

Oral Presentation 7 - Title: Socioeconomic and Geographical Disparities to Undergoing Endoscopic Resection for Stage I Rectal Cancer in the United States: A National Cancer Database (NCDB) Study

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Background: Stage I rectal cancer (S1ra) is typically treated with upfront surgical excision. In clinical T1 (cT1) disease, endoscopic resection (ER) is now often utilized and offers less morbidity compared to formal surgical resection (SR). However, ER requires skilled endoscopists who are not ubiquitously available. Given existing healthcare disparities in the United States, we assessed the impact of socioeconomic and geographical factors on the use of ER for S1ra using the National Cancer Database (NCDB).

Methods/Research Design. National Cancer Database (NCDB) retrospective analysis was performed in clinical S1ra patients who underwent ER or SR between 2006-2021. We analyzed socioeconomic considerations to characterize factors associated with undergoing ER and overall survival (OS).

Results: 21,755 cT1 patients (49.8% ER, 50.2% SR) and 16,019 cT2 patients (17.2% ER, 82.8% SR) were included. ER patients were older with more comorbidities. In cT1 patients, male gender, black race, treatment between 2016-2021, at an academic center, or from Northeast or North Central regions were more likely to undergo ER. For cT2 patients, black race, treatment between 2016-2021, and from the Northeast region were more likely to undergo ER. There was no difference in education status, household income, or being treated at an academic versus community hospital in patients undergoing ER compared to SR. cT1 patients who underwent ER had superior OS when treated between 2016-2021 compared to 2006-2010 (HR: 0.87, CI: 0.78-0.97, $p=0.013$), treated at an academic versus community hospital (HR: 0.79, CI: 0.73-0.84, $p<0.001$), being from a metro versus rural county (HR: 0.84, CI: 0.81-0.99, $p=0.042$), and being from the Mountain/Pacific region (HR: 0.87, CI: 0.77-0.98, $p=0.018$) (Figure 1). Differences in these outcomes did not exist for cT2 patients. There was also no difference in OS for all patients based on insurance status or household income.

Conclusion: In S1ra, socioeconomic factors including the type of hospital, urban-rural county designation, and geographic region impacted the likelihood of undergoing ER. These factors also predicted improved OS for cT1 disease. These findings possibly reflect accessibility to advanced endoscopists needed for ER and differences in uptake of minimally-invasive endoscopic surgery, highlighting the need for improved access to specialized providers in underserved areas where ER is performed less frequently and with worse survival.