

Antiemetics for Oncology

Policy Number: 2021D0093A
Effective Date: July 1, 2021

[➔ Instructions for Use](#)

Table of Contents	Page
Coverage Rationale	1
Definitions	3
Applicable Codes	3
Background	4
Benefit Considerations	5
Clinical Evidence	5
U.S. Food and Drug Administration	7
References	8
Policy History/Revision Information	9
Instructions for Use	9

Community Plan Policy
• Antiemetics for Oncology

Coverage Rationale

[➔ See Benefit Considerations](#)

This policy refers to the following products used as antiemetics for oncology use:

- Akynzeo® (palonosetron/fosnetupitant) injection
- Akynzeo® (palonosetron/netupitant) capsule
- Aloxi® (palonosetron) injection
- Cinvanti® (aprepitant) injectable emulsion
- Emend® (fosaprepitant) injection, capsule
- Sustol® (granisetron extended release) injection
- Kytril® (granisetron) injection, tablets
- Varubi® (rolapitant) tablet
- Zofran® (ondansetron) injection, tablets

Inclusion of oral antiemetics in this policy and application of the preferred product criteria to them is limited to when these are administered prior to the chemotherapy infusion and not when they are self-administered by the patient outside of the infusion.

Medical Necessity Plans

Preferred Product	Non-Preferred Product
Neurokinin 1 Receptor Antagonist (NK1 RA)	
Emend injection	Cinvanti injectable emulsion
Emend capsules	Varubi tablets
5-Hydroxytryptamine Receptor Antagonist (5HT3 RA)	
Kytril injection	Aloxi injection
Kytril tablets	Sustol injection
Zofran injection	
Zofran tablets	

Preferred Product	Non-Preferred Product
NK1 RA/5HT3 RA Combination	
	Akynzeo injection
	Akynzeo capsule

Coverage for antiemetics will be provided contingent on the coverage criteria in the [Diagnosis-Specific Criteria](#) section.

Preferred Product Criteria

Treatment with non-preferred NK1 RA, 5HT3 RA, or NK1 RA/5HT3 RA combination product is medically necessary for the indications specified in the policy when one of the following is met:

- Both of the following:
 - History of a trial of adequate dose and duration of preferred NK1 RA or 5HT3 RA product, resulting in minimal clinical response; and
 - Physician attests that, in their clinical opinion, the clinical response would be expected to be superior with non-preferred NK1 RA, 5HT3 RA, or NK1 RA/5HT3 RA combination product, than experienced with preferred NK1 RA or 5HT3 RA

or

- Both of the following:
 - History of intolerance, contraindication, or adverse event to preferred NK1 RA or 5HT3 RA; and
 - Physician attests that, in their clinical opinion, the same intolerance, contraindication, or adverse event would not be expected to occur with non-preferred NK1 RA, 5HT3 RA, or NK1 RA/5HT3 RA combination product

Non-Medical Necessity Plans

Any antiemetic product is to be approved contingent on the coverage criteria in the [Diagnosis-Specific Criteria](#) section.

Diagnosis-Specific Criteria

For the coverage criteria below, in absence of specified drug products, the term “antiemetics” will be used in this policy where the coverage criteria apply to all products listed above.

Antiemetics are proven and medically necessary for the following indications:

- [NK1 RA](#) (Emend, Cinvanti, Varubi) may be indicated when one of following are present:
 - Both of the following:
 - Prevention of chemotherapy-induced nausea and vomiting due to [high emetic risk](#) parenteral anticancer agents¹⁰; and
 - In combination with a 5HT3 RA

or

 - All of the following:
 - Prevention of chemotherapy-induced nausea and vomiting due to [moderate emetic risk](#) parenteral anticancer agents; and
 - In combination with a 5HT3 RA; and
 - One of the risk factors for anticancer-agent induced nausea/vomiting
 - Younger age (< 55 years)
 - Female sex
 - Previous history of chemotherapy induced nausea or vomiting
 - Little or no previous alcohol use
 - History of motion sickness or morning sickness during pregnancy
 - High anxiety
- [5HT3 RA](#) (Aloxi, Kytril, Sustol, Zofran) may be indicated when one of the following are present:
 - Both of the following:

- Prevention of chemotherapy-induced nausea and vomiting due to [high emetic risk](#) parenteral anticancer agents¹²; and
 - In combination with a NK1 RA
- or**
- Prevention of chemotherapy-induced nausea and vomiting due to [moderate emetic risk](#) parenteral anticancer agents¹¹; **or**
 - All of the following:
 - Prevention of chemotherapy-induced nausea and vomiting due to [moderate emetic risk](#) parenteral anticancer agents¹¹; and
 - In combination with a NK1 RA; and
 - One of the risk factors for anticancer-agent induced nausea/vomiting
 - Younger age (< 55 years)
 - Female sex
 - Previous history of chemotherapy induced nausea or vomiting
 - Little or no previous alcohol use
 - History of motion sickness or morning sickness during pregnancy
 - High anxiety
- or**
- Treatment of breakthrough nausea and/or vomiting due to anticancer agent(s)
- [NK1 RA/5HT3 RA Combination](#) (Akynzeo) may be indicated when one of the following are present:
 - All of the following:
 - Prevention of chemotherapy-induced nausea and vomiting due to [moderate emetic risk](#) parenteral anticancer agents¹¹; and
 - One of the risk factors for anticancer-agent induced nausea/vomiting
 - Younger age (< 55 years)
 - Female sex
 - Previous history of chemotherapy induced nausea or vomiting
 - Little or no previous alcohol use
 - History of motion sickness or morning sickness during pregnancy
 - High anxiety
- or**
- Prevention of chemotherapy-induced nausea and vomiting due to [high emetic risk](#) parenteral anticancer agents¹²

Definitions

Acute Emesis: Nausea and/or vomiting that occurs within a few minutes to several hours after administration of certain anticancer agents and commonly resolves within the first 24 hours.

Delayed Emesis: Nausea and/or vomiting that occurs more than 24 hours after anticancer agents.

High Emetic Risk: More than 90% of patients experience acute emesis.

Low Emetic Risk: 10%-30% of patients experience acute emesis.

Minimal Emetic Risk: Fewer than 10% of patients experience acute emesis.

Moderate Emetic Risk: More than 30% to 90% of patients experience acute emesis.

Applicable Codes

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this policy does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by the member specific benefit plan document and applicable laws that may

require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other Policies and Guidelines may apply.

HCPCS Code	Description
J0185	Injection, aprepitant, 1 mg
J1453	Injection, fosaprepitant, 1 mg
J1454	Injection, fosnetupitant 235 mg and palonosetron 0.25 mg
J1626	Injection, granisetron hydrochloride, 100 mcg
J1627	Injection, granisetron, extended-release, 0.1 mg
J2405	Injection, ondansetron hydrochloride, per 1 mg
J2469	Injection, palonosetron HCl, 25 mcg
J8501	Aprepitant, oral, 5 mg
J8655	Netupitant 300 mg and palonosetron 0.5 mg, oral
J8670	Rolapitant, oral, 1 mg
Q0162	Ondansetron 1 mg, oral, FDA-approved prescription anti-emetic, for use as a complete therapeutic substitute for an IV anti-emetic at the time of chemotherapy treatment, not to exceed a 48-hour dosage regimen
Q0166	Granisetron hydrochloride, 1 mg oral, FDA-approved prescription anti-emetic, for use as a complete therapeutic substitute for an IV anti-emetic at the time of chemotherapy treatment, not to exceed a 24-hour dosage regimen

Diagnosis Code	Description
R11.0	Nausea
R11.10	Vomiting, unspecified
R11.2	Nausea with vomiting, unspecified
T45.1X5A	Adverse effect of antineoplastic and immunosuppressive drugs, initial encounter
T45.1X5D	Adverse effect of antineoplastic and immunosuppressive drugs, subsequent encounter
T45.1X5S	Adverse effect of antineoplastic and immunosuppressive drugs, sequela
Z51.11	Encounter for antineoplastic chemotherapy

Background

Anticancer related emesis can significantly affect patient's quality of life and lead to poor compliance of therapy.^{1,2} The incidence and severity of nausea and/or vomiting in patients receiving anticancer agents and/or radiation therapy (RT) can be affected by many factors, including: 1) the specific therapeutic agents used; 2) dosage of the agents; 3) schedule and the route of administration of the agents; 4) target of the RT (eg, whole body, upper abdomen); 5) individual patient variability (eg, younger age, female sex, prior anticancer agents, history of alcohol use, morning sickness, motion sickness, anxiety).^{3,4}

Neurokinin 1 Receptor Antagonist (NK1 RA)

Aprepitant is a highly selective antagonist of neurokinin 1 (NK1) receptors.^{6,8,9} By blocking the activity of substance P at neurokinin 1 receptors, aprepitant is thought to prevent the onset of nausea and vomiting. Fosaprepitant is a prodrug of aprepitant that is rapidly converted to aprepitant.^{5,6,7,8}

5-Hydroxytryptamine Receptor Antagonist (5HT3 RA)

Palonosetron, granisetron, and ondansetron are 5-hydroxytryptamine (5-HT3) receptor antagonist. By blocking the activity of serotonin at 5-HT3 receptors in the central nervous system and gastrointestinal tract, these agents are thought to prevent the onset of nausea and vomiting.^{14,15,16,17,18,19,20}

NK1 RA and 5HT3 RA Combination

Akynzeo is a combination product of a 5-HT3 receptor antagonist (palonosetron) and an NK1 receptor antagonist (netupitant or fosnetupitant).^{21,22,23}

Benefit Considerations

Some Certificates of Coverage allow for coverage of experimental/investigational/unproven treatments for life-threatening illnesses when certain conditions are met. The member specific benefit plan document must be consulted to make coverage decisions for this service. Some states mandate benefit coverage for off-label use of medications for some diagnoses or under some circumstances when certain conditions are met. Where such mandates apply, they supersede language in the benefit document or in the medical or drug policy. Benefit coverage for an otherwise unproven service for the treatment of serious rare diseases may occur when certain conditions are met. See the Policy and Procedure addressing the treatment of serious rare diseases.

Clinical Evidence

National Comprehensive Cancer Network²⁵

The National Comprehensive Cancer Network (NCCN) publishes clinical practice guidelines for Oncology (NCCN Guidelines®) specific to antiemesis related to cancer treatments.²⁵ National Comprehensive Cancer Network (NCCN) provides recommendations for antiemetic therapy regimens based on the emetogenic risk of the chemotherapy and if it is intravenous or oral. The emetogenic risk of intravenous anticancer agents is based on the frequency of emesis.

High emetic risk agents have a greater than 90% frequency of emesis. Moderate emetic risk has a 30-90% frequency of emesis while low emetic risk has 10 – 30% frequency of emesis, and minimal emetic risk have less than 10% frequency of emesis. For oral antineoplastic agents, the levels are divided into those with moderate to high emetic risk (greater than or equal to 30% frequency of emesis) and minimal to low emetic risk (less than 30% frequency of emesis). (NCCN, 2020).

For high emetic risk parenteral (IV) anticancer agents, NCCN recommends several options for acute and delayed emesis prevention without a preference given to one regimen over another. Regimens recommended include either aprepitant oral or IV, fosaprepitant IV, or rolapitant oral in combination with a 5-HT3 receptor antagonist (palonosetron IV; granisetron subcutaneous [SQ], oral, IV or transdermal; or ondansetron oral or IV) with dexamethasone oral or IV. Other options include netupitant/palonosetron oral or fosnetupitant/palonosetron IV in combination with dexamethasone; olanzapine oral with palonosetron IV and dexamethasone oral or IV; or aprepitant oral or IV, fosaprepitant IV, or rolapitant oral in combination with a 5-HT3 receptor antagonist, dexamethasone oral or IV, and olanzapine. (NCCN, 2019) For moderate emetic risk parenteral anticancer agents, several options are recommended without preference for acute and delayed emesis prevention. One option recommends a 5-HT3 receptor antagonist in combination with dexamethasone oral or IV. NCCN notes a preference for palonosetron IV or granisetron extended-release injection when an NK1 antagonist is not used in combination with 5-HT3 antagonist. Other options include use of aprepitant oral or IV, fosaprepitant IV, rolapitant oral in combination with a 5-HT3 receptor antagonist and dexamethasone oral or IV; netupitant/palonosetron oral or fosnetupitant/palonosetron IV in combination with dexamethasone; or olanzapine oral with palonosetron IV and dexamethasone oral or IV. (NCCN, 2020) For low emetic risk parenteral anticancer agents, NCCN recommends dexamethasone oral or IV; metoclopramide oral or IV; prochlorperazine oral or IV; or an oral 5-HT3 receptor antagonist. Routine prophylaxis is not recommended for minimal emetic risk parenteral anticancer agents. (NCCN, 2020) For high to moderate emetic risk with oral anticancer agents, NCCN recommends a 5-HT3 receptor antagonist (dolasetron oral, granisetron oral or transdermal, or ondansetron oral). For low to minimal risk with oral anticancer agents, as needed treatment is recommended initially with recommendations to use either metoclopramide oral as needed, prochlorperazine oral as needed, or an oral 5-HT3 antagonist as needed provided when nausea/vomiting is experienced. (NCCN, 2020) If breakthrough chemotherapy-induced nausea and vomiting occurs, recommendations for subsequent chemotherapy cycles include changing the antiemetic regimen to a higher level for primary treatment. (NCCN, 2020)

NCCN listed high emetic risk regimens (> 90% frequency of emesis)

- AC combination defined as any chemotherapy regimen that contains anthracycline and cyclophosphamide
- Carboplatin AUC ≥ 4

- Carmustine > 250 mg/m²
- Cisplatin
- Cyclophosphamide > 1500 mg/m²
- Dacarbazine
- Doxorubicin ≥ 60 mg/m²
- Epirubicin > 90 mg/m²
- Ifosfamide ≥ 2 g/m² per dose
- Mechlorethamine
- Streptozocin

NCCN listed moderate emetic risk regimens (> 30%-90% frequency of emesis)

- Aldesleukin > 12 – 15 million IU/m²
- Amifostine > 300 mg/m²
- Azacitidine
- Bendamustine
- Busulfan
- Carboplatin AUC < 4
- Carmustine ≤ 250 mg/m²
- Clofarabine
- Cyclophosphamide ≤ 1500 mg/m²
- Cytarabine > 200 mg/m²
- Dactinomycin
- Daunorubicin
- Dual-drug liposomal encapsulation of cytarabine and daunorubicin
- Dinutiximab
- Doxorubicin < 60 mg/m²
- Enfortumab vedotin-ejfv
- Epirubicin ≤ 90 mg/m²
- Fam-trastuzumab deruxtecan
- Idarubicin
- Ifosfamide < 2 g/m² per dose
- Interferon alfa ≥ 10 million IU/m²
- Irinotecan
- Irinotecan (liposomal)
- Melphalan
- Methotrexate ≥ 250 mg/m²
- Oxaliplatin
- Temozolomide
- Trabectedin

American Society of Clinical Oncology²⁸

The American Society of Clinical Oncology (ASCO) has published guidelines for antiemetics in oncology after conducting a systematic review by an expert pane of forty-one publications (35 randomized control trials and 6 meta-analysis). The guideline addresses the prevention and management and nausea and vomiting due to antineoplastic agents and/or radiation therapy in patients with cancer.

For high emetic risk antineoplastic agents, ASCO guidelines recommend four-drug combination (an NK1 receptor antagonist, a 5-HT3 receptor antagonist, dexamethasone, and olanzapine) with dexamethasone and olanzapine to be continued on days 2-4; high quality of evidence and strong strength of recommendations. In addition, patients who are treated with anthracycline and cyclophosphamide combination should be offered four-drug antiemetic combination (an NK1 receptor antagonist, a 5-HT3 receptor antagonist, dexamethasone, and olanzapine) with olanzapine continued on days 2-4; high quality of evidence and strong strength of recommendations.

For moderate emetic risk antineoplastic agents, especially those treated with carboplatin area under the curve (AUC) ≥ 4 mg/ml per minute, ASCO guidelines recommend a 3-drug combination (an NK1 receptor antagonist, a 5-HT3 receptor antagonist, and dexamethasone). Those treated with moderate emetic risk antineoplastic agents excluding carboplatin AUC ≥ 4 mg/ml per minute, ASCO guidelines recommend 2-drug combination (a 5-HT3 receptor antagonist and dexamethasone); high quality of evidence and strong strength of recommendations.

For low emetic risk antineoplastic agents, ASCO guidelines recommend single agents (a 5-HT3 receptor antagonist or dexamethasone); low quality of evidence and moderate strength of recommendations.

For minimal emetic risk antineoplastic agents, ASCO guidelines recommend no routine antiemetic prophylaxis; low quality of evidence and moderate strength of recommendation.

For breakthrough nausea and vomiting, ASCO guidelines recommend evaluating emetic risk, disease status, concurrent illnesses, and medications, and ascertain that the best regimen is being administered for the emetic risk. Those who experience nausea or vomiting despite optimal prophylaxis, and who did not receive olanzapine prophylactically, should be offered olanzapine in addition to continuing the standard antiemetic regimen; intermediate quality of evidence and moderate strength of recommendation. Additionally, those who experience nausea or vomiting despite optimal prophylaxis, and who have already received olanzapine, may be offered a drug of a different class – for example, an NK1 receptor antagonist, lorazepam or alprazolam, a dopamine receptor antagonist, dronabinol, or nabilone – in addition to continuing the standard antiemetic regimen; intermediate quality of evidence for dronabinol and nabilone and low otherwise and moderate strength of recommendation. (ASCO, 2017)

U.S. Food and Drug Administration (FDA)

This section is to be used for informational purposes only. FDA approval alone is not a basis for coverage.

Akynzeo® (palonosetron/netupitant) capsule is a combination of selective 5-HT3 receptor antagonist and substance P/neurokinin 1 receptor antagonist indicated in combination with dexamethasone in adults for the prevention of acute and delayed nausea and vomiting associated with initial and repeat courses of cancer chemotherapy, including, but not limited to, highly emetogenic chemotherapy.

Akynzeo® (palonosetron/fosnetupitant) injection is a combination of selective 5-HT3 receptor antagonist and substance P/neurokinin 1 receptor antagonist indicated in combination with dexamethasone in adults for the prevention of acute and delayed nausea and vomiting associated with initial and repeat courses of highly emetogenic cancer chemotherapy. Akynzeo injection has not been studied for the prevention of nausea and vomiting associated with anthracycline plus cyclophosphamide chemotherapy.

Cinvanti® (aprepitant) emulsion is a substance P/neurokinin-1 (NK 1) receptor antagonist, indicated in adults, in combination with other antiemetic agents, for the prevention of acute and delayed nausea and vomiting associated with initial and repeat courses of highly emetogenic cancer chemotherapy (HEC) including high dose cisplatin and nausea and vomiting associated with initial and repeat courses of moderately emetogenic cancer chemotherapy (MEC). Cinvanti has not been studied for treatment of established nausea and vomiting.

Emend® (fosaprepitant) injection is a substance P/neurokinin-1 (NK1) receptor antagonist, indicated in adults and pediatric patients 6 months of age and older, in combination with other antiemetic agents, for the prevention of acute and delayed nausea and vomiting associated with initial and repeat courses of highly emetogenic cancer chemotherapy (HEC) including high-dose cisplatin and delayed nausea and vomiting associated with initial and repeat courses of moderately emetogenic cancer chemotherapy (MEC). Emend has not been studied for treatment of established nausea and vomiting.

Emend® (aprepitant) capsules is a substance P/ neurokinin-1 (NK1) receptor antagonist, indicated in combination with other antiemetic agents, in patients 12 years of age and older for prevention of acute and delayed nausea and vomiting associated with initial and repeat courses of highly emetogenic cancer chemotherapy (HEC) including high-dose cisplatin nausea and vomiting associated with initial and repeat courses of moderately emetogenic cancer chemotherapy (MEC).

Varubi® (rolapitant) tablet is a substance P/neurokinin 1 (NK1) receptor antagonist indicated in combination with other antiemetic agents in adults for the prevention of delayed nausea and vomiting associated with initial and repeat courses of emetogenic cancer chemotherapy, including, but not limited to, highly emetogenic chemotherapy

Aloxi® (palonosetron) injection is a serotonin subtype 3 (5-HT₃) receptor antagonist indicated in adults for moderately emetogenic cancer chemotherapy – prevention of acute and delayed nausea and vomiting associated with initial and repeat courses, highly emetogenic cancer chemotherapy – prevention of acute nausea and vomiting associated with initial and repeat courses, and prevention of postoperative nausea and vomiting (PONV) for up to 24 hours following surgery. Efficacy beyond 24 hours has not been demonstrated. Aloxi is also indicated in pediatric patients aged 1 month to less than 17 years for prevention of acute nausea and vomiting associated with initial and repeat courses of emetogenic cancer chemotherapy, including highly emetogenic cancer chemotherapy.

Aloxi® (palonosetron) capsules is a serotonin subtype 3 (5-HT₃) receptor antagonist, indicated for moderately emetogenic cancer chemotherapy – prevention of acute nausea and vomiting associated with initial and repeat courses.

Sustol® (granisetron extended release) injection is a serotonin-3 (5-HT₃) receptor antagonist indicated in combination with other antiemetics in adults for the prevention of acute and delayed nausea and vomiting associated with initial and repeat courses of moderately emetogenic chemotherapy (MEC) or anthracycline and cyclophosphamide (AC) combination chemotherapy regimens.

Kytril® (granisetron) injection is a serotonin-3 (5-HT₃) receptor antagonist indicated for the prevention of nausea and/or vomiting associated with initial and repeat courses of emetogenic cancer therapy, including high-dose cisplatin and for the prevention and treatment of postoperative nausea and vomiting in adults.

Zofran® (ondansetron) oral solution, tablets, and orally disintegrating tablets are 5-HT₃ receptor antagonist indicated for the prevention of nausea and vomiting associated with highly emetogenic cancer chemotherapy, including cisplatin greater than or equal to 50 mg/m², nausea and vomiting associated with initial and repeat courses of moderately emetogenic cancer chemotherapy, nausea and vomiting associated with radiotherapy in patients receiving either total body irradiation, single high-dose fraction to the abdomen, or daily fractions to the abdomen, or postoperative nausea and/or vomiting

Zofran® (ondansetron) injection is a 5-HT₃ receptor antagonist indicated for prevention of nausea and vomiting associated with initial and repeat courses of emetogenic cancer chemotherapy and prevention of postoperative nausea and/or vomiting.

References

1. Navari RM, Aapro M. Antiemetic Prophylaxis for Chemotherapy-Induced Nausea and Vomiting. *N Engl J Med*. 2016;374(14):1356-1367. doi:10.1056/NEJMra1515442.
2. McDonagh M, Peterson K, Thakurta S. Consideration of Evidence on Antiemetic Drugs for Nausea and Vomiting Associated with Chemotherapy or Radiation Therapy in Adults. Rockville (MD): Agency for Healthcare Research and Quality (US); 2010.
3. Herrstedt J. Antiemetics: an update and the MASCC guidelines applied in clinical practice. *Nat Clin Pract Oncol*. 2008;5(1):32-43. doi:10.1038/nponc1021.
4. Hesketh PJ, Grunberg SM, Herrstedt J, et al. Combined data from two phase III trials of the NK1 antagonist aprepitant plus a 5HT₃ antagonist and a corticosteroid for prevention of chemotherapy-induced nausea and vomiting: effect of gender on treatment response. *Support Care Cancer*. 2006;14(4):354-360. doi:10.1007/s00520-005-0914-4.
5. Emend (fosaprepitant) for injection. Physician Prescribing Information [Internet] Merck Sharp & Dohme Corp. 2019 Jan Accessed at: <https://www.merck.com/product/oncology/home.html>. Created 2008. Accessed June 24, 2020.
6. Rapoport B, Smit T. Clinical pharmacology of neurokinin-1 receptor antagonists for the treatment of nausea and vomiting associated with chemotherapy. *Expert Opin on Drug Safety* 2017;16(6):697-710. DOI: 10.1080/14740338.2017.1325868.
7. Candelario N, Lu ML. Fosaprepitant dimeglumine for the management of chemotherapy-induced nausea and vomiting: patient selection and perspectives. *Cancer Management and Research* 2016;8:77-82. DOI: 10.2147/CMAR.S93620.

8. Garnock-Jones KP. Fosaprepitant dimeglumine: a review in the prevention of nausea and vomiting associated with chemotherapy. *Drugs* 2016;76(14):1365-72. DOI: 10.1007/s40265-016-0627-7.
9. Emend (aprepitant) capsules. Physician Prescribing Information [Internet] Merck Sharp & Dohme Corp. 2019 Sep Accessed at: <https://www.merck.com/product/oncology/home.html>. Accessed June 24, 2020.
10. Aapro M, Carides A, Rapoport BL, Schmoll HJ, Zhang L, Warr D. Aprepitant and fosaprepitant: a 10-year review of efficacy and safety. *Oncologist* 2015;20(4):450-8. DOI: 10.1634/theoncologist.2014-0229.
11. Jordan K, Jahn F, Aapro M. Recent developments in the prevention of chemotherapy-induced nausea and vomiting (CINV): a comprehensive review. *Annals of Oncology* 2015;26(6):1081-1090. DOI: 10.1093/annonc/mdv138.
12. Inui N. Antiemetic therapy for non-anthracycline and cyclophosphamide moderately emetogenic chemotherapy. *Medical Oncology* 2017;34(5):77. DOI: 10.1007/s12032-017-0937-y.
13. Isoda A, et al. Palonosetron, aprepitant, and dexamethasone for prevention of nausea and vomiting after high-dose melphalan in autologous transplantation for multiple myeloma: A phase II study. *International Journal of Hematology* 2017;105(4):478-84. DOI: 10.1007/s12185-016-2152-6.
14. Aloxi (palonosetron HCl) injection. Physician Prescribing Information [Internet] Helsinn. 2018 Sep Accessed at: <http://www.aloxi.com/>. Accessed June 24, 2020.
15. Navari RM. 5-HT3 receptors as important mediators of nausea and vomiting due to chemotherapy. *Biochimica et Biophysica Acta* 2015;1848(10 Pt B):2738-46. DOI: 10.1016/j.bbame.2015.03.020.
16. Zhou M. et al. Update on the management of chemotherapy-induced nausea and vomiting - focus on palonosetron. *Therapeutics and Clinical Risk Management* 2015;11:713-29. DOI: 10.2147/TCRM.S68130.
17. Zofran (ondansetron) injection [prescribing information]. Research Triangle Park, NC: GlaxoSmithKline; March 2017. Accessed June 24, 2020.
18. Zofran (ondansetron) tablets [prescribing information]. East Hanover, NJ: Novartis Pharmaceuticals Corporation; October 2017. Accessed June 24, 2020.
19. Granisetron injection [prescribing information]. Schaumburg, IL: Sagent; February 2016. Accessed June 24, 2020.
20. Granisetron tablet [prescribing information]. Sellersville, PA: Teva Pharmaceuticals; August 2014. Accessed June 24, 2020.
21. Akynzeo (netupitant/palonosetron) [prescribing information]. Woodcliff Lake, NJ: Eisai Inc; April 2018. Accessed June 24, 2020.
22. Akynzeo (fosnetupitant and palonosetron) [prescribing information]. Iselin, NJ: Helsinn Therapeutics (US), Inc; April 2018. Accessed June 24, 2020.
23. Aapro M, Rugo H, Rossi G, et al. A randomized phase III study evaluating the efficacy and safety of NEPA, a fixed-dose combination of netupitant and palonosetron, for prevention of chemotherapy-induced nausea and vomiting following moderately emetogenic chemotherapy. *Ann Oncol.* 2014;25(7):1328-1333. doi:10.1093/annonc/mdu101.
24. National Comprehensive Cancer Network (NCCN) Clinical Practice Guidelines in Oncology. Antiemesis. v.2.2020. Accessed June 25, 2020.
25. Hesketh PJ, Kris MG, Basch E, et al: Antiemetics: American Society of Clinical Oncology Clinical Practice Guideline Update. *J Clin Oncol* 35:3240- 3261, 2017.

Policy History/Revision Information

Date	Summary of Changes
07/01/2021	<ul style="list-style-type: none"> • New Medical Benefit Drug Policy

Instructions for Use

This Medical Benefit Drug Policy provides assistance in interpreting UnitedHealthcare standard benefit plans. When deciding coverage, the member specific benefit plan document must be referenced as the terms of the member specific benefit plan may differ from the standard plan. In the event of a conflict, the member specific benefit plan document governs. Before using

this policy, please check the member specific benefit plan document and any applicable federal or state mandates. UnitedHealthcare reserves the right to modify its Policies and Guidelines as necessary. This Medical Benefit Drug Policy is provided for informational purposes. It does not constitute medical advice.

This Medical Benefit Drug Policy may also be applied to Medicare Advantage plans in certain instances. In the absence of a Medicare National Coverage Determination (NCD), Local Coverage Determination (LCD), or other Medicare coverage guidance, CMS allows a Medicare Advantage Organization (MAO) to create its own coverage determinations, using objective evidence-based rationale relying on authoritative evidence ([Medicare IOM Pub. No. 100-16, Ch. 4, §90.5](#)).

UnitedHealthcare may also use tools developed by third parties, such as the InterQual[®] criteria, to assist us in administering health benefits. UnitedHealthcare Medical Benefit Drug Policies are intended to be used in connection with the independent professional medical judgment of a qualified health care provider and do not constitute the practice of medicine or medical advice.