RESULTS: Setup time for PA was 4.2 min. A total of 24 lesions were removed. PA group had a significantly shorter total procedure time (STD vs. PA = median 43.8 min vs. 11.5, p < 0.001) and fewer muscular injuries (3 vs. 0, p < 0.001) than the STD group. Closure time was 3.2 min, and no leakage was noted up to 60 mmHg. In the clinical case, a 6x4cm sessile polyp at the posterior wall of the Cecum was removed in the same manner, illustrated with this short video. She was discharged on POD 1 without complications.

CONCLUSION: In preclinical trials, PA for tumor excision appears to be feasible, safe, and faster than ESD. Although results are preliminary, PA has the potential for clinical applications.

Outcomes of Inadequate Examined Lymph Node Yield on Pathologic T3N0M0 Colon Cancer Cases Undergoing Surgical Resection with Clear Margins: A National Cancer Database Study
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INTRODUCTION: The T3N0M0 has typically good prognosis when clear margins and an adequate examined lymph node (ELN) yield are achieved. An inadequate ELN yield (<12) is known to be associated with worse overall survival (OS). It is unclear how ELN count affects OS. The national rates of inadequate ELN and its impact on OS in T3N0M0 cases are not well-defined. We aimed to determine the incidence, impact, and factors associated with <12ELN in T3N0M0 colon cancer.

METHODS: The NCDB (2010-2017) was reviewed for pathologic T3N0M0 adenocarcinomas undergoing R0 resection. Cases were stratified by <12 and ≥12ELN. Multivariate analysis evaluated factors associated with <12ELN. Propensity-score matching balanced the groups across demographic, disease, and provider factors. Kaplan Meier curves and multivariate Cox analysis assessed OS. The main outcomes were the incidence, factors associated with <12ELN, and impact on OS.

RESULTS: Of 53,185 cases, 6.8% (n = 3,616) had <12ELN. Older age, black race, comorbidity burden, left-sided resections, and open approach were associated with <12ELN. Female sex, high-grade, and treatment at high-volume facilities (≥500 cancer cases/year) were associated with ≥12ELN. In the matched cohort, the <12ELN arm had worse 1-, 3-, and 5-year OS (94.8%, 79%, 64.9%) compared to ≥12ELN arm (95.9%, 83.7%, 71%) (p < 0.001). In the Cox analysis, <12ELN was associated with worse OS (HR1.282, 95%CI 1.203-1.366; p < 0.001). Female sex, private payors, adjuvant chemotherapy, and treatment at high-volume facilities were associated with improved OS.

CONCLUSION: Inadequate lymph node yield is an independent predictor of worse OS in T3N0M0 colon cancer. Modifiable factors associated with inadequate ELN yield were identified, supporting centralization of care to improve long-term OS.

Pre-National Comprehensive Cancer Network Guideline Inclusion Trends in Receipt of Total Neoadjuvant Chemoradiation for Locally Advanced Rectal Cancer
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INTRODUCTION: Studies reflecting the advantages of total neoadjuvant chemoradiation (TNT) for locally advanced rectal cancer (LARC) have been increasingly described, culminating in the inclusion of TNT as an option in the 2018 NCCN guidelines. This study aims to describe baseline trends in the receipt of TNT, as well as factors associated with its use in years preceding guideline inclusion.

METHODS: A retrospective cohort study using the National Cancer Database (NCDB 2012-2017) of adult patients with clinical stage II/III LARC was performed. TNT status was assigned if patients had received both chemoradiation and chemotherapy prior to surgical intervention. Patient clinicodemographic data and hospital information were collected. Univariate and multivariate analyses were performed.

RESULTS: There were 35,212 patients with stage II (14,159; 40.2%) or stage III (21,053; 59.8%) LARC identified; 19,709 (56%) received TNT. Rates of receipt of TNT ranged from 53.6% (2016) to 58.7% (2013); there was no linear trend identified. The highest rates of TNT were observed in integrated network cancer centers (59.9%; OR 1.29, 95% CI 1.16-1.44) and academic/research programs (57.9%; OR 1.29, 95% CI 1.16-1.44), and in patients with a Charlson score >1. There was a trend towards significantly decreased rates of TNT in Stage II and increased use in Stage III disease during the study time.

CONCLUSION: Rates of TNT use pre-guideline inclusion were consistently above 50% with no clear trend in use over the 6 years. As expected, treatment in academic or integrated facilities demonstrated increased rates of use. Future post-guideline studies may refer to this information as an informative baseline.

Prognostic Impact of Lymphovascular Invasion in Stage 1 Colon Cancer: A National Cancer Database Study
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INTRODUCTION: Biomarkers and histopathological features, such as lymphovascular invasion (LVI) are used to assess prognosis and guide therapy in high-risk colon cancers. However, few studies to date have investigated the impact of these features in early-stage disease. Our goal was to quantify the impact of LVI on overall survival (OS) in Stage I colon cancer.

METHODS: The NCDB (2010-2017) was reviewed for pathological Stage I colon adenocarcinomas that underwent resection with clear margins. Multivariate analysis identified factors associated with LVI. Cases were propensity-score matched, then OS compared across LVI and no LVI groups with Kaplan-Meier curves. Multivariate Cox regression established factors associated with OS. The main outcome measures were the impact of LVI on OS and factors associated with the presence of LVI.

RESULTS: Of 65,642 cases, 7.2% (n=4,726) had LVI. Propensity-score matching resulted in 3,024 cases/arm. The 1-, 3-, and 5-year OS was significantly worse with LVI compared to no LVI: 97.5%, 87.9% and 80% vs 98.1%, 91.6%, and 84%, respectively (p<0.002). In the adjusted Cox model, LVI was significantly associated with worse OS (HR 1.193; 95%CI 1.060-1.350; p=0.005). Factors associated with LVI were left-sided cancers (OR 1.286; 1.204-1.374; p<0.001), pT2 (OR 1.103; 95%CI 1.037-1.174; p=0.002), perineural invasion (OR 5.791; 95%CI 5.051-6.639; p<0.001), and high-grade (OR 3.062; 95%CI 2.822-3.323; p<0.001). Black race was protective against LVI (OR 0.799; 95%CI 0.720-0.888; p<0.001).

CONCLUSION: LVI is a poor prognostic marker in Stage I colon cancer; there is a small, but significant reduction in OS. These results warrant further study on the heterogeneity in assumed low-risk disease, as well as consideration of adjuvant chemotherapy and longer-term surveillance when LVI is present.

Racial and Ethnic Disparity in the Surgical Management of Colorectal Cancer in the Non-Elective Setting

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INTRODUCTION: The purpose of this study was to determine if there are racial and ethnic differences in the surgical approach or postoperative outcomes in a limited cohort of individuals undergoing non-elective surgeries.

METHODS: We performed a retrospective cohort study of adult patients with colorectal cancer undergoing non-elective colorectal surgery using the NSQIP database for the years 2005-2018. Patients with missing race/ethnicity were excluded. We performed logistic regression to compare surgical approach and 30-day postoperative outcomes between four racial and ethnic groups. Multivariable analyses adjusted for patient characteristics and the urgency of the operation. Analyses of postoperative outcomes also adjusted for surgical approach.

RESULTS: 12,572 patients met inclusion criteria: 71% were non-Hispanic white (NHW), 15% non-Hispanic black (NHB), 9% Hispanic, and 6% other. Compared to NHW, NHB race was associated with higher odds of an open approach after adjustment (OR=1.11, 95% CI=1.00-1.25), while Hispanic ethnicity was associated with lower odds (OR=0.85, 95% CI=0.74-0.98). Prior to adjustment, NHB race was also associated with increased odds of a morbidity (OR=1.13, 95% CI=1.02-1.26) or reoperation (OR=1.22, 95% CI=1.00-1.49) within 30 days, but this was non-significant after adjustment. There were no racial or ethnic differences in the odds of 30-day morbidity, mortality, reoperation, or readmission after adjustment. Sensitivity analysis revealed that individuals with missing race/ethnicity were 30% less likely to have an open surgery (OR=0.70, 95% CI=0.63-0.79) and 35% more likely to have a complication (OR=1.35, 95% CI=1.11-1.63).

CONCLUSION: Although NHB individuals were more likely to undergo an open procedure in the non-elective setting, we did not observe worse postoperative outcomes after adjustment.

Rectal Stump Leaks in Patients Undergoing Subtotal Colectomy for Ulcerative Colitis: Inflammatory Bowel Disease Center

Experience
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INTRODUCTION: A restorative proctocolectomy with ileal pouch-anal anastomosis (IPAA) or J-pouch is the most common staged procedure performed to treat ulcerative colitis (UC). Often, a subtotal colectomy (STC) with end ileostomy is performed as a first stage procedure prior to J-pouch creation. This study examines a subset of patients whose course was complicated by rectal stump leaks after initial subtotal colectomy.

METHODS: This retrospective chart review was conducted at a tertiary care inflammatory bowel disease (IBD) center. All UC or