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Nausea & Vomiting: The Forgotten Symptoms

- Acknowledge the Kaurna lands that we meet on today and the land of the Wiradjuri people where I work and live

Definitions

Nausea: common, unpleasant sensation of queasiness, stomach discomfort, urge to vomit, ‘feeling sick’

Retching: reverse peristalsis, action of stomach and oesophagus

Vomiting: forceful expulsion of stomach content

Regurgitation: backward effortless flow of undigested food, liquid or stomach acid

Expectoration: Coughing or spit from the lungs

Occurrence in Palliative Care Population

70% persons with advanced cancer
30% persons with cardiac failure
70% persons with CKD
25% persons with Severe COPD

Pain in Palliative Care Population

Estimated to occur in 50 – 90 % patients

PCOC data offers insights into recognition and treatment of pain

80% palliative care scripts are for analgesia mainly prescribed by non palliative care prescribers

Palliative Care specialists are more likely to prescribe anti emetic (twice as likely)

Paucity of data for recognition and treatment of nausea and vomiting

Impacts of Nausea and Vomiting

- Can mask other symptoms
- Mild nausea can have a severe impact
- Quality of life
- Hard to distract from

Welcome to 2030

- You are all Registered Nurse Prescribers
- Patient vignettes
- Utilise Slido for your answers

Case One

You are seeing Amir, he has locally advanced adenocarcinoma of the oesophagus. His oncologist commenced 5mg Oxynorm liquid last week

Today his wife informs you that the new medication is making him feel sick and he is refusing to take it.

How Would You Treat Amir?

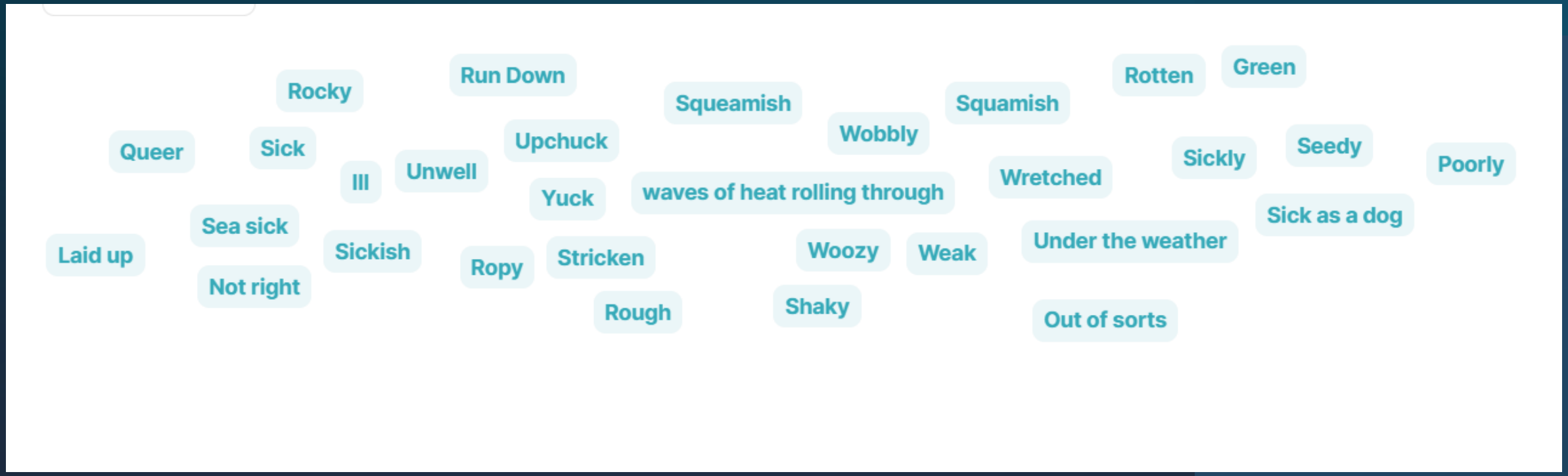
What Would You Do Next??

Case Two

- You have been asked to see Shaz with several days of intermittent nausea and vomiting. She has ovarian cancer with peritoneal seeding. She informs you that she kept down soup for tea last night (about ½ cup) and has had a piece of toast with honey and a ½ cup of tea for breakfast. She now feels yuck, full and bloated.

How Would You Treat Shaz

What Would You Do Next?


Rocky
Run Down
Squeamish
Squamish
Rotten
Green
Queer
Sick
Upchuck
Wobbly
Sickly
Seedy
Poorly
Ill
Unwell
Wretched
Yuck
waves of heat rolling through
Sick as a dog
Sea sick
Laid up
Sickish
Ropy
Stricken
Woozy
Weak
Under the weather
Not right
Rough
Shaky
Out of sorts

History is the key to good patient assessment

Description in patient's own words, what they believe is causing it?

Quality – differentiate between nausea/vomit/regurgitation/chest gunk

Duration – timing, intermittent, continuous, relationship between nausea and vomiting

Triggers – thought of food, oral intake, chemo/other medicines

History

Vomitus – what does it look like, undigested food, bile, faecal matter, chest secretions

Associated symptoms – headache, constipation (what is their bowel history), pain, poor appetite

Drug history – medication commencement

Prior history……

Physical Examination

Abdomen – distension, bowel sounds, organomegaly, other masses

Oral candidiasis

Rectal examination – are they constipated

Signs of sepsis, neurological signs, infection

Biochemical	Metabolic – hypercalcaemia, renal failure		
Impaired gastric emptying	Drugs – opioids, tricyclic antidepressants Hepatomegaly Splenamegaly 'Squashed stomach'	Occurs after initiation of medications Early satiety Bloating Nausea and vomiting soon after eating Feels better after a vomit	They feel hungry and once they have a mouthful of food feel like a 'poisoned pup or post prandial Christmas feeling' Yuck, off my tucker, awful, Bluergh Confused and sad Carer stress can be high
Visceral/serosal	Bowel obstruction Stretched liver capsule	Nausea followed by large volume vomit (depending on level of obstruction) Colicky abdominal pain Bowel sounds can be increased in partial obstruction of may be absent for illeus	Intense feeling of sickness Sick feeling associated with cramping pain Bloated and uncomfortable Yuck feeling Feeling sluggish and off
Cranial	Raised intracranial pressure – tumour, infarction	Constant nausea May be worse in morning	Feeling off all the time No relief Don't feel right Accompanies by dizziness Can worsen when changing position

Treatment

Assessment as foundation to treat

Nonpharmacological treatments are key

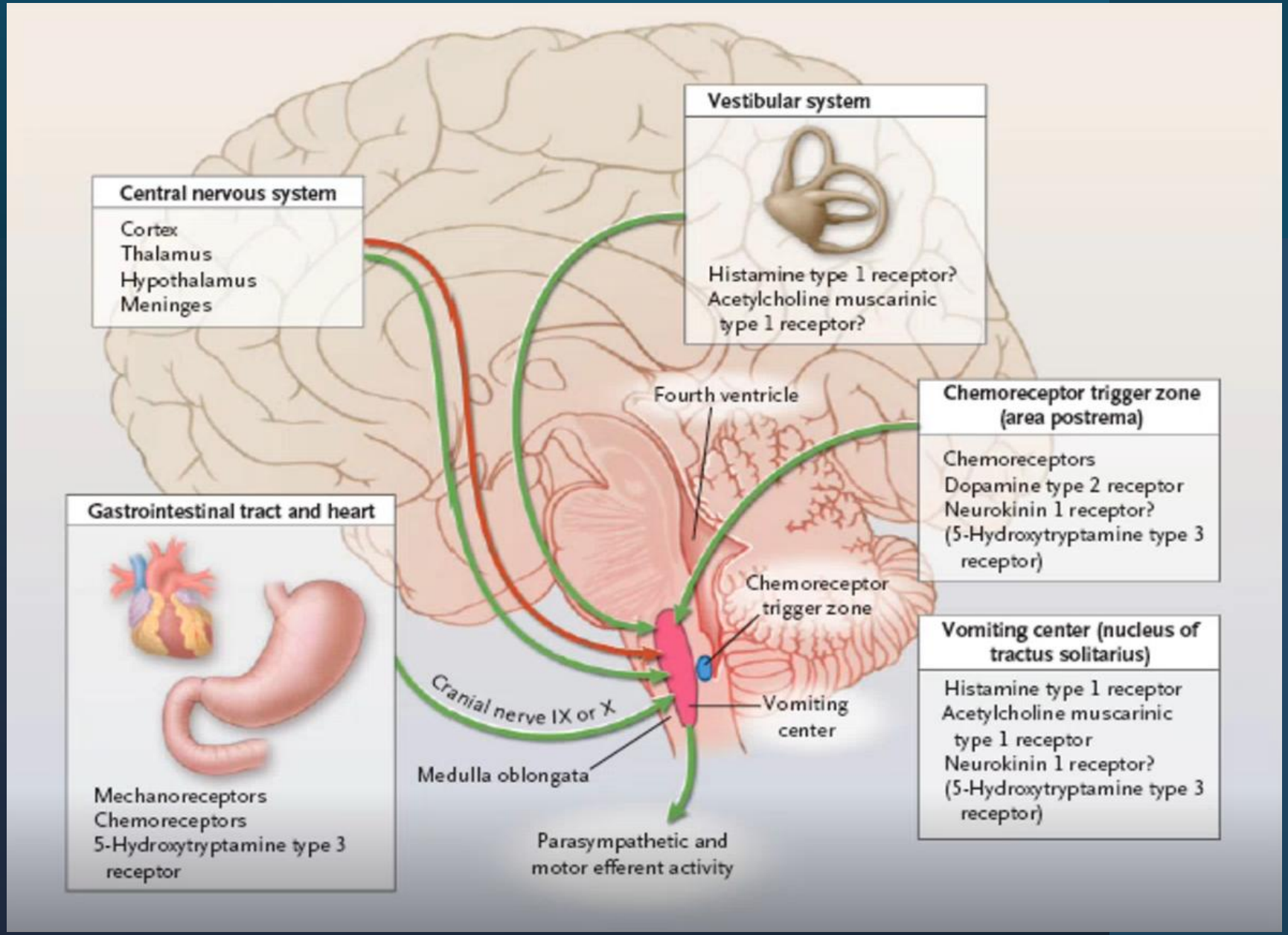
Guideline versus mechanistic approach to medications

Surgical interventions – resection, NGT, venting gastrosomy

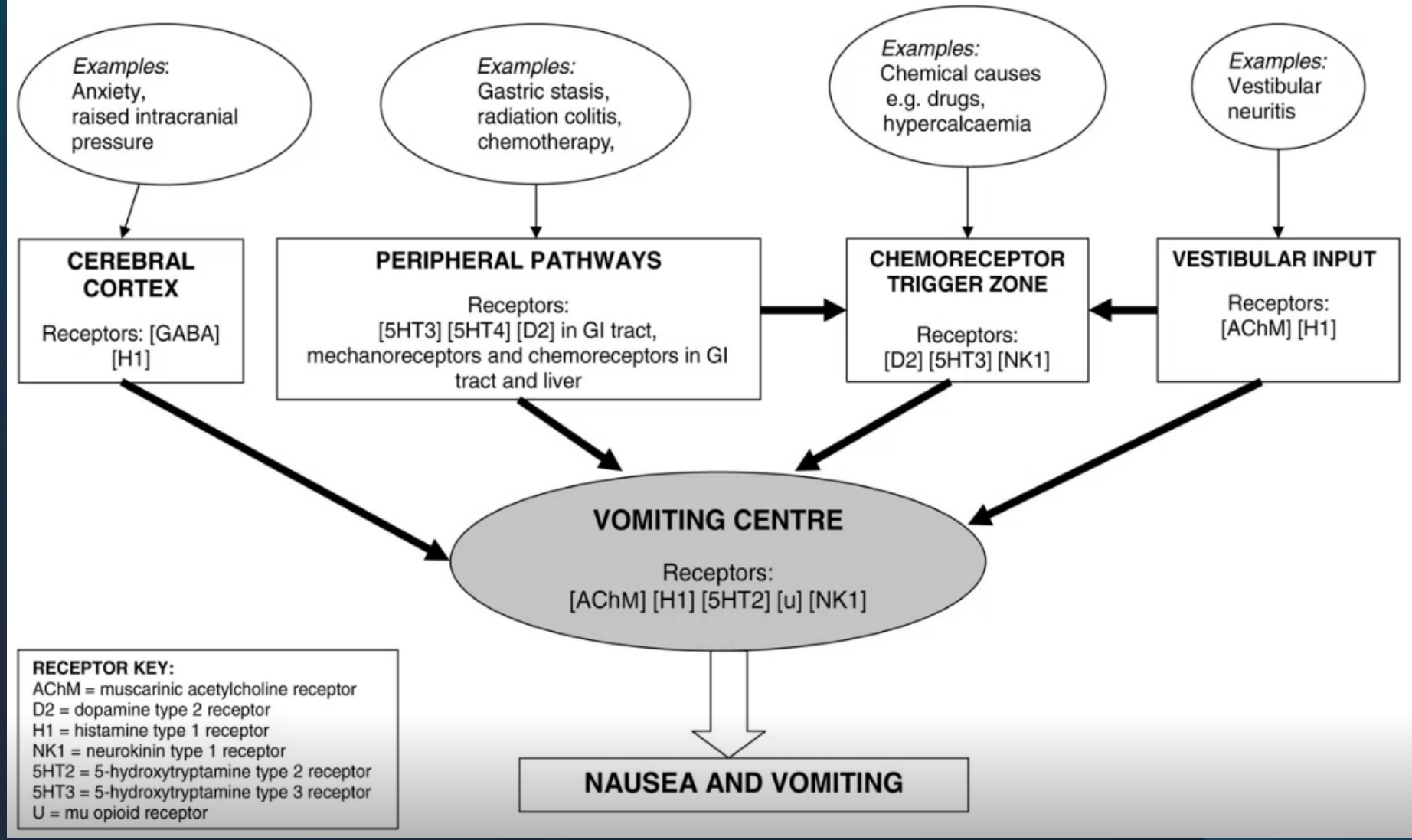
Patient education

How Do Anti Emetics Work?

- Prokinetics – push gastric contents along
- Dopamine Antagonists – block receptors in CTZ, preventing dopamine from triggering the medullary vomiting centre
- Anti histamine – cross the blood brain barrier and block histamine and acetylcholine receptors in the vomiting centre and inner ear
- 5HT3 Antagonists – block serotonin, preventing it from binding to the 5HT3 receptors


Central nervous system
Cortex
Thalamus
Hypothalamus
Meninges
Vestibular system
Histamine type 1 receptor?
Acetylcholine muscarinic type 1 receptor?
Fourth ventricle
Chemoreceptor trigger zone (area postrema)
Chemoreceptors
Dopamine type 2 receptor
Neurokinin 1 receptor?
(5-Hydroxytryptamine type 3 receptor)
Chemoreceptor trigger zone
Gastrointestinal tract and heart
Vomiting center (nucleus of tractus solitarius)
Histamine type 1 receptor
Acetylcholine muscarinic type 1 receptor
Neurokinin 1 receptor?
(5-Hydroxytryptamine type 3 receptor)
Cranial nerve IX or X
Vomiting center
Medulla oblongata
Parasympathetic and motor efferent activity
Mechanoreceptors
Chemoreceptors
5-Hydroxytryptamine type 3 receptor

Various Triggers and Where they act



Anti Emetic Selection

Table 1. Dosing, adverse effects and cost of commonly used antiemetics in advanced cancer[A]

Drug	Recommended daily dosing	Adverse effects	Cost ($) per day
Metoclopramide	• 10 mg TDS PO PRN, to a maximum of 30 mg in 24 h • 5–10 mg TDS IM/SC PRN, to a maximum of 30 mg in 24 h	• Diarrhoea, dizziness, drowsiness, akathisia, increased serum prolactin, galactorrhoea, extrapyramidal side effects, neuroleptic malignant syndrome, arrythmias	• 0.40–1.20 • 3.23–9.69
Haloperidol	• 1.5–3 mg PO BD PRN or 1 mg SC BD PRN. The maximum dose we would use for the indication of nausea is 6 mg PO per day, or 5 mg SC per day • The dose in the RCT was 1.5 mg orally once daily, increased to 1.5 mg twice daily if nausea continued[5]	• Sedation, extrapyramidal side effects, hypotension, dystonia, neuroleptic malignant syndrome, parkinsonism, tardive dyskinesia, stroke, VTE, QT prolongation, arrythmias	• 0.07–0.22 • 1.56–4.70
Cyclizine	• 25 mg TDS PRN PO, to a maximum of 150 mg in 24 h	• Sedation, dizziness, constipation, urinary retention, dry eyes/mouth, dyskinesia, hallucinations, agranulocytosis, hepatic dysfunction	• 1.16–3.49
Ondansetron	• 4–8 mg TDS PO PRN, up to 24 mg in 24 h • Most trials used tropisetron.[9,10,11] One trial used ondansetron 24 mg per day[7]	• Constipation, extrapyramidal side effects, QT prolongation, arrythmias	• 1.2–5.10
Levomepromazine	• Not AMH/PBS listed • Start at 3.125–6.25 mg PO BD, to a maximum of 12.5 mg per day orally. Or 3.125 mg SC once daily, to a maximum of 3.125 mg SC twice daily • The trial dose was 6.25 mg PO OD, increased to 6.25 mg PO BD if nausea continued[5]	• Sedation, extrapyramidal side effects, dry mouth, postural hypotension	• Not readily available in community but is available through hospital pharmacies

[A]Prices are for Pharmaceutical Benefits Scheme (PBS)-recommended formulations listed by a prominent Australian pharmacy chain. Dosages and prices are listed for PO, IM and SC preparations where relevant. Maximum doses are specific to the indication of nausea in advanced cancer

AMH, Australian Medicines Handbook; BD, twice per day; IM, intramuscular; OD, once a day; PO, oral; PRN, as required; RCT, randomised controlled trial; SC, subcutaneous; TDS, three times a day; VTE, venous thromboembolism.

Non Pharmacological

Control odour

Fresh air

Oropharyngeal hygiene

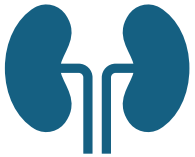
Suitable distractions, relaxation techniques

Non-Pharmacological

Nurse upright

Avoid emetogenic smells and foods

Avoidance of situations in which nausea and vomiting is a conditioned response



Treat associated symptoms (constipation, pain, anxiety)

Reflection

Nausea and Vomiting

- More than just throwing medications at patients
- Regular medications
- Consider whole person
- Be Kind
- Don’t forget the often forgotten


Thank You