztalmy)	-
Lacosamide (Vimpat)	✓
Lacosamide (Motpoly XR)	-
Lamotrigine (Lamictal, Lamictal ODT, Lamictal XR, Subvenite**)	✓
Levetiracetam (Keppra, Keppra XR, Roweepra**, Spritam, Elepsia XR)	→
Methsuximide (Celontin)	∨
Oxcarbazepine (Oxtellar XR, Trileptal)	✓
Perampanel (Fycompa)	-
Pregabalin (Lyrica)	∨
Rufinamide (Banzel)	∨
Stiripentol (Diacomit)	-
Tiagabine (Gabitril)	✓
Topiramate (Topamax, Topamax Sprinkle, Trokendi XR, Qudexy XR,	∨ ∥
Eprontia)	· "
Valproic acid/valproate sodium	✓
Vigabatrin (Sabril, Vigadrone**)	✓
Vigabatrin (Vigafyde)	<u>-</u>
Zonisamide (Zonegran§, Zonisade)	→

^{*}For example, authorized generic, branded generic (unless not considered therapeutically equivalent by the Orange Book), generic, unbranded biologic, or interchangeable biologic.

(Drugs@FDA 2024, Orange Book: Approved Drug Products with Therapeutic Equivalence Evaluations 2024)

Indications

- Tables 2A and 2B provide an overview of the various indications for the anticonvulsant category of medications. Except where noted, only FDA-approved products and indications are included. For items marked with an asterisk, there is additional information about the indication provided in the box following the tables.
 - Acute-care indications that are not related to convulsive disorders (for example, pre-procedural use of benzodiazepines in hospital settings) are not included.

[†] Only Sezaby is FDA-approved; other phenobarbital products are marketed without FDA approval

[§] Brand marketing status may vary by strength and/or formulation

Generic availability may vary by strength, brand and/or formulation

^{**} Branded generic



Table 2A. Indications for anticonvulsants (Part 1 of 2)

Table 2A. Indications for anticonvulsants (Part 1 of 2)																				
Indications	Brivaracetam	Cannabidiol	Carbamazepine	Cenobamate	Clobazam	Clonazepam	Clorazepate	Diazepam	Divalproex Sodium	Eslicarbazepine	Ethosuximide	Everolimus	Felbamate	Fenfluramine	Fosphenytoin	Gabapentin	Ganaxolone	Lacosamide	Lamotrigine	Levetiracetam
Partial seizures (simple partial, complex partial and/or secondarily	•, A*		y *	* *			А		✓ , A*	✓ , A*			✓, A*			A*		* *	✓ , A*	* *
generalized) Primary generalized tonic-clonic seizure (grand mal)			~												v *			A*	A*	A*
Absence seizure (petit mal)						v *			, A*		>									
Multiple seizure types that include absence seizures Seizures of Lennox-									Α											
Gastaut syndrome (LGS)		* *			A*	✓ , A							A*	* *					A*	
Seizures of Dravet syndrome		v *												v *						
Juvenile myoclonic epilepsy (JME)																				Α*
Emergency/acute/short -term use for seizure control (see notes)								* *							* *					
Akinetic and myoclonic seizures						✓ ,														
Convulsive disorders (see notes)								A*												
Certain mixed seizure patterns or other partial or generalized seizures			y *																	
Migraine prophylaxis Trigeminal neuralgia			* *						*											
Postherpetic neuralgia																* *				
Bipolar disorder Panic disorder, with or			* *						*										v *	
without agoraphobia						>														
Anxiety disorder; short- term relief of anxiety symptoms							~	~												
Symptomatic relief of acute alcohol withdrawal							>	~												



Indications	Brivaracetam	Cannabidiol	Carbamazepine	Cenobamate	Clobazam	Clonazepam	Clorazepate	Diazepam	Divalproex Sodium	Eslicarbazepine	Ethosuximide	Everolimus	Felbamate	Fenfluramine	Fosphenytoin	Gabapentin	Ganaxolone	Lacosamide	Lamotrigine	Levetiracetam
Relief of skeletal muscle spasm, spasticity, athetosis, and stiff-man syndrome								Α												
Seizures associated with cyclin-dependent kinase-like 5 (CDKL5) deficiency disorder																	*			
Seizures associated with tuberous sclerosis complex (TSC)		v *										A*								
TSC for the treatment of subependymal giant cell astrocytoma (SEGA)												*								

^{√ =} monotherapy (or not specified); A = adjunctive therapy

Table 2B. Indications for Anticonvulsants (Part 2 of 2)

Indications	Midazolam	Methsuximide	Oxcarbazepine	Pentobarbital	Perampanel	Phenobarbital [†]	Phenytoin	Pregabalin	Primidone	Rufinamide	Stiripentol	Tiagabine	Topiramate	Valproic acid	Vigabatrin	Zonisamide
Partial seizures (simple partial, complex partial and/or secondarily generalized)			, A*		✓ , A*		v *	A*	✓ , A*			A*	✓ , A*	✓ , A*	A*	A*
Primary generalized tonic-clonic seizure (grand mal)					A*		v *		, A*				, A*			
Absence seizure (petit mal)		v *												✓ , A*		
Multiple seizure types which include absence seizures														A*		
Seizures of LGS										Α*			A*			
Seizures of Dravet syndrome											A*					
Emergency/acute/ short- term use for seizure control (see notes)	y *			v *			v *									

Data as of August 20, 2024 KS-U/LK-U/BSH

Page 5 of 32

This information is considered confidential and proprietary to Optum Rx. It is intended for internal use only and should be disseminated only to authorized recipients. The contents of the therapeutic class overviews on this website ("Content") are for informational purposes only. The Content is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Patients should always seek the advice of a physician or other qualified health provider with any questions regarding a medical condition. Clinicians should refer to the full prescribing information and published resources when making medical decisions.



Indications	Midazolam	Methsuximide	Oxcarbazepine	Pentobarbital	Perampanel	Phenobarbital [†]	Phenytoin	Pregabalin	Primidone	Rufinamide	Stiripentol	Tiagabine	Topiramate	Valproic acid	Vigabatrin	Zonisamide
Infantile spasms															* *	
Convulsive disorders (see notes)						* *										
Neonatal seizures						*										
Migraine prophylaxis													*			
Postherpetic neuralgia								>								
Sedative for anxiety, tension, and apprehension																
Neuropathic pain associated with diabetic peripheral neuropathy								>								
Neuropathic pain associated with spinal cord injury								<								
Fibromyalgia Short-term treatment of insomnia [¥]				>				>								

^{√ =} monotherapy (or not specified); A = adjunctive therapy

Notes: Additional Detail on Selected Indications

- Brivaracetam:
 - Treatment of partial-onset seizures in patients ≥ 1 month of age
- Cannabidiol:
 - o Treatment of seizures associated with LGS, Dravet syndrome, or TSC in patients ≥ 1 year of age
- Carbamazepine:
 - Partial seizures with complex symptomatology (psychomotor, temporal lobe); patients with these seizures appear to show greater improvement than those with other types; generalized tonic-clonic seizures (grand mal); mixed seizure patterns which include the above, or other partial or generalized seizures
 - Absence seizures (petit mal) do not appear to be controlled; carbamazepine has been associated with increased frequency of generalized convulsions in these patients
 - Treatment of pain associated with true trigeminal neuralgia; beneficial results also reported in glossopharyngeal neuralgia
 - Bipolar indication is for an extended-release capsule formulation (Equetro) only: treatment of patients with acute manic or mixed episodes associated with bipolar I disorder
- Cenobamate:
 - o Treatment of partial-onset seizures in adult patients
- Clobazam:
 - Seizures associated with LGS in patients ≥ 2 years of age
- Clonazepam:
 - o In patients with absence seizures who have failed to respond to succinimides, clonazepam may be useful
- Diazepam:
 - Oral diazepam (tablets, solution, concentrate) may be used adjunctively in convulsive disorders; it has not proved useful as sole therapy

Data as of August 20, 2024 KS-U/LK-U/BSH

Page 6 of 32

This information is considered confidential and proprietary to Optum Rx. It is intended for internal use only and should be disseminated only to authorized recipients. The contents of the therapeutic class overviews on this website ("Content") are for informational purposes only. The Content is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Patients should always seek the advice of a physician or other qualified health provider with any questions regarding a medical condition. Clinicians should refer to the full prescribing information and published resources when making medical decisions.

[†]Only Sezaby is FDA-approved; other phenobarbital products are marketed without FDA approval

^{*}Use is not recommended.



- o Injectable diazepam is a useful adjunct in status epilepticus and severe recurrent convulsive seizures
- o Diazepam nasal spray and rectal gel are indicated for the acute treatment of intermittent, stereotypic episodes of frequent seizure activity (ie, seizure clusters, acute repetitive seizures) that are distinct from a patient's usual seizure pattern in patients with epilepsy ≥ 6 years of age (nasal spray), ≥ 2 years of age (rectal gel), or 2 to 5 years of age (buccal film)
- Divalproex sodium:
 - Monotherapy and adjunctive therapy in the treatment of patients with complex partial seizures that occur either in isolation or in association with other types of seizures (≥ 10 years of age for all formulations)
 - Monotherapy and adjunctive therapy in the treatment of simple and complex absence seizures (≥ 10 years of age for extended-release tablets; age not specified for tablets/sprinkle capsules)
 - o Adjunctive therapy for treatment of multiple seizure types that include absence seizures
 - o The tablets and extended-release tablets have indications in bipolar disorder and migraine prophylaxis; the sprinkle capsule formulation does not. For bipolar disorder, safety and effectiveness for long-term use (> 3 weeks) has not been demonstrated in controlled clinical trials. Bipolar disorder indications are as follows:
 - Treatment of the manic episodes associated with bipolar disorder (tablets)
 - Treatment of acute manic or mixed episodes associated with bipolar disorder, with or without psychotic features (extended-release tablets)
- Eslicarbazepine:
 - o Treatment of partial-onset seizures in patients ≥ 4 years of age
- Everolimus:
 - o Adjunctive treatment of adult and pediatric patients ≥ 2 years of age with TSC-associated partial-onset seizures
 - Adult and pediatric patients ≥ 1 year of age with TSC for the treatment of SEGA that requires therapeutic intervention but cannot be curatively resected
- Felbamate:
 - Not first-line; recommended only in patients who respond inadequately to alternative treatments and whose epilepsy
 is so severe that a substantial risk of aplastic anemia and/or liver failure is deemed acceptable
 - Monotherapy or adjunctive therapy in the treatment of partial seizures, with and without generalization, in adults with epilepsy
 - Adjunctive therapy of partial and generalized seizures associated with LGS in children (age not specified in indication; dosage instructions are provided for patients ≥ 2 years of age)
- Fenfluramine:
 - Treatment of seizures associated with Dravet syndrome and LGS in patients ≥ 2 years of age
- Fosphenytoin:
 - Treatment of generalized tonic-clonic status epilepticus
 - o Prevention and treatment of seizures occurring during neurosurgery
 - o Can be substituted short-term for oral phenytoin when oral phenytoin administration is not possible
- Gabapentin:
 - Adjunctive therapy in the treatment of partial-onset seizures, with and without secondary generalization, in adults and pediatric patients ≥ 3 years of age with epilepsy
 - Management of postherpetic neuralgia in adults
- Ganaxolone:
 - o Treatment of seizures associated with CDKL5 deficiency disorder in patients ≥ 2 years of age
- · Lacosamide:
 - Treatment of partial-onset seizures in patients ≥ 1 month of age (tablet, oral solution, injection [Vimpat] only) and in adults and pediatric patients weighing ≥ 50 kg (extended-release capsule [Motpoly XR] only)
 - Adjunctive therapy in the treatment of primary generalized tonic-clonic seizures in patients ≥ 4 years of age [Vimpat] and in adults and pediatric patients weighing ≥ 50 kg [Motpoly XR]
- Lamotrigine immediate-release formulations:
 - o Age ≥ 2 years for adjunctive therapy for partial-onset seizures, primary generalized tonic-clonic seizures, and generalized seizures of LGS
 - Age ≥ 16 years for conversion to monotherapy in patients with partial-onset seizures who are receiving treatment with carbamazepine, phenytoin, phenobarbital, primidone, or valproate as the single AED



- Maintenance treatment of bipolar I disorder to delay the time to occurrence of mood episodes in patients treated for acute mood episodes with standard therapy (treatment of acute manic or mixed episodes is not recommended)
- Lamotrigine extended-release tablets:
 - Age ≥ 13 years for adjunctive therapy for primary generalized tonic-clonic seizures and partial-onset seizures with or without secondary generalization, and age ≥ 13 years for conversion to monotherapy in patients with partial-onset seizures who are receiving treatment with a single AED
 - o The extended-release formulation is not FDA-approved for bipolar disorder
- · Levetiracetam:
 - o Tablets, oral solution, injection, and tablets for oral suspension:
 - Treatment of partial-onset seizures in patients ≥ 1 month of age (tablets, oral solution, and injection [Keppra]); treatment for partial-onset seizures in patients ≥ 4 years of age and weighing > 20 kg (tablets for oral suspension [Spritam])
 - Adjunctive therapy in the treatment of myoclonic seizures in adults and adolescents ≥ 12 years of age with JME
 - Adjunctive therapy in the treatment of primary generalized tonic-clonic seizures in adults and children ≥ 6
 years of age with idiopathic generalized epilepsy
 - The extended-release tablets are only indicated for the treatment of partial-onset seizures in patients ≥ 12 years of age
- Methsuximide:
 - o Control of absence (petit mal) seizures that are refractory to other drugs
- Midazolam:
 - Nasal spray: Acute treatment of intermittent, stereotypic episodes of frequent seizure activity (ie, seizure clusters, acute repetitive seizures) that are distinct from a patient's usual seizure pattern in patients with epilepsy ≥ 12 years of age
 - o IM injection: Treatment of status epilepticus in adults
- Oxcarbazepine immediate-release formulations:
 - o Monotherapy in the treatment of partial seizures in adults and children 4 to 16 years of age
 - o Adjunctive therapy in the treatment of partial seizures in adults and children 2 to 16 years of age
- Oxcarbazepine extended-release tablets:
 - o Treatment of partial-onset seizures in adults and children ≥ 6 years of age
- Pentobarbital:
 - o In anesthetic doses in the emergency control of certain acute convulsive episodes, eg, those associated with status epilepticus, cholera, eclampsia, meningitis, tetanus, and toxic reactions to strychnine or local anesthetics
- Perampanel:
 - Treatment of partial-onset seizures with or without secondarily generalized seizures in patients with epilepsy ≥ 4 years
 of age
 - Adjunctive therapy in the treatment of primary generalized tonic-clonic seizures in patients with epilepsy ≥ 12 years of age
- Phenobarbital (Sezaby is the only formulation that is FDA-approved):
 - Phenobarbital tablets and elixir are indicated for the treatment of generalized and partial seizures; the generic
 injection is indicated as an anticonvulsant for the treatment of generalized tonic-clonic and cortical focal seizures, in
 the emergency control of certain acute convulsive episodes, and in pediatric patients as an anticonvulsant; the brand
 Sezaby injection is indicated for the treatment of neonatal seizures in term and preterm infants
- Phenytoin oral formulations:
 - Treatment of tonic-clonic (grand mal) and complex partial (psychomotor, temporal lobe) seizures and prevention and treatment of seizures occurring during or following neurosurgery (the oral suspension does not have the neurosurgery indication)
- Phenytoin injection:
 - Treatment of generalized tonic-clonic status epilepticus and prevention and treatment of seizures occurring during neurosurgery
 - o Can be substituted as short-term use for oral phenytoin when oral phenytoin administration is not possible
- Pregabalin:
 - o Adjunctive therapy for treatment of partial-onset seizures in patients ≥ 1 month of age



- Primidone:
 - Control of grand mal, psychomotor, and focal epileptic seizures; may control grand mal seizures refractory to other anticonvulsant therapy
- Rufinamide:
 - o Adjunctive treatment of seizures associated with LGS in adults and pediatric patients ≥ 1 year of age
- Stiripentol:
 - Treatment of seizures associated with Dravet syndrome in patients taking clobazam who are ≥ 6 months of age and weigh ≥ 7 kg; no clinical data to support its use as monotherapy
- Tiagabine:
 - o Adjunctive therapy in adults and children ≥ 12 years of age in the treatment of partial seizures
- Topiramate:
 - Initial monotherapy in patients with partial-onset or primary generalized tonic-clonic seizures (age ≥ 2 years for tablets, immediate-release sprinkle capsules, oral solution, and Qudexy XR extended-release capsules; age ≥ 6 years for Trokendi XR extended-release capsules)
 - o Adjunctive therapy for adults and pediatric patients with partial-onset seizures or primary generalized tonic-clonic seizures and in patients with seizures associated with LGS (age ≥ 2 years for tablets, immediate-release sprinkle capsules, oral solution, and Qudexy XR extended-release capsules; age ≥ 6 years for Trokendi XR extended-release capsules)
 - o Prophylaxis of migraine headache in patients ≥ 12 years of age
- Valproic acid/valproate sodium:
 - Monotherapy and adjunctive therapy in the treatment of patients with complex partial seizures that occur either in isolation or in association with other types of seizures; sole and adjunctive therapy in the treatment of simple and complex absence seizures, and adjunctively in patients with multiple seizure types which include absence seizures
- Vigabatrin:
 - Adjunctive therapy for patients ≥ 2 years of age with refractory complex partial seizures who have responded inadequately to several alternative treatments and for whom the potential benefits outweigh the risk of vision loss (tablets and powder for solution only)
 - Monotherapy for patients with infantile spasms 1 month to 2 years of age for whom the potential benefits outweigh the
 potential risk of vision loss (tablets, powder for solution, and concentrated solution)
- Zonisamide:
 - Zonegran oral capsules: adjunctive therapy in the treatment of partial seizures in adults with epilepsy (safety and
 effectiveness in children < 16 years of age have not been established)
 - Zonisade oral suspension: adjunctive therapy in the treatment of partial-onset seizures in adults and pediatric patients
 ≥ 16 years of age
- Information on indications, mechanism of action, pharmacokinetics, dosing, and safety has been obtained from the prescribing information for the individual products, except where noted otherwise.

Clinical Efficacy Summary

- Overall, the anticonvulsants have demonstrated efficacy for their FDA-approved uses. Clinical trial data demonstrating
 efficacy of the anticonvulsants for the treatment of epilepsy is described in the prescribing information for the individual
 products, particularly for anticonvulsants more recently approved by the FDA. However, the prescribing information for
 some older, conventional products (eg, benzodiazepines, carbamazepine, ethosuximide, methsuximide, phenytoin, and
 primidone) and non-FDA approved products (eg, most formulations of phenobarbital) do not contain efficacy data in their
 prescribing information.
- When possible, monotherapy with a single AED is the preferred treatment approach. This increases the probability of treatment adherence, provides a wider therapeutic index, and is associated with fewer idiosyncratic reactions, teratogenic effects, and potential drug interactions. However, data are conflicting on the benefits of mono- vs polytherapy (*Schachter* 2024[b]). Most patients with epilepsy are treated with anticonvulsant monotherapy (*Nevitt et al* 2022).



- No single AED is clearly the most effective. Comparative efficacy data for the management of epilepsy are limited, and trials have generally not shown significant differences among drugs in terms of efficacy. However, the quality of the data is limited and generally derived from short-term trials (*Karceski* 2024).
- An evidence review summarized AED efficacy and effectiveness as initial monotherapy for epileptic seizures and syndromes (*Glauser et al 2013*). This publication provides conclusions based on a review of 64 randomized trials and 11 meta-analyses. Conclusions include the following:
 - As initial monotherapy for adults with newly diagnosed or untreated partial-onset seizures:
 - Carbamazepine, levetiracetam, phenytoin, and zonisamide are established as efficacious/effective.
 - Valproate is probably efficacious/effective.
 - Gabapentin, lamotrigine, oxcarbazepine, phenobarbital, topiramate, and vigabatrin are possibly efficacious/effective.
 - Clonazepam and primidone are potentially efficacious/effective.
 - As initial monotherapy for children with newly diagnosed or untreated partial-onset seizures:
 - Oxcarbazepine is established as efficacious/effective.
 - Carbamazepine, phenobarbital, phenytoin, topiramate, valproate, and vigabatrin are possibly efficacious/effective.
 - Clobazam, carbamazepine, lamotrigine, and zonisamide are potentially efficacious/effective.
 - As initial monotherapy for elderly adults with newly diagnosed or untreated partial-onset seizures:
 - Gabapentin and lamotrigine are established as efficacious/effective.
 - Carbamazepine is possibly efficacious/effective.
 - Topiramate and valproate are potentially efficacious/effective.
 - As initial monotherapy for adults with newly diagnosed or untreated generalized-onset tonic-clonic seizures:
 - Carbamazepine, lamotrigine, oxcarbazepine, phenobarbital, phenytoin, topiramate, and valproate are possibly
 efficacious/effective.
 - Gabapentin, levetiracetam, and vigabatrin are potentially efficacious/effective.
 - Carbamazepine and phenytoin may precipitate or aggravate generalized-onset tonic-clonic seizures.
 - o For children with newly diagnosed or untreated generalized-onset tonic-clonic seizures:
 - Carbamazepine, phenobarbital, phenytoin, topiramate, and valproate are possibly efficacious/effective.
 - Oxcarbazepine is potentially efficacious/effective.
 - Carbamazepine and phenytoin may precipitate or aggravate generalized-onset tonic-clonic seizures.
 - As initial monotherapy for children with newly diagnosed or untreated absence seizures:
 - Ethosuximide and valproate are established as efficacious/effective.
 - Lamotrigine is possibly efficacious/effective.
 - Gabapentin is established as inefficacious/ineffective.
 - Carbamazepine, oxcarbazepine, phenobarbital, phenytoin, tiagabine, and vigabatrin may precipitate or aggravate absence seizures (based on scattered reports).
 - o As initial monotherapy for children with benign childhood epilepsy with centrotemporal spikes (BECTS):
 - Carbamazepine and valproate are possibly efficacious/effective.
 - Gabapentin, levetiracetam, oxcarbazepine, and sulthiame (not available in the United States) are potentially efficacious/effective.
 - For patients with newly diagnosed JME:
 - Topiramate and valproate are potentially efficacious/effective.
 - Carbamazepine, gabapentin, oxcarbazepine, phenytoin, tiagabine, and vigabatrin may precipitate or aggravate absence, myoclonic, and in some cases generalized tonic-clonic seizures. There has also been a report that lamotrigine may exacerbate seizures in JME.
 - There is a lack of well-designed randomized trials in epilepsy, particularly for generalized seizures and in the pediatric population.
- A Cochrane systematic review evaluated the efficacy of AED monotherapy for epilepsy (Nevitt et al 2022). The review
 included the use of carbamazepine, phenytoin, valproate, phenobarbital, oxcarbazepine, lamotrigine, gabapentin,
 topiramate, levetiracetam, zonisamide, eslicarbazepine, and lacosamide for the treatment of partial-onset seizures
 (simple partial, complex partial or secondarily generalized) or generalized tonic-clonic seizures with or without other
 generalized seizure types.
 - o This network meta-analysis showed that for the primary outcome, the time to withdrawal of allocated treatment:



- For individuals with partial seizures, lamotrigine performed better than most other treatments. No significant difference was found between lamotrigine and levetiracetam for any outcome related to treatment failure, and both drugs were found to perform better than all other AEDs.
- For individuals with generalized onset seizures, valproate performed better than carbamazepine, lacosamide, topiramate, and phenobarbital.
- For the secondary outcome, time to first seizure:
 - For individuals with partial seizures, phenobarbital performed better than both carbamazepine and lamotrigine. No significant differences were found among newer agents (eg, oxcarbazepine, topiramate, gabapentin, levetiracetam, zonisamide, and lacosamide) for partial or generalized onset seizures.
 - For both partial and generalized seizure types, phenytoin and phenobarbital generally performed better than other treatments.
- Few notable differences were shown for either partial or generalized seizure types for the secondary outcomes of time to 6-month or 12-month remission of seizures.
- Overall, direct evidence and network meta-analysis estimates were numerically similar, and effect sizes had overlapping confidence intervals.
- o Data for individuals with generalized seizures are still limited and additional randomized trials are needed.
- The relative efficacy among valproate, lamotrigine, phenytoin, carbamazepine, ethosuximide, topiramate, levetiracetam, and phenobarbital as monotherapy for generalized (n = 7 studies) or absence seizures (n = 3 studies) was evaluated in a systematic review and network meta-analysis (*Campos et al 2018*). The outcomes analyzed were seizure freedom and withdrawal due to inefficacy. Compared to valproate, phenytoin had a lower odds of seizure freedom (odds ratio, 0.50; 95% credible Interval [Crl], 0.27 to 0.87) in patients with generalized tonic-clonic seizures. Lamotrigine had the highest probability of seizure freedom and valproate had the highest probability of withdrawal due to inefficacy in these patients. For absence seizures, ethosuximide and valproate were found to have a higher probability of seizure freedom compared to lamotrigine.
- A meta-analysis estimated the comparative efficacy of achieving seizure freedom with 22 antiepileptic drugs and placebo in children and adolescents (*Rosati et al 2018*). For the treatment of newly diagnosed focal epilepsy (n = 4 studies), point estimates suggested superiority of carbamazepine and lamotrigine; however, this was not statistically significant. For refractory focal epilepsy (n = 9 studies), levetiracetam and perampanel were more effective than placebo in mixed comparisons. Ethosuximide and valproic acid were more effective than lamotrigine for absence seizures. The authors concluded that better designed comparative studies with appropriate length of follow-up, well-defined outcomes, and reliable inclusion criteria are needed to validate these results.
- A meta-analysis compared monotherapy with carbamazepine or phenytoin in children and adults with focal onset seizures (simple or complex focal and secondarily generalized), or generalized onset tonic-clonic seizures (with or without other generalized seizure types). Results demonstrated that the time to treatment failure (primary outcome) did not significantly differ between treatment groups. The time to first seizure after randomization and 6-month and 12-month remission were also similar between groups (*Nevitt et al 2019*).
- A network meta-analysis comparing third-generation AEDs (brivaracetam, cenobamate, eslicarbazepine, lacosamide, and perampanel) for adjunctive treatment of partial-onset seizures in adults found that cenobamate had the greatest likelihood of being the best option to reduce seizure frequency and brivaracetam and lacosamide had the highest probabilities of being the best-tolerated treatments (*Lattanzi et al 2022*).
- As many as 20% to 40% of patients with epilepsy can be considered refractory to drug treatment, referred to as drug-resistant epilepsy. Treatment of drug-resistant epilepsy may include additional anticonvulsant drug trials, epilepsy surgery, vagus nerve stimulation, responsive cortical stimulation, deep brain stimulation, cannabinoids, and dietary changes (the ketogenic diet) (Sirven 2023).
 - o Combination AED regimens are an option for the treatment of drug-resistant epilepsy. However, robust clinical evidence of suitable combinations of AEDs has been difficult to generate due to the large number of possible combinations of drugs and doses. Examples of combinations for which there is some evidence of efficacy include valproate plus lamotrigine for partial-onset and generalized seizures, valproate plus ethosuximide for absence seizures, and lamotrigine plus topiramate for various seizure types; however, even this evidence is fairly limited. In general, when considering combination therapy, it is recommended to combine medications with different mechanisms of action, and to be mindful of the overall drug load to minimize AEs. Two-drug therapy should be attempted before considering addition of a third drug, and higher numbers of drugs should be avoided as they are associated with a very low likelihood of additional seizure reduction (*Kwan et al 2011*).



- A meta-analysis examined the efficacy of newer AEDs (eslicarbazepine, brivaracetam, perampanel, and lacosamide) vs levetiracetam as adjunctive therapy for uncontrolled partial-onset seizures. Most patients in this meta-analysis were on at least 2 other AEDs at the time of treatment. In this analysis, eslicarbazepine, lacosamide, and brivaracetam were non-inferior to levetiracetam in terms of efficacy, but all newer AEDs except brivaracetam had worse tolerability profiles than levetiracetam at high doses (*Zhu et al 2017*).
- A network meta-analysis examined the efficacy of AEDs (including brivaracetam, eslicarbazepine acetate, gabapentin, lacosamide, levetiracetam, lamotrigine, oxcarbazepine, pregabalin, perampanel, rufinamide, tiagabine, topiramate, vigabatrin, and zonisamide) for adjunctive use in patients with refractory partial-onset seizures while using monotherapy (*Zhao et al 2017*). The efficacy outcomes studied were 50% responder rate and state of seizure freedom. The authors concluded that topiramate, levetiracetam, pregabalin, and oxcarbazepine were preferable for their relatively high efficacy and low risk of AEs. Rufinamide was the least preferable medication due to its low efficacy and high risk of AEs.
- A systematic review and network meta-analysis evaluated the efficacy and safety of 6 AEDs in LGS (*Zhang et al 2022*). A total of 8 RCTs were included in the analysis, which evaluated the use of lamotrigine, rufinamide, cannabidiol, topiramate, clobazam, and felbamate.
 - Based on the proportion of patients achieving at least a 50% reduction in drop seizures (reported for 5 AEDs in 7 RCTs), all active AEDs were considered superior to placebo therapy. Based on the surface under the cumulative ranking curve (SUCRA), rufinamide, cannabidiol, and topiramate were ranked highest, followed by clobazam and lamotrigine; however, there were no significant differences among these AEDs.
 - For the proportion of patients achieving a 75% reduction in drop seizures (reported for 4 AEDs in 5 RCTs), clobazam was ranked highest, followed by cannabidiol therapy; both were superior to placebo. For topiramate and rufinamide, no significant differences were found vs placebo.
 - When evaluating safety, lamotrigine, cannabidiol, and felbamate ranked highest (worst) for serious AEs; however, cannabidiol was the only AED with a significantly higher incidence of serious AEs vs placebo. No substantial difference was observed between the active AEDs.
- A network meta-analysis was conducted to evaluate the efficacy of 17 newer AEDs for treatment of refractory partial-onset epilepsy with or without secondary generalization (*Hu et al 2018*). The primary outcome was seizure freedom, which was defined as a 100% seizure reduction in the maintenance or double-blind treatment period of the trial. Safety was assessed by the withdrawal rate due to treatment-emergent AEs. Based on results of 54 studies that evaluated the efficacy outcome, the most effective agents included tiagabine, brivaracetam, and valproic acid, and the least effective agents included rufinamide, lamotrigine, and zonisamide. Products with favorable safety included levetiracetam, brivaracetam, and perampanel, while those with the least favorable safety included retigabine (not available in the United States), oxcarbazepine, and rufinamide. The authors stated that agents with the best outcomes in terms of efficacy and safety included levetiracetam, vigabatrin, valproic acid, and brivaracetam.
- A network meta-analysis was conducted to evaluate the efficacy of add-on fenfluramine, stiripentol, cannabidiol, or soticlestat (investigational product) for Dravet syndrome (*Xia et al 2024*). A total of 6 trials (N = 633) were included. All drug regimens were superior to placebo at achieving at least 50% and 75% reductions in convulsive seizure frequency, but only stiripentol, fenfluramine 0.4 mg/kg/day, and fenfluramine 0.7 mg/kg/day reduced monthly convulsive seizure frequency. Based on SUCRA, stiripentol ranked highest for reducing monthly convulsive seizure frequency, followed by fenfluramine 0.4 mg/kg/day, fenfluramine 0.7 mg/kg/day, cannabidiol 20 mg/kg/day, and fenfluramine 0.2 mg/kg/day. With regard to achieving at least a 50% reduction in convulsive seizure frequency, based on SUCRA, stiripentol ranked highest, followed by fenfluramine 0.4 mg/kg/day, soticlestat, fenfluramine 0.7 mg/kg/day, fenfluramine 0.2 mg/kg/day. With regard to achieving at least a 75% reduction in convulsive seizure frequency, based on SUCRA, fenfluramine 0.7 mg/kg/day ranked highest, followed by fenfluramine 0.4 mg/kg/day, fenfluramine 0.2 mg/kg/day, cannabidiol 10 mg/kg/day, and cannabidiol 20 mg/kg/day.

Recently approved agents

Cannabidiol (Epidiolex) was approved in June 2018 for use in pediatric patients 2 years of age and older with LGS or Dravet syndrome (FDA news release 2018). It is the first FDA-approved drug for the treatment of patients with Dravet syndrome and is the first approved drug that contains a purified substance, cannabidiol, derived from marijuana. Its approval for these 2 indications was based on 3 placebo-controlled trials in patients refractory to other treatments.
 Cannabidiol, along with use of other agents demonstrated a significant reduction in seizure frequency compared to placebo (Thiele et al 2018; Devinsky et al 2018; Devinsky et al 2017). A combined analysis of these trials and an

Data as of August 20, 2024 KS-U/LK-U/BSH

Page 12 of 32



additional randomized dose-ranging trial found that cannabidiol was effective in the overall population as well as in patients using it in conjunction with clobazam ($Gunning\ et\ al\ 2021$). In July 2020, cannabidiol was FDA-approved for a third indication, treatment of seizures associated with TSC, and the age range for all 3 indications was aligned to include pediatric patients 1 year of age and older ($FDA\ news\ release\ 2020$). In a placebo-controlled trial of 224 patients with TSC and seizures inadequately controlled with \geq 1 concomitant AED, cannabidiol resulted in a significant reduction in seizure frequency compared to placebo ($Thiele\ at\ al\ 2021$). To date, no comparative trials vs other AEDs have been published.

- Everolimus tablets for oral suspension (Afinitor Disperz) received an expanded indication for adjunctive use in TSC-associated partial-onset seizures in April 2018. Results of a randomized, double-blind, placebo-controlled study of 366 patients with inadequately controlled seizures on 2 or more AEDs demonstrated a significant reduction in seizure frequency compared to placebo (*French et al 2016*).
- In August 2018, the FDA approved a second drug, stiripentol (Diacomit), for use in the treatment of seizures associated with Dravet syndrome. Two multicenter placebo-controlled studies evaluated the addition of stiripentol to clobazam and valproate therapy in patients 3 years to ≤ 18 years of age with Dravet syndrome. Responder rates (seizure frequency reduced by 50%) with respect to generalized tonic-clonic seizures were significantly lower with stiripentol compared to placebo (*Chiron et al 2000, Diacomit prescribing information* 2024). The effectiveness of stiripentol for patients aged 6 months to < 3 years was extrapolated from effectiveness data in patients 3 years to < 18 years of age (*Diacomit prescribing information 2022*).
- In May 2019, a nasal spray formulation of midazolam (Nayzilam) was approved for the acute treatment of cluster seizures in adults and adolescents. In one randomized controlled trial in patients with seizure clusters while receiving a stable AED regimen, the proportion of patients who experienced treatment success (seizure termination within 10 minutes and no recurrence for the next 6 hours) was significantly higher with midazolam nasal spray compared to placebo (53.7% vs 34.4%; p = 0.0109) with similar tolerability (*Detyniecki et al 2019*).
- Cenobamate was approved in late 2019 and its efficacy has yet to be compared to other AEDs. The approval of this agent was based on 2 multicenter, randomized, double-blind, placebo-controlled studies that enrolled 655 adults with partial-onset seizures with or without generalization who were not adequately controlled with 1 to 3 other AEDs (*Chung et al 2020*, *Krauss et al 2020*). The results of these trials demonstrated that cenobamate significantly reduced the frequency of seizures occurring in a 28-day period. In the first trial, the median percent change in seizure frequency from baseline was -55.6% with cenobamate and -21.5% with placebo. In the second trial, the median percent change ranged from -36.3% to -55.3% with cenobamate and was -24.3% with placebo.
- In June 2020, the FDA approved a third drug, fenfluramine (Fintepla), for use in the treatment of seizures associated with Dravet syndrome. Two randomized, double-blind, placebo-controlled studies evaluated fenfluramine in patients 2 to 18 years of age with Dravet syndrome who were inadequately controlled with 1 to 4 other AEDs (*Lagae et al 2020, Nabbout et al 2019*). In both trials, fenfluramine significantly reduced the frequency of convulsive seizures occurring in a 28-day period as compared to placebo. In the first trial, in patients not receiving stiripentol, fenfluramine at a dose of 0.7 mg/kg/day demonstrated a 62.3% greater reduction in mean monthly convulsive seizure frequency (MCSF) over 14 weeks compared with placebo. In the second trial, in patients who were receiving a stiripentol-inclusive AED regimen, fenfluramine at a dose of 0.4 mg/kg/day showed a 54% greater reduction in MCSF over 15 weeks compared with placebo.
 - o An additional randomized, double-blind, placebo-controlled trial evaluated fenfluramine in patients with Dravet syndrome aged 2 to 18 years with poorly controlled convulsive seizures (≥ 6 seizures during the baseline period); patients were randomized to receive placebo, fenfluramine 0.2 mg/kg/day, or fenfluramine 0.7 mg/kg/day for a total of 14 weeks (*Sullivan et al 2023*). The primary endpoint was the change in mean MCSF from baseline in patients treated with fenfluramine 0.7 mg/kg/day versus placebo. Patients treated with fenfluramine 0.7 mg/kg/day demonstrated a 64.8% greater reduction in MCSF compared to placebo (p < 0.0001).
 - o In March 2022, the FDA approved fenfluramine for use in the treatment of seizures associated with LGS based on the results of a randomized, double-blind, placebo-controlled trial (*Knupp et al 2022*). The trial included adults and pediatric patients 2 to 35 years of age with LGS who were inadequately controlled with 1 to 4 other AEDs and found that the change in drop seizure frequency from baseline was -26.5% in patients treated with 0.7 mg/kg/day of fenfluramine, -14.2% in patients who received 0.2 mg/kg/day of fenfluramine, and -7.6% with placebo.
- Ganaxolone was approved by the FDA as an orphan drug in 2022 for the treatment of seizures associated with CDKL5
 deficiency disorder. A randomized, double-blind, placebo-controlled trial evaluated ganaxolone in patients 2 to 21 years
 of age with a molecularly confirmed CDKL5 variant that was pathogenic or likely pathogenic and a history of



uncontrolled early-onset seizures despite treatment with ≥ 2 AEDs (*Knight et al 2022*). Results demonstrated a median percent change in 28-day major motor seizure frequency of -30.7% in patients treated with ganaxolone and -6.9% in patients treated with placebo.

- Although previous formulations of phenobarbital were not FDA-approved, phenobarbital injection (Sezaby) was approved in 2022 for the treatment of neonatal seizures. A randomized, double-blind study compared phenobarbital (n = 42) to levetiracetam (n = 64) in neonates younger than 14 days who were gestational ages between 36 and 44 weeks (< 2 weeks of age) (Sharpe et al 2020). The percentage of patients with seizure termination for > 24 hours was higher with phenobarbital (73%) compared to levetiracetam (25%) (Sezaby prescribing information 2023).
- In 2023, lacosamide extended-release capsules were approved for the treatment of partial-onset seizures. This approval was supported by efficacy data from studies involving immediate-release lacosamide in patients with partial-onset seizures, as well as by demonstrating the relative bioavailability of extended-release capsules compared to immediate-release lacosamide in healthy adults (*Motpoly XR prescribing information* 2024).
- In 2024, vigabatrin concentrated oral solution was approved for the treatment of infantile spasms based on a comparison of the compositional differences between vigabatrin powder for oral solution and vigabatrin concentrated oral solution (*Vigafyde prescribing information 2024*).
- In 2024, diazepam buccal film was approved for pediatric patients 2 to 5 years of age for the acute treatment of intermittent, stereotypic episodes of frequent seizure activity (ie, seizure clusters, acute repetitive seizures) that are distinct from a patient's usual seizure pattern. The safety and effectiveness of this product are supported by evidence from studies of diazepam rectal gel in adult and pediatric patients, adult bioavailability studies comparing diazepam buccal film with diazepam rectal gel, adult and pediatric diazepam buccal film pharmacokinetic data, and an open-label safety study of diazepam buccal film (*Libervant prescribing information 2024*).
 - In the open-label safety study, 118 patients 2 to 65 years of age received at least 1 dose of diazepam buccal film. Eleven treatment-related AEs (10 being mild or moderate in severity) occurred in 9 patients over a mean of 243 days of follow-up; no patient discontinued participation because of AEs. The film was successfully administered on a first or second attempt on 96.6% of use occasions. A second dose was required within 24 hours after the first dose on 8.5% of use occasions (Seinfeld et al 2020).

Status epilepticus

- A 2019 randomized controlled trial of children and adults with benzodiazepine-refractory convulsive status epilepticus compared the efficacy of intravenous (IV) levetiracetam (n = 145 patients), fosphenytoin (n = 118), or valproate (n = 121) in this setting. Results demonstrated that each agent led to seizure cessation and improved alertness by 1 hour in approximately 50% of patients, with no significant differences between groups (*Kapur et al 2019*).
- A meta-analysis of 9 randomized controlled trials evaluated the efficacy and safety of levetiracetam vs phenytoin as second-line treatment for benzodiazepine-resistant status epilepticus in children and adults. The efficacy outcomes included seizure cessation and seizure recurrence within 24 hours. The authors did not find a significant difference in efficacy between levetiracetam and phenytoin in the overall population or in the subgroup analysis of pediatric patients. AEs were similar across both groups except for a higher incidence of cardiac instability, reported mainly as hypotension, in the phenytoin group (*DeMott et al 2020*).

Clinical Guidelines

- Efficacy and tolerability of the new antiepileptic drugs I: treatment of new-onset epilepsy. American Academy of Neurology and American Epilepsy Society (French et al 2004A [retired], Kanner et al, 2018A [reaffirmed in 2021]).
 - A 2018 update to the 2004 guideline focuses on treatment of new-onset epilepsy with second and third generation AEDs. The 2004 publication summarizes the efficacy, tolerability, and safety of gabapentin, lamotrigine, topiramate, tiagabine, oxcarbazepine, levetiracetam, and zonisamide for the treatment of children and adults with newly diagnosed partial and generalized epilepsies.
 - The recommendations from the 2004 guideline include the following:
 - Patients with newly diagnosed epilepsy who require treatment can be initially treated with standard AEDs such as carbamazepine, phenytoin, valproic acid, or phenobarbital, or with the newer AEDs lamotrigine, gabapentin, oxcarbazepine, or topiramate. Choice will depend on individual patient characteristics.
 - Lamotrigine can be included in the options for children with newly diagnosed absence seizures.
 - The 2018 recommendations include the following:



- As monotherapy in adult patients with new-onset focal epilepsy or unclassified generalized tonic-clonic seizures:
 - Lamotrigine use should be considered to decrease seizure frequency.
 - Lamotrigine use should be considered and gabapentin use may be considered to decrease seizure frequency in patients aged ≥ 60 years.
 - Levetiracetam and zonisamide use may be considered to decrease seizure frequency.
 - Vigabatrin appears to be less efficacious than carbamazepine immediate-release and may not be offered; furthermore, the toxicity profile precludes vigabatrin use as first-line therapy.
 - Pregabalin 150 mg per day is possibly less efficacious than lamotrigine 100 mg per day.
 - There is insufficient evidence to consider use of gabapentin, oxcarbazepine, or topiramate over carbamazepine.
 - There is insufficient evidence to consider use of topiramate instead of phenytoin in urgent treatment of new-onset or recurrent focal epilepsy, unclassified generalized tonic-clonic seizures, or generalized epilepsy presenting with generalized tonic-clonic seizures.
 - Data are lacking to support or refute use of third-generation AEDs (eslicarbazepine, ezogabine [no longer marketed], lacosamide, perampanel, pregabalin, and rufinamide), clobazam, felbamate, or vigabatrin for newonset epilepsy.
 - Data are lacking to support or refute use of newer AEDs in treating unclassified generalized tonic-clonic seizures.
- Ethosuximide or valproic acid should be considered before lamotrigine to decrease seizure frequency in children with absence epilepsy. An exception would be if there are compelling AE-related concerns with use of ethosuximide or valproic acid.
- The guideline does not address newly approved agents including cannabidiol, everolimus, stiripentol, cenobamate, fenfluramine, or ganaxolone.
- Efficacy and tolerability of the new antiepileptic drugs II: treatment of refractory epilepsy. American Academy of Neurology and American Epilepsy Society (Kanner et al 2018B [reaffirmed in 2021], French et al 2004B [retired]).
 - A 2018 update to the 2004 guideline focuses on management of treatment-resistant epilepsy with second and third generation AEDs. The 2004 publication summarizes the efficacy, tolerability, and safety of gabapentin, lamotrigine, topiramate, tiagabine, oxcarbazepine, levetiracetam, and zonisamide for the treatment of children and adults with refractory partial and generalized epilepsies.
 - Recommendations from the 2004 guideline include the following:
 - It is appropriate to use gabapentin, lamotrigine, tiagabine, topiramate, oxcarbazepine, levetiracetam, and zonisamide as add-on therapy in patients with refractory epilepsy.
 - Oxcarbazepine, topiramate, and lamotrigine can be used as monotherapy in patients with refractory partial epilepsy.
 - Topiramate may be used for the treatment of refractory generalized tonic-clonic seizures in adults and children.
 - Gabapentin, lamotrigine, oxcarbazepine, and topiramate may be used as adjunctive treatment of children with refractory partial seizures.
 - Topiramate and lamotrigine may be used to treat drop attacks associated with LGS in adults and children.
 - Recommendations from the 2018 guideline include the following:
 - As adjunctive therapy in patients with treatment-resistant adult focal epilepsy (TRAFE):
 - Immediate-release pregabalin and perampanel are established as effective to reduce seizure frequency.
 - Lacosamide, eslicarbazepine, and extended-release topiramate should be considered to decrease seizure frequency.
 - Vigabatrin and rufinamide are effective for decreasing seizure frequency, but are not first-line agents.
 - Ezogabine (no longer marketed) use should be considered to reduce seizure frequency, but carries a serious risk of skin and retinal discoloration.
 - Clobazam and extended-release oxcarbazepine may be considered to decrease seizure frequency.
 - As monotherapy in patients with TRAFE:
 - Eslicarbazepine use may be considered to decrease seizure frequency.
 - Data are insufficient to recommend use of second- and the other third-generation AEDs.
 - For add-on therapy for generalized epilepsy, immediate-release and extended-release lamotrigine should be considered as add-on therapy to decrease seizure frequency in adults with treatment-resistant generalized tonic-clonic seizures secondary to generalized epilepsy. Levetiracetam use should be considered to decrease seizure



frequency as add-on therapy for treatment-resistant generalized tonic-clonic seizures and for treatment-resistant JME.

- Rufinamide is effective to reduce seizure frequency as add-on therapy for LGS. Clobazam use should be considered as add-on therapy for LGS.
- For add-on therapy in pediatric patients with treatment-resistant focal epilepsy:
 - Levetiracetam use should be considered to decrease seizure frequency (age 1 month to 16 years).
 - Zonisamide use should be considered to decrease seizure frequency (age 6 to 17 years).
 - Oxcarbazepine use should be considered to decrease seizure frequency (age 1 month to 4 years).
 - Data are unavailable on the efficacy of clobazam, eslicarbazepine, lacosamide, perampanel, rufinamide, tiagabine, or vigabatrin.
- The guideline does not address newly approved agents including cannabidiol, everolimus, stiripentol, cenobamate, fenfluramine, or ganaxolone.
- Evidence-based guideline: management of an unprovoked first seizure in adults. Guideline Development Subcommittee of the American Academy of Neurology and the American Epilepsy Society (*Krumholz et al 2015*; reaffirmed in 2018, 2021, and 2024).
 - This practice guideline makes recommendations based on a consideration of the evidence for prognosis and treatment of adults with an unprovoked first seizure.
 - Recommendations include the following:
 - Adults presenting with an unprovoked first seizure should be informed that the chance for a recurrent seizure is greatest within the first 2 years after a first seizure (21% to 45%).
 - Clinicians should also advise such patients that clinical factors associated with an increased risk of seizure
 recurrence include a prior brain insult such as a stroke or trauma, an EEG with epileptiform abnormalities, a
 significant brain-imaging abnormality, or a nocturnal seizure.
 - Clinicians should advise patients that, although immediate AED therapy, as compared with delay of treatment pending a second seizure, is likely to reduce the risk of a seizure recurrence in the 2 years subsequent to a first seizure, it may not improve quality of life.
 - Clinicians should advise patients that over the longer term (> 3 years), immediate AED treatment is unlikely to improve the prognosis for sustained seizure remission.
 - Patients should be advised that their risk for AED AEs ranges from 7% to 31% and that these AEs are predominantly mild and reversible.
 - Immediate AED therapy after an unprovoked first seizure is likely to reduce seizure recurrence risk. A reduction in
 risk may be important, particularly for adults, for whom seizure recurrences may cause serious psychological and
 social consequences such as loss of driving privileges and limitations on employment. However, immediate AED
 treatment is not well accepted and is debated. Decisions should be based on weighing the risk of recurrence against
 the AEs of AED therapy and should take patient preferences into account.
 - It is accepted that when a patient has a second or additional seizures, an AED should be initiated because the risk of subsequent seizures is very high.
- Evidence-based guideline: treatment of convulsive status epilepticus in children and adults. Guideline Committee of the American Epilepsy Society (*Glauser et al 2016*).
 - This publication provides conclusions and a treatment algorithm based on a structured literature review of randomized trials of anticonvulsant treatments for seizures lasting longer than 5 minutes. A total of 38 trials were included.
 - For treatment in the adult population, conclusions included the following:
 - Intramuscular (IM) midazolam, IV lorazepam, IV diazepam (with or without phenytoin), and IV phenobarbital are established as efficacious at stopping seizures lasting at least 5 minutes.
 - IV lorazepam is more effective than IV phenytoin in stopping seizures lasting at least 10 minutes.
 - There is no difference in efficacy between IV lorazepam followed by IV phenytoin, IV diazepam plus phenytoin followed by IV lorazepam, and IV phenobarbital followed by IV phenytoin.
 - IV valproic acid has similar efficacy to IV phenytoin or continuous IV diazepam as second therapy after failure of a benzodiazepine.
 - Insufficient data exist in adults about the efficacy of levetiracetam as either initial or second therapy.



- In adults with status epilepticus without established IV access, IM midazolam is established as more effective compared with IV lorazepam.
- No significant difference in effectiveness has been demonstrated between lorazepam and diazepam in adults with status epilepticus.
- For treatment in the pediatric population, conclusions included the following:
 - IV lorazepam and IV diazepam are established as efficacious at stopping seizures lasting at least 5 minutes.
 - Rectal diazepam, IM midazolam, intranasal midazolam, and buccal midazolam are probably effective at stopping seizures lasting at least 5 minutes.
 - Insufficient data exist in children about the efficacy of intranasal lorazepam, sublingual lorazepam, rectal lorazepam, valproic acid, levetiracetam, phenobarbital, and phenytoin as initial therapy.
 - IV valproic acid has similar efficacy but better tolerability than IV phenobarbital as second therapy after failure of a benzodiazepine.
 - Insufficient data exist in children regarding the efficacy of phenytoin or levetiracetam as second therapy after failure of a benzodiazepine.
 - In children with status epilepticus, no significant difference in effectiveness has been established between IV lorazepam and IV diazepam.
 - In children with status epilepticus, non-IV midazolam (IM/intranasal/buccal) is probably more effective than diazepam (IV/rectal).
- Conclusions included the following (age not specified):
 - Insufficient data exist about the comparative efficacy of phenytoin and fosphenytoin. Fosphenytoin is better tolerated compared with phenytoin. When both are available, fosphenytoin is preferred based on tolerability, but phenytoin is an acceptable alternative.
- The overall treatment algorithm directs that:
 - A benzodiazepine (IM midazolam, IV lorazepam, or IV diazepam) is recommended as the initial therapy of choice in the first phase of treatment (5 to 20 minutes after the beginning of the seizure). Although IV phenobarbital is established as efficacious and well tolerated as initial therapy, its slower rate of administration positions it as an alternative initial therapy. For prehospital settings or where first-line benzodiazepine options are not available, rectal diazepam, intranasal midazolam, and buccal midazolam are reasonable initial therapy alternatives.
 - In the second phase of treatment (from 20 to 40 minutes after the beginning of the seizure), reasonable options include fosphenytoin, valproic acid, and levetiracetam. There is no clear evidence that any of these options is better than the others. Because of AEs, IV phenobarbital is a reasonable second-therapy alternative if none of the 3 recommended therapies are available.
 - There is no clear evidence to guide therapy in the third phase of therapy (≥ 40 minutes after the beginning of the seizure).
- Practice parameter: treatment of the child with a first unprovoked seizure. Quality Standards Subcommittee of the American Academy of Neurology and the Practice Committee of the Child Neurology Society (*Hirtz et al 2003*; reaffirmed in 2018, 2021, and 2024)
 - This parameter reviews published literature relevant to the decision to begin treatment after a child or adolescent experiences a first unprovoked seizure and presents evidence-based practice recommendations. Treatment during the neonatal period is not addressed.
 - Recommendations include the following:
 - Treatment with AEDs is not indicated for the prevention of the development of epilepsy.
 - Treatment with AEDs may be considered in circumstances where the benefits of reducing the risk of a second seizure outweigh the risks of pharmacologic and psychosocial AEs.
 - The majority of children who experience a first unprovoked seizure will have few or no recurrences. Treatment with AEDs after a first seizure as opposed to after a second seizure has not been shown to improve prognosis for long-term seizure remission.
 - Treatment has been shown in several studies combining both children and adults to reduce the risk of seizure recurrence; however, there is a relative paucity of data from studies involving only children after a first seizure.
- Summary of recommendations for the management of infantile seizures. Task force report for the ILAE Commission of Pediatrics (*Wilmshurst et al 2015*).



- This publication recommends an approach to the standard and optimal management of infants with seizures. When
 possible, recommendations are evidence-based; however, when no evidence was available, recommendations are
 based on expert opinion and standard practice.
- Recommendations/findings include the following:
 - There is no indication for initiation of chronic AEDs for simple febrile seizures. However, in the acute treatment of febrile seizures, it is important to treat seizures lasting 10 minutes or longer.
 - In an otherwise healthy infant, a policy of "wait and see" is reasonable after the first afebrile seizure. However, this is a rare event and close monitoring is essential.
 - Treatment options with established or probable efficacy include the following:
 - Focal seizures: levetiracetam
 - Epileptic spasms: High-dose or low-dose ACTH
 - Dravet syndrome: stiripentol
 - Treatment options with possible efficacy include the following:
 - Generalized seizures: levetiracetam, valproate, lamotrigine, topiramate, clobazam
 - Epileptic spasms: prednisone, vigabatrin
 - · Benign infantile convulsions: carbamazepine, phenobarbital, valproate
 - Dravet syndrome: topiramate, zonisamide, valproate
 - Benign myoclonic epilepsy of infancy: valproate, topiramate, lamotrigine, clonazepam
 - Provoked or situational seizures: carbamazepine
 - There is no clear evidence supporting an optimal duration of treatment; this is dependent on seizure type.
- Treatment of seizures in the neonate. International League Against Epilepsy (ILAE) (Pressler et al 2023).
 - This document was prepared based on a systematic review of the literature and included the following 6 core recommendations:
 - The first-line AED should be phenobarbital, regardless of etiology, unless channelopathy is the likely cause for seizures (eg, due to family history), in which case phenytoin or carbamazepine should be used.
 - Second-line AEDs include phenytoin, levetiracetam, midazolam, or lidocaine. Levetiracetam may be preferred in neonates with cardiac disorders.
 - Following cessation of acute provoked seizures without evidence for neonatal-onset epilepsy, AEDs should be discontinued before discharge home, regardless of magnetic resonance imaging or electroencephalographic findings.
 - Therapeutic hypothermia may reduce seizure burden in neonates with hypoxic-ischemic encephalopathy.
 - Treating neonatal seizures (including electrographic-only seizures) to achieve a lower seizure burden may be associated with improved outcomes.
 - A trial of pyridoxine may be attempted in neonates with clinical features of vitamin B6-dependent epilepsy and seizures unresponsive to second-line AEDs.
- Teratogenesis, Perinatal, and Neurodevelopmental Outcomes After In Utero Exposure to Antiseizure Medication: Practice Guideline From the American Academy of Neurology, American Epilepsy Society, and Society for Maternal-Fetal Medicine (*Pack et al 2023*).
 - This publication summarizes evidence for selected issues regarding the clinical management of people with epilepsy
 of childbearing potential (PWECP).
 - Recommendations include the following:
 - Clinicians must consider using lamotrigine, levetiracetam, or oxcarbazepine in PWECP when appropriate based on the patient's epilepsy syndrome, likelihood of achieving seizure control, and comorbidities, to minimize the risk of major congenital malformations (MCMs).
 - Clinicians must avoid the use of valproic acid in PWECP to minimize the risk of MCMs, neural tube defects, urogenital and renal malformations, and poor neurodevelopmental outcomes, if clinically feasible.
 - To reduce the risk of cardiac malformations, clinicians must avoid the use of phenobarbital in PWECP, if clinically feasible.
 - To reduce the risk of oral clefts, clinicians should avoid the use of phenobarbital and topiramate in PWECP, if clinically feasible.



 Clinicians should avoid the use of valproic acid or topiramate in PWECP to minimize the risk of offspring being born small for gestational age.

- Practice parameter: management of epilepsy in pregnancy: a report from the International League Against Epilepsy Task Force on Women and Pregnancy (*Tomson et al 2019*)
 - This publication provides recommendations on the clinical management of WWE who are of childbearing potential.
 - Recommendations include the following:
 - Valproate is associated with the highest risk of inducing MCMs, phenobarbital and topiramate are associated with intermediate risk of MCM to specific organs, and lamotrigine and levetiracetam have the lowest associated risks.
 - The risk of MCMs is dose-dependent for valproate and may also be dose-dependent for other AEDs (ie, carbamazepine, phenobarbital, lamotrigine).
 - Exposure to valproate in the womb is associated with a significant risk of cognitive and neurodevelopmental disorders.
 - Carbamazepine does not appear to cause major neurobehavioral teratogenicity.
 - Current data suggest a reduced risk of neurodevelopmental effects from lamotrigine.
 - Limited data suggest a low risk for neurodevelopmental effects from levetiracetam and topiramate, but further research is needed.
- Practice parameter update: management issues for women with epilepsy focus on pregnancy (an evidence-based review): vitamin K, folic acid, blood levels, and breastfeeding. Quality Standards Subcommittee and Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology and American Epilepsy Society (*Harden et al 2009*; reaffirmed in 2022; update in progress)
 - This publication summarizes evidence for selected issues regarding the clinical management of WWE who are pregnant or planning to be pregnant.
 - Recommendations include the following:
 - The fact that phenobarbital, primidone, phenytoin, carbamazepine, levetiracetam, valproate, gabapentin, lamotrigine, oxcarbazepine, and topiramate cross the placenta may be factored into the clinical decision regarding the necessity of AED treatment for a WWE.
 - Monitoring of lamotrigine, carbamazepine, and phenytoin levels during pregnancy should be considered.
 - Monitoring of levetiracetam and oxcarbazepine (as monohydroxy derivative) levels during pregnancy may be considered.
 - There is insufficient evidence to support or refute a change in phenobarbital, valproate, primidone, or ethosuximide levels related to pregnancy, but this lack of evidence should not discourage monitoring levels of these AEDs during pregnancy.
 - Valproate, phenobarbital, phenytoin, and carbamazepine may not transfer into breast milk to as great an extent as primidone, levetiracetam, gabapentin, lamotrigine, and topiramate.
 - Although many of the AEDs were shown to cross the placenta or enter breast milk, studies were limited in duration and did not systematically evaluate neonatal symptoms.
- Practice advisory update summary: Antiseizure medication withdrawal in seizure-free patients. Report of the American Academy of Neurology Guideline Subcommittee (*Gloss et at 2021*, an update to the 1996 practice parameter)
 - This publication addresses the available evidence on the risk of seizure development in adult and pediatric patients who have been seizure-free and may be considering discontinuing AED treatment. Clinicians should provide counseling noting that recurrent seizures increase the risk of status epilepticus or death, although existing data do not suggest an increased risk of status epilepticus or death after AED withdrawal. Clinicians must explore contributors to patients' quality of life as part of shared decision-making. Additional recommendations include:
 - In adult patients:
 - In adults who are seizure-free for at least 2 years, there should be a discussion between the clinician and the
 patient or caregiver about the risks and benefits of AED withdrawal, noting that there is possibly higher seizure
 recurrence in patients after AED withdrawal, and if seizures recur, there is a small chance they will no longer
 respond to medications.
 - It is unknown if EEG or imaging studies inform the decision to withdraw AEDs.
 - The risk of seizure recurrence in patients who have had epilepsy surgery is uncertain.



- In pediatric patients:
 - In children who are seizure-free for 18 to 24 months who do not have an electroclinical syndrome suggesting
 otherwise, a discussion of the risks and benefits of discontinuing AEDs should take place. This discussion should
 include acknowledgement that if seizures recur after discontinuing AEDs, there is a small chance they will no
 longer respond to treatment.
 - Clinicians should discuss with children and their families that AED discontinuation can be considered since discontinuation does not clearly increase the risk of seizure.
 - In children seizure-free for 18 to 24 months in whom AED withdrawal is being considered, an EEG should be ordered. If no epileptiform activity is shown, AED discontinuation can be offered, and tapering should occur no faster than 25% every 10 to 14 days.
 - Clinicians must consider the history of the patient's electroclinical syndrome when counseling about discontinuation of AEDs.
- Guidelines also support the use of AEDs for several common non-epilepsy indications:
 - The American Academy of Neurology and American Headache Society state that AEDs with established efficacy for migraine prevention include valproate, divalproex sodium, and topiramate; carbamazepine is noted to be possibly effective (Silberstein et al 2012; reaffirmed in 2022; update in progress). An American Academy of Neurology guideline for pediatric migraine prevention noted that children and adolescents with migraine receiving topiramate are probably more likely than those receiving placebo to have a reduction in migraine or headache day frequency, whereas there was insufficient evidence to support the efficacy of extended-release divalproex sodium for reducing frequency (Oskoui et al 2019 [reaffirmed in 2022]).
 - The American Academy of Neurology states that oral drugs from any of the following drug classes are probably more likely than placebo to improve pain due to diabetic neuropathy: gabapentinoids, sodium channel blockers, serotonin norepinephrine reuptake inhibitors (SNRIs), and SNRI-opioid dual mechanism agents (eg, tramadol); tricyclic antidepressants (TCAs) are possibly more likely than placebo to improve pain (*Price et al 2022*). The guideline recommends that gabapentinoids, sodium channel blockers, SNRIs, or TCAs be offered by clinicians to treat pain in patients with painful diabetic neuropathy.
 - △ The American Diabetes Association (ADA) recommends gabapentinoids, SNRIs, TCAs, and sodium channel blockers as initial pharmacologic treatments for neuropathic pain in diabetes (ADA 2024).
 - A retired guideline from The American Academy of Neurology states that gabapentin and pregabalin are of benefit in reducing pain from postherpetic neuralgia (*Dubinsky et al 2004; retired February 27, 2018*).
 - American Psychiatric Association guidelines describe the key role of AEDs in the management of bipolar disorder, including the following (*Hirschfeld et al 2002*):
 - First-line pharmacological treatment for more severe manic or mixed episodes is either lithium plus an antipsychotic
 or valproate plus an antipsychotic; for less ill patients, monotherapy with lithium, valproate, or an antipsychotic may
 be sufficient. For mixed episodes, valproate may be preferred over lithium. Carbamazepine and oxcarbazepine are
 alternatives.
 - First-line pharmacological treatment for bipolar depression is either lithium or lamotrigine. When an acute depressive episode of bipolar disorder does not respond to first-line medication treatment, the next steps include adding lamotrigine, bupropion, or paroxetine.
 - The initial treatment for patients who experience rapid cycling should include lithium or valproate; an alternative is lamotrigine.
 - The medications with the best empirical evidence to support their use in maintenance treatment include lithium and valproate; possible alternatives include lamotrigine, carbamazepine, or oxcarbazepine.
 - Note: This guideline was published in 2002 and cannot be assumed to be current; however, AEDs continue to be recommended for both acute (mania or hypomania) and maintenance phases of bipolar disorder (*Post 2023*, Stovall 2024).

Safety Summary

- Tolerability and safety are as important as efficacy in determining the overall effectiveness of epilepsy treatment (Schachter 2024[b]).
- Common AEs among AEDs include the following (Schachter 2024[b], individual package inserts):
 Systemic AEs:

Data as of August 20, 2024 KS-U/LK-U/BSH

Page 20 of 32



- Nausea, vomiting, constipation, diarrhea, anorexia
- Rash
- Hyponatremia (carbamazepine, eslicarbazepine, oxcarbazepine)
- Weight gain (pregabalin, perampanel, valproate, vigabatrin), weight loss (felbamate, topiramate, stiripentol, fenfluramine)
- Neurologic AEs:
 - Headache
 - Somnolence, sedation, drowsiness, lethargy, fatigue
 - Dizziness, vertigo
 - Tremor, anxiety, nervousness, insomnia
 - Aggression, irritability, hyperactivity
 - Depression, mood alteration
 - Confusion
 - Ataxia
 - Blurred or double vision
- Examples of rare but serious AEs include the following (Schachter 2024[b], individual package inserts):
 - Suicidal ideation and behavior (AEDs as a class, except everolimus)

Psychosis (brivaracetam, levetiracetam)

- Neutropenia, leukopenia, pancytopenia, agranulocytosis, thrombocytopenia, and/or aplastic anemia (brivaracetam, carbamazepine, divalproex, ethosuximide, felbamate, lacosamide, lamotrigine, levetiracetam, oxcarbazepine, phenobarbital, phenytoin, primidone, stiripentol, valproate, vigabatrin, zonisamide)
- o Anaphylaxis or angioedema (brivaracetam, fosphenytoin, gabapentin, levetiracetam, phenytoin, pregabalin)
- Acute toxic reaction (sedation, dizziness, ataxia, nausea, and vomiting) (primidone)
- Severe skin rashes, Stevens-Johnson syndrome (SJS), and/or toxic epidermal necrolysis (TEN) (carbamazepine, cenobamate, clobazam, divalproex, eslicarbazepine, ethosuximide, fosphenytoin, gabapentin, lamotrigine, levetiracetam, oxcarbazepine, phenobarbital, phenytoin, primidone, rufinamide, tiagabine, topiramate, valproate, zonisamide)
- Drug reaction with eosinophilia and systemic symptoms (DRESS)/multiorgan hypersensitivity (clobazam, levetiracetam)
- Hypersensitivity reactions (including angioedema, erythema, and pruritus) (cannabidiol)
- Aseptic meningitis (lamotrigine)
- Hepatic failure (carbamazepine, divalproex, ethosuximide, felbamate, phenytoin, phenobarbital, primidone, valproate)
- Hepatocellular injury (cannabidiol)
- Elevated liver transaminases and ammonia levels (hyperammonemia) (cannabidiol [especially with concomitant use
 of valproate, clobazam, or both], zonisamide)
- Encephalopathy (zonisamide)
- Pancreatitis (carbamazepine, valproate)
- Lupus syndrome (carbamazepine, phenytoin)
- Hirsutism (phenytoin)
- Hypogammaglobulinemia (carbamazepine, lamotrigine, levetiracetam, valproate)
- Prolonged PR interval, atrioventricular block, changes in QT interval, and/or cardiac rhythm or conduction abnormalities (cenobamate, eslicarbazepine, lacosamide, lamotrigine, rufinamide)
- Serum sickness (carbamazepine, ethosuximide, phenytoin, phenobarbital, primidone, valproate)
- Multiorgan hypersensitivity (carbamazepine, cenobamate, ethosuximide, gabapentin, lacosamide, lamotrigine, oxcarbazepine, perampanel, phenytoin, rufinamide, valproate, zonisamide)
- Severe neuropsychiatric effects/hostility/aggression (brivaracetam, clonazepam, levetiracetam, perampanel)
- Hemophagocytic lymphohistiocytosis (HLH) (lamotrigine)
- Cardiac AEs, including bradycardia and cardiac arrest (phenytoin)
- Abnormal magnetic resonance imaging signals in infants (vigabatrin)
- Intramyelinic edema (vigabatrin)
- Serotonin syndrome (fenfluramine)
- Significant elevation in blood pressure including hypertensive crisis (fenfluramine)
- Respiratory depression, especially in the setting of underlying respiratory impairment or concurrent use of opioids (gabapentin, pregabalin)

Data as of August 20, 2024 KS-U/LK-U/BSH

Page 21 of 32



- Hyperammonemia and hyperammonemic encephalopathy (divalproex)
- Hypothermia (divalproex)
- o Increased rates of pneumonia (when cannabidiol is given concomitantly with clobazam)
- Neonatal sedation and withdrawal syndrome (clobazam, clonazepam, clorazepate, diazepam, midazolam)
- Increased intraocular pressure in patients with glaucoma (diazepam)
- Embryofetal toxicity (topiramate)
- Connective tissue contractures (phenobarbital, primidone)
- Complex regional pain syndrome (phenobarbital)
- Adenopathy, pseudolymphoma, neuropathy, ataxia (phenytoin)
- Rhabdomyolysis (pregabalin)
- Nonconvulsive status epilepticus (tiagabine)
- Polycystic ovary syndrome (valproate)
- Nephrolithiasis (topiramate, zonisamide)
- Acute myopia and secondary angle closure glaucoma (zonisamide)
- Oligohidrosis and hyperthermia (topiramate)
- Fever and hyperhidrosis (zonisamide)
- A number of AEDs carry boxed warnings related to potentially serious AEs; these include the following:
 - Carbamazepine:
 - Serious and sometimes fatal dermatologic reactions, including TEN and SJS, have been reported. Studies in patients of Chinese ancestry have found a strong association between the risk of developing SJS/TEN and the presence of HLA-B*1502, an inherited allelic variant of the HLA-B gene. Patients with ancestry in genetically at-risk populations (across broad areas of Asia) should be screened for the presence of HLA-B*1502 prior to initiating treatment with carbamazepine.
 - Aplastic anemia and agranulocytosis have been reported. If a patient exhibits low or decreased white blood cell or
 platelet counts, the patient should be monitored closely, and discontinuation of the drug should be considered if
 any evidence of significant bone marrow depression develops.
 - Olobazam, clonazepam, clorazepate, diazepam, and midazolam:
 - Concomitant use of benzodiazepines and opioids may result in profound sedation, respiratory depression, coma, and death. Concomitant prescribing should be reserved for use in patients for whom alternative treatment options are inadequate, and patients should be followed for signs and symptoms of respiratory depression and sedation.
 - Clobazam, diazepam, and midazolam:
 - Use of benzodiazepines may expose users to risks of abuse, misuse, and addiction, which may result in overdose or death; continued use of benzodiazepines may lead to physical dependence, especially with high doses and longer treatment duration. Abrupt discontinuation may result in acute, potentially life-threatening, withdrawal reactions. In some cases, protracted withdrawal symptoms can occur, which can last weeks to more than 12 months. Before prescribing and throughout treatment, each patient should be assessed for abuse, misuse, and addiction. For patients using benzodiazepines more frequently than recommended, the agents should be gradually tapered when discontinuing to minimize withdrawal reactions.
 - Felbamate
 - Use is associated with a marked increase in the incidence of aplastic anemia. Felbamate should only be used in patients whose epilepsy is so severe that the risk of aplastic anemia is deemed acceptable. Routine blood testing cannot be reliably used to reduce the incidence of aplastic anemia, but it will in some cases allow detection of hematologic changes before the syndrome declares itself clinically. Felbamate should be discontinued if any evidence of bone marrow depression occurs.
 - Cases of acute liver failure have been reported. Felbamate should not be prescribed for anyone with a history of hepatic dysfunction. Treatment should be initiated only in individuals without active liver disease and with normal baseline serum transaminases. It has not been proven that periodic serum transaminase testing will prevent serious injury, but it is generally believed that early detection of drug-induced hepatic injury along with immediate withdrawal of the suspect drug enhances the likelihood for recovery. Serum transaminases should be monitored at baseline and periodically thereafter. Felbamate should be discontinued if either aspartate aminotransferase (AST) or alanine aminotransferase (ALT) become increased to ≥ 2 times the upper limit of normal, or if clinical signs and symptoms suggest liver failure, and should not be considered for retreatment.
 - Fenfluramine:



- Use of serotonergic drugs with 5-HT2B receptor agonist activity (eg, fenfluramine) is associated with valvular heart disease and pulmonary arterial hypertension. Echocardiogram assessments are required before, during, and after treatment with fenfluramine, and the benefits vs risks of initiating or continuing treatment with this product must be considered based on echocardiogram findings.
- Due to the risks of valvular heart disease and pulmonary arterial hypertension, fenfluramine is available only through a risk evaluation and mitigation strategy (REMS) program (FDA REMS 2024). Healthcare providers who prescribe fenfluramine and pharmacies that dispense the product must be certified. Each patient must be enrolled in the REMS program. Prescribers must ensure that periodic cardiovascular monitoring is performed and report any AE suggestive of valvular heart disease and/or pulmonary hypertension to the fenfluramine REMS program.
- Fosphenytoin and phenytoin:
 - There is a cardiovascular risk associated with rapid IV infusion rates. The rate of administration should not exceed recommendations, and careful cardiac monitoring is required.
- Lamotrigine:
 - Cases of life-threatening serious skin rashes, including SJS and TEN, and/or rash-related death have been caused by lamotrigine. Benign rashes are also caused by lamotrigine; however, it is not possible to predict which rashes will prove to be serious. Lamotrigine should be discontinued at the first sign of a rash, unless the rash is clearly not drug related.
- Perampanel:
 - Serious or life-threatening psychiatric and behavioral AEs including aggression, hostility, irritability, anger, and homicidal ideation and threats have been reported. Patients should be monitored for these reactions and for changes in mood, behavior, or personality. The dose should be reduced if these symptoms occur, and it should be discontinued if symptoms are severe or worsening.
- Valproic acid and divalproex sodium:
 - Hepatotoxicity, including fatalities, has been reported, usually during the first 6 months of treatment. Serum liver tests are required and patients should be monitored closely. There is an increased risk of valproate-induced acute liver failure and resultant deaths in patients with mitochondrial disease. Valproic acid and divalproex sodium are contraindicated in patients known to have mitochondrial disorders caused by polymerase gamma (POLG) gene mutations, and in children < 2 years of age who are suspected of having a mitochondrial disorder.</p>
 - There is a risk to fetuses exposed in utero, particularly neural tube defects, other major malformations, and decreased intelligence quotient (IQ). Valproate should not be given to a woman of childbearing potential unless the drug is essential to the management of her medical condition, and women should use effective contraception while using valproate.
 - Pancreatitis, including fatal hemorrhagic cases, has occurred. Patients and guardians should be warned that abdominal pain, nausea, vomiting, and/or anorexia can be symptoms of pancreatitis that require prompt medical evaluation.
- Vigabatrin:
 - Vigabatrin can cause permanent bilateral concentric visual field constriction, including tunnel vision that can result
 in disability. In some cases, vigabatrin may also damage the central retina and may decrease visual acuity.
 Baseline and periodic vision assessment are recommended. However, this assessment cannot always prevent
 vision damage, and once detected, vision loss due to vigabatrin is not reversible. Vigabatrin should be withdrawn
 from patients who fail to show substantial clinical benefit.
 - Due to the risks of vision loss, vigabatrin is available only through a REMS program (FDA REMS 2024). Healthcare providers who prescribe vigabatrin and pharmacies that dispense the product must be specially certified. Each patient must be enrolled in the REMS program. Prescribers must ensure that periodic visual monitoring is performed and report any AE suggestive of vision loss to the vigabatrin REMS program.
- Everolimus is an antineoplastic, immunosuppressant agent associated with several AEs.
 - o The most common AE that occurred in trials for TSC-associated partial-onset seizures was stomatitis.
 - More serious AEs include:
 - Non-infectious pneumonitis
 - Infections
 - Hypersensitivity reactions
 - Angioedema (when taken with an angiotensin-converting enzyme inhibitor)
 - Renal failure
 - Impaired wound healing

Page 23 of 32



- Myelosuppression
- Reduced immune response with vaccination
- Hyperglycemia
- Hyperlipidemia
- Embryo-fetal toxicity
- Topiramate:
 - Topiramate can decrease lumbar bone mineral density, which has been correlated with decreased serum bicarbonate in some patients, reflective of metabolic acidosis. Topiramate monotherapy has demonstrated negative effects on patient growth (both height and weight gain) when used over long periods. Increases in urinary calcium and decreases in urinary citrate have also been observed, increasing the risk of kidney stones and/or nephrocalcinosis.
 - Although decreases in bone mineral density have been observed in pediatric patients of all ages, patients 6 to 9
 years of age are most commonly affected.
- The most common AEs associated with ganaxolone include somnolence, pyrexia, salivary hypersecretion, and seasonal allergy. More serious AEs include somnolence and sedation, suicidal behavior and ideation, and a potential for increased seizure frequency and status epilepticus associated with rapid withdrawal of therapy.

Dosing and Administration

• General dosing information is provided in Table 3. Dosing may vary based on the specific indication, interacting medications, and the patient's age and renal and hepatic function. Additionally, some medications are recommended to be titrated during initial treatment. Please refer to the prescribing information of the individual products for more detailed information.

Table 3. Dosing and Administration

Drug	Available Formulations	Route	Usual Recommended Frequency	Comments				
Barbiturates								
Pentobarbital (Nembutal)	injection	IV, IM	Single dose	Acute use only. If needed, additional small increments may be given after the initial dose.				
Phenobarbital* (Sezaby)	tablets, elixir, injection	oral, IV, IM	2 to 3 times per day	IV/IM single dose may also be used for acute convulsions. May be repeated in 6 hours (generic). For Sezaby, the single dose may be repeated in 15 minutes, then every 8 to 12 hours for up to 5 days.				
Primidone (Mysoline)	tablets	oral	3 to 4 times per day					
Benzodiazepines	}							
Clobazam (Onfi, Sympazan)	tablets, oral suspension, oral film	oral	1 or 2 times per day	Daily doses > 5 mg should be given in divided doses 2 times per day. Sympazan should be applied on top of the tongue where it adheres and dissolves.				
Clonazepam (Klonopin)	tablets, orally disintegrating tablets (wafers)	oral	3 times per day					



Drug	Available Formulations	Route	Usual Recommended Frequency	Comments
Clorazepate (Tranxene T- Tab)	tablets	oral	2 to 3 times per day	
Diazepam (Diastat, Libervant, Valium, Valtoco)	tablets, oral solution, oral concentrate, buccal film, rectal gel, injection, nasal spray	oral, buccal, rectal, IV, IM, intranasal	2 to 4 times per day (oral tablets, solution, concentrate) Acute treatment: single dose followed by a second dose 4 to 12 hours after the first dose (rectal gel) or 4 hours after the first dose (nasal spray, buccal film) as needed Acute treatment (IV/IM): single dose; may be repeated every 10 to 15 minutes up to maximum dose of 30 mg	The buccal film, nasal spray, and rectal gel should be used to treat no more than 1 episode every 5 days and no more than 5 episodes per month.
Midazolam (Nayzilam, Seizalam)	nasal spray, injection	Intranasal, IM	Intranasal: Single dose followed by a second dose given at least 10 minutes after the first dose if needed IM: Single dose	Intranasal: Should be used to treat no more than 1 episode every 3 days and no more than 5 episodes per month. IM: Should be administered by a healthcare professional. After administration, monitoring of respiratory and cardiac function is recommended until the patient is stabilized.
Hydantoins Fosphenytoin (Cerebyx)	injection	IV, IM	2 times per day or other divided doses based on drug levels	Generally used in acute situations as a loading dose; may be given in divided doses when substituted for oral phenytoin.
Phenytoin (Dilantin, Phenytek)	extended-release capsules, chewable tablets, oral suspension, injection	oral, IV, IM	2 to 4 times per day	Capsules are extended- release and may be suitable for once-daily dosing in some adults.
Miscellaneous				
Brivaracetam (Briviact)	tablets, oral solution, injection	oral, IV	2 times per day	The injection may be used when oral administration is temporarily not feasible.
Cannabidiol (Epidiolex)	oral solution	oral	2 times per day	The provided oral syringe should be used to measure an accurate dose.
Carbamazepine (Carbatrol, Epitol, Equetro, Tegretol, Tegretol-XR)	tablets, chewable tablets, oral suspension, extended-release	oral	2 to 4 times per day	Immediate-release tablets are given 2 to 3 times per day and the suspension is given 4 times per day. Carbatrol and Equetro are twice-daily

Page 25 of 32

This information is considered confidential and proprietary to Optum Rx. It is intended for internal use only and should be disseminated only to authorized recipients. The contents of the therapeutic class overviews on this website ("Content") are for informational purposes only. The Content is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Patients should always seek the advice of a physician or other qualified health provider with any questions regarding a medical condition. Clinicians should refer to the full prescribing information and published resources when making medical decisions.



Drug	Available	Route	Usual Recommended	Comments
Diag	Formulations	Route	Frequency	
	tablets, extended- release capsules			extended-release capsule formulations; these capsules may be opened and sprinkled on soft food. Tegretol-XR is a twice-daily extended-release tablet formulation; these tablets must be swallowed whole.
Cenobamate (Xcopri)	Tablets	oral	once daily	The recommended titration schedule should not be exceeded. Tablets may be administered whole or crushed; the crushed tablet can be mixed with water and either administered by mouth as an oral suspension or administered via a nasogastric tube.
Divalproex sodium (Depakote, Depakote ER, Depakote Sprinkle)	delayed-release tablets, delayed- release sprinkle capsules, extended- release tablets	oral	2 to 3 times per day (once daily for extended-release tablets)	Delayed-release tablets and extended-release tablets should be swallowed whole. Sprinkle capsules may be opened and sprinkled on soft food. Delayed-release tablet and capsule doses > 250 mg per day should be given in divided doses.
Eslicarbazepine (Aptiom)	tablets	oral	once daily	Tablets may be crushed.
Ethosuximide (Zarontin)	capsules, oral solution/syrup	oral	once daily or in divided doses	
Everolimus (Afinitor Disperz)	tablets for oral suspension	oral	once daily	Should be taken at the same time each day with or without food. Suspension should be prepared using water only and administered immediately after preparation. The suspension should be discarded if not taken within 60 minutes of preparation. Dose adjustments are made based on trough drug concentration.
Felbamate	tablets, oral	oral	3 or 4 times per day	concentration.
(Felbatol)	suspension			



Down	Available	Desete	Usual Recommended	2	
Drug	Formulations	Route	Frequency	Comments	
Fenfluramine (Fintepla)	oral solution	oral	2 times per day	The provided oral syringe should be used to measure an accurate dose.	
Gabapentin (Neurontin)	tablets, capsules, oral solution	oral	3 times per day	Capsules should be swallowed whole.	
Ganaxolone (Ztalmy)	oral suspension	oral	3 times per day	The provided oral syringe should be used to measure an accurate dose.	
Lacosamide (Vimpat)	tablets, oral solution, injection	oral, IV	2 times per day (oral route) 2 or 3 times per day IV	An alternate initial dosing regimen including a loading dose and/or higher initial dosage may be used in patients for whom achieving the recommended maintenance dosage in a shorter timeframe is clinically indicated.	
Lacosamide (Motpoly XR)	extended-release capsule	Oral	once daily	Extended-release capsules should not be opened, chewed, or crushed.	
Lamotrigine (Lamictal, Lamictal ODT, Lamictal XR, Subvenite)	tablets, chewable dispersible tablets, orally disintegrating tablets, extended- release tablets	oral	2 times per day (once daily for extended-release tablets)	Only whole tablets should be administered. Extended-release tablets must not be chewed or crushed.	
Levetiracetam (Keppra, Keppra XR, Roweepra, Spritam, Elepsia XR)	tablets, tablets for oral suspension, oral solution, extended- release tablets, injection	oral, IV	2 times per day (once daily for extended-release tablets)	Tablets and extended-release tablets should not be chewed or crushed. Tablets for oral suspension (Spritam) can be dissolved in liquid and swallowed or allowed to disintegrate in the mouth.	
Methsuximide (Celontin)	capsules	oral	2 to 4 times per day (Lexicomp 2024)		
Oxcarbazepine (Oxtellar XR, Trileptal)	tablets, oral suspension, extended-release tablets	oral	2 times per day (once daily for extended-release tablets)	In conversion of oxcarbazepine immediate-release to Oxtellar XR, higher doses of Oxtellar XR may be necessary. Extended-release tablets must not be chewed or crushed.	
Perampanel (Fycompa)	tablets, oral suspension	oral	once daily at bedtime	The provided oral syringe should be used to measure an accurate dose.	
Pregabalin (Lyrica)	capsules, oral solution	oral	2 to 3 times per day		
Rufinamide (Banzel)	tablets, oral suspension	oral	2 times per day	Tablets can be administered whole, as half tablets, or crushed.	



Drug	Available Formulations	Route	Usual Recommended Frequency	Comments
Stiripentol (Diacomit)	capsules, powder for oral suspension	oral	2 to 3 times per day	Capsules must be swallowed whole with a glass of water during a meal. Powder should be mixed with water and taken immediately after mixing during a meal.
Tiagabine (Gabitril)	tablets	oral	2 to 4 times per day	
Topiramate (Topamax, Topamax Sprinkle, Trokendi XR, Qudexy XR, Eprontia)	tablets, sprinkle capsules, extended- release capsules, extended-release sprinkle capsules, oral solution	oral	2 times per day (once daily for extended-release capsule formulations)	Sprinkle capsules may be opened and sprinkled on soft food. Extended-release capsules (Trokendi XR) must not be chewed or crushed, but extended-release sprinkle capsules (Qudexy XR) may be sprinkled on soft food.
Valproic acid/ valproate sodium	capsules, oral solution/ syrup, injection	oral, IV	1 to 4 times per day (<i>Lexicomp</i> 2024)	Capsules should be swallowed whole without chewing to avoid local irritation of the mouth and throat. If the total dose exceeds 250 mg, it should be given in divided doses.
Vigabatrin (Sabril, Vigadrone, <mark>Vigafyde</mark>)	tablets, powder for oral solution, concentrated oral solution	oral	2 times per day	Powder for oral solution is supplied in individual dose packets to be mixed with water before administration. Vigafyde is a concentrated formulation as compared to other vigabatrin products.
Zonisamide (Zonegran, Zonisade)	capsules, oral suspension	oral	1 or 2 times per day	Capsules must be swallowed whole. The provided oral syringe should be used to measure an accurate dose of the oral suspension.

^{*} Only Sezaby is FDA-approved; other phenobarbital products are marketed without FDA approval See the current prescribing information for full details.

Conclusion

- Several classes of AEDs are available, including barbiturates, benzodiazepines, hydantoins, and miscellaneous agents. These products vary in terms of their indications for specific seizure types and indications other than epilepsy.
- Overall, the anticonvulsants have demonstrated efficacy for their FDA-approved uses. When possible, monotherapy with a single AED is the preferred treatment approach; however, data are conflicting on the benefits of mono- vs polytherapy.
- Patients who are refractory to monotherapy may be treated with combination therapy. When considering combination therapy, it is recommended to combine medications with different mechanisms of action and AE profiles.
- Comparative efficacy data for the management of epilepsy are limited.



- Tolerability and safety are as important as efficacy in determining the overall effectiveness of epilepsy treatment. Both
 systemic AEs and neurologic AEs commonly occur. Some AEDs are associated with rare but serious AEs, and careful
 patient selection and monitoring are required.
- Epilepsy management can be complex and is often performed by neurologists. Availability of a variety of AEDs supports the ability of clinicians to select the most clinically appropriate agent for individual patients.
- Anticonvulsants are also established as effective for several non-epilepsy indications, including (but not limited to) bipolar disorder, migraine prophylaxis, and neuropathic pain.

References

- Afinitor Disperz [package insert]. East Hanover, NJ: Novartis Pharmaceuticals Inc.; July 2024.
- American Diabetes Association. 12. Retinopathy, Neuropathy, and Foot Care: Standards of Medical Care in Diabetes 2024. *Diabetes Care*. 2024;47(Suppl 1):S231-S243. doi: 10.2337/dc24-S012.
- Aptiom [package insert], Marlborough, MA: Sunovion Pharmaceuticals Inc.; November 2023.
- Banzel [package insert], Woodcliff Lake, NJ: Eisai Inc.; May 2023.
- Briviact [package insert], Smyrna, GA: UCB Inc.; May 2023.
- Campos MSA, Ayres LR, Morelo MRS, Carizio FAM, Pereira LRL. Comparative efficacy of antiepileptic drugs for patients with generalized epileptic seizures: systematic review and network meta-analyses. *Int J Clin Pharm.* 2018;40(3):589-598. doi: 10.1007/s11096-018-0641-9.
- Carbatrol [package insert], Lexington, MA: Takeda Pharmaceuticals America Inc.; April 2023.
- Celontin [package insert], New York, NY: Pfizer Inc.; August 2023.
- Cerebyx [package insert], New York, NY: Pfizer Inc.; May 2022.
- Chiron, C, Marchand, MC, Tran, A, et al. Stiripentol in severe myoclonic epilepsy in infancy: a randomized placebo-controlled syndrome-dedicated trial. STICLO study group. *Lancet*. 2000;356(9242):1638-1642. doi: 10.1016/s0140-6736(00)03157-3.
- Chung SS, French JA, Kowalski J, et al. Randomized phase 2 study of adjunctive cenobamate in patients with uncontrolled focal seizures. *Neurology*. 2020;94(22):e2311-e2322. doi: 10.1212/WNL.000000000009530.
- DeMott JM, Slocum GW, Gottlieb M, Peksa GD. Levetiracetam vs. phenytoin as 2nd-line treatment for status epilepticus: a systematic review and meta-analysis. *Epilepsy Behav*. 2020;111:107286. doi: 10.1016/j.yebeh.2020.107286.
- Depakote (tablets) [package insert], North Chicago, IL: AbbVie Inc.; March 2024.
- Depakote ER [package insert], North Chicago, IL: AbbVie Inc.; March 2024.
- Depakote Sprinkle Capsules [package insert], North Chicago, IL: AbbVie Inc.; March 2024.
- Detyniecki K, Van Ess PJ, Sequeira DJ, Wheless JW, Meng TC, Pullman WE. Safety and efficacy of midazolam nasal spray in the outpatient treatment of patients with seizure clusters-a randomized, double-blind, placebo-controlled trial. *Epilepsia*. 2019;60(9):1797-1808.
- Devinsky O, Patel AD, Cross JH, et al. Effect of cannabidiol on drop seizures in the Lennox-Gastaut syndrome. N Engl J Med. 2018;378(20):1888-1897. doi: 10.1056/NEJMoa1714631.
- Devinsky O, Cross JH, Laux L, et al. Trial of cannabidiol for drug-resistant seizures in the Dravet syndrome. N Engl J Med. 2017;376(21):2011-2020.
 doi: 10.1056/NEJMoa1611618.
- Diacomit [package insert]. Beauvais, France: Biocodex; June 2024.
- Diastat & Diastat AcuDial [package insert], Bridgewater, NJ: Bausch Health US, LLC; January 2024.
- Diazepam (injection) [package insert], Berkeley Heights, NJ: Hikma Pharmaceuticals, Inc.; April 2024
- Diazepam (oral solution) and Diazepam Intensol (oral concentrate) [package insert], Congers, NY: Chartwell RX, LLC.; July 2024.
- Dilantin-125 (oral suspension) [package insert], New York, NY: Pfizer Inc.; March 2022.
- Dilantin (capsules) [package insert], New York, NY: Pfizer Inc.; March 2022.
- Dilantin Infatabs (chewable tablets) [package insert], New York, NY: Pfizer Inc.; August 2024.
- Drugs@FDA: FDA approved drug products. Food and Drug Administration website. https://www.accessdata.fda.gov/scripts/cder/daf/. Accessed August 20, 2024.
- Dubinsky RM, Kabbani H, El-Chami Z, Boutwell C, Ali H. Practice Parameter: treatment of postherpetic neuralgia: an evidence-based report of the Quality Standards Subcommittee of the American Academy of Neurology. Neurology. 2004; 63:959-965 (retired February 27, 2018).
- Elepsia XR [package insert]. Westfield, NJ: Tripoint Therapeutics; March 2024.
- Epidiolex [package insert]. Carlsbad, CA: Greenwich Biosciences, Inc.; March 2024.
- Epilepsy Foundation. Lennox-Gastaut Syndrome. Epilepsy Foundation website. http://www.epilepsy.com/learn/types-epilepsy-syndromes/lennox-gastaut-syndrome-lgs. Reviewed February 12, 2020. Accessed August 20, 2024.
- Epilepsy Foundation. Types of epilepsy syndromes. Epilepsy Foundation website. http://www.epilepsy.com/learn/types-epilepsy-syndromes. Reviewed September 3, 2013. Accessed August 20, 2024.
- Eprontia [package insert], Wilmington, MA: Azurity Pharmaceuticals, May 2024.
- Equetro [package insert], Parsippany, NJ: Validus Pharmaceuticals LLC; October 2022.
- FDA News Release. FDA approves first drug comprised of an active ingredient derived from marijuana to treat rare, severe forms of epilepsy. Food and Drug Administration website. https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm611046.htm. Published June 25, 2018. Accessed https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm611046.htm. Published June 25, 2018. Accessed https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm611046.htm. Published June 25, 2018.
- Felbatol [package insert], Somerset, NJ: Meda Pharmaceuticals Inc.; February 2018.
- FDA News Release. FDA approves new indication for drug containing an active ingredient derived from cannabis to treat seizures in rare genetic disease. Food and Drug Administration website. https://www.fda.gov/news-events/press-announcements/fda-approves-new-indication-drug-containing-active-ingredient-derived-cannabis-treat-seizures-rare. Published July 31, 2020. Accessed <a href="https://www.fda.gov/news-events/press-announcements/fda-approves-new-indication-drug-containing-active-ingredient-derived-cannabis-treat-seizures-rare. Published July 31, 2020. Accessed <a href="https://www.fda.gov/news-events/press-announcements/fda-approves-new-indication-drug-containing-active-ingredient-derived-cannabis-treat-seizures-rare.
- Fintepla [package insert], Emeryville, CA: Zogenix, Inc.; December 2023.

Data as of August 20, 2024 KS-U/LK-U/BSH

Page 29 of 32



- Fisher RS, Acevedo C, Arzimanoglou A, et al. A practical clinical definition of epilepsy. Epilepsia. 2014;55(4):475-482.
- Fisher RS, Cross JH, D'Souza C, et al. Instruction manual for the ILAE 2017 operational classification of seizure types. *Epilepsia*. 2017(A);58(4):531-542
- Fisher RS, Cross JH, French JA, et al. Operational classification of seizure types by the International League against Epilepsy: position paper of the ILAE Commission for Classification and Terminology. *Epilepsia*. 2017(B);58(4):522-530.
- Food and Drug Administration Approved Risk Evaluation and Mitigation Strategies (FDA REMS).
 https://www.accessdata.fda.gov/scripts/cder/rems/index.cfm. Accessed August 20, 2024.
- French JA, Kanner AM, Bautista J, et al. Efficacy and tolerability of the new antiepileptic drugs I: treatment of new-onset epilepsy. Report of the Therapeutics and Technology Assessment Subcommittee and Quality Standards Subcommittee of the American Academy of Neurology and the American Epilepsy Society. *Neurology*. 2004(A);62:1252-1260. [Retired]
- French JA, Kanner AM, Bautista J, et al. Efficacy and tolerability of the new antiepileptic drugs II: treatment of refractory epilepsy. Report of the Therapeutics and Technology Assessment Subcommittee and Quality Standards Subcommittee of the American Academy of Neurology and the American Epilepsy Society. Neurology. 2004(B);62:1261-1273. [Retired]
- French JA, Lawson JA, Yapici Z, et al. Adjunctive everolimus therapy for treatment-resistant focal-onset seizures associated with tuberous sclerosis (EXIST-3): a phase 3, randomized, double-blind, placebo-controlled study. *Lancet*. 2016;388(10056):2153-2163. doi: 10.1016/S0140-6736(16)31419-
- Fycompa [package insert], Woodcliff Lake, NJ: Eisai Inc.; January 2024.
- Gabitril [package insert], North Wales, PA: Teva Pharmaceuticals USA Inc.; September 2021.
- Glauser T, Ben-Menachem E, Bourgeois B, et al; for the ILAE subcommission of AED Guidelines. Updated ILAE evidence review of antiepileptic drug
 efficacy and effectiveness as initial monotherapy for epileptic seizures and syndromes. Epilepsia. 2013;54(3):551-563.
- Glauser T, Shinnar S, Gloss D, et al. Evidence-based guideline: treatment of convulsive status epilepticus in children and adults: report of the Guideline Committee of the American Epilepsy Society. *Epilepsy Curr*. 2016;16(1):48-61.
- Gloss D, Pargeon K, Pack A, et al. Antiseizure Medication Withdrawal in Seizure-Free Patients: Practice Advisory Update Summary: Report of the AAN Guideline Subcommittee. *Neurology*. 2021;97(23):1072-1081. doi:10.1212/WNL.00000000012944.
- Gunning B, Mazurkiewicz-Beldzinska M, Chin RFM, et al. Cannabidiol in conjunction with clobazam: analysis of four randomized controlled trials. *Acta Neurol Scand.* 2021;143(2):154-163. doi: 10.1111/ane.13351.
- Harden CL, Pennell PB, Koppel BS, et al. Practice parameter update: management issues for women with epilepsy focus on pregnancy (an evidence-based review): vitamin K, folic acid, blood levels, and breastfeeding. Report of the Quality Standards Subcommittee and Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology and American Epilepsy Society. *Neurology*. 2009;73:142-149.
- Hirschfeld RM, Bowden CL, Gitlin MJ, et al. Practice guideline for the treatment of patients with bipolar disorder; second edition.
 http://psychiatryonline.org/pb/assets/raw/sitewide/practice_guidelines/guidelines/bipolar.pdf. Originally published April 2002. Accessed August 20, 2024
- Hirtz D, Berg A, Bettis D, et al. Practice Parameter: treatment of the child with a first unprovoked seizure. Report of the Quality Standards Subcommittee of the American Academy of Neurology and the Practice Committee of the Child Neurology Society. *Neurology*. 2003;60:166-175. [Reaffirmed on July 12, 2024]
- Hu Q, Zhang F, Teng W, et al. Efficacy and safety of antiepileptic drugs for refractory partial-onset epilepsy: a network meta-analysis. J Neurol. 2018;265(1):1-11. doi: 10.1007/s00415-017-8621-x.
- Kanner AM, Ashman E, Gloss D, et al. Practice guideline update summary: efficacy and tolerability of the new antiepileptic drugs I: treatment of new-onset epilepsy. Report of the Guideline Development, Dissemination, and Implementation Subcommittee of the American Academy of Neurology and the American Epilepsy Society. Neurology. 2018(A);91(2):82-90. doi: 10.1212/WNL.000000000005756. [Reaffirmed on September 18, 2021]
- Kanner AM, Ashman E, Gloss D, et al. Practice guideline update summary: efficacy and tolerability of the new antiepileptic drugs II: treatment-resistant epilepsy. Report of the Guideline Development, Dissemination, and Implementation Subcommittee of the American Academy of Neurology and the American Epilepsy Society. Neurology. 2018(B);91(2):74-81. doi: 10.1212/WNL.000000000005755. [Reaffirmed on September 18, 2021]
- Kapur J, Elm J, Chamberlain JM, et al. Randomized trial of three anticonvulsant medications for status epilepticus. N Engl J Med. 2019;381(22):2103-2113. doi: 10.1056/NEJMoa1905795.
- Karceski S. Initial treatment of epilepsy in adults. UpToDate website. https://www.uptodate.com/contents/search. Updated August 24, 2024. Accessed August 20, 2024.
- Keppra (injection) [package insert], Smyrna, GA: UCB Inc.; March 2024.
- Keppra (tablets & oral solution) [package insert], Smyrna, GA: UCB Inc.; March 2024.
- Keppra XR [package insert], Smyrna, GA: UCB Inc.; March 2024.
- Klonopin [package insert], Montgomery, AL: H2-Pharma, LLC; December 2023.
- Knight EMP, Amin S, Bahi-Buisson N, et al. Safety and efficacy of ganaxolone in patients with CDKL5 deficiency disorder: results from the double-blind phase of a randomised, placebo-controlled, phase 3 trial. *Lancet Neurol*. 2022;21(5):417-427. doi:10.1016/S1474-4422(22)00077-1.
- Knupp KG, Scheffer IE, Ceulemans B, et al. Efficacy and safety of fenfluramine for the treatment of seizures associated with Lennox-Gastaut syndrome: a randomized clinical trial. *JAMA Neurol*. 2022;79(6):554-564. doi:10.1001/jamaneurol.2022.0829.
- Krumholz A, Wiebe S, Gronseth GS, et al. Evidence-based guideline: management of an unprovoked first seizure in adults: report of the Guideline Development Subcommittee of the American Academy of Neurology and the American Epilepsy Society. *Neurology*. 2015;84:1705-1713. [Reaffirmed on February 10, 2024]
- Krauss GL, Klein P, Brandt C, et al. Safety and efficacy of adjunctive cenobamate (YKP3089) in patients with uncontrolled focal seizures: a multicentre, double-blind, randomised, placebo-controlled, dose-response trial. *Lancet Neurol*. 2020;19(1):38-48.
- Kwan P, Schachter SC, Brodie MJ. Drug-resistant epilepsy. N Engl J Med. 2011;365:919-926.
- Lagae L, Sullivan J, Knupp K, et al. Fenfluramine hydrochloride for the treatment of seizures in Dravet syndrome: a randomised, double-blind, placebo-controlled trial. Lancet. 2020;394(10216):2243-2254. doi: 10.1016/S0140-6736(19)32500-0.
- Lamictal (tablets, chewable dispersible tablets & orally disintegrating tablets) [package insert], Research Triangle Park, NC: GlaxoSmithKline; February 2023.



- Lamictal XR [package insert], Research Triangle Park, NC: GlaxoSmithKline; January 2023.
- Lattanzi S, Trinka E, Zaccara G, et al. Third-generation antiseizure medications for adjunctive treatment of focal-onset seizures in adults: a systematic review and network meta-analysis. *Drugs*. 2022;82(2):199-218. doi:10.1007/s40265-021-01661-4.
- LexiComp database. http://online.lexi.com/lco/action/home/switch. Updated in 2024. Accessed August 20, 2024.
- Lyrica [package insert], New York, NY: Pfizer Inc.; December 2023.
- Motpoly XR [package insert], Piscataway, NJ: Aucta Pharmaceuticals, Inc.; June 2024.
- Mysoline [package insert], Bridgewater, NJ: Bausch Health US, LLC; July 2020.
- Nabbout R, Mistry A, Zuberi S, et al. Fenfluramine for treatment-resistant seizures in patients with Dravet syndrome receiving stiripentol-inclusive regimens: a randomized clinical trial. JAMA Neurol. 2019;77(3):300-308. doi: 10.1001/jamaneurol.2019.4113.
- Nayzilam [package insert]. Smyrna, GA: UCB, Inc.; January 2023.
- Nembutal [package insert], Gurnee, IL: Akorn, Inc.; February 2024.
- Neurontin [package insert], New York, NY: Pfizer Inc.; July 2024
- Nevitt SJ, Marson AG, Tudur Smith C. Carbamazepine versus phenytoin monotherapy for epilepsy: an individual participant data review. Cochrane Database Syst Rev. 2019;18;7:CD001911.
- Nevitt SJ, Sudell M, Cividini S, Marson AG, Tudur Smith C. Antiepileptic drug monotherapy for epilepsy: a network meta-analysis of individual participant data. Cochrane Database Syst Rev. 2022;4(4):CD011412. doi: 10.1002/14651858.CD011412.pub4.
- Nguyen VV, Dergalust S, Chang E. Epilepsy. In: DiPiro JT, Yee GC, Posey L, et al, eds. *Pharmacotherapy: A Pathophysiologic Approach*. 12th ed. McGraw Hill; 2023. https://accesspharmacy.mhmedical.com/content.aspx?bookid=3097§ionid=267240882. Accessed https://accesspharmacy.mhmedical.com/content.aspx?bookid=3097§ionid=267240882. Accessed https://accesspharmacy.mhmedical.com/content.aspx?bookid=3097§ionid=267240882. Accessed https://accesspharmacy.mhmedical.com/content.aspx?bookid=3097§ionid=267240882.
- Onfi [package insert], Deerfield, IL: Lundbeck Inc.; March 2024.
- Orange Book: Approved drug products with therapeutic equivalence evaluations. Food and Drug Administration website. https://www.accessdata.fda.gov/scripts/cder/ob/default.cfm. Accessed August 20, 2024.
- Oskoui M, Pringsheim T, Billinghurst L, et al. Practice guideline update summary: Pharmacologic treatment for pediatric migraine prevention: Report of
 the Guideline Development, Dissemination, and Implementation Subcommittee of the American Academy of Neurology and the American Headache
 Society. Headache. 2019;59(8):1144-1157. [Reaffirmed on October 22, 2022]
- Oxtellar XR [package insert], Rockville, MD: Supernus Pharmaceuticals Inc.; August 2024.
- Pack AM, Oskoui M, Williams Roberson S, et al. Teratogenesis, Perinatal, and Neurodevelopmental Outcomes After In Utero Exposure to Antiseizure Medication: Practice Guideline From the AAN, AES, and SMFM. Neurology. 2024;102(11):e209279. doi:10.1212/WNL.0000000000209279
- Phenobarbital (elixir) [package insert], East Brunswick, NJ: Strides Pharma Inc.; April 2022.
- Phenobarbital (injection) [package insert], Berkeley Heights, NJ: Hikma Pharmaceuticals Inc.; April 2024.
- Phenobarbital (tablet) [package insert], Boca Raton, FL; e5 Pharma LLC; July 2023.
- Phenytoin (injection) [package insert], Alpharetta, GA: Acella Pharmaceuticals, LLC; January 2024.
- Post RM. Bipolar disorder in adults: choosing maintenance treatment. UpToDate website. https://www.uptodate.com/contents/search. Updated April 19, 2023. Accessed August 20, 2024.
- Pressler RM, Abend NS, Auvin S, et al. Treatment of seizures in the neonate: Guidelines and consensus-based recommendations-Special report from the ILAE Task Force on Neonatal Seizures. *Epilepsia*. 2023;64(10):2550-2570. doi:10.1111/epi.17745
- Price R, Smith D, Franklin G, et al. Oral and topical treatment of painful diabetic polyneuropathy: practice guideline update summary: report of the AAN Guideline Subcommittee. *Neurology*. 2022;98(1):31-43. doi:10.1212/WNL.00000000013038.
- Qudexy XR [package insert], Maple Grove, MN: Upsher-Smith Laboratories Inc.; August 2024.
- Rosati A, Ilvento L, Lucenteforte E, et al. Comparative efficacy of antiepileptic drugs in children and adolescents: a network meta-analysis. Epilepsia. 2018;59(2):297-314. doi: 10.1111/epi.13981.
- Rufinamide suspension [package insert]. Baltimore, MD: Lupin Pharmaceuticals, Inc.; July 2024.
- Sabril [package insert], Deerfield, IL: Lundbeck Inc.; October 2021.
- Schachter SC. Evaluation and management of the first seizure in adults. UpToDate website. https://www.uptodate.com/contents/search. Updated May
 2, 2024[a]. Accessed August 20, 2024.
- Schachter SC. Overview of the management of epilepsy in adults. UpToDate website. https://www.uptodate.com/contents/search. Updated June 24, 2024[b]. Accessed August 20, 2024.
- Seinfeld S, Gelfand MA, Heller AH, Buan C, Slatko G. Safety and tolerability associated with chronic intermittent use of diazepam buccal film in adult, adolescent, and pediatric patients with epilepsy. Epilepsia. 2020;61(11):2426-2434. doi:10.1111/epi.16696
- Seizalam [package insert]. Lake Forest, IL: Hospira, Inc; January 2023.
- Sezaby [package insert]. Cranbury, NJ: Sun Pharmaceuticals Industries, Inc.; January 2023.
- Sharpe C, Reiner GE, Davis SL, et al. Levetiracetam versus phenobarbital for neonatal seizures: a randomized controlled trial. *Pediatrics*. 2020;145(6):e20193182.
- Silberstein SD, Holland S, Freitag F, et al. Evidence-based guideline update: pharmacologic treatment for episodic migraine prevention in adults: report of the Quality Standards Subcommittee of the American Academy of Neurology and the American Headache Society. *Neurology*. 2012;78:1337-1345. [Reaffirmed on October 22, 2022]
- Sirven JI. Evaluation and management of drug-resistant epilepsy. UpToDate website. https://www.uptodate.com/contents/search. Updated December 19, 2023. Accessed August 20, 2024.
- Spritam [package insert], Blue Ash, OH: Aprecia Pharmaceuticals Company; June 2024.
- Stovall J. Acute bipolar mania and hypomania in adults: general principles of pharmacotherapy. UpToDate website. https://www.uptodate.com/contents/search. Updated July 22, 2024. Accessed August 20, 2024.
- Sullivan J, Lagae L, Cross JH, et al. Fenfluramine in the treatment of Dravet syndrome: results of a third randomized, placebo-controlled clinical trial. *Epilepsia*. Published online August 6, 2023. doi:10.1111/epi.17737.
- Sympazan [package insert]. Warren, NJ: Aquestive Therapeutics; March 2024.
- Tegretol and Tegretol-XR [package insert], East Hanover, NJ: Novartis Pharmaceuticals Corp.; July 2024.



- Thiele EA, Bebin EM, Bhathal H, et al. Add-on cannabidiol treatment for drug-resistant seizures in tuberous sclerosis complex: a placebo-controlled randomized clinical trial. *JAMA Neurol.* 2021;78(3):285-292. doi: 10.1001/jamaneurol.2020.4607.
- Thiele EA, Marsh ED, French JA, et al. Cannabidiol in patients with seizures associated with Lennox-Gastaut syndrome (GWPCARE4): a randomized, double-blind, placebo-controlled phase 3 trial. *Lancet*. 2018;391(10125):1085-1096. doi: 10.1016/S0140-6736(18)30136-3.
- Tomson T, Battino D, Bromley R, et al. Executive summary: management of epilepsy in pregnancy: a report from the International League Against Epilepsy Task Force on Women and Pregnancy. *Epilepsia*. 2019;60(12):2343-2345. doi:10.1111/epi.16395.
- Topamax [package insert], Titusville, NJ: Janssen Pharmaceuticals Inc.; May 2023.
- Tranxene T-TAB [package insert], Lebanon, NJ: Recordati Rare Diseases Inc.; January 2023.
- Trileptal [package insert], East Hanover, NJ: Novartis Pharmaceuticals Corporation; July 2024.
- Trokendi XR [package insert], Rockville, MD: Supernus Pharmaceuticals Inc.; January 2024.
- Valium [package insert], Wixom, MI: Waylis Therapeutics LLC; March 2024.
- Valproate sodium [package insert]. Lake Zurich, IL: Fresenius Kabi; October 2022.
- Valproic acid (capsule) [package insert]. Princeton, NJ: Bionpharma Inc.; December 2023.
- Valproic acid (solution) [package insert]. Philadelphia, PA: Lannett Company, Inc.; September 2020.
- Valtoco [package insert], San Diego, CA: Neurelis, Inc.; August 2023.
- Vigafyde [package insert], Parsippany, NJ: Pyros Pharmaceuticals, Inc.; August 2024.
- Vimpat [package insert], Smyrna, GA: UCB Inc.; June 2024.
- Wilmshurst JM, Gaillard WD, Vinayan KP, et al. Summary of recommendations for the management of infantile seizures: task force report for the ILAE Commission of Pediatrics. *Epilepsia*. 2015;56(8):1185-1197.
- Xcopri [package insert], Paramus, NJ: SK Life Science Inc.; August 2024.
- Xia D, Zhang P, Chen Y, Liu X, Chen Y. Efficacy of pharmacological treatments for Dravet syndrome: Systematic review and network metaanalysis. Seizure. 2024;117:90-97. doi:10.1016/j.seizure.2024.02.004
- Zarontin (capsules) [package insert], New York, NY: Pfizer Inc.; July 2024.
- Zarontin (oral solution) [package insert], New York, NY: Pfizer Inc.; July 2023.
- Zhang L, Wang J, Wang C. Efficacy and safety of antiseizure medication for Lennox-Gastaut syndrome: a systematic review and network metaanalysis. Dev Med Child Neurol. 2022;64(3):305-313. doi:10.1111/dmcn.15072.
- Zhu LN, Chen D, Xu D, Tan G, Wang HJ, Liu L. Newer antiepileptic drugs compared to levetiracetam as adjunctive treatments for uncontrolled focal epilepsy: an indirect comparison. Seizure. 2017;51:121-132.
- Zhao T, Feng X, Liu J, et al. Evaluate the efficacy and safety of anti-epileptic medications for partial seizures of epilepsy: A network meta-analysis. *J Cell Biochem*. 2017;118(9):2850-2864. doi: 10.1002/jcb.25936.
- Zonegran [package insert], Miami Lakes, FL: Concordia Pharmaceuticals Inc.; November 2023.
- Zonisade [package insert], Wilmington, MA: Azurity Pharmaceuticals Inc.; March 2023.
- Ztalmy [package insert], Radnor, PA: Marinus Pharmaceuticals, Inc.; April 2024.

Publication Date: September 13, 2024



Therapeutic Class Overview

H. pylori combinations

Introduction

- Helicobacter pylori (H. pylori), a common gastric gram-negative spiral bacterium, is associated with dyspepsia, chronic gastritis, peptic ulcer disease, gastric adenocarcinoma, and gastric mucosa-associated lymphoid tissue (MALT) lymphoma (Hu et al 2021, Lamont 2022). H. pylori acts by disrupting the mucous layer, liberating enzymes and toxins, and adhering to the gastric epithelium (Lamont 2022).
 - o Approximately one-half of the world's population is infected with *H. pylori*, and worldwide, nearly 90% of non-cardia gastric cancer has been attributed to *H. pylori* infection (*Hu et al 2021*). Prevalence estimates can vary greatly, depending on the location of the study group and the characteristics of the population studied (*Lamont 2022*).
- Eradication of *H. pylori* is part of the effective treatment and/or prevention of gastric and/or duodenal disorders. The most common method for the eradication of *H. pylori* infection consists of the administration of a proton pump inhibitor (PPI) in combination with 1 or more antimicrobial agent(s) (*Crowe 2019, Lamont 2023*).
 - Successful H. pylori eradication may decrease levels of gastric inflammation, relieve dyspepsia, prevent the
 progression of gastric mucosa, and reduce the incidence of peptic ulcer and gastric cancer; recent studies have
 demonstrated that H. pylori treatment was associated with a lower risk of gastric cancer even in older patients (Hu et
 al 2021).
- Six Food and Drug Administration (FDA)-approved *H. pylori* eradication packaged combination products are available in the United States (U.S.) (*Drugs@FDA 2024, prescribing information: Helidac Therapy 2024, lansoprazole, amoxicillin, and clarithromycin kit 2024, Omeclamox-Pak 2023, Pylera 2024, Talicia 2024, Voquezna Dual Pak and Triple Pak 2024).*
 - Helidac Therapy is a co-packaged kit containing bismuth subsalicylate tablets, metronidazole tablets, and tetracycline capsules; it requires the concomitant administration of an H2-antagonist (H2A).
 - Pylera (bismuth subcitrate potassium, metronidazole, and tetracycline) fixed-dose combination capsule is approved for use in combination with omeprazole.
 - A co-packaged product, previously known by the brand name Prevpac, is a triple-therapy eradication regimen kit that includes lansoprazole capsules, amoxicillin capsules, and clarithromycin tablets; a generic remains available.
 - Omeclamox-Pak is a triple-therapy co-packaged kit that includes omeprazole capsules, clarithromycin tablets, and amoxicillin capsules.
 - Talicia (omeprazole, amoxicillin and rifabutin), a triple-therapy, fixed-dose combination capsule, was FDA-approved in 2019 and developed to address *H. pylori* treatment challenges due to increasing antibiotic resistance. Due to the differences in the pharmacokinetics of the components of Talicia, substitution of the individual components is not possible using commercially available individual products.
 - Voquezna is available in a co-packaged Dual Pak consisting of vonoprazan tablets with amoxicillin capsules, or a
 Triple Pak consisting of vonoprazan tablets, amoxicillin capsules, and clarithromycin tablets.
 - Vonoprazan is a first-in-class potassium-competitive acid blocker (PCAB). Unlike PPIs, vonoprazan does not
 require acid activation and has a more potent and longer duration of acid suppression including during the night
 (Scott et al 2015, Shin et al 2011).
- Comparative studies of worldwide and regional efficacy of *H. pylori* regimens are lacking (*Rokkas et al 2021*). There are also limited data on *H. pylori* antibiotic resistance rates to guide therapy. The choice of initial antibiotic regimen to treat *H. pylori* should be guided by the presence of risk factors for macrolide resistance and local antibiotic resistance patterns (if known), penicillin allergy, adverse events, and ease of administration. In patients with ≥ 1 risk factor for macrolide resistance, clarithromycin-based therapy should be avoided (*Crowe 2019, Lamont 2023*).
 - Risk factors for macrolide resistance include prior exposure to macrolide therapy and high local clarithromycin resistance rates ≥ 15% or eradication rates with clarithromycin triple therapy ≤ 85%.
 - o In the U.S., given the limited information on antimicrobial resistance rates, it is generally assumed that clarithromycin resistance rates are > 15% unless local data indicate otherwise. Data suggest that *H. pylori* antibiotic resistance rates are high worldwide, and clarithromycin-resistant *H. pylori* has been included in the World Health Organization (WHO) priority list of antibiotic-resistant bacteria (*Hu et al 2021, Savoldi et al 2018*).
 - Additional *H. pylori* eradication regimens under investigation also include hybrid and reverse hybrid therapies (ie, a PPI and amoxicillin for 10 to 14 days with the addition of clarithromycin and metronidazole for the final or first 7 days, respectively), with eradication rates of > 85% reported (*Hu et al 2021*).
- Approximately 20% of patients fail an initial attempt at H. pylori eradication and require salvage therapy (Lamont 2023).



- In patients with persistent *H. pylori* infection, the choice of antibiotic therapy should be guided by the patient's initial
 treatment regimen, the use of other antibiotics, and the presence of relevant antibiotic allergies. Antibiotics included
 in the initial regimen should generally be avoided. However, amoxicillin can be reused as resistance rarely develops.
 Patients with a reported history of penicillin allergy should be referred to an allergist to determine if they have a true
 penicillin allergy.
- Salvage regimens include bismuth quadruple therapy, levofloxacin triple therapy, high-dose dual therapy (with amoxicillin and a PPI), clarithromycin-based concomitant therapy, and rifabutin triple therapy.
- Medispan class: Ulcer therapy combinations

Table 1. Medications Included Within Class Review

Drug	Alternative Available (same molecular entity)*
amoxicillin, clarithromycin, lansoprazole	-
Helidac Therapy (bismuth subsalicylate, metronidazole, tetracycline)	-
Omeclamox-Pak (amoxicillin, clarithromycin, omeprazole)	-
Pylera (bismuth subcitrate potassium, metronidazole, tetracycline hydrochloride)	~
Talicia (omeprazole magnesium, amoxicillin, rifabutin)	-
Voquezna Dual Pak (vonoprazan and amoxicillin)	-
Voquezna Triple Pak (vonoprazan, amoxicillin, and clarithromycin)	-

^{*}For example, authorized generic, branded generic (unless not considered therapeutically equivalent by the Orange Book), generic, unbranded biologic, or interchangeable biologic.

(Drugs@FDA 2024, Orange Book: Approved Drug Products with Therapeutic Equivalence Evaluations 2024)

Indications

Table 2. Food and Drug Administration Approved Indications

Indication	amoxicillin; clarithromycin; lansoprazole	Helidac Therapy (bismuth subsalicylate, metronidazole, tetracycline)	Omeclamox- Pak (amoxicillin; clarithromycin; omeprazole)	Pylera (bismuth subcitrate potassium, metronidazole, tetracycline)	Talicia (omeprazole magnesium, amoxicillin rifabutin)	Voquezna Dual Pak (vonoprazan amoxicillin); Triple Pak (vonoprazan, amoxicillin, clarithromycin)
In combination with omeprazole, for the treatment <i>H. pylori</i> infection and duodenal ulcer disease (active or history of within the past 5 years) to eradicate <i>H. pylori</i>				~		
In combination with an H2A, for the treatment of H. pylori infection and duodenal ulcer disease (active or history of duodenal		* *				

Data as of August 5, 2024 AD/LF

Page 2 of 10



Indication	amoxicillin; clarithromycin; lansoprazole	Helidac Therapy (bismuth subsalicylate, metronidazole, tetracycline)	Omeclamox- Pak (amoxicillin; clarithromycin; omeprazole)	Pylera (bismuth subcitrate potassium, metronidazole, tetracycline)	Talicia (omeprazole magnesium, amoxicillin rifabutin)	Voquezna Dual Pak (vonoprazan amoxicillin); Triple Pak (vonoprazan, amoxicillin, clarithromycin)
ulcer) to eradicate <i>H.</i> <i>pylori</i>						
Treatment of H. pylori infection and duodenal ulcer disease (active or 1-year history of a duodenal ulcer) to eradicate H. pylori	•		•			
Treatment of <i>H.</i> pylori infection in adults					>	~

^{*}The eradication of H. pylori has been demonstrated to reduce the risk of duodenal ulcer recurrence in patients with active duodenal ulcer disease.

(Prescribing information: Helidac Therapy 2024; lansoprazole, amoxicillin, and clarithromycin kit 2024; Omeclamox-Pak 2023; Pylera 2024; Talicia 2024; Voquezna Dual Pak and Triple Pak 2024)

• Information on indications, mechanism of action, pharmacokinetics, dosing, and safety has been obtained from the prescribing information for the individual products, except where noted otherwise.

Clinical Efficacy Summary

- Older clinical trials comparing triple therapy (lansoprazole, amoxicillin, and clarithromycin) to dual therapy (lansoprazole with amoxicillin or clarithromycin), lansoprazole monotherapy, or placebo found that triple therapy provided significantly greater eradication rates of *H. pylori*. In some instances, it was not reported or unclear whether the medications were prescribed as daily administration packs or as individual products (*Bazzoli et al 1998, Laine et al 2003*, *Lamouliatte et al 1998, Nagahara et al 2007*, *Schwartz et al 1998, Veldhuyzen van Zanten et al 2003*).
- A meta-analysis of 14 randomized controlled trials reported that high-dose dual therapy (a PPI given 4 times daily plus high-dose amoxicillin for 14 days) was as effective for *H. pylori* eradication when compared to bismuth-based quadruple therapy (*Zhou et al 2023*). In the high-dose dual therapy group, adverse effects were significantly lower when compared to bismuth-based quadruple therapy (relative risk, 0.42; 95% confidence interval [CI], 0.34 to 0.50, low quality evidence).
- Head-to-head trials and meta-analyses have reported that bismuth-based quadruple therapy was at least as effective as standard triple therapy for the eradication of *H. pylori*, and a few studies reported higher eradication rates with quadruple therapy when compared to 7 to 14-day standard triple therapy (*Chey et al 2017, Katelaris et al 2002, Laine et al 2003, Liou et al 2016, Luther et al 2010, Macías-Gracía et al 2019, Magaret et al 2001, Malfertheiner et al 2011, O'Morain et al 2003, Uygun et al 2007, Uygun et al 2008, Venerito et al 2013). Bismuth-based quadruple therapy was also reported to be effective in patients who had received or failed previous <i>H. pylori* treatment regimens (*Miehlk et al 2003, Uygun et al 2008*).
 - Laine et al 2003 reported that a 10-day course of omeprazole plus a triple antibiotic capsule (bismuth, metronidazole, and tetracycline) was at least as efficacious as standard therapy with omeprazole, amoxicillin, and clarithromycin for the eradication of *H. pylori*. The bismuth-based regimen demonstrated effectiveness even in the presence of metronidazole and clarithromycin-resistant strains of *H. pylori* with eradication rates of 80% and 77%, respectively, in the intention-to-treat (ITT) analysis.
 - Liou et al 2016 reported *H. pylori* eradication frequencies of 90.4% in their ITT population with bismuth quadruple 10-day therapy (bismuth, lansoprazole, tetracycline, metronidazole), 85.9% with 10-day non-bismuth-based quadruple

Data as of August 5, 2024 AD/LF

Page 3 of 10



therapy (lansoprazole, amoxicillin, clarithromycin, metronidazole) and 83.7% with 14-day triple therapy (lansoprazole, amoxicillin, clarithromycin). Superiority was achieved with bismuth 10-day quadruple therapy vs 14-day triple therapy (difference, 6.7%; 95% CI, 2.7 to 10.7), although rates of adverse events were highest in the bismuth 10-day quadruple therapy group (67% vs 47%).

- A Phase 3 non-inferiority trial reported that a 10-day course of omeprazole plus a triple antibiotic capsule (bismuth, metronidazole, and tetracycline) was at least as efficacious as standard therapy with omeprazole, amoxicillin, and clarithromycin for 7 days in the eradication of *H. pylori* (*Malfertheiner et al 2011*). The bismuth-based regimen demonstrated eradication rates that were significantly higher than the 7-day standard triple therapy. Compliance rates in both groups exceeded 95%.
- In a 2013 meta-analysis of 12 studies by Venerito et al, a bismuth-based quadruple regimen (bismuth, metronidazole, tetracycline, and PPI) for a treatment duration of 10 days was found to be more effective for *H. pylori* eradication when compared to a 7-day triple therapy regimen containing a PPI, amoxicillin, and clarithromycin. Eradication was achieved in 77.6% of patients receiving the 10-day bismuth-based quadruple regimen vs 68.9% of patients receiving 7-day triple therapy (risk difference, 0.06; 95% CI, -0.01 to 0.13). When triple therapy was extended to 10 days of treatment, however, eradication rates between triple therapy and 7-day quadruple therapy were considered similar. Compliance and rates of side effects were also similar between treatment groups.
- o A meta-analysis of 30 studies reported that the first-line *H. pylori* eradication rate of Pylera plus a PPI was 90% (95% CI, 87% to 92%; 21 trials; I² = 88%). In the second-line setting, the eradication rate of Pylera plus a PPI against *H. pylori* was 89% (95% CI, 86% to 93%; 12 studies; I² = 78%). For the second-line treatment following previous treatment with clarithromycin, the eradication rate of Pylera plus a PPI was 90% (95% CI, 87% to 93%; 11 studies; I² = 78%) (*Nyssen et al 2019*).
- The efficacy and safety of Helidac (bismuth subsalicylate, metronidazole, tetracycline) were established in eradicating *H. pylori* infection in patients with an active duodenal ulcer. Eradication rates for Helidac therapy of 14 days were 77% and 82% in 2 clinical trials. The rates of duodenal ulcer recurrence at 12 months after treatment with Helidac plus ranitidine or ranitidine alone were 13% and 100% in the patients with a negative *H. pylori* test after treatment (*Helidac prescribing information 2020*).
- A prospective multicenter study and 1 meta-analysis have reported that non-bismuth-based quadruple therapy containing a nitroimidazole as a component of the regimen is safe and achieves higher eradication rates than standard non-bismuth-based triple therapy (*Gisbert and Calvet 2012*, *Molina-Infante et al 2015*).
 - o Gisbert and Calvet reported in their meta-analysis that *H. pylori* eradication was improved with non-bismuth-based quadruple therapy (PPI, amoxicillin, metronidazole, and clarithromycin) vs non-bismuth-based triple therapy (PPI, amoxicillin, clarithromycin). In their analysis of 7 randomized controlled trials, 90% of patients achieved *H. pylori* eradication in the ITT analysis in the quadruple group vs 78% in the triple therapy group (odds ratio [OR], 2.36; 95% CI, 1.67 to 3.34). The duration of the quadruple regimens differed across the studies included in the analysis and ranged from 3- to 5-day treatment durations, vs regimens of 5 to 7 days duration with triple therapy. Overall, quadruple and triple therapy regimens were found to have similar safety profiles.
 - A prospective, multicenter study found that empiric non-bismuth-based quadruple therapy (esomeprazole, amoxicillin, clarithromycin, metronidazole) for 14 days vs non-bismuth-based triple therapy (esomeprazole, amoxicillin, clarithromycin) for 14 days achieved significantly higher rates of *H. pylori* eradication (90.4 % vs 81.3% in ITT analysis; p < 0.001). While adverse events occurred at higher rates in the quadruple therapy group, the rate was not significantly increased compared to triple therapy and did not result in significant differences in treatment compliance between the 2 regimens (*Molina-Infante et al 2015*).
- The efficacy and safety of Talicia (equivalent to omeprazole 120 mg, amoxicillin 3 g, rifabutin 150 mg daily) were demonstrated in 2 double-blind, randomized controlled studies in treatment-naïve patients regardless of peptic or duodenal ulcer status. The ERADICATE Hp2 trial evaluated Talicia vs amoxicillin 3 g + omeprazole 120 mg daily in 455 patients with confirmed *H. pylori* infection. The eradication rate was significantly higher in the Talicia group compared to the active control group (83.8% vs 57.7%; p < 0.0001) (*Graham et al 2020*). The placebo-controlled ERADICATE Hp study that enrolled 118 patients found the eradication rate success for Talicia was significantly higher than the historical control using the standard of care (89.4% vs 2.7%; p < 0.001) (*Talicia Formulary Dossier 2020*).
- The efficacy and safety of Voquezna were demonstrated in a randomized, noninferiority study which assigned 1046 treatment-naïve patients with *H. pylori* infection to receive open-label Voquezna dual therapy (vonoprazan 20 mg twice daily plus amoxicillin 1 g three times daily) or double-blind triple therapy with either Voquezna twice daily (vonoprazan 20 mg, amoxicillin 1 g, clarithromycin 500 mg) or lansoprazole (lansoprazole 30 mg, amoxicillin 1 g, clarithromycin 500 mg) twice daily for 14 days. The eradication rates of *H. pylori* strains not resistant to clarithromycin or amoxicillin were

Data as of August 5, 2024 AD/LF

Page 4 of 10



78.5% with Voquezna dual therapy, 84.7% with Voquezna triple therapy, and 78.8% with lansoprazole triple therapy. Both analyses were considered noninferior to lansoprazole triple therapy (difference, 5.9%; 95% CI, -0.8 to 12.6; p < 0.001; difference -0.3%; 95% CI, -7.4 to 6.8; p = 0.007) (Chey et al 2022).

• A systematic review and meta-analysis of 15 studies (N = 4568) comparing Voquezna dual therapy to other recommended regimens for *H. pylori* eradication (eg, Voquezna triple therapy, Voquezna quadruple therapy [Voquezna triple therapy plus bismuth], and PPI-based therapies [dual, triple, or bismuth-containing quadruple]) found that the pooled eradication rate of Voquezna dual therapy per ITT analysis was 85.0%. Voquezna dual therapy showed a higher cure rate vs PPI-based triple therapy (82.0% vs 71.4%, p < 0.01) but a lower rate vs Voquezna-based quadruple therapy (83.1% vs 93.3%, p = 0.02). There was no significant difference in efficacy between Voquezna dual therapy vs Voquezna triple therapy, PPI-based dual therapy, or PPI-based quadruple therapy (*Du et al 2023*).

Clinical Guidelines

- The 2017 American College of Gastroenterology (ACG) guideline recommends a 14-day therapy of a triple-drug regimen containing a PPI, clarithromycin, and either amoxicillin or metronidazole as the preferred treatment in regions where *H. pylori* has < 15% resistance to clarithromycin and in patients with no previous history of macrolide exposure. The triple-drug regimen should be given for 14 days as meta-analyses have shown better outcomes with 14-day treatment compared to 7-day and 10-day treatments. Other first-line options include bismuth quadruple therapy (PPI + bismuth + a nitroimidazole [metronidazole or tinidazole] + tetracycline) for 10 to 14 days and "concomitant therapy" consisting of a PPI, clarithromycin, amoxicillin, and a nitroimidazole for 10 to 14 days (*Chey et al 2017*).
 - Bismuth quadruple therapy or levofloxacin triple therapy (PPI + amoxicillin + levofloxacin) for 14 days are the
 preferred options for patients who have failed a first-line clarithromycin-containing regimen. Clarithromycin or
 levofloxacin-containing salvage regimens are the preferred treatment options for patients who have received first-line
 bismuth quadruple therapy.
 - Rifabutin triple regimen of a PPI, amoxicillin, and rifabutin for 10 days is one of several suggested salvage regimens; however, this is not the same dosing regimen as in the FDA-approved Talicia labeling.
- The 2020 American Gastroenterological Association (AGA) guidelines on the management of gastric intestinal metaplasia recommend that patients with gastric intestinal metaplasia undergo testing for *H. pylori* followed by eradication (strong recommendation; moderate quality of evidence) (*Gupta et al 2020*).
- The 2021 AGA expert review on the management of refractory *H. pylori* infection states that treatment will depend on the previous regimen used. If macrolides or fluoroquinolones were previously used, then clarithromycin- or levofloxacin-based regimens, respectively, should be avoided. If bismuth quadruple therapy failed, then either a levofloxacin- or rifabutin-based triple therapy plus high dose PPI and amoxicillin, or an alternative bismuth-containing quadruple therapy should be chosen. Additional recommendations include ensuring appropriate metronidazole dosing, adequate acid suppression, and longer treatment duration (14 days instead of 7 days) (*Shah et al 2021*).
- The updated 2021 World Gastroenterology Organization (WGO) global guidelines for *H. pylori* indicate 2 core choices for first-line eradiation therapy that have widespread use around the world. These include triple therapy with PPI plus amoxicillin and clarithromycin (where clarithromycin resistance is low) or bismuth-based quadruple therapy (PPI + bismuth + metronidazole + tetracycline or amoxicillin [amoxicillin may be useful when high primary clarithromycin resistance)]. Optimal duration may vary from country to country depending on resource availability (*Katelaris et al 2021*).

Safety Summary

Clarithromycin-containing combinations (Omeclamox-Pak and amoxicillin/clarithromycin/lansoprazole)

- All products are contraindicated in patients with hypersensitivity to any component of the formulation. Due to the clarithromycin component, Omeclamox-Pak and amoxicillin/clarithromycin/lansoprazole are contraindicated in patients taking drugs reported to result in cardiac arrhythmias when administered concomitantly (eg, ergotamine, dihydroergotamine, and pimozide), in patients with history of QT prolongation or ventricular cardiac arrhythmia, in patients taking concomitant lurasidone, and in those with a history of jaundice/hepatic dysfunction associated with prior clarithromycin use. PPIs are contraindicated with rilpivirine-containing products.
- Warnings and precautions for amoxicillin/clarithromycin/lansoprazole and Omeclamox-Pak associated with the
 clarithromycin component include fetal risk, colchicine toxicity, hepatotoxicity, QT prolongation, and myasthenia gravis.
 Other warnings include Clostridioides difficile-associated diarrhea, risk of gastric malignancy, development of bacterial
 superinfections, acute interstitial nephritis, cutaneous and systemic lupus erythematosus, acute interstitial nephritis, and
 the risk of severe cutaneous adverse reactions (SCARs) including Stevens-Johnson syndrome (SJS), toxic epidermal

Data as of August 5, 2024 AD/LF Page 5 of 10

This information is considered confidential and proprietary to Optum Rx. It is intended for internal use only and should be disseminated only to authorized recipients. The contents of the therapeutic class overviews on this website ("Content") are for informational purposes only. The Content is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Patients should always seek the advice of a physician or other qualified health provider with any questions regarding a medical condition. Clinicians should refer to the full prescribing information and published resources when making medical decisions.



necrolysis (TEN), drug reaction with eosinophilia and systemic symptoms (DRESS), and acute generalized exanthematous pustulosis (AGEP).

- They should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus, and there is no appropriate alternative therapy.
- A decision should be made whether to discontinue nursing or to discontinue amoxicillin/clarithromycin/lansoprazole, considering the importance of the therapy to the mother. The development and health benefits of breastfeeding should be considered along with the mother's clinical need for Omeclamox-Pak and any potential adverse effects on the breastfed child from clarithromycin or from the underlying maternal condition.
- Omeclamox-Pak should not be used in Asian patients or in patients with hepatic impairment.
- Numerous drug-drug interactions exist with the components of Omeclamox-Pak, amoxicillin/clarithromycin/lansoprazole, and Pylera; some interactions, including colchicine, have led to fatal toxicity (refer to the prescribing information for more details).
- The most common adverse effects reported in clinical trials when all 3 components of either Omeclamox-Pak or amoxicillin/clarithromycin/lansoprazole were administered included diarrhea, headache, and taste perversion.

Metronidazole- and tetracycline-containing combinations (Helidac Therapy and Pylera)

- Boxed warning: Pylera and Helidac both have a boxed warning for potential carcinogenicity associated with
 metronidazole. Metronidazole has been shown to be carcinogenic in mice and rats, but it is unknown whether the drug is
 associated with carcinogenicity in humans.
- Contraindications for use of Pylera and Helidac include hypersensitivity reactions, severe renal impairment, concurrent use of methoxyflurane, patients with Cockayne syndrome, use of disulfiram in the past 2 weeks, and consumption of alcoholic beverages for 3 days during or after therapy. Pylera is additionally contraindicated in pregnancy.
- Warnings and precautions for Pylera and Helidac include potential for carcinogenicity, fetal toxicity, maternal hepatotoxicity, tooth enamel discoloration and hypoplasia, photosensitivity, increased plasma concentrations in patients with hepatic impairment, central nervous system effects, severe cutaneous reactions, darkening of the tongue and/or black stool, and caution in patients with a history of blood dyscrasias.
 - A woman should pump and discard human milk for the duration of Pylera therapy and for 2 days after therapy ends. Nursing women should avoid breastfeeding their infant during Helidac therapy and for 24 hours after the last dose.
 - Helidac and Pylera should not be used in children up to 8 years of age since tetracycline use in children may cause permanent discoloration of the teeth.
- Helidac, due to the salicylate component, has a warning- for the risk of Reye's syndrome in children and adolescents who have or who are recovering from varicella or influenza.
- The most frequently reported adverse effects (≥ 5%) with Pylera included abnormal feces, diarrhea, nausea, and headache. For Helidac, the most frequently reported adverse effects (≥ 5%) were nausea, diarrhea, and abdominal pain.
- There are numerous drug interactions with Helidac and Pylera, including those with methoxyflurane, disulfiram, alcohol, oral contraceptives, anticoagulants, lithium, antacids, multivitamins, dairy products, cytochrome P450 (CYP) inducers and CYP inhibitors. QT prolongation has also been reported with metronidazole, particularly when administered with drugs with the potential for prolonging the QT interval. See the current prescribing information for full details.

Talicia (omeprazole magnesium, amoxicillin, rifabutin)

- Contraindications for use of Talicia include hypersensitivity to any of the components and use of rilpivirine-containing products, delaviridine, or voriconazole.
- Warnings and precautions for Talicia include *Clostridioides difficile*-associated diarrhea, reduction in the efficacy of hormonal contraceptives, drug-induced enterocolitis syndrome (DIES), rash in patients with mononucleosis, acute interstitial nephritis, cutaneous and systemic lupus erythematosus, and acute tubulointerstitial nephritis.
- Talicia carries an additional warning and precaution for the risk of SCARs including SJS, TEN, DRESS, and AGEP.
- Use of Talicia should be avoided during pregnancy.
- The most commonly reported adverse effects (≥ 1%) with Talicia included diarrhea, headache, nausea, abdominal pain, chromaturia, rash, dyspepsia, oropharyngeal pain, vomiting, and vulvovaginal candidiasis.
- Talicia should be avoided in patients with renal or hepatic impairment.
- Components of Talicia have the potential for numerous clinically important drug interactions with CYP2C19 and CYP3A4 substrates, inducers, and inhibitors. See the current prescribing information for full details.



Pharmacogenomics

• CYP2C19, a polymorphic enzyme, is involved in the metabolism of omeprazole. Approximately 15 to 20% of Asians are poor metabolizers, which can lead to increased concentrations of omeprazole. Risk vs benefit should be considered when prescribing Omeclamox-Pak or Talicia in this population.

Voquezna Dual Pak (vonoprazan, amoxicillin) and Triple Pak (vonoprazan, amoxicillin, and clarithromycin)

- Contraindications for use of Voquezna include hypersensitivity to vonoprazan, amoxicillin or other beta-lactams, clarithromycin or other macrolide antibiotics and concomitant use of rilpivirine-containing products. Contraindications to Voquezna Triple Pak due to the clarithromycin component include concomitant drugs reported to result in cardiac arrhythmias when administered concomitantly (eg, ergotamine, dihydroergotamine, and pimozide), concurrent lipid-lowering agents (lomitapide, simvastatin, and lovastatin) and colchicine in patients with renal or hepatic impairment, concomitant lurasidone, and in those with a history of jaundice/hepatic dysfunction associated with prior clarithromycin use
- Warnings and precautions include risk of SCARs (SJS, TEN, DRESS, and AGEP), Clostridioides difficile-associated diarrhea, DIES, rash in patients with mononucleosis, interactions with diagnostic investigations for neuroendocrine tumors, and development of drug-resistant bacteria. Warnings and precautions due to the clarithromycin component include QT prolongation, hepatotoxicity, embryo-fetal toxicity, and exacerbation of myasthenia gravis.
- Voquezna Triple Pak is not recommended in pregnancy unless there are no available alternative therapies. Voquezna Dual Pak has not been adequately assessed in pregnancy.
- Components of Voquezna have the potential for numerous clinically important drug interactions, including with CYP3A4 substrates, inducers, and inhibitors. See the current prescribing information for full details.
- The most common adverse events with Voquezna Triple Pak (≥ 2%) included dysgeusia, diarrhea, vulvovaginal candidiasis, headache, abdominal pain, and hypertension. The most common adverse events with Voquezna Dual Pak (≥ 2%) included diarrhea, abdominal pain, vulvovaginal candidiasis, and nasopharyngitis.

Dosing and Administration

Table 3. Dosing and Administration

Drug	Available Formulations	Route	Usual Recommended Frequency	Comments
amoxicillin, clarithromycin, lansoprazole	Capsules (amoxicillin, lansoprazole), tablets (clarithromycin)	oral	Lansoprazole 30 mg, amoxicillin 1000 mg, and clarithromycin 500 mg each given twice daily for 10 or 14 days	
Helidac Therapy (bismuth subsalicylate, metronidazole, tetracycline)	Chewable tablets (bismuth subsalicylate), tablets (metronidazole), capsules (tetracycline)	oral	Bismuth subsalicylate 525 mg, metronidazole 250 mg, and tetracycline 500 mg taken 4 times daily for 14 days	Should be administered after meals and at bedtime. Bismuth subsalicylate tablets should be chewed and swallowed. An H2A should be administered as directed.
Omeclamox-Pak (amoxicillin, clarithromycin, omeprazole)	Capsules (amoxicillin, omeprazole), tablets (clarithromycin)	oral	Omeprazole 20 mg, clarithromycin 500 mg, and amoxicillin 1000 mg, each given twice daily for 10 days	Should be administered in the morning and evening before eating a meal. All tablets and capsules should be swallowed whole.



Drug	Available Formulations	Route	Usual Recommended Frequency	Comments
				In patients with an ulcer at initiation of therapy, an additional 18 days of omeprazole 20 mg once daily is recommended.
Pylera (bismuth subcitrate potassium, metronidazole, tetracycline)	Capsules	oral	3 capsules (bismuth subcitrate 140 mg, metronidazole 125 mg, and tetracycline 125 mg) 4 times daily for 10 days	Should be administered after meals and at bedtime. Omeprazole 20 mg should be taken twice a day with Pylera after the morning and evening meal.
Talicia (omeprazole magnesium, amoxicillin, rifabutin)	Capsules	oral	4 capsules (omeprazole 10 mg, amoxicillin 250 mg, and rifabutin 12.5 mg) 3 times daily (at least 4 hours apart) for 14 days	Should be administered with food and a full glass of water. Capsules should be swallowed whole. Should not be administered with alcohol.
Voquezna Dual Pak (vonoprazan, amoxicillin)	Tablets (vonoprazan) Capsules (amoxicillin)	oral	Vonoprazan 20 mg twice daily plus amoxicillin 1000 mg 3 times daily for 14 days	Can be administered with or without food.
Voquezna Triple Pak (vonoprazan, amoxicillin, clarithromycin)	Tablets (vonoprazan, clarithromycin) Capsules (amoxicillin)	oral	Vonoprazan 20 mg, amoxicillin 1000 mg, and clarithromycin 500 mg each given twice daily for 14 days	

See the current prescribing information for full details.

Conclusion

- *H. pylori* eradication rates have been steadily diminishing in the U.S. as clarithromycin resistance has been increasing worldwide. Eradication rates with commonly prescribed triple therapy regimens have fallen below 80%.
- Although treatment of *H. pylori* was studied in many randomized controlled trials conducted in North America during the
 first decade of this century, the number of treatment trials assessing modern regimens is modest to non-existent. As
 such, the clinical guideline recommendations rely upon clinical trial data generated in other parts of the world when
 considering a number of regimens. The treatment regimen that is selected must consider local antibiotic resistance
 patterns (if known), previous exposure and allergies to specific antibiotics, adverse effects, and ease of administration
 (Chey et al 2017).
 - The ACG 2017 guideline recommends a 14-day therapy of a triple-drug regimen containing a PPI, clarithromycin, and either amoxicillin or metronidazole as a preferred treatment in regions where *H. pylori* has < 15% resistance to clarithromycin. Other first-line options include bismuth quadruple therapy (PPI + bismuth + a nitroimidazole [metronidazole or tinidazole] + tetracycline) for 10 to 14 days and "concomitant therapy" consisting of a PPI, clarithromycin, amoxicillin, and a nitroimidazole for 10 to 14 days. Preferred salvage regimens include bismuth quadruple therapy and levofloxacin triple therapy for patients who received a first-line treatment containing clarithromycin. For patients who had bismuth quadruple therapy as first-line, clarithromycin or levofloxacin-containing salvage regimens are preferred second-line treatment options. Suggested salvage treatment comprises many options including a rifabutin-containing regimen.



- There are no major differences in the adverse event profile of bismuth-related regimens and standard clarithromycin-based triple therapy. Bismuth-based therapy is commonly associated with darkening of the tongue and stool, nausea, and gastrointestinal adverse effects. Clarithromycin-based triple therapies are commonly associated with gastrointestinal adverse effects, headache, and diarrhea. Talicia regimen is associated with diarrhea, headache, rash, and dyspepsia. The most common adverse effects reported with the Voquezna regimens were diarrhea, dysgeusia, vulvovaginal candidiasis, abdominal pain, and headache.
- The combination products in this class include individual drugs co-packaged together in either kits or fixed-dose combination capsules in an effort to improve compliance while maintaining high eradication rates. Data demonstrating improved compliance or improved outcomes vs administration of the individual components are lacking. Antibiotic resistance is highly variable in different geographic areas and must be carefully considered when choosing among the various *H. pylori* treatment regimens. The newest co-packed product, Voquezna Dual and Voquezna Triple Therapy Pak, has demonstrated non-inferiority to lansoprazole triple therapy in patients without a clarithromycin- or amoxicillin-resistant strain at baseline. Data comparing vonoprazan regimens with bismuth quadruple therapy are limited.

References

- Chey WD, Leontiadis GI, Howden CW, Moss SF. American College of Gastroenterology clinical guideline: treatment of Helicobacter pylori infection. *Am J Gastroenterol*. 2017;112;212-238.
- Chey WD, Mégraud F, Laine L, López LJ, Hunt BJ, Howden CW. Vonoprazan Triple and Dual Therapy for Helicobacter pylori Infection in the United States and Europe: Randomized Clinical Trial. *Gastroenterology*. 2022;163(3):608-619. doi:10.1053/j.gastro.2022.05.055.
- Crowe SE. Helicobacter pylori infection. N Engl J Med. 2019;380:1158-1165.
- Drugs@FDA: FDA approved drug products. Food and Drug Administration Web site. https://www.accessdata.fda.gov/scripts/cder/daf/. Accessed February 21, 2024.
- Du RC, Hu YX, Ouyang Y, et al. Vonoprazan and amoxicillin dual therapy as the first-line treatment of Helicobacter pylori infection: A systematic review
 and meta-analysis. Helicobacter. 2024;29(1):e13039.
- Food and Drug Administration. Voquezna interdisciplinary review. www.fda.gov. April 29, 2022. Accessed February 21, 2024.
- Gisbert JP, Calvet X. Update on non-bismuth quadruple (concomitant) therapy for eradication of Helicobacter pylori. *Clin Exp Gastroenterol*. 2012;5:23-34. doi:10.2147/CEG.S25419.
- Graham DY, Canaan Y, Maher J, et al. Rifabutin-based triple therapy (RHB-105) for helicobacter pylori eradication: A double-blind, randomized, controlled trial. *Ann Intern Med.* 2020;172(12): 795-802.
- Gupta S, Li D, El Serag HB, et al. AGA clinical practice guidelines on management of gastric intestinal metaplasia. Gastroenterol. 2020;158(3):P693-702.
- Helidac Therapy [package insert], East Brunswick, NJ: Casper Pharma, LLC; July 2024.
- Hu Y, Ouyang Y, Zhu Y, Lu NH. Reverse hybrid therapy for Helicobacter pylori eradication: A systematic review and meta-analysis. Helicobacter. 2021;26(2):e12784. doi: 10.1111/hel.12784.
- Katelaris PH, Hunt R, Bazzoli F, et al. World Gastroenterology Organisation Global Guidelines Helicobacter pylori. World Gastroenterology Organisation website. https://www.worldgastroenterology.org/UserFiles/file/guidelines/helicobacter-pylori-english-2021.pdf. Updated May 2021. Accessed February 21, 2024.
- Lamont JT. Bacteriology and epidemiology of Helicobacter pylori infection. UpToDate Web site. http://www.uptodate.com. Updated August 4, 2022.
 Accessed February 21, 2024.
- Lamont JT. Treatment regimens for Helicobacter pylori. UpToDate Web site. http://www.uptodate.com. Updated October 5, 2023. Accessed February 21, 2024.
- Lansoprazole, amoxicillin, and clarithromycin kit [package insert], East Brunswick, NJ: Rising Health LLC.; January 2024.
- Liou JM, Fang YJ, Chen CC, et al. Concomitant, bismuth quadruple, and 14-day triple therapy in the first-line treatment of Helicobacter pylori: a multicentre, open-label, randomised trial. *Lancet*. 2016;388(10058):2355-2365. doi:10.1016/S0140-6736(16)31409-X.
- Macías-Gracía F, Baston-Rey I, de la Iglesia-García D, et al. Bismuth-containing quadruple therapy versus concomitant quadruple therapy as first-line treatment for Helicobacter pylori infection in an area of high resistance to clarithromycin: A prospective, cross-sectional, comparative, open trial. Helicobacter. 2019;24(1):e12546.
- Malfertheiner P, Bazzoli F, Delchier JC, et al. Helicobacter pylori eradication with a capsule containing bismuth subcitrate potassium, metronidazole, and tetracycline given with omeprazole versus clarithromycin-based triple therapy: a randomised, open-label, non-inferiority, phase 3 trial [published correction appears in Lancet. 2011;378(9805):1778. Dosage error in article text]. Lancet. 2011;377(9769):905-913. doi:10.1016/S0140-6736(11)60020-2
- Molina-Infante J, Lucendo AJ, Angueira T, et al. Optimised empiric triple and concomitant therapy for Helicobacter pylori eradication in clinical practice: the OPTRICON study. *Aliment Pharmacol Ther.* 2015;41(6):581-589. doi:10.1111/apt.13069.
- Nyssen OP, McNicholl AG, Gisbert JP. Meta-analysis of three-in-one single capsule bismuth-containing quadruple therapy for the eradication of Helicobacter pylori. Helicobacter. 2019;24(2):e12570.
- O'Morain C, Borody T, Farley A, et al. Efficacy and safety of single-triple capsules of bismuth biskalcitrate, metronidazole and tetracycline, given with omeprazole, for the eradication of *Helicobacter pylori*: an international multicenter study. *Aliment Pharmacol Ther*. 2003;17:415-420.
- Omeclamox-Pak [package insert], Nashville, TN: Cumberland Pharmaceuticals; August 2023.
- Orange Book: Approved drug products with therapeutic equivalence evaluations. Food and Drug Administration Web site. https://www.accessdata.fda.gov/scripts/cder/ob/default.cfm. Accessed February 21, 2024.
- Pylera [package insert], Montgomery, AL: H2-Pharma, LLC.; April 2024.



- Rokkas T, Gisbert JT, Malfertheiner P, et al. Comparative effectiveness of multiple different first-line treatment regimens for Helicobacter pylori infection: a network meta-analysis. *Gastroenterology*. 2021;161(2):495-507.
- Savoldi A, Carrara E, Graham DY, et al. Prevalence of antibiotic resistance in *Helicobacter pylori*: a systematic review and meta-analysis in World Health Organization regions. *Gastroenterology*. 2018;155(15):1372-1382.e.17.
- Scott DR, Munson KB, Marcus EA, et al. The binding selectivity of vonoprazan (TAK-438) to the gastric H+,K+-ATPase. *Aliment Pharmacol Ther*. 2015;42(0):1315-1326.
- Shah SC, Iyer PG, Moss SF. AGA clinical practice update on the management of refractory Helicobacter pylori infection: Expert review. Gastroenterology. 2021;160(5):1831-1841. doi:10.1053/j.gastro.2020.11.059.
- Shin JM, Inatomi N, Munson K, et al. Characterization of a novel potassium-competitive acid blocker of the gastric H,K-ATPase, 1-[5-(2-fluorophenyl)-1-(pyridin-3-ylsulfonyl)-1H-pyrrol-3-yl]-N-methylmethanamine monofumarate (TAK-438). *JPET*. 2011;339:2:412-420.
- Talicia [package insert], Raleigh, NC; RedHill Bioparma, Inc.; May 2024.
- Talicia [formulary submission dossier]. Raleigh, NC; RedHill Bioparma, Inc.; 2020.
- Uygun A, Kadayifci A, Safali M, Ilgan S, Bagci S. The efficacy of bismuth containing quadruple therapy as a first-line treatment option for Helicobacter pylori. J Dig Dis. 2007;8(4):211-215.
- Uygun A, Ozel AM, Yildiz O, et al. Comparison of three different second-line quadruple therapies including bismuth subcitrate in Turkish patients with non-ulcer dyspepsia who failed to eradicate *Helicobacter pylori* with a 14-day standard first-line therapy. *J Gastroenterol Hepatol*. 2008;23(1):42-45.
- Venerito M, Krieger T, Ecker T, Leandro G, Malfertheiner P. Meta-analysis of bismuth quadruple therapy versus clarithromycin triple therapy for empiric primary treatment of *Helicobacter pylori* infection. *Digestion*. 2013;88(1):33-45. doi:10.1159/000350719.
- Voquezna Dual and Triple Pack [package insert], Buffalo Grove, IL; Phathom Pharmaceuticals; May 2024.
- Zhou BG, Mei YZ, Zhang M, Jiang X, Li YY, Ding YB. High-dose dual therapy versus bismuth-containing quadruple therapy for Helicobacter pylorieradication: a systematic review and meta-analysis with trial sequential analysis. Therap Adv Gastroenterol. 2023;16:17562848221147756.
 Published 2023 Jan 10. doi:10.1177/17562848221147756.

Publication Date: August 28, 2024