Nausea as a Mediator of Olanzapine's (OLZ) effect on Quality-of-Life (QOL) Improvement in Patients Receiving Highly (HEC) or Moderately Emetogenic Chemotherapy (MEC): Insights from a Phase III NCORP RCT

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Abstract: PD1-09

URCC NCORP Research Base

Background

- Chemotherapy-induced nausea persists despite guideline-based antiemetics, reducing QoL (FACT-G = Overall QoL, PWB = subscale, Physical Well Being).
- In a Phase III NCORP RCT, both OLZ and prochlorperazine (PLZ) improved nausea/QoL; OLZ had stronger, consistent effects.

Aim of this analysis: To determine whether reductions in nausea mediated the effect of OLZ on QoL improvements using a moderated mediation (SEM) approach in those receiving HEC vs MEC.



Methods

- The median age was 50.7y, 100% Female.
- 80.7% White/ 12.3% Black/ 5.8% Asian/ 4.2% Latino, and no significant difference between arms.
- 64.2% Received HEC (anthracycline based regimens).

TIMEPOINT 1
N = 1363
Chemotherapy Naïve Breast Cancer Patients
- Scheduled to receive doxorubicin, and/or cyclophosphamide, and/or carboplatin
AND
- ASCO regimen recommendations.

TIMEPOINT 2
N = 1363 → 310
Chemotherapy CYCLE 1
nausea ≥3 during chemotherapy (on a 1-7 scale)

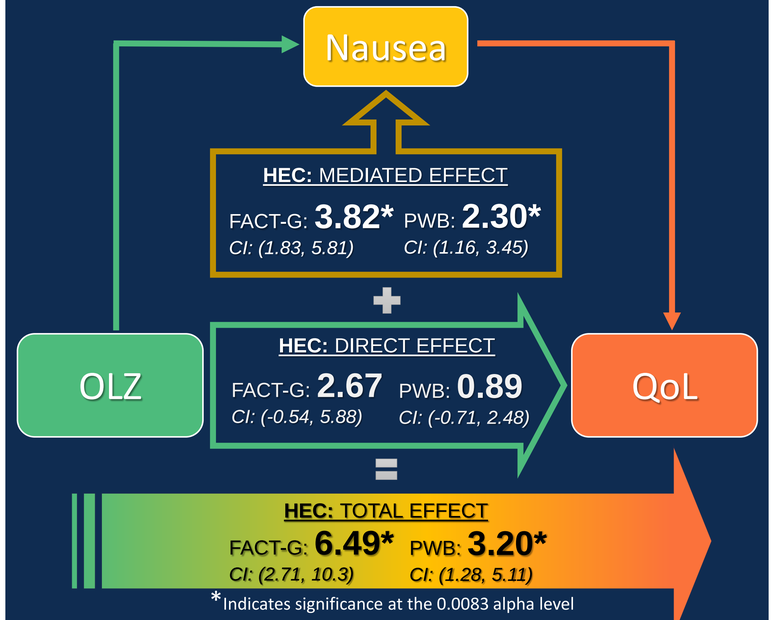
Randomize

TIMEPOINT 3
N = 310
Chemotherapy CYCLE 2
Arm Ratio 1:1:1
- 1-ASCO
- 2-PCZ + ASCO
- 3-OLZ + ASCO

In HEC, OLZ decreasing nausea led to a…

- 58.8%* increase in overall QoL
- 72.2%* increase in physical well being

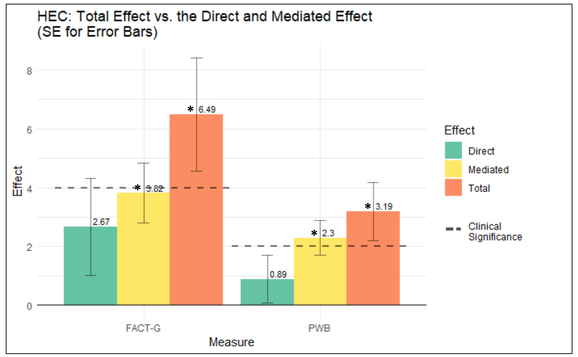
The overall decrease in nausea and increase in QoL are both clinically and statistically significant.

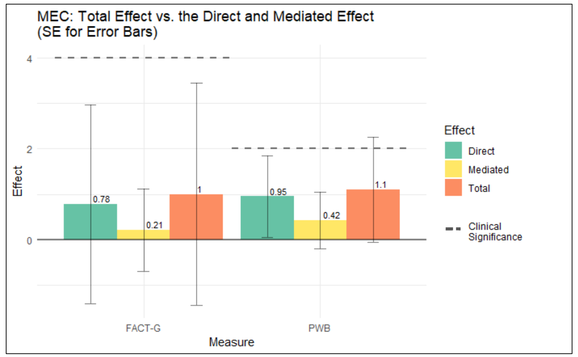


*Indicates significance at the 0.0083 alpha level

Scan the QR code for more info or if you have any questions.

Results/Graphs/Data





Main Finding:
Olanzapine's effect on **Quality of Life (QoL)** is largely, if not fully, explained by its impact on **reducing nausea.**

More pronounced effect in HEC with no mediation found in the MEC group.

Clinical Relevance in HEC:
FACT-G change = **6.5 points**
PWB change = **3.2 points**
Nausea change = **-2.82 points**

(meets minimally important difference)
Demonstrates that **controlling nausea is the key pathway** to QoL benefit.

Future Directions for Research

- These findings highlight nausea control as a key pathway through which OLZ improves QoL in those receiving HEC. Consistent with current guidelines.
- These findings support incorporating mediation analyses in supportive care trials to uncover mechanisms of benefit.
- We will test whether OLZ reduces nausea—and improves QoL—among patients receiving ADCs, a growing population with high symptom burden.

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