Supplemental prophylactic intervention for chemotherapy-induced nausea and emesis (spice) trial: Protocol for a multi-centre double-blind placebo-controlled randomized trial

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Protocol for a double-blind placebo-controlled randomized trial

Ginger for chemotherapy-induced nausea and vomiting?

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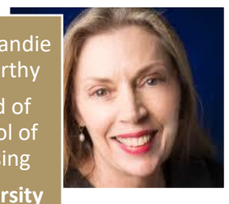

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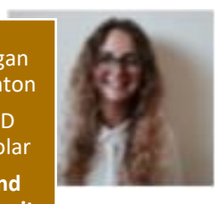

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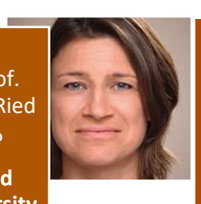

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Introduction

Ginger may have the potential to act as an adjuvant therapy for chemotherapy-induced nausea and vomiting (CINV). Despite advances in anti-cancer treatments and anti-emetic medication, low risk and cost-effective therapies to improve nausea-related QoL, symptom management and ultimately the survival of patients undergoing chemotherapy are needed.

Research aim: To assess the efficacy (reduced incidence and severity of CINV, enhanced quality of life), safety, cost-effectiveness, and impact on gut microbiota of a standardized adjuvant ginger root supplement.

Intervention

- **Study Design:** Multi-centre double-blind placebo-controlled randomized trial.
- **Recruitment:** Two hospitals in Brisbane, Queensland, Australia up until April 2019. Target sample size: N=300.
- **Supplementation Schedule:** 4x 300mg over-encapsulated capsules of ginger per day (1.2g ginger/60mg gingerols per day) OR 4x 300mg over-encapsulated capsules of placebo per day (1.2g inner filler microcrystalline cellulose) → 1x capsule every 3-4 hours → capsules consumed for 5 days → commencing Day 1 of CTx Cycle 1 → For Cycles 1 to 3.
- **Alterations to Standard Care:** No changes to standard care. Use of anti-emetic medications prescribed by medical teams permitted during the trial.

Eligibility Criteria

INCLUDED

- Chemotherapy-naïve
- Moderately to highly emetogenic CTX
- Single-day CTX regimen
- Age >18 years
- English speaking
- Adequate physical function
- Ability to safely swallow capsules
- Cognitive ability to understand study purpose and adhere to study

EXCLUDED

- Concurrent radiotherapy
- Concurrent use of ginger in food/supplement/drinks
- History of adverse event to ginger
- Prescribed anti-coagulants, NSAIDs or hypoglycaemics
- Self-prescribed nausea therapies
- Chronic alcohol use (>14 standard drinks per week)
- Experiencing nausea and/or vomiting for reasons other than CTx
- Gall stones or liver disease
- Thrombocytopenia
- Pregnant or lactating women

Study Procedure

Timepoint	**T0**	**T1**	**T2**	**T3**	**T4**
	Pre- CTX	Day before CTX	Day of CTX	4-days post-CTX	5-8 days post-CTX
CTX cycle (C)	1 only	1 - 3	1 - 3	1 - 3	1 - 3
Screened and consented	✓				
Participant characteristics	✓				
Delivery of supplements	✓				
Delivery of Participant Booklet	✓				
Nutrition status (Scored PG-SGA)	✓		✓ (C2-3)		
Supplements consumed			✓	✓	
CIN-related QoL (FLIE-5DR)		✓		✓	
Global QoL (EQ-5D-5L)		✓		✓	
Anticipatory nausea and vomiting		✓			
Nausea and vomiting (MAT)			✓	✓	
Depression and anxiety (HADS)			✓		
Fatigue (FACIT-F)			✓		✓
Health service use				✓ (C3)	
Blinding and adherence					✓
Concurrent ginger intake	✓	✓	✓	✓	✓
Adverse events					✓
Stool swab sample	✓				✓

Results

- N=38 recruited from Site A since commencing October 2017. Recruitment expected to commence at Site B July 2018.
- 85% response rate.
- 55% female; mean age 59 ± 12 years; 36% lung cancer, 21% breast, 12% lymphoma, 24% other.
- No reported serious adverse events relatable to the study intervention.

Outcomes

This study, aimed to be completed in April 2019, will:

- ✓ evaluate the safety of ginger supplementation;
- ✓ examine the ginger formulation and dosing regimen needed;
- ✓ control potential confounders;
- ✓ indicate the capacity of ginger to ameliorate CINV-related effects such as fatigue and compromised nutrition.

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