National Cancer Control Programme

NCCP Supportive Care

Antiemetic Medicines for inclusion in NCIS (Medical Oncology)

Version	Date published	Amendment	Approved By
1	24/04/2019	Version 1	ISMO & NCCP
2	27/06/2019	Clarification on aprepitant dosing for high emetogenic risk multi-day chemotherapy	ISMO & NCCP
3	29/01/2020	Clarification of Dexamethasone IV dosing as Dexamethasone phosphate salt. Updated dosing recommendations for olanzapine	ISMO & NCCP
4	18/03/2021	Amended routes of administration of 5-HT_3 antagonists (ondansetron) and corticosteroids (dexamethasone) from IV to PO and updated associated dosing recommendations	ISMO & NCCP
5	06/05/2022	Amended anti-emetic recommendations for CARBOplatin AUC≥ 4	ISMO & NCCP
6	12/07/2022	Updated to allow consideration of addition of cyclizine for breakthrough nausea in patients not receiving olanzapine	ISMO & NCCP
7	02/06/2023	Amended anti-emetic recommendations for CARBOplatin AUC≥ 4	ISMO & NCCP

8	10/02/2025	Inclusion of anti-emetic recommendation for trastuzumab deruxtecan (Enhertu®) as High	ISMO & NCCP

1 Background

The NCCP has facilitated the development of nationally agreed systemic anti-cancer therapy (SACT) regimens to support safe, evidence-based and cost-effective cancer treatment for cancer patients. These regimens are developed under the guidance of Medical Consultants involved in the treatment of patients with cancer with input from nursing staff, pharmacists and other healthcare professionals. Each NCCP SACT regimen indicates the emetogenic potential of the regimen[1]. Chemotherapy Induced Nausea and Vomiting (CINV) is one of the most frequent side effects experienced by patients undergoing chemotherapy treatment. Currently hospitals delivering chemotherapy services have individual policies on the management of CINV.

The NCCP has published on its website a classification document on the range of options available to manage CINV.

2 Introduction

A survey of hospital nursing and pharmacy departments was carried out by NCCP in May 2018 to establish the antiemetics in use by each hospital for the treatment of high, moderate, low and minimal emetogenic parenteral SACT in adults. The survey indicated that there was variation in the choice of anti-emetics being used in the responding hospitals[2]. This variation was seen primarily in:

- The dose of the drug (e.g. dexamethasone 8mg vs 12mg)
- The route of administration of the drug (e.g. ondansetron IV vs PO)

Subsequent feedback from the Irish Society of Medical Oncologists proposed that a standardised approach to the use of antiemetic medicines in adults be agreed and be built into NCIS for the following reasons:

- Streamlining of work flow in NCIS as it removes the need for prescribers to choose antiemetics for use in each prescription
- Prevention of accidental omission of antiemetics

[1] Based on the available supporting evidence
[2] Responses were received from 13 hospitals

- Benefit to patients as ensures all patients are treated in line with best practice[3] (for the associated emetogenic risk)
- Standardisation of practice

3 ISMO Defined Antiemetic Medicines to be built into NCIS for Medical Oncology Patients

Following an evidence review of the relevant literature (1-4), ISMO have agreed the defined antiemetic medicines to be included in NCIS for use for all adult medical oncology patients[4]. These are detailed in Table 1 below.

The ISMO defined antiemetic medicines will be reviewed and updated as required in line with any future updated antiemetic recommendations. To note:

1. These agreed medicines do not preclude:
    - The use of locally agreed antiemetic agents in line with local procurement contracts in place
    - The development of regimen specific anti-emetics where agreed nationally
2. Prescribers may change the default antiemetic medicine at an individual patient level at their own discretion

The NCCP recommends that as local antiemetic policies are reviewed that the ISMO defined antiemetic medicines for adult medical oncology patients would be considered for inclusion as appropriate[5]. This should reduce change management at a local level when NCIS is implemented.

All comments and feedback are welcome at oncologydrugs@cancercontrol.ie

[3] The defined antiemetic medicines have been agreed with ISMO following an evidence review of the relevant literature
[4] As per the associated emetogenic risk detailed in the NCCP SACT regimen
[5] Considering any local procurement arrangements that are in place

Standard Antiemetic Regimen to be used for Medical Oncology SACT (Adults)

- This standard antiemetic regimen was agreed to be the default antiemetic regimen built into the National Cancer Information System (NCIS) for medical oncology regimens by ISMO members Nov 2018.
- This standard regimen does not preclude the use of locally agreed antiemetic agents in line with local procurement contracts in place. The agreed standard antiemetic regimen could be adopted as local regimens are reviewed.

Table 1 Standard Antiemetic Regimen for Medical Oncology SACT (Adults)

Emetogenic Risk	Antiemetic Regimen[a]	Antiemetic regimen of choice – Day 1 Drug, dose, frequency and route of administration	Antiemetic regimen of choice – subsequent days Drug, dose, frequency, route and day of administration
High (>90% risk of emesis)	NK_1 Receptor Antagonist **and** 5-HT_3 Receptor Antagonist **and** Corticosteroid **and** Olanzapine	Aprepitant 125mg PO OD Ondansetron 16mg PO OD[b,c] Dexamethasone 12mg PO OD Olanzapine 5mg PO OD	Aprepitant 80mg PO daily on Day 2 and 3 Dexamethasone 8mg PO daily on Days 2-4 *Metoclopramide 10mg PO TDS Olanzapine 5mg PO daily on Day 2 to 4
High (>90% risk of emesis) **Anthracycline- Cyclophosphamide**	NK_1 Receptor Antagonist **and** 5-HT_3 Receptor Antagonist **and** Corticosteroid **and** Olanzapine	Aprepitant 125mg PO OD Ondansetron 16mg PO OD[b,c] Dexamethasone 12mg PO OD Olanzapine 5mg PO OD	Aprepitant 80mg PO daily on Day 2 and 3 *Metoclopramide 10mg PO TDS Olanzapine 5mg PO daily on Day 2 to 4
High (>90% risk of emesis) **CARBOplatin AUC ≥4** **Fam-trastuzumab deruxtecan-nxki**	NK_1 Receptor Antagonist **and** 5-HT_3 Receptor Antagonist **and** Corticosteroid	Aprepitant 125mg PO OD Ondansetron 16mg PO OD[b,c] Dexamethasone 12mg PO OD	Aprepitant 80mg PO daily on Day 2 and 3 Dexamethasone 8mg PO daily on Days 2 to 4 Metoclopramide 10mg PO TDS
Moderate[d](>30-90% risk of emesis)	5-HT_3 Receptor Antagonist **and** Corticosteroid	Ondansetron 16mg PO OD[b,c] Dexamethasone 8mg PO OD	Dexamethasone 8mg PO daily on Day 2 and 3 Metoclopramide 10mg PO TDS prn
Low (10-30% risk of emesis)	5-HT_3 Receptor Antagonist **or** Corticosteroid	Ondansetron 8mg PO OD	Metoclopramide 10mg PO TDS prn

[a]+/- H_2 Blocker or a proton pump inhibitor to prevent dyspepsia which can mimic nausea

[b]Alternate dosing options may be recommended at the discretion of the clinician, considering individual patient characteristics e.g. splitting ondansetron to 8mg PO twice daily or reducing to 8mg PO once daily

[c]Ondansetron prolongs the QT interval in a dose-dependent manner. Caution should be exercised when prescribing to patients with underlying conditions or concomitant medicines which may predispose them to this risk

[d]Olanzapine may be added to moderate emetic risk regimens in cases of breakthrough nausea and vomiting. Consideration could be given to the addition of cyclizine for breakthrough nausea in patients who are not already receiving olanzapine
Consideration may be given to increasing the dose of olanzapine to 10mg at the discretion of the prescribing Consultant

*Use of metoclopramide and olanzapine together may increase the risk of extra pyramidal side effects, caution should be exercised when prescribing to patients with underlying conditions or concomitant medications which may predispose them to this risk

Adult patients who are treated with multi-day SACT should be offered antiemetics before treatment that are appropriate for the emetogenic risk of the SACT administered on each day of the SACT treatment and for two days after. Aprepitant should be continued for up to 2 days at a dose of 80mg after chemotherapy in adults who receive 5 day CISplatin regimens

Note: Dexamethasone dose may be modified or omitted where the SACT regimen already includes a steroid.

4 References

1. NCCN Clinical Practice Guidelines in Oncology Antiemesis. v1 ed2021
2. Hesketh PJ, Kris MG, Basch E, Bohlke K, Barbour SY, Clark-Snow RA, et al. Antiemetics: American Society of Clinical Oncology Clinical Practice Guideline Update. J Clin Oncol. 2020;38:2782-2797
3. Hesketh PJ, Kris MG, Basch E, Bohlke K, Barbour SY, Clark-Snow RA, et al. Antiemetics: American Society of Clinical Oncology Clinical Practice Guideline Update. J Clin Oncol. 2017;35(28):3240-61.
4. Sutherland AN, Katrien. Plugge, Emma. Ware, Lynda. Head, Karen. Burton, Martin. Olanzapine for the prevention and treatment of cancer-related nausea and vomiting in adults - Sutherland, A - 2018 | Cochrane Library. Cochrane Database of Systematic Reviews. 2018.
5. Roila F, Molassiotis A, Herrstedt J, Aapro M, Gralla RJ, Bruera E, et al. 2016 MASCC and ESMO guideline update for the prevention of chemotherapy- and radiotherapy-induced nausea and vomiting and of nausea and vomiting in advanced cancer patients. Ann Oncol. 2016;27(suppl 5):v119-v33.
6. Prevention of antineoplastic induced nausea and vomiting eviQ v4 17/01/2019

7. Hashimoto H et al. Olanzapine 5mg plus standard antiemetic therapy for the prevention of chemotherapy induced nausea and vomiting (J-FORCE): a multicentre, randomised, double-blind, placebo-controlled, phase 3 trial. Lancet Oncol 2019; Dec 11. pii: S1470-2045(19)30678-3