

Association of Neoadjuvant Immunotherapy with Postoperative Major Morbidity After Oncologic Surgery

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Background

- Neoadjuvant immunotherapy (NI) has revolutionized cancer treatment.¹
- Extensive research on the impact of neoadjuvant chemotherapy² but not NI on surgical outcomes across cancer types
- Understanding the effect of NI on surgical complication risk informs patient education and selection for oncologic surgery.

Methods

- **Primary outcome:** Major morbidity³ = hospital length of stay within top decile of each surgery subtype, unplanned 30-day readmission, or 30-day mortality
- Multivariable logistic regressions: Odds ratios of major morbidity from NI by cancer type
- Covariates: Demographics, Charlson-Deyo comorbidity index, clinical cancer staging, procedure type, surgical approach, and neoadjuvant chemotherapy and radiation

Results

Figure 1. Flowchart of Inclusion Criteria for Cancer Surgery Patients by Neoadjuvant Immunotherapy

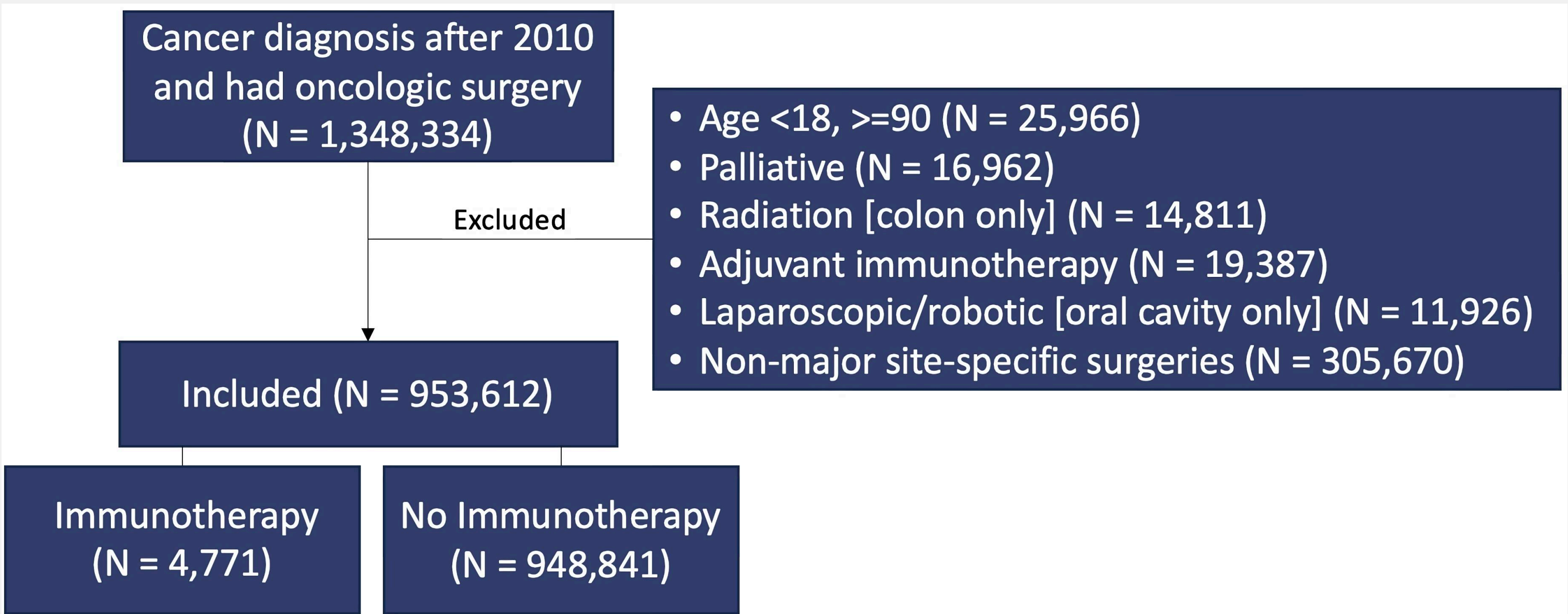
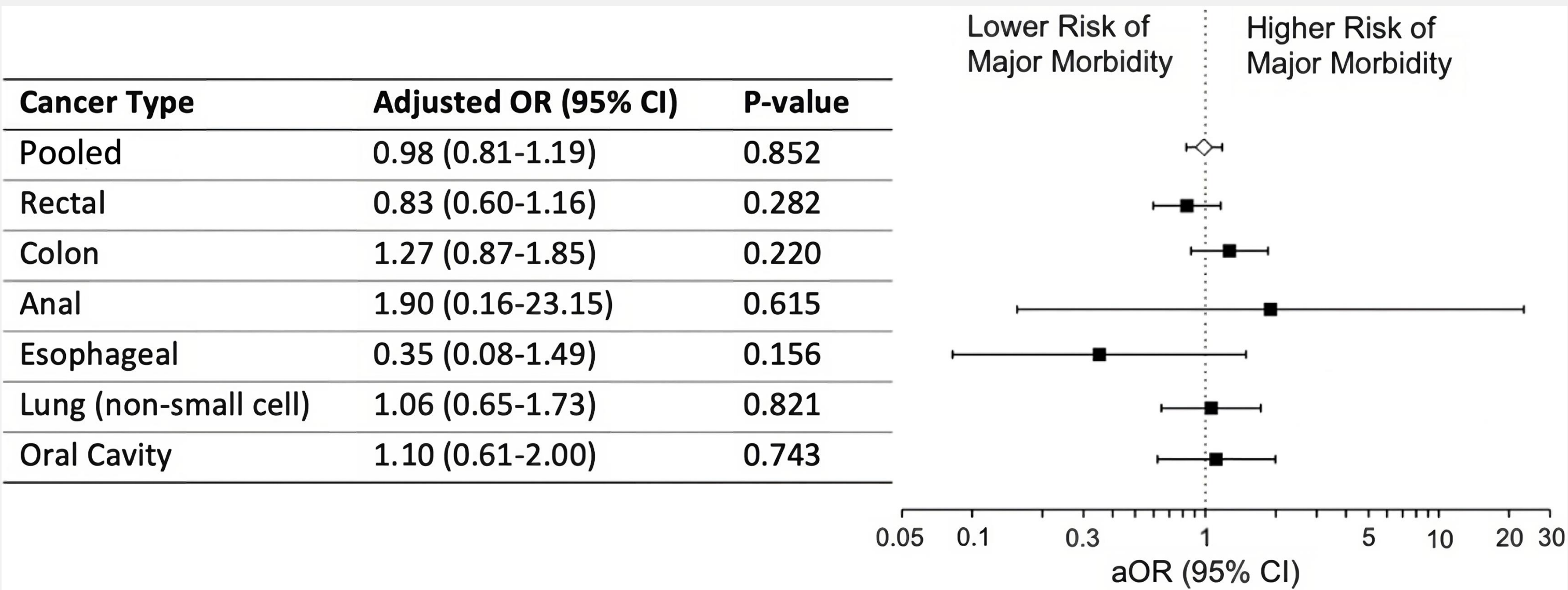


Figure 2. Adjusted Odds Ratios for Major Morbidity Associated with Neoadjuvant Immunotherapy by Cancer Type



Discussion / Conclusions

- No association between NI and increased surgical complication risk for rectal, colon, anal, esophageal, non-small cell lung, and oral cavity cancers
- **Limitations:** Lack of detailed surgical complication data for each cancer type, small anal cancer sample size, and use of NCDB to study surgical outcomes
- NCDB major morbidity as a composite surgical complication proxy has been validated.³

References

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