Patient and Procedural Characteristics Associated with Receipt of Combined Oral Antibiotics and Mechanical Bowel Preparation Before Elective Colectomy

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INTRODUCTION

- Combined administration of oral antibiotics and mechanical bowel preparation prior to elective colorectal surgery has been demonstrated to reduce the incidence of surgical site infection, anastomotic leakage, and readmission
- Many patients still do not receive combined preparation, and the reasons for omission of combined preparation remain understudied

METHODS

- 2018 ACS NSQIP Targeted Colectomy PUF
- Patients diagnosed with an obstruction or ileus, or assigned an ASA class 5 excluded
- Combined preparation designated as receipt of both preoperative oral antibiotics and mechanical bowel preparation
- Associations of patient and procedural factors with receipt of combined preparation tested using univariate analyses and forward stepwise multivariable logistic regression

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RESULTS

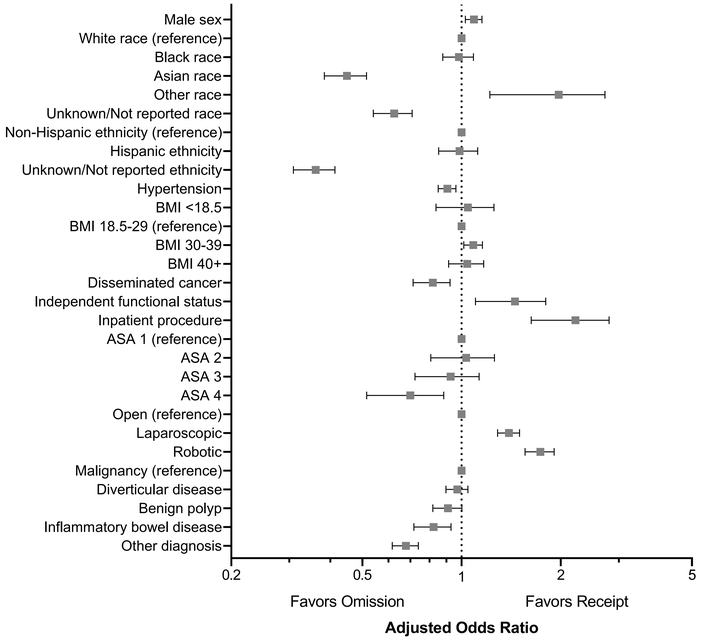
- 21,889 patients included
  - 14,694 (63.2%) received combined preparation

Unadjusted Analysis

- Patients who received combined preparation were:
  - Younger (62 vs. 64 years, p<0.001)
  - Male (47.9% vs. 46.4%, p=0.03)
  - White race (77.4% vs. 60.8%, p<0.001)
  - Non-Hispanic ethnicity (87.2% vs. 70.8%, p<0.001)
  - Higher BMI (28.3 vs. 27.9 kg/m^2, p<0.001)
  - Lower ASA classification (p<0.001)
  - Undergo robotic approach (19.1% vs. 12.4%, p<0.001)
  - Diverticular disease (25.2% vs. 20.0%, p<0.001)

Adjusted Analysis

- Associated with receipt of combined preparation: male sex, BMI 30-39 kg/m^2, independent functional status, inpatient procedure class, and laparoscopic and robotic approaches (all p<0.05; **Figure**)
- Associated with omission of combined preparation: Asian race, hypertension, disseminated cancer, ASA class 4, and IBD (all p<0.05; **Figure**)



CONCLUSION

- Patient and procedural factors are associated with receipt of combined oral antibiotics and mechanical bowel preparation before elective colectomy
- Further study of patients being offered, prescribed, and completing combined preparation is needed