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maintaining the crosstalk between cell death and mitochondrial-specific autophagy in inflammatory bowel disease (IBD).

METHODS: We evaluated intestinal mRNA expression and protein levels of cGAS in patients with IBD. Subsequently, we performed a standard 7-day 2% dextran sodium sulfate colitis model on cGAS KO (n=16) and WT C7/B6 mice (n=13). We assessed the Disease Activity Index (DAI) scores composed of weight loss, stool consistency, and bleeding. We evaluated the tissue via qPCR, western blot, H&E staining, IF, and TUNEL assay.

RESULTS: We found significant increases in cGAS mRNA expression and protein levels in patients with IBD. Our results demonstrate cGAS knockout mice to have worsened severity of colitis compared to wild type mice when subjected to experimental colitis. We report decreased expression of the key autophagy protein, Beclin-1 ($p < 0.01$), decreased conversion of LC3-I to LC3-II ($p = 0.05$), and increased levels of p-62 protein expression, signifying disruption of autophagy. More specifically, our data also demonstrate decreased levels of mitophagy proteins PINK-1 and Parkin in cGAS knockout mice subjected to DSS. Our data demonstrate significantly higher TUNEL and Caspase-3 staining ($p < 0.01$) in cGAS knockout mice subjected to DSS.

CONCLUSION: Our data suggest that cGAS plays a key role in maintaining the intestinal epithelial homeostasis during human IBD and murine colitis by regulating a homeostatic balance between mitochondrial-specific autophagy and cell death.

Choosing the Optimal Approach for Colectomy in the 80-year-old Colorectal Cancer Patient



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INTRODUCTION: As the United States population ages, patients undergo surgery for colorectal cancer later in life, with operations in octogenarians becoming common. However, most geriatric surgery research focuses on patients over 65 years of age, without specifically addressing risks for the octogenarian patient, a population that may have special consideration given their advanced age. The objective of this study is to compare operative approaches for colectomy in colorectal cancer patients aged 80 and older.

METHODS: The NSQIP targeted colectomy database was reviewed for patients age 80 and older undergoing elective colectomy for cancer from 2012 to 2019. Open and minimally invasive surgery (MIS) groups were analyzed according to intention-to-treat. Multivariate logistic regression and negative binomial regression were used for the primary outcome of 30-day mortality and secondary outcomes, while adjusting for preoperative characteristics including: sex, American Society of Anesthesiologists category, emergency operations, and preoperative chemotherapy, among others.

RESULTS: Of the 30,954 patients included, 14,450 underwent open (46.7%) and 16,504 (53.3%) underwent MIS operations. MIS patients experienced lower mortality (OR 95% CI [0.394,0.501], $p < 0.0001$), superficial surgical site infection (OR 95% CI [0.508,0.673], $p < 0.0001$), and reoperation (OR 95% CI [0.746,0.958], $p = 0.008$). MIS patients also had shorter lengths of stay (incidence rate ratio 95% CI [0.713,0.738], $p < 0.0001$). There was no significant difference in anastomotic leak rate (OR 95% CI [0.763,1.059], $p = 0.203$).

CONCLUSION: In octogenarians, minimally invasive surgery outperformed open surgery in nearly all 30-day outcomes. When feasible, minimally invasive surgery should be the preferred option in the advanced elderly patient.

Covid-19 Pandemic Impact on Colorectal Cancer Screening



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INTRODUCTION: The COVID-19 pandemic changed all aspects of healthcare, including access to colorectal cancer screening.

METHODS: We performed a cross-sectional survey assessing attitudes toward screening during the pandemic (n=745)(NCI funding 2T32CA093423).

RESULTS: In this cohort, respondents had a higher completion of fecal occult blood test (FOBT) in the past 3 years than American Cancer Society reported pre-COVID FOBT use (32% vs 11%, $p < 0.0001$), with 42% of respondents completing the FOBT during the pandemic. Colonoscopy completion rates were similar (respectively, 65% vs 61%). Respondents had higher unemployment rates compared to pre-COVID rates (7.4% vs 2.6%, $p < 0.0001$). Given higher unemployment and COVID infection risk, respondents confirmed concerns about copays and COVID when scheduling colonoscopies (52.4% and 65.9%, respectively). Of those who had concerns, some reported that this delayed their screening (57.6% and 59.9%, respectively). Respondents with copay concerns were more likely to be unemployed, with household income $< \$25,000$ and without healthcare insurance. Those with COVID concerns were more likely to be female, never married or widowed, and in poor health. Patients were queried on changes that would increase screening given new pandemic barriers. Offerings of gloves and masks, smaller offices, and weekend screening increased the likelihood of colonoscopy (respectively, 30.7%, 30.7%, 19.7%). Additionally, 51.9% of respondents were willing to do an at-home FOBT test in lieu of colonoscopy. Of those who would use an FOBT, 93.0% would be willing to do follow-up colonoscopy if FOBT is positive.

CONCLUSION: The COVID pandemic has introduced new barriers to colorectal cancer screening. FOBT as an initial test may increase colonoscopy compliance.

Current Trends in Non-Operative Management for Rectal Adenocarcinoma: An Unequal Playing Field?



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INTRODUCTION: Increasing evidence suggests patient-oriented benefits of surveillance and non-operative management (NOM) for rectal cancer with complete clinical response after chemoradiation. However, vigilant surveillance requires excellent access to care. We hypothesize that NOM is increasingly common, especially in groups with higher access to care.

METHODS: Using the National Cancer Database (2006-2017), we identified patients with non-metastatic rectal adenocarcinoma who received neoadjuvant chemoradiation and underwent NOM. We excluded patients who underwent local resection, were medically ineligible for surgery, or were recommended to have surgery but did not. Using logistic regression with backward stepwise selection, we examined periodic rates of NOM, and patient, socioeconomic, and facility-level factors associated with NOM.

RESULTS: There were 65,619 and 9,929 patients who underwent surgery or NOM, respectively. NOM patients increased from 2,354 (13.1%) in 2006-2009 to 4,385 (16.3%) in 2014-2017. Patients who were older, Black, without private insurance, and with less education exhibited higher odds of NOM. Treatment at an academic hospital (adjusted odds ratio [aOR], 0.83; 95% CI, 0.77-0.90) or high-volume center (aOR, 0.76; 95% CI, 0.71-0.80) indicated a lower likelihood of NOM compared to community hospitals or lower volume centers, respectively.

CONCLUSION: NOM of rectal adenocarcinoma increased over time. Academic and high-volume centers were less likely to use NOM. Patients who traditionally have lower access to care, and potentially higher risk of suboptimal surveillance, were more likely to receive NOM. These findings suggest that current NOM use may be driven by patient characteristics and socioeconomic factors rather than increasing evidence for its appropriate use.

Differences in Decisional Regret among Patients Undergoing Elective and Non-elective Colectomy



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INTRODUCTION: Decisional regret (DR) is associated with worse quality of life, higher rates of depression, and worse health outcomes. Understanding the factors associated with DR is critical for effective preoperative counseling; however, it is unknown how surgical urgency affects this outcome. This study compares the factors associated with DR in patients undergoing elective and non-elective colectomies.

METHODS: We performed a retrospective cohort study of patients aged 18 or older undergoing colectomy between January 2017 and February 2020 in the Michigan Surgical Quality Collaborative database. Patients who completed a postoperative survey about DR were included. Patients were stratified by surgical urgency into elective and non-elective cohorts. Patient, procedural, and postoperative factors associated with DR were examined using multivariable logistic regression.

RESULTS: Of 3,290 patients, 2,567 (66%) underwent elective and 1,123 (34%) underwent non-elective colectomies. DR rate was significantly higher in the non-elective cohort (12.7% vs 9.4%, $P=0.002$) compared to the elective cohort. In the elective cohort, DR was associated with 30-day postoperative complications (odds ratio [OR] 1.8; 95% CI 1.3-2.5), 30-day readmissions (OR 1.9; 95% CI 1.2-3.0), and diagnoses of diverticular disease (OR 1.4; 95% CI 1.0-2.0) or inflammatory bowel disease (OR 2.4; 95% CI 1.2-4.8) (reference cancer/adenoma). In the non-elective cohort, DR was associated with female sex (OR 1.5; 95% CI 1.0-2.3) and Black race (OR 2.0; 95% CI 1.1-3.7) (reference White).

CONCLUSION: Postoperative outcomes had a significant impact on DR after elective colectomy, but not after non-elective colectomy. These differences should be carefully considered in preoperative counseling.

Do Comorbid Conditions Increase the Incidence of Venous Thromboembolism after Colorectal Surgery?



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INTRODUCTION: Inadequate prophylaxis results in breakthrough venous thromboembolism (VTE) in surgical patients. We hypothesize that the presence of comorbid conditions in patients undergoing colorectal (CRR) or small bowel resection (SBR) may be at a greater risk of developing VTE than what is reported in the literature.

METHODS: All patients undergoing CRR and/or SBR from 7/1/2017 to 6/30/2020 were identified. Incidence of preoperative or postoperative VTE were determined: deep venous thrombosis (DVT), pulmonary embolism (PE), portal vein thrombosis (PVT), or inferior vena cava thrombosis (IVCT). Patient demographics, baseline laboratory values, medical co-morbidities, and 30-d outcomes were recorded. All patients received multimodal