

## Drug Classes and Medications for Treatment of Nausea and Vomiting

| Class                                 | Mechanism   | Indications   | Drugs   | Side Effects   | Cost     |
|---------------------------------------|---|---|---|--|----------|
| <b>Antidopaminergic therapies</b>     | <ul style="list-style-type: none"> <li>Block emetic pathways originating from the GI and CTZ</li> <li>Antidopaminergic (D<sub>2</sub>)</li> <li>Direct pro-kinetic effect (metoclopramide)</li> </ul>   | Opioids, chemotherapy, toxins or drugs associated nausea and vomiting   | <ul style="list-style-type: none"> <li>Prochlorperazine</li> <li>Promethazine</li> <li>Metoclopramide</li> <li>Haloperidol</li> </ul>                                 | <ul style="list-style-type: none"> <li>Extra-pyramidal effects</li> <li>Sedation</li> <li>Hypotension</li> <li>Contraindicated in bowel obstruction</li> </ul>   | Low      |
| <b>Serotonin receptor antagonists</b> | Block emetic pathways occurring through vagal stimulation, 5-HT <sub>3</sub> receptors in the GI tract, and/or the CTZ  | Chemotherapy, toxins (CTZ, GI tract) associated nausea and vomiting   | <ul style="list-style-type: none"> <li>Ondansetron</li> <li>Granisetron</li> <li>Dolasetron</li> <li>Tropisetron</li> <li>Palonosetron (second generation)</li> </ul> | <ul style="list-style-type: none"> <li>Constipation</li> <li>Headache</li> </ul>   | Moderate |
| <b>Antihistamines</b>                 | Uncertain action at the vomiting center   | Inner ear pathology, adjuvant to other agents   | <ul style="list-style-type: none"> <li>Diphenhydramine</li> <li>Hydroxyzine</li> <li>Meclizine</li> <li>Doxepin</li> </ul>  | <ul style="list-style-type: none"> <li>Sedation</li> <li>Constipation</li> <li>Confusion</li> <li>Orthostatic hypotension</li> <li>Dry mouth</li> </ul>  | Low      |
| <b>Anxiolytics – Benzodiazepines</b>  | Works via the cerebral cortex pathway   | <ul style="list-style-type: none"> <li>Anxiety, PTSD post-chemotherapy</li> <li>Useful as an adjunct</li> </ul>   | <ul style="list-style-type: none"> <li>Lorazepam</li> <li>Oxazepam</li> <li>Diazepam</li> </ul>   | <ul style="list-style-type: none"> <li>Sedation</li> <li>Confusion</li> <li>Falls and fractures</li> </ul>   | Low      |
| <b>Corticosteroids</b>                | <ul style="list-style-type: none"> <li>May relieve cancer associated nausea through effects on reducing inflammatory mediators, tumor edema, pressure on GI tract, and reducing intracranial pressure from tumor mass.</li> <li>The exact mechanism in nausea and vomiting is unknown.</li> </ul> | <ul style="list-style-type: none"> <li>Bone pain</li> <li>Stimulate appetite</li> </ul>   | <ul style="list-style-type: none"> <li>Dexamethasone</li> <li>Methylprednisolone</li> <li>Prednisone</li> </ul>   | <ul style="list-style-type: none"> <li>Fluid retention</li> <li>Increased blood pressure</li> <li>Mood swings</li> <li>Weight gain</li> <li>Increased risk of infections</li> <li>Thinning bones (osteoporosis) and fractures</li> </ul>                 | Low      |
| <b>Cannabinoids</b>                   | Cannabinoid receptors are widespread in the central nervous system and the mechanism of action is unknown   | <ul style="list-style-type: none"> <li>Nausea unresponsive to conventional treatment</li> <li>May be used in combination with other antiemetic therapies</li> <li>Combination antiemetic therapy with dronabinol and prochlorperazine may result in synergistic antiemetic effects and minimize the toxicities</li> </ul> | Dronabinol  | <ul style="list-style-type: none"> <li>Tachycardia</li> <li>Low blood pressure</li> <li>Blood shot eyes</li> <li>Muscle relaxation</li> <li>Slowed digestion</li> <li>Dizziness</li> <li>Depression</li> <li>Hallucinations</li> <li>Paranoia</li> </ul> | Moderate |