Guideline Resource Unit
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Guideline Summary

Endorsement of the 2020 American Society of Clinical Oncology's Guideline for Antiemetics

Accompanies: Clinical Practice Guideline SUPP-011

Cancer Care Alberta

www.ahs.ca/guru

The management strategies outlined in this summary and accompanying guideline apply to adult patients receiving potentially emetogenic chemotherapy and/or radiotherapy for cancer. With a few modifications, Cancer Care Alberta's Provincial Tumour Teams endorse the 2020 American Society of Clinical Oncology (ASCO) clinical practice guideline for antiemetics. Refer to the full clinical practice guideline for a detailed description of the clinical questions, recommendations, guideline development methodology, and references.

Combined Chemotherapy

- Patients who are treated with combination chemotherapy should be offered antiemetics that are appropriate for the agent with the highest emetogenic level.
- The addition of a checkpoint inhibitor (CPI) to chemotherapy does not change the recommendation for an antiemetic regimen based on the emetogenicity of the agents administered. CPIs administered alone or in combination with another CPI are minimally emetogenic and do not require the routine use of a prophylactic antiemetic.

Highly Emetogenic Chemotherapy (HEC) (>90% frequency of emesis)

- Cisplatin and other HEC single agents: four-drug combination of a neurokinin 1 (NK_1) receptor antagonist (RA), a serotonin ($5\text{-}HT_3$) RA, dexamethasone, and olanzapine. Dexamethasone and olanzapine should be continued on days 2 to 4.
- Anthracycline combined with cyclophosphamide: four-drug combination of an NK_1 RA, a $5\text{-}HT_3$ RA, dexamethasone, and olanzapine. Olanzapine should be continued on days 2 to 4.

Moderately Emetogenic Chemotherapy (MEC) (30-90% frequency of emesis)

- Carboplatin-based regimens AUC ≥ 4: three-drug combination of a NK_1 RA, a $5\text{-}HT_3$ RA, and dexamethasone.
- Carboplatin-based regimens AUC< 4 or non-carboplatin-based regimens: two-drug combination of a $5\text{-}HT_3$ RA (day 1) and dexamethasone (day 1). Patients receiving agents with known risk for delayed nausea and vomiting (e.g. cyclophosphamide, doxorubicin, oxaliplatin) may be offered dexamethasone on days 2 and 3.

Low Emetogenic Chemotherapy (LEC) (10-30% frequency of emesis)

- Low-emetic-risk chemotherapy agents: single dose of a $5\text{-}HT_3$ RA or dexamethasone before chemotherapy.

Minimal Emetogenic Chemotherapy (LEC) (<10% frequency of emesis)

- Patients should not be offered routine antiemetic prophylaxis. However, prophylactic antiemetics may be administered to patients who have had emesis with prior low-risk regimens, or on an as needed basis.

Adjunctive Drugs

- Lorazepam is not recommended as a single-agent antiemetic, but along with other antiemetics can reduce anxiety and anticipatory nausea and vomiting.
- An H2 blocker or proton pump inhibitor may also be considered to prevent or manage dyspepsia.

Cannabinoids

- Medical cannabinoids may be considered for treatment of refractory CINV/RINV assuming that patients have had a reasonable therapeutic trial of standard therapies, and they are used as adjuncts to other prescribed therapies. Nabilone (1 to 2 mg PO bid) is recommended. Dose reduction may be required when prescribing for medically frail patients.
- Medical cannabis (inhaled, oils, or edibles), as well as nabiximols are not recommended for chemotherapy- and RT-induced nausea and vomiting.

Complementary and Alternative Therapies

- Evidence is insufficient to make a recommendation for or against the use of ginger, acupuncture /acupressure, and other complementary or alternative therapies for the prevention of nausea and vomiting in patients with cancer.

High-Dose Chemotherapy with Stem Cell or Bone Marrow Transplantation

- Three-drug combination of an NK_1 RA, a 5-HT_3 RA, and dexamethasone before chemotherapy.
- Use of steroids is not recommended with cellular therapies, including preparative lymphodepleting chemotherapy regimens.
- Avoid the use of corticosteroid antiemetic premedication for 1-5 days prior to and 90 days after CAR T-cell therapies.

Multiday Chemotherapy

- Multiday HEC (e.g. 3 or 5-day cisplatin regimens): three-drug combination of an NK_1 RA, a 5-HT_3 RA, and dexamethasone administered on each day of chemotherapy and for up to 2 days after chemotherapy is completed.
- Multiday MEC or LEC: antiemetics before chemotherapy that are appropriate for the emetic risk of the agent administered on each day of treatment, and for up to 2 days after the completion of the chemotherapy regimen.

Breakthrough Nausea and Vomiting

- Re-evaluate emetic risk, antiemetic regimen, disease status, concurrent illnesses, and medications to assess for possible other mechanisms of nausea and vomiting.

- Patients who experience nausea or vomiting despite optimal prophylaxis, and who did not receive olanzapine prophylactically, should be offered olanzapine (2.5 to 5 mg PO daily to a maximum of 10 mg PO daily) in addition to continuing the standard antiemetic regimen. Alternatively, clinicians may choose metoclopramide 10 mg PO every 4-6 hours or prochlorperazine 10 mg PO every 6 hours.
- In addition to continuing the standard antiemetic regimen, patients who experience nausea or vomiting despite optimal prophylaxis, and who have already received olanzapine, may be offered a drug of a different class, depending on the presumed driver of the nausea.

Anticipatory Nausea and Vomiting

- Optimal antiemetic therapy beginning with the initial cycles of chemotherapy.
- Most common cause is anxiety: benzodiazepines and behavioural therapy are recommended.

Highly Emetogenic Radiation Therapy (RT) (Total Body)

- Two-drug combination of a 5-HT_3 RA and dexamethasone before each fraction and on the day after each fraction if RT is not planned for that day.

Moderately Emetogenic RT (Upper Abdomen, Craniospinal)

- 5-HT_3 RA before each fraction, with or without dexamethasone before the first five fractions.

Low Emetogenic RT (Brain, Head and Neck, Thorax, Pelvis)

- Brain: rescue dexamethasone therapy.
- Head and neck, thorax, or pelvis: rescue therapy, which could include one or more of a 5-HT_3 RA, dexamethasone, or a dopamine RA.

Minimal Emetogenic RT (Extremities, Breast)

- Rescue therapy with a 5-HT_3 RA, dexamethasone, or a dopamine RA.

Concurrent Chemotherapy and RT

- Antiemetic therapy that is appropriate for the emetic risk level of chemotherapy agents, unless the risk level of the RT is higher.
- During periods when prophylactic antiemetic therapy for chemotherapy agents has ended and ongoing RT would normally be managed with its own prophylactic therapy, patients should receive prophylactic therapy that is appropriate for the emetic risk of the RT until the next period of chemotherapy, rather than receiving rescue therapy for chemotherapy agents as needed.