

# Evaluation of appropriate antiemetic prophylactic Olanzapine administration in patients receiving cisplatin chemotherapy

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## Background

- Chemotherapy-induced nausea and vomiting (CINV) occurs in  $\geq 90\%$  of patients receiving cisplatin chemotherapy.
- Olanzapine, a second generation antipsychotic, has been found beneficial to prevent CINV in patients receiving cisplatin chemotherapy.
- The National Cancer Network and American Society of Clinical Oncology has recommended olanzapine be first-line therapy as antiemetic prophylaxis in patients receiving cisplatin.

## Objective

- To evaluate the ratio of patients receiving olanzapine as primary prophylaxis in patients receiving cisplatin.

## Methods

- Mercy Hospital's investigational review board approved this retrospective chart review study.
- Data was obtained using the institution's electronic medical record system EPIC, and stored in a secure excel spreadsheet that may only be accessed by study team members,
- Inclusion criteria: Adults aged 18 years and older who have received at least one dose of cisplatin through Mercy (St. Louis) for an oncology related use over a 3-year time period with only their first use being included (primary prophylaxis).
- No additional exclusion criteria.
- Primary outcome: To evaluate the ratio of patients who did and did not receive olanzapine antiemetic prophylaxis when cisplatin therapy was administered.
- Secondary outcomes: To determine need for emesis-care, identify barriers to olanzapine use, and determine if provider education would be beneficial for cisplatin-receiving patients.

## Results

Type of Cancer	Stage Range	Number of patients with type of cancer
Genitourinary Cancer	Stage III; TNM Stage System: T1-T2bN0M0	4
Gynecological Cancer	IB-IVB	7
Tonsillar/Laryngeal/ Maxillary Sinus Cancer	Resected-Stage III; TNM Staging System: T1N1M0-T4N2b	7
Squamous Cell Carcinoma of the tongue	T2N2M0	1
Lung Cancer	Stage IB; TNM Staging System: T3N0M0 (Resected)	2
Lung Cancer + Brain metastases	Stage IV	1
Supraclavicular Neuroendocrine Carcinoma	High Grade; non-metastatic	1
Metastatic Gastrointestinal Adenocarcinoma	Stage IV	2

- Patient Characteristics:
  - 52% aged  $\geq 65$  years
  - Median BMI: 27.49 kg/m<sup>2</sup>
  - 12% African-American
  - 88% Caucasian
- Top 5 past medical history: Hypertension (52%), Hyperlipidemia (32%), Anxiety (28%), Type 2 diabetes mellitus (24%), Other psychiatric disorders (24%)
- Twenty-five total patients were screened for olanzapine utilization.

## Conclusions

- Olanzapine is underutilized as primary antiemetic prophylaxis is lacking in this patient population.
- Allergies or other contraindications to olanzapine use, as it pertains to the past medical history and/or home medication list, were not found.
- Provider education on updated ASCO and NCCN guidelines would likely be beneficial for this patient population.

## Results

- Zero patients received olanzapine
- 68% of patients received a regimen of: Palonosetron 0.25 mg IV, Fosaprepitant 150 mg IV, and Dexamethasone 12 mg IV
- 24% patients had follow up encounters relating to nausea and vomiting within one week after their cisplatin dose.

Type of Encounter	Day # post-cisplatin treatment	Outcome of encounter
During chemotherapy	0	Patient continued chemotherapy after a consult with dietician.
Patient Message	1	Patient used ondansetron as needed and continued with chemotherapy.
Phone Call	2 and 7	The patient continued chemotherapy regimen as planned after counseling patient to take ondansetron as needed.
Phone Call	4	Patient continued with chemotherapy regimen as previously planned.
Hospital Admission	2	Admitted for acute pancreatitis --- patient continued chemotherapy regimen and opted for elective outpatient cholecystectomy.
Phone Call	5	Patient had been rotating ondansetron and prochlorperazine. Patient complained of mild nausea, however, was willing to continue chemotherapy regimen as planned.