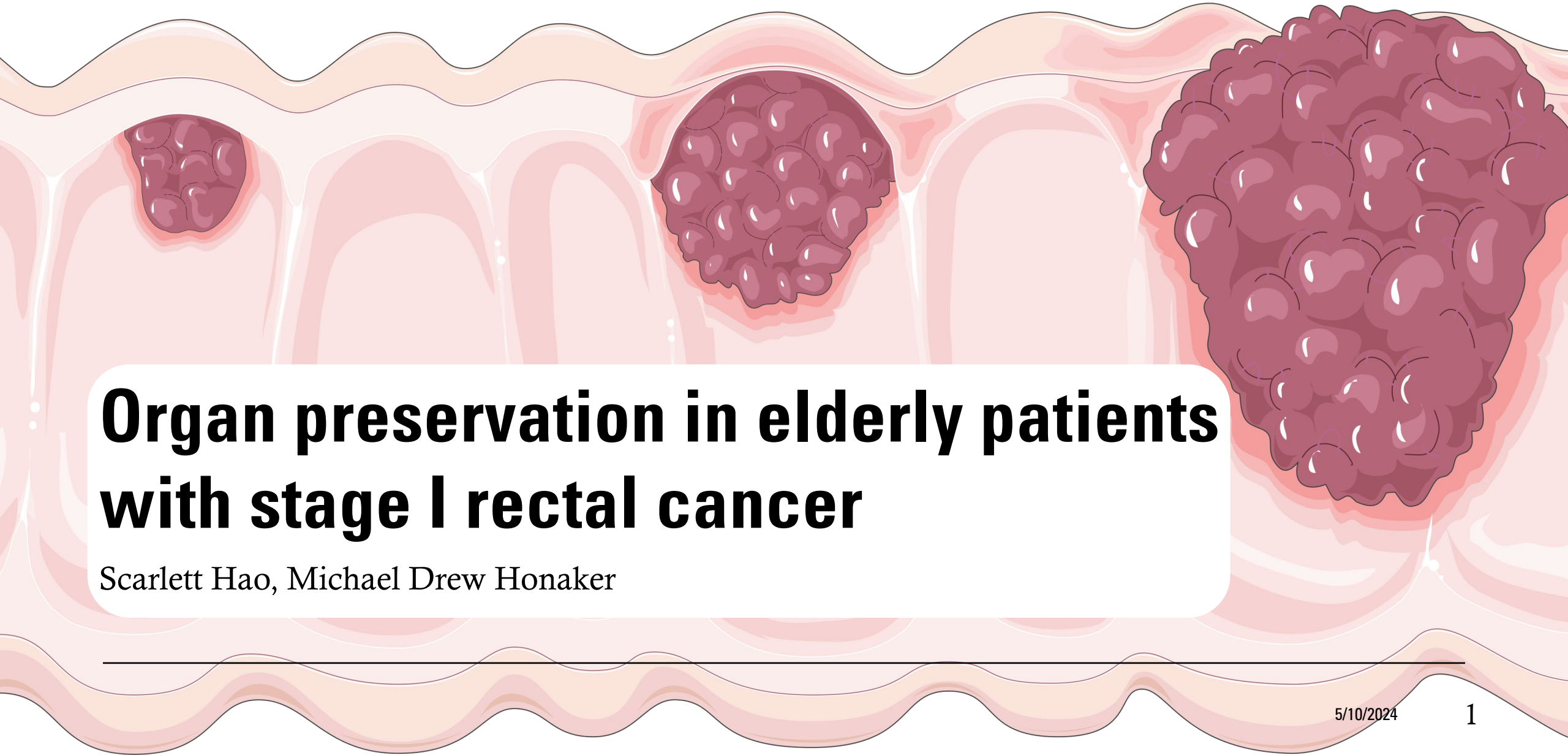
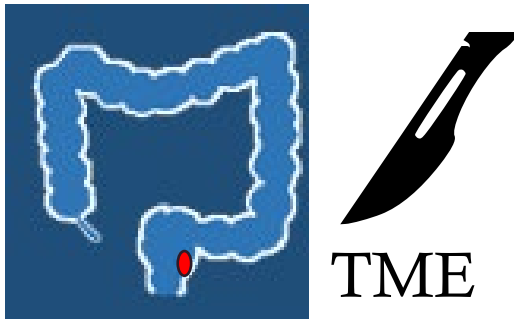


Organ preservation in elderly patients with stage I rectal cancer

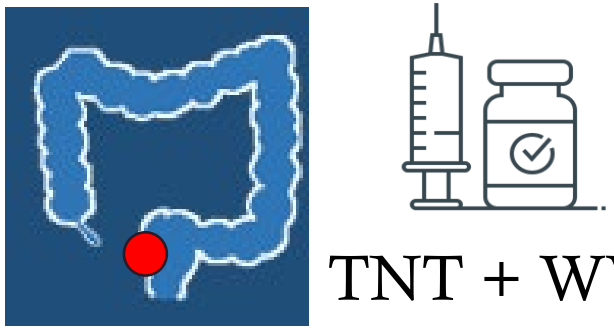
Scarlett Hao, Michael Drew Honaker

THE TREATMENT PARADOX

- 2015: Multicenter prospective RTC (CARTS) demonstrated downstaging in majority of patients with T1-3 rectal cancer treated first with chemoradiation, enabling organ preservation for 55% of patients instead of undergoing total mesorectal excision (TME).[1]
- 2022: Multicenter prospective RTC (OPRA) found 74% of patients with stage II/III rectal cancer treated with total neoadjuvant therapy (TNT) had complete or near-complete response enabling watch-and-wait (WW) approach.[2]



TME

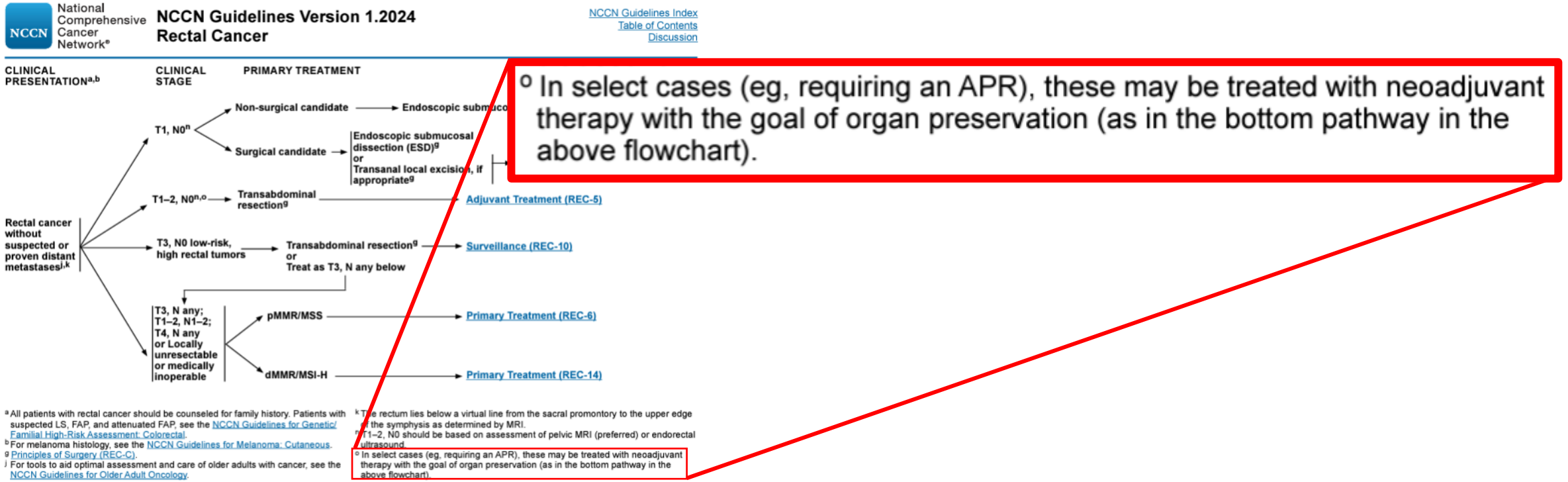


TNT + WW

[1]Verseveld et al. *Br J Surg*. 2015
[2]Garcia-Aguilar et al. *J Clin Oncol*. 2022

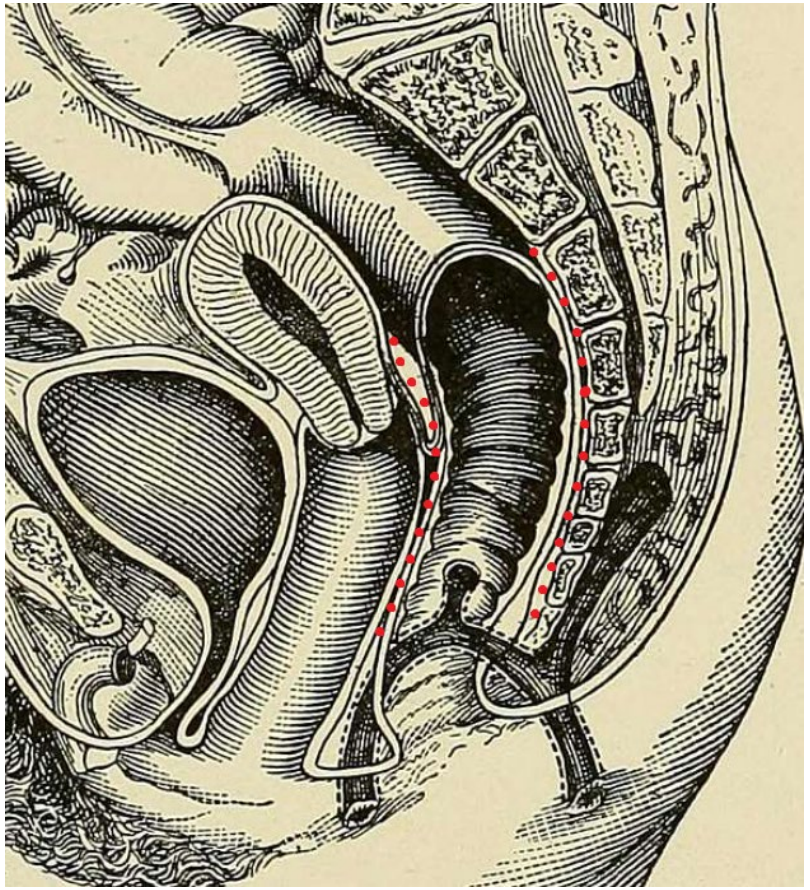
NEW EVIDENCE-BASED PRACTICE

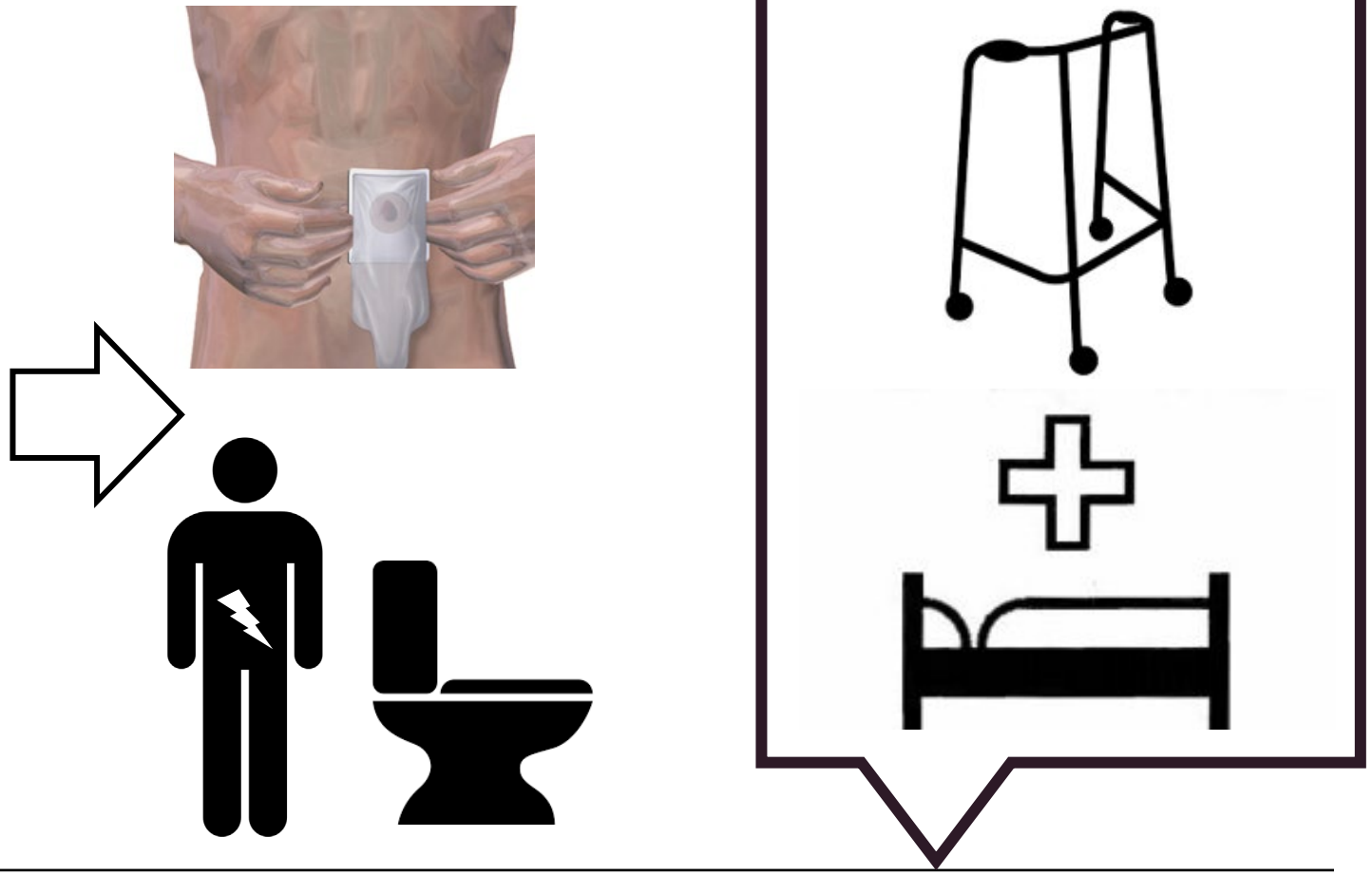
- 2023: Multicenter prospective trial (NEO) found an observed organ preservation rate of 79% for patients T1-T3 lesions treated with neoadjuvant chemoradiotherapy.[3]



[3]Kennecke et al. *J Clin Oncol*. 2023

WHY PURSUE ORGAN PRESERVATION?





HYPOTHESIS

Rates of organ preservation are higher in elderly patients with high risk T1 or T2 lesions compared to younger patients.

METHODS

Patient selection

- National Cancer Database 2004-2020 rectal cancer module
- Inclusion: Adults with high risk stage I rectal cancer (cT1 with high risk features or cT2)

Variables

- Independent variable: age <70 years versus age ≥ 70 years
- Outcome variable: receipt of OP or TME
  - OP: neoadj chemorad +/- local excision
  - TME: any chemorad + TME

Analysis

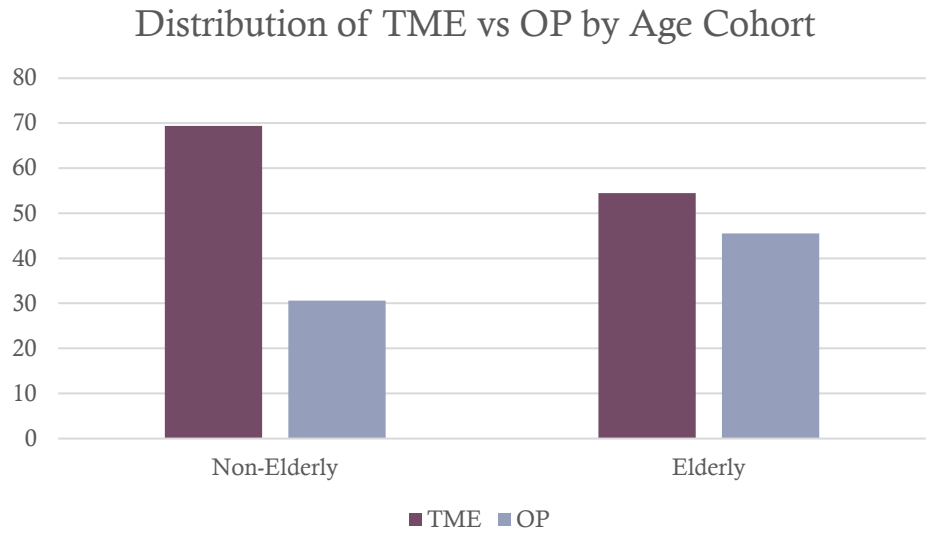
- Binary multivariable logistic regression for odds of receiving OP versus TME
- Modeled with combinatorial testing of variables selected *a priori* and significant on univariate regression

RESULTS

- 38,714 patients included

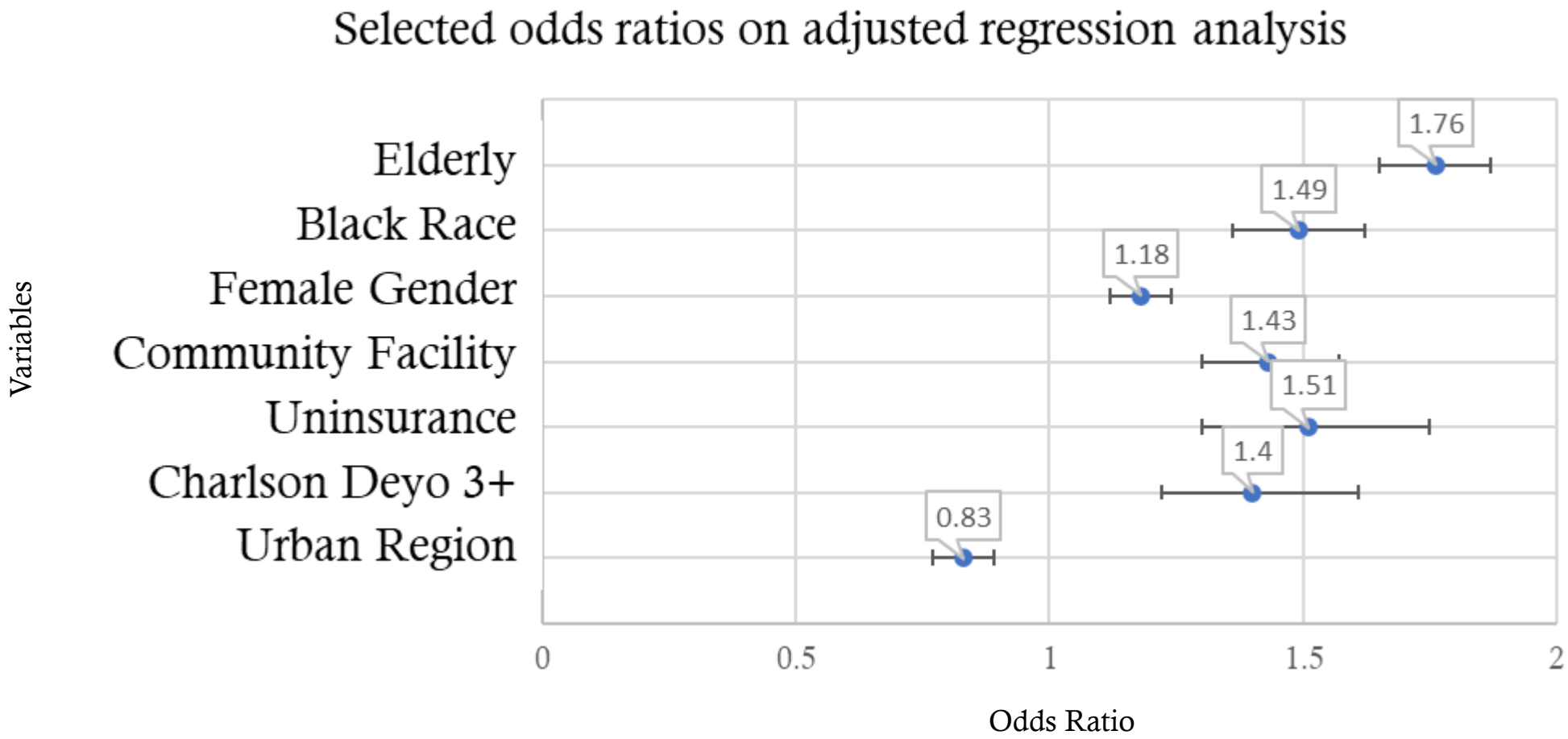
White / Black	**79.3% / 9.2%**	**85.3% / 6.8%**
Academic / Community	**36.9% / 6.7%**	**29.3% / 8.4%**
Private / Medicare	**64.2% / 22.3%**	**10.1% / 87.1%**
CDCC 0 / 3+	**80.1% / 1.9%**	**67.1% / 4.4%**
Metro / Urban	**83.8% / 14.5%**	**82.0% / 15.8%**

RESULTS



	Non-Elderly	Elderly	TOTAL
TME	17640 (69.45%)	7250 (54.45%)	24890
OPR	7760 (30.55%)	6064 (45.55%)	13824
TOTAL	25400	13314	38714

RESULTS


Selected odds ratios on adjusted regression analysis
Variables
Elderly
Black Race
Female Gender
Community Facility
Uninsurance
Charlson Deyo 3+
Urban Region
1.76
1.49
1.18
1.43
1.51
1.4
0.83
0
0.5
1
1.5
2
Odds Ratio

KEY TAKEAWAYS

Limitations

- Retrospective data
- NCDB is not population-based
- Intent of therapy unknown
- Cannot account for non-tracked confounders

- Current guideline recommendations for higher risk stage I rectal cancer is TME.
- A large proportion of patients with high-risk stage I rectal cancer undergo organ preservation instead of TME.
- This is more pronounced in elderly patients, comorbid patients, and disadvantaged patients.

CONCLUSION

Current and ongoing studies have the potential to change the treatment paradigm for patients with high-risk stage I rectal cancer.