Efficacy of ginger (Zingiber officinale) in ameliorating chemotherapy-induced nausea and vomiting and chemotherapy-related outcomes: a systematic literature review update and meta-analysis

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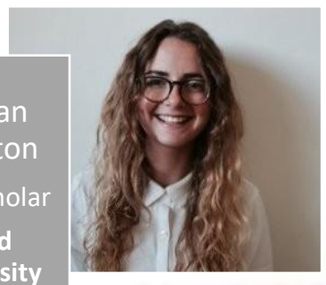
Systematic Review Update with Meta-Analysis

Ginger for Chemotherapy-induced nausea and vomiting?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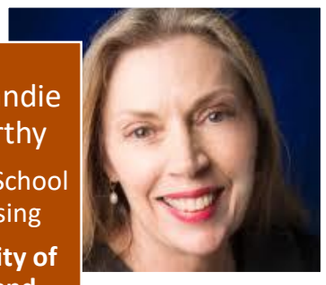
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Introduction

Gingerol and shogaol compounds in ginger likely interact with multiple components of the CINV pathway.

Previous systematic reviews (Marx et. al. 2013 and Lee & Oh 2013) found no consistent effect of ginger as an adjuvant therapy for CINV.

Research aim: To update previous systematic reviews which evaluate the efficacy of ginger supplementation in the prevention and management of CINV

Methods & Included Studies

Searched 5 databases → Included adults receiving CTx → Ginger versus placebo/control (including anti-emetics) → Searched 204 records → Included 18 studies (13 new ones) → n=1,652 total participants, 64% female , n=9/18 studies in breast cancer→ Low risk of bias in most studies (Cochrane) → Meta-analysis via RevMan → Confidence in body of evidence assessed by GRADE.

Results

NAUSEA INCIDENCE

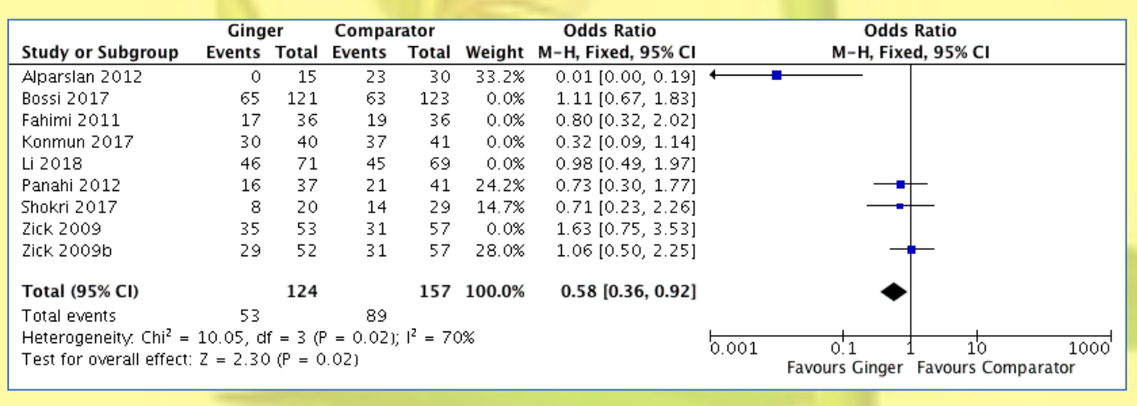

Figure 1: **>1g/day** for **any duration** significantly reduced odds of overall nausea incidence by **42%**. GRADE level**:** very low

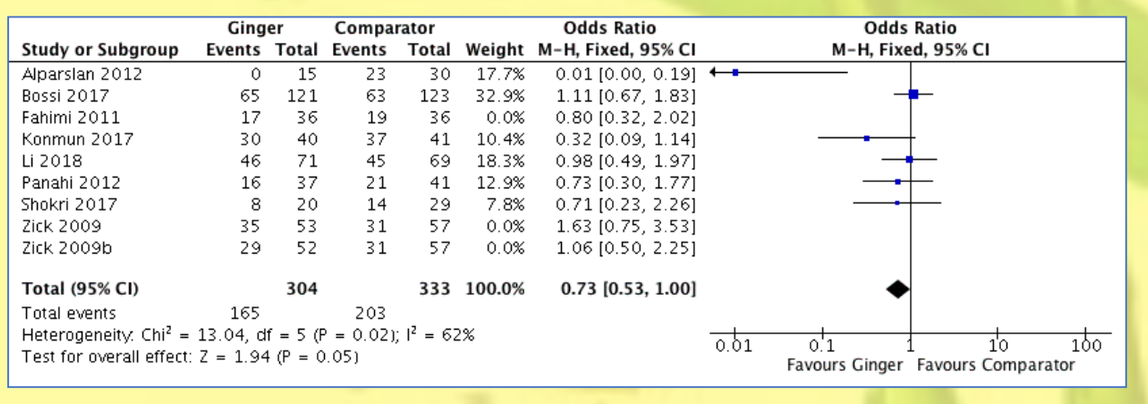

Figure 2: Any dose for **>3-days** duration significantly reduced odds of overall nausea incidence by **27%**. GRADE level: very low

VOMITING INCIDENCE

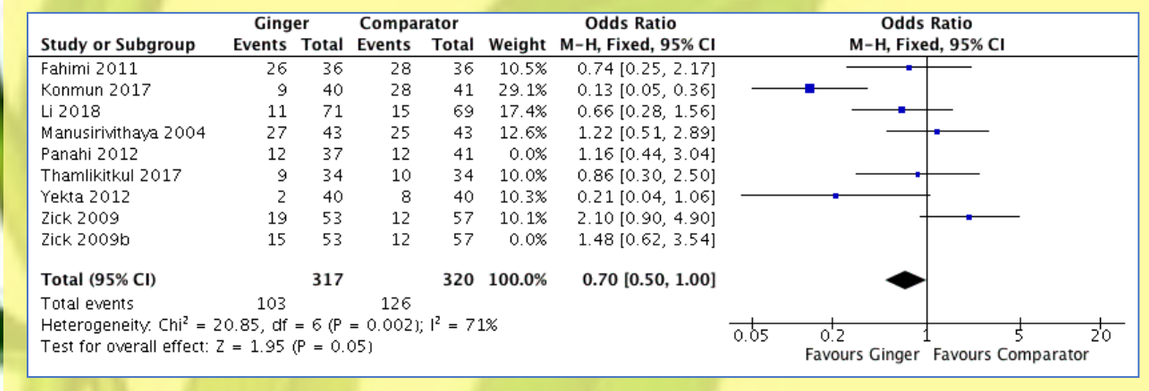

Figure 3: **≤1g/day** for **any duration** significantly reduced odds of overall vomiting incidence by **30%**. GRADE level: low

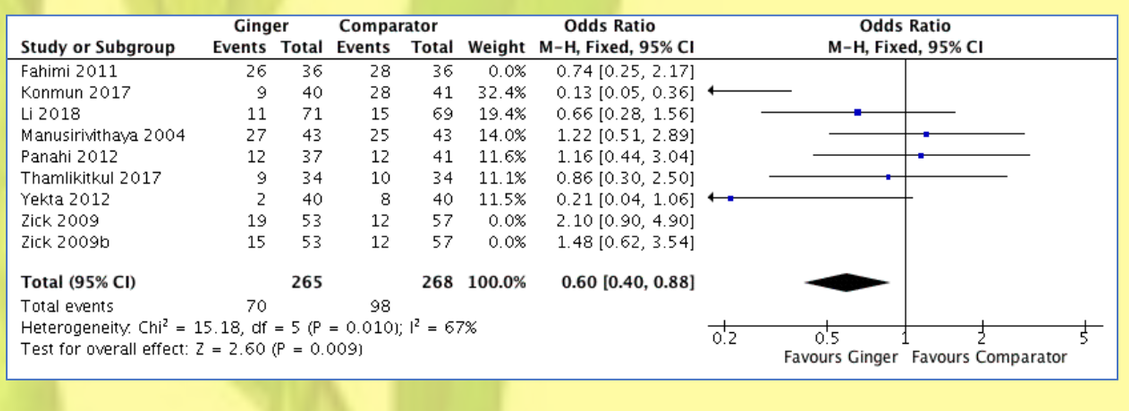

Figure 4: Any dose for **>3-days** duration significantly reduced odds of overall vomiting by **40%**. GRADE level: low

Takeaway messages

- ✓ No serious safety concerns identified beyond increased risk of reflux
- ✓ Consistent finding that >3 days of supplementation can improve nausea & vomiting incidence
- ✓ Evidence regarding dosing strength inconsistent likely to due to heterogeneity in active compounds
- ✓ Larger well-controlled studies should improve confidence in estimated effect sizes
- ✓ SPICE Trial currently underway in Qld Australia (n=300 Double Blind Placebo-RCT)