

# Hospitalizations and emergency visits for Ontario breast cancer patients undergoing neoadjuvant chemotherapy with pembrolizumab: A population-based analysis

G. Ko, MD, M. Castelo, MD, E. Amir, MD, A. Covelli, MD, A. Eskander, MD, V. Freitas, MD, C.A. Koch, MD, Q. Li, MMath, N. Liu, PhD, J. Ramruthan, MSc, E. Reel, MSW, A. Roberts, MD, T. Zhong, MD and T.D. Cil, MD

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## Introduction

- Immunotherapy-containing regimens are increasingly used in neoadjuvant treatment for triple negative breast cancer (TNBC)
- Immune-related adverse events may result in:  
↑ Hospitalizations ↑ ED visits

**OBJECTIVE:** To assess the rate of hospitalization and ED visits for breast cancer (BC) patients undergoing neoadjuvant chemotherapy (NAC) with and without immunotherapy in Ontario, Canada

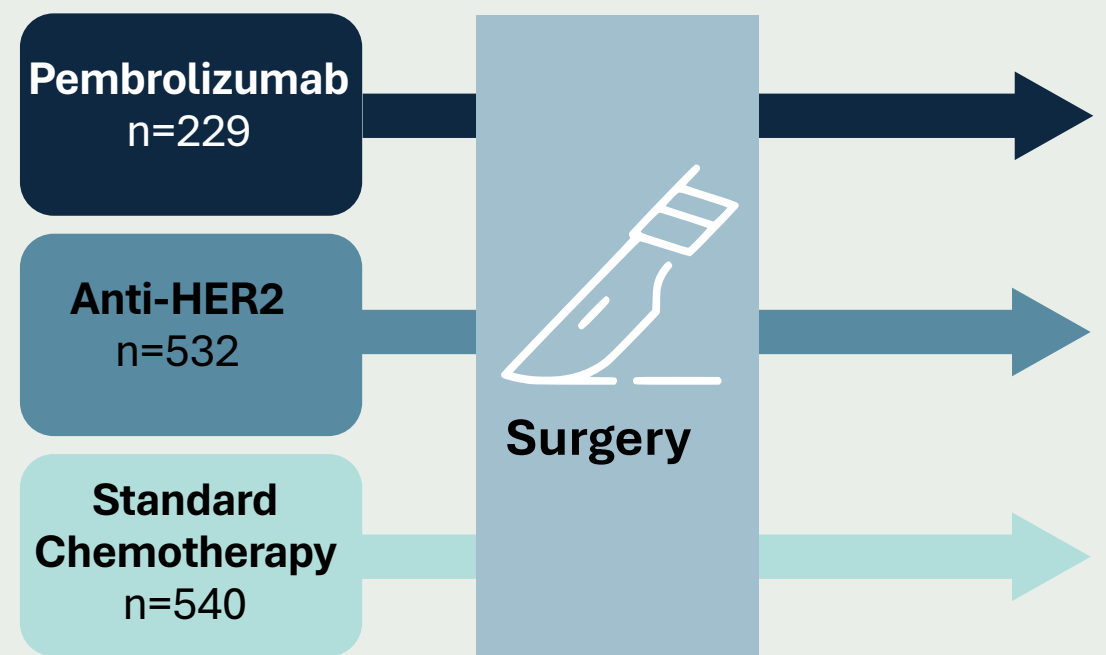
## Methods

### Eligibility

Apr 1, 2022 - Aug 31, 2023

- 1301 newly diagnosed BC patients
- Median age of 52 (44 - 62)
- 94.7% with no prior comorbidities

### NAC period



### Post-op period

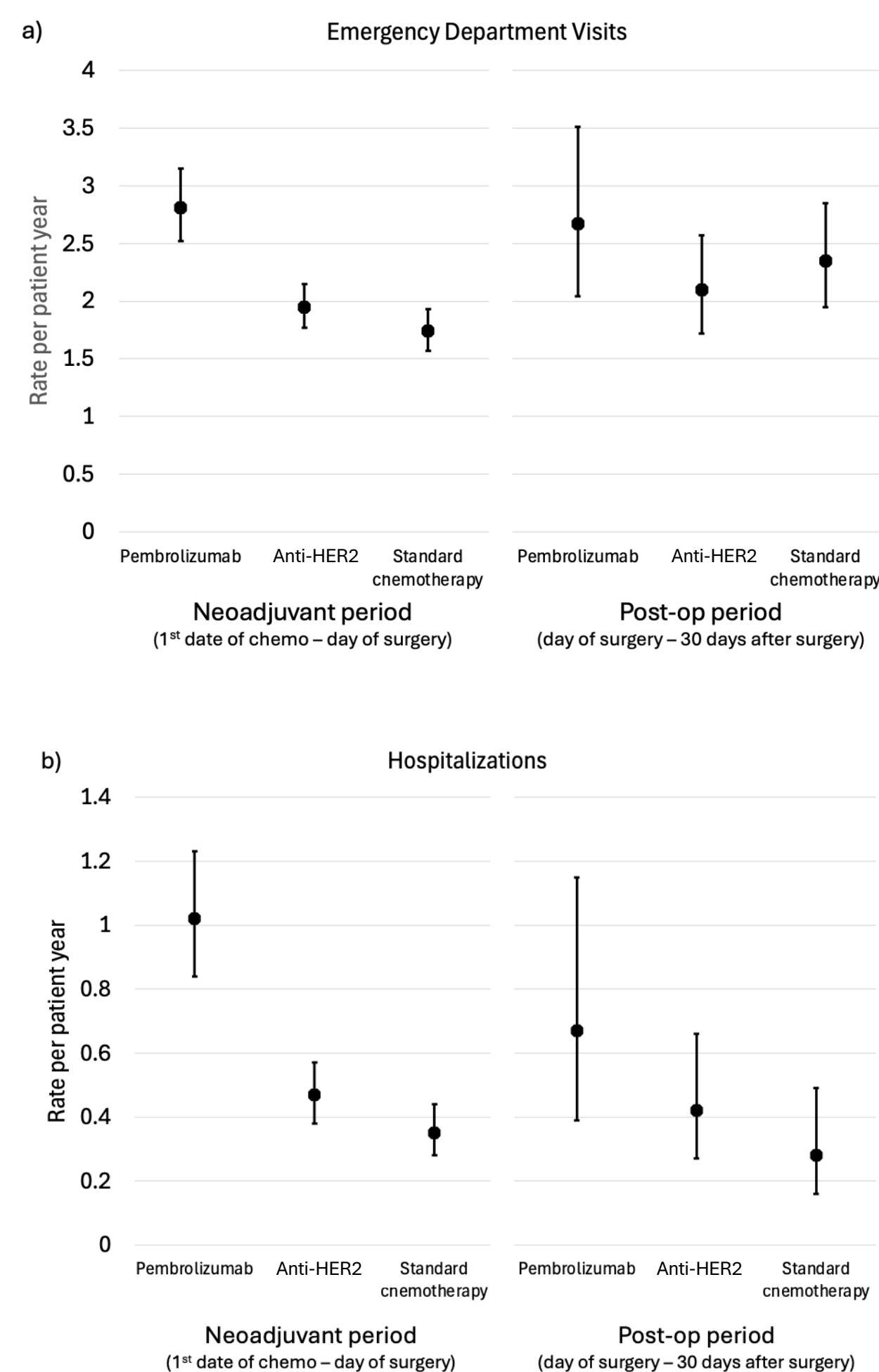


Figure 1: Rates of ED Visits and Hospitalizations during neoadjuvant and post-operative periods across treatment groups

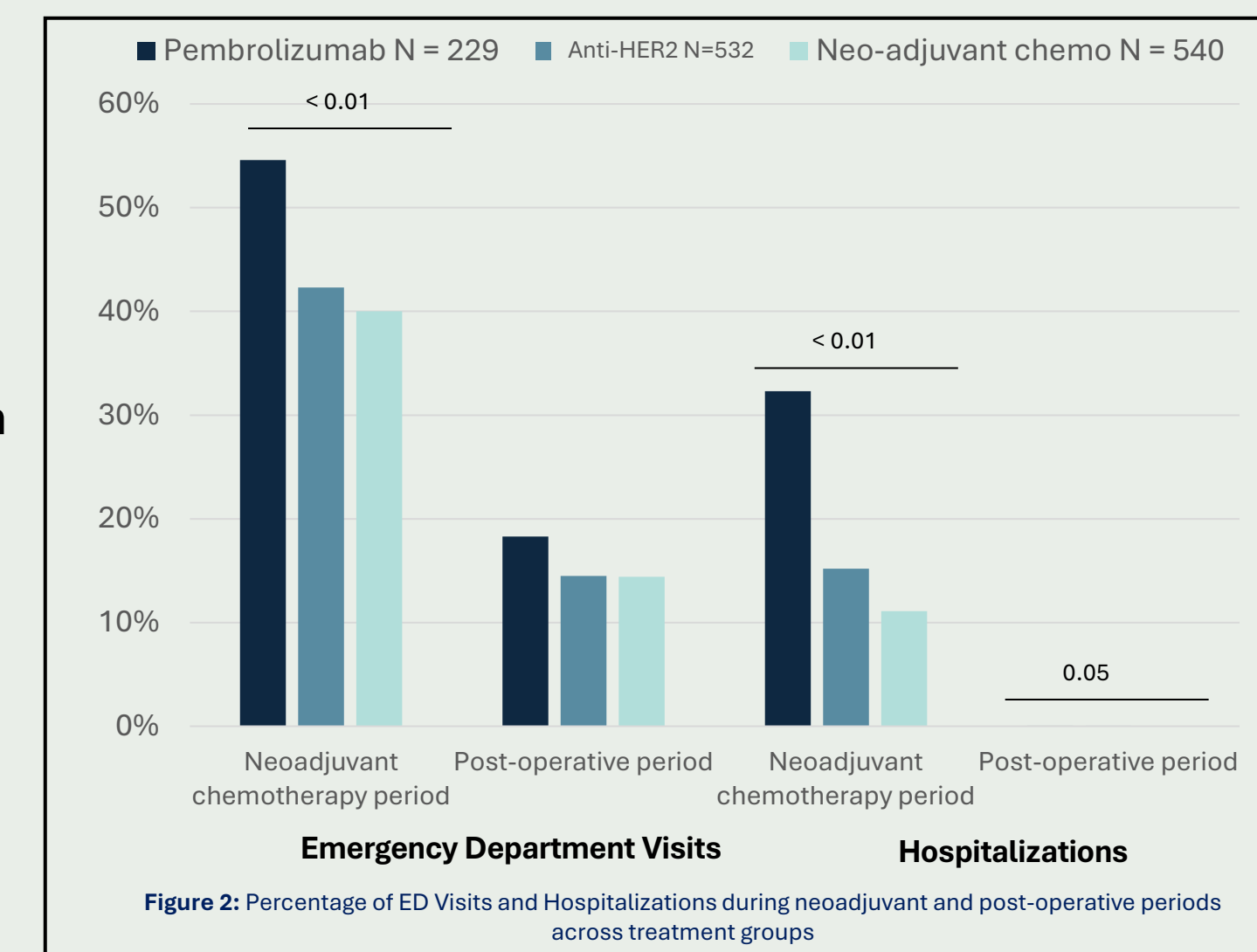
## Results

### Emergency Department Visits:

- Neoadjuvant Period**  
54.6% of BC patients on Pembrolizumab had 1+ ED visit – significantly higher than anti-HER2 and standard chemotherapy ( $p < 0.001$ )
- Post-Operative Period**  
No difference between groups

### Hospitalizations:

- Neoadjuvant Period**  
32.3% of patients receiving pembrolizumab had more frequent hospitalizations pre-operatively (vs anti-Her2, 15.2% and standard chemotherapy, 11.1%;  $p < 0.01$ )
- Post-Operative Period**  
No significant difference between groups



## Conclusion

This study provides confirmatory population-level data regarding the integration of immunotherapy into NAC.

- BC patients on NAC with pembrolizumab had more ED visits and hospitalizations during the neoadjuvant period
- No significant differences were observed in ED visits/ hospitalizations post-operatively
- Further research is needed to understand the etiology of unanticipated healthcare use in this patient population

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