North Dakota Medicaid
Drug Utilization Review Board Meeting
March 1, 2023
Conference Room 210/212

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Meeting Notice

North Dakota Medicaid Drug Use Review Board

Wednesday, March 1st, 2023
1 to 4 p.m. Central Time

In-Person Information

Conference Room 210/212, 2nd Floor, Judicial Wing, State Capitol
600 E. Boulevard Ave., Bismarck

Virtual Information

Join virtually: Click here to join the meeting
Join by phone: 701-328-0950, Conference ID: 747 563 783#

Agenda

1. Administrative items
    - DHHS announcements

2. Old business
    - Review and approval of December 2022 meeting minutes
    - Budget update
    - Review top 25 drugs for the fourth quarter of 2022
    - Prior authorization/PDL update
    - Update to *C. difficile* associated diarrhea
    - Update to Vaginal Infections

3. New business
    - Review of Hyperparathyroidism
    - Review of Influenza
    - Review of Neuromyelitis Optica Spectrum Disorder
    - Review of Urea Cycle Agents
    - Discussion of RSV
    - Retrospective DUR profile review update
    - Retrospective DUR criteria recommendations
    - Upcoming meeting date/agenda.
        - Next meeting is June 7th, 2023

Adjourn

Individuals with disabilities who need accommodations, including appropriate auxiliary aids to participate, can contact Stacey Koehly at 701-328-4807, toll-free 800-755-2604, 711 (TTY) or skoehly@nd.gov.

North Dakota Medicaid Drug Use Review (DUR) Board
Meeting Minutes
December 7, 2022

Members Present: Andrea Honeyman, Kathleen Traylor, Gabriela Balf, Amy Werremeyer, Laura Kroetsch, Tanya Schmidt, Kevin Martian, Kristen Peterson

Medicaid Pharmacy Department: Alexi Murphy, Brendan Joyce, LeNeika Roehrich, Jeff Hostetter

Old Business
Chair T. Schmidt called the meeting to order at 1:20 p.m.

DHHS Announcements
Chair T. Schmidt asked B. Joyce if there is a set date for the end of the public health emergency, in which he answered that there is no set date currently. Chair T. Schmidt followed up by asking if the end of the public health emergency would interfere with medication therapy management (MTM) services. B. Joyce answered that it would not affect MTM services, and they will continue to be covered.

Review and Approval of Meeting Minutes
Chair T. Schmidt asked for a motion to approve the minutes of the September 7, 2022, meeting. A. Werremeyer moved that the minutes be approved, and L. Kroetsch seconded the motion. The chair called for a voice vote to approve the minutes. The motion passed with no audible dissent.

Budget Update
B. Joyce presented budget updates and the overall increase due to the increase in Medicaid member numbers. B. Joyce shared that in 2020, the pre-rebate spend was 79 million dollars and post-rebate was 22.5 million dollars. In 2021, the pre-rebate spend was 100 million dollars and post-rebate was 27 million dollars. For the first 3 quarters of 2022, the pre-rebate spend was 84 million and is projected to be 112 to 114 million dollars pre-rebate total spend for 2022. It is projected, the post-rebate spend will be around 32 million dollars for 2022. Thus, in one year, the total spending rose 14%. B. Joyce assured that this amount of growth is congruent with other Medicaid programs. Chair T. Schmidt asked B. Joyce what the difference in members between 2020 and 2022 is in which he answered that in the beginning of 2020 there was a total of 88 thousand members and as of October of 2022, there was a total of 127 thousand members. B. Joyce went on to discuss that the increase of total spend is not necessarily a result of the amount of members, but rather, the increase in medication cost and utilization of those medications.

Review Top 25 Drugs
B. Joyce presented the quarterly review of the top 25 drugs based on total cost of claims, the top 25 drugs based on the total number of claims, and the top drug classes based on claims and cost for the 3rd quarter of 2022.

PDL/PA Criteria Updates
A. Murphy shared with the Board all the changes made to the Preferred Drug List (PDL) throughout the year 2022. Notable changes include removing Imitrex cartridge and nasal spray, Zomig nasal spray, Bromsite, Prolensa, and Rytary from PA.

Update to Prurigo Nodularis (Dupixent)
A. Murphy presented the criteria for Dupixent's new indication (prurigo nodularis). During public comment, Thu-Mai Duong, a representative of Dupixent, agreed with the criteria set forth for Dupixent therapy in prurigo nodularis; however, she expressed concern about the immunologic systemic therapy requirement for patients primarily since many patients with this disease state are elderly and it may pose a safety risk. There were no further comments from the Board members.

Update to Endometriosis Pain (Myfembree)
A. Murphy presented the criteria for Myfembree's new indication (endometriosis pain). Myfembree and Orilissa will now share the same criteria in the endometriosis pain category on the PDL. There were no further comments or questions.

Update to Hematopoietic Syndrome of Acute Raditaion Syndrome (NPlate)
A. Murphy presented the criteria for NPlate in the off-label use for Hematopoietic Syndrome of Acute Radiation Syndrome. There were no further comments or questions.

Second Review of Amyloidosis
A motion and second were made at the September 2022 DUR Board meeting to place agents for amyloidosis on prior authorization. Group criteria was presented to the Board by A. Murphy. Chair T. Schmidt called for a voice vote to approve the updated criteria, which passed with no audible dissent.

Second Review of Amyotrophic Lateral Sclerosis
A motion and second were made at the September 2022 DUR Board meeting to place agents for amyotrophic lateral sclerosis on prior authorization. Group criteria was presented to the Board by A. Murphy. Chair T. Schmidt called for a voice vote to approve the updated criteria, which passed with no audible dissent.

Second Review of Chelating Agents
A motion and second were made at the September 2022 DUR Board meeting to place agents for chelating agents on prior authorization. Group criteria was presented to the Board by A. Murphy. Chair T. Schmidt called for a voice vote to approve the updated criteria, which passed with no audible dissent.

Treatment follow-up Questions for Eosinophilic Esophagitis (EoE)
A. Murphy presented a document containing follow-up answers to questions asked at the September 2022 Board meeting that were not answered. During public comment, Thu-Mai Duong, a representative for Dupixent, had comments regarding the renewal criteria for Dupixent in EoE. Thu-Mai Duong expressed concerns for the requirement of an esophageal intraepithelial eosinophil count of ≤6 eos/hp in cases when a patient may have a count higher than 6 but has relief from Dupixent or vice versa. Thu-Mai Duong discussed that an esophageal intraepithelial eosinophil count is typically used for diagnosis but not for showing improvement in symptoms. A. Werremeyer followed up by asking if there were any quality-of-life assessments that were included in the trials regarding Dupixent use in EoE. Thu-Mai Duong answered that dysphagia and quality-of-life questionnaires were used in the study and stated she would follow-up with the questionnaires discussed.

Annual Review of Prior Authorization Forms and Criteria
The Board reviewed all forms and criteria utilized for all medications that are currently placed on prior authorization. A. Murphy discussed the major changes made in the preferred drug list (PDL) since the last update. Some of the most notable changes include adding criteria for medical billing only agents and preferring biosimilars of Remicade (Avsola and Renflexis). This list of changes is included in the handout, as well as, in the PDL. Chair T. Schmidt then called for any questions or concerns about the reviewed forms and criteria. G. Balf asked about the first-fill edit for ADHD medications and why these agents are limited initially. A. Murphy answered that the first-fill edit is utilized on few medications that one could notice soon after taking if it is therapeutic. The day supply of the first-fill is limited to ensure the member is on a therapeutic dose before paying for a full supply. Chair T. Schmidt asked for a motion to approve the updated PDL and PA forms. A. Werremeyer moved that the PDL and PA forms be approved, and K. Martian seconded the motion. The chair called for a voice vote to approve the PDL and PA forms. The motion passed with no audible dissent.

New Business

Discussion of RDUR Response Letter
S. Donald presented the RDUR response letters from the 3rd quarter of 2022. Most providers responded that the benefits of the drug outweigh the risks. Chair T. Schmidt discussed concerns of the low provider response rate and asked S. Donald how the rate of responses seen in North Dakota compared to other states. S. Donald stated that the rates are low across the board, but North Dakota is slightly lower than the average.

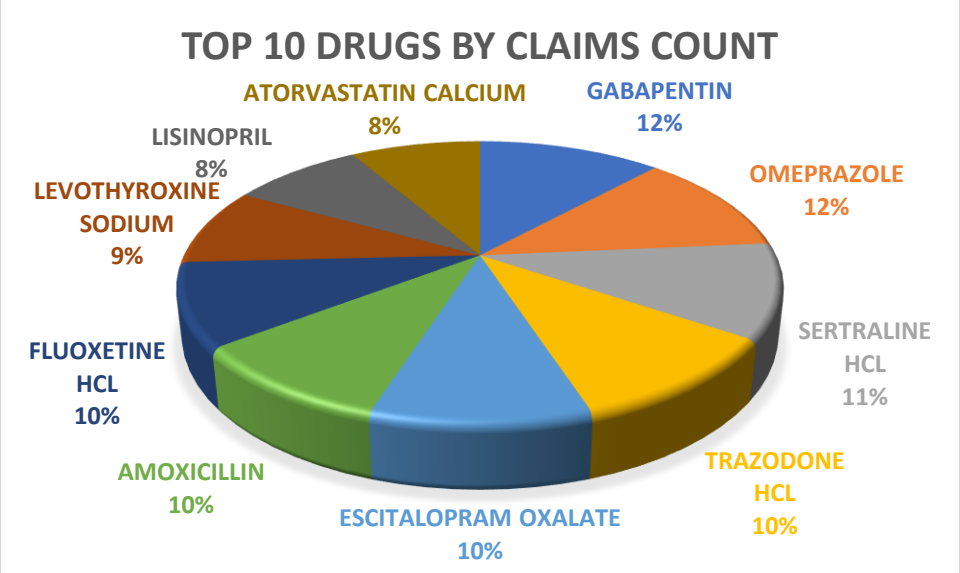
Retrospective Drug Utilization Review (RDUR) Criteria Recommendations
S. Donald reviewed the RDUR criteria that were selected for review of each month of the last quarter. Presented data included the number of profiles reviewed, number of cases identified for intervention, and the number of letters sent, as well as an overview of what RDUR interventions were identified as most prevalent for each monthly cycle. The recommended RDUR criteria enclosed in the packet were developed from product information provided by the manufacturers and are consistent with new indications, new drugs added, and new warnings. These proposed criteria will be added to the current set of criteria and will be used in future DUR cycles. K. Martian moved to approve the new criteria and K. Peterson seconded the motion. Chair T. Schmidt called for a voice vote to approve the new criteria, which passed with all present members voting to approve.

Adjournment and Upcoming Meeting Date
Chair T. Schmidt adjourned the meeting at 2:37 pm. The next DUR Board meeting will be held March 1, 2023, at 1:00 pm at the state capitol building.

Top 25 Drugs Based on Number of Claims from 10/01/2022 – 12/31/2022

Drug	Claims	Patients	Claims Cost	Cost / Claim	% Total Claims	Dif.
1. GABAPENTIN	4,688	1,998	$69,585.74	$14.84	1.8%	↑1
2. OMEPRAZOLE	4,653	2,303	$60,379.00	$12.98	1.8%	↓1
3. SERTRALINE HCL	4,307	2,379	$58,913.12	$13.68	1.6%	NC
4. TRAZODONE HCL	4,167	2,052	$56,772.89	$13.62	1.6%	NC
5. ESCITALOPRAM OXALATE	3,972	2,227	$53,281.42	$13.41	1.5%	NC
6. AMOXICILLIN	3,832	3,591	$54,531.50	$14.23	1.4%	↑12
7. FLUOXETINE HCL	3,797	2,021	$52,227.52	$13.75	1.4%	↓1
8. LEVOTHYROXINE SODIUM	3,507	1,837	$57,164.86	$16.3	1.3%	↓1
9. LISINOPRIL	3,379	1,993	$43,587.30	$12.9	1.3%	↓1
10. ATORVASTATIN CALCIUM	3,329	1,884	$47,369.14	$14.23	1.3%	↓1
11. AMOXICILLIN-CLAV	3,189	3,006	$57,622.34	$18.07	1.2%	↑19
12. VYVANSE	3,097	1,263	$829,582.98	$267.87	1.2%	NC
13. BUPROPION XL	3,040	1,644	$51,321.65	$16.88	1.1%	↓3
14. PREDNISONE	2,970	2,440	$34,506.90	$11.62	1.1%	↑5
15. PANTOPRAZOLE SODIUM	2,912	1,432	$39,873.67	$13.69	1.1%	↓4
16. HYDROCODONE-ACET	2,777	1,759	$40,580.63	$14.61	1.0%	↓3
17. CYCLOBENZAPRINE HCL	2,599	1,610	$30,345.29	$11.68	1.0%	↓1
18. DULOXETINE HCL	2,597	1,339	$42,490.77	$16.36	1.0%	↓3
19. BUPRENORPHINE-NALOX	2,524	634	$109,902.84	$43.54	1.0%	↑2
20. CLONIDINE HCL	2,480	1,257	$30,899.72	$12.46	0.9%	↑3
21. LAMOTRIGINE	2,406	1,010	$35,751.61	$14.86	0.9%	↑2
22. METFORMIN HCL	2,340	1,299	$30,913.89	$13.21	0.9%	↓6
23. HYDROXYZINE HCL	2,319	1,397	$31,681.76	$13.66	0.9%	↑4
24. MONTELUKAST SODIUM	2,258	1,326	$31,363.31	$13.89	0.9%	↓3
25. CLONAZEPAM	2,248	954	$30,546.11	$13.59	0.8%	↑3

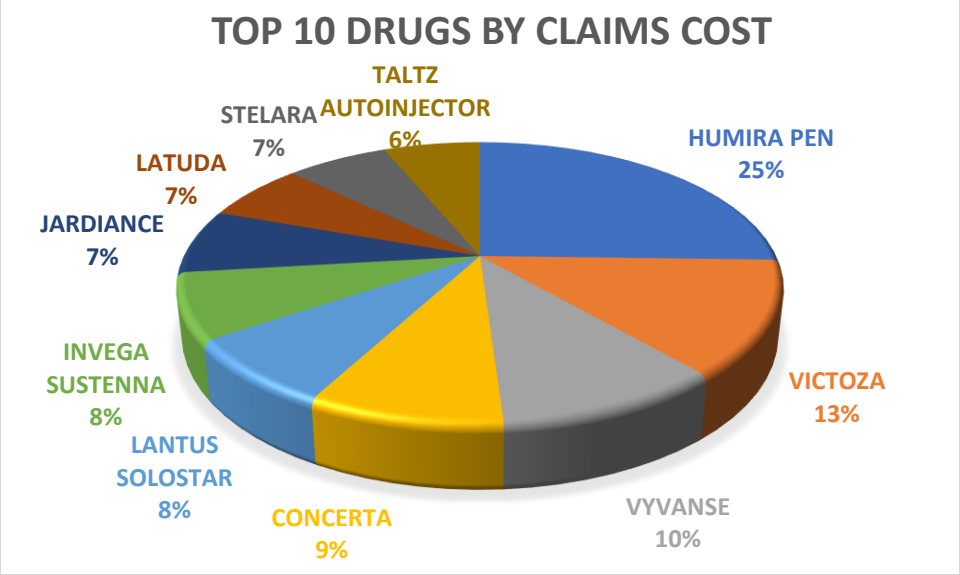
Total Claims	**265,138**



Top 25 Drugs Based on Total Claims Cost from 10/01/2022 – 12/31/2022

Drug	Claims Cost	Claims	Patients	Cost /Claim	% Total Cost	Dif.
1. HUMIRA PEN	$ 2,046,338.77	274	115	$ 7,468.39	6.3%	NC
2. VICTOZA	$ 1,063,839.77	1,271	615	$ 837.01	3.3%	NC
3. VYVANSE	$ 829,582.98	3,097	1,263	$ 656.84	2.5%	NC
4. CONCERTA	$ 715,354.85	2,079	856	$ 835.69	2.2%	NC
5. LANTUS SOLOSTAR	$ 618,928.91	1,202	757	$ 817.61	1.9%	NC
6. INVEGA SUSTENNA	$ 610,189.37	234	90	$ 6,779.88	1.9%	↑2
7. JARDIANCE	$ 592,325.04	924	477	$ 1,241.77	1.8%	NC
8. LATUDA	$ 537,502.33	632	243	$ 2,211.94	1.6%	↑2
9. STELARA	$ 530,513.46	23	18	$ 29,472.97	1.6%	↓3
10. TALTZ	$ 502,532.08	82	32	$ 15,704.13	1.5%	↓1
11. BIKTARVY	$ 460,878.83	216	98	$ 4,702.85	1.4%	↑1
12. TRIKAFTA	$ 401,272.00	16	6	$ 66,878.67	1.2%	↑8
13. VRAYLAR	$ 387,613.91	405	165	$ 2,349.18	1.2%	↑5
14. ADDERALL XR	$ 385,328.47	2,174	914	$ 421.58	1.2%	↑2
15. SYMBICORT	$ 368,306.37	1,057	601	$ 612.82	1.1%	↓1
16. ADVAIR DISKUS	$ 348,812.57	924	518	$ 673.38	1.1%	↑1
17. ELIQUIS	$ 348,007.86	651	316	$ 1,101.29	1.1%	↓2
18. NOVOLOG FLEXPEN	$ 347,498.37	459	281	$ 1,236.65	1.1%	NC
19. NORDITROPIN	$ 316,092.15	76	36	$ 8,780.34	1.0%	↓6
20. MAVYRET	$ 309,065.79	26	20	$ 15,453.29	0.9%	↓9
21. SOFOSBUVIR-VEL	$ 278,180.87	36	18	$ 15,454.49	0.9%	↑7
22. ABILIFY MAINTENA	$ 261,380.13	118	50	$ 5,227.60	0.8%	↓1
23. LEVEMIR FLEXTOUCH	$ 248,546.39	422	257	$ 967.11	0.8%	↓1
24. XIFAXAN	$ 247,554.16	90	48	$ 5,157.38	0.8%	↑1
25. ORKAMBI	$ 241,524.03	11	4	$ 60,381.01	0.7%	↑3

Total Claims Cost	**$32,709,611**



Top 15 Therapeutic Classes Based on Number of Claims from 10/01/2022 – 12/31/2022

Therapeutic Class Description	Claims	Patients	Claims Cost	Cost/Claim	% Total Claims	Dif.
1. ANTIDEPRESSANTS	29,683	12,245	$ 613,819.25	$ 20.68	11.2%	NC
2. ANTICONVULSANTS	13,434	4,800	$ 627,168.27	$ 46.69	5.1%	NC
3. ANTIPSYCHOTIC AGENTS	9,307	3,594	$ 2,547,210.95	$ 273.69	3.5%	NC
4. PROTON-PUMP INHIBITORS	7,926	3,857	$ 142,954.16	$ 18.04	3.0%	NC
5. PENICILLIN ANTIBIOTICS	7,379	6,570	$ 119,357.29	$ 16.18	2.8%	↑7
6. SEDATIVE / HYPNOTICS	7,099	3,545	$ 112,800.58	$ 15.89	2.7%	↓1
7. AMPHETAMINES	6,702	2,774	$ 1,260,324.68	$ 188.05	2.5%	NC
8. OPIATE AGONISTS	6,697	3,481	$ 108,422.84	$ 16.19	2.5%	↓2
9. NSAIDS	6,246	4,148	$ 91,159.98	$ 14.59	2.4%	↓1
10. STATINS	5,803	3,295	$ 84,883.47	$ 14.63	2.2%	↓1
11. RESPIRATORY / CNS STIMULANTS	5,449	2,073	$ 1,080,602.08	$ 198.31	2.1%	NC
12. BETA BLOCKERS	5,422	2,963	$ 100,159.36	$ 18.47	2.0%	↓2
13. ADRENALS	5,223	4,235	$ 70,907.47	$ 13.58	2.0%	↑2
14. BETA AGONISTS	5,017	4,593	$ 304,395.36	$ 60.67	1.9%	↓1
15. ACE - INHIBITORS	4,248	2,479	$ 65,401.37	$ 15.40	1.6%	↓1

Top 15 Therapeutic Classes Based on Claims Cost from 10/01/2022 – 12/31/2022

Therapeutic Class Description	Claims Cost	Claims	Patients	Cost/Claim	% Total Cost	Dif.
1. DMARDS	$ 3,301,747.78	592	250	$5,577.28	10.1%	NC
2. ANTIPSYCHOTIC AGENTS	$ 2,547,210.95	9,307	3,594	$273.69	7.8%	NC
3. INSULINS	$ 1,851,346.59	3,467	1,384	$533.99	5.7%	↑1
4. SKIN AND MUCOUS MEMBRANE AGENTS, MISC.	$ 1,804,942.79	622	373	$2,901.84	5.5%	↓1
5. AMPHETAMINES	$ 1,260,324.68	6,702	2,774	$188.05	3.9%	NC
6. ANTINEOPLASTIC AGENTS	$ 1,254,456.13	609	261	$2,059.86	3.8%	↑2
7. INCRETIN MIMETICS	$ 1,209,238.21	1,444	657	$837.42	3.7%	↓1
8. RESPIRATORY CORTICOSTEROIDS	$ 1,106,216.13	3,834	2,351	$288.53	3.4%	↑2
9. NON-AMPHETAMINE STIMULANTS	$ 1,080,602.08	5,449	2,073	$198.31	3.3%	↑1
10. ANTIRETROVIRALS	$ 1,031,313.43	727	267	$1,418.59	3.2%	↓1
11. SGLT2 INHIBITORS	$ 815,230.96	1,303	664	$625.66	2.5%	NC
12. ANTICONVULSANTS	$ 627,168.27	13,434	4,800	$46.69	1.9%	NC
13. ANTIDEPRESSANTS	$ 613,819.25	29,683	12,245	$20.68	1.9%	NC
14. HCV ANTIVIRALS	$ 591,991.43	63	38	$9,396.69	1.8%	↑1
15. IMMUNOMODULATORY AGENTS	$ 557,895.02	75	28	$7,438.60	1.7%	↓1

PDL Update

Drug	PA Status	Class
Amjevita	PA	Cytokine Modulators
betamethasone valerate foam 0.12%	remove PA	Topical Steroids
desoximetasone spray 0.25%	remove PA	Topical Steroids
hydrocortisone valerate cream 0.20%	remove PA	Topical Steroids
insulin NPH human/regular insulin human	PA	Insulin
NPH insulin	PA	Insulin
Rebyota	PA	C.difficle associated diarrhea (CDAD)
Tascenso ODT	PA	Multiple Sclerosis
Winlevi	PA	Acne Vulgaris

Clostridioides difficile-associated diarrhea (CDAD)

Prevention

PREFERRED AGENTS (CLINICAL PA REQUIRED)	NON-PREFERRED AGENTS (PA REQUIRED)
REBYOTA (fecal microbiota, live – jslm) SUSPENSION	

Electronic Duration Verification:

- Rybyota is payable every 6 months.

Prior Authorization Criteria

Initial Criteria - Approval Duration: 12 months

- The member has had at least two episodes of diarrhea with a positive stool test for *C.difficile* toxin within the last year

Vaginal Infections

Fungal Infections

Oral

PREFERRED AGENTS (NO PA REQUIRED)	NON-PREFERRED AGENTS (PA REQUIRED)
fluconazole tablet	BREXAFEMME (ibrexafungerp) TABLETS
SOLOSEC (secnidazole) GRANULE PACKET	VIVJOA (oteseconazole) CAPSULES
tinidazole tablet	

Vaginal

PREFERRED AGENTS (NO PA REQUIRED)	NON-PREFERRED AGENTS (PA REQUIRED)
terconazole cream	GYNAZOLE 1 (butoconazole) CREAM
terconazole suppository – labeler 00713	terconazole suppository – labeler 45802

Prior Authorization Criteria

Initial Criteria - Approval Duration: 12 months

- The member must have failed 30-day trials of all preferred agents of unique ingredients, as evidenced by paid claims or pharmacy printouts.
- Vivjoa Only:
  - The member must have failed a six-month trial of oral fluconazole maintenance prophylaxis treatment
  - The member must not be of reproductive potential defined as:
    - The member is postmenopausal
    - The member is known to not be of reproductive potential (e.g., history of tubal ligation, salpingo-oophorectomy, or hysterectomy)

REVIEW OF HYPERPARATHYROIDISM

Background

Overview

Calcitriol and other synthetic vitamin D derivatives have been proven to reduce parathyroid hormone (PTH), stabilize PTH, and improve bone histology. Unfortunately, these agents have not been shown to improve clinically important outcomes and can pose a risk of hypercalcemia. Secondary hyperparathyroidism is defined as adaptive parathyroid gland hyperplasia and increased production of parathyroid hormone (PTH). This includes biochemical abnormalities in calcium, phosphate, PTH, and vitamin D. High levels of PTH over time can cause high-turnover bone disease, fracture, hypercalcemia, and hyperphosphatemia.

Place-in-therapy/Guidelines

Treatment should not be initiated based on a single elevated PTH level. If PTH remains elevated after treating modifiable risk factors (hyperphosphatemia, high phosphate intake, and vitamin D deficiency), the vitamin D derivative calcitriol may be used. Most patients who have PTH >2.3 to 3 times the upper limit of normal of 65 pg/mL are treated with pharmacological interventions. If the member is on renal dialysis (i.e., end-stage renal disease), Medicare eligibility must be ruled out.

There are several treatment options for secondary hyperparathyroidism:

- Vitamin D supplements
- Cinacelcet
- Surgery – parathyroidectomy is reserved for very severe cases not responding to drug therapy
- Dietary measures in combination with phosphate binders – recommended for non-dialysis patients with a serum phosphorus >5.5 mg/dL

Recommended Agents:

- Vitamin D supplements
  - Should not be used in the absence of vitamin D deficiency
- Calcitriol and synthetic vitamin D analogs
  - Can reduce/stabilize PTH but pose a risk of hypercalcemia
  - Currently no recommendations for which agent to utilize over the other
  - Calcitriol is not used if the serum phosphate is above normal range or if the corrected serum total calcium concentration is ≥9.5 mg/dL (≥2.37 mmol/L)
  - The effects of calcitriol versus other synthetic vitamin D derivatives have not been evaluated in nondialysis CKD patients
- Calcimimetics
  - Generally, should only be used in dialysis patients

Advantages/Disadvantages

- Rayaldee (calcifediol)
  - Indication(s): Chronic renal failure, Stage 3 or 4 and with serum total 25-hydroxyvitamin D levels less than 30 nanograms/mL - Secondary hyperparathyroidism
  - Prohormone for calcitriol
  - Supplied as capsules
- Zemplar (paricalcitrol)
  - Indication(s): Chronic kidney disease - Secondary hyperparathyroidism; Treatment and Prophylaxis
  - Dosing available for pediatric patients
  - Supplied as a capsule and IV solution
- Rocaltrol (calcitriol)

- Indication(s): Hypocalcemia - Hypoparathyroidism, Postsurgical or idiopathic; Hypocalcemia – Pseudohypoparathyroidism; Hypocalcemia - Renal dialysis (Chronic); Plaque psoriasis (Mild to Moderate); Secondary hyperparathyroidism
- Dosing available for pediatric patients
- Supplied as a capsule, IV solution, and oral solution

- Hectorol (doxercalciferol)
  - Indication(s): Secondary hyperparathyroidism, In patients with stage 3 or 4 chronic kidney disease; Chronic kidney disease, On dialysis - Secondary hyperparathyroidism
  - Supplied as a capsule and IV solution

FDA Approval

Rayaldee: 505(b) New Drug Application (NDA) pathway, Type 5 - New Formulation or New Manufacturer; STANDARD
Zemplar: 505(b) New Drug Application (NDA) pathway, Type 3 - New Dosage Form; STANDARD
Rocaltrol capsule: 505(b) New Drug Application (NDA) pathway, Type 1 - New Molecular Entity; PRIORITY
Rocaltrol solution: 505(b) New Drug Application (NDA) pathway, Type 3 - New Dosage Form; STANDARD
Hectorol: 505(b) New Drug Application (NDA) pathway, Type 1 - New Molecular Entity; STANDARD

Cost

Drug	Strength	Package Size	WAC Pkg Price	Cost/ year*
Rayaldee capsule	30 mcg	30 each, 60 each	$1,181.40 for 30 mcg 30 each bottle	$28,747.40
calcitriol capsule	0.25 mcg, 0.5 mcg	30 each, 100 each	$8.10 for 0.25 mcg 30 each bottle	$98.55
calcitriol solution	1 mcg/mL	15 mL bottle	$75.00	$456.25
paricalcitol capsule	1 mcg, 2 mcg, 4 mcg	30 each	$30.00 for 1 mcg 30 each bottle	$365.00
doxercalciferol capsule	0.5 mcg, 1 mcg, 2.5 mcg	30 each, 50 each	$659.50 for 1 mcg 50 each bottle	$4,814.35

*Based on adult dosing at lowest per unit WAC cost

References:
1. Kidney Disease: Improving Global Outcomes (KDIGO) CKD-MBD Update Work Group. KDIGO 2017 Clinical Practice Guideline Update for the Diagnosis, Evaluation, Prevention, and Treatment of Chronic Kidney Disease–Mineral and Bone Disorder (CKD-MBD). Kidney Int Suppl. 2017;7:1–59.
2. Kidney Disease: Improving Global Outcomes (KDIGO) CKD-MBD Work Group. KDIGO clinical practice guideline for the diagnosis, evaluation, prevention, and treatment of Chronic Kidney Disease-Mineral and Bone Disorder (CKD-MBD). Kidney Int Suppl. 2009;(113):S1-130.[PubMed 19644521]
3. Hectorol (doxercalciferol capsules) [prescribing information]. Cambridge, MA: Genzyme; November 2018.
4. Doxercalciferol capsules [prescribing information]. East Brunswick, NJ: Avet Pharmaceuticals Inc; October 2019.
5. Rocaltrol (calcitriol) [prescribing information]. Parsippany, NJ: Validus Pharmaceuticals; May 2018.
6. Calcitriol (oral capsule) [prescribing information]. Sellersville, PA: Teva Pharmaceuticals; January 2014.
7. Rayaldee (calcifediol) [prescribing information]. Miami, FL: OPKO Pharmaceuticals; April 2021.
8. Zemplar (paricalcitol) [prescribing information]. North Chicago, IL: AbbVie Inc; October 2019.
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REVIEW OF INFLUENZA

Background

Overview

There are six licensed prescription influenza antiviral medications approved in the United States. Only four antiviral agents are currently recommended by the U.S. Food and Drug Administration (FDA) for the 2022-2023 influenza season.

- Recommended for Use: Tamiflu (oseltamivir phosphate), Relenza (zanamivir), Rapivab (peramivir), and Xofluza (baloxavir marboxil) are active against influenza A and B
- Not Recommended for Use: Symmetrel (amantadine) and Flumadine (rimantadine) are active against influenza A virus, but are not recommended for antiviral treatment or chemoprophylaxis of currently circulating influenza A viruses

Studies have shown that treatment reduces the symptoms of influenza by approximately 30 hours versus placebo and chemoprophylaxis has been shown to prevent 70%-90% of influenza cases after exposure.

Place-in-therapy/Guidelines

Treatment:

Currently, the Centers for Disease Control and Prevention (CDC) recommends treatment within 48 hours of illness onset with antiviral medications for suspected or confirmed influenza regardless of vaccination status for any patient how is either:

- hospitalized
- has severe, complicated, or progressive illness; or
- at a higher risk for influenza complications

Providers can consider empiric antiviral therapy, however, of non-high-risk outpatients with suspected influenza based on clinical judgement if treatment can be initiated within 48 hours.

Recommended Agents –

- For outpatients with complications or progressive disease, oral oseltamivir is recommended as soon as possible.
- For outpatients with uncomplicated influenza, oral oseltamivir, inhaled zanamivir, intravenous peramivir, or oral baloxavir may be used for treatment.

Post-exposure chemoprophylaxis:

Currently, the Centers for Disease Control and Prevention (CDC) can be considered for post-exposure chemoprophylaxis for prevention of influenza in people at high risk of complications if vaccine has not been given or is not fully effective.

CDC does not recommend widespread or routine use of antiviral medications for chemoprophylaxis except as one of multiple interventions to control institutional influenza outbreaks. Routine use of post-exposure chemoprophylaxis is not recommended; one reason for this is to avoid sub-therapeutic treatment dosing if infection is already established, although the likelihood of emergence of antiviral resistant viruses is unknown.

Antiviral chemoprophylaxis is not recommended if more than 48 hours have elapsed since the first exposure to a person with influenza.

Recommended Agents -

- For post-exposure chemoprophylaxis, oral oseltamivir, inhaled zanamivir, or oral baloxavir may be used.

Pre-exposure chemoprophylaxis:
In general, the CDC does not recommend seasonal or pre-exposure antiviral chemoprophylaxis.

Advantages/Disadvantages

- Tamiflu (oseltamivir)
  - Can be used for treatment in any age group
  - Oral agent (capsules and suspension) - Multidose regimen
- Rapivab (peramivir)
  - IV agent
- Relenza (zanamivir)
  - Recommended for age 7 years and older
  - Not recommended for use in people with underlying respiratory disease
  - Inhaled agent
- Xofluza (baloxavir marboxil)
  - Recommended for age 5 years and older
  - Oral agent (tablet and suspension) - Single dose regimen

FDA Approval

Tamiflu: 505 (b) New Drug Application (NDA) pathway, Type 1 - New Molecular Entity, PRIORITY
Relenza: 505 (b) New Drug Application (NDA) pathway, Type 1 - New Molecular Entity, PRIORITY
Xofluza: 505 (b) New Drug Application (NDA) pathway, Type 1 - New Molecular Entity, PRIORITY

Cost

Drug	Strength	Package Size	WAC Pkg Price	Cost/ treatment course*
Oseltamivir phosphate	30mg, 45mg, 75mg	10 each	$18.50	$18.50
Oseltamivir susp	6 mg/mL	60mL	$30.00	$60.00
Relenza	5 mg/actuation	20 each Inhaler	$59.00	$59.00
Xofluza	40mg, 80mg	1 each	$154.50	$154.50

*Based on adult dosing at lowest per unit WAC cost

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2. Product Information: XOFLUZA(R) oral tablets, baloxavir marboxil oral tablets, oral suspension. Genentech USA Inc (per FDA), South San Francisco, CA, 2022.

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4. Product Information: RAPIVAB(R) intravenous injection, peramivir intravenous injection. BioCryst Pharmaceuticals, Inc (per FDA), Durham, NC, 2021.
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REVIEW OF NEUROMYELITIS OPTICA SPECTRUM DISORDER

Background

Overview

Enspryng is a human monoclonal antibody that targets interleukin-6 receptors. It is indicated for the treatment of neuromyelitis optica spectrum disorder in adults who are anti-aquaporin-4 (AQP4) antibody positive. Neuromyelitis optica spectrum disorder (NMOSD) is a rare autoimmune disease of the central nervous system. It attacks the optic nerves and spinal cord, and over-time, it can lead to blindness and/or paraplegia.

Place-in-therapy/Guidelines

Treatment for reversing recent symptoms:
Early treatment for a neuromyelitis optica (NMO) attack includes giving methylprednisolone IV for about five days then tapering slowly over several more days. Plasma exchange is also utilized as the first or second treatment in addition to steroids for severe symptoms or vision loss.

Preventing future attacks:
A lower dose of corticosteroids may be used over time to prevent future attacks and relapses.

Reducing relapses:
Monoclonal antibodies are effective in reducing the risk of NMO relapses. The only FDA approved monoclonal antibodies used for NMO are Soliris, Enspryng, and Uplizna.

The SAkuraSky and SAkuraStar studies demonstrated that treatment with Enspryng in anti-AQP4 antibody−positive patients reduced the risk of NMOSD relapse by 78% and 74%, respectively, compared with placebo. There was no evidence of a benefit in patients who were anti-AQP4 antibody−negative.

Rituximab, although not currently FDA approved for use in NMO, has been shown to be effective in clinical trials and is commonly used by providers for this disease. Other agents utilized for immune suppression include azathioprine, mycophenolate, methotrexate, cyclophosphamide, and Actemra. IV immunoglobulins may also decrease the relapse rate of NMO.

Advantages/Disadvantages

- Enspryng (satralizumab)
  - Self-administered subcutaneous agent
- Uplizna (inebilizumab), Soliris (eculizumab)
  - IV agents

FDA Approval

Enspryng: 351(a) Biologics License Agreement (BLA); Orphan

Cost

Drug	Strength	Package Size	WAC Pkg Price	Cost/ year*
Enspryng	120 mg/mL	1 mL syringe	$ 16,515.58	$198,186.96

*Based on adult maintenance dosing at lowest per unit WAC cost

References:

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REVIEW OF UREA CYCLE AGENTS

Background

Overview

The urea cycle is a metabolic pathway which converts nitrogen to urea to be excreted from the body. A deficiency of an enzyme within the pathway may cause a disorder in the conversion process. Urea cycle disorders (UCDs), except for arginase deficiency, cause hyperammonemia. The ammonia build-up can cause neurologic injury and life-threatening illnesses. Symptoms can include failure to feed, hypothermia, cerebral edema, and seizures. Mortality and morbidity are high in UCDs; however, survival rates are increased with earlier diagnosis and treatment. The different types of deficiencies are as follows:

- Carbamoyl phosphate synthetase I (CPSI) deficiency
- Ornithine transcarbamylase (OTC) deficiency
- Argininosuccinate synthetase (ASS) deficiency
- Argininosuccinate lyase (ASL) deficiency
- N-acetyl glutamate synthetase (NAGS) deficiency
- Arginase (ARG1) deficiency
- Ornithine translocase (ORNT1) deficiency
- Citrin deficiency

Place-in-therapy/Guidelines

Treatment depends on the deficient enzyme.

Initial Treatment:

- Rehydrate
- Remove nitrogen and ammonia using pharmacological interventions and/or hemodialysis
- Stop protein intake
- Stimulate anabolism and nitrogen uptake

Long-Term Management:

Maximizing neurodevelopment, preventing intercurrent hyperammonemia and comorbidities, and achieving normal fasting glutamine and low-normal fasting ammonia levels are goals in long-term management of UCDs.

- Protein intake adjustments
- Maintaining hydration
- Pharmacological interventions
- Liver transplant

Recommended Agents:

Oral phenylbutyrate is used as adjunctive therapy to standard care in most cases except for when NAGS deficiency is present. There are currently four oral phenylbutyrate agents available in the form of sodium phenylbutyrate (Buphenyl, Pheburane, Olpruva) or glycerol phenylbutyrate (Ravicti). NAGS deficiency may require treatment with carglumic acid (Carbaglu). ASL or ASS1 deficiency is treated with arginine.

Ravicti was found to be noninferior to Buphenyl.

Advantages/Disadvantages

- Buphenyl (sodium phenylbutyrate):
  - Generic available
  - Prodrug of phenylacetate
  - Strong salty taste and odor
  - Supplied as a tablet or powder

- Pheburane (sodium phenylbutyrate):
  - 505b2 to Buphenyl
  - Prodrug of phenylacetate
  - Supplied as oral granules that can be sprinkled onto food or liquid
- Olpruva (sodium phenylbutyrate):
  - 505b2 to Buphenyl
  - Prodrug of phenylacetate
  - Designed to enhance palatability compared to Buphenyl
  - Supplied as an oral suspension
- Ravicti (glycerol phenylbutyrate):
  - 505b2 to Buphenyl
  - Pre-prodrug of phenylacetate
  - Designed to enhance palatability compared to Buphenyl (tasteless and odorless)
  - Not a 1:1 conversion from sodium phenylbutyrate to glycerol phenylbutyrate
  - Supplied as a liquid
- Carbaglu (carglumic acid):
  - Generic available
  - Utilized in N-acetyl glutamate synthetase (NAGS) deficiency
  - Carbaglu is not available through pharmaceutical wholesalers or retail pharmacies, but only through direct shipping from the Accredo specialty pharmacy.
  - Supplied as a soluble tablet

FDA Approval

Buphenyl tablet: New Drug Application (NDA) pathway, Type 3 - New Dosage Form, PRIORITY; Orphan
Buphenyl powder: New Drug Application (NDA) pathway, Type 1 - New Molecular Entity, PRIORITY; Orphan
Pheburane: 505(b)(2) New Drug Application (NDA) pathway, Type 5 - New Formulation or New Manufacturer; STANDARD; Orphan
Olpruva: 505(b)(2) New Drug Application (NDA) pathway, Type 5 - New Formulation or New Manufacturer; STANDARD
Ravicti: 505(b)(2) New Drug Application (NDA) pathway, Type 2 - New Active Ingredient; STANDARD; Orphan
Carbaglu: 505(b) New Drug Application (NDA) pathway, Type 1 - New Molecular Entity; PRIORITY; Orphan

Cost

Drug	Strength	Package Size	WAC Pkg Price	Cost/ year*
sodium phenylbutyrate powder	3 gm/tsp	250 g Bottle	$4,499.50	$127,870.84
sodium phenylbutyrate tablet	500 mg	250 each	$3,000.00	$166,440.00
Pheburane pellet	483 mg/g	174 g Bottle	$4,374.99	$178,638.51
Olpruva suspension	Approved December 2022 – no pricing available			
Ravicti liquid	1.1 g/mL	25 mL Bottle	$5,478.25	$1,079,763.08
carglumic acid soluble tablet	200 mg	60 ea Bottle	$8,602.20	$1,203,591.15

*Based on adult dosing with an average body surface area of 1.7m(2) and average weight of 84.2 kg at lowest per unit WAC cost

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5. Pheburane (sodium phenylbutyrate) [prescribing information]. Bryn Mawr, PA: Medunik USA Inc; June 2022.[PubMed Pheburane.1]
6. Olpruva (sodium phenylbutyrate) [prescribing information]. Newton, MA: Acer Therapeutics Inc; December 2022.[PubMed Acer.1]
7. Ravicti (glycerol phenylbutyrate) [prescribing information]. Lake Forest, IL: Horizon Therapeutics USA Inc; September 2021.
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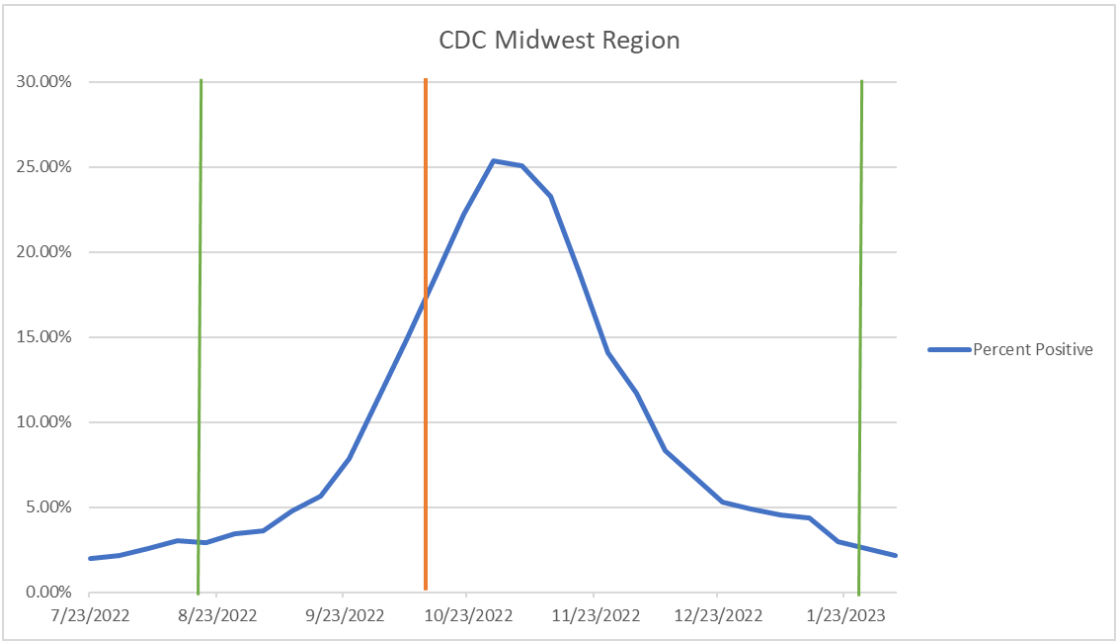
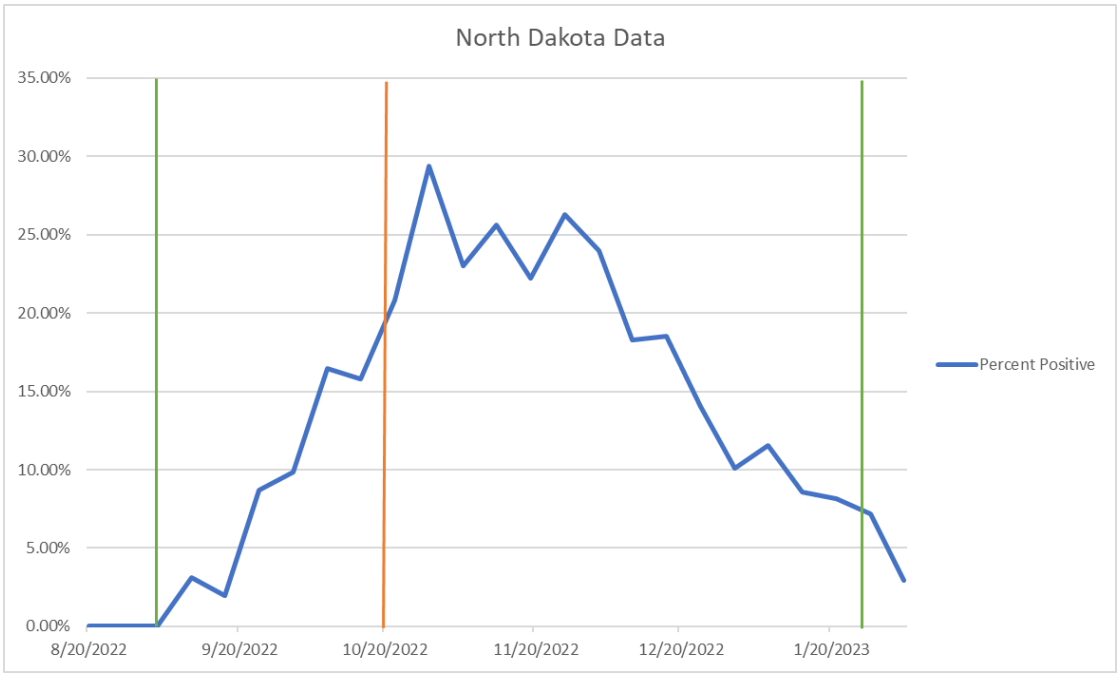
2022-2023 RSV season

Seasonal Data

Green markers indicate actual season (as determined by data), while the orange marker indicates previous date driven season onset. Using the date driven methodology, Synagis would have been fully effective after the peak of RSV season (given approx. 1 month to full efficacy). The season offset by date would occur in April.

Date driven season followed bell curve and actual PA request volume.





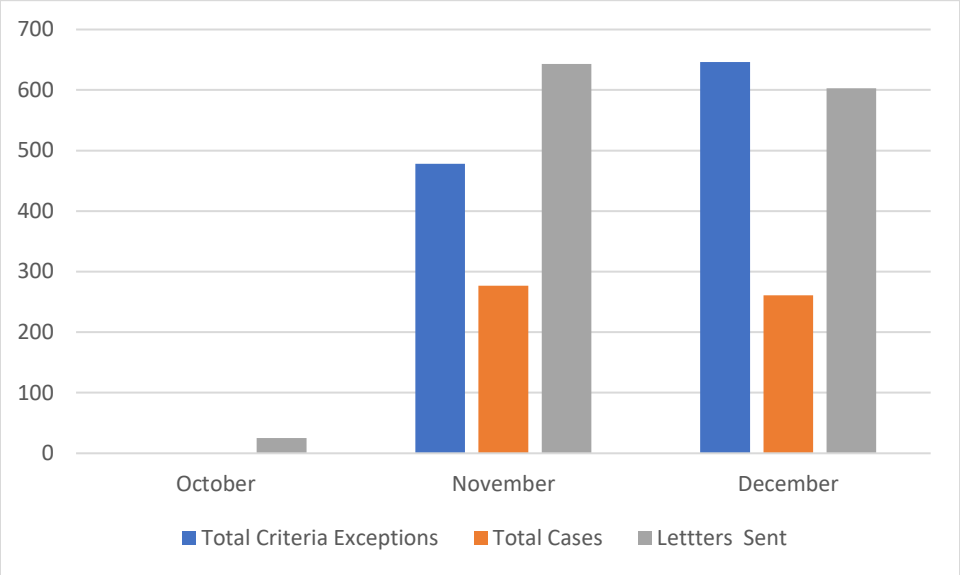
Season offset provider announcement

Effective January 28, the Respiratory Syncytial Virus (RSV) season offset criteria has been met. Season offset is defined as the last of two consecutive weeks when percentage of positive PCR tests for RSV is less than 3%, as reported to the Centers of Disease Control and Prevention. The RSV season is identified using data reported by the National Respiratory and Enteric Virus Surveillance System Midwest Region. No further prior authorization requests will be approved. Current Synagis authorization end dates are not impacted.

Proposed coverage for a season with a double peak:

Infants meeting clinical criteria would be eligible to receive doses until the age of 3 months old. Infants that have received 5 doses during the previous peak or have exceeded the age of 3 months old would not be eligible for additional doses.

RDUR Activity Overview: Q4 2022



October Special Mailing

Primary Therapeutic Consideration

Buprenorphine-naloxone is a combination product commonly used for patients who are diagnosed with opioid use disorder. Buprenorphine is a partial mu-opioid agonist, and naloxone is a pure mu-opioid antagonist. Currently available formulations include buccal film, sublingual film, and sublingual tablet

Naloxone, when taken orally, undergoes significant hepatic first-pass metabolism which, in turn, causes very low (<2%) systemic bioavailability. The combination product, when taken orally, does not cause withdrawal symptoms, but rather, deters patients from using the agent inappropriately. When misused by injecting or snorting, bioavailability increases greatly and can cause severe opioid withdrawal symptoms in patients who are physically dependent on full opioid agonists.

The buprenorphine monoproduct has historically been recommended during pregnancy to avoid severe withdrawal and prenatal exposure to naloxone in the case of misuse by snorting or injection. The buprenorphine monoproduct has a higher potential for misuse and diversion, and a higher street value in comparison to the combination product. If buprenorphine is prescribed as a monoproduct, the patient may need to be monitored more closely for misuse and diversion.

Switching a patient that is stable on the combination product to buprenorphine monoproduct due to pregnancy may not be necessary, as recent studies have found no adverse effects and similar outcomes when using the combination product versus buprenorphine monoproduct while pregnant. The use of combination therapy in pregnant patients will likely expand over time.

References

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10. "FDA warns about dental problems with buprenorphine medicines dissolved in the mouth to treat opioid use disorder and pain." U.S. Food and Drug Administration. January 2022. Available from: https://www.fda.gov/drugs/drug-safety-and-availability/fda-warns-about-dental-problems-buprenorphine-medicines-dissolved-mouth-treat-opioid-use-disorder

November Cases by Type of Criteria		
Criteria Description	**# of Cases**	**% of Cases**
Drug-Disease Interactions	105	38%
Drug-Drug Conflicts	137	50%
Clinical Appropriateness	35	12%

DRUG-DISEASE INTERACTIONS: Renal Impairment / Hepatic Impairment
DRUG-DRUG CONFLICTS: CNS depressants / Opioids; Anticonvulsants / amphetamines
CLINICAL APPROPRIATENESS: Pregnancy / Impaired Contraceptives

December Cases by Type of Criteria		
Criteria Description	**# of Cases**	**% of Cases**
Clinical Appropriateness	17	7%
Drug-Drug Conflicts	106	41%
Overutilization	39	15%
Drug-Disease Interactions	99	38%

CLINICAL APPROPRIATENESS: Antidepressants/Suicidal Ideation
DRUG-DRUG CONFLICTS: CYP Inducers / Oxycodone-BZD/ Lithium - antidepressants
OVERUTILIZATION: PPI use
DRUG-DISEASE INTERACTIONS: Renal Impairment / Hepatic Impairment

December 13, 2022

Notice to Prescriber: Medical Drug PA Requirements Including Remicade and Biosimilars

You are receiving this notice because you have been identified as a provider that may be affected by these updates. Please review the following and should you have any further questions regarding claims processing, please direct them to mmisinfo@nd.gov or 877-328-7098. Please direct questions regarding prior authorizations to medicaidrx@nd.gov or 1-800-755-2604.

Remicade Biosimilar Requirements

Effective January 1, 2023 (date of service), ND Medicaid will prefer the biosimilars Avsola (Q5121) and Renflexis (Q5104) with no prior authorization. Remicade (J1745), Inflectra (Q5103), and infliximab (J1745) will require prior authorization.

Please see the current criteria by navigating to the most recent preferred drug list (PDL) found at http://www.hidesigns.com/ndmedicaid/pdl/

Grandfathering prior authorization will not be granted for Remicade, Inflectra, or inflximimab.

Additional Medical Drug Prior Authorization Requirements – Existing Patients

Effective January 1, 2023 (date of service), ND Medicaid will require prior authorization on Orencia (J0129), Simponi Aria (J1602), Entyvio (J3380), Sterlara (J3357), Tysabri (J2323), and Ilumya (J3245).

You may request a grandfathering prior authorization for any ND Medicaid patients you have currently receiving any of these products by providing the following information for each patient by fax to 701-328-1544 Attn: Pharmacy or secure email to medicaidrx@nd.gov:

- Medicaid ID, Name, DOB, J code, how many units are needed and frequency, billing and rendering NPIs

Please see the full list of medical drugs that require PA at https://www.hhs.nd.gov/human-services/medicaid/provider under the “Codes Requiring Service Authorization” tab at the bottom of the page.

New patient requests for medical drugs requiring prior authorization:

Medicare primary patients: Please use the SFN 511 form and indicate that the patient has Medicare. No further criteria need to be met.

Commercial insurance or Medicaid primary: Please use the SFN 511 form and the criteria found at http://www.hidesigns.com/ndmedicaid/pdl/ will need to be met for a prior authorization approval. The prior authorization number must be included on the billed claim.

The SFN 511 form can be found at: https://www.nd.gov/eforms/Doc/sfn00511.pdf

What are biosimilars?

A biosimilar is a biologic that is highly similar to and has no clinically meaningful differences from an existing FDA-approved biological medication, called a reference product.

Human pharmacokinetic and pharmacodynamic studies comparing a proposed product to the reference product are generally fundamental components to demonstrate similar exposure, efficacy, and safety.

Should I be concerned about using a biosimilar?

Biosimilars can be considered the equivalent of another lot of their reference product since even reference products vary from lot-to-lot. Switching between reference products and biosimilars and among biosimilars is no different than is switching from lot-to-lot of a reference product over time. Switching or substitution should not cause concern to patients or health care providers.

As part of the approval process, the FDA assesses the manufacturers' strategies to control for the pattern and degree of variations between different lots of the biological product to keep a consistent mix of variants between the lots to help ensure consistency in safety and effectiveness.

Biosimilar products can be used in patients who have previously been treated with the reference product or used in patients that have not previously been treated with a biologic. Biosimilars are expected to generally have the same type and amount of immunogenic response as the reference product, so if the patient does not respond to the biologic or develops anti-drug antibodies, then the same can be expected with the corresponding biosimilar or reference product.

What is the difference between a biosimilar and a generic?

In contrast to a chemical, which is synthesized and can be exactly copied, a biologic medication is made from living sources creating a natural variability that occurs in both biosimilars and the reference product and cannot be exactly copied. Because of this, the information needed to demonstrate that a biologic is biosimilar to another biologic can be much more extensive than what is needed for a generic.

How can I help my patients with the transition to a biosimilar?

Physicians, nurses, and pharmacists play essential roles in consistent education regarding biosimilars to patients, which is crucial in reducing the nocebo effect and improving acceptance of biosimilars.

Prevent the nocebo effect – provide reassurance that they can expect the same safety and effectiveness from the biosimilar over the course of treatment as they would with the reference product and discuss why the change is happening (i.e., reduced cost to the health system).

What references are available to help my staff and my patients understand biosimilars?

https://www.fda.gov/drugs/biosimilars/patient-materials

https://www.fda.gov/drugs/therapeutic-biologics-applications-bla/biosimilars

NORTH DAKOTA MEDICAID
RETROSPECTIVE DRUG UTILIZATION REVIEW
CRITERIA RECOMMENDATIONS
1ST QUARTER 2023

Criteria Recommendations ***Approved Rejected***

1. Deucravacitinib / Overuse _____ _____
Alert Message: Sotyktu (deucravacitinib) may be over-utilized. The recommended dosage of deucravacitinib is 6 mg, taken orally once daily, with or without food.

Drugs/Diseases
Util A Util B Util C
Deucravacitinib

Max Dose: 6 mg/day

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Sotyktu Prescribing Information, September 2022, Bristol-Myers Squibb.

2. Deucravacitinib / Therapeutic Appropriateness _____ _____
Alert Message: The safety and effectiveness of Sotyktu (deucravacitinib) in pediatric patients have not been established.

Drugs/Diseases
Util A Util B Util C
Deucravacitinib

Age Range: 0 – 17 yoa

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Sotyktu Prescribing Information, September 2022, Bristol-Myers Squibb.

3. Deucravacitinib / Therapeutic Appropriateness _____ _____
Alert Message: Sotyktu (deucravacitinib) is not recommended for use in patients with severe hepatic impairment (Child-Pugh C). No dose adjustment of deucravacitinib is recommended in patients with mild (Child-Pugh A) or moderate (Child-Pugh B) hepatic impairment.

Drugs/Diseases
Util A Util B Util C
Deucravacitinib Cirrhosis
Hepatic Failure
References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Sotyktu Prescribing Information, September 2022, Bristol-Myers Squibb.

4. Deucravacitinib / Serious Infections _____ _____

Alert Message: Avoid the use of Sotyktu (deucravacitinib) in patients with an active or serious infection. Serious infections have been reported in subjects with psoriasis who received deucravacitinib. Closely monitor patients for the development of signs and symptoms of infection during and after treatment with deucravacitinib. A patient who develops a new infection during treatment with deucravacitinib should undergo prompt and complete diagnostic testing; appropriate antimicrobial therapy should be initiated, and the patient should be closely monitored. Interrupt deucravacitinib if a patient develops a serious infection. Do not resume deucravacitinib until the infection resolves or is adequately treated.

Drugs/Diseases

Util A	Util B	Util C
Deucravacitinib	Serious Infections	

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Sotyktu Prescribing Information, September 2022, Bristol-Myers Squibb.

5. Deucravacitinib / Tuberculosis _____ _____

Alert Message: Sotyktu (deucravacitinib) is not recommended for use in patients with active tuberculosis. Evaluate patients for active and latent tuberculosis (TB) infection prior to initiating treatment with deucravacitinib. If positive, start treatment for TB prior to deucravacitinib use.

Drugs/Diseases

Util A	Util B	Util C
Deucravacitinib	Tuberculosis	
	History of Tuberculosis	

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Sotyktu Prescribing Information, September 2022, Bristol-Myers Squibb.

6. Deucravacitinib / Malignancies _____ _____

Alert Message: Malignancies, including lymphomas, were observed in clinical trials with Sotyktu (deucravacitinib). Consider the benefits and risks for the individual patient prior to initiating or continuing therapy with deucravacitinib, particularly in patients with a known malignancy (other than a successfully treated non-melanoma skin cancer) and patients who develop a malignancy when on treatment with deucravacitinib.

Drugs/Diseases

Util A	Util B	Util C
Deucravacitinib	Malignancies	

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Sotyktu Prescribing Information, September 2022, Bristol-Myers Squibb.

Recommendations ***Approved Rejected***

7. Deucravacitinib / Rhabdomyolysis & Symptoms _____ _____

Alert Message: In clinical trials, cases of rhabdomyolysis were reported in subjects treated with Sotyktu (deucravacitinib), resulting in interruption or discontinuation of deucravacitinib dosing. Treatment with deucravacitinib was associated with an increased incidence of asymptomatic creatine phosphokinase (CPK) elevation and rhabdomyolysis compared to treatment with placebo. Discontinue deucravacitinib if markedly elevated CPK levels occur, or myopathy is diagnosed or suspected. Instruct patients to promptly report any unexplained muscle pain, tenderness, or weakness, particularly if accompanied by malaise or fever.

Drugs/Diseases

Util A	Util B	Util C
Deucravacitinib	Muscle Cramps	
	Muscle Spasm	
	Fever	
	Malaise	
	Abnormal Findings in Urine	
	Elevation of levels of liver transaminase	
	Rhabdomyolysis	

References:

Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Sotyktu Prescribing Information, September 2022, Bristol-Myers Squibb.

8. Deucravacitinib / Potential Risks of JAK Inhibitors _____ _____

Alert Message: Sotyktu (deucravacitinib) is a tyrosine kinase 2 (TYK2) inhibitor indicated for the treatment of plaque psoriasis. It is not known whether TYK2 inhibition may be associated with the observed or potential adverse reactions of Janus Kinase (JAK) inhibition. In a large, randomized, postmarketing safety trial of a JAK inhibitor in rheumatoid arthritis (RA), patients 50 years of age and older with at least one cardiovascular risk factor, higher rates of all-cause mortality, including sudden cardiovascular death, major adverse cardiovascular events, overall thrombosis, deep venous thrombosis, pulmonary embolism, and malignancies (excluding non-melanoma skin cancer) were observed in patients treated with the JAK inhibitor compared to those treated with TNF blockers. Deucravacitinib is not approved for use in RA.

Drugs/Diseases

Util A	Util B	Util C
Deucravacitinib	Deep Vein Thrombosis	
	Thrombosis	
	Pulmonary Embolism	

References:

Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Sotyktu Prescribing Information, September 2022, Bristol-Myers Squibb.

9. Deucravacitinib / Pregnancy / Pregnancy Negating _____ _____

Alert Message: Available data from case reports on Sotyktu (deucravacitinib) use during pregnancy are insufficient to evaluate a drug-associated risk of major birth defects, miscarriage, or adverse maternal or fetal outcomes. Report pregnancies to the Bristol-Myers Squibb Company's Adverse Event reporting line at 1- 800-721-5072.

Drugs/Diseases

Util A	Util B	Util C (Negate)
Deucravacitinib	Pregnancy	Abortion
		Delivery
		Miscarriage

Gender: Female
Age Range: 11 – 50 yoa

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Sotyktu Prescribing Information, September 2022, Bristol-Myers Squibb.

10. Deucravacitinib / Potent Immunosuppressants _____ _____

Alert Message: Sotyktu (deucravacitinib) is not recommended for use in combination with other potent immunosuppressants. Concurrent use may result in enhanced immunosuppressive effects.

Drugs/Diseases

Util A	Util B	Util C
Deucravacitinib	Immunosuppressants	

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Sotyktu Prescribing Information, September 2022, Bristol-Myers Squibb.

11. Deucravacitinib / Lactation _____ _____

Alert Message: There are no data on the presence of Sotyktu (deucravacitinib) in human milk, the effects on the breastfed infant, or the effects on milk production. Deucravacitinib is present in rat milk. When a drug is present in animal milk, it is likely that the drug will be present in human milk. The developmental and health benefits of breastfeeding should be considered, along with the mother's clinical need for deucravacitinib and any potential adverse effects on the breastfed infant from deucravacitinib or the underlying maternal condition.

Drugs/Diseases

Util A	Util B	Util C
Deucravacitinib	Lactation	

Gender: Female
Age Range: 11 – 50 yoa

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Sotyktu Prescribing Information, September 2022, Bristol-Myers Squibb.

Criteria Recommendations ***Approved Rejected***

12. Deucravacitinib / Non-adherence _____ _____
Alert Message: Based on refill history, your patient may be under-utilizing Sotyktu (deucravacitinib). Nonadherence to the prescribed dosing regimen may result in subtherapeutic effects, which may lead to decreased patient outcomes and additional healthcare costs.

Drugs/Diseases

Util A	Util B	Util C
Deucravacitinib		

References:
Osterberg L, Blaschke T. Adherence to Medication. N Engl J Med 2005; 353:487- 497.
Brown MT, Bussell J, Supmarna D, et al. Medication Adherence: Truth and Consequences. Am J Med Sci. 2016 Apr;351(4):387-399.
Thorneloe RJ, Bundy C, Griffiths CE, Ashcroft DM, Cordingley L. Nonadherence to Psoriasis Medication as an Outcome of Limited Coping Resources and Conflicting Goals: Findings From a Qualitative Interview Study with People with Psoriasis. Br J Dermatol. 2017 Mar;176(3):667-676. doi: 10.1111/bjd.15086. Epub 2016 Dec 17. PMID: 27664406; PMCID: PMC5363250.
Belinchon I, Rivera R, Blanch C, Comellas M, Lizan L. Adherence, Satisfaction and Preferences for Treatment in Patients with Psoriasis in the European Union: A Systematic Review of the Literature. Patient Prefer Adherence. 2016 Nov 17;10:2357-2367. doi: 10.2147/PPA.S117006. PMID: 27895471; PMCID: PMC5118025.

13. Pemigatinib / Overuse _____ _____
Alert Message: Pemazyre (pemigatinib) may be over-utilized. The maximum recommended dosage (intermittent or continuous schedule) of pemigatinib is 13.5 mg per day.

Drugs/Diseases

Util A	Util B	Util C (Negating)
Pemigatinib		CKD Stage 4, 5, & ESRD
		Cirrhosis
		Liver Failure

Max Dose: 13.5 mg/day

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Pemazyre Prescribing Information, August 2022, Incyte Corporation.

14. Pemigatinib / Overuse _____ _____
Alert Message: Pemazyre (pemigatinib) may be over-utilized. The maximum recommended dosage (intermittent or continuous) of pemigatinib in patients with severe renal impairment is 9.0 mg per day.

Drugs/Diseases

Util A	Util B	Util C (Include)
Pemigatinib		CKD Stage 4, 5, & ESRD

Max Dose: 9.0 mg/day

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Pemazyre Prescribing Information, August 2022, Incyte Corporation.

Criteria Recommendations ***Approved Rejected***

15. Pemigatinib / Overuse _____ _____

Alert Message: Pemazyre (pemigatinib) may be over-utilized. The maximum recommended dosage (intermittent or continuous) of pemigatinib in patients with severe hepatic impairment (total bilirubin > 3 x ULN with any AST) is 9.0 mg per day.

Drugs/Diseases

Util A	Util B	Util C (Include)
Pemigatinib		Cirrhosis
		Liver Failure

Max Dose: 9.0 mg/day

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Pemazyre Prescribing Information, August 2022, Incyte Corporation.

16. Pemigatinib / Therapeutic Appropriateness _____ _____

Alert Message: The safety and effectiveness of Pemazyre (pemigatinib) have not been established in pediatric patients.

Drugs/Diseases

Util A	Util B	Util C
Pemigatinib		

Age Range: 0 – 17 yoa

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Pemazyre Prescribing Information, August 2022, Incyte Corporation.

17. Pemigatinib / Ocular Toxicity _____ _____

Alert Message: Pemazyre (pemigatinib) can cause retinal pigment epithelial detachment (RPED), which may cause symptoms such as blurred vision, visual floaters, or photopsia. Perform a comprehensive ophthalmological examination, including OCT prior to initiation of pemigatinib and every 2 months for the first 6 months and every 3 months thereafter during treatment. For the onset of visual symptoms, refer patients for ophthalmologic evaluation urgently, with follow-up every 3 weeks until resolution or discontinuation of pemigatinib. Modify the dose or permanently discontinue pemigatinib as recommended.

Drugs/Diseases

Util A	Util B	Util C
Pemigatinib	Blurred Vision	
	Photopsia	
	Serous Detachment of retinal Pigment Epithelium	
	Vitreous Opacities	

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Pemazyre Prescribing Information, August 2022, Incyte Corporation.

Criteria Recommendations ***Approved Rejected***

18. Pemigatinib / Strong & Moderate CYP3A4 Inducers _____ _____

Alert Message: Concomitant use of Pemazyre (pemigatinib) with a strong or moderate CYP3A inducer decreases pemigatinib plasma concentrations, which may reduce the efficacy of pemigatinib. Avoid concomitant use of strong and moderate CYP3A inducers with pemigatinib.

Drugs/Diseases

Util A	Util B	Util C
Pemigatinib	Apalutamide	
	Bosentan	
	Carbamazepine	
	Efavirenz	
	Etravirine	
	Phenobarbital	
	Phenytoin	
	Primidone	
	Rifabutin	
	Rifampin	
	Rifapentine	

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Pemazyre Prescribing Information, August 2022, Incyte Corporation.

19. Pemigatinib / Strong & Moderate CYP3A4 Inhibitors _____ _____

Alert Message: The concurrent use of Pemazyre (pemigatinib) with strong and moderate CYP3A4 inhibitors should be avoided. Coadministration of pemigatinib with strong or moderate CYP3A inhibitors increases pemigatinib plasma concentrations, which increases the incidence and severity of adverse reactions. If concomitant use with a strong or moderate CYP3A inhibitor cannot be avoided, reduce the pemigatinib dose from 13.5 mg to 9 mg or if taking 9 mg to 4.5 mg. If concomitant use of the CYP3A inhibitor is discontinued, increase the pemigatinib dosage (after 3 plasma half-lives of the CYP3A inhibitor) to the dosage that was used before starting the CYP3A4 inhibitor.

Drugs/Diseases

Util A	Util B		Util C
Pemigatinib	Atazanavir	Fosamprenavir	
	Aprepitant	Idelalisib	
	Cimetidine	Indinavir	
	Ciprofloxacin	Itraconazole	
	Clarithromycin	Ketoconazole	
	Clotrimazole	Nefazodone	
	Cobicistat	Nelfinavir	
	Crizotinib	Posaconazole	
	Cyclosporine	Ritonavir	
	Diltiazem	Saquinavir	
	Dronedarone	Tipranavir	
	Erythromycin	Verapamil	
	Fluconazole	Voriconazole	
	Fluvoxamine		

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Pemazyre Prescribing Information, August 2022, Incyte Corporation.

Criteria Recommendations ***Approved Rejected***

20. Pemigatinib / Pregnancy / Pregnancy Negating _____ _____

Alert Message: Based on findings in an animal study and its mechanism of action, Pemazyre (pemigatinib) can cause fetal harm when administered to a pregnant woman. Oral administration of pemigatinib to pregnant rats during the period of organogenesis caused fetal malformations, fetal growth retardation, and embryo-fetal death at maternal exposures lower than the human exposure based on area under the curve (AUC) at the clinical dose of 13.5 mg. Advise pregnant women of the potential risk to the fetus. Advise female patients of reproductive potential to use effective contraception during treatment with pemigatinib and for 1 week after the last dose.

Drugs/Diseases

Util A	Util B	Util C (Negate)
Pemigatinib	Pregnancy	Abortion
		Delivery
		Miscarriage

Gender: Female
Age Range: 11 – 50 yoa

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Pemazyre Prescribing Information, August 2022, Incyte Corporation.

21. Pemigatinib / Lactation _____ _____

Alert Message: There are no data on the presence of Pemazyre (pemigatinib) or its metabolites in human milk or their effects on either the breastfed child or milk production. Because of the potential for serious adverse reactions in breastfed children from pemigatinib, advise women not to breastfeed during treatment and for 1 week after the last dose.

Drugs/Diseases

Util A	Util B	Util C
Pemigatinib	Lactation	

Gender: Female
Age Range: 11 – 50 yoa

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Pemazyre Prescribing Information, August 2022, Incyte Corporation.

22. Pemigatinib / Therapeutic Appropriateness _____ _____

Alert Message: Advise females of reproductive potential to use effective contraception during treatment with Pemazyre (pemigatinib) and for 1 week after the last pemigatinib dose.

Drugs/Diseases

Util A	Util B	Util C (Negating)
Pemigatinib		Contraceptives

Gender: Female
Age Range: 11 – 50 yoa

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Pemazyre Prescribing Information, August 2022, Incyte Corporation.

Criteria Recommendations ***Approved Rejected***

23. Pemigatinib / Therapeutic Appropriateness _____ _____
Alert Message: Advise males with female partners of reproductive potential to use effective contraception during treatment with Pemazyre (pemigatinib) and for 1 week after the last dose.

Drugs/Diseases
Util A Util B Util C
Pemigatinib

Gender: Male

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Pemazyre Prescribing Information, August 2022, Incyte Corporation.

24. Pemigatinib / **Non-adherence** _____ _____
Alert Message: Based on refill history, your patient may be under-utilizing Pemazyre (pemigatinib). Nonadherence to the prescribed dosing regimen may result in subtherapeutic effects, which may lead to decreased patient outcomes and additional healthcare costs.

Drugs/Diseases
Util A Util B Util C
Pemigatinib

References:
Osterberg L, Blaschke T. Adherence to Medication. N Engl J Med 2005; 353:487- 497.
Ruddy K, Mayer E, Partridge A. Patient Adherence and Persistence With Oral Anticancer Treatment. CA Cancer J Clin 2009;59:56-66.
Barillet M, Prevost V, Joly F, Clarisse B. Oral Antineoplastic Agents: How do We Care About Adherence? Br J Clin Pharmacol. 2015;80(6):1289–1302. doi:10.1111/bcp.12734
Greer JA, Amoyal N, Nisotel L, et al. Systemic Review of Adherence to Oral Antineoplastic Therapies. The Oncologist. 2016;21:354-376.

25. Roflumilast / Therapeutic Appropriateness _____ _____
Alert Message: The safety and effectiveness of Zoryve (roflumilast cream) in pediatric patients below the age of 12 years have not been established.

Drugs/Diseases
Util A Util B Util C
Roflumilast Cream

Age Range: 0 – 11 yoa

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Zoryve Prescribing Information, August 2022, Arcutis Biotherapeutics, Inc.

Criteria Recommendations ***Approved Rejected***

26. Roflumilast / Moderate to Severe Hepatic Impairment _____ _____

Alert Message: Zoryve (roflumilast cream) is contraindicated in patients with moderate to severe liver impairment (Child-Pugh B or C). Topical roflumilast has not been studied in patients with hepatic impairment. In clinical studies with oral roflumilast, patients with mild to moderate hepatic impairment had significant increases in the AUC and Cmax of roflumilast as compared to healthy patients.

Drugs/Diseases

Util A	Util B	Util C
Roflumilast Cream	Hepatic Impairment	

References:

Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Zoryve Prescribing Information, August 2022, Arcutis Biotherapeutics, Inc.

27. Roflumilast / CYP3A4 Inhibitors & Dual 3A4 & 1A2 Inhibitors _____ _____

Alert Message: The coadministration of Zoryve (roflumilast cream) with systemic CYP3A4 inhibitors or dual inhibitors that inhibit both CYP3A4 and CYP1A2 simultaneously (e.g., erythromycin, ketoconazole, fluvoxamine, cimetidine) may increase roflumilast systemic exposure and may result in increased adverse reactions. The risk of such concurrent use should be weighed carefully against the benefit.

Drugs/Diseases

Util A	Util B		Util C
Roflumilast Cream	Ciprofloxacin	Itraconazole	
	Cimetidine	Ketoconazole	
	Clarithromycin	Nefazodone	
	Cobicistat	Nelfinavir	
	Delavirdine	Posaconazole	
	Erythromycin	Ritonavir	
	Fluvoxamine	Saquinavir	
	Indinavir	Voriconazole	

References:

Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Zoryve Prescribing Information, August 2022, Arcutis Biotherapeutics, Inc.

28. Roflumilast / Therapeutic Appropriateness _____ _____

Alert Message: There is no information regarding the presence of Zoryve (roflumilast cream) in human milk, the effects on the breastfed infant, or the effects on milk production. Roflumilast and its metabolites are excreted into the milk of lactating rats. The developmental and health benefits of breastfeeding should be considered, along with the mother's clinical need for roflumilast cream and any potential adverse effects on the breastfed infant from roflumilast cream or the underlying maternal condition. To minimize potential exposure to the breastfed infant via breast milk, use roflumilast cream on the smallest area of skin (avoiding the nipple and areola) and for the shortest duration possible while breastfeeding.

Drugs/Diseases

Util A	Util B	Util C
Roflumilast	Lactation	
Gender: Female		
Age Range: 11 – 50 yoa		

References:

Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

Criteria Recommendations ***Approved Rejected***

29. Alogliptin/Metformin / Therapeutic Appropriateness _____ _____

Alert Message: Kazano (alogliptin/metformin) is contraindicated in patients with severe renal impairment (eGFR < 30 mL/min/1.73m2). The metformin component of the combination product is substantially excreted by the kidney, and the risk of metformin accumulation and lactic acidosis increases with the degree of renal impairment.

Drugs/Diseases

Util A	Util B	Util C
Alogliptin/Metformin		CKD Stage 4
		CKD Stage 5
		ESRD

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Kazano Prescribing Information, March 2022, Takeda Pharmaceuticals America, Inc.

30. Dupilumab / Therapeutic Appropriateness _____ _____

Alert Message: The safety and efficacy of Dupixent (dupilumab) for the treatment of prurigo nodularis in pediatric patients have not been established.

Drugs/Diseases

Util A	Util B	Util C (Negate)
Dupilumab	Prurigo Nodularis	Asthma
		Atopic Dermatitis
		Eosinophilic Esophagitis

Age Range: 0 – 17 yoa

References:

Clinical Pharmacology, 2022 Elsevier/Gold Standard.

Dupixent Prescribing Information, Sept. 2022, Regeneron Pharmaceuticals, Inc.

31. Vonoprazan/Amoxicillin/Clarithromycin / Therapeutic Appropriateness _____ _____

Alert Message: The safety and effectiveness of Voquezna Triple Pak (vonoprazan, amoxicillin, and clarithromycin) in pediatric patients have not been established.

Drugs/Diseases

Util A	Util B	Util C
Vonoprazan/Amoxicillin/Clarithromycin		

Age Range: 0 – 17 yoa

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Voquezna Triple Pak and Voquezna Dual Pak Prescribing Information, May 2022, Phantom Pharmaceuticals.

32. Vonoprazan/Amoxicillin/Clarithromycin / Rilpivirine-Containing Drugs _____ _____

Alert Message: Concurrent use of Voquezna Triple Pak (vonoprazan, amoxicillin, and clarithromycin) with rilpivirine-containing products is contraindicated. Vonoprazan reduces intragastric acidity, which may alter the absorption of rilpivirine, leading to changes in safety and/or effectiveness. The inhibitory effect of vonoprazan on acid secretion increases with repeated daily dosing.

Drugs/Diseases

Util A	Util B	Util C
Vonoprazan/Amoxicillin/Clarithromycin	Rilpivirine	
	Rilpivirine/Cabotegravir	
	Rilpivirine/Dolutegravir	
	Rilpivirine/Emtricitabine/Tenofovir ala	
	Rilpivirine/Emtricitabine/Tenofovir dis	

References:

Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Voquezna Triple Pak and Voquezna Dual Pak Prescribing Information, May 2022, Phantom Pharmaceuticals.

33. Vonoprazan/Amoxicillin/Clarithromycin / Atazanavir-Containing Drugs _____ _____

Alert Message: Concurrent use of Voquezna Triple Pak (vonoprazan, amoxicillin, and clarithromycin) with an atazanavir-containing product should be avoided. Vonoprazan reduces intragastric acidity, which may alter the absorption of atazanavir, leading to changes in safety and/or effectiveness. The inhibitory effect of vonoprazan on acid secretion increases with repeated daily dosing.

Drugs/Diseases

Util A	Util B	Util C
Vonoprazan/Amoxicillin/Clarithromycin	Atazanavir	
	Atazanavir/Cobicistat	

References:

Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Voquezna Triple Pak and Voquezna Dual Pak Prescribing Information, May 2022, Phantom Pharmaceuticals.

34. Vonoprazan/Amoxicillin/Clarithromycin / Nelfinavir _____ _____

Alert Message: Concurrent use of Voquezna Triple Pak (vonoprazan, amoxicillin, and clarithromycin) with nelfinavir should be avoided. Vonoprazan reduces intragastric acidity, which may alter the absorption of nelfinavir, leading to changes in safety and/or effectiveness. The inhibitory effect of vonoprazan on acid secretion increases with repeated daily dosing.

Drugs/Diseases

Util A	Util B	Util C
Vonoprazan/Amoxicillin/Clarithromycin	Nelfinavir	

References:

Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Voquezna Triple Pak and Voquezna Dual Pak Prescribing Information, May 2022, Phantom Pharmaceuticals.

35. Vonoprazan/Amoxicillin/Clarithromycin / Strong & Moderate 3A Inducers _____ _____

Alert Message: The vonoprazan and clarithromycin components of Voquezna Triple Pak (vonoprazan, amoxicillin, and clarithromycin) are CYP3A substrates. Strong or moderate CYP3A inducers may decrease the exposure of vonoprazan and clarithromycin, which may reduce the effectiveness of the CYP3A substrates.

Drugs/Diseases

Util A	Util B	Util C
Vonoprazan/Amoxicillin/Clarithromycin	Apalutamide	
	Bosentan	
	Carbamazepine	
	Efavirenz	
	Etravirine	
	Phenobarbital	
	Phenytoin	
	Primidone	
	Rifabutin	
	Rifampin	
	Rifapentine	

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Voquezna Triple Pak and Voquezna Dual Pak Prescribing Information, May 2022, Phantom Pharmaceuticals.

36. Vonoprazan/Amoxicillin/Clarithromycin / CYP3A4 Substrates w/ NTI _____ _____

Alert Message: The vonoprazan and clarithromycin components of Voquezna Triple Pak (vonoprazan, amoxicillin, and clarithromycin) are CYP3A inhibitors. Concurrent use of clarithromycin and vonoprazan with CYP3A substrates where minimal concentration changes may lead to serious toxicities should be done with caution. Frequent monitoring of substrate concentrations and/or adverse reactions related to the substrate drugs is recommended when used with vonoprazan and clarithromycin.

Drugs/Diseases

Util A	Util B	Util C
Vonoprazan/Amoxicillin/Clarithromycin	Cyclosporine	
	Sirolimus	
	Tacrolimus	

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Voquezna Triple Pak and Voquezna Dual Pak Prescribing Information, May 2022, Phantom Pharmaceuticals.

37. Vonoprazan/Amoxicillin/Clarithromycin / Clopidogrel _____ _____

Alert Message: The vonoprazan component of Voquezna Triple Pak (vonoprazan, amoxicillin, and clarithromycin) is a CYP2C19 inhibitor. Concurrent use of vonoprazan with clopidogrel, a CYP2C19 substrate, may result in reduced clopidogrel efficacy. Vonoprazan may reduce plasma concentrations of the active metabolite of clopidogrel and may cause a reduction in platelet inhibition. Carefully monitor the efficacy of clopidogrel and consider alternative anti-platelet therapy.

Drugs/Diseases

Util A	Util B	Util C
Vonoprazan/Amoxicillin/Clarithromycin	Clopidogrel	

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Voquezna Triple Pak and Voquezna Dual Pak Prescribing Information, May 2022, Phantom Pharmaceuticals.

Recommendations ***Approved Rejected***

38. Vonoprazan/Amoxicillin/Clarithromycin / Citalopram _____ _____

Alert Message: The vonoprazan component of Voquezna Triple Pak (vonoprazan, amoxicillin, and clarithromycin) is a CYP2C19 inhibitor. Concurrent use of vonoprazan with citalopram, a CYP2C19 substrate, may result in increased citalopram exposure, increasing the risk for citalopram adverse reactions. The dose of citalopram should be limited to 20 mg/day when co-administered with vonoprazan.

Drugs/Diseases

Util A	Util B	Util C
Vonoprazan/Amoxicillin/Clarithromycin	Citalopram	

References:

Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Voquezna Triple Pak and Voquezna Dual Pak Prescribing Information, May 2022, Phantom Pharmaceuticals.

39. Vonoprazan/Amoxicillin/Clarithromycin / Cilostazol _____ _____

Alert Message: The vonoprazan component of Voquezna Triple Pak (vonoprazan, amoxicillin, and clarithromycin) is a CYP2C19 inhibitor. Concurrent use of vonoprazan with cilostazol, a CYP2C19 substrate, may result in increased cilostazol exposure, increasing the risk of cilostazol-related adverse reactions. The dose of cilostazol should be limited to 50 mg twice daily when co-administered with vonoprazan.

Drugs/Diseases

Util A	Util B	Util C
Vonoprazan/Amoxicillin/Clarithromycin	Cilostazol	

References:

Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Voquezna Triple Pak and Voquezna Dual Pak Prescribing Information, May 2022, Phantom Pharmaceuticals.

40. Vonoprazan/Amoxicillin/Clarithromycin / Severe Renal Impairment _____ _____

Alert Message: Avoid the use of Voquezna Triple Pak (vonoprazan, amoxicillin, and clarithromycin) in patients with severe renal impairment (eGFR less than 30 mL/minute) or renal failure. The pack does not allow for appropriate dosage adjustments needed for these patients. In pharmacokinetic studies, patients with severe renal impairment exhibited increased systemic exposure to vonoprazan (2.4-times greater) compared to subjects with normal renal function.

Drugs/Diseases

Util A	Util B	Util C
Vonoprazan/Amoxicillin/Clarithromycin	CKD Stage 4 CKD Stage 5 ESRD	

References:

Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Voquezna Triple Pak and Voquezna Dual Pak Prescribing Information, May 2022, Phantom Pharmaceuticals.

Recommendations ***Approved Rejected***

41. Vonoprazan/Amoxicillin/Clarithromycin / Mod-Sev Hepatic Impairment _____ _____

Alert Message: Avoid the use of Voquezna Triple Pak (vonoprazan, amoxicillin, and clarithromycin) in patients with moderate to severe hepatic impairment (Child-Pugh Class B or C). The pack does not allow for appropriate dosage adjustments needed for these patients. In pharmacokinetic studies, patients with severe hepatic impairment exhibited increased systemic exposure to vonoprazan (2.6-times greater) compared to subjects with normal renal function.

Drugs/Diseases

Util A	Util B	Util C
Vonoprazan/Amoxicillin/Clarithromycin	Hepatic Impairment	

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Voquezna Triple Pak and Voquezna Dual Pak Prescribing Information, May 2022, Phantom Pharmaceuticals.

42. Vonoprazan/Amoxicillin/Clarithromycin / Pregnancy / Negating _____ _____

Alert Message: There are no adequate and well-controlled studies of Voquezna Triple Pak (vonoprazan, amoxicillin, clarithromycin) in pregnant women to evaluate for drug-associated risks of major birth defects, miscarriage, or other adverse maternal or fetal outcomes. The use of the triple pack is not recommended in pregnant women except in clinical circumstances where no alternative therapy is appropriate.

Drugs/Diseases

Util A	Util B	Util C (Negate)
Vonoprazan/Amoxicillin/Clarithromycin	Pregnancy Delivery Miscarriage	Abortion

Gender: Female
Age Range: 11 – 50 yoa

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Voquezna Triple Pak and Voquezna Dual Pak Prescribing Information, May 2022, Phantom Pharmaceuticals.

43. Vonoprazan/Amoxicillin/Clarithromycin / Lactation _____ _____

Alert Message: There are no data regarding the presence of the vonoprazan component of the Voquezna Triple Pak (vonoprazan, amoxicillin, and clarithromycin) in human milk, the effects on the breastfed infant, or the effects on milk production. Vonoprazan and its metabolites are present in rat milk. Liver injury occurred in offspring from pregnant and lactating rats administered oral vonoprazan. When a drug is present in animal milk, it is likely that the drug will be present in human milk. Because of the potential risk of adverse liver effects shown in animal studies with vonoprazan, a woman should pump and discard human milk for the duration of vonoprazan therapy, and for 2 days after therapy ends, and feed her infant stored human milk (collected prior to therapy) or formula.

Drugs/Diseases

Util A	Util B	Util C
Vonoprazan/Amoxicillin/Clarithromycin	Lactation	

Gender: Female
Age Range: 11 – 50 yoa
References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Voquezna Triple Pak and Voquezna Dual Pak Prescribing Information, May 2022, Phantom Pharmaceuticals.

Recommendations ***Approved Rejected***

44. Vonoprazan/Amoxicillin/Clarithromycin / Colchicine _____ _____
Alert Message: Life-threatening and fatal drug interactions have been reported in patients treated with clarithromycin, a component of Voquezna Triple Pak (vonoprazan, amoxicillin, and clarithromycin), and colchicine. If co-administration of Voquezna Triple Pak and colchicine is necessary for patients with normal renal and hepatic function, reduce the dose of colchicine. Monitor patients for clinical symptoms of colchicine toxicity. Concomitant administration of Voquezna Triple Pak and colchicine is contraindicated in patients with renal or hepatic impairment.

Drugs/Diseases

Util A	Util B	Util C (Negating)
Vonoprazan/Amoxicillin/Clarithromycin	Colchicine	Hepatic Impairment
		Renal Impairment

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Voquezna Triple Pak and Voquezna Dual Pak Prescribing Information, May 2022, Phantom Pharmaceuticals.

45. Vonoprazan/Amoxicillin/Clarithromycin / Omeprazole _____ _____
Alert Message: Avoid concomitant use of Voquezna Triple Pak (vonoprazan, amoxicillin, and clarithromycin) with omeprazole. In clinical studies, clarithromycin concentrations in the gastric tissue and mucus were increased by concomitant administration of omeprazole. Coadministration may result in clarithromycin-related adverse effects.

Drugs/Diseases

Util A	Util B	Util C
Vonoprazan/Amoxicillin/Clarithromycin	Omeprazole	

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Voquezna Triple Pak and Voquezna Dual Pak Prescribing Information, May 2022, Phantom Pharmaceuticals.

46. Vonoprazan/Amoxicillin/Clarithromycin / Itraconazole _____ _____
Alert Message: The concurrent use of Voquezna Triple Pak (vonoprazan, amoxicillin, and clarithromycin) with itraconazole may result in elevated clarithromycin and itraconazole exposure. Both clarithromycin and itraconazole are substrates and inhibitors of CYP3A, potentially leading to a bi-directional drug interaction when administered concomitantly. Patients taking itraconazole with Voquezna Triple Pak should be monitored closely for signs or symptoms of increased or prolonged adverse reactions associated with itraconazole and clarithromycin.

Drugs/Diseases

Util A	Util B	Util C
Vonoprazan/Amoxicillin/Clarithromycin	Itraconazole	

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Voquezna Triple Pak and Voquezna Dual Pak Prescribing Information, May 2022, Phantom Pharmaceuticals.

Recommendations ***Approved Rejected***

47. Tenofovir Alafenamide / Overutilization _____ _____

Alert Message: The safety and efficacy of Vemlidy (tenofovir alafenamide) have not been established in pediatric patients with chronic HBV infection who are less than 12 years of age.

Drugs/Diseases

Util A	Util B	Util C
Tenofovir Alafenamide		

Age Range 0 – 11 yoa

References:

Vemlidy Prescribing Information, Oct. 2022, Gilead Sciences, Inc.

48. Venlafaxine Besylate Tablets / Overuse _____ _____

Alert Message: Venlafaxine besylate extended-release may be over-utilized. The maximum recommended dose is 225 mg once daily.

Drugs/Diseases

Util A	Util B	Util C (Negating)
Venlafaxine besylate ER		CKD Stage 1, 2, 3, 4, & 5 ESRD Hemodialysis Hepatic Impairment

Max Dose: 225 mg/day

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Venlafaxine Besylate Tablets, Extended-Release, June 2022, Almatica Pharma, LLC.

49. Venlafaxine Besylate Tablets / Therapeutic Appropriateness _____ _____

Alert Message: The safety and effectiveness of venlafaxine besylate extended-release in pediatric patients have not been established.

Drugs/Diseases

Util A	Util B	Util C
Venlafaxine besylate ER		

Age Range: 0 – 17 yoa

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Venlafaxine Besylate Tablets, Extended-Release, June 2022, Almatica Pharma, LLC.

Recommendations ***Approved Rejected***

50. Venlafaxine Besylate Tablets / Renal Impairment _____ _____

Alert Message: Venlafaxine besylate extended-release should be used with caution in patients with renal impairment. Renal elimination of venlafaxine is the primary route of excretion. Reduce the total daily dose of venlafaxine by 25% to 50% in patients with mild (CLcr = 60-89 mL/min) or moderate (CLcr = 30-59 mL/min) renal impairment. In patients undergoing hemodialysis or with severe renal impairment (CLcr < 30 mL/min), the total daily dose should be reduced by 50% or more. Switch to another venlafaxine extended-release product if doses lower than 112.5 mg are needed.

Drugs/Diseases

Util A	Util B	Util C (Include)
Venlafaxine besylate ER		CKD Stage 1, 2, 3, 4, and 5 ESRD Hemodialysis

Max Dose: 112.5 mg/day

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Venlafaxine Besylate Tablets, Extended-Release, June 2022, Almatica Pharma, LLC.

51. Venlafaxine Besylate Tablets / Hepatic Impairment _____ _____

Alert Message: Venlafaxine besylate extended-release should be used with caution in patients with hepatic impairment. Reduce the total daily dose of venlafaxine by 50% in patients with mild (Child-Pugh Class A) to moderate (Child-Pugh Class B) hepatic impairment. In patients with severe hepatic impairment (Child-Pugh Class C) or hepatic cirrhosis, it may be necessary to reduce the dose by 50% or more. Switch to another venlafaxine extended-release product if doses lower than 112.5 mg are needed.

Drugs/Diseases

Util A	Util B	Util C (Include)
Venlafaxine besylate ER		Hepatic Impairment

Max Dose: 112.5 mg/day

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Venlafaxine Besylate Tablets, Extended-Release, June 2022, Almatica Pharma, LLC.

52. Venlafaxine Besylate Tablets / Nonadherence _____ _____

Alert Message: Based on the refill history, your patient may be underutilizing venlafaxine besylate extended-release. Non-adherence to the prescribed dosing regimen may result in sub-therapeutic effects, which may lead to decreased patient outcomes and additional healthcare costs.

Drugs/Diseases

Util A	Util B	Util C
Venlafaxine besylate ER		

References:

Iuga AO, McGuire MJ. Adherence and Health Care Costs. Risk Manag Healthc Policy. 2014 Feb 20;7:35-44.

Osterberg L, Blaschke T. Adherence to Medication. N Engl J Med 2005;353:487-97.

Keene MS. Confusion and Complaints: The True Cost of Noncompliance in Antidepressant Therapy. Medscape Psychiatry & Mental Health. 2005;10(2). Available at: http://www.medscape.com/viewarticle/518273

Woldu H, Porta G, Goldstein T, et al. Pharmacokinetically and Clinician- Determined Adherence to an Antidepressant Regimen and Clinical Outcome in the TORDIA Trial. J Am Acad Child Adol Psy, 50;5:490-98. May 2011.
Chong WW, Aslani P, Chen TF. Effectiveness of Interventions to Improve Antidepressant Medication Adherence: A Systematic Review. Int J Clin Pract. 2011 Sep;65(9)954-975.

Recommendations ***Approved Rejected***

53. Upadacitinib 30 mg / Overutilization - Atopic Dermatitis _____ _____

Alert Message: Rinvoq (upadacitinib) may be over-utilized. The recommended dose of upadacitinib for maintenance treatment of atopic dermatitis in adults 65 years of age and older is 15 mg once daily. No differences in effectiveness were observed between these patients and younger patients; however, there was a higher rate of serious infections and malignancies in those patients 65 years of age or older in the 30 mg dosing group in the long-term trials.

Drugs/Diseases

Util A	Util B	Util C (Required)
Upadacitinib 30mg		Atopic Dermatitis

Age Range: ≥ 65 yoa
Max Dose: 30 mg
Day Supply: 90 days
References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Rinvoq Prescribing Information, Oct. 2022, AbbVie Inc.

54. SGLT2 Inhibitors / Lithium _____ _____

Alert Message: Concomitant use of an SGLT2 inhibitor with lithium may decrease serum lithium concentrations. Monitor serum lithium concentration more frequently during SGLT2 inhibitor initiation and dosage changes.

Drugs/Diseases

Util A	Util B	Util C
Canagliflozin	Lithium	
Dapagliflozin		
Empagliflozin		
Ertugliflozin		

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Facts & Comparison, 2022, Wolters Kluwer Health.

55. Triumeq PD / Non-adherence _____ _____

Alert Message: Based on the refill history, your patient may be underutilizing Triumeq PD (abacavir/dolutegravir/lamivudine). Nonadherence to antiretroviral therapy may result in

insufficient plasma levels and partial suppression of viral load leading to the development of

resistance, HIV progression, and increased mortality.

Drugs/Diseases

Util A	Util B	Util C
Abacavir/dolutegravir/lamivudine PD		

References:

Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for the Use of Antiretroviral Agents in Adults and Adolescents with HIV. Department of Health and Human Services. January 20, 2022. Available at https://clinicalinfo.hiv.gov/sites/default/files/guidelines/documents/AdultandAdolescentGL.pdf. Accessed January 25, 2022.

Panel on Antiretroviral Therapy and Medical Management of Children Living with HIV. Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection. Updated December 30, 2021. Available at: http://aidsinfo.nih.gov/contentfiles/lvguidelines/pediatricguidelines.pdf. Accessed Jan. 5, 2022.

Panel on Treatment of Pregnant Women with HIV and Prevention of Perinatal Transmission. Recommendations for Use of Antiretroviral Drugs in Pregnant Women with HIV Infection and Intervention to Reduce Perinatal Transmission in the United States. Dec. 30, 2021. Available at: http://clinicalinfo.hiv.gov/sites/default/files/guidelines/documents/Perinatal_GL.pdf. Accessed Jan. 5, 2022.

Schaecher KL. The Importance of Treatment Adherence in HIV. Am J Manag Care. 2013 Sep;19(12 Suppl):231-7.

Recommendations ***Approved Rejected***

56. Triumeq PD / Overutilization _____ _____

Alert Message: Triumeq PD (abacavir/dolutegravir/lamivudine tablets for oral suspension) may be over-utilized. The manufacturer's maximum recommended dose of abacavir/dolutegravir/lamivudine tablets for oral suspension in children weighing, 20 to < 25 kg is 6 tablets once daily, 14 to < 20 kg is 5 tablets once daily, and 10 to < 14 kg is 4 tablets once daily. Triumeq PD is not recommended in pediatric patients weighing 25 kg or more.

Drugs/Diseases

Util A	Util B	Util C
Abacavir/dolutegravir/lamivudine PD		

Max Dose: 6 tablets per day

Age Range: 0 – 8 yoa

References:

Triumeq & Triumeq PD Prescribing Information, Oct. 2022, ViiV Healthcare.

Clinical Pharmacology, 2022 Elsevier/Gold Standard.

57. Triumeq PD / UGT1A1 & CYP3A4 Inducers / Dolutegravir (Negating) _____ _____

Alert Message: Concurrent use of Triumeq PD (abacavir/dolutegravir/lamivudine tablets for oral suspension) with an efavirenz-containing agent, fosamprenavir/rtv, tipranavir/rtv, carbamazepine, or rifampin may result in decreased plasma concentrations of the dolutegravir component of the antiretroviral and loss of efficacy. If co-administration is necessary for pediatric patients weighing 10 kg to < 25 kg, it is recommended that an additional weight-based dose of dolutegravir be given. Refer to the official prescribing information for the recommended dose for specific weight ranges.

Drugs/Diseases

Util A	Util B	Util C (Negating)
Abacavir/dolutegravir/lamivudine PD	Carbamazepine Efavirenz Fosamprenavir/ritonavir Tipranavir/ritonavir Rifampin	Dolutegravir

Age Range: 0 – 8 yoa

References:

Triumeq & Triumeq PD Prescribing Information, Oct. 2022, ViiV Healthcare.

Clinical Pharmacology, 2022 Elsevier/Gold Standard.

58. Triumeq PD / Therapeutic Appropriateness _____ _____

Alert Message: Triumeq PD (abacavir/dolutegravir/lamivudine oral tablets for oral suspension) is not recommended in patients weighing 25 kg or more. Triumeq PD (abacavir/dolutegravir/lamivudine) is a fixed-dose tablet, and the dosage of individual components cannot be adjusted and may lead to suboptimal dosing for patients weighing 25 kg or more.

Drugs/Diseases

Util A	Util B	Util C
Abacavir/dolutegravir/lamivudine PD		

Age Range: > 8 yoa

References:

Triumeq & Triumeq PD Prescribing Information, Oct. 2022, ViiV Healthcare.

Clinical Pharmacology, 2022 Elsevier/Gold Standard.

Recommendations ***Approved Rejected***

59. Asciminib / Overuse _____ _____

Alert Message: Scemblix (asciminib) may be over-utilized. The recommended dosage in patients with Ph+ CML in CP, previously treated with two or more TKIs, is 80 mg taken orally once daily at approximately the same time each day or 40 mg twice daily at approximately 12-hour intervals. The recommended dose of asciminib in patients with Ph+ CML-CP with T315I mutation is 200 mg taken orally twice daily at approximately 12-hour intervals.

Drugs/Diseases

Util A	Util B	Util C
Asciminib		

Max Dose: 400 mg/day

References:

IBM Micromedex DRUGDEX (electronic version). Truven Health Analytics, Greenwood Village, Colorado, USA. 2022. Scemblix Prescribing Information, October 2022, Novartis Pharmaceuticals Corporation**.**

60. Asciminib / Therapeutic Appropriateness _____ _____

Alert Message: The safety and efficacy of Scemblix (asciminib) in pediatric patients have not been established.

Drugs/Diseases

Util A	Util B	Util C
Asciminib		

Age Range: 0 – 17 yoa

References:

IBM Micromedex DRUGDEX (electronic version). Truven Health Analytics, Greenwood Village, Colorado, USA. 2022. Scemblix Prescribing Information, October 2022, Novartis Pharmaceuticals Corporation**.**

61. Asciminib / Myelosuppression _____ _____

Alert Message: Thrombocytopenia, neutropenia, and anemia have occurred in patients receiving Scemblix (asciminib). Perform complete blood counts every two weeks for the first 3 months of treatment and monthly thereafter or as clinically indicated. Monitor patients for signs and symptoms of myelosuppression. Based on the severity of thrombocytopenia and/or neutropenia, reduce dose, temporarily withhold, or permanently discontinue asciminib per official prescribing information.

Drugs/Diseases

Util A	Util B	Util C
Asciminib	Anemia	
	Neutropenia	
	Thrombocytopenia	

References:

IBM Micromedex DRUGDEX (electronic version). Truven Health Analytics, Greenwood Village, Colorado, USA. 2022. Scemblix Prescribing Information, October 2022, Novartis Pharmaceuticals Corporation**.**

Criteria Recommendations ***Approved Rejected***

62. Asciminib / Pancreatitis _____ _____

Alert Message: Pancreatitis occurred in 9 of 356 (2.5%) patients receiving Scemblix (asciminib). Assess serum lipase and amylase levels monthly during treatment with asciminib or as clinically indicated. Monitor the patient for signs and symptoms of pancreatic toxicity. Perform more frequent monitoring in patients with a history of pancreatitis. Based on the severity of lipase and amylase elevation, reduce the dose, temporarily withhold, or permanently discontinue asciminib.

Drugs/Diseases

Util A	Util B	Util C
Asciminib	Pancreatitis	

References:

IBM Micromedex DRUGDEX (electronic version). Truven Health Analytics, Greenwood Village, Colorado, USA. 2022. Scemblix Prescribing Information, October 2022, Novartis Pharmaceuticals Corporation.

63. Asciminib / Antihypertensives (Negating) _____ _____

Alert Message: In clinical trials, hypertension occurred in 19% of patients receiving Scemblix (asciminib). Monitor and manage hypertension using standard antihypertensive therapy during treatment with asciminib as clinically indicated; for Grade 3 or higher hypertension, temporarily withhold, reduce dose, or permanently discontinue asciminib depending on the persistence of hypertension.

Drugs/Diseases

Util A	Util B	Util C (Negating)
Asciminib		Antihypertensives

References:

IBM Micromedex DRUGDEX (electronic version). Truven Health Analytics, Greenwood Village, Colorado, USA. 2022. Scemblix Prescribing Information, October 2022, Novartis Pharmaceuticals Corporation.

64. Asciminib / Cardiovascular Toxicity _____ _____

Alert Message: In clinical trials, cardiovascular toxicity (including ischemic cardiac, arrhythmia, QT prolongation, arterial thrombotic and embolic conditions) and cardiac failure occurred in patients receiving Scemblix (asciminib). Monitor patients with a history of cardiovascular risk factors for cardiovascular signs and symptoms. Initiate appropriate treatment as clinically indicated; for Grade 3 or higher cardiovascular toxicity, temporarily withhold, reduce dose, or permanently discontinue asciminib depending on the persistence of cardiovascular toxicity.

Drugs/Diseases

Util A	Util B	Util C
Asciminib	Arrhythmias	
	Arterial Embolism & Thrombosis	
	Heart Failure	
	Ischemic heart Disease	

References:

IBM Micromedex DRUGDEX (electronic version). Truven Health Analytics, Greenwood Village, Colorado, USA. 2022. Scemblix Prescribing Information, October 2022, Novartis Pharmaceuticals Corporation.

Criteria Recommendations ***Approved Rejected***

65. Asciminib / Strong CYP3A4 Inhibitors _____ _____

Alert Message: Concomitant use of Scemblix (asciminib) with a strong CYP3A4 inhibitor increases both the asciminib Cmax and AUC, which may increase the risk of adverse reactions. Asciminib is a CYP3A4 substrate. Closely monitor for adverse reactions in patients treated with asciminib at 200 mg twice daily with concomitant use of strong CYP3A4 inhibitors.

Drugs/Diseases

Util A	Util B		Util C
Asciminib	Clarithromycin	Nelfinavir	
	Cobicistat	Posaconazole	
	Indinavir	Ritonavir	
	Itraconazole Tabs	Saquinavir	
	Ketoconazole	Voriconazole	
	Nefazodone		

References:
IBM Micromedex DRUGDEX (electronic version). Truven Health Analytics, Greenwood Village, Colorado, USA. 2022. Scemblix Prescribing Information, October 2022, Novartis Pharmaceuticals Corporation**.**

66. Asciminib / Itraconazole Oral Solution w/ HBC _____ _____

Alert Message: Concomitant use of Scemblix (asciminib) with itraconazole oral solution containing hydroxypropyl-B-cyclodextrin decreases asciminib Cmax and AUC, which may reduce asciminib efficacy. Avoid coadministration of asciminib at all recommended doses with itraconazole oral solution containing hydroxypropyl-B-cyclodextrin.

Drugs/Diseases

Util A	Util B	Util C
Asciminib	Itraconazole Oral Solution	

References:
IBM Micromedex DRUGDEX (electronic version). Truven Health Analytics, Greenwood Village, Colorado, USA. 2022. Scemblix Prescribing Information, October 2022, Novartis Pharmaceuticals Corporation**.**

67. Asciminib / Sensitive CYP3A4 Substrates _____ _____

Alert Message: Scemblix (asciminib) is a CYP3A4 inhibitor. Concomitant use of asciminib can increase the Cmax and AUC of CYP3A4 substrates, which may increase the risk of adverse reactions of these substrates. Closely monitor for adverse reactions in patients treated with asciminib at 80 mg total daily dose with concomitant use of sensitive CYP3A4 substrates, where minimal concentration changes may lead to serious adverse reactions. Avoid coadministration of asciminib at 200 mg twice daily with sensitive CYP3A4 substrates.

Drugs/Diseases

Util A	Util B					Util C
Asciminib	Avanafil	Eletriptan	Lurasidone	Simvastatin	Vardenafil	
	Budesonide	Eplerenone	Maraviroc	Sirolimus		
	Buspirone	Everolimus	Midazolam	Tacrolimus		
	Cyclosporine	Felodipine	Naloxegol	Ticagrelor		
	Darifenacin	Ibrutinib	Nisoldipine	Tipranavir		
	Darunavir	Lomitapide	Quetiapine	Tolvaptan		
	Dronedarone	Lovastatin	Sildenafil	Triazolam		

References:
IBM Micromedex DRUGDEX (electronic version). Truven Health Analytics, Greenwood Village, Colorado, USA. 2022. Scemblix Prescribing Information, October 2022, Novartis Pharmaceuticals Corporation**.**

Criteria Recommendations ***Approved Rejected***

68. Asciminib / Sensitive CYP2C9 Substrates _____ _____
Alert Message: Avoid concomitant use of CYP2C9 substrates with Scemblix (asciminib) at all asciminib recommended doses. Asciminib is a CYP2C9 inhibitor. Concurrent use of asciminib with a CYP2C9 substrate can increase the Cmax and AUC of the substrate, which may increase the risk of substrate-related serious adverse reactions.

Drugs/Diseases

Util A	Util B	Util C
Asciminib	Celecoxib	
	Glimepiride	
	Phenytoin	
	Warfarin	

References:
IBM Micromedex DRUGDEX (electronic version). Truven Health Analytics, Greenwood Village, Colorado, USA. 2022. Scemblix Prescribing Information, October 2022, Novartis Pharmaceuticals Corporation**.**

69. Asciminib / Sensitive P-gp Substrates _____ _____
Alert Message: Scemblix (asciminib) is a P-gp inhibitor. Concomitant use of asciminib with a P-gp substrate can increase the plasma concentrations of the substrate, which may increase the risk of substrate-related adverse reactions. Closely monitor for adverse reactions in patients treated with asciminib at all recommended doses with concomitant use of P-gp substrates, where minimal concentration changes may lead to serious toxicities.

Drugs/Diseases

Util A	Util B		Util C
Asciminib	Cyclosporine	Sirolimus	
	Digoxin	Tacrolimus	
	Everolimus		

References:
IBM Micromedex DRUGDEX (electronic version). Truven Health Analytics, Greenwood Village, Colorado, USA. 2022. Scemblix Prescribing Information, October 2022, Novartis Pharmaceuticals Corporation**.**

70. Asciminib / Pregnancy / Pregnancy Negating _____ _____
Alert Message: Based on findings from animal studies and its mechanism of action, Scemblix (asciminib) can cause fetal harm when administered to a pregnant woman. Animal reproduction studies in pregnant rats and rabbits demonstrated that oral administration of asciminib during organogenesis induced structural abnormalities, embryo-fetal mortality, and alterations to growth. Advise pregnant women and females of reproductive potential of the potential risk to a fetus. Verify the pregnancy status of females of reproductive potential prior to starting treatment with asciminib.

Drugs/Diseases

Util A	Util B	Util C (Negate)
Asciminib	Pregnancy	Abortion
		Delivery
		Miscarriage

Gender: Female
Age Range: 11 – 50 yoa

References:
IBM Micromedex DRUGDEX (electronic version). Truven Health Analytics, Greenwood Village, Colorado, USA. 2022. Scemblix Prescribing Information, October 2022, Novartis Pharmaceuticals Corporation**.**

Criteria Recommendations ***Approved Rejected***

71. Asciminib / Lactation _____ _____
Alert Message: There are no data on the presence of Scemblix (asciminib) or its metabolites in human milk, the effects on the breastfed child, or milk production. Because of the potential for serious adverse reactions in the breastfed child, advise women not to breastfeed during treatment with asciminib and for 1 week after the last dose.

Drugs/Diseases

Util A	Util B	Util C
Asciminib	Lactation	

Gender: Female
Age Range: 11 – 50 yoa

References:
IBM Micromedex DRUGDEX (electronic version). Truven Health Analytics, Greenwood Village, Colorado, USA. 2022. Scemblix Prescribing Information, October 2022, Novartis Pharmaceuticals Corporation**.**

72. Asciminib / Therapeutic Appropriateness _____ _____
Alert Message: Advise females of reproductive potential to use effective contraception during treatment with Scemblix (asciminib) and for at least 1 week after the last dose. Based on findings from animal studies and its mechanism of action, asciminib can cause fetal harm when administered to a pregnant woman. Verify the pregnancy status of females of reproductive potential prior to starting treatment with asciminib.

Drugs/Diseases

Util A	Util B	Util C (Negating)
Asciminib		Contraceptives

Gender: Female
Age Range: 11 – 50 yoa

References:
IBM Micromedex DRUGDEX (electronic version). Truven Health Analytics, Greenwood Village, Colorado, USA. 2022. Scemblix Prescribing Information, October 2022, Novartis Pharmaceuticals Corporation**.**

73. Asciminib / Non-adherence _____ _____
Alert Message: Based on refill history, your patient may be under-utilizing Scemblix (asciminib). Nonadherence to the prescribed dosing regimen may result in subtherapeutic effects, which may lead to decreased patient outcomes and additional healthcare costs.

Drugs/Diseases

Util A	Util B	Util C
Asciminib		

References:
Osterberg L, Blaschke T. Adherence to Medication. N Engl J Med 2005; 353:487- 497.
Ruddy K, Mayer E, Partridge A. Patient Adherence and Persistence With Oral Anticancer Treatment. CA Cancer J Clin 2009;59:56-66.
Barillet M, Prevost V, Joly F, Clarisse B. Oral Antineoplastic Agents: How do We Care About Adherence?. Br J Clin Pharmacol. 2015;80(6):1289–1302. doi:10.1111/bcp.12734
Greer JA, Amoyal N, Nisotel L, et al. Systemic Review of Adherence to Oral Antineoplastic Therapies. The Oncologist. 2016;21:354-376.

Criteria Recommendations ***Approved Rejected***

74. Futibatinib / Overuse _____ _____
Alert Message: Lytgobi (futibatinib) may be over-utilized. The recommended dosage of futibatinib is 20 mg (five 4 mg tablets) taken orally once daily until disease progression or unacceptable toxicity occurs.

Drugs/Diseases
Util A Util B Util C
Futibatinib

Max Dose: 20 mg/day

References:
Lytgobi Prescribing Information, September 2022, Taiho Oncology Inc.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

75. Futibatinib / Therapeutic Appropriateness _____ _____
Alert Message: The safety and effectiveness of Lytgobi (futibatinib) have not been established in pediatric patients.

Drugs/Diseases
Util A Util B Util C
Futibatinib

Age Range: 0 – 17 yoa

References:
Lytgobi Prescribing Information, September 2022, Taiho Oncology Inc.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

76. Futibatinib / Therapeutic Appropriateness _____ _____
Alert Message: Lytgobi (futibatinib) can cause retinal pigment epithelial detachment (RPED). Perform a comprehensive ophthalmological examination, including OCT of the macula, prior to initiation of therapy, every 2 months for the first 6 months, and every 3 months thereafter. For the onset of visual symptoms, refer patients for ophthalmologic evaluation urgently, with follow-up every 3 weeks until resolution or discontinuation of futibatinib. Withhold or reduce the dose of futibatinib as recommended in official prescribing information.

Drugs/Diseases
Util A Util B Util C
Futibatinib Retinal Detachment

References:
Lytgobi Prescribing Information, September 2022, Taiho Oncology Inc.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

77. Futibatinib / Hyperphosphatemia _____ _____

Alert Message: Lytgobi (futibatinib) can cause hyperphosphatemia leading to soft tissue mineralization, calcinosis, nonuremic calciphylaxis, and vascular calcification. Increases in phosphate levels are a pharmacodynamic effect of futibatinib. Monitor for hyperphosphatemia throughout treatment. Initiate a low phosphate diet and phosphate lowering therapy when serum phosphate level is >/= 5.5 mg/dL. For serum phosphate levels > 7 mg/dL, initiate or intensify phosphate lowering therapy and dose reduce, withhold, or permanently discontinue futibatinib based on the duration and severity of hyperphosphatemia.

Drugs/Diseases

Util A	Util B	Util C
Futibatinib	Hyperphosphatemia	

References:

Lytgobi Prescribing Information, September 2022, Taiho Oncology Inc.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

78. Futibatinib / Dual P-gp and CYP3A Inhibitors _____ _____

Alert Message: Avoid concomitant use of drugs that are dual P-gp and strong CYP3A inhibitors with Lytgobi (futibatinib). Concomitant use of drugs that are dual P-gp and strong CYP3A inhibitors with futibatinib may increase futibatinib exposure, which may increase the incidence and severity of adverse reactions.

Drugs/Diseases

Util A	Util B	Util C
Futibatinib	Cobicistat	
	Itraconazole	
	Ketoconazole	
	Ritonavir	

References:

Lytgobi Prescribing Information, September 2022, Taiho Oncology Inc.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

79. Futibatinib / Dual P-gp and CYP3A Inducers _____ _____

Alert Message: Avoid the concurrent use of dual P-gp and strong CYP3A inducers with Lytgobi (futibatinib). Concomitant use of drugs that are dual P-gp and strong CYP3A inducers may decrease futibatinib exposure, which may reduce the efficacy of futibatinib.

Drugs/Diseases

Util A	Util B	Util C
Futibatinib	Apalutamide	
	Carbamazepine	
	Phenobarbital	
	Phenytoin	
	Primidone	
	Rifampin	

References:

Lytgobi Prescribing Information, September 2022, Taiho Oncology Inc.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

Criteria Recommendations ***Approved Rejected***

80. Futibatinib / P-gp Substrates w/ NTI _____ _____

Alert Message: Lytgobi (futibatinib) is an inhibitor of P-gp. Consider more frequent monitoring for adverse reactions associated with concomitantly administered drugs that are sensitive substrates of P-gp and reduce the dose of these drugs per their prescribing Information. Futibatinib may increase exposure of drugs that are substrates of P-gp.

Conflict Code: DD - Drug/Drug Interaction
Drugs/Diseases

Util A	Util B	Util C
Futibatinib	Cyclosporine	
	Digoxin	
	Everolimus	
	Sirolimus	
	Tacrolimus	

References:

Lytgobi Prescribing Information, September 2022, Taiho Oncology Inc.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

81. Futibatinib / Pregnancy / Pregnancy Negating _____ _____

Alert Message: Based on findings in an animal study and its mechanism of action, Lytgobi (futibatinib) can cause fetal harm when administered to a pregnant woman. Oral administration of futibatinib to pregnant rats during the period of organogenesis caused fetal malformations, fetal growth retardation, and embryo-fetal death at maternal exposures lower than the human exposure at the clinical dose of 20 mg based on area under the curve (AUC). Advise pregnant women of the potential risk to the fetus.

Drugs/Diseases

Util A	Util B	Util C (Negate)
Futibatinib	Pregnancy	Abortion
		Delivery
		Miscarriage

Gender: Female
Age Range: 11 – 50 yoa

References:
Lytgobi Prescribing Information, September 2022, Taiho Oncology Inc.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

82. Futibatinib / Lactation _____ _____

Alert Message: There are no data on the presence of Lytgobi (futibatinib) or its metabolites in human milk or their effects on either the breastfed child or milk production. Because of the potential for serious adverse reactions from futibatinib in breastfed children, advise women not to breastfeed during treatment and for 1 week after the last dose.

Drugs/Diseases

Util A	Util B	Util C
Futibatinib	Lactation	

Gender: Female
Age Range: 11 – 50 yoa

References:
Lytgobi Prescribing Information, September 2022, Taiho Oncology Inc.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

83. Futibatinib / Therapeutic Appropriateness _____ _____
Alert Message: Advise female patients of reproductive potential to use effective contraception during treatment with Lytgobi (futibatinib) and for 1 week after the last dose of futibatinib. Based on findings in an animal study and its mechanism of action, futibatinib can cause fetal harm when administered to a pregnant woman.

Drugs/Diseases
Util A Util B Util C
Futibatinib

Gender: Female
Age Range: 11 – 50 yoa

References:
Lytgobi Prescribing Information, September 2022, Taiho Oncology Inc.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

84. Futibatinib / Therapeutic Appropriateness _____ _____
Alert Message: Advise male patients with female partners of reproductive potential to use effective contraception during treatment with Lytgobi (futibatinib) and for 1 week after the last dose of futibatinib.

Drugs/Diseases
Util A Util B Util C
Futibatinib

Gender: Male

References:
Lytgobi Prescribing Information, September 2022, Taiho Oncology Inc.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

85. Futibatinib / Non-adherence _____ _____
Alert Message: Based on refill history, your patient may be under-utilizing Lytgobi (futibatinib). Nonadherence to the prescribed dosing regimen may result in subtherapeutic effects, which may lead to decreased patient outcomes and additional healthcare costs.

Drugs/Diseases
Util A Util B Util C
Futibatinib

References:
Osterberg L, Blaschke T. Adherence to Medication. N Engl J Med. 2005;353:487-497.

Ruddy K, Mayer E, Partridge A. Patient Adherence and Persistence With Oral Anticancer Treatment. CA Cancer J Clin 2009;59:56-66.

Greer JA, Amoyal N, Nisotel L, et al. Systemic Review of Adherence to Oral Antineoplastic Therapies. The Oncologist. 2016;21:354-376.

Barillet M, Prevost V, Joly F, Clarisse B. Oral Antineoplastic Agents: How do We Care About Adherence? Br J Clin Pharmacol. 2015;80(6):1289-1302. doi:10.1111/bcp.1273

Recommendations ***Approved Rejected***

86. Olopatadine/Mometasone / Overuse _____ _____
Alert Message: Ryaltris (olopatadine/mometasone) may be over-utilized. The recommended dosage of olopatadine/mometasone is 2 sprays in each nostril twice daily. Hypercorticism and adrenal suppression may occur when nasal corticosteroids, including olopatadine/mometasone, are misused by taking higher-than-recommended dosages.

Drugs/Diseases

Util A	Util B	Util C
Olopatadine/Mometasone		

Max Dose: 8 sprays a day

References:
Clinical Pharmacology, 2023 Elsevier/Gold Standard.
Ryaltris Prescribing Information, Oct. 2022, Hikma Specialty USA Inc.

87. Olopatadine/Mometasone / Therapeutic Appropriateness _____ _____
Alert Message: The safety and effectiveness of Ryaltris (olopatadine/mometasone) have not been established in pediatric patients less than 12 years of age, and olopatadine/mometasone is not indicated for use in this population. Nasal corticosteroids, including mometasone (a component in the combination product), may cause a reduction in growth velocity when administered to pediatric patients. Routinely monitor the growth of pediatric patients receiving olopatadine/mometasone nasal spray.

Drugs/Diseases

Util A	Util B	Util C
Olopatadine/Mometasone		

Age Range: 0 - 11 yoa

References:
Clinical Pharmacology, 2023 Elsevier/Gold Standard.
Ryaltris Prescribing Information, Oct. 2022, Hikma Specialty USA Inc.

88. Olopatadine/Mometasone / Therapeutic Appropriateness _____ _____
Alert Message: The use of nasal and inhaled corticosteroids, including Ryaltris (olopatadine/mometasone), can result in the development of glaucoma and/or cataracts. Therefore, close monitoring is warranted in patients with a change in vision or with a history of increased intraocular pressure, glaucoma, and/or cataracts.

Drugs/Diseases

Util A	Util B	Util C
Olopatadine/Mometasone	Cataracts Glaucoma Visual Disturbances	

References:
Clinical Pharmacology, 2023 Elsevier/Gold Standard.
Ryaltris Prescribing Information, Oct. 2022, Hikma Specialty USA Inc.

Criteria Recommendations ***Approved Rejected***

89. Olopatadine/Mometasone / CNS Depressants _____ _____

Alert Message: Concurrent use of Ryaltris (olopatadine/mometasone) with alcohol or other central nervous system depressants should be avoided because somnolence and impairment of central nervous system performance may occur. The olopatadine component of the combination product can cause CNS depression.

Drugs/Diseases

Util A	Util B	Util C
Olopatadine/Mometasone	CNS Depressants	

References:
Clinical Pharmacology, 2023 Elsevier/Gold Standard.
Ryaltris Prescribing Information, Oct. 2022, Hikma Specialty USA Inc.

90. Olopatadine/Mometasone / Strong CYP3A4 Inhibitors _____ _____

Alert Message: Caution should be exercised when considering the coadministration of Ryaltris (olopatadine/mometasone) with strong CYP3A4 inhibitors. Mometasone furoate, a component of the combination product, is primarily and extensively metabolized by CYP3A4 to multiple metabolites. Concomitant administration with a CYP3A4 inhibitor may inhibit the metabolism of and increase the plasma concentration of mometasone furoate and potentially increase the risk for adverse reactions.

Drugs/Diseases

Util A	Util B	Util C
Olopatadine/Mometasone	Clarithromycin	Nelfinavir
	Cobicistat	Posaconazole
	Indinavir	Ritonavir
	Itraconazole	Saquinavir
	Ketoconazole	Voriconazole
	Nefazodone	

References:
Clinical Pharmacology, 2023 Elsevier/Gold Standard.
Ryaltris Prescribing Information, Oct. 2022, Hikma Specialty USA Inc.
FDA: Drug Development and Drug Interactions: Tables of Substrates, Inhibitors and Inducers. Available at:
http://www.fda.gov/Drugs/DevelopmentApprovalProcess/DevelopmentResources/DrugInteractionalLabeling/ucm093664.htm

91. Olopatadine/Mometasone / Therapeutic Appropriateness _____ _____

Alert Message: Nasal corticosteroids, including Ryaltris (olopatadine/mometasone), may cause a reduction in growth velocity when administered to pediatric patients. The growth of pediatric patients receiving nasal corticosteroids should be monitored routinely (e.g., via stadiometry). The safety and effectiveness of olopatadine/mometasone have not been established in pediatric patients less than 12 years of age, and olopatadine/mometasone is not indicated for use in this population. The potential growth effects of prolonged treatment should be weighed against the clinical benefits obtained and the risks/benefits of noncorticosteroid treatment alternatives.

Drugs/Diseases

Util A	Util B	Util C
Olopatadine/Mometasone		

Age Range: 12 - 17 yoa

References:
Clinical Pharmacology, 2023 Elsevier/Gold Standard.
Ryaltris Prescribing Information, Oct. 2022, Hikma Specialty USA Inc.

92. Olopatadine/Mometasone / Pregnant / Pregnancy Negating _____ _____

Alert Message: Ryaltris (olopatadine/mometasone) should be used with caution during pregnancy. There are no available data on Ryaltris (olopatadine/mometasone) nasal spray in pregnant women to evaluate for a drug-associated risk of major birth defects, miscarriage, or other adverse maternal or fetal outcomes. In animal reproductive studies, fetal abnormalities have been reported with oral olopatadine hydrochloride and mometasone furoate.

Drugs/Diseases

Util A	Util B	Util C (Negating)
Olopatadine/Mometasone	Pregnancy	Abortion
		Delivery
		Miscarriage

Gender: Female
Age Range: 12 - 999 yoa

References:
Clinical Pharmacology, 2023 Elsevier/Gold Standard.
Ryaltris Prescribing Information, Oct. 2022, Hikma Specialty USA Inc.

93. Olopatadine/Mometasone / Lactation _____ _____

Alert Message: There are no available data on the presence of Ryaltris (olopatadine/mometasone) in human milk, the effects on the breastfed child, or the effects on milk production. It is not known whether topical nasal administration could result in sufficient systemic absorption to produce detectable quantities in human breast milk. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for olopatadine/mometasone and any potential adverse effects on the breastfed infant from olopatadine/mometasone or from the underlying maternal condition.

Drugs/Diseases

Util A	Util B	Util C
Olopatadine/Mometasone	Lactation	

Gender: Female
Age Range: 12 - 999 yoa

References:
Clinical Pharmacology, 2023 Elsevier/Gold Standard.
Ryaltris Prescribing Information, Oct. 2022, Hikma Specialty USA Inc.

94. Zonisamide / Overuse _____ _____

Alert Message: Zonisamide may be over-utilized. The recommended maximum dosage is 600 mg daily.

Drugs/Diseases

Util A	Util B	Util C
Zonisamide		

Max Dose: 600 mg/day

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

Criteria Recommendations ***Approved Rejected***

95. Zonisamide / Therapeutic Appropriateness _____ _____
Alert Message: The safety and effectiveness of zonisamide in pediatric patients below the age of 16 have not been established.

Drugs/Diseases

Util A	Util B	Util C
Zonisamide		

Age Range: 0 - 15 yoa

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

96. Zonisamide / Myopia & Secondary Glaucoma _____ _____
Alert Message: Acute myopia and secondary angle closure glaucoma have been reported in patients receiving zonisamide. Elevated intraocular pressure can lead to serious sequelae, including permanent vision loss if left untreated. The primary treatment to reverse symptoms is the discontinuation of zonisamide as rapidly as possible, according to the judgment of the treating physician. Other therapeutic measures, in conjunction with the discontinuation of zonisamide, may be helpful. Myopia and secondary angle closure glaucoma usually resolve or improve after discontinuation of zonisamide.

Drugs/Diseases

Util A	Util B	Util C
Zonisamide	Myopia	
	Ocular Pain	
	Secondary Glaucoma	

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

97. Zonisamide / Carbonic Anhydrase Inhibitors _____ _____
Alert Message: Concomitant use of zonisamide, a carbonic anhydrase inhibitor, with any other carbonic anhydrase inhibitor, may increase the severity of metabolic acidosis and may also increase the risk of kidney stone formation. Therefore, if zonisamide is given concomitantly with another carbonic anhydrase inhibitor, monitor the patient for the appearance or worsening of metabolic acidosis.

Drugs/Diseases

Util A	Util B	Util C
Zonisamide	Acetazolamide	
	Dichlorphenamide	
	Methazolamide	

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

Criteria Recommendations ***Approved Rejected***

98. Zonisamide / CYP3A4 Inducers _____ _____
Alert Message: Concomitant use of zonisamide with a potent CYP3A4 inducer can result in decreased systemic exposure and loss of zonisamide efficacy. Zonisamide is metabolized by hepatic cytochrome P450 enzyme CYP3A4, and concomitant use with a potent inducer can increase the metabolism of zonisamide.

Drugs/Diseases

Util A	Util B	Util C
Zonisamide	Apalutamide	
	Carbamazepine	
	Enzalutamide	
	Mitotane	
	Phenobarbital	
	Phenytoin	
	Primidone	
	Rifampin	

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

99. Zonisamide Suspension / Pregnancy / Pregnancy Negating _____ _____
Alert Message: Based on animal data, zonisamide can cause fetal harm when administered to a pregnant woman. Zonisamide should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Drugs/Diseases

Util A	Util B	Util C (Negate)
Zonisamide	Pregnancy	Abortion
		Delivery
		Miscarriage

Gender: Female
Age Range: 11 - 50 yoa

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

100. Zonisamide / Lactation _____ _____
Alert Message: Zonisamide is readily transferred to human milk. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for zonisamide and any potential adverse effects on the breastfed infant zonisamide or the underlying maternal condition. Because zonisamide has been associated with metabolic acidosis in adult and pediatric patients and hyperthermia in pediatric patients, infants exposed to zonisamide during breastfeeding should be monitored for poor feeding, weight loss, excess sedation, decreased muscle tone, and elevated temperature.

Drugs/Diseases

Util A	Util B	Util C
Zonisamide	Lactation	

Gender: Female
Age Range: 16 - 50 yoa

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

Criteria Recommendations ***Approved Rejected***

101. Zonisamide / Contraceptives _____ _____

Alert Message: Advise females of reproductive potential to use effective contraception during treatment with zonisamide and for one month after discontinuation. Based on animal data, zonisamide can cause fetal harm when administered to a pregnant woman.

Drugs/Diseases

Util A	Util B	Util C (Negating)
Zonisamide		Contraceptives

Gender: Female
Age Range: 16 - 50 yoa

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.

102. Dextroamphetamine Transdermal / Overuse _____ _____

Alert Message: Xelstrym (dextroamphetamine transdermal) may be over-utilized. The maximum recommended dose of transdermal dextroamphetamine is 18 mg/9 hours.

Drugs/Diseases

Util A	Util B	Util C (Negating)
Dextroamphetamine Transdermal		CKD 4
		CKD 5
		ESRD

Max Dose: 18.9 mg/9 hours

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Xelstrym Prescribing Information, March 2022, Noven Therapeutics, LLC.

103. Dextroamphetamine Transdermal / Overuse (CKD4 & CKD 5) _____ _____

Alert Message: Xelstrym (dextroamphetamine transdermal) may be over-utilized. The maximum recommended dose of transdermal dextroamphetamine in patients with severe renal impairment (GFR 15 to < 30 mL/min) is 13.5 mg/9 hours.

Drugs/Diseases

Util A	Util B	Util C (Include)
Dextroamphetamine Transdermal		CKD 4 and 5

Max Dose: 13.5 mg/9 hours

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Xelstrym Prescribing Information, March 2022, Noven Therapeutics, LLC.

104. Dextroamphetamine Transdermal / Overuse - ESRD _____ _____

Alert Message: Xelstrym (dextroamphetamine transdermal) may be over-utilized. The maximum recommended dose of transdermal dextroamphetamine in patients with end-stage renal disease (GFR < 15 mL/min/1.73 m2) is 9 mg/9 hours.

Drugs/Diseases

Util A	Util B	Util C (Include)
Dextroamphetamine Transdermal		ESRD

Max Dose: 9 mg/9 hours

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Xelstrym Prescribing Information, March 2022, Noven Therapeutics, LLC.

105. Dextroamphetamine Transdermal / Therapeutic Appropriateness _____ _____

Alert Message: The safety and effectiveness of Xelstrym (dextroamphetamine transdermal) have not been established in pediatric patients below the age of 6 years.

Drugs/Diseases

Util A	Util B	Util C
Dextroamphetamine Transdermal		

Age Range: 0 - 5 yoa

References:
Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Xelstrym Prescribing Information, March 2022, Noven Therapeutics, LLC.

106. Omalizumab / Therapeutic Appropriateness (Age) _____ _____

Alert Message: The safety and efficacy of Xolair (omalizumab) in pediatric patients below 18 years of age with nasal polys have not been established.

Drugs/Diseases

Util A	Util B	Util C (Negating)
Omalizumab	Nasal Polyps	Asthma
		Urticaria

Age Range: 0 - 18 yoa

References:

Clinical Pharmacology, 2022 Elsevier/Gold Standard.
Facts & Comparisons, 2022 Updates, Wolters Kluwer Health.