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[Abstract:0100]**Local-invasive colorectal cancer complicated by intestinal obstruction****Valerii Pavlovich Kryshen, Volodymyr Mushinin***

General Surgery Department, Medical University, Dnipro, Ukraine

Background: Our goal had been evaluating cases of local-invasive CRC complicated by IO in a surgical point.**Methods:** The short-term result of 32 patients surgical treatment in a cause of CRC complicated by IO had been analyzed. In all cases tumor invasion into the surrounding tissue was detected by computed tomography (CT). In 18 cases the tumor grew into peritoneum, fascial-muscular structures, in 14 cases cancer spread involving other next organs of the abdominal cavity. 32 primary radical surgery were performed with restoration of the alimentary tract continuity: 28 interventions with removal of the organ-complex and soft tissues of the abdominal wall, 1 operation added with resection of the right ureter and 3-need splenectomy.**Results:** The complications in the early postoperative period were not detected. In two cases a stricture of the ureter developed one-two months later, which required stenting. In all cases tumor invasion into surrounding anatomical structures was morphologically confirmed.**Conclusions:** The conducted study confirmed high informative value of CT in CRC complicated by IO. The local-invasive CRC with IO required performing advanced primary radical surgical interventions with intestinal anastomoses. To prevent anastomoses failure and improving their protection it has been necessary to provide the intraoperative decompression and sanitation of intestine.**Keywords:** Colorectal cancer (crc), Intestine obstruction**[Abstract:0101]****Comparison of short-term outcomes between intracorporeal isoperistaltic and antiperistaltic anastomosis for right colectomy: A retrospective study on 214 consecutive patients****Mingguang Zhang*, Zheng Liu, Zhao Lu, Xiyue Hu, Zhaoxu Zheng, Haitao Zhou, Xishan Wang**

Cancer Hospital, Chinese Academy of Medical Sciences, China

Background: Totally laparoscopic right colectomy (TLRC) has been demonstrated to be safe and feasible. Two manners of anastomosis, namely, antiperistaltic and isoperistaltic side-to-side anastomosis (SSA), have been described before. However, research concerning the influence of different peristaltic orientations on anastomosis is scarce. The aim of this study was to compare the short-term outcomes between these two modalities for right colectomy.**Methods:** We retrospectively reviewed 214 consecutive patients who underwent TLRC from January 2017 to December 2020 at our medical center. Data on demographics, disease features, pathological characteristics, operative details and short-

term outcomes were collected and analyzed. Each patient in the isoperistaltic SSSA group was matched to a member of the antiperistaltic SSSA group using propensity scores.

Results: We found that operative features such as operating time ($p=0.18$), intraoperative bleeding ($p=0.36$), number of harvested lymph nodes ($p=0.58$) and length of incision ($p=0.18$), as well as parameters of postoperative recovery such as time to first flatus ($p=0.51$), time to first defecation ($p=0.55$), and length of stay ($p=0.18$) were statistically comparable between the two groups. The postoperative complication rate according to Clavien-Dindo classification system was also similar ($p=0.77$).**Conclusions:** According to this study, intracorporeal isoperistaltic SSA can achieve a short-term outcomes similar to that of antiperistaltic SSA.**Keywords:** Isoperistaltic, Antiperistaltic, Intracorporeal anastomosis, Right colectomy**[Abstract:0102]****Analysis of learning curve for laparoscopic low anterior resection with transanal natural orifice specimen extraction (NOSE): A single institution's experience****Mingguang Zhang*, Zheng Liu, Xu Guan, Haipeng Chen, Zhixun Zhao, Zheng Jiang, Xishan Wang**

Cancer Hospital, Chinese Academy of Medical Sciences, China

Background: Laparoscopic colorectal surgery with NOSE is safe and feasible. But research concerning about learning process of NOSE has not been described before. This study is aimed to evaluate the learning curve of laparoscopic surgery of rectal cancer with NOSE.**Methods:** 185 consecutive patients who underwent transanal NOSE for laparoscopic rectal cancer resection were reviewed. By using cumulative sum (CUSUM) and risk adjusted-cumulative sum (RA-CUSUM), multi-dimensional analysis was performed.**Results:** According to CUSUM of operating time (CUSUMOT), learning process of the institution was divided into two periods: phase 1 (1-96) and phase 2 (97-185). CUSUMOT and RA-CUSUM analysis for two surgeons showed that learning process was divided into learning period (1-25 for surgeon A and 1-28 for surgeon B), plateau period (26-40 for surgeon A and 29-40 for surgeon B) and competent period (41-59 for surgeon A and 41-92 for surgeon B). Operating time and intraoperative bleeding decreased with experience accumulation. 3-year RFS rate was better during the competent period.**Conclusions:** Laparoscopic surgery of rectal cancer with transanal NOSES is relatively easy to master for experienced surgeons. According to this study, a minimum of 40 cases are required for a surgeon with a degree of laparoscopic experience.**Keywords:** Rectal surgery, Natural orifice specimen extraction (NOSE), Learning curve

The authors marked with an asterisk (*) are the corresponding authors.

[Abstract:0103]**Totally laparoscopic low anterior resection with transanal extraction combined with anvil placement via stoma site****Xiaolong Ma*, Haipeng Chen, Xu Guan, Zhixun Zhao, Ming Yang, Zhaoxu Zheng, Zheng Liu, Xishan Wang**

Department of Colorectal Surgery, National Cancer Center; National Clinical Research Center for Cancer; Cancer hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China

Background: Protective ileostomy procedure has been applied to prevent anastomotic leakage. Conventional laparoscopic low rectal resection demands a major incision in the abdominal wall for specimen extraction and inserting the anvil into the proximal bowel when protective ileostomy procedure was also needed. In this study, we aim to report a modified method of specimen extraction by rectal eversion technique combined with anvil placement via stoma site.

Methods: The patients underwent laparoscopic LAR and protective ileostomy from September 2015 to September 2018 were enrolled and the patients were divided into two group: experimental group ($n=74$) and conventional group ($n=64$). The patients' demographic characteristics, perioperative and postoperative outcomes, pathology results, and visual analog scale score were compared.

Results: A total of 138 patients underwent laparoscopic LAR with protective ileostomy. The average total incision length in experimental group was significantly shorter than in conventional group. The postoperative pain in the experimental group during the first three days after surgery was significantly decreased compared to the conventional group. The incidence of wound-related complications was lower in the experimental group than in the conventional group.

Conclusions: The study suggested that it is safe and feasible to insert anvil via stoma site, when performing total laparoscopic LAR with protective ileostomy.

Keywords: Rectal eversion technique, Anvil placement

[Abstract:0106]**KRAS p.G12V mutation may change the sensitivity of LARC to nCRT by affecting cell cycle****Hengchang Liu*, Zheng Jiang, Xishan Wang**

Department of Colorectal Surgery, National Cancer Center/ National Clinical Research Center for Cancer/Cancer Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, China

Background: The response of patients with locally advanced rectal cancer (LARC) to neoadjuvant chemoradiotherapy (nCRT) varies greatly.

Methods: Based on our previous research, we constructed a colorectal cancer cell line with KRAS (p.G12V) mutation. CCK-8 and flow cytometry were used to detect the changes of cell proliferation, apoptosis and cell cycle after irradiation. The mechanisms were explored and verified by proteomics and phosphorylation.

Results: We found that KRAS (p.G12V) mutation cells can promote cell proliferation, but after irradiation, it can inhibit

cell proliferation and apoptosis. Flow cytometry results showed that the proportion of G2-M phase cells of KRAS (p.G12V) mutation cells increased significantly after irradiation. These results were also confirmed in vivo experiments. The results of proteomics suggest that KRAS p.G12V mutation may affect cell cycle related pathways, resulting in decreased radiosensitivity of cells.

Conclusions: KRAS (p.G12V) mutation may affect the cell cycle, block the irradiated cells in G2-M phase, prolong the time of DNA damage repair (DDR), and reduce the sensitivity of cells to radiation.

Keywords: Rectal cancer, locally advanced rectal cancer, neoadjuvant chemoradiotherapy, KRAS, mechanism

[Abstract:0110]**Appendiceal mucocele: Brief series and review of the literature****Süleyman Atalay***

Sultan 2. Abdülhamid Han Training and Research Hospital, Department of General Surgery, Istanbul, Turkey

Background: Appendiceal mucocele is defined as a cystic dilatation of the appendix due to the accumulation of abnormal mucoid material in the lumen of the appendix vermiformis.

Methods: In this study, pathology results of 901 patients who underwent appendectomy between 2013 and 2020 were reviewed. Based on the literature, age, gender, clinical findings, diagnostic tests and histopathological results of 10 patients who were diagnosed histopathologically with appendiceal mucocele were analyzed and retrospectively evaluated.

Results: 901 patients who underwent appendectomy between 2013 and 2020 were retrospectively analyzed. Mucocele was detected in 7 patients and mucinous cystadenoma was detected in 3 patients. Appendectomy was performed in 10 patients (4 urgent, 6 elective), 9 conventional and 1 laparoscopic surgery. During the operation, no mucocele perforation was observed in any patient, which could be the cause of pseudomyxoma peritonei.

Conclusions: Appendix mucocele is a rare pathology with benign and malignant potential. Treatment is always surgical and determined by the integrity of the organ, the dimensions of its base and the histological type of the lesion. During surgery, care should be taken not to cause peritoneum, pseudomyxoma, which is the most feared complication.

Keywords: appendiceal mucocele, cystic dilatation

[Abstract:0114]**Platelet rich plasma application in treatment of recurrent pilonidal disease****Nurullah Damburacı, Barış Sevinç*, Ömer Karahan**

Department of General Surgery, Uşak Univesity School of Medicine, Uşak, Turkey

Background: There are several options defined for treatment of pilonidal disease. The common problem of all methods is the recurrence and there is no consensus about the management of the recurrent disease. Platelet Rich Plasma (PRP) has shown to be a safe and effective method for treatment of primary pilonidal disease. The aim of this study is to evaluate the results of PRP application in recurrent pilonidal disease.

Methods: The study was conducted at Uşak Training and Research Hospital. Patients with postsurgical recurrent pilonidal disease were included in the study. All procedures were performed under infiltration anaesthesia. After removal of foreign material and cleaning of the sinus tract with saline solution, PRP gel prepared from the patients' own blood was placed into the sinus tract.

Results: Mean healing time of 54 cases was 11.9 ± 6.6 days. Seventy-seven point eight percent of cases had one course of PRP application; 20.4% of cases had two and 1.9% of cases had three PRP applications. After a mean follow up of 19.9 ± 4.5 months we met recurrence only in one case.

Conclusions: With the low recurrence rate and fast healing time platelet rich plasma can be safely used for treatment of recurrent pilonidal disease.

Keywords: Pilonidal disease, Platelet rich plasma

[Abstract:0115]**Effect of soft computed microbiome treatment in chronic constipation: Randomized controlled trial****Naciye Cigdem Arslan*¹, Damla Beyazgul², Oguzhan Hakan Topgul¹, Aycan Gundogdu³, Ozkan Ufuk Nalbantoglu⁴**¹Department of General Surgery, Istanbul Medipol University, Istanbul, Turkey²Faculty of Nutrition and Dietetics, Ankara University, Ankara, Turkey³Faculty of Computer Science and Engineering, Erciyes University, Kayseri, Turkey⁴Department of Gastroenterology, Erciyes University, Kayseri, Turkey

Background: Current medications and behavioral modifications have limited success in the treatment of chronic constipation (CC). Individualized diet based on microbiome analysis may improve symptoms in CC.

Methods: Between December 2020-March 2021 42 patients fulfilling Rome IV criteria for functional constipation were randomized into 2 groups. Control group received traditional treatments (laxatives, enemas, increased fiber and fluid intake eg.). Study group underwent microbiome analysis and received an individualized diet prescribed by a soft computing system (Enbiosis Biotechnology®, Sariyer, Istanbul). Differences in Patient Assessment Constipation-Quality of Life (PAC-QoL)

score and complete bowel movements per week (CBMpW) were compared between groups after 6 week-treatment.

Results: Thirty-eight (20 in control and 18 in study groups) patients were included. Mean age and BMI were 31.5 ± 10.8 years and 26.1 ± 5.2 kg/m². Mean duration of constipation was 89.8 ± 72 months. Mean PAC-QoL score decreased from 52 ± 18.5 to 14.4 ± 4.1 in study group ($p < 0.001$) and remained similar (59.5 ± 10.4 to 55.1 ± 8.5) in control group ($p = 0.125$). Mean pre-treatment CBMpW was 2.1 ± 2.2 and 1.8 ± 1.9 in control and study groups and increased to 2.8 ± 2 ($P = 0.542$) and 4.6 ± 2.1 ($p = 0.010$) after treatment.

Conclusions: Soft computed microbiome treatment may improve QoL and CBMpW in CC when compared with conventional medications and diets.

Keywords: Constipation, Microbiome

[Abstract:0117]**Does home oral nutrition support improves nutritional status and Quality of life who undergone colorectal cancer surgery?****Bilal Arslan*, Tahsin Çolak**

Division of Surgical Oncology, Department of Surgery, School of Medicine, Mersin University, Mersin, Turkey

Background: Malnutrition is prevalent in colorectal cancer patients. Fast-track surgery is a multimodal approach to patient care using a combination of several evidence-based perioperative interventions to expedite recovery after colorectal surgery. We aimed to evaluate the nutritional status, morbidity, readmissions, functional status, QoL (Quality of life) of patients who underwent elective colorectal cancer surgery and initiated home ONS.

Methods: 219 patients who underwent colorectal cancer surgery between 01.09.2017-01.09.2019 and initiated home ONS after the ERAS pathway were evaluated retrospectively. 144 patients were included and analyzed in terms of demographics, diagnosis, weight changes, BMI changes, readmissions, morbidity, duration of enteral nutritional use, daily caloric and Protein intake, functional status (Barthel index), and Quality of life (The Satisfaction with Life Scale-SWLS).

Results: The BMI mean value increased from 20.63 ± 4.01 to 23.96 ± 3.75 . Barthel Index points were significantly higher in the patient group who daily received 1000 kcal (76.9% & 79.4) ($p < 0.05$). The SWLC index mean score of well-being was high (22.75 ± 8.77), but no significant difference was observed.

Conclusions: ONS after ERAS pathway has positive effects on BMI, functional status, and QoL in colorectal cancer patients. The patients gained weight, mean BMI value increased, functional status, and Quality of life improved.

Keywords: Colorectal neoplasm, Malnutrition

[Abstract:0122]**Treatment of hemorrhoids using high frequency welding technology****Valerii Pavlovich Kryshen, Maxsym Ivanyk*, Ivan Kalka, Mykhailo Shevchuk, Mykola Trofimov**

General Surgery Department, Medical University, Dnipro, Ukraine

Background: Despite of progress in modern medicine the effectiveness of hemorrhoids treatment has been remained unsatisfactory. The our aim was to evaluate effectiveness of high frequency welding technology in hemorrhoids surgery.

Methods: We observed 136 patients suffered by combined and complicated hemorrhoids who underwent surgery using welding machine. Efficiency was assessed during 5 years (2015–2020) after surgery according to the criteria of likelihood of relapse, pain level, close and distant complications, anatomical condition of anal mucous structure, duration of disability, need for hospitalization in surveillance period.

Results: Analysis revealed that it's advisable to provide staged methodical approach based on high energy techniques in surgical treatment of 136 hemorrhoids because of significant reduce average time of disability more than 50 % compared with Milligan-Morgan performed operation (453 cases), eliminated the need for hospitalization during long-term period even with hemorrhoids of 3–4 degrees and better SF-36 scoring on the whole.

Conclusions: The hemorrhoids surgery with using high energy device brought about more hopeful clinical and functional result and hasn't been characterized by distant complications such as a structure of the anal canal.

Keywords: Hemorrhoids, Surgery

[Abstract:0125]**Changes in cerebral oxygen saturation with the Trendelenburg position and increased intraabdominal pressure in laparoscopic rectal surgery****Murat Çakır, Selman Alkan*, Mustafa Şentürk, Gülçin Hacibeyoğlu, Mehmet Aykut Yıldırım, Mehmet Biçer**

Department of the General Surgery, Meram Medical School, Necmettin Erbakan University, Konya, Turkey

Background: Position changes and increased intra-abdominal pressure in laparoscopic interventions lead to some physiopathological changes. The results of studies on hemodynamic effects caused by laparoscopic surgery are not compatible with each other. There is no definite information in the literature regarding cerebral oxygen saturation in patients undergoing colorectal surgery. Our aim is to investigate whether there is oxygen saturation change in brain tissue in pneumoperitoneum and the Trendelenburg position during laparoscopic rectal surgery.

Methods: The study was conducted prospectively, with the approval of the ethics committee. Cerebral oxygen saturation was measured in 35 patients who underwent laparoscopic rectal surgery in the Trendelenburg position. Measurements were made under general anesthesia in pneumoperitoneum and the Trendelenburg position.

Results: The study was conducted on 35 patients, 7 female and 28 male, who underwent laparoscopic rectal surgery. The values that are statistically affected by the position are systolic blood pressure, mean arterial blood pressure and cerebral oxygen saturation. The Trendelenburg position does not disturb the cerebral oxygen saturation and it causes an increase in saturation. After pneumoperitoneum occurred, changes in systolic blood pressure, mean arterial blood pressure and brain oxygen saturation were detected.

Conclusions: The Trendelenburg position and increased intraabdominal pressure during laparoscopic surgery do not impair brain oxygen saturation.

Keywords: Position, Saturation

[Abstract:0126]**The efficacy and results of medical treatment in postoperative ileus****Murat Çakır, Abdullah Gürhan Duyan, Mustafa Şentürk, Mehmet Aykut Yıldırım, Mehmet Metin Belviranlı, Selman Alkan***

Department of the General Surgery, Meram Medical School, Necmettin Erbakan University, Konya, Turkey

Background: Postoperative paralytic ileus refers to the disruption of the normal coordinated propulsive motor activity of the gastrointestinal system following surgery. The aim of this study was to investigate the efficacy of gastrografin, neostigmine and their combined administration in patients diagnosed with paralytic ileus in the postoperative period.

Methods: The prospective randomized study is involving prolonged postoperative ileus cases following colorectal surgery. Neostigmine, gastrografin and their combination were utilized for the treatment of patients with prolonged postoperative ileus and their efficacy was compared. Patients in the gastrografin and neostigmine combined group had earlier gas and/or stool discharge.

Results: The study covered 112 patients. Gastrografin was administered to 63 patients; neostigmine was administered to 29, while 20 patients received the combination of the two. Data pertaining to the comparison of the two groups revealed that patients in the gastrografin group were discharged earlier than those in the neostigmine group. Further, patients in the combined group had earlier gas and/or stool discharge and were also discharged from the hospital earlier than those in the neostigmine group.

Conclusions: Gastrografin and combined use of gastrografin and neostigmine are effective and viable methods for postoperative ileus cases. Gastrografin can safely be used in patients with anastomoses.

Keywords: Postoperative Ileus

[Abstract:0138]**Colorectal cancer and PET/CT****Alev Çınar***

Gülhane Education and Training Hospital, Department of Nuclear Medicine, Ankara, Turkey

Background: Colorectal cancer (CRC) is a common type of cancer, and the detection of treatment response improves the survival rate.

Methods: 168 CRC patients underwent baseline and serial FDG PET/CT for the assessment of treatment response and analyzed retrospectively.

Results: Local recurrence or distant metastasis was detected in 33.9% of the study population and the mean time to recurrence after primary surgery was 3.66 ± 2.98 years. Local recurrence was detected in 11 patients in the rectosigmoid group, 14 in the descending colon group, 7 in the transverse colon, 22 in the ascending colon, and 3 in the caecum. The mean SUVmax of local recurrence was 8.97 ± 3.42 g/dl.

Lung metastasis was observed in 34 (20%) patients. The mean SUVmax of lung nodules was 6.05 ± 2.78 g/dl. Bone metastasis was detected in 8 patients and all of these had lung metastasis as well.

Conclusions: Local recurrence rate was higher in the ascending colon group, but liver or lung metastasis rate was higher in the rectosigmoid group. Our investigation revealed a 38% higher risk of lung metastasis suggesting that lung imaging should be integral to clinical follow-up.

Keywords: FDG PET/CT, Colorectal cancer

[Abstract:0140]**Prognostic significance of pelvic tumoral complexity ("petcom") score in multidisciplinary management of pelvic tumoral masses****Ali Durubey Çevlik*¹, Selman Sökmen¹, Tayfun Bişgin¹, Funda Obuz², Burçin Tuna³, Işıl Somalı⁴, Hülya Ellidokuz⁵, İlnur Bilkay Görken⁶**¹Faculty of Medicine, Department of General Surgery, Dokuz Eylül University, Izmir, Turkey²Faculty of Medicine, Department of Radiology, Dokuz Eylül University, Izmir, Turkey³Faculty of Medicine, Department of Pathology, Dokuz Eylül University, Izmir, Turkey⁴Faculty of Medicine, Department of Medical Oncology, Dokuz Eylül University, Izmir, Turkey⁵Faculty of Medicine, Department of Biostatistics and Medical Informatics, Dokuz Eylül University, Izmir, Turkey⁶Faculty of Medicine, Department of Radiation Oncology, Dokuz Eylül University, Izmir, Turkey

Background: This study is aimed to assess the results of multidisciplinary approach in management of patients treated for unknown pelvic masses and to develop a pelvic tumour complexity score to determine the prognostic significance in surgical/final oncological outcomes.

Methods: The prospectively maintained clinicopathological database of 100 patients examined for unknown pelvic tumoral mass were analyzed. The PETCOM score was defined by combining the specific radiological evaluative parameters and peri-

operative surgical findings. The cut-off point of PETCOM score was determined with ROC analysis and Youden index. The cut-off values dichotomized into two patient subgroups: low vs high PETCOM scores.

Results: Colorectal resection was performed in 24%. The morbi-mortality rates were 30 and 43%, respectively. In multivariate analysis, the PETCOM score was found to be a strong independent prognostic factor for mortality ($p=.022$), local recurrence ($p=.004$), and distant metastasis ($p=.007$). A statistically significant difference was found between the overall survival of patients with low (138.62 ± 13.05 months) and high PETCOM (62.53 ± 9.25 months) scores ($p<.001$).

Conclusions: The PETCOM score is a reliable and a valid prognostic and predictive factor to improve clinical morbi-mortality results and oncologic outcomes.

Keywords: Pelvic cancer, Complexity score

[Abstract:0141]**Effect of Covid-19 pandemic on colonoscopy diagnoses****Ahmet Cem Esmer, Muhammed İkbâl Akın*, Evren Peker, Şevket Cumhuri Yeğen**

Department of General Surgery, Marmara University Pendik Training and Research Hospital, İstanbul, Turkey

Background: COVID-19 was first identified in December 2019 in China. Due to rapid transmission through respiration, precautions to be taken in the endoscopy unit increased. Hospital admissions decreased due to restrictions. We compared pre- and post-pandemic colonoscopy procedures in terms of age, gender and diagnosis.

Methods: We retrospectively analyzed patients who underwent endoscopy between May–December 2019 and May–December 2020 in Marmara University Hospital General Surgery Clinic endoscopy unit in terms of gender, age and endoscopic diagnosis. Statistical analyzes were performed with SPSS15.0.

Results: Number of colonoscopies performed in pre-pandemic period was 1080 in the aforementioned date range, it was observed that the number was 860 in post-pandemic period. There was no statistical difference age and gender distribution. There was no statistical difference between the two periods in the diagnosis of anal fistula, postoperative control, Crohn's, Rectal ulcer, Right colon tumor, Transverse colon tumor, Left colon tumor, and Ulcerative colitis. A statistically significant increase was observed in the diagnosis of hemorrhoids, diverticulum and rectum tumors in the post-pandemic period. A statistically significant decrease was observed in normal colonoscopy and polyp diagnoses.

Conclusions: The closure caused by the pandemic and the measures taken in the endoscopy unit resulted in a decrease in the number of total colonoscopy and colonoscopy without endoscopic pathology.

Keywords: Colonoscopy, COVID-19

[Abstract:0150]**Low anterior resection syndrome rates and risk factors of patients underwent sphincter-sparing rectal surgery****Hilmi Yazici*, Muhammed Said Dalkilic, Muhammed Ikbal Akin, Sevket Cumhuri Yeğen, Wafi Attaallah**

Marmara University Pendik Research and Treatment Hospital, Istanbul, Turkey

Background: The aim of this study was evaluating the Low anterior resection syndrome (LARS) rates and risk factors after sphincter-sparing rectal surgery (SSRC).**Methods:** The medical records of patients who underwent SSRC between 2016 and 2020 were analyzed. Data regarding demographics, neo/adjuvant chemo-radiotherapy, and type of resection were retrospectively analyzed. LARS scoring system defined by Emmertsen and Laurberg was used to calculate LARS scores.**Results:** 129 patients were enrolled in this study. Anterior resection (AR), low anterior resection (LAR), very low anterior resection (VLAR), and intersphincteric resection were the procedures performed. LARS were reported in 60(%47) patients among all the cohort study after 12(1–30) months of follow-up. LARS was reported in %12($n=3$) among patients underwent AR, however, this rate was %54($n=57$) among patients underwent more distal resections (LAR, VLAR, and IR; $p<0.001$). Furthermore, LARS rate was significantly higher among patient underwent VLAR-IR LARS than those underwent LAR (%83 vs %41 $p<0,001$). Multivariate analysis showed that more distal resections were the only significant ($p: 0,013$) risk factor for LARS.**Conclusions:** LARS was common among patients underwent SSRS. The more distal resection was the clearly risk factor for LARS. These results should be more considered after surgery, and treatment should be recommended.**Keywords:** LARS, Rectum**[Abstract:0151]****Debridement and laser treatment versus debridement alone in pilonidal disease: Prospective observational study****Alparslan Saylar*¹, Tansu Altıntaş², Uygar Duzci¹, Naciye Cigdem Arslan¹**¹Department of Surgery, Istanbul Medipol University, Istanbul, Turkey²Department of Surgery, Kanuni SS Research Hospital, Istanbul, Turkey**Background:** This study aims to investigate the effect of laser therapy (LT) in minimally invasive management of pilonidal disease (PD).**Methods:** Data of the patients with Tezel type III, IV and V PD eligible for simple debridement have been collected since March 2018. All the patients underwent debridement (removal of hair and/or necrotic tissues through pits using a clamp/curette/brush) of PD; laser ablation was added in patients who willing to have LT. Surgical outcome of two procedures were compared. Primary outcome measure was recurrence at 18 months.**Results:** One hundred twenty one patients (80 debridement alone and 41 debridement + LT) were included in the analysis. Median follow-up was 22 (18–108) months. Recurrence was seen in 8 (10 %) patients in debridement group and 3 (7.3 %) in laser group ($p=0.452$). Time to return to work (3.2 ± 2.2 vs 6.7 ± 2.3 days, $p<0.001$), sit pain-free (5.1 ± 2.1 vs 7.8 ± 3.1 days, $p=0.003$) and complete healing (10.1 ± 2.3 vs 14.1 ± 3.8 , $p<0.001$) were significantly shorter in LT group. All 14 (17.5 %) complications including bleeding, seroma and wound infection were seen in debridement only group ($p=0.002$).**Conclusions:** Laser ablation when added to debridement has no effect on short-term recurrence but significantly reduces postoperative complications and work-day loss.**Keywords:** Laser treatment, Pilonidal disease**[Abstract:0158]****Factors affecting anastomotic leakage after right hemicolectomy for cancer: Single center experience****Timuçin Erol*, Salih Süer, Mustafa Oruç, Kaya Yorgancı**

Hacettepe University Faculty of Medicine, Department of General Surgery, Ankara, Turkey

Background: Although anastomotic leakage after right hemicolectomy is relatively low, it is the most important life threatening complication. Aim of this study is to investigate the factors affecting anastomotic leakage after right hemicolectomy.**Methods:** All patients ≥ 18 years of age, undergoing right hemicolectomy for a diagnosis of adenocarcinoma in the right colon between 2016 and 2020 included to study. Primary outcome was anastomotic leakage rate secondary outcome was mortality rate. Patient demographics, co morbidities, preoperative laboratory tests, perioperative transfusion, performing surgeon, anastomotic technique, tumor stage, and timing of surgery (elective v.s emergent) are the variables which are investigated.**Results:** Total 141 patient included to study. Mean age was $62,39\pm 12,6$. Total anastomotic leakage rate was % 9.2 ($n=13$) and overall mortality rate was % 5 ($n=7$). Anastomotic leakage rate of patients over 65 y.o was %15.3 whereas this rate was % 4.9 under 65 y. o. timing of surgery is found to be the other risk factor for leakage ($p=0,001$). Other factors did not have an effect on anastomotic leakage rate.**Conclusions:** Age of the patient and timing of the operation are the factors affecting anastomotic leakage after right hemicolectomy.**Keywords:** Anastomotic leakage, Right hemicolectomy

[Abstract:0160]**Short term outcomes after laparoscopic colorectal cancer surgery with transvaginal versus conventional specimen extraction****Xiyue Hu*, Mingguang Zhang, Xu Guan, Zheng Liu, Haipeng Chen, Zhaoxu Zheng, Haitao Zhou, Xishan Wang**

Department of Colorectal Surgery, National Cancer Center/ National Clinical Research Center for Cancer/Cancer Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China

Background: Natural orifice specimen extraction has been considered to accelerate postoperative recovery. Few studies have focused on the effect of transvaginal specimen extraction on surgical outcomes, cosmetic outcomes and sexual function in colorectal surgery.**Methods:** This study was a propensity score-matched comparative retrospective study, conducted in a single center. Between November 2015 and November 2019, 83 pairs of propensity score-matched female patients received laparoscopic radical resection for stage I-III colorectal cancer with transvaginal specimen extraction and conventional specimen extraction. Age, T stage, cancer stage, tumor diameter and differentiation were used as covariates of propensity score. Outcome measures included postoperative complication, sexual function, and cosmetic results.**Results:** In each group, one rectal cancer patients had vaginal fistula; only one patient in transvaginal group had anastomotic leak. Patients in transvaginal group used less additional analgesics (16 vs 28, $p=0.035$), and had fewer wound complications (2 vs 11, $p=0.009$). No difference was found in pre- and post-operative Female Sexual Function Index score between the two groups ($p=0.952$, $p=0.816$). Patient Scar Assessment Questionnaire Score revealed a better cosmetic outcome in transvaginal group ($p=0.000$).**Conclusions:** Transvaginal specimen extraction improved short-term outcomes as well as cosmetic results while brings limited adverse effect on female's sexual function.**Keywords:** Colorectal cancer, Natural orifice specimen extraction surgery**[Abstract:0162]****Can the size/morphology/site/access score be used to evaluate advanced pathology risk stratification of colorectal polyps?****Tahsin Dalgic*¹, Abdullah Senlikci², Musa Akoglu¹, Erdal Birol Bostanci¹**¹Department of Gastroenterology Surgery, Ankara City Hospital, Ankara, Turkey²Department of Gastroenterology Surgery, Ankara Training and Research Hospital, Ankara, Turkey**Background:** The SMSA scoring system is a scoring system that assesses the difficulty of polypectomy by evaluating the size, morphology, site and access to the polyp during colonoscopy. The aim of this study was to evaluate the risk stratification of advanced pathology using the SMSA scoring system.**Methods:** This retrospective study included patients who underwent endoscopic mucosal resection for colon polyps in the endoscopy unit of the Gastroenterology Surgery Clinic between 2014–2019.**Results:** A total of 354 procedures were evaluated. Of the total lesions, 92.9 % were <2 cm. 71.8 % were sessile, 70.9 % were in the left colon and in 91.2 % the access was easy. Stages of the lesions were determined as 34.7 % at stage 1, 57.9 % at stage 2, 6.5 % at stage 3 and 0.8 % at stage 4. It was observed that the possibility of additional procedure, complication, surgical necessity, piecemeal resection and advanced pathology increased with increasing SMSA score ($p<0,001$).**Conclusions:** The SMSA scoring system can be used to assess the risk stratification of advanced pathology in colorectal polyps.**Keywords:** Size/Morphology/Site/Access score, Advanced pathology, Colorectal polyps**[Abstract:0163]****How to manage localized low-grade appendiceal mucinous neoplasia?****Emine Kurt*, Sevim Turanlı**

SBU, Ankara Oncology Education and Research Hospital, Department of Surgical Oncology, Ankara, Turkey

Background: Low grade appendiceal neoplasia (LAMN) is a rare tumor. This study aimed to evaluate surgical approaches in localized LAMN.**Methods:** A retrospective database search for LAMN in our institution between June 1st, 2017 and June 1st, 2021 revealed 16 patients. Three patients with pseudomyxoma peritonei at the time of diagnosis and 2 patients with colon adenocarcinoma, incidentally diagnosed during the operation as LAMN were excluded from the study. Rest of the patients were grouped as patients treated just with appendectomy (Group I) and as patients treated with coeectomy or right hemicolectomy (Group II).**Results:** There were 5 patients in group I and 6 patients in group II. Seven patients were female and median age was 63 years. Preoperative diagnosis was acute appendicitis in 2 patients, and appendiceal tumor or right lower abdominal mass in 9. Two patients operated for acute appendicitis had perforation and acellular mucin at right lower quadrant. Median macroscopic tumor size was 4.5 cm. T stage distribution in Group I and Group II was; Tis 40.0 %/66.7 %, T4A: 60.0 %/16.7 % and T4B: 0.0 %/16.7 %; M stage as M0: 80.0 %/83.3 % and M1A: 20.0 %/16.7 %. Median follow-up was 25 months. None of patients had recurrence.**Conclusion:** In LAMN even with localized peritoneal dissemination, appendectomy seems efficient for surgical treatment.**Keywords:** Low grade appendiceal neoplasia, Surgery

[Abstract:0170]**Comparison of transanal and transvaginal specimen extraction in laparoscopic colorectal surgery****İsmail Ertuğrul*, Yunus Emre Altuntaş, Selçuk Kaya, Önder Altun, Hakan Uzunoğlu, Hasan Fehmi Küçük**

Kartal City Hospital, Department of General Surgery, Istanbul, Turkey

Background: This study is intended to compare the outcomes of transanal and transvaginal NOSES in patients undergoing laparoscopic colorectal surgery.**Methods:** This study included 45 patients who were scheduled for NOSES after laparoscopic colorectal resection in our clinic January 2019 and March 2020. NOSES was performed on 36 patients during this period. For extraction after laparoscopic resection, transanal approach was preferred while transvaginal approach was used in female patients where transanal approach failed.**Results:** The size of the lesion was larger in the transvaginal group than the transanal group. Two complications associated with extraction were observed. One patient who underwent transanal extraction procedure developed transient anal incontinence, which was spontaneously resolved. A patient with transvaginal extraction developed anastomosis leakage and rectovaginal fistula associated with anastomosis leakage. Recovery was then achieved in the patient by placing a colonic stent.**Conclusions:** Since the only statistically significant difference between the transanal and transvaginal routes was in terms of lesion size, it is necessary to avoid causing a secondary organ injury and therefore to primarily prefer transanal route. However, if the diameter of the lesion is large and the patient is female, transvaginal route can be an alternate.**Keywords:** Natural orifice specimen extraction surgery, Laparoscopic colorectal surgery**[Abstract:0172]****Rare presentation of mechanical large bowel obstruction: colonic invagination case series****Sami Benli*¹, Tahsin Çolak², Habip Sari³**¹Mersin University, Faculty of Medicine, Department of General Surgery, Division of Surgical Oncology, Mersin, Turkey²Mersin University, Faculty of Medicine, Department of General Surgery, Mersin, Turkey³Hatay Education and Research Hospital, Hatay, Turkey**Background:** Invagination is defined as the telescopic placement of the proximal intestinal loop into the distal intestinal loops. Although it is mostly seen in childhood, it can also be seen in adulthood. As the intestinal region, it is mostly seen in the small intestines, but it can also be seen in the colon and rectum although it is rare.**Methods:** We retrospectively reviewed patients aged 18 years and older who were diagnosed with colorectal intussusception at a single institution between October 2015 and December 2020.**Results:** Among 7 patients who were finally analyzed. The age range of the patients ranged from 62 to 89. Ileocolic invagination was the most common localization. Other localizations included the cecum, descending colon, and rectum. Segmentary resection was performed in all patients. Pathology results were reported as inflammatory myofibroblastic tumor, mostly adenocarcinoma, submucosal hematoma, colonic lipoma, ganglioneuroma and solitary rectal ulcer.**Conclusions:** Intussusception is an uncommon presentation in adults, especially in the colorectal region. In addition, since cancer is among the causes of invagination, the type of surgery (mesocolic excision) to be performed on the patients is important on the integrity of the treatment.**Keywords:** Colorectal intussusception, Invagination**[Abstract:0173]****Our experience with colorectal endoscopic submucosal dissection****Tahsin Dalgic*¹, Abdullah Senlikci², Erdal Birol Bostanci¹**¹Ankara City Hospital, Department of Gastroenterology Surgery, Ankara, Turkey²Ankara Training and Research Hospital, Department of Gastroenterology Surgery, Ankara, Turkey**Background:** In this study, we aimed to present our experience of colorectal endoscopic submucosal dissection.**Methods:** Patients who underwent ESD in colon and rectum between 2014–2019 were included in study. Cases were evaluated in terms of location of polyp, morphology, size, complete excision, en bloc resection, complications, histopathological findings, advanced pathology.**Results:** Of the lesions, 23 were in left colon, 7 were in right colon, 42 were in rectum and 1 (1.37%) in ileal pouch. Of the lesions 64 (87.67%) were sessile and 9 (12.33%) were pedicled. The mean lesion size was 1.7 (0.4–3.5) cm. En-bloc resection rate was 87.67% and complete resection rate was 97.26%. We had no complication requiring intervention. When evaluated according to histopathology results, there was adenomatous polyp (LGD) in 30 lesions, adenomatous polyp (HGD) in 20 lesions, intramucosal carcinoma in 9 lesions, NET(G1) in 5 lesions, invasive carcinoma in 3 lesions, hyperplastic polyp in 2 lesions, inflammatory polyp in 1 lesion, hamartomatous polyp in 1 lesion, serrated adenoma in 1 lesion and lipoma in 1 lesion.**Conclusions:** Endoscopic submucosal dissection (ESD) can be safely applied in large, superficial colorectal lesions with high en bloc and complete resection and low complication rates.**Keywords:** Colorectal polyps, Endoscopic submucosal dissection

[Abstract:0184]**Case series of affected segment of rectosigmoid resection and reanastomosis in patient with primary and recurrent gynecologic cancers****Uğur Kemal Öztürk, Sami Açar*, Murat Api**

Zeynep Kamil Women and Children's Diseases Training and Research Hospital, Istanbul, Turkey

Background: It is aimed to present the results of colorectal resection performed during gynecologic oncologic surgery.**Methods:** Between January 2018 and May 2021, rectosigmoid colectomy operations were performed on 34 patients, including the covid 19 pandemic period, in the gynecological oncology service of the University of Health Sciences Zeynep Kamil Gynecology and Pediatrics training and research hospital.**Results:** Of the underwent 34 anastomoses, 27 (79.4 %) were made with primary suture technique and 7 (20.6 %) were end to end anastomosis circular stapler. Intraoperative management included adequate mobilization of the colonic mesentery from the splenic flexura to eliminate tension on the anastomosis, and liberal use of pelvic drains. During the operation, 8 (23.5 %) patients underwent colostomy and 4 (11.8 %) ileostomy. Relaparotomy was required due to anastomotic leakage in 6 (22.2 %) of the anastomoses made with the primary suture technique and in 2 (28.5 %) of the anastomoses made with the end to end anastomosis circular stapler technique. There were no operative mortalities. 4 of the underwent colostomies were closed again at different appropriate time intervals.**Conclusions:** Rectosigmoid colectomy permitted optimal or curative tumor resection in the majority of these patients, and thus should be performed whenever necessary to reach better oncologic outcome.**Keywords:** Colostomy, Loop ileostomy**Results:** Our final analysis included 80 EOCRC cases and 314 controls. When the EOCRC group was compared with the AOCRC, there was no statistically significant difference between gender, tumor location, T stage of the tumor and survival ($p=0.190$, $p=0.924$, $p=0.165$, $p=0.574$). However, there was a statistically significant difference in the N stage of the tumor, the degree of differentiation, LVI and PNI status, and the p values were respectively; $p=0.006$, $p=0.029$, $p=0.019$ and $p=0.003$.**Conclusions:** EOCRC has more aggressive tumor biology than AOCRC in terms of N stage, poor differentiation, LVI and PNI.**Keywords:** Colorectal cancer, Early onset**[Abstract:0200]****International Delphi consensus of expert surgeons on the definition and surgical management of the splenic flexure carcinoma****Cigdem Benlice*¹, Amjad Parvaiz², Werner Hohenberger³, Bilgi Baca⁴, Luca Stocchi⁵, Seon Hahn Kim⁶, Torbjörn Holm⁷, Mehmet Ayhan Kuzu¹**¹University of Ankara, Department of General Surgery, Ankara, Turkey²Champalimaud Clinical Centre, Lisboa – Portugal³University Erlangen-Nürnberg, Germany⁴Acibadem Mehmet Ali Aydinlar University, School of Medicine, Department of General Surgery, Istanbul, Turkey⁵Mayo Clinic, Jacksonville, FL, USA⁶Korea University College of Medicine Seoul, Korea⁷Division of Coloproctology, Centre of Surgical, Gastroenterology, Karolinska University Hospital, Stockholm, Sweden**Background:** To establish an international consensus on the definition and surgical approach for the management of splenic flexure (SF) cancer.**Method:** 3-rounds online-based Delphi study was conducted between September-2020 to February-2021. Total of 35 questions was created using statements that reflected recent publications and distributed through an online questionnaire tool.**Results:** Out of 47 experts, 89 % of them ($N=42$) participated the second and third rounds. While 90 % of them have been practicing colorectal cancer surgery for more than 10 years, only 10 % had been in practice for 5-10 years. Median rate of experience in performing minimally invasive (MIS) colon cancer cases was 90 % per surgeon (range:0-98 %). The SF was defined as 10 cm from either side where the distal transverse colon and proximal descending colon (62 %). Segmental colectomy was the most preferred technique (72 %) in the elective settings by MIS approach (88 %). Central vascular ligation of both left colic and left branch of middle colic artery was recommended (56 %). Open subtotal colectomy was the most preferred technique in the emergent settings for patient diagnosed with perforated (78 %) or obstructed (54 %) cancer.**Conclusion:** This is the first international consensus on the standardization of the definition, surgical technique and approach for the management of SF cancer.**Keywords:** Splenic flexure cancer, Delphi consensus**[Abstract:0193]****Is early onset colorectal cancer related to lymph node metastasis much more?****Sami Benli*¹, Tahsin Çolak²**¹Mersin University, Faculty of Medicine, Department of General Surgery, Division of Surgical Oncology, Mersin, Turkey²Mersin University, Faculty of Medicine, Department of General Surgery, Mersin, Turkey**Background:** The incidence rate of colorectal cancer is increasing globally in individuals under 50 years of age. EOCRC accounts for approximately 10% of all colorectal cancers. EOCRC has a certain hereditary predisposition, which has distinct clinico pathological and molecular features compared with traditional CRC.**Methods:** Between 2010 and 2020, 394 patients who were operated for CRC were included in the study. Patients were divided into 2 groups as EOCRC (<50 years) and AOCRC. Pearson's chi-square test was used to compare categorical variables in independent groups. Logistic regression analysis was performed using the Backward method with the variables whose relationship with the age group was evaluated, with the result of $p<0.100$.

[Abstract:0217]**Endorectal advancement flap for anorectal fistula: a single surgeon experience****Muharrem Oner*, Maher Abbas**

Al Zahra Hospital Dubai, UAE

Background: Anorectal fistulas are challenging to treat. The search for the optimal operation continues. The purpose of this study was to review the results of the endorectal advancement flap.

Methods: A retrospective review of a single surgeon experience.

Results: 87 patients underwent ERF (Male/Female 42.5%/57.5%). Median age was 41 years. Fistula types included low to mid transphincteric 31, high or suprasphincteric 25, horseshoe 10, anoperineal 3, rectovaginal 14, and rectourethral 4. The most common etiology was cryptoglandular disease 87.4%. 34 patients (39.1%) had prior seton insertion and 18 patients (20.7%) had prior fistula surgery. 9 patients (10.3%) had baseline incontinence. Median operative time was 75 minutes. A postoperative complication (anal sepsis) was noted in 4 patients (4.6%). During a median follow-up of 4 months (range 1–38 months), initial healing was noted in 80 patients (93%). Recurrence rate was 9.3% yielding an overall success rate of 83.7%. There was a non-statistically significance trend for a higher success rate in patients who were non-smokers (92 vs. 73%, $p=0.065$), those with low to mid transphincteric fistula (87% vs. 68%, $p=0.073$), and for cryptoglandular type fistula (87 vs. 64%, $p=0.05$)

Conclusions: ERF for complex anorectal fistulas is associated with a high healing rate, low complication rate, and infrequent recurrence. Larger studies are needed to further assess the impact of patient related factors and fistula characteristics on long-term success of ERF

Keywords: Endorectal advancement flap, Anal fistula

[Abstract:0224]**Prognostic value of tumor budding in pT3/4aN0 colon cancer****Serkan Zenger*¹, Bülent Gürbüz¹, Uğur Can¹, İbrahim Halil Özata², Serpil Yılmaz Postgil³, Orhun Çiğ Taşkın⁴, Emre Balık², Dursun Buğra²**¹Department of General Surgery, VKF American Hospital, Istanbul, Turkey²Department of General Surgery, Koç University, School of Medicine, Istanbul, Turkey³Department of Pathology, VKF American Hospital, Istanbul, Turkey⁴Department of Pathology, Koç University, School of Medicine, Istanbul, Turkey

Background: The aim of this study is to evaluate the effect of tumor budding (Bd) on long-term outcomes in patients with T3/4aN0 colon cancer.

Methods: The patients were enrolled as follows: 97 in Bd1 (0–4 buds) group, 41 in Bd2 (5–9 buds) group and 56 in Bd3 (>10 buds) group. Three groups were compared in terms of demographic characteristics, operative outcomes, pathologic results, recurrences, and survival.

Results: In Bd3 group, well differentiation rates were significantly lower and moderate differentiation rates were higher than other groups ($p=0.002$). Tumor size was significantly bigger and lymphovascular invasion (LVI) was significantly higher in Bd3 group. Local and distance recurrences were detected in 5 (5.2%), in 4 (9.8%), and in 10 (17.9%) patients of the Bd1, Bd2, and Bd3 groups, respectively ($p=0.03$). Five-year overall survival (OS) and disease-free survival (DFS) were significantly worse in Bd3 group. Additionally, in the subgroup of patients with Bd3 and LVI, 5-year OS (60% vs 92%, $p=0.001$) and DFS (56.1% vs 85.4%, $p=0.001$) were significantly worse than other groups.

Conclusions: Tumor budding is a factor that negatively affects prognosis. We think that adjuvant chemotherapy is necessary, especially in pT3/4aN0 colon cancer patients with the presence of Bd3 and LVI together.

Keywords: Colon cancer, Tumor budding

[Abstract:0227]**Factors affecting surgical margin positivity in patients underwent resection for rectosigmoid colon cancer****Tolga Kalaycı*¹, Umit Haluk İliklerden², Mehmet Çetin Kotan²**¹Department of General Surgery, Erzurum Regional Education and Research Hospital, Erzurum, Turkey²Department of General Surgery, Faculty of Medicine, Van Yuzuncu Yil University, Van, Turkey

Background: Surgical margin positivity (SMP) in rectosigmoid colon cancer is a difficult problem to manage and treat. In this study, we examined the factors affecting SMP in patients who underwent surgical resection for rectosigmoid colon cancer.

Methods: The patients who were operated for rectosigmoid colon cancer in Van Yuzuncu Yil University Faculty of Medicine Department of General Surgery between 2010 and 2018 were evaluated. The relationship between preoperative, operative and postoperative factors and SMP was evaluated with independent samples T test, Mann Whitney U test and Chi-square test (assuming $p<=0.05$ significant).

Results: There were 114 patients who met the study criteria. The mean age of the patients was 60.03 ± 14.41 years (25–98), and 61 (53.5%) patients were female. 7 (6.1%) patients had SMP. The rate of SMP was higher in patients with younger age ($p=0.022$), with more metastatic lymph nodes ($p<0.001$), and with a high lymph node ratio ($p<0.001$).

Conclusions: Young patients and patients with a high number and rate of metastatic lymph nodes have a higher rate of SMP, so these cases are difficult to manage. Adjuvant therapy and re-surgeries may be needed in the treatment of patients with SMP.

Keywords: Surgical margin positivity, rectosigmoid colon cancer

[Abstract:0228]**Factors affecting the preference of ostomy in patients who underwent resection for rectosigmoid colon cancer****Tolga Kalaycı¹, Umit Haluk İliklerden², Mehmet Çetin Kotan²**¹Department of General Surgery, Erzurum Regional Education and Research Hospital, Erzurum, Turkey²Department of General Surgery, Faculty of Medicine, Van Yuzuncu Yil University, Van, Turkey**Background:** Ostomy is a surgical method used in resection-applied rectosigmoid colon cancer. In this study, we wanted to emphasize in which patients we prefer ostomy in rectosigmoid colon cancer resection.**Methods:** The patients who were operated for rectosigmoid colon cancer in Van Yuzuncu Yil University Faculty of Medicine Department of General Surgery between 2010 and 2018 were evaluated. In these patients, the preference for ostomy was evaluated with independent samples T test, Mann Whitney U test and Chi-square test (assuming $p < 0.05$ significant).**Results:** There were 114 patients included in the study. The mean age of the patients was 60.03 ± 14.41 (25–98) years, and 61 (53.5 %) patients were female. An ostomy was preferred in 50 (43.9 %) of all patients. Ostomy was preferred in patients who received neoadjuvant therapy ($p = 0.003$), patients with distal tumor ($p < 0.001$), patients with extensive reactive lymph node dissection ($p = 0.007$) and patients with high total lymph node count ($p = 0.021$). Emergency colon surgery ($p = 0.844$) and the length of the removed bowel segment ($p = 0.957$) were not found to be a preference for ostomy.**Conclusions:** Extensive lymph node dissection, more distal location of the tumor, and neoadjuvant treatment are the factors that affect the choice of ostomy.**Keywords:** Ostomy, Rectosigmoid colon cancer**[Abstract:0232]****Impact of positive-to-total lymph node ratio on prognosis in stage 3 colorectal cancer: A multicenter study****Hakan Yırğın¹, Osman Sibiç¹, Yunus Emre Tatlıdil¹, Mehmet Aziret², Mehmet Abdülsamet Bozkurt¹, Metin Ercan²**¹Istanbul Kanuni Training and Research Hospital, General Surgery Clinic, Istanbul, Turkey²Sakarya Training and Research Hospital, Gastroenterology Surgery Clinic, Sakarya, Turkey**Background:** Colorectal cancer (CRC) remains a health problem despite advances in diagnostic and treatment methods. This study aimed to determine the impact of positive-to-total lymph node (LN) ratio (+LNR) on survival in CRC.**Methods:** A total of 109 patients who underwent surgery for CRC between 2010 and 2018 were included in the study. Patients with stage 3 CRC were included. Patients age; sex; operation type (emergency or elective); tumor size, grade, and location; TNM stage; vascular and perineural invasions; numbers of LNs examined and negative and positive LNs, +LNR, and administration of postoperative chemotherapy (CT) were examined.**Results:** Median follow-up period was 34.7 months. Most patients were in stage 3b (67.9 %), and the median number of dissected LNs was 15. The number of metastatic LNs, positive LN ratio, number of negative LNs 3, 16.7, 11, respectively. The overall survival (OS) rate was 48.6 %. Mean life expectancy was 51.5 months. Multivariate Cox regression analysis revealed +LNR >23.3 %, age, and absence of postoperative CT as risk factors for OS ($p < 0.05$). +LNR >23.3 % was associated with poor OS and 3.726-fold poorer survival.**Conclusions:** +LNR >23.3 % is a risk factor affecting OS in stage 3 CRC. Increased +LNR (>23.3 %) is associated with poor OS.**Keywords:** Stage 3 colorectal cancer, lymph node ratio**[Abstract:0238]****Comparison of two techniques for appendix stump closure in laparoscopic appendectomy: intracorporeal ligation vs non-absorbable polymer clips****Semra Demirli Atıcı, Ufuk Uylaş*, Erdinç Kamer**

University of Health Sciences Turkey, Tepecik Education and Research Hospital, Department of General Surgery, Izmir, Turkey

Background: Closure of the appendix stump is important for the prevention of serious complications such as sepsis, peritonitis, and postoperative fistula. In our study, we aimed to compare two commonly used surgical techniques for stump closure in LA.**Methods:** A total of 369 patients who underwent LA with the diagnosis of acute appendicitis in our clinic between January 2011 and January 2020 were analyzed retrospectively. A total of 304 patients who met the inclusion criteria were divided into two groups as intracorporeal ligation and nonabsorbable polymer clips (hem-o-lock clips). Patient groups were compared in terms of age, gender, duration of operation, hospital duration, and postoperative 30-day complication rates.**Results:** Intracorporeal ligation was used in Group 1 ($n = 151$, 49.67 %), and nonabsorbable polymer clips were used in Group 2 ($n = 153$, 50.32 %). The operation time and hospital stay were shorter in Group 2 ($p < 0.05$). Postoperative complications were seen in 15 (4.93 %) patients. Post-operative complications were higher in the group treated with intracorporeal ligation ($p < 0.05$).**Conclusions:** As an appendix stump closure technique in the learning curve stage, the application of nonabsorbable polymer clips can be preferred as a method that can reduce the postoperative complication rate and hospital stay.**Keywords:** Appendicitis, Complication

[Abstract:0239]**Comparison of postoperative complications of diverticulectomy in symptomatic and incidental Meckel's diverticulum****Semra Demirli Atıcı, Ufuk Uylaş*, Cem Tuğmen, Erdinç Kamer**

University of Health Sciences Turkey, Tepecik Education and Research Hospital, Department of General Surgery, Izmir, Turkey

Background: Management of incidental Meckel's diverticulum (MD) in adults is controversial. The aim of this study is to compare the postoperative complications of diverticulectomy in incidental and symptomatic MD.**Methods:** The adult patients with MD who were surgically treated in our clinic between January 2010 and December 2020 were analyzed retrospectively. Patients were divided into two groups according to having symptomatic and asymptomatic diverticula. Age, gender, preoperative laboratory values, histopathology, hospital duration, and postoperative complications were compared between the groups.**Results:** A total of 46 patients, symptomatic (Group 1, 78.3 %) and incidental (Group 2, 21.7 %) were included in the study. The number of male patients was higher and the male/female ratio was 30/16. Patients in Group 1 were younger than Group 2 ($p < 0.05$). MD dimension was longer in Group 1 ($p < 0.05$). The hospital duration in Group 2 was higher than Group 1 ($p > 0.05$). All of the postoperative complications were surgical site infections and were more common in Group 1 ($p > 0.05$).**Conclusions:** While complications are higher after resection in symptomatic Meckel's diverticulitis, it should be kept in mind that hospital stay may be longer due to primary surgery in incidental Meckel's diverticulitis.**Keywords:** Diverticulectomy, Complications**[Abstract:0240]****Correction of the perineal prolapse in the new modification****Fidan Mammad Shirinova*, Khaleddin Novruz Musayev**

Azerbaijan Medical University, Baku, Azerbaijan

Background: Rectal and uterine prolapse is one of the diseases that occur in women after difficult childbirth, heavy physical work, severe weight loss.**Methods:** The rectal cord apparatus is mobilized without damage to the level of the internal sphincter, the bowel is pulled up and to the right, is brought to a normal position where it will remain in the pelvic cavity, 3 × 5 cm proline mesh is divided into 3 slices up to 1/3 of the length, then 2 slices are fixed to the posterior wall of the rectum mobilized to the inner sphincter with 3–4 sutures at a distance of 1 cm through the muscle layer along the sides, the other 3 slices are sewn in the same way to the cervix uteri or uterus.**Results:** After 1 year of this operation in 16 patients, no recurrence of uterine, vaginal and rectal prolapse was observed on re-examination, constipation was occurred in 2 patients and treated with conservative treatment. Electrostimulation due to

anal incontinence was restored in 4 patients after endotonic electrostimulation.

Conclusions: We came to the conclusion that our modification of the Wells method is one of the effective methods to be used in the treatment of such patients.**Keywords:** Prolapse, Rectum**[Abstract:0255]****Peritoneal Cancer Index – immunoscore in cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC)****Yasemin Yıldırım*, Tayfun Bişgin, Berke Manoğlu, Ali Durubey Çevlik, Selman Sökmen**

Dept. of Surgery, Colorectal & Pelvic Surgery Unit, Dokuz Eylül University Medical Faculty, Izmir, Turkey

Background: A valid comparison of immun function among different patients, primary pathologies, and tumor burdens requires a reliable assessment of a complex clinical situation. This study aimed to investigate the prognostic impact of combined PCI-Immunoscore in patients treated with CRS/HIPEC.**Methods:** 424 patients of the prospectively maintained database were analyzed. Besides clinicopathologic factors, modified Glasgow Prognostic Score (mGPS), CRP-Albumin Ratio (CAR), Neutrophile-Lymphocyte Ratio (NLR), thrombocyte count, and Neutrophile-Thrombocyte Ratio (NTR) were stratified in scoring categories as prognosticators of surgical and oncologic outcomes.**Results:** The median follow-up was 37.8 mos. The overall survival was 51.7 %. The 1, 3, and 5-yr survival rates were analyzed as 81.1 %, 58.1 %, and 46.5 %, respectively. The number of resected organs ($p = .001$; OR:1.94), ICU stay ($p = .011$; OR:2.11), and the mGPS(1&2) scoring categories were significantly associated with overall morbidity ($p = .001$; OR:2.52&3.07, respectively). Incomplete cytoreduction (CC-1&2) ($p = .001$; OR:1.86), PCI ($p = .005$; OR:1.62), and neoadjuvant chemotherapy ($p = .001$; OR:2.48) were independent determinants of the recurrent disease. In Cox analysis, anastomotic leak ($p = .002$; HR:3.26), the completeness of cytoreduction ($p = .0014$; HR:1.64), the number of organ resection ($p = .002$; HR:1.83), the lymph node involvement ($p = .003$; HR:1.76), and all of the combined PCI-CAR-NT(1-3) scoring categories ($p = .001$; HRs:5.35, 8.7 and 10.15, respectively) were found to be robust prognostic factors for overall survival.**Conclusions:** Staging the host by combining the PCI with an immunoscore may help to assess/monitor/improve the surgical complications and final oncologic outcomes in these complex cancer patients. The aggregate maximum PCI-Immunoscore tool may be a better prognostic measure for outcome evaluation**Keywords:** Cytoreductive surgery/HIPEC, Immunoscore

[Abstract:0257]**Neglected prognostic importance of ileal resection in patients with peritoneal metastasis**

Tayfun Bisgin^{*1}, Berke Manoglu¹, Berkay Sakaoglu¹, Isil Basara², Tugba Unek³, Sulen Sarioglu⁴, Sevda Ozkardesler⁵, Selman Sokmen¹

¹Dept. of Surgery Colorectal and Pelvic Unit, Dokuz Eylul University Medical Faculty, Izmir, Turkey

²Dept. of Radiology, Dokuz Eylul University Medical Faculty, Izmir, Turkey

³Dept. of Medical Oncology, Dokuz Eylul University Medical Faculty, Izmir, Turkey

⁴Dept. of Pathology, Dokuz Eylul University Medical Faculty, Izmir, Turkey

⁵Dept. of Anaesthesiology, Dokuz Eylul University Medical Faculty, Izmir, Turkey

Background: The ileum has unique functions such as enzymatic digestion of nutrients, absorption of vitamin B12, fats and bile salts, and immunologic functions. This study aimed to determine the prognostic role of ileal resection on surgical and oncological results of cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC).

Methods: Prospectively maintained database of 661 patients of whom 348 (52.3 %) had ileal resection were analyzed. Besides clinicopathological variables, peritoneal cancer index (PCI), completeness of cytoreduction (CC-0, CC-1 and -2), (neo) adjuvant-chemotherapy, operative time, usage of albumin, erythrocyte suspension (ES), and fresh frozen plasma (FFP) were evaluated.

Results: Median follow-up period was 35.26 months. The 3- and 5-year survival rates were significantly lower in ileal resection group (41.3 % and 28.0 % vs. 57.5 % and 36.3 %; $p = .001$). High PCI score ($p < .001$), more CC-1 or CC-2 cytoreductions ($p < .001$), high number of resected organs (≥ 5 organs) ($p = .000$), more splenectomy ($p = .001$), the prolonged operative time ($p < .001$), increased morbidity ($p < .001$), more neoadjuvant chemotherapy ($p = .004$), the presence of ostomy ($p < .001$), and development of infection ($p < .001$), more intra-operative ES ($p < .001$), albumin ($p < .001$), and FFP ($p < .001$), and more post-operative ES ($p < .001$) usage were found in ileal resection group. PCI score ($p = .000$), the number of resected organs ($p = .000$), splenectomy ($p = .045$), neoadjuvant-chemotherapy ($p = .004$) and morbidity ($p = .020$) were independent prognostic factors.

Conclusion: The loss of ileal functions have potential prognostic role on increased post-operative complications and worsened overall survival in patients with PMs.

Keywords: Cytoreductive surgery/HIPEC, Ileum

[Abstract:0259]**Application of terminal ileum suspension in laparoscopic radical resection for low-rectal cancer**

Chuanqing Bao^{*}, Zenghui Yang, Binghua Xu, Xiaoming Shen, Yifan Shi, Tiantian Zhao, Xiaoyu Xu, Li Xia

Department of gastrointestinal surgery, Affiliated Hospital of Jiangnan University, Wuxi, Jiangsu Province, China

Background: To discuss the clinical application of terminal ileum suspension in laparoscopic radical resection for low rectal cancer.

Methods: Between September 2015 to September 2017, forty patients with low-rectal cancer were randomly assigned to control group receiving laparoscopic radical proctectomy with total mesorectal excision TME combined with the terminal ileal loop ostomy $n = 20$ and test group receiving laparoscopic radical proctectomy with TME combined with terminal ileum suspension $n = 20$). The first exhaust time postoperative hospital stay postoperative discomforts and complications were recorded.

Results: There were statistical differences between the two groups at the first exhaust time post-operation diarrhea, colostomy bleeding and the rate of colostomy back operation $P < 0.05$. Compared to the control group, there were no statistical differences at the rate of anastomotic fistula and postoperative hospital stay $P > 0.05$.

Conclusions: Terminal ileum suspension could achieve the clinical effect of the ileostomy and significantly decrease post-operation complications. It does not affect the patient's postoperative recovery and reduces the pain and financial burden of patients.

Keywords: Terminal ileum suspension, Low-rectal cancer

[Abstract:0270]**Analyses of clinicopathological characteristics and prognosis for patients with early-onset colorectal cancer**

Lingling Wang^{*}, Zhao Lu, Mingguang Zhang, Zheng Liu, Xishan Wang

National Cancer Center/National Clinical Research Center for Cancer/Cancer Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing 100021, P. R. China.

Background: The incidence and mortality rates of early-onset colorectal cancer (EO-CRC) are increasing, while with few studies focused on the disease. This study aims to assess clinicopathological characteristics and prognosis of EO-CRC patients in China.

Methods: In this retrospective study, patients are less than 40-year-old, having undergone resection in Cancer Hospital, Chinese Academy of Medical Sciences from January 2017 to December 2018 were enrolled. The clinicopathological characteristics and prognosis between non-neoadjuvant and neoadjuvant groups were analysed.

Results: This study collected 211 EO-CRC patients, with 152 in non-neoadjuvant group and 59 in neoadjuvant group. The deficient mismatch repair rate was 15.15 %. In neoadjuvant group, pathologic complete response rate was 11.86 % and vascular tumour thrombus was less frequently identified ($P = 0.002$). There were no significant differences between the 3-year recurrence-free survival (RFS) and overall survival (OS) rates (RFS: 76.32 % vs 64.41 %, $p = 0.09$; OS: 88.16 % vs 83.05 %, $P = 0.4$). Advanced N, M stages, perineural invasion were associated with poor prognostic of RFS, advanced T, N stages, and tumour deposits with poor prognostic of OS.

Conclusions: Advanced N stage is the important factor of poor prognosis in RFS and OS of EO-CRC patients with the rates of 3-year RFS and OS reaching 70 % and 85 %.

Keywords: Early-onset colorectal cancer, Clinicopathological characteristics

[Abstract:0271]**Invasive intestinal endometriosis: Single center experience**

Özgen Işık, Aysun Şahin, Murat Şen*, İlker Yalçın, Oğuz Kızılaslan, Said Kural, Tuncay Yılmazlar

Department of Surgery, School of Medicine, Bursa Uludağ University, Bursa, Turkey

Background: Endometriosis is defined as the presence of endometrial-like tissue outside the uterus. The reported incidence in pre-menopausal women varies between 8 and 15%. Gastrointestinal (GI) involvement is reported in up to 3.8–37% of women diagnosed with endometriosis. In this study, we aim to present our experience in this rare disease.

Methods: Chart review was performed by using the keyword "endometriosis", 27 females were identified. Patient demographics, details of surgical treatment for invasive intestinal endometriosis (IIE), the number of pregnancies, delivery type, use of fertility treatment modalities were documented. In total, 15 patients with IIE were included while 12 patients were excluded from the study.

Results: Median age was 36 (26–68). Of the 15 patients, 13 were admitted in emergency setting. Only 5 patients had a previous diagnosis of endometriosis. The most common indication for surgery was intestinal obstruction (66.7%), and the most common affected location was terminal ileum (46.7%). Stoma was created in 8 patients and 6 of them were reversed during the follow-up. Morbidity rate was 13.3% and mortality rate was 6.7%.

Conclusions: IIE is a rare disease that may mimic other GI diseases, such as inflammatory bowel disease and malignancies. In young women with cyclic intestinal obstruction symptoms, IIE should be kept in mind in differential diagnosis.

Keywords: Endometriosis, Intestinal obstruction

[Abstract:0272]**Colonoscopy findings in patients whose fecal occult blood tests were positive while colorectal cancer screening**

Gökmen Güzel*

General Surgery Department of Antalya Serik State Hospital, Antalya, Turkey

Background: According to the colorectal cancer (CRC) screening programme in our country, citizens between the ages of 50 and 70 should have a fecal occult blood test (FOBT) in every 2 years time and colonoscopy should be performed when FOBT was positive. We aimed to evaluate the effectiveness of the program by examining the results of the patients referred to us during the last 1 year.

Methods: Demographics, colonoscopy findings, pathology results and treatment methods of 73 consecutive patients with positive FOBT who were sent to our Endoscopy Unit for advanced examination were analysed retrospectively.

Results: 38 (52%) patients were female and 35 (48%) were male; the median age was 60(50–79). A malignant mass (adenocarcinoma) in 4 (5.5%) patients and polyps in 28 (38.4%); precancerous adenomatous polyps in 22 patients whereas hyperplastic polyps in 9) patients were detected. Malignancies were

operated and polypectomies were done. Of the other patients; 11 (15.1%) had diverticulosis, 2 (2.7%) had inflammatory bowel disease, 4 (5.5%) had non specific colitis and 20 (27.4%) had hemorrhoids. In addition, 14 (19.2%) colonoscopies were normal.

Conclusions: Mortality and morbidity due to CRC can be diminished and various risky conditions can be prevented by widespread and effective use of CRC screening programme.

Keywords: Colonoscopy, Fecal occult blood test

[Abstract:0273]**Comparison of the outcomes of overlapping and direct apposition sphincteroplasty techniques in anal sphincter repair**

Ozan Akıncı*, Zehra Zeynep Keklikkırın, Yasin Tosun

Kartal Dr. Lütfi Kırdar City Hospital, General Surgery Clinic, Istanbul, Turkey

Background: Sphincteroplasty is important in the management of anal sphincter injury. We aimed to evaluate overlapping and direct apposition sphincteroplasty techniques for the anal sphincter repair.

Methods: Thirty-six patients who underwent sphincteroplasty due to anal sphincter injury between 2011 and 2021 were analyzed retrospectively. Age, gender, etiologic factors, degree of laceration, repair technique, postoperative complication, time between injury and repair, length of hospital stay, follow-up time, and postoperative Cleveland Clinical Incontinence Score (CCIS) were evaluated. The outcomes of overlapping and apposition sphincteroplasty techniques were compared.

Results: 31 were female, 5 were male, and the mean age was 31.5±6.7 years. The etiologic factors were obstetric trauma in 25 patients, perianal intervention in 7 patients, and trauma in 4 patients. The overlapping technique was applied to 14 patients and the apposition technique was applied to 22 patients. Postoperative mean CCIS of all cases was 5.5±2.6. The mean CCIS of overlapping sphincteroplasty was significantly lower than apposition repair (p:0.006). It was observed that the CCIS level decreased as the time between sphincter injury and repair decreased (p<0.001; r:0.625).

Conclusions: It is important to repair anal sphincter injury as early as possible. Overlapping and direct apposition are safe methods, and the quality of life is higher in overlapping sphincteroplasty.

Keywords: Anal sphincter injury, Sphincteroplasty

[Abstract:0277]**The significance of surgical treatment for anorectal melanoma**

Ma Jian*, Jiang Bo, Liu Haiyi, Bai Wenqi, Zhang Yixun

Shanxi Cancer Hospital Chinese Academy of Medical Sciences, China

Background: The prognostic value for the surgical treatment of anorectal melanoma (ARM) is not well understood. We aimed to identify the related factors of ARM overall survival (OS).

Methods: We assessed patients with ARM from 2005 to 2017 who were diagnosed at Shanxi Cancer Hospital. Factors associ-

ated with ARM OS included age, gender, tumor stage, and lactate dehydrogenase (LDH) level. These factors were analyzed using multivariable logistic regression. The OS was analyzed by Kaplan-Meier. The different treatment method was analyzed by Cox proportional hazard model.

Results: A total of 80 patients were assessed in this study. The OS analysis results showed that one-year, two-year, three-year, and five-year OS were 70.0 %, 32.5 %, 21.2 % and 2.5 %, respectively. Log-rank test analysis showed that low LDH level (< 248 U/L, $P=0.032$), receiving surgery ($P<0.001$), stage I ($P=0.019$), T1 stage ($P=0.006$) and M0 stage ($P=0.011$) had better OS in all patients. However, better OS was associated in patients who only received surgery (HR=2.828; 95%CI: 1.360–5.920, $P=0.006$) from Cox regression analysis.

Conclusions: Surgical treatment is a promising way to improve OS in patients with ARM.

Keywords: Melanoma, Anorectum

[Abstract:0280]

Short-term outcomes for laparoscopic surgery for BMI ≥ 30 patients with rectal cancer

Qi Zhang*, Qian Liu, Jiannan Chen, Shiwen Mei, Jianwei Liang, Zheng Wang

Department of Colorectal Surgery, National Cancer Center, National Clinical Research Center for Cancer, Cancer Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, China

Background: Objective Obesity is known to be a preoperative risk factor for rectal cancer surgery. This study aimed to investigate the influence of obesity on the surgical outcomes of laparoscopic surgery for rectal cancer.

Methods: The clinical data of 356 patients with rectal cancer from Jan 2012 to Dec 2015 were analyzed retrospectively. Perioperative outcomes were compared between 48 patients with a BMI (body mass index) ≥ 30 kg/m² [obese group] and 308 patients with a BMI < 30 kg/m² [non-obese group] who underwent laparoscopic surgery.

Results: Operation times were significantly longer for the obese group than for the non-obese group (125.2 ± 30.5 min vs. 180.5 ± 58.2 min, $P=0.021$). There were no statistically significant differences between two groups in terms of intraoperative blood loss, the number of retrieved lymph nodes, postoperative recovery and postoperative complications ($P>0.05$). During the follow-up period, the overall survival rates were not significantly different between the two groups [66.7 % (32/48) vs 67.2 % (207/308), $P=0.787$]. The differences in recurrence and metastasis between the two groups were not statistically significant.

Conclusions: Our analysis revealed that laparoscopic surgery can be safely performed in patients with BMI ≥ 30 . The procedure was considered to be difficult but sufficiently feasible.

Keywords: Rectal cancer, Obese, Body mass index, Laparoscopy, Treatment outcome

[Abstract:0281]

Transanal specimen extraction after laparoscopic sigmoidectomy for sigmoid volvulus

Ufuk Uylaş*¹, Cuneyt Kayaalp²

¹University of Health Sciences Turkey, Tepecik Education and Research Hospital, Department of General Surgery, Izmir, Turkey

²Yeditepe University Facult of Medicine, Yeditepe University Koşuyolu Hospital Department of Gastroenterology Surgery, Istanbul, Turkey

Background: Specimen removal from the natural orifice after laparoscopic surgery is increasingly preferred. In this study, we aimed to share the results of cases with sigmoid volvulus who underwent laparoscopic surgery and transanal specimen extraction.

Methods: Patients who underwent elective laparoscopic sigmoid colon resection and transanal specimen extraction for the diagnosis of sigmoid volvulus were retrospectively analyzed. The patients were evaluated in terms of age, gender, comorbidity, operation time, surgical difficulties, length of hospital stay, and complications.

Results: Eight patients underwent laparoscopic sigmoid resection and transanal specimen extraction. All patients were male and the median age was 68 (28–86). There were 5 patients with comorbidity. The median operative time was 195 minutes (180–360). Anastomotic leakage occurred in 1 patient. The median hospital stay was 5.5 days (3–21).

Conclusions: Transanal specimen extraction after laparoscopic resection is a feasible and safe method since there is no occupying mass such as tumor or diverticula in sigmoid volvulus. This approach may reduce wound complications and provide a short hospitalization.

Keywords: Sigmoid volvulus, Natural orifice

[Abstract:0285]

Association between mismatch repair gene hMLH1 -93 G>A promoter polymorphism and colorectal cancer risk

Bayram Bayramov*¹, Farah Gahramanova², Shabnam Mammadova², Nuru Bayramov²

¹Human Genetics Laboratory, Genetic Resources Institute of Azerbaijan National Science Academy, Baku, Azerbaijan

²Department of General Surgery and Transplantology, Azerbaijan Medical University, Baku, Azerbaijan

Background: In the current study, we investigated the role of the Human MutL homolog 1 (MLH1) gene-93 G>A promoter polymorphism in the occurrence and development of colorectal cancer (CRC).

Methods: DNA isolation was performed from blood samples taken from 134 patients and 137 controls by salting method. Genotyping was performed on agarose gel using polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) methods.

Results: There were no correlations observed between the subject groups both for genotype and allele frequencies ($P>0.05$). Moreover, there were no statistically differences between heterozygote GA and mutant genotype AA and clinic

pathological parameters; tumor stage, tumor grade, age, sex, smoking status and alcohol consuming ($P > 0.05$). In contrast, the promotor hMLH1 -93G>A polymorphism was significantly associated (OR=0.56; 95% CI=0.35-0.91; $P=0.018$) with a reduced risk of CRC in the recessive model (GG+GA vs AA).

Conclusion: Our findings indicated that the genetic variant of hMLH1 -93 G/A may not be associated with the risk of CRC, however, the recessive model was associated with a reduced risk of disease. Further studies with a large sample size can be performed to understand the prognostic role of hMLH1 gene polymorphisms in CRC.

Keywords: Colorectal cancer, hMLH1 gene

[Abstract:0288]

Fournier's gangrene: Is there role of center effect?

Özgen Işık*, Murat Şen, Tuncay Yılmazlar

Department of Surgery, School of Medicine, Bursa Uludağ University, Bursa, Turkey

Background: Fournier's gangrene (FG) is a fatal disease that is characterized with the necrotizing soft tissue infection (NSTI) of perianal, perineal, and genital region. Factors affecting the prognosis of FG were well described, but little data exist about the impact of treating center. In this study, we aimed to present the largest single center data, and the impact of center affect in FG.

Methods: Data of the patients who underwent surgical debridement for FG between January 1996 and May 2021 were collected from the prospectively maintained departmental database. In total, 235 patients included in the study. Patients were classified into two groups based on the year of admission: Before 2010 and After 2010. Patient demographics, duration of symptoms, presence of DM, etiology of NSTI, UFGSI score, need of mechanical ventilation, and length of hospital (LHS) were recorded.

Results: Results: Median age was 58(22-88) and 32.8% were females. Median UFGSI score was 9(1-30). Overall mortality rate was 23.4%. Of the 235 patients, 101 were admitted before 2010. Patients in the After 2010 group were older ($p=0.008$), had longer LHS ($p=0.047$), increased need for mechanical ventilation ($p=0.023$), higher UFGSI score ($p=0.023$), more frequent anorectal origin ($p=0.0005$). However, mortality rates were comparable between the two groups (19.8% vs. 26.12%, $p=0.25$).

Conclusions: Our department managed more complicated FG patients in the second period of this study with comparable mortality rate. This finding may be result of the increasing experience of our center.

Keywords: Fournier's gangrene

[Abstract:0289]

Comparison of oncologic outcomes in geriatric patients with rectal cancer

Berke Manoğlu*, Tayfun Bişgin, Çağatay Aydın, Selman Sökmen

Dokuz Eylül University Hospital, Department of Surgery, Colorectal & Pelvic Surgery Unit, Izmir, Turkey

Background: The morbi-mortality and oncologic outcomes can be worsened in geriatric rectal cancer patients due to frailty, co-morbidities, sarcopenia, (neo-) adjuvant therapy. This

study was aimed to compare of surgical and oncological results of rectal cancer patients over 65(GI) and under/equal to 65(GII) years of age.

Methods: The prospectively maintained database of 991 patients were analyzed. All conventional clinicopathologic features, operative findings, and oncologic outcomes were compared in between GI and GII patients.

Results: 57.2% of the patients were over 65 years old. Tumors in GI(57.2%) were located at 55% in proximal rectum, 28.2% in mid-rectum, and 16.7% in distal rectum, whereas 50.7%, 26.4%, and 22.8% in GII(42.8%), respectively. 76% and 81% of GI and GII patients had received neo-chemo/radiotherapy. There was at least one co-morbidity in both groups (GI: 91.5% and GII: 86.8%). Perioperative mortality rates and length of hospital stays (LoH) were similar in both groups (mortality: 2.6%; LoH: 13 days, ranging 3 to 54). All the pathological stages were well-matched in adult and geriatric patients. There were no significant differences between groups in terms of local and/or distant recurrence and disease-free survival.

Conclusions: Multidisciplinary management of geriatric rectal cancer can be performed effectively with good oncologic outcomes in experienced colorectal units.

Keywords: Rectal cancer, Colorectal surgery

[Abstract:0293]

Preoperative radiotherapy 5 × 5 Gy and delayed surgery increases local recurrence rate of rectal cancer at 10-year follow-up – results of the randomised controlled trial

Radosław Pach*, Antoni M Szczepanik, Marek Sierzega, Piotr Richter

Department of General Surgery, Jagiellonian University, Cracow, Poland

Background: Studies on short-course preoperative radiotherapy in combination with total mesorectal excision for rectal cancer reported improved local control without clear survival benefits. The optimal fractionation and interval between radiotherapy and surgery are still under debate. We, therefore, aimed to report 10-year results of a randomized clinical trial (RCT, NCT01444495) comparing different time intervals between irradiation and surgery for rectal cancer.

Methods: Patients with rectal cancer were randomly assigned to short-course preoperative radiotherapy (5 × 5 Gy) followed by surgery 7-10 days or 4-5 weeks after the end of irradiation. The primary endpoint was the local recurrence rate at 5 years. The secondary endpoints included overall survival, disease-free survival, systemic recurrence rate, and downstaging.

Results: A total of 154 patients were randomly assigned to short ($n=77$) or long interval ($n=77$) surgery. The cumulative incidence of local recurrence at 10 years was 1.5% and 12.7% in the short and long-interval groups, respectively ($p=0.037$). Accordingly, the incidence of systemic relapse was 16.9% versus 9.9% ($p=0.230$). There were no differences in the overall 10-year survival between patients subject to short and long-interval surgery (58% vs 61%, $p=0.754$).

Conclusions: Short-course radiotherapy with delayed surgery demonstrated an increased risk of local relapse over a 10-year follow-up.

Keywords: Rectal cancer, Preoperative short-course radiotherapy

[Abstract:0294]**What are the risk factors for Low Anterior Resection Syndrome in patients undergoing laparoscopic low anterior resection****Cebraıl Oğuz*, Oğuzhan Tekin, Ahmet İpek, Egemen Saygılı, Münevver Dilara Yurtbaşı, Selim Doğan, Hüsnü Şevik, Cihad Tatar**

Istanbul Training and Research Hospital, Department of Surgery, Istanbul, Turkey

Background: Low anterior Resection Syndrome (LARS), which consists of symptoms such as incontinence, urgency, diarrhea, and increased frequency of defecation, has been increasingly seen in patients undergoing low anterior resection. In this study, risk factors that may affect the development of LARS in patients who underwent laparoscopic resection for rectal cancer were investigated.

Methods: Patients who completed the LARS score questionnaire were classified into 2 groups based on having major LARS or not (Group 1: No LARS or minor LARS; Group 2: Major LARS). Age, gender, BMI, tumor localization, distance from the anastomosis to the anal verge, lymph node positivity, neoadjuvant and adjuvant treatment status, and protective stoma status were recorded. The mean follow-up time of the patients was 23 (min-max; 18–25) months.

Results: Among the 50 patients, 21 (42%) were classified into the major LARS group. There was no significant difference between the groups in terms of age, gender, BMI, harvested lymph nodes. The distance from the anastomosis line to the anal verge, receiving neoadjuvant radiotherapy and having protective stoma were significantly associated with major LARS.

Conclusion: The incidence of major LARS after laparoscopic low anterior resection is relatively high. Neoadjuvant radiotherapy, distance from the anal verge, and diverting stoma are major risk factors.

Keywords: LARS, SKOR

[Abstract:0295]**Selection treatment method in adhesive small bowel obstruction evaluation of 380 cases****Semra Tutcu Şahin*¹, Semra Salimoğlu², Mustafa Tireli¹**¹Department of General Surgery, Faculty of Medicine, Manisa Celal Bayar University, Manisa, Turkey²Department of General Surgery, Tepecik Training and Research Hospital, Health Sciences University, Izmir, Turkey

Background: Today, 70% of mechanical bowel obstructions are caused by adhesive small bowel obstruction (ASBO). Despite those who recommend the surgical method in the treatment of this problem, it is reported that good results can be obtained with the conservative method. In this study, the efficacy of surgical and conservative treatment methods in ASBO was reviewed.

Methods: The data of 380 patients with previous abdominal surgery and bowel obstruction findings were evaluated. Emergency surgery was performed in patients with suspected strangulation and in patients with complete occlusion findings at the first admission examination. Conservative treatment was begin

to those with incomplete occlusion and those with no suspicion of strangulation. Success, mortality and morbidity were compared in the treatment groups.

Results: Conservative treatment and early surgical treatment was performed in 284 cases and in 96 cases, respectively. Successful results were obtained in 73.6% of the cases with conservative treatment. The success rates were 85% and 46.5% in incomplete and complete occlusion patients, respectively. Late surgical treatment was performed in 75 patients with unsuccessful results.

Conclusions: The majority of ASBO patients can be cured with conservative treatment. Late surgical treatment in patients for whom conservative treatment fails does not increase mortality and morbidity.

Keywords: Adhesion, Obstruction

[Abstract:0298]**Completely diverted tube ileostomy versus conventional loop ileostomy****Alisina Bulut*, Wafi Attaallah**

Marmara University, Faculty of Medicine, Department of General Surgery, Istanbul, Turkey

Background: Diverting ileostomies are performed to prevent morbidity and mortality caused by anastomotic leakage. However, many complications may develop due to loop ileostomy and its reversal. We aimed to compare the results of completely diverted tube ileostomy and loop ileostomy.

Methods: The study was designed prospectively and operations were performed by the same surgeon at a single center. Completely diverted tube ileostomy was performed in 20 consecutive patients and loop ileostomy was performed in the next 20 consecutive patients who needed diverting stoma. The primary outcome of the study was to compare the overall complication rates. Length of hospital stay, cost-effectivity, achieving complete diversion and length of time with a stoma were evaluated as secondary outcomes.

Results: There were no significant differences between the demographic characteristics. Complete diversion was achieved in both groups. Overall complications were significantly higher in the loop ileostomy group [$p=0.002$]. Median time with a stoma was statistically higher in the loop ileostomy group [$p<0.001$].

Conclusion: Completely diverted tube ileostomy is superior to loop ileostomy for reasons such as lack of need for reversal surgery, fewer complications, and provides a significant cost advantage.

Keywords: Tube ileostomy, Loop ileostomy

[Abstract:0300]**Neoadjuvant monotherapy of PD-1 monoclonal antibody in five cases of dMMR/MSI-H colorectal cancer****Junyi Zeng¹, Yinghua Duan², Yandong Zhao³, Fengyun Pei¹, Wan He⁴, Meijin Huang¹, Jun Huang^{*1}**¹Department of Colorectal Surgery, the 6th Affiliated Hospital, Sun Yat-sen University, Guangzhou, China²Department of Traditional Chinese Medicine, the 1st Affiliated Hospital, Sun Yat-sen University, Guangzhou, China³Department of Pathology, the 6th Affiliated Hospital, Sun Yat-sen University, Guangzhou, China⁴Department of Oncology, Shenzhen People's Hospital The Second Clinical Medical College, Jinan University; The First Affiliated Hospital, Southern University of Science and Technology, Shenzhen, China

Background: PD-1 monoclonal antibody therapy has been recommended as the first line treatment of dMMR/MSI-H metastatic colorectal cancer (CRC), but the safety and efficacy of neoadjuvant monotherapy of PD-1 monoclonal antibody in early stage or local advanced dMMR/MSI-H CRC remains unclear.

Methods: From June 2020 to April 2021, five dMMR/MSI-H CRC patients treated in the 6th Affiliated Hospital of Sun Yat-sen University were included. In this cohort, all patients accepted 6 doses (200 mg/dose, every 3 weeks) of Sintilimab injection (Innovent, LTD) alone before radical laparoscopic resection. The clinical and pathological data of the 5 patients were analyzed.

Results: All the 5 patients were confirmed dMMR by IHC. However, 80 % (4/5) of the patients was confirmed MSI-H and 20 % (1/5) was confirmed MSS by NGS. Three of the 5 patient clinical stages were stage III and the another two were stage II. The major pathological response (MPR) rate was 100 % (5/5) and the pathological complete response (PCR) rate was 80 % (4/5). No immunotherapeutic associated SAE or operational complications were found in this cohort.

Conclusions: Single drug of neoadjuvant PD-1 monoclonal antibody neoadjuvant treatment was safe and effective in early stage or local advanced dMMR/MSI-H CRC.

Keywords: Colorectal cancer, Immunotherapy

[Abstract:0303]**The role of rectal redundancy on the rectal prolapse pathophysiology: a pilot study****Wafi Attaallah, Ahmet Akmercan*, Hale Feratoğlu**

General Surgery, School of Medicine, Marmara University, Istanbul, Turkey

Background: The precise cause of rectal prolapse is still unknown. We aimed to evaluate the role of rectal redundancy in rectal prolapse pathophysiology.

Methods: This study was conducted prospectively. Fourteen patients who underwent rectopexy were included in the study group. Seventeen patients who underwent laparotomy for another reason were included in the control group. To measure the redundancy of the rectum, we have calculated the ratio of

the length of the intraperitoneal rectum (R) to the length of distance between promontorium and peritoneal reflection (PRx). The primary outcome was to evaluate whether the ratio of R/PRx is higher in patients with rectal prolapse compared to the control group.

Results: The length of the sigmoid colon and the length of distance between promontorium and peritoneal reflection (PRx) were not significantly different between the two groups. However, the length of the intraperitoneal rectum was significantly higher in the prolapse group. Furthermore, the median R/PRx ratio in the prolapse group was significantly higher than in the control group.

Conclusions: This study showed that intraperitoneal rectum in patients with rectal prolapse is significantly more redundant than the normal population. This result could be considered reasonable evidence for the role of rectal redundancy on rectal prolapse pathophysiology.

Keywords: rectal prolapse pathophysiology, redundancy

[Abstract:0308]**Is routine COVID-19 PCR testing necessary prior to colonoscopic interventions?****Leyla Zeynep Tigrel*, Tunc Eren, Mert Gacemer, Cengiz Madenci, Medeni Sermet, Ibrahim Ali Ozdemir, Ozgur Ekinci, Orhan Alimoglu**

Istanbul Medeniyet University Goztepe City Hospital, Department of General Surgery, Istanbul, Turkey

Background: The aim of the present study was to evaluate the effectiveness of routine nose/throat polymerize chain reaction (PCR) swab testing for coronavirus disease 2019 (COVID-19) prior to colonoscopic interventions.

Methods: Two peaks of COVID-19 were announced in Turkey during 2020. Infectious parameters of the patients who underwent colonoscopy during these two peaks were recorded and analyzed. $p < 0.05$ was accepted as statistically significant.

Results: The first peak group consisted of 199 (39.0%) patients while 311 (61.0%) patients were in the second peak group. Preinterventional PCR testing was performed in none of the patients in the first peak group while all patients underwent PCR testing prior to colonoscopy in the second peak group. During the postinterventional 14-days-follow-up period, PCR testing was indicated and performed in 4 patients (2.0%) in the first peak group and 37 (11.9%) patients in the second peak group due to COVID-like symptoms. Postinterventionally, none of the patients in the first peak group had positive PCR results (0.0%), whereas 5 (1.6%) patients were diagnosed with COVID-19 in the second peak group ($p = 0.162$; $p > 0.05$).

Conclusions: Routine preinterventional PCR testing did not affect COVID-19 infection rates measured during the 14-day-follow-up period after colonoscopic interventions.

Keywords: COVID-19, Colonoscopy

[Abstract:0310]**Home biofeedback treatment for fecal incontinence. A pilot study**

Wafi Attaallah*, Gülşah Filiz Karpuz

Marmara University, Faculty of Medicine, Department of General Surgery, Istanbul, Turkey

Background: Although it is an effective modality, anal biofeedback is no common used in fecal incontinence patients due to the lack of availability, the need of more than one session with trained personnel and high cost. In this study, we aimed to evaluate the success achieved by self-administered home biofeedback treatment.

Methods: Patients with fecal incontinence at single center were included in this prospective study. These patients were trained on the application of biofeedback therapy using a novel biofeedback device. Treatment was recommended twice a day for 3 months. The Wexner score, Fecal Incontinence Severity Index (FISI) and the Fecal Incontinence Quality of Life Scale (FIQOL) were compared before and after the treatment.

Results: Home biofeedback treatment was applied to 22 patients. The median age was 57 (17–69) years old. A very significant decreases were observed in the Wexner scores ($p < 0.001$) and the median value of the FISI ($p < 0.001$) after the biofeedback treatment. Furthermore, a very significant increase in the quality of life was found at the end of the treatment ($p < 0.001$).

Conclusion: Home biofeedback is an effective treatment for fecal incontinence. It can be preferred to standard biofeedback therapies because of its simplicity, easy-to-understand and cheapness.

Keywords: Fecal incontinence, Home biofeedback

[Abstract:0312]**A novel circTDRD3-HIF1 α -positive feedback loop promotes the proliferation and metastasis of colorectal cancer**

Fu Zhong Mao*

Department of General Surgery, Shanghai General Hospital, Shanghai Jiaotong University School of Medicine, China

Background: circRNAs and Tumor hypoxia are thought to play a key role in tumor progression and malignancy, respectively. Nevertheless, the biological effects and mechanisms of specific circRNAs exposed to hypoxia microenvironment in colorectal cancer (CRC) still remains elusive.

Methods: qRT-PCR was used to determine the expression level of circTDRD3 in CRC tissues and cell lines. Subsequently, functional experiments in vitro and in vivo were performed to explore functional effects on tumor growth and metastasis in CRC. Mechanistically, luciferase reporter assay, FISH, RIP assays, CHIP assays were performed to confirm the interaction among circTDRD3, miR-1231 and HIF-1 α .

Results: CircTDRD3 was upregulated evidently in both CRC tissues and cell lines. Overexpression of circTDRD3 facilitated the proliferation, migration and metastasis of CRC cell lines in vitro and in vivo. Mechanistically, circTDRD3 was shown to regulate the expression of HIF1 α by sponging miR-1231 to promote EMT in CRC cells, meanwhile HIF1 α could bind to the TDRD3

promoter sequence and promote the circularization of circRNA by cooperating with PTBP1 protein.

Conclusions: Our findings reveal that circTDRD3 facilitates the proliferation and metastasis of CRC through a positive feedback loop mediated by HIF1 α /ADAR/circTDRD3/miR1231/HIF1 α axis. Therefore, circTDRD3 may serve as an exploitable marker and therapeutic target for CRC patients.

Keywords: circTDRD3.1, HIF1a.2

[Abstract:0314]**Significance of laboratory parameters in pregnant patients with acute appendicitis**

Rifat Peksöz*

Atatürk University Research Hospital, Erzurum, Turkey

Background: Acute appendicitis (AA) is one of the most common surgical emergencies in pregnant women and the most common cause of non-obstetric acute abdomen. It is difficult to diagnose AA during pregnancy due to the physiological and anatomical changes that occur during pregnancy and the limited use of radiological methods. Therefore laboratory parameters very important. We aimed to examine significance of laboratory parameters in pregnancy.

Methods: The data of 130 pregnancy patients who diagnosis of AA between 2010–2021 were analyzed retrospectively. Twenty patients whose blood parameters were affected by causes other than AA were excluded.

Results: The patients were divided into three groups. Group I: negative appendectomy ($n = 19$); Group IIa: uncomplicated appendicitis ($n = 59$); Group IIb: complicated appendicitis ($n = 32$). There was no significant difference concerning mean age and gestational week. Complication rates were 5.26 % in Group I, 3.38 % in Group IIa, and 12.5 % in Group IIb, with significant differences.

Conclusions: Twenty-six parameters were evaluated. However, only the parameters with high diagnostic value were discussed. WBC, neutrophil, NLR, PLR, total, direct and indirect bilirubin levels can be used diagnosis of AA. WBC, neutrophil, NLR, platelet, PLR, LDH, total, direct and indirect bilirubin levels can be used to determine the complicated appendicitis.

Keywords: Acute appendicitis, Pregnancy

[Abstract:0315]**Lymph node ratio is better prognostic factor than ypN categories in resectable rectal cancer after preoperative short-course radiotherapy followed by total mesorectal excision – results from a randomised clinical trial**

Antoni M Szczepanik*, Radoslaw Pach, Marek Sierzega, Piotr Richter

Department of General Surgery, Jagiellonian University Medical College, Cracow, Poland

Background: The value of lymph node ratio in patients with rectal cancer has not been unequivocally established so far. The study aimed to assess the effect of lymph node ratio on rectal cancer prognosis in patients operated on after short-course preoperative radiotherapy 25 Gy at 10-year follow-up.

Methods: A total of 141 patients with resectable rectal cancer were included. Lymph node yield was compared in patients with short and long time intervals between radiotherapy and surgery. Survival curves were compared between patients with different ypN and lymph node ratio (LNR) categories. Univariate and multivariate analyzes were performed to identify independent prognostic factors for overall survival and disease-free survival.

Results: Data were available for a median follow-up of 11.6 years. Higher difference in overall survival at 10 years was observed in patients with LNR ≤ 0.41 and >0.41 when compared to ypN categories. Separate prognostic factor analyzes were performed for the whole population and for subgroups who had <12 and ≥ 12 lymph nodes retrieved. LNR was identified as an independent prognostic factor for overall survival in multivariate analyses for all patients and those with less than 12 retrieved lymph nodes.

Conclusions: LNR better discriminates patients in terms of overall survival than ypN categories.

Keywords: Rectal cancer, Lymph node ratio

[Abstract:0322]

Identification of a genomic instability-related lncRNA prognostic model in colorectal cancer based on TCGA database and bioinformatics analysis

Yu Liang*, Hong Xu Sun, Bin Ma, Peng Jiang

Department of Colorectal Surgery, Cancer Hospital of China Medical University, Liaoning Cancer Hospital & Institute, No. 44 Xiaohuyan Road, Dadong District, Shenyang 110042, Liaoning Province, P R China

Background: A growing body of research has revealed that lncRNAs participate in regulating genomic instability.

Methods: We obtained RNA expression profiles, somatic mutation profiles and clinical information of colorectal cancer (CRC) from TCGA project. We divided the cohort into two groups based on mutation frequency and identified genomic instability-related lncRNAs (GI-lncRNAs) using R software. We further analyzed the function of GI-lncRNAs and established a prognostic model through Cox regression. Using the prognostic model, we divided the cohort into high and low risk groups, and further verified the prognostic differences between the two groups as well as the predictive power of GI-lncRNAs in CRC.

Results: We identified a total of 143 GI-lncRNAs that differentially expressed between higher and lower mutation frequency group. According to KEGG pathway and GO analyses, a series of cancer-associated terms were enriched. We further constructed a prognostic model that including 5 GI-lncRNAs (PTPRD-AS1, AC009237.14, LINC00543, AP003555.1 and AL109615.3). We validated that the expression of the 5 GI-lncRNAs were associated with prognosis and mutation of critical genes.

Conclusions: The present research further confirmed the vital function of GI-lncRNAs in genomic instability and the 5 GI-lncRNAs are potential biomarkers and needed to be studied in depth.

Keywords: Genomic instability, Long noncoding RNAs

[Abstract:0328]

Risk factors for prognosis of simple lung metastasis after radical resection of colorectal cancer

Rui Guo*, Yongmin Li, Boao Li, Xin Zhao, Yue Chen

Department of Colorectal Surgery, Cancer Hospital of China Medical University, Liaoning Cancer Hospital & Institute, Shenyang110042,China

Background: To investigate the prognostic factors of simple lung metastasis after radical resection of colorectal cancer.

Methods: We retrospectively analyzed the clinical data of 55 patients with simple lung metastasis after radical resection of colorectal cancer from 2004 to 2015 in colorectal surgery department of Liaoning Cancer Hospital. Univariate Cox regression analysis was performed on the general data, and multivariate Cox regression analysis was used to determine the risk factors affecting the prognosis of simple lung metastasis after radical resection of colorectal cancer.

Results: Univariate Cox regression analysis suggested that the survival of patients with simple lung metastasis was related to mediastinal lymph node enlargement, bilateral lung metastasis and CEA >5 ng/L, which *P* value is 0.007, 0.009 and 0.044 respectively. Multivariate Cox regression analysis suggested that mediastinal lymph node enlargement and CEA >5 ng/L were independent risk factors for simple lung metastasis after radical resection of colorectal cancer.

Conclusions: Mediastinal lymph node enlargement and CEA >5 ng/L are independent risk factors for simple lung metastasis after radical resection of colorectal cancer, which may provide certain references for clinical practice.

Keywords: Colorectal cancer, Simple pulmonary metastasis, Prognosis, Risk factors

[Abstract:0331]

Surgical access selection and anatomical basis for taTME in low and intermediate rectal cancer

Guo Zhen¹, Zhang Yi², Zhang Hao¹, Xiao Jun Jie², Xia Qing Qian¹, Sheng Hua Jun¹, Zhu Shu Juan¹, Zhang Hong Yu^{*2}

¹Department of Anatomy, Chongqing Medical University, Chongqing, 400016,China

²Department of General Surgery, the First Affiliated Hospital, Chongqing Medical University, Chongqing, 400016, China

Background: In performing the taTME procedure, it was found that the clinical anatomy encountered at different sites of dissection of the intestinal wall differed, resulting in differences in the difficulty of the procedure.

Methods: Anatomical study of 22 adult male pelvic specimens without obvious lesions using fine dissection and simulated taTME.

Results: Determine the anatomical levels and signs of the transanal approach into the anterior rectal space, propose the concept of the lower boundary plane of the anterior rectal space, and determine the differences in the anatomical structures of different subdivisions.

Conclusions: In taTME, the anterior rectal surgery area is divided into two zones, upper and lower, with the lower border

of the pre-rectal space (distance from the dentate line intestinal wall is about 4 cm), and different approaches (normal circumferential and lateral approaches) can be taken to enter the pre-rectal space in order to reduce the occurrence of surgical complications.

Keywords: Pre-rectal space, Rectal cancer, Transanal total mesorectal excision, Anatomy

[Abstract:0333]

Can Lymphocyte/C-Reactive Protein Ratio Predict Morbidity in Surgery for Complicated Sigmoid Diverticulitis?

Semra Demirli Atıcı, Ufuk Uylaş*, Erdinç Kamer, Cem Tuğmen

University of Health Sciences Turkey, Tepecik Education and Research Hospital, Department of General Surgery, Izmir, Turkey

Background: Many different markers are used as predictors of morbidity and mortality that may develop after major abdominal surgery. The aim of this study is to evaluate the prognostic effect of LCR on morbidity in surgery for complicated diverticulitis.

Materials-Methods: Patients who were operated on for complicated sigmoid colon diverticulitis between January 2015 and January 2020 were retrospectively analyzed. Patients aged >18 years with diverticulitis stage Hinchey 3 and 4 according to computed tomography or operative findings were included in the study. The patients were divided into two groups as those with postoperative complications (Group 1) and those without complications (Group 2). Demographic characteristics and inflammatory parameters of the patients were compared.

Results: We retrospectively analyzed 61 patients who underwent surgical resection for complicated sigmoid diverticulitis. Eighteen (29.5 %) female and 36 (59.5 %) male patients who met the criteria were included in the study. LCR was found to have an effect on the development of postoperative morbidity in complicated diverticulitis ($p < 0.05$).

Conclusion: We think that LCR can be used as a useful marker to identify those at high postoperative risk in patients undergoing surgery for complicated diverticulitis. This simple applicable laboratory parameter can guide surgeons in these patients.

Keywords: Diverticulitis, Morbidity

[Abstract:0334]

Cecal diverticulitis: a rare cause of right lower quadrant pain

Erdinç Kamer, Ufuk Uylaş*, Batuhan Eydurhan, Cem Tuğmen, Mustafa Emiroğlu

Department of General Surgery, University of Health Sciences, Tepecik Education and Research Hospital, Izmir, Turkey

Background: Colon-derived diverticula, most commonly in the sigmoid colon. Solitary cecum diverticula are rare and usually asymptomatic, mostly anterior cecum wall-based lesions. Cecal diverticulum accounts for 3.6 % of colonic diverticulum in

Western countries. Computed tomography (CT) is very important in diagnosis. Clinically, it is difficult to distinguish cecal diverticulitis from acute appendicitis. In our study, we aimed to present our patients diagnosed with solitary cecal diverticulitis.

Methods: The records of 18 patients diagnosed with solitary cecum diverticulitis by examination and CT were analyzed from 152 patients admitted to our hospital with quadrant pain and hospitalized with the diagnosis of diverticulitis between 2015–2021. The patients' demographic characteristics, comorbidities, Hinchey classification, applied treatments, and follow-up were recorded.

Results: 11 of the patients were female and 7 were male, with a mean age of 50.4 years (range:22–83 years). Our incidence of cecal diverticulitis was 11.8%. 83.3% of the patients were Hinchey 1a and 16.7% were Hinchey 3. All patients were diagnosed with CT. Surgery was performed in 22% of the patients, while 78% were treated conservatively (Table).

Conclusions: Cecal diverticulum accounts for 3.6% of colonic diverticulum in Western countries. Clinically, it is difficult to distinguish cecal diverticulitis from acute appendicitis. Computed tomography (CT) is very important in diagnosis.

Keywords: Cecal diverticulitis, Lower quadrant pain

[Abstract:0335]

Single-Port port laparoscopic Hartmann's procedure reversal: First results

Tevfik Kivılcım Uprak, Ahmet Akmercan*, Tayfun Akmercan

General Surgery, School of Medicine, Marmara University, Istanbul, Turkey

Background: Single port laparoscopic surgery provides better cosmetic results and postoperative recovery. We aimed to evaluate the feasibility and safety of single-port laparoscopic reversal of Hartmann's procedure (SPL-HR) through the colostomy site.

Methods: Five patients who underwent SPL-HR were evaluated. A peristomal incision was made, and the colostomy completely detached from the abdominal wall. The anvil of the circular stapler was inserted in the proximal colon and pushed back to the cavity. The single-port device was inserted through the stoma incision. Conventional laparoscopic instruments were used. The rectal stump and descending colon were mobilized. Splenic flexure mobilization was performed selectively if necessary. End-to-end anastomosis was performed using the circular stapler. Demographics features, details of initial Hartmann's procedure, operative parameters, and perioperative complications were recorded.

Results: We successfully performed SPL-HR in all patients. No additional trocars or conversion to open surgery were required. The median operative time was 100 min (range 50–100 min). Postoperative intra-abdominal abscess occurred in 1 patient. The median length of hospital stay was 5 days (range 3–9 days). There was no readmission after the discharge of patients.

Conclusions: In our experience, SPL-HR is a feasible and safe surgical technique.

Keywords: Single-port laparoscopy, Hartmann's reversal

[Abstract:0338]**Results of our early repair practice in traumatic anal sphincter injury****Muhammet Akyüz, Ömer Cenk Cüçük*, Erdoğan Mütevelli Sözüer, Mustafa Gök, Hızır Yakup Akyıldız**

Department of Surgery, Faculty of Medicine, Erciyes University, Kayseri Turkey

Background: Traumatic anal sphincter injuries result in incontinence and impair quality of life. We analyzed our cases in which we applied early repair to sphincter injuries caused by obstetric and non-obstetric (penetrating/blunt) etiologies.

Methods: The data of 19 patients with traumatic anal sphincter injury who were treated in our clinic between January 2015 and June 2021 were analyzed. Demographic characteristics of the patients, type of injury, time of first attempt, type of repair and long-term results were examined.

Results: Of 19 patients, 13 (68.4%) were female and 6 (31.6%) were male, with a mean age of 37.4 (19–79). Twelve (63.2%) of all injuries were due to normal delivery and others due to non-obstetric reasons. Primary sphincter repair was performed on average 12.6 (1–120) hours after injury due to loss of sphincter tone in all patients on rectal digital examination. Jorge-Wexner incontinence score was used in the follow-up of the cases, and the mean score was 2.37 (0–15) in the 1st month after the operation. Permanent complete incontinence was only present in one patient in the non-obstetric group.

Conclusions: Satisfactory results in terms of quality of life have been obtained with primary sphincteroplasty performed in the early post-traumatic period.

Keywords: Anal sphincter injury, Sphincteroplasty

[Abstract:0341]**CT pelvic measurements predict the difficulty of laparoscopic medium-low rectal resection****Zhi Yin*, Wan Dai Wei, He Song Bing, Tang Quan, Shi Xing Yu, Yuan Zi Han, Chen Guo Liang, Dong Xiao Qiang**

First Affiliated Hospital, Soochow University, Suzhou, China

Background: With the increasing incidence of medium-low rectal cancer, laparoscopy has become the main surgical method. Studies suggested that obese people with deep, narrow pelvises may make surgery more difficult. This paper mainly discusses the relationship between the pelvic factors and the difficulty of laparoscopic middle-low rectal resection.

Methods: In this study, clinical data were collected from 80 patients with medium-low rectal cancer who underwent laparoscopic rectal resection between January 2018 and February 2019. 25 pelvic factors were measured on CT images. The operative time, blood loss, conversion to open procedure, use of transanal dissection, postoperative hospital stay and postoperative complications were taken as the criteria of surgical difficulty. Univariate analysis and multivariate analysis were used to analyze the influencing factors of pelvic size and related clinical data on surgical difficulty.

Results: Univariate analysis and multivariate analysis suggest that interspinous diameter, anteroposterior diameter of inlet, length of pubic symphysis and distance from sacral prom-

ontory to tip of coccyx were the main factors. A scoring model for the difficulty of operation was established according to the above factors. A Nomogram was established based on this model.

Conclusions: Preoperative comprehensive evaluation of pelvic factors in patients with medium-low rectal cancer can be used as an evaluation index of surgical difficulty.

Keywords: Pelvic factors, Surgery difficulty

[Abstract:0343]**The effect of stoma on surgical outcomes in patients with Fournier's gangrene; single center experience****Fevzi Cengiz*¹, Feyyaz Güngör², Emine Özlem Gür¹, Yiğit Doğanay Atalay¹, Cengiz Tavusbay¹, Haldun Kar¹, Melek Gökova¹, Murat Kemal Atahan¹**¹Izmir Katip Celebi University, Atatürk Education and Research Hospital, Department of General Surgery, İzmir, Turkey²Ağrı Diyaradin State Hospital, Department of General Surgery, Ağrı, Turkey

Background: Fournier's gangrene, a potentially fatal disease characterized by necrotizing fasciitis of the perineal and genital region, is a surgical emergency requiring aggressive surgical debridement and antibiotics. In this study, stoma indications and its effect on surgical outcome in patients with Fournier's gangrene were evaluated in the light of literature data.

Methods: Our study is a retrospective study that included 120 patients diagnosed with Fournier's gangrene in our center between 2009 and 2019. Patients were grouped as with and without stoma, and demographic data, comorbidities, clinical characteristics, laboratory data, and postoperative follow-up data of the patients were analyzed between groups.

Results: The median age of the patients was 58.05 (47–67)/year, and 89 (74.2%) were male. No statistically significant difference was found between the groups in terms of gender, diabetes mellitus status, presence of other comorbidities, white blood cell value, C-reactive protein value, creatinine value, glucose value, number of debridements, graft requirement and hospital stay. A statistically significant difference was found in age, hemoglobin value and mortality.

Conclusions: In our study, it was found that the stoma group was older, had a lower hemoglobin value, and had a higher mortality.

Keywords: Fournier's gangrene, Stoma

[Abstract:0346]**Endoscopic surgery; single center colorectal ESD case series****Fevzi Cengiz^{*1}, Feyyaz Güngör², Hüseyin Taş¹, Mehmet Hacıyanlı¹**¹Izmir Katip Celebi University, Atatürk Education and Research Hospital, Department of General Surgery, İzmir, Turkey²Ağrı Diyadin State Hospital, Department of General Surgery, Ağrı, Turkey

Background: With the development and more widespread use of endoscopy devices, gastrointestinal malignancies, including early-stage cancers and precancerous lesions, are detected more frequently. In this study, our endoscopic submucosal dissection (ESD) results of gastrointestinal lesions are presented in the light of current literature.

Methods: The study includes patients who were evaluated in the surgical endoscopy unit of our hospital and underwent ESD between 2018–2021 July. In our study, the demographic data of the patients, the duration of surgery, complications, histopathological results and the results of patients who required resection according to histopathological examination were evaluated.

Results: In our study, ESD was performed in 58 patients (30 males, 28 females, mean age 63 ± 10/years), including 24 rectal, 2 rectosigmoid, 34 colonic lesions. Histopathological examination revealed 23 lesions as malignant and 37 lesions as benign. Poor prognostic criteria were found in the histopathological examination of 6 patients, and oncological resection was performed in five patients and follow-up in one patient. After oncological resection, residual tumor was detected in 2 patients and lymph node positivity was detected in 1 patient.

Conclusions: Emerging endoluminal surgery with the ESD technique is included in surgical guidelines for the treatment of early stage gastrointestinal tract malignancies.

Keywords: Endoscopic surgery, ESD

[Abstract:0348]**The effect of sarcopenia on surgical outcomes in patients with ASA score III and undergoing emergency colorectal surgery; single center experience****Feyyaz Güngör¹, Fevzi Cengiz^{*2}, Burak Koyuncu², Furkan Tosun², Selda Hacıyanlı², Halis Bağ², Arif Atay², Osman Nuri Dilek²**¹Ağrı Diyadin State Hospital, Department of General Surgery, Ağrı, Turkey²Izmir Katip Celebi University, Atatürk Education and Research Hospital, Department of General Surgery, İzmir, Turkey

Background: Sarcopenia is closely associated with decreased muscle mass and it is possible to measure skeletal muscle volume with computed tomography. In this study, we aimed to evaluate the effect of sarcopenia on surgical results in patients with an ASA score of III who underwent emergency colorectal resection, in the light of literature data.

Methods: 31 patients with ASA score of III who underwent emergency colorectal resection in our center between 2013 and 2018 were included in the study. Patients were grouped as with and without Clavien-Dindo 3a complication and preoperative CT images were evaluated.

Results: Of the 31 patients included in the study, 23 (74.19 %) were male and the median age was 66 (56–77)/year. In the analysis performed between the groups, no statistically significant difference was found between age, gender, left psoas area, total muscle area and visceral fat area. There was a statistically significant difference in the right psoas area and subcutaneous fat area criteria.

Conclusions: In our study, it was determined that the right psoas muscle area was less and the subcutaneous fat area was more in patients with ASA score of III, who underwent emergency colorectal resection, and who developed complications above Clavien-Dindo 3a.

Keywords: Colorectal surgery, Sarcopenia

[Abstract:0350]**Comparison of ileal pouch anal anastomosis and ileorectal anastomosis in patients with familial adenomatous polyposis****Mehmet Ali Açıkgöz^{*1}, Bahri Çakabay²**¹Mardin Nusaybin State Hospital, Mardin, Turkey²Diyarbakır Gazi Yaşargil Health Application and Research Center, Diyarbakır, Turkey

Background: FAP is a disorder which its main treatment is surgery. Total Colectomy Ileorectal Anastomosis (IRA) and Total Proctocolectomy Ileal pouch Anal Anastomosis (IPAA) are options of surgery. Each procedure has advantages and disadvantages. We aimed to investigate the effect of two surgical procedures on quality of life of patients in the postoperative period.

Methods: Our study is a retrospective clinic research. The patients who are operated in Diyarbakır Gazi Yaşargil Health Application and Research Center of General Surgery, between the years 2014–2019 due to FAP are included. 25 patients of study group performed IRA, 15 patients performed IPAA. Data was collected via using SF-36 quality of life questionnaire.

Results: The average age of included 40 FAP patients is 46,5. %52,5 of the patients were male and the %47, 5 were female. All IPAA patients performed temporary loop ileostomy.

Conclusions: In all subscales of SF-36, the IRA group was significantly higher than IPAA group. In the comparison between sex groups themselves; all subscales of IRA were significantly higher in both groups IRA versus IPAA. In various studies; while no significant difference was found between the two groups when compared with SF-36 but a significant difference was found when compared with EORTC QLQ-CR38. We think that this difference is due to many reasons, from the usage limits of SF-36 to social differences.

Keywords: Familial Adenomatous Polyposis, Quality of life

[Abstract:0351]**Has there been a stage shift in rectal cancers during the Covid-19 pandemic?**

Fevzi Cengiz^{*1}, Mete Etlik¹, Feyyaz Güngör², Turan Acar¹, Serkan Karaislı¹, Hilmi Güngör¹, Yeliz Yılmaz Bozok¹, Mehmet Hacıyanlı¹

¹İzmir Katip Celebi University, Atatürk Education and Research Hospital, Department of General Surgery, İzmir, Turkey

²Ağrı Diyarın State Hospital, Department of General Surgery, Ağrı, Turkey

Background: The first case reported as Covid-19 in Turkey occurred on March 11, 2020. During this sensitive Covid-19 pandemic, various difficulties were encountered in the treatment of patients diagnosed with colorectal cancer. In this study, we aimed to investigate whether there was a stage shift in patients diagnosed with rectal cancer during the Covid-19 pandemic.

Methods: Patients who underwent rectal surgery between March 11, 2019 and 2021 were included in our study. Patients were classified as before (Group-1) and after (Group-2) the Covid-19 pandemic. Demographic data of the patients, surgical procedure performed, histopathological diagnosis, pathological TNM classification and stage were analyzed.

Results: 129 patients were included in the study and 75 (58.13 %) of the patients were male. The median age was 65.3 (59–72.5)/year. There were 73 patients in group-1 and 56 patients in group-2. In the comparison, no statistically significant difference was found in demographic data, surgical procedures and T classification. There was a statistical difference in N classification and stage.

Conclusions: In our study, the patients who were operated during the Covid-19 period (Group-2) were found to be in a more advanced N classification and stage.

Keywords: COVID-19, Rectal cancer

[Abstract:0352]**The prognosis prediction model of colorectal cancer was established based on NGS**

Zhe Zhang^{*1}, Xiaoqiang Dong², Songbing He²

¹General surgery, Suzhou Dushu Lake Hospital, Suzhou, China

²General surgery, First Affiliated Hospital of Soochow University, Suzhou, China

Background: Traditional TNM staging cannot meet the needs of predicting the prognosis of patients with colorectal cancer in the era of precision medicine. It can be seen that the introduction of tumor molecular markers on the basis of anatomy and pathology will be an important way to improve the prognosis assessment system.

Methods: NGS was used to examine the key gene mutations in 104 patients with colorectal cancer. Lasso regression was applied for the preliminary screening of detected genes. Gene and clinicopathological indicators were included in the univariate and multivariate Cox regression. Then a nomogram for prognostic prediction was drawn for possible prognostic indicators. We used the C-index, calibration curve, ROC curves to test the accuracy and differentiation of the proposed model.

Results: Seven prognostic factors, including depth of tumor invasion, number of regional lymph node metastases, distant metastasis, preoperative CEA level and BRCA2, KRAS and SMAD4 mutation status were included in the prognostic model construction. After verification we found that the model has better performance to predict prognosis than traditional TNM staging.

Conclusions: We used seven prognostic indicators to construct a Nomogram model for the prognosis of colorectal cancer that demonstrates better prediction performance than traditional TNM staging.

Keywords: NGS, Nomogram

[Abstract:0356]**Clinical outcomes of obstructive colorectal cancer patients during the COVID-19 pandemic**

İlker Özgür, Berke Şengün*, Alişan Berk Deniz, Cemil Burak Kulle, Adem Bayraktar, Ali Fuat Kaan Gök, Mehmet Türker Bulut, Metin Keskin

Istanbul University, Faculty of Medicine, Department of General Surgery, Istanbul, Turkey

Background: The COVID-19 pandemic has affected all aspects of clinical care, including diagnosis and treatment of colorectal cancers (CRC). During the initial peak of the pandemic, elective patient care was restricted in addition to the government-imposed lockdown, resulting in a decrease in number of colonoscopies being performed and patients admitted for treatment. In this study, we aimed to investigate whether the pandemic has affected presentation characteristics and outcomes of CRCs in this period.

Methods: This is a single-center, retrospective study, based on all CRCs that underwent surgical resection in a tertiary-center. Patients were divided into two groups: before and after 15 months of identification of “patient-zero” in Turkey (18/03/2020). Patient demographics, initial presentation characteristics, clinical outcomes and pathological cancer stages were compared.

Results: Overall, 215 patients underwent resection for CRCs during 30-month period (COVID:107, pre-COVID:108). Patient characteristics, tumor location and clinical-staging were comparable between two groups. During COVID period, number of obstructive CRCs ($p < 0.01$) and emergency presentations ($p < 0.01$) increased significantly compared to the pre-COVID period. But there were no differences between 30-day morbidity, mortality, and pathological outcomes ($p > 0.05$).

Conclusion: Although the results of our study indicate a significant increase in emergency presentation and decrease in elective-admissions of CRCs during the pandemic, patients treated in COVID-period were not in a significant disadvantage in terms post-operative outcomes. Further efforts should be made to decrease risks related to emergency presentation of CRCs for future adverse-events.

Keywords: COVID-19, Bowel obstruction

[Abstract:0357]**Comparison of the effectiveness of natural orifice specimen extraction between benign and malignant colorectal patients: What should be the limits?****Yunus Emre Altuntaş¹, İsmail Ertuğrul¹, Şükriye Leyla Altuntaş², Selçuk Kaya¹, Önder Altın¹, Osman Akdoğan^{*1}, Nejdet Bildik¹, Hasan Fehmi Küçük¹**¹University of Health Sciences Hamidiye Faculty of Medicine Kartal Dr. Lutfi Kırdar City Hospital, Istanbul, Turkey²Istanbul Medipol University Medical Faculty Obstetrics and Gynecology, Istanbul, Turkey**Background:** In this article, our aim is to determine the limitations of the technique by comparing left-sided benign and malignant lesions with specimen extraction (NOSE) from natural orifices such as transrectal or transvaginal without abdominal incision.**Methods:** This was a prospective randomized clinical study conducted in one tertiary-level university hospital. All patients were operated under general anesthesia in the modified Lloyd-Davies position using the standard laparoscopic colorectal surgery technique. The transanal route was chosen as the first option for specimen removal after laparoscopic resection and, if unsuccessful, the transvaginal route was attempted in female patients. SPSS 20.0 for windows used.**Results:** Seventeen patients with benign (Group 1) and 24 malignant (Group 2) left-sided colorectal diseases were included in the study. The results of the comparison of demographic, clinical characteristics, pre- and post-operative parameters, specimen characteristics and technique of the patients are given in Tables 1, 2 and 3.**Conclusions:** The fact that female gender, location of the lesion in the rectum, transvaginal removal of the specimen, intracorporeal placement of the anvil were statistically more significant in Group 1 showed that left-sided benign colorectal diseases could be performed better with the NOSE technique.**Keywords:** Natural orifice specimen extraction, Laparoscopic colorectal surgery**[Abstract:0360]****Prediction of prognosis in colon adenocarcinoma patients based on RNA binding proteins****Lipeng Luan, Haitao Zhang, Songbing He***

The First Affiliated Hospital of Soochow University Suzhou, China

Background: RNA binding proteins (RBPs) play an important role in the regulation of post-transcriptional gene expression and are related to the occurrence and development of tumors.**Methods:** Combined with the clinical and transcriptome data of colon adenocarcinoma (COAD) in TCGA, the differentially expressed RBPs in normal and cancer tissues were selected. Cox analysis identifies prognostic-related RBP. All samples were randomly divided into experimental group and control group. Modeling: According to the prognosis-related RBP risk score, the experimental group and the control group were divided into high-risk and low-risk subgroups, and the

prognosis of the two subgroups was compared. Online survival database and Human Protein Atlas (HPA) validate the model results.

Results: 469 differentially expressed RBPs were detected, and 10 prognostic-related RBPs were obtained. In the prediction model, the prognosis of high-risk patients in the experimental group is poor in the lower-risk group, and the results of the control group are the same. Cox analysis shows that this model can be used as an independent prognostic factor. The results of online survival analysis tools, HPA and models are consistent.**Conclusions:** Some RBPs are related to the prognosis of COAD patients, providing new ideas for the treatment of COAD patients.**Keywords:** Colon adenocarcinoma, RNA binding proteins, Prognostic prediction model, Bioinformatics**[Abstract:0362]****Modified frailty index predicts high-risk patients for developing chronic anal fistula after initial perianal abscess****Rozan Kaya*, Muhammed Gürlük, Candemir Ertürk, Münevver Dilara Yurtbaşı, Hüsnü Şevik, Ufuk Oğuz İdiz, Mert Mahsuni Sevinç, Cihad Tatar**

Istanbul Training and Research Hospital, Department of Surgery, Istanbul, Turkey

Background: The modified frailty index (mFI-5) is an index that has been proven to adequately reflect frailty and predict mortality and morbidity. In this study we aimed to evaluate whether mFI could be utilized to predict chronic anal fistula after initial perianal abscess.**Methods:** A retrospective cohort study was conducted in patients with a first-time perianal abscess between January 2018 and December 2020. A previously described mFI was calculated. Demographics, comorbidities, mFI scores and development of anal fistula were recorded. Patients were divided into 2 groups based on having chronic anal fistula or not.**Results:** Forty-six patients met inclusion criteria (24 men, 13 women; mean age: 37.4 years). During a mean follow-up of 29 months, in 9 patients (20%) chronic anal fistula was developed. The mean time for the development of anal fistula was 9 months. There were no significant differences in terms of gender, age, BMI, and smoking status between the groups. Mean mFI score was 0.54 ± 1.48 and 0.15 ± 1.25 in patients who experienced chronic anal fistula and not, respectively. mFI score was significantly high in patients who experienced chronic anal fistula ($p=0.0019$).**Conclusion:** A 5-point modified frailty index correlates with development of chronic anal fistula after initial perianal abscess.**Keywords:** Anal fistula, Perianal abscess

[Abstract:0364]

Risk factors for appendix mucinous adenocarcinoma

Hakan Mustafa Köksal, Mustafa Fevzi Celayir*, Aydın Eray Tufan

Sisli Hamidiye Etfal Research and Education Hospital, Istanbul, Turkey

Background: Appendix malignancy (AM) is detected in 0.5-1.4% of patients. Mucinous adenocarcinoma (AMA) is one of the AM. It can cause pseudomyxoma peritonei if diagnosed late. In this study, it was aimed to reveal the risk factors of AMA.

Methods: 1884 patients were operated in 2016 and 2020 for acute appendicitis (AP). 80 patients' pathology resulted as lymphoid hyperplasia and fibrous obliteration and/or whose data could not be reached were excluded. Demographic characteristics, preoperative laboratory findings and radiological examinations were analyzed.

Results: There were 23 (11M, 12F) patients. The mean age was 46.2, WBC value was 10.700, CRP value was 52.36, neutrophil percentage was 68.87, and appendix diameter was 16.5 mm. 1781 (1083M, 698F) patients were diagnosed with acute appendicitis and their mean age was 34.5 years. Mean WBC value was 14.160, CRP value was 51.81, neutrophil percentage was 78.62, and appendix diameter was 9.46 mm.

Conclusions: The absence of leukocytosis and neutrophil dominance, the appendix diameter ≥ 12 mm, and the advanced age of the patient are risk factors for AMA. Removing the appendix and its meso without disrupting the tissue integrity is very important.

Keywords: Acute appendicitis, Mucinous adenocarcinoma of the appendix

[Abstract:0367]

Choice of incision dictate the incidence of surgical site infection in colorectal surgery

Khadija Qadir*¹, Mahmood Al Dhaheri¹, Ibrahim Amer¹, Khadija Mansoor¹, Komal Yousaf¹, Noof Al Naimi¹, Mohamed Abu Nada¹, Amjad Parvaiz²

¹Hamad Medical Corporation, Doha, Qatar

²Champalimud Foundation, Lisbon, Portugal

Background: Surgical site infection (SSI) is a common morbidity in colorectal surgery. The incidence of SSI varies with the type of procedure, mode of surgery (elective vs emergency surgery) and with the choice of incision.

Objective: To look at the incidence of SSI in relation to the incision made during both elective and emergency abdominal colorectal surgery.

Methods: Prospectively collected data for of patients undergoing laparoscopic or open resection during 2019 were analyzed. Demographics including comorbidities and post-operative clinical outcomes data were collected. SSI is defined according to the US CDC criteria.

Results: Total of 124 patients underwent elective and emergency procedures. 87(70%) had laparoscopic procedure. Within laparoscopy, 56(64%) patients had a midline incision for specimen extraction, while 31(35%) patients had Pfannenstiel for specimen extraction.

Within the open surgery group 37(30%) all had midline laparotomy.

The overall incidence of superficial surgical site infection (SSI) was seen in 14.4%.

Subgroup analysis of the data showed association of SSI with midline laparotomy (24%), midline extraction site (11%) and Pfannenstiel extraction site to be (11%) (p0.34).

Conclusions: This study demonstrates that midline incision either for extraction purpose in laparoscopic surgery or laparotomy is associated with higher rates of surgical site infection when compared to Pfannenstiel incisions.

Keywords: Surgical site infection, Colorectal surgery

[Abstract:0376]

"Fluorescence Lymphatic Mapping Technique" in right sided colon cancer surgery

Murat Şen*, Özgen Işık, Tuncay Yılmazlar

General Surgery, Bursa Uludag University Faculty of Medicine, Bursa, Turkey

Background: Fluorescence imaging (FI) makes fluorescence lymphatic mapping (FLM) possible. There are studies demonstrating peritumoral indocyanine green (ICG) injection makes lymph nodes (LN) visible in the mesocolon. Pure peritumoral injection may not be sufficient for demonstrating drainage and mapping may not be reliable since lymph vessels blocked by tumoral cells. We present our (FLM) technique for right sided colon cancer surgery proposing maximal LN harvesting with selective D3 lymphatic dissection.

Methods: 15 mg of ICG prepared. Subserosal injection performed to the colonic wall at caecum, mid-ascending-colon and hepatic-flexure in addition to the peritumoral injections. After injection; mobilization of the right-mesocolon was started in lateral to medial fashion. When separation of the visceral plane was completed, FI was performed with SPYelite (Stryker, Kalamazoo, MI, USA) before central ligation. Time between the injection and the FI was median 28 minutes. This first-FI was done for making sure that ICG was drained to the lymphatics and LN of the right mesocolon. Then, right colectomy was completed and repeat FI was done before ileotransversostomy. The second-FI was performed to identify whether fluorescing LN were left at the resection site. When all fluorescing LN were removed, ileotransversostomy was created.

Results: FLM technique was utilized in 5 patients. Residual fluorescing LN's were demonstrated during FI in 2 patients who underwent conventional right-colectomy.

Conclusions: FLM technique may offer reduced morbidity by removing only fluorescing D3-LN without comprising oncological quality of the right-colon cancer surgery.

Keywords: Colon cancer, Lymphatic mapping

[Abstract:0378]**Stapled hemorrhoidopexy in a high volume center: Post-operative results in early period****Emir Çapkınoğlu¹, Onur Dülgeroğlu², Cihan Uras³**¹Department of General Surgery, Bakırköy Acibadem Hospital, Istanbul, Turkey²Vocational School of Health Sciences, Acibadem Mehmet Ali Aydınlar University, Istanbul, Turkey³Department of General Surgery, School of Medicine, Acibadem Mehmet Ali Aydınlar University, Istanbul, Turkey

Background: Stapler hemorrhoidopexy was defined by Longo in 1998 and has become a preferred method with lesser complications (pain, bleeding, etc.) in early postoperative compared to conventional hemorrhoidectomy. This study aimed to show the early (first 30-day) postoperative results in a high-volume center.

Methods: Data of 1460 patients who underwent to stapler hemorrhoidopexy between 2001–2021 were reviewed retrospectively. Postoperative bleeding, early re-admission, pain relief need, bowel movements, duration of surgery, and incontinence complaints of the patients were evaluated.

Results: The study included 1460 patients (Male: 875, Female: 585). Median age was 41(21–76) years. Median operation time was 21 (18–46)minutes. Nine hundred sixty (65%) patients were discharged within 24 hours. During hospitalization, 68 (4%) patients required additional opioids other than routine non-steroidal anti-inflammatory analgesic. Extra sutures were placed for hemostasis during the operation in 32 (2%) patients. Urinary retention developed in 51 (3%) patients. Thirteen (<0.9%) patients were followed up for postoperative bleeding inpatient/outpatient. In two off these 13 patients, hemostasis was achieved with sutures under general anesthesia.

Conclusions: Stapler hemorrhoidopexy is a preferable technique with low early postoperative complication in high-volume centers with appropriate patient choice

Keywords: Longo, Stapled hemorrhoidopexy

[Abstract:0381]**Further Modified Hanley procedure for the management of horseshoe abscess: single-center results****Wafi Attaallah, Ahmet Omak*, Ahmet Akmercan, Tefvik Kivılcım Uprak**

General Surgery, School of Medicine, Marmara University, Istanbul, Turkey

Background: Horseshoe abscess is big trouble in surgical practice. This study aimed to evaluate the outcomes of further modified Hanley procedure for horseshoe abscesses.

Methods: Thirteen patients with horseshoe abscesses were undergone surgery in a single center. The deep postanal space was accessed through a posterior longitudinal mucocutaneous incision at the level of dentate line. Internal anal sphincter (IAS) and subcutaneous part of the external anal sphincter (EAS) were cut. Dissection was carried deeper behind superficial part of EAS into deep postanal space where the abscess was placed. Bilateral external orifices were created on the skin by crossing

postanal space and ischioanal fossa with a clamp advanced through posterior incision. Two loose setons were placed bilaterally. During follow-up, both clinical and radiological healing were retrospectively analyzed.

Results: Clinical and radiological improvement occurred in 11(85%) of 13 patients. However, 2 patients described partial clinical healing without any radiological changes. Both of two seton were removed in 6(46%) patients and one seton was removed in 5(38%) patients. Abscess recurrence was not observed in the healing group. Fecal incontinence didn't occur in any patient.

Conclusions: Modified Hanley procedure using two setons without extensive posterior incision can be performed safely for horseshoe abscesses drainage.

Keywords: Horseshoe abscess, Modified Hanley procedure

[Abstract:0382]**Comparison of the clinical characteristics and stage of colorectal tumors before and during the Coronavirus Disease 2019 (COVID-19) pandemic****Görkem Özdemir*, Ahmet Şeker, Alper Sözütek, Tolga Ölmez**

Adana City Training and Research Center, Department of Gastroenterological Surgery, Adana, Turkey

Background: The coronavirus disease 2019 (COVID-19) pandemic has caused changes in health system priorities. The aim of this study is to investigate whether the pandemic causes delay in the diagnosis of colorectal tumors, to compare the clinical characteristics and TNM stage of those before and during the pandemic.

Methods: This retrospective single centered study included a total of 140 patients diagnosed with colorectal cancer from January 2019 to May 2021. The patients were divided into two groups: before and during pandemic. The following parameters were compared between the groups; age, gender, CEA level, type of surgery, location of the tumor, neoadjuvant treatment status, clinical and pathological stages, the number of the retrieved and metastatic lymph nodes.

Results: The length of the hospital stay was significantly lower during the pandemic. The laparoscopic surgery decreased during the pandemic. There were no statistically significant differences between the groups with regard to the demographic factors. The TNM stage of the tumor did not differ among the groups.

Conclusions: There was not a significant difference in the TNM stage. Thus, it seems that the pandemic did not cause a delay in the diagnosis of colorectal tumors at our hospital, serving as a tertiary reference center.

Keywords: Colorectal tumor, COVID-19 pandemic

[Abstract:0384]**Does emergency surgery have an impact on lymph node harvest in colorectal cancer surgery? – Single center experience****Andrej Nikolovski¹, Kristijan Dervishov¹, Cemal Ulusoy²**¹Department of Visceral Surgery, University Surgical Clinic “Sv. Naum Ohridski”, Medical Faculty, University “Sv. Kiril i Metodij”, Skopje, North Macedonia²Department of General Surgery, Prof. Dr. Cemil Taşçıoğlu Şehir Hastanesi, Istanbul, Turkey

Background: Adequate oncologic surgery for colorectal cancer implies proper resection margin of the resected specimen and complete mesocolic excision in order to achieve objective postoperative pathologic staging. Current recommendations require a minimum of 12 lymph nodes retrieval. In emergency colon cancer surgery, questions are raised about its impact on the lymph node number harvest.

Methods: Retrospective analysis of 102 patients operated for colorectal cancer in the period of 1 year was conducted. Two groups (emergency and elective) were formed. Six surgeons performed all of the operations (three high-volume and three low-volume surgeons).

Results: Twenty patients presented as surgical emergencies and the rest 66 were elective cases. Sixteen patients with stage IV were excluded. Mean number of lymph nodes retrieved in the emergency group was 11.1 [5–20], and 14.7 [4–34] in the elective one, respectively ($p=0.004$). Sufficient number of lymph nodes (≥ 12) extraction was achieved in 7 patients in the emergency group and in 48 patients in the elective one ($p=0.003$).

Conclusions: Emergency colon cancer surgery did have impact on the lymph node number harvest. Adequate colorectal training is expected to improve the surgical technique in order to achieve reliable TNM staging.

Keywords: Colorectal cancer, Lymph node

[Abstract:0385]**RIFT Turkey: Right iliac fossa treatment audit Turkey****Ali Yalçinkaya¹, Bengi Balcı², Sezai Leventoğlu³, Alp Yıldız⁴, Ahmet Yalçinkaya⁵, RIFT Turkey Collaboration⁶**¹Gazi University Faculty of Medicine, Ankara, Turkey²Department of General Surgery, Ankara Oncology Training and Research Hospital, Ankara, Turkey³Department of Surgery, Gazi University Faculty of Medicine, Ankara, Turkey⁴Department of Surgery, Yenimahalle Training and Research Hospital, Ankara, Turkey⁵Department of Medical Biochemistry, Hacettepe University Faculty of Medicine, Ankara, Turkey⁶Participating institutions from across Turkey

Background: Appendicitis is among the most common general surgical emergencies worldwide, but its diagnosis remains challenging. This study aimed to determine whether existing risk prediction models can reliably identify patients presenting to hospital with acute right iliac fossa pain, in addition, to clarify the current management differences across the country.

Methods: This multicentre, national, prospective observational study included all patients referred to general surgeons with either RIF pain or suspected appendicitis. Consecutive patients presenting within 3-month long data collection periods were included. Centres were invited to participate between September and December 2020. Data was captured using a secure online data management system.

Results: A total of 3361 patients were included from all participating hospitals across Turkey, of which 43% was women and 57% was men. A normal appendix was seen in ~3% of patients included in the study. Appendectomy was performed in 2477 patients for appendicitis together with or without the presence of associated surgical pathologies.

Conclusions: Management of acute appendicitis in Turkey has shown differences across Turkey. A low normal appendix rate is the presumed effect of a preoperative imaging strategy with USG and CT.

Keywords: Appendicitis, Acute surgery

[Abstract:0391]**Is increased age a factor in complicated sigmoid diverticulitis?****Gizem Kilinc^{*}, Korhan Tuncer, Batuhan Eydurhan, Semra Demirli Atici, Ufuk Uylas, Cem Tugmen, Erdinc Kamer**

University of Health Sciences Tepecik Training and Research Hospital, Department of General Surgery, İzmir, Turkey

Background: Although sigmoid diverticulitis is frequently seen in elderly patients, it can also be seen at younger ages. In our study, we aimed to compare the morbidity of young and elderly sigmoid diverticulitis patients.

Methods: Patients aged >18 years with a diagnosis of sigmoid diverticulitis who admitted to the emergency department between 2014 and 2021 were retrospectively screened. The patients were divided into two groups as 50 years old and under (Group 1) and over 50 years old (Group 2). The groups were compared in terms of demographic characteristics, laboratory parameters, degree of diverticulitis, length of hospital stay, choice of treatment, postoperative morbidity, and mortality.

Results: 175 patients were included in the study. The median age was 58.6 ± 15.3 . There were 93 male and 82 female patients. There was no difference in gender distribution between Group 1 ($n=57$) and Group 2 ($n=118$) ($p>0.05$). The rate of complicated diverticulitis was higher in Group 2, and the rate of surgical treatment was found to be higher ($p<0.05$). Postoperative morbidity, mortality rates, and hospital stay were higher in Group 2 patients ($p<0.05$).

Conclusions: The incidence of complicated sigmoid diverticulitis increases with increasing age. Therefore, surgical treatment, morbidity, and mortality increase in these patients.

Keywords: Sigmoid diverticulitis, Complication

[Abstract:0395]**The learning curve for laparoscopic surgery in colorectal cancer at a new regional hospital: a single surgeon experience of 106 consecutive cases without supervision****Beslen Goksoy*¹, İbrahim Fethi Azamat²**¹Sancaktepe Şehit Prof. Dr. İlhan Varank Training and Research Hospital, Department of General Surgery, Istanbul, Turkey²Koç University Hospital, Department of General Surgery, Istanbul, Turkey**Background:** Laparoscopic surgery in colorectal cancer is mostly performed in university hospitals or experienced centers. The aim of this study is to determine the learning curve of laparoscopic colorectal surgery in a new regional hospital.**Methods:** From August 2018 to July 2021, 106 consecutive patients undergoing laparoscopic colorectal surgery by a single surgeon were analyzed. The learning curve was evaluated using the cumulative sum (CUSUM) method. Perioperative outcomes were compared between learning curve phases.**Results:** Based on the CUSUM analysis, the learning curve consisted of three unique phases: phase I, the initial learning period (first to 53rd operation); phase II, the consolidation period (54th to 68th operation); and phase III, the experienced period (69th to 106th operation). Operative time and estimated blood loss were significantly reduced with increasing experience ($p < 0.001$). From the postoperative results, stool out time ($p < 0.05$), oral intake time ($p = 0.001$) and drain removal time ($p < 0.001$) were shorter with increasing experience. When compared in terms of histopathological results, the length of the piece and the number of harvested lymph nodes increased with experience ($p = 0.001$).**Conclusions:** Laparoscopic surgery for colorectal cancer in a new regional hospital is feasible and safe. The data suggest that the learning phase was achieved after 53 to 68 cases.**Keywords:** Laparoscopic colorectal cancer surgery, Learning curve**[Abstract:0396]****Management and outcomes of anal sphincter injuries****Metin Yıldız*, Rifat Peksöz, Esra Dişçi**

Atatürk University Faculty of Medicine, Department of General Surgery, Erzurum, Turkey

Background: We aimed to examine surgical procedures and outcomes of anal sphincter injuries (ASI).**Methods:** The data of 34 patients who operated due to grade 3–4 anal sphincter injury between 2010–2021 were analyzed. Patients' demographic features, complications, Wexner incontinence score and quality of life were evaluated.**Results:** The mean age of patients was 35.8 and the F/M ratio was 23/11. The etiopathogenesis of ASI were obstetric injury 19, iatrogenic 6, drill-cutting tool injury 5, car accident 3, and gunshot injury 1 respectively. 79.4% of the patients didn't have anal tone at admission. 85.3% had 3rd degree anal laceration. Overlapping sphincteroplasty was the most used method and in addition, 20.6% of the patients underwent colostomy.

Complications were wound infection 14.7%, wound dehiscence 8.8%, fecal incontinence 5.8%, urinary incontinence 5.9%, anal stricture, rectovaginal fistula, and the mortality rate was 2.9%. At mean follow-up of 35.8 months, the Wexner score was 3.59. A low Wexner score increases the quality of life.

Conclusions: The best results were obtained in obstetric injuries, with a continence success rate of 75.9%. Hospitalization time and complication rate are lower in patients with colostomy. In ASI, overlapping sphincteroplasty is the current surgical technique because of its good functional results.**Keywords:** Anal sphincter injury, Overlapping repair**[Abstract:0397]****The role of EMVI and circumferential tumor location as predictive imaging findings in the neoadjuvant treatment response in rectal cancer****Hakan Doğan*¹, Emre Altınmakas¹, Orhun Çiğ Taşkın³, Emre Özoran², Emre Balık², Volkan Adsay³, Dursun Buğra², Bengi Gürses¹**¹Radiology, School of Medicine, Koc University, Istanbul, Turkey²General Surgery, School of Medicine, Koc University, Istanbul, Turkey³Pathology, School of Medicine, Koc University, Istanbul, Turkey**Background:** Magnetic resonance is the mainstay of imaging for the evaluation of neoadjuvant treatment response in rectal cancer. MRI detected extramural venous invasion (EMVI) has been shown to correlate with survival and prognosis, but this has not been studied in detail. In this study, we aimed to analyze the effect of a number of mrEMVI features and circumferential tumor location on neoadjuvant treatment response.**Methods:** 57 patients (mean age:56,9) with biopsy-proven rectal adenocarcinoma who have received neoadjuvant chemotherapy and underwent rectal MRI from 2016 to 2020 were included. Pearson Chi-Square and Mann Whitney U tests were used for the statistical analyses.**Results:** 17 patients were mrEMVI- (29,8%), 40 were mrEMVI+ (70,2%). Complete/near-complete responders had less number of mrEMVI (mean 1,45 vs 2,54; $p < 0,05$) and smaller diameter mrEMVI (mean 1,8 mm vs 3,30 mm; $p < 0,05$) compared to partial responders. 13 patients had anteriorly (25%), 12 had posteriorly (23,1%) and 27 (51,9%) had laterally dominant tumors. In the remaining 5 patients, invasive behavior was in a circumferential fashion. Anterior dominant tumors had significantly more residual disease rates when compared with lateral and posterior dominant tumors ($p < 0,05$).**Conclusion:** The size and number of mrEMVI, and circumferential tumor location influence the treatment response.**Keywords:** EMVI, Rectal cancer

[Abstract:0399]**Analysis of related clinicopathological factors of metastasis of anorectal malignant melanoma after surgery****Xin Liu*¹, Rui Zhang¹, Li Li Mam², Lu Si², Yan Long Liu³, Pei Rong Ding⁴**¹Cancer Hospital of China Medical University, Liaoning Cancer Hospital and Institute, China²Peking University Cancer Hospital, China³The Affiliated Tumor Hospital of Harbin Medical University⁴Sun Yat-sen University Cancer Center, China**Background:** To investigate the clinicopathological characteristics and prognostic factors of metastatic anorectal malignant melanoma after surgery.**Methods:** A retrospective analysis of 52 patients diagnosed with metastatic anorectal malignant melanoma after surgery from January 2009 to January 2019 from Liaoning Cancer Hospital, Harbin Medical University Affiliated Tumor Hospital and Sun Yat-sen University Cancer Center. Log-rank test and cox model were used to conduct univariate and multivariate analysis to compare the impact of different clinical factors on the overall survival of patients.**Results:** The follow-up period was 120 months. Log-rank univariate analysis showed that T stage, adjuvant therapy and the number of metastases were the influencing factors for the prognosis of metastatic anorectal malignant melanoma after surgery. T stage (OR=2.351, $P=0.038$), adjuvant therapy (OR=0.073, $P=0.041$) and the number of metastatic tumors (OR=0.545, $P=0.016$) were the independent factor for the prognosis of affected the metastatic anorectal malignancy after surgery.**Conclusions:** T stage, adjuvant therapy and the number of metastases are independent factors that affected the prognosis of metastatic anorectal malignant melanoma after surgery. According to the patient's condition and prognostic factors, adjustment of the treatment mode could prolong the patient's overall survival time.**Keywords:** Anorectal malignant melanoma, Prognosis**[Abstract:0400]****A novel transanal NOSES for treating middle and low rectal cancer (with 8 cases report)****Jian Peng*, Shuai Xu, Qianhui Ouyang, Wen Wang, Xiong Guo, Jie Chen**

General Surgery Department, Xiangya Hospital, Central South University, Changsha, China

Background: Natural orifice specimen extraction surgery (NOSES) has less pain, rapid recovery and no wound-related complications with improvement of appearance. However, it is technically complicated and difficult, and controversial in bacteriology and oncology. In this paper, we describe a novel transanal NOSES for treatment of middle and low rectal cancer that can avoid those imperfections above.**Methods:** The data of 8 patients with middle and low rectal cancer undergoing the novel transanal NOSES from Xiangya Hospital of Central South University were retrospectively

reviewed from December 2020 to July 2021. We recorded the general condition and postoperative evaluation indicators.

Results: The average operative time of 8 patients was (223.75±52.36) min. The intraoperative blood loss was (68.75±30.44) ml. The first feeding time was (17.25±1.58) h. The first ambulation time was (19.88±1.36) h. The first anal exhaust time was (48.38±22.29) h. There were no postoperative anastomotic leakage, abdominal infection, perioperative deaths, and recurrence cases during the follow-up period.**Conclusions:** The novel transanal NOSES can make the operation easy, and meet with the aseptic and tumor-free principles. The improved surgical method is safe, effective and feasible for selected middle and low rectal cancer patients.**Keywords:** Transanal natural orifice specimen extraction surgery (Ta-NOSES), Middle and low rectal cancer, Tumor-free**[Abstract:0410]****Challenging colectomies in transverse colon tumors****Mert Tanal*¹, Mustafa Fevzi Celayir², Aydın Eray Tufan², Esin Kabul Gurbulak²**¹Tekirdag Ismail Fehmi Cumalioglu State Hospital, Department of General Surgery, Tekirdağ, Turkey²University of Health Sciences, Seyrantepe Hamidiye Etfal Research and Training Hospital, Department of General Surgery, Istanbul, Turkey**Background:** Although colon tumors are generally referred as right and left colon tumors, transverse colon tumors occur about 5% of all colorectal cancers. While the surgical strategy is generally determined preoperatively, in malignancies originating from transverse colon, the operative strategy and type of anastomosis are usually finalized peroperatively according to the condition of the colon and the localization of the tumor. In this study, we evaluated transverse colon malignancies with the choice of anastomosis, retrospectively.**Methods:** Among 722 patients operated for colorectal cancer between 2015–2019, 30 patients had oncological transverse colectomy. Primary tumor was located in mid-transverse colon in 14 patients, whereas 11 tumors were closer to hepatic, and 5 tumors closer to splenic flexure.**Results:** Of 30 patients included, the female/male ratio was 10/20, and the mean age was 66.4(53–84). The median follow-up was 32.3 months (1–60 months), the calculated 1-year survival was 86.7%, and 3-year survival was 36.7%. The decrease in 3-year survival was interpreted in favor of metastatic disease. Side-to-side anastomosis was performed with linear stapler in 11 patients, end-to-side with circular stapler in 14 patients, and handsewn end-to-side in 5 patients.**Conclusions:** The approach to transverse colon tumors was examined together with scientific data and recent studies, and anastomosis reliability was reported in the study. Transverse colon tumors are challenging especially in terms of surgical anastomosis management both preoperatively and peroperatively.**Keywords:** Hemicolectomy, Transverse colon

[Abstract:0419]**Postoperative adhesive intestinal obstruction****Parvin Najafgulyeva***

Baku, Azerbaijan

Background: Adhesive intestinal obstruction is an inevitable complication of abdominal surgeries. It has high morbidity with associated poor quality of life and predisposition to repeated hospitalization. Most of them can be managed conservatively.

Methods: A retrospective study of 27 patients admitted with the diagnosis of postoperative adhesive partial bowel obstruction was conducted by analyzing their medical records. Demographic data, clinical presentation including duration, previous surgical procedures, treatments received for the condition and successful conservative approach versus requirement of operative intervention were assessed.

Results: The median age was 29 years. Male predominance was noted. Pelvic surgeries and gynecological surgeries (33 %) were found to be the most common cause of adhesive bowel obstruction followed by appendectomy (21 %). More than two third of the patients (76.7 %) developed symptoms within two years of the initial surgery. Successful conservative treatment was noted in 19 patients (65.5 %) and discharged on fourth day of admission. 10 patients (34.5 %) underwent surgery. They all underwent adhesiolysis and had good outcome.

Conclusions: The time-honored practice of expectant management of adhesive partial bowel obstruction has equally good outcome, as compared to various interventions practiced.

Keywords: Intestinal obstruction

[Abstract:0423]**The impact of patient mortalities on general surgeons' psychosocial well-being and surgical practices****Süleyman Utku Çelik*¹, Duygu Sezen Bayındır², Mehmet Ali Göçer², Buket Karakurt², Mustafa Kaya², Sena Nur Kekeç², Furkan Aydın Şimşek², Cihangir Akyol²**¹Gulhane Training and Research Hospital, Department of General Surgery, Ankara, Turkey²Ankara University School of Medicine, Department of General Surgery, Ankara, Turkey

Background: This study aimed to investigate impacts of patient mortalities on general surgeons' psychosocial well-being and surgical practices.

Methods:Data were collected using a 30-item questionnaire.

Results: 480-participants completed the survey. 34.6 % of participants reported patient mortalities affecting their emotional well-being, 34.2 % professional-career, and 23.3 % social-life. Related patient- mortalities, 90.6 % reported sadness, 47.3 % worry for patients' relatives, 25.4 % guilty, 19.0 % worry about reputation, and 13.3 % fear. After mortalities, 16.0 % indicated that they experienced repetitive-memories, 9.2 % a-loss-of-interest in enjoyable activities, 15.6 % a change in sleeping-pattern, and 21.9 % reported increases in alcohol/tobacco consumption. 37.5 % of participants stated that it's more difficult to lose a patient who is followed for years, and 94.4 % thought to

be more difficult losing a patient because of unexpected-complications. While 18.1 % indicated that they considered taking a-break for-a-while after mortalities, 11.9 % thought to give-up their surgery-career and 9.8 % avoiding surgical procedures for-a-while. 41.7 % reported to receive support from their families, 37.9 % from peers, 35.4 % from senior-colleagues, and 3.1 % from institutions. Participants' suggestions for supporting surgeons are: education on coping-with mortality (51.5 %), formal mentoring-system (31.3 %), psychotherapy (27.7 %), and a-time-break after mortality (13.5 %).

Conclusions: Psychosocial consequences of patient mortalities on surgeons are an important occupational-health-issue. Further efforts are needed at a personal-, institutional-, and organizational-level to provide effective support.

Keywords: Patient mortality, Surgeons

[Abstract:0424]**Safety and efficacy of endoscopic self-expandable metallic stent applications in obstructive left colon and rectum tumors****Elchin Alizade*, Yağmur Eltemur, Abdullah Kut, Mehmet İlhan, Hakan Teoman Yanar, Kayhan Günay, Cemalettin Ertekin, Ali Fuat Kaan Gök**

Istanbul University, Istanbul Faculty of Medicine, Istanbul, Turkey

Aim: This study aims to investigate the efficacy, clinical and technical success of self-expandable metallic stents (SEMS) applied in obstructive left colon and rectum tumors in a tertiary care center.

Methods: Patients with obstructive left colon and rectal tumors who underwent SEMS between December 2014 and May 2021 were evaluated retrospectively.

Results: Of the 43 patients included in the study, 28(65 %) were male, 15(35 %) were female. The median age was 61 years. The locations of tumors were sigmoid colon ($n=19,44 %$), rectum ($n=12,28 %$), rectosigmoid ($n=9,21 %$) and left colon ($n=3,7 %$). SEMS application was failed in three cases, and the technical success was 93 %. Colonic decompression was achieved in 34 of 40 patients with successful stenting. Clinical success was 85 %. SEMS was applied for palliation of advance staged cancer in 18 patients and as a bridge to definitive surgery in 16 patients. Thirteen of them underwent elective laparoscopic surgery. Migration ($n=5,12 %$), perforation ($n=2,5 %$) and stent occlusion ($n=2,5 %$) were the most common complications due to SEMS application.

Conclusions: SEMS is an effective and safe procedure for the palliation of malignant colorectal obstruction and as a bridge to definitive surgery. Also, SEMS can enable single-staged elective laparoscopic surgery instead of open emergency surgery.

Keywords: Obstructive colorectal cancer, Self-Expandable metal stent

[Abstract:0441]**ERAS in colorectal surgery: early clinical outcomes**

Mehmet Ali Koç¹, Deniz Kütük^{*1}, Süheyla Karadağ Erkoç², Menekşe Özçelik², Neslihan Alkış², Cihangir Akyol¹

¹Ankara University, School of Medicine, Department of General Surgery, Ankara, Turkey

²Ankara University, School of Medicine, Department of Anesthesia, Ankara, Turkey

Background: ERAS is a multimodal and multidisciplinary protocol developed to improve postoperative outcomes. Studies have shown that postoperative recovery time is shortened, postoperative complications are reduced in surgical patients who underwent the ERAS protocol, and therefore patients are discharged earlier.

Methods: Early clinical outcomes of colorectal surgery patients who underwent ERAS protocol between February and July 2021 were evaluated.

Results: The ERAS protocol was applied to 40 colorectal surgery patients, 35 of whom were laparoscopic. Thirty of the patients were male, and the median age was 63. Ten of the patients were evaluated as ASA-1, 20 as ASA-2, and 10 as ASA-3. Oral intake was started at the 2nd hour postoperatively, and patients were mobilized at the 4th hour. The median gas discharge time was 1 day. The median length of hospital stay is 7 days. According to the Clavien-Dindo classification, no complications developed in 21 (52.5%) patients postoperatively. On the other hand, there were 13 (32.5%) grade 1–2 complications, and only 6 (15%) complications (5 patient grade 3, 1 patient grade 4) that required any intervention.

Conclusions: ERAS should be preferred in colorectal surgery patients for early discharge, more comfortable perioperative period and less interventional complication rates.

Keywords: ERAS, Recovery

[Abstract:0446]**Comparison of sinusectomy-primary closure and excision-primary closure techniques in type I and IIa pilonidal sinus disease: a retrospective cohort study**

Erdinç Kamer^{*1}, Haldun Kar², Eyüp Kebapçı¹, Yunus Sür², Melek Gökova², Mesut Özoğul²

¹Department of General Surgery, University of Health Sciences Turkey, Tepecik Education and Research Hospital, İzmir, Turkey

²Department of Surgery, İzmir Katip Celebi University, Atatürk Education and Research Hospital, İzmir, Turkey

Background: The management of chronic pilonidal disease has remained controversial since its initial description by Mayo in 1883, but recently, following the concept of “less is more”, new minimally invasive approaches such as synotomy, sinusectomy, and trephining have begun to be proposed. The aim of this study is to compare the patients who underwent microsinectomy and excision-primary closure surgery for pilonidal sinus (PSH) in our clinic.

Methods: After obtaining ethical approval from the ethics committee of our hospital, the study was carried out between 01.01.2017 and 31.12.2020. Two cohort groups were formed for patients with type I and IIa PSH who underwent sinusectomy-primary repair (Group I, SPT) and excision-primary repair (Group II, EPT).

Results: Of the 114 patients who underwent sinusectomy, 83 (72.8%) were male, 31 (27.2%) were female, with a mean age of 28.0 years. A statistical significance was found between the two groups in terms of hospital stay, sinus type (IIA), wound healing time, and anesthesia methods applied. Median follow-up was 2 years, recurrence rate was 7%. Median time to return to work was 2 weeks and median wound healing time was 3.7 weeks.

Conclusions: We believe that the SPT method, which is accepted as a minimally invasive technique, is a safe method used in type I and IIa PSH with its rapid wound healing, low hospital stay and low recurrence rate.

Keywords: Pilonidal sinus disease, Sinusectomy

[Abstract:0448]**Fournier's gangrene in Turkish population: analysis of two decades**

Tuncay Yılmazlar^{*1}, Özgen Işık¹, Murat Şen¹, Deniz Sığırlı²

¹General Surgery, Bursa Uludağ University Faculty of Medicine, Bursa, Turkey

²Biostatistics, Bursa Uludağ University Faculty of Medicine, Bursa, Turkey

Background: Fournier's Gangrene (FG) is a rare, devastating disease. Its nature and rarity limit conducting clinical studies with large patient population. Here, we aimed to determine risk factors, predictors of mortality of FG among the Turkish population.

Methods: A literature search was conducted by using PubMed with keywords “FG” and “Turkey”. The search revealed 95 published articles between January 2000 and December 2020. Studies including less than 20 patients, consecutive studies of the same author were excluded. Totally, 41 studies were included. The correlation between mortality and the other variables were analyzed. The differences between the first and the second decade were compared.

Results: There were 1919 patients reported in 41 studies. Patient number was median 38 per study. Majority of the patients were male (83.11%) with a median age of 55. Overall, median mortality was 17.39%. Sixteen studies were published between 2000 and 2010 (first decade). Mortality rate was lower in the studies published between 2010 and 2020 (14.72% ± 7.1 vs. 22.46% ± 11.62, $p=0.011$). Cutaneous origin was negatively correlated with mortality ($r=-0.615, p=0.033$) while chronic renal failure ($r=0.705, p=0.005$) and fecal diversion ($r=0.371, p=0.037$) were positively correlated.

Conclusions: Although FG is still associated with a significant mortality in the last decade, it seems to be reduced comparing the past decade. Avoiding unnecessary fecal diversion, proper assessment of comorbidities and origin of the disease may have impact on the mortality.

Keywords: Fournier's gangrene, Turkey

[Abstract:0453]**The risk factors for development of parastomal hernia: A single institution experience****Tayfun Bisgin^{*1}, Cahide Ayik², Deniz Cenan³, Berke Manoglu¹, Dilek Ozden², Selman Sokmen¹**¹Dept. of Surgery Colorectal and Pelvic Unit, Dokuz Eylul University Medical Faculty, Izmir, Turkey²Dokuz Eylul University Faculty of Nursing, Izmir, Turkey³Enterostomal Therapy Nurse, Dokuz Eylül University Medical Faculty, Izmir, Turkey

Background: Parastomal hernia (PH) is a common complication in colorectal surgery and the tangible risk factors for PS development remain unclear at present. The aim of this study was to determine the incidence and risk factors in PS.

Methods: Retrospective data from a recent 8 years cohort of 954 ostomy patients from 2013 to 2020 was analyzed. All ostomy patients who had completed follow-up appointments after discharge were included.

Results: One or more ostomy complications developed in 39.8% of patients. PH developed 10.5% of patients and its incidence increases after the third month. Ostomy location in left lower quadrant, BMI, age, end colostomy and prolapse affected PS in univariate analysis ($p < 0.05$). Age (OR=1.712; 95%CI=1.079-2.716), BMI (OR=2.167; 95%CI=1.328-3.535), left lower quadrant ostomy location (OR=2.481; 95%CI=1.518-4.056) and prolapse (OR=8.854; 95%CI=4.287-18.286) were independent risk factors in logistic-regression analysis ($p < 0.05$).

Conclusion: The incidence of PH was in nearly one-in ten patients after colorectal surgery with ostomy. Advanced age, ostomy prolapse, location of ostomy and severe obesity were independent risk factors. Patients with these high risks should be followed rigorously for the development of PH.

Keywords: Parastomal hernia, Hernia

[Abstract:0456]**Endoscopic interventions in small sized colorectal polyps****Aynur Kamal Safiyeva***

General surgeon, Central Customs Hospital, Baku, Azerbaijan

Background: Colorectal polyps as a precursor of colon cancer are the most common benign derivatives of the large and small intestine developing from the glandular epithelium of the intestinal mucosa. Dysplasia of ectopic crypts plays an essential role in the development of polyps into cancer

Methods: The research was conducted in the Endoscopy Division of the Surgery Department of the Central Customs Hospital in Azerbaijan. Small polyps up to 5 mm in size, found in 42 out of 100 patients, were removed endoscopically and pathohistologically evaluated.

Results: The obtained materials were analyzed for pathohistological examination according to several parameters. The identified 42 diminutive polyps are pathologically listed as follows: Hyperplastic polyp -11, inflammatory polyps-11, tubular polyps—19, tubulovillous—1

Conclusions: Dysplasia even in small polyps can be detected. Thus, even diminutive polyps can be considered a “precursor” of colorectal cancer, and the removal of these polyps when they are detected can prevent the development of colorectal cancer in these patients in the distant future. Therefore, it is necessary to take into account the size of the polyp, the sensitivity, and the accuracy of its measurements.

Keywords: Colorectal polyps

[Abstract:0464]**Preoperative oral immune nutrition in patients with colorectal cancer surgery: the effects of hospitalization and health expenses****Ahmet Serdar Karaca, Feza Yarbuğ Karakayalı, Ramazan Gündoğdu***

Başkent University, Faculty of Medicine, Department of General Surgery, Istanbul, Turkey

Background: The use of enteral formulas containing immunonutrients in patients with gastrointestinal malignancies may reduce infectious complications and reduce postoperative morbidity, resulting in reductions in hospital stay and health care costs.

Methods: 104 patients who underwent planned surgery for resectable colorectal cancer were included in the study. Impact © was administered to the oral group for 8 days (3 sachets per day) compared to the group that did not.

Results: 40.5% (21) of patients without immune nutrition experienced infectious complications versus 26.9% (14) of recipients. In patients with rectal cancer who did not receive support, 50% (8) experienced minor infectious complications ($p = .028$). When infectious complications were observed in each group, the variables of total hospital stay and cost doubled with significant differences. These variables, although not statistically significant, showed higher values in the no-supplement group compared to those who received immune nutrition.

Conclusions: Patients who did not receive support experienced more frequent infection complications than those who received support, with significant results in the subgroup of patients with rectal cancer. Total hospital stays and costs were slightly higher in the no supplement group and significantly doubled in each category when infectious complications were observed.

Keywords: Colorectal cancer, Complications, Immune nutrition, Infectious complications

[Abstract:0465]**How should nutritional support be given to patients after colorectal cancer surgery?****Ahmet Serdar Karaca, Feza Yarbuğ Karakayalı, Ramazan Gündoğdu***

Başkent University, Faculty of Medicine, Department of General Surgery, Istanbul, Turkey

Background: To review the nutritional support practice in patients after colorectal cancer surgery and to suggest appropriate nutritional strategies.

Methods: 270 consecutive surgical patients who applied to our hospital with the diagnosis of colon cancer or rectum cancer between riabiles of clinical outcome were analyzed, including postoperative complications, hospital stay, cost of hospital stay, and postoperative outcome.

Results: The rate of postoperative complications was higher in “risk-free” patients who did not receive postoperative nutritional support compared to patients who received postoperative nutritional support (2.40 ± 1.51 vs 1.23 ± 0.60 , $P=0.000$) and who stayed longer in the postoperative hospital. stay (23.00 ± 15.84 days vs. 15.27 ± 5.89 days, $P=0.009$). Patients who received preoperative total parenteral nutrition (TPN) had a higher cost of hospitalization than patients who did not receive preoperative TPN (6713.50 ± 507.66 TL vs 4178.00 ± 359.68 TL, $P=0.014$). Administration of postoperative enteral nutrition shortened the postoperative fasting time (5.16 ± 1.21 days vs. 6.40 ± 1.84 days, $P=0.001$) and postoperative hospital stay (11.92 ± 4.34 days vs 15.77 ± 6.03 days, $P=0.002$).

Conclusions: Appropriate and moderate nutritional intervention may improve postoperative outcomes of colorectal cancer patients.

Keywords: Colorectal cancer, Nutritional support

[Abstract:0466]

The frequency of colorectal malignancies in patients performed colonoscopy due to occult blood positiveness in cancer screening center

Ahmet Serdar Karaca, Feza Yarbuğ Karakayalı, Hüseyin Onur Aydın*

Başkent University, Faculty of Medicine, Department of General Surgery, Istanbul, Turkey

Background: Stool occult blood test is one of the screening methods. In this study, we aimed to evaluate the colonoscopic findings, to determine the frequency of polyps, histopathological types and the frequency of colorectal malignancy in patients who underwent colonoscopy due to positive stool occult blood test in our endoscopy unit.

Methods: Patients who were positive for occult blood in the stool between. Colonoscopy was performed to evaluate the terminal ileum after appropriate preparation.

Results: 201 patients underwent colonoscopy due to occult blood positivity in the stool. Of the patients, 104 (52%) were male and 97 (48%) were female. Adenomatous polyp in 67 (32%) cases, adenocarcinoma in 13 (6.1%) cases. The mean age of 41 male and 26 female patients with polyps was 61.5 ± 9 years. 76% of the polyps were in the left colon and 80% of the malignancies were in the rectosigmoid colon. In 74% of the cases, no pathology was found to explain the positivity of occult blood in the stool.

Conclusions: It is seen that colorectal cancers and precancerous lesions can be detected early and survival rates can increase thanks to screening programs.

Keywords: Fecal occult blood positivity, Screening

[Abstract:0477]

Simple machine learning algorithm to preoperative diagnosis of acute appendicitis

Ahmet Tark Harmantepe^{*1}, Enis Dikicier², Emre Gönüllü¹, Kayhan Özdemir³, Burak Kamburoğlu¹, Merve Yiğit¹

¹Sakarya University Education and Research Hospital, General Surgery Department, Sakarya, Turkey

²Sakarya University Medicine Faculty, General Surgery Department, Sakarya, Turkey

³Urgup State Hospital, General Surgery Department, Nevşehir, Turkey

Background: Machine learning is a branch of artificial intelligence based on the idea that systems can learn from data, identify patterns and make decisions with minimal human intervention. Our aim is to predict acute appendicitis, which is the most common emergency surgery indication, using machine learning algorithms with an easy and inexpensive method.

Methods: Patients who were treated surgically with a pre-diagnosis of acute appendicitis in a hospital between 2011 and 2021 were analyzed. 189 positive and 156 negative appendectomies were found. Gender and hemogram were used as features. Machine learning algorithms and data analysis were made in Python (3.7) programming language.

Results: The success rate in the test data was 82.7% in logistic regression, 68.9% in support vector machines, 78.1% in k-nearest neighbors, 83.9% in neural networks, 79% in decision trees, and 73.5% in gradient boosting. The success rate in the voting classifier created with logistic regression, k-nearest neighbor, support vector machines and artificial neural networks was 86.2%. In Voting classifier, sensitivity was 83.7% and specificity was 88.6%.

Conclusions: Voting classifier achieved the highest success with 86.2%, and an easy and fast estimation method was developed for the diagnosis of acute appendicitis. These algorithms will have a higher success rate when integrated into appendicitis scoring systems

Keywords: Acute appendicitis, Machine learning

[Abstract:0481]

Oncological competence of emergency surgery in colon cancer: a single-center retrospective comparative study

Mehmet Günay*, İrem Gider, Elchin Alizade, Mehmet İlhan, Hakan Teoman Yanar, Mustafa Kayıhan Günay, Cemalettin Ertekin, Ali Fuat Kaan Gök

Istanbul University, Istanbul Faculty of Medicine, Department of General Surgery, Istanbul, Turkey

Background: This study aims to compare the status of the resection margins and the number of lymph nodes (LN) harvested in patients who underwent emergency surgery and elective surgery for colon cancer.

Methods: Patients who underwent emergency or elective colon cancer surgery between January 2016 and December 2020 were included.

Results: A total of 224 patients were included in the study. The median age was 69 (20–87) years. Eighty-eight (39%)

patients underwent emergency surgery due to obstruction and perforation (group A). One hundred thirty-six patients (61 %) underwent elective surgery (group B). The median number of LN harvested was similar in two groups (group A 27 (6–95) vs group B 23 (5–119), $p=0.216$). The rate of node-positive patients was higher in group A (4 vs 2, $p<0.001$). According to the median number of LN removed, there was no difference between right hemicolectomy (group A 28 (6–64) vs group B 24 (5–69), $p=0.361$), and anterior resection (group A 23 (6–45) vs group B 20 (8–53), $p=0.183$). There was no positive margin in group A while two patients had a positive margin in group B.

Conclusions: Appropriate cancer surgery can be performed in patients with resectable tumors that require emergency surgery.

Keywords: Emergency colon resection, Lymph nodes

[Abstract:0503]

Avoiding The Anastomotic Leakage In Right Hemicolectomy: Should The Stapler Be Linear or Circular?

Mustafa Fevzi Celayir*¹, Hakan Mustafa Köksal¹, Mert Tanal², Aydın Eray Tufan¹

¹University of Health Sciences, Seyrantepe Hamidiye Etfal Research and Training Hospital, Department of General Surgery, Istanbul, Turkey

²Tekirdag State Hospital, Department of General Surgery, Tekirdag, Turkey

Background: In the right hemicolectomy, the incidence of anastomotic leakage (AL) for ileocolic anastomosis is between 0.2 % and 7.2%. Adequate circulation in the anastomosis line and a good surgical technique are essential for an effective anastomosis. We compared circular stapler side-to-end and linear stapler side-to-side after a standard right hemicolectomy technique for right colon and/or hepatic flexure cancer.

Methods: This study was planned as a retrospective study. Emergent operations and handsewn ileocolic anastomoses were excluded and the ileocolic anastomosis was done using circular stapler and linear stapler.

Results: Among 120 patients who underwent through the right hemicolectomy between 2018–2021, 31 (25.8 %) of patients underwent anastomosis with circular stapler. The other 89 (74.2 %) patients underwent through ileocolic anastomosis with a linear stapler. AL developed in 2 (6.4 %) in end to side anastomosis and 6 (6.7 %) in side to side anastomosis ($p>0.05$). The rate of intraoperative blood transfusion was high in those who developed anastomotic leakage ($p=0.007$). There was no significant difference between the groups in terms of duration of operation, onset of bowel movements, duration of hospitalization, comorbidity, and 1-month and 6-month mortality rates ($p>0.05$).

Conclusions: This study determined that the use of different staplers in the ileocolic anastomosis after right hemicolectomy did not increase the risk of AL. Intraoperative blood transfusion has been shown as an independent risk factor for anastomotic leakage.

Keywords: Anastomotic leakage, Stapler

[Abstract:0506]

Obstructive colonic carcinomas in emergency: a comparison between left and right-sided lesions

Elif Baran*, Aydın Eray Tufan, Mustafa Fevzi Celayir

University of Health Sciences, Seyrantepe Hamidiye Etfal Research and Training Hospital, Department of General Surgery, Istanbul, Turkey

Background: There are relatively few studies that compare the management and outcomes of obstructive colonic cancer, depending on the site of the tumour. We aimed to evaluate the differences in patient's characteristics and perioperative outcomes of emergent surgery for obstructive right-sided versus left-sided colonic cancers.

Methods: Through 2018–2021, we retrospectively analyzed the pre, per and postoperative data of operated 44 consecutive obstructive colonic carcinoma patients from a single institution within 24 hours from admission.

Results: There were 21 (10F, 11M) right sided and 23 (6F, 17M) left sided colonic cancer patients. Patients aged over 80 were significantly more frequent in the right group (38 vs 9 %, $p<0.05$). There was no difference in terms of gender, associated comorbidities, biological parameters, and incidence of metastases. The one-stage strategy was significantly performed more often in the right group (78 vs 45 %, $p<0.05$). Furthermore, the right group had also higher mortality rate in year one and two.

Conclusions: Operated right-sided obstructive colonic cancer patients were older, had more advanced locoregional disease, and were more often treated in a one-stage strategy than patients with a left obstructive tumour.

Keywords: Obstructive colonic carcinoma, Colorectal cancer

[Abstract:0507]

Rectal cancer in octogenarians: Are we losing the fight?

Mert Tanal*¹, Aydın Eray Tufan², Elif Baran², Mustafa Fevzi Celayir²

¹Tekirdag State Hospital, Department of General Surgery, Tekirdag, Turkey

²University of Health Sciences, Seyrantepe Hamidiye Etfal Research and Training Hospital, Department of General Surgery, Istanbul, Turkey

Background: Rectal cancer has high morbidity and mortality rate. It is encountered more frequently in elders considering that cancers are diagnosed at a more advanced, at least, locally advanced stages. In our study, changes in the treatment of rectal cancers in octogenarian patients were shown.

Methods: We performed a retrospective cohort study which included patients diagnosed with rectal cancer at the age of 80 years or older between 2016–2021. At the same time, a monitored control group included consecutive patients younger than 80 years diagnosed with rectal cancer which was numbered as group 1. Whereas octogenarians were numbered in group 2. We compared clinicopathological characteristics, treatment and the outcome.

Results: From 184 rectal cancer patients, 166 were in group 1, whereas 18 were in group 2. The follow-up period was 36

months for those younger than 80 years and 36 months for octogenarians. Octogenarians had a higher rate for history of cancer (10 vs 55.5%, $p < 0.05$), a lower rate for family history of cancer (7 vs 38.8%, $p < 0.05$), and a lower disease-free survival rate (70 vs 42.1%; 5 vs 27.7%, $p < 0.05$). In group 2, the percentage of patients who underwent open surgery were 88.8% respectively and the rate of laparoscopic surgery was significantly higher in group 1 (78 vs 47%, $p < 0.05$).

Conclusions: Octogenarians especially with comorbidities presented with rectum cancer had worse outcome. Further research is needed to better define this population.

Keywords: Octogenarian, Rectal cancer

[Abstract:0508]

The impact of the Covid-19 pandemic on negative appendectomy and complicated appendicitis

Aydın Eray Tufan*, Elif Baran, Betül Dizman, Mustafa Fevzi Celayir

University of Health Sciences, Seyrantepe Hamidiye Etfal Research and Training Hospital, Department of General Surgery, Istanbul, Turkey

Background: During the Coronavirus-19 (COVID-19) pandemic, quarantine was one of the measures used to control the spread of virus and at the same time to conserve medical resources. Although this was effective in some ways, it caused disruptions in health care procedures such as appendectomy. Acute appendicitis is the most common abdominal emergency globally. In this study, we examined the effect of COVID-19 pandemic on the rate of negative appendectomy and complicated appendicitis.

Methods: This is a single-centered retrospective study, which includes appendectomies between 2018–2021 years. The patients were divided into two groups, according to the date of the start of COVID-19 pandemic in March-2020; those operated pre-Covid-19 (group 1) and after (group 2). Demographic characteristics, preoperative laboratory findings, operative notes and pathology results were analyzed.

Results: In total 305 (203M, 102F) patients with a diagnosis of acute appendicitis were operated. 188 (123M, 65F) patients were operated before March-2020, 117 (80M, 37F) after March 2020. There was no significant difference in demographic characteristics and preoperative laboratory findings between the groups ($p > 0.05$). However, group 1 had a higher rate of negative appendectomy ($p < 0.05$), a lower rate for the complicated appendicitis ($p < 0.05$), and a shorter operative time (56 minutes vs 70 minutes, $p < 0.001$).

Conclusions: In the COVID-19 pandemic, the operation time for the acute appendicitis and the rate of complicated appendicitis increased, while the rate of negative appendectomy decreased.

Keywords: Acute appendicitis, Coronavirus-19

[Abstract:0512]

The surgical treatment of splenic flexure colon cancer: segmental or extended resection?

Tevfik Kivilcim Uprak, Gunel Mammadova*, Ali Emre Atici, Sevket Cumhuri Yegen

Marmara University School of Medicine Department of General Surgery, Istanbul, Turkey

Background: Splenic flexure colon cancer (SFC) is often associated with a worse prognosis because of variable lymphatic drainage and its anatomical complexity. The surgical treatment of SFC is not standardized and there is no consensus on extended resection (extended right and left colectomies, ER) or segmental resections (SR). The aim of this study is to investigate whether segmental resection is as safe and effective as extended resection.

Methods: The study included with all consecutive SFC operated by ER or SR between January 2014 and December 2018. We evaluated postoperative complications, oncologic results (number of lymph nodes removed, R0 resection rate) and overall survival outcomes in regarding these two groups.

Results: A total of 70 patients included. Patients with metastatic disease and T0 pathology were excluded. SR ($n = 37$, 57%) or ER ($n = 25$, 43%) arms were well balanced for age, gender, BMI, ASA, and ECOG scores. The median follow-up period was 34 months (1–88 month). Although the overall survival of the extended group was higher, it was not statistically significant.

Conclusions: The perioperative complications and 3 years survival rates between ER and SR are similar. SR should be considered safely and effectively as ER in surgical treatment of SFC

Keywords: Segmental resection, Splenic flexure

[Abstract:0517]

Non-operative management in locally advanced distal rectal cancer patients with clinical complete response after consolidation chemoradiotherapy: a single center experience

Cemil Burak Kulle¹, İnan Güden*¹, İlker Özgür¹, Şule Karaman², Sezai Vatanserver³, Bülent Acunaş⁴, Mehmet Türker Bulut¹, Metin Keskin¹

¹Department of General Surgery, Istanbul University School of Medicine, Istanbul, Turkey

²Department of Radiation Oncology, Istanbul University Oncology Institute, Istanbul, Turkey

³Department of Medical Oncology, Istanbul University Oncology Institute, Istanbul, Turkey

⁴Department of Radiology, Istanbul University School of Medicine, Istanbul, Turkey

Background: This study aims to analyze the long-term clinical outcomes of non-operative management (NOM) in locally advanced distal rectal cancer (LADRC) patients who had a complete clinical response (cCR) following consolidation neoadjuvant chemoradiotherapy (CNCRT).

Methods: LADRC patients with stage II/III amenable for surgery received neoadjuvant chemoradiotherapy (nCRT). Patients with an incomplete response following nCRT underwent surgery and patients with a significant clinical response

were treated with six cycles of FOLFOX. Patients with a cCR following CNCRT were managed with NOM.

Results: A total of 89 patients treated between May 2016 and May 2020 were enrolled in this prospective, observational case series study. Forty-five (51 %) patients with an incomplete response underwent surgery after nCRT and 44 (49 %) patients received CNCRT. Following CNCRT 36 (82 %) patients with cCR were followed up with NOM. The rate of local regrowth was 19.4 % with all patients having an endoluminal growing pattern confined to the first two years. Distant metastases were diagnosed in 2 (6 %) of 36 patients. 5-year overall survival was 97,2 % and 5-year disease-specific survival was 77,8 %.

Conclusions: The long-term clinical outcomes of NOM were promising in terms of pelvic tumor control and overall survival in strictly selected patients who had cCR after CNCRT.

Keywords: Distal rectal cancer, Non-operative management

[Abstract:0519]

Adjuvant chemotherapy for stage II colon cancer: Is it necessary?

Adem Bayraktar, Niyaz Shadmanov*, Berke Şengün, Cemil Burak Kulle, İlker Özgür, Senem Karabulut, Mehmet Türker Bulut, Metin Keskin

Istanbul University, Faculty of Medicine, Department of General Surgery, Istanbul, Turkey

Background: While adjuvant chemotherapy in stage III colon cancer is universally accepted, the utilization of adjuvant chemotherapy in stage II colon cancer remains still controversial. Some studies have pointed out survival benefit in patients with stage IIB/C colon cancer with poor prognostic factors (lymphovascular, perineural invasion, poor histological differentiation) or inadequate sampling of lymph nodes but the data is limited for stage IIA colon cancer.

Methods: In this study, patients with stage IIA colon cancer who were treated with surgery alone or surgery and adjuvant chemotherapy between 2015 and 2020 in a high-volume tertiary care center were analyzed. Demographics, pathological and oncological outcomes were compared.

Results: Overall, 65 patients with stage IIA(T3N0) colon cancer were treated in the study period. Adjuvant chemotherapy was administered to 31 patients (47.7 %). There were no significant differences between demographic values. Patients who received adjuvant chemotherapy had significantly more minor risk factors compared to patients who did not ($p < 0.05$), including lymphovascular invasion ($p < 0.05$) and other risk factors without additional survival benefit.

Conclusion: Patients with stage IIA colon cancer and high-risk features might benefit from adjuvant treatment although the study should be repeated with higher number of patients to achieve better statistical analysis power.

Keywords: Stage II colon cancer, Adjuvant treatment

[Abstract:0521]

Assessment of PET-CT for synchronous colonic cancers in patients with left-sided obstructive colorectal cancer: Is postoperative total colonoscopy necessary?

Cemil Burak Kulle, Mehmet İskender Yıldırım*, İlker Özgür, Adem Bayraktar, Zeynep Gözde Özkan, Mehmet Türker Bulut, Metin Keskin

Istanbul University, Faculty of Medicine, Department of General Surgery, Istanbul, Turkey

Background: This study aims to evaluate the ability of positron emission tomography-computed tomography (PET-CT) to identify synchronous colonic cancers and the necessity of postoperative total colonoscopy (TCS) in patients with obstructive colorectal cancer.

Methods: This is a single center retrospective cohort study conducted at a high-volume, comprehensive cancer center in Istanbul. All patients who underwent radical resection surgery for obstructive colorectal cancer with a preoperative PET-CT and postoperative TCS were enrolled into the study. Patients were analyzed for sensitivity, specificity, positive predictive (PPV) value, negative predictive value (NPV) and accuracy to detect synchronous colonic cancers with a preoperative PET-CT.

Results: Out of 78 patients 45 (58 %) had a left-sided obstructive colorectal cancer. The tumor was localized in the rectosigmoid junction ($n = 24$), sigmoid ($n = 10$), descending ($n = 6$) and transvers ($n = 1$) colon. PET-CT scan revealed synchronous colonic cancer in four (8,89 %) patients, which were confirmed by pathology report in patients with subtotal/total colectomy. Postoperative TCS revealed no synchronous colonic cancers. The sensitivity, specificity, PPV/NPV and accuracy of PET-CT for detecting synchronous invasive colonic cancers was 100 %. **Conclusion:** Although PET-CT is an effective advanced imaging modality for detecting synchronous colonic cancers, the necessity of postoperative TCS needs to be explored in future large-scale studies.

Keywords: Obstructive colorectal cancer, PET-CT

[Abstract:0524]

Comparison of clinical outcomes in locally advanced distal rectal cancer patients with complete clinical response: total mesorectal Excision versus Nonoperative Management

Cemil Burak Kulle¹, Halil Alper Bozkurt*¹, Fatih Selçukbiricik², Şule Karaman³, Metin Keskin¹, Emre Balık⁴, Dursun Buğra⁴, Mehmet Türker Bulut¹

¹Istanbul University, Faculty of Medicine, Department of General Surgery, Istanbul, Turkey

²Koç University Hospital, Department of Medical Oncology, Istanbul, Turkey

³Istanbul University, Faculty of Medicine, Department of Radiation Oncology, Istanbul, Turkey

⁴Koç University Hospital, Department of General Surgery, Istanbul, Turkey

Aim: This study compares the clinical outcomes of locally advanced distal rectal cancer (LADRC) patients treated with

either nonoperative management (NOM) or total mesorectal excision (TME) following neoadjuvant treatment.

Methods: This retrospective case series was conducted at two cancer centers. All LADRC patients with clinical complete response (cCR) following neoadjuvant therapy, who agreed to NOM or TME revealing a pathologic complete response (pCR) were enrolled into the study. Patients were analyzed for local regrowth/recurrence (LR), distant metastases (DM) and survival status.

Results: Patients in the NOM group ($n=67$) compared with the patients in the pCR group ($n=69$) revealed no differences regarding baseline characteristics and tumor location ($p>0.05$). Ten (15%) patients with LR in the NOM group were detected on surveillance and treated with salvage surgery (100%). Pelvic control after salvage surgery was maintained in sixty-five patients (97%). No LR occurred in the pCR group, but three (4,4%) patients had DM. At five years, the pCR group had improved disease-free survival ($p<0,001$), although no difference was observed in overall survival between these two groups ($p=0,089$).

Conclusion: NOM is a promising treatment option compared to the standard trimodal treatment strategy with its equivalent pelvic tumor control and OS in strictly selected patients.

Keywords: Nonoperative management, Pathologic complete response

[Abstract:0528]

Clinical outcomes of salvage surgery in locally advanced distal rectal cancer patients with local regrowth following nonoperative management

İlker Özgür¹, Cemil Burak Kulle¹, Halil Alper Bozkurt*¹, Yersu Kapran³, Emre Balık², Dursun Buğra², Mehmet Türker Bulut¹, Metin Keskin¹

¹Istanbul University Faculty of Medicine, Department of General Surgery, Istanbul, Turkey

²Koç University Hospital, Department of General Surgery, Istanbul, Turkey

³Koç University Hospital, Department of Pathology, Istanbul, Turkey

Aim: The aim of this study is to evaluate the feasibility and clinical outcomes of salvage surgery in locally advanced distal rectal cancer (LADRC) patients with local regrowth following nonoperative management (NOM).

Methods: All LADRC patients managed with nonoperative management after neoadjuvant therapy with clinical complete response (cCR), who developed local regrowth during surveillance between January 2015-December 2019, were enrolled into the study. Patients were analyzed for the rate of salvage surgery, disease-free survival and overall survival.

Results: Eleven out of 63 patients developed local regrowth after a mean of 8,4 (3-15) months during surveillance. The mean follow-up period was 40,7 (24-59) months. Eleven (100%) patients underwent salvage surgery due to the principles of total mesorectal excision (TME). Local excision was not performed. One (9,1%) patient experienced local recurrence and three (27,3%) patients developed distant metastasis after a mean surveillance period of 33,7 (17-47) months. The three-years local recurrence rate, systemic recurrence rate, disease-free survival, and overall survival in the patients undergoing surgical treatment were 9,1%, 73%, 63,7% and 91%, respectively.

Conclusion: All patients with regrowth after a NOM strategy were amenable for salvage surgery with curative intent and jus-

tifiable pelvic tumor control. Uncontrolled pelvic disease was rare.

Keywords: Non-operative management (NOM), Salvage surgery

[Abstract:0529]

Surgery in pararectal masses: a single center experience

Adem Bayraktar¹, İlker Özgür¹, Cemil Burak Kulle¹, Berke Şengün¹, Ozan Pastacıgil*¹, Emre Balık², Mehmet Türker Bulut¹, Metin Keskin¹

¹Istanbul University, Faculty of Medicine, Department of General Surgery, Istanbul, Turkey

²Koç University, School of Medicine, Department of General Surgery, Istanbul, Turkey

Background: Pararectal masses are rare tumors mostly located in retrorectal or presacral space which may display different histopathological characteristics. In this case-series, we aimed to present our experience with patients treated with surgery for pararectal tumors.

Methods: Patients who were treated between August 2006-May 2021 in a tertiary-referral center were included in the study. Patient demographics, presentation characteristics, perioperative results were retrospectively analyzed from a prospectively maintained database.

Results: There were 27 patients treated with surgery for pararectal tumors. Mean age was 40(range:19-74) and 19(70.1%) were women. Most common presenting symptom was perineal pain (14-51.9%). All tumors were evaluated with pelvic MRI. Sixteen (59.3%) were treated with posterior approach while 10(37%) were treated anteriorly. Of those who were treated anteriorly, 5 patients had undergone laparoscopic, 1 patient had undergone combined surgery. Mean length of stay was 4 days (1-16). Pathological results revealed 5 tumors as malignant (21%). Of all benign tumors (22), 17 were in congenital origin (63%).

Conclusions: Pararectal tumors are heterogenous and rare. Most would require surgical resection which could be accomplished by anterior, posterior, or laparoscopic approach. Pelvic MRI is a useful tool for planning surgery. Clinical outcomes are determined by various factors including resection margins, especially for malignant tumors.

Keywords: Pararectal mass, retrorectal tumor

[Abstract:0530]

Transanal endoscopic surgery in rectal tumors: single center experience

Safa Vatanserver*¹, Osman Bozbıyık², Tayfun Yoldaş², Cemil Çalışkan², Erhan Akgün², Mustafa Ali Korkut²

¹İdil State Hospital, Sırnak, Turkey

²Department of General Surgery, Faculty of Medicine, Ege University, Izmir, Turkey

Background: Transanal endoscopic surgery is an alternative therapy to either radical surgery or endoscopic mucosal resection for rectal neoplasms.

Methods: A retrospective data collection of transanal endoscopic surgery procedures performed through Ege University Hospital, from 2014 to 2020 was conducted. TEO® platform (Karl Storz) was used in all patients.

Results: A total of 56 patients were included in this study. Thirteen (23 %) of the patients were women. The mean age was 62 (±13). The mean distance of the tumor from the anal verge was 7 cm (±3). The mean tumor diameter was 3 cm (±2). Histopathological examination revealed malignancy in 38 (68 %) patients [pTis: 15 (39 %), pT1: 9 (24 %), pT2: 11 (29 %), pT3: 3 (8 %)]. Complications were seen in three (5 %) patients. The mean follow-up period was 34 months (±18). Three (5 %) patients required re-excision.

Conclusions: Transanal endoscopic surgery allows the excision of rectal lesions that cannot be excised with a conventional approach, with a low morbidity rate. It can also be used for definitive histopathological diagnosis of lesions whose pathology has not been fully revealed, and for the removal of early stage malignant rectal tumors with appropriate surgical margins.

Keywords: Rectal tumor, Transanal endoscopic operation

[Abstract:0532]

Early stoma complications and risk factors in emergency and elective colorectal surgery

Cahide Ayik^{*1}, Tayfun Bisgin², Deniz Cenan³, Berke Manoglu², Dilek Ozden¹, Selman Sokmen²

¹Dokuz Eylul University Faculty of Nursing, Izmir, Turkey

²Dept. of Surgery Colorectal and Pelvic Unit, Dokuz Eylul University Medical Faculty, Izmir, Turkey

³Enterostomal Therapy Nurse, Dokuz Eylül University Medical Faculty, Izmir, Turkey

Background: The effect of emergency and elective colorectal surgery on ostomy complications shows conflicting results. The aim of this study was to determine the effect of emergency and elective surgery on early ostomy complications.

Methods: Retrospectively collected data of 872 ostomy patients was analyzed. Patients who followed-up regularly during the first post-operative month were included.

Results: Ostomy related complications developed in 65.7 % of the patients. The most common complications were peristomal irritant contact dermatitis (PICD) (33.3 %) and mucocutaneous separation (MS) (30.7 %). Necrosis (7.4 %vs3.4 %), MS (37.2 %vs27.1 %), and bleeding (6.1 %vs2.1 %) were more common in patients undergoing emergency surgery ($p<.01$); PICD (37.3 %vs.26 %) and hyperplasia (8.6 %vs.4.5 %) were more common in elective surgery ($p<.05$). In emergency surgery group co-morbidity (OR=1.810), malignancy (OR=1.675) and loop ostomy (OR=2.089) were independent risk factors for PICD; end ostomy (OR=1.606), ostomy height of <10 mm (OR=2.104) and malignancy (OR=1.805) were independent risk factors for MS. In elective surgery male gender (OR=1.832), ileostomy (OR=2.322) preoperative IRT/CT (OR=2.178) were risk factors for PICD; ostomy height of <10 mm (OR=1.613) was independent risk factor for MS.

Conclusion: Ostomy complications were affected by the type of surgery in the early period. Factors relating to the patient and stoma were effective in the complication development. Thus, strict follow-up of patients in the early period is extremely important.

Keywords: Ostomy, Stoma complications

[Abstract:0533]

Total pelvic exenteration for rectal carcinoma: a single institution's experience

Tayfun Bisgin, Muhammed Berkay Sakaoglu*, Berke Manoglu, Selman Sokmen

Dept. of Surgery Colorectal and Pelvic Unit, Dokuz Eylul University Medical Faculty, Izmir, Turkey

Background: Total pelvic exenteration (TPE) is a potentially curative surgery for locally advanced primary or recurrent rectal carcinoma. The aim of this study was to discuss our results in TPE for rectal carcinoma.

Methods: Prospectively maintained data of 32 patients with rectal carcinoma who underwent TPE was analyzed. Twenty-three patients presented with primary rectal tumors; nine had recurrent disease.

Results: 29(90.6 %) of the patients received neoadjuvant chemoradiotherapy, and 9(28.1 %) patients received second-line RT after recurrence. Sacrectomy was also performed in 5(15.6 %) patients due to sacral involvement. Perineal reconstruction was done with primary closure in 24, gluteal rotation flap in five, vertical rectus abdominis myocutaneous flap in one, and prosthetic mesh in two patients. Clavien-Dindo grade III-IV morbidity developed in 16(50 %) patients. Perioperative mortality occurred in 2(6.5 %) patients. The mean follow-up was 13.8 months (range: 27 days-36.4 months). Seven (21.8 %) of the patients had local re-recurrence, 11(34.3 %) had intra-abdominal disease and 8(25 %) had distant metastasis. The 1-and 2-years survival rates were 49.1 % and 20.2 %, respectively.

Conclusion: TPE can be performed to salvage advanced or recurrent rectal carcinoma in patients with low mortality but high morbidity rate. TPE has a crucial role in multimodal management of advanced primary or recurrent rectal carcinoma.

Keywords: Total pelvic exenteration, rectal carcinoma

[Abstract:0540]

Ligasure hemorrhoidectomy (LH) with „near base“ technique

Şenol Tahir*, Martina Ambardjieva, Frosina Jovanovska, Alma Mustafova, Kristijan Dervisov, Nimetula Limani, Berat Dalipi, Petar Markov

University Clinic for Surgical Diseases, General and Abdominal departemen – St. Naum Ohridski, Skopje, N. Macedonia

Background: In this study we evaluate the use of Milligan-Morgan hemorrhoidectomy with Ligasure vessel sealing.

Methods: Grades 3 and 4 hemorrhoids are operated with Ligasure by coagulation and cutting of the hemorrhoids at positions 5, 7 and 11 hour. The patients received premedication, analgesia and intravenous 500 mg metronidazole preoperatively. Under anesthesia, placed in a lithotripsy position, the anoscope is placed with a easy retraction, than a 5 mm V shape incision is made with the scalpel at the anocutaneous border. The nodule was lifted with an instrument and the LigaSure was placed on the base of the nodule (leaving 2 mm enough mucosa above the sphincter), coagulated and incised. The control check, 24 hours later and sent home with oral analgesic and metronidazole therapy. Follow-up 7, 14 and 28th day.

Results: 52 patients undergoing LH surgery, with an average age of 42.5 years. 59 % are women and 56 % are grades III. Average operative intervention 17.0 + 4.1 minutes, hospital stay 1.2 days, Postoperative pain (VAS1-6) 3. Urinary retention 0.4 %. Minor bleeding 5.6 %. Pruritus in 5.6 %, gas incontinence 7.6 %. No stenosis or incontinence.

Conclusions: LH is an effective and safe surgical method and it should be used as a routine.

Keywords: Hemorrhoidectomy; Vessel sealing

[Abstract:0542]

The lymph node ratio has prognostic significance in patients with rectal cancer who received neoadjuvant therapy

Serhat Buldur*, Osman Bozbıyık, Cemil Çalışkan

Ege Üniversitesi Tıp Fakültesi, Genel Cerrahi Anabilim Dalı, İzmir, Turkey

Background: The aim was to compare the number of lymph nodes in patients who received and did not receive neoadjuvant therapy and to determine the role of lymph node ratio in these patients.

Methods: Patients who underwent elective surgery for rectal adenocarcinoma between January 2008 and June 2016 were retrospectively analyzed. Demographic, clinical, and histopathological parameters and overall survival of the patients were evaluated.

Results: A total of 386 male and 247 female patients were included in the study. 54.7 % of the patients were received neoadjuvant treatment. The mean number of dissected lymph nodes was 14.00 ± 8.86. The mean number of lymph nodes in the neoadjuvant treatment group was 11.31 ± 6.53 and 17.24 ± 10.15 in the control group. When the lymph node ratio was classified as below 25 %, 25–50 %, or over 50 %, the mean survival times were 76.7 ± 4.8 months, 54.6 ± 8.1 months and 45.3 ± 8.4 months, respectively. According to the result of the ROC analysis, the cut-off value for the lymph node ratio was determined as 16 %.

Conclusions: Neoadjuvant treatment negatively effects the number of resected lymph nodes in rectal cancer patients. In neoadjuvant rectum cancer patients, the lymph node ratio can be used as a prognostic factor.

Keywords: Lymph node ratio, Rectum cancer

[Abstract:0544]

Clinicopathological significance of preoperative neutrophil-lymphocyte ratio (NLR), platelet-lymphocyte ratio (PLR) in colorectal cancer patients

Yağmur Özge Turaç Kösem¹, Müge Yurdacan^{*1}, Furkan Çakır², Murat Süphan Ertürk¹, Asiye Perek¹

¹Istanbul University-Cerrahpasa, Cerrahpasa Medical Faculty, Department of General Surgery, Istanbul, Turkey

²Istanbul Bilgi University, Faculty of Health Sciences, Physiotherapy and Rehabilitation Department, Istanbul, Turkey

Background: Colorectal cancer (CRC) is the third leading cause of cancers diagnosed worldwide with a high mortality.

Clinicopathological features, such as tumor metastasis and lymph node involvement, are important factors affecting cancer progression. For this reason, predictive biomarker determination studies have recently gained momentum in order to detect these steps earlier and cheaper. In our study, we aimed to examine the relationship of neutrophil-lymphocyte ratio (NLR) and platelet-lymphocyte ratio (PLR) with clinicopathological characteristics of CRC.

Methods: In our study, 354 patients who underwent surgery for CRC in Istanbul University-Cerrahpasa General Surgery Clinic between 2018 and 2020 were included. Preoperative patient data were obtained from the hospital clinic records. IBM SPSS Statistics 26.0 was used for the statistical analysis.

Results: Based on the positive lymph node ratio of 0.2, a significant difference was found in PLR and NLR values of the patients ($p < 0.05$). Elevated PLR were associated with metastasis. NLR was correlated with positive lymph node ratio ($p < 0.05$, $r = 0.155$). NLR value $> 3,07$ was found to be 61 % sensitive and specific in predicting lymph node involvement rate ($p < 0.05$).

Conclusions: Present results indicate that PLR and NLR may be useful for colon cancer nomograms.

Keywords: Neutrophil-lymphocyte ratio (NLR), Platelet-lymphocyte ratio (PLR)

[Abstract:0550]

Malignant colorectal polyps: Are pathology reports sufficient for decision making?

Metin Keskin¹, Cemil Burak Kulle¹, İrem Karataş^{*1}, İlker Özgür¹, Adem Bayraktar¹, Melek Büyük², Mine Güllüoğlu², Mehmet Türker Bulut¹

¹Istanbul University Faculty of Medicine, Department of General Surgery, Istanbul, Turkey

²Istanbul University Faculty of Medicine, Department of Pathology, Istanbul, Turkey

Background: This study aims to assess the completeness of pathology reports of T1 colorectal cancers from different healthcare centers and the change of treatment decision after reevaluation of the polyps.

Methods: In this single center retrospective cohort study several pathology reports of endoscopically excised malignant colorectal polyps at diverse healthcare centers in Turkey were reassessed at a comprehensive cancer center in Istanbul. Reassessment was mainly focused on core elements such as size of invasive carcinoma, histologic type and grade, tumor extension, surgical margin (deep and mucosal) and lymphovascular invasion.

Results: Sixty-seven endoscopically resected malignant polyps were analyzed. The mean age of patients was 62,2 years and 38 (58 %) patients were male. Tumor size, histological type and grade, surgical margin (deep and mucosal) and lymphovascular invasion were reported in 11 %, 100 %, 31 %, 9 % and 19 %, respectively. All five prognostic factors were reported only in one (1,5 %) pathology report. Due to missing data pathologic examination of 59 (88 %) patients were determined to be insufficient to make a treatment decision.

Conclusions: Several variables are not considered and frequently missing for decision making, suggesting the reassessment of the pathology report by a second pathologist at a high-volume comprehensive cancer center.

Keywords: Malignant polyps, Treatment strategy

[Abstract:0555]**Seasonal difference in emergency surgery rates for adhesion related small bowel obstruction**Oğuzhan Taş*¹, Orçun Alpay², Adil Koyuncu²¹Aksaray University, Aksaray Training and Research Hospital, Aksaray, Turkey²University of Health Sciences, Haseki Training and Research Hospital, Istanbul, Turkey

Background: Small bowel obstructions (SBO) are common conditions in practice of surgery. Determining the etiology and deciding for the surgery at the right time is crucial for the surgeon. It was investigated treatments of the patients hospitalized due to adhesion-related SBO (ASBO) vary according seasonal differences.

Methods: All patients hospitalized due to SBO at general surgery clinic between July 2016–2021 have been analyzed. Demographic findings, etiology, date and surgeries have been recorded. Early postoperative SBO's has been excluded from the study.

Results: Out of total 300 patients, 57.7% ($n=173$) of them has been hospitalized due to ASBO. The average age of patients was 54.2 and 68.2% of were male ($n=118$). Surgical treatment has been required for 24.9% ($n=43$) of patient. Adhesiolysis has been sufficient in 67.4% ($n=29$) of the patients.

While the rate of patients operated during autumn was 14%, winter was 21% and 35% in the summer ($p<0,05$). The high-est operation rate was determined as 55% in June; no patient underwent surgical treatment in November.

Conclusions: Mostly ASBO's resolve without surgery. We concluded that having a higher rate of surgery during the summer months in our data series caused by dehydration and intense stool plug. Larger series studies are needed.

Keywords: Adhesion, Bowel obstruction

[Abstract:0558]**Microsinusectomy with video-assisted laser ablation for pilonidal sinus disease: Single center experience**Cahide İnci Şahin*¹, Çiğdem Benlice², Afag Aghayeva³, İsmail Hakkı Hamzaoğlu³, Tayfun Karahasanoğlu³, Bilgi Baca³¹Department of General Surgery, Acıbadem Altunizade Hospital, İstanbul, Turkey²Department of General Surgery, School of Medicine, Ankara University, Ankara, Turkey³Department of General Surgery, School of Medicine, Acıbadem Mehmet Ali Aydınlar University, İstanbul, Turkey

Background: Considering common morbidities after surgical treatment of pilonidal sinus disease (PSD) including pain, loss of productive work-hours and wound infections owing to long healing times, minimal invasive techniques has gained popularity recently. This study aimed to present the feasibility and safety of video-assisted laser ablation and microsinusectomy for PSD.

Methods: Patients who underwent video-assisted laser ablation and microsinusectomy between 11/2017 and 12/2020 for PSD included. For the procedure, after making a 3–6 mm

full-thickness skin incision with punch biopsy instrument and cleaning of the sinus tract with brush and curette, the sinus tract was visualized with sinuscope. Then, laser probe was introduced into sinus tract and ablation was performed. Demographics, postoperative complications and follow-up period were assessed.

Results: A total of 62 patients (13 females) with a mean age of 28 years met inclusion criteria. Of those, 4 patients had recurrent PSD. Mean hospital stay was 1 ± 0.27 days. Mean healing time was 2–6 weeks. Two patients had chronic pain and two patients had seroma, these patients responded well to conservative treatment with analgesics and antibiotics. Only one recurrence occurred during a 12 ± 6.18 months of follow-up period.

Conclusions: Video-assisted laser ablation and microsinusectomy is a safe and feasible procedure and also effective minimal invasive procedure for recurrent PSD.

Keywords: Pilonidal sinus, Laser

[Abstract:0561]**Comparison of the application between circular stapler and linear stapler in right hemicolectomy**

Alp Ömer Cantürk*, Hilmi Bozkurt, Muzaffer Akıncı

University of Health Sciences, Haseki Training and Research Hospital, Clinic of General Surgery, İstanbul, Turkey

Background: Right sided hemicolectomy for right sided colonic cancer is a common performed procedure. Multiple surgical techniques can be used in the surgical treatment of right colon cancer. In open surgical technique, linear and circular stapler can be used. This study compares the results of both techniques. Clavien Dindo scoring was also used in the comparison.

Methods: Between 2018–2021, 107 operation was performed. We obtained the data of patients who had undergone right hemicolectomy surgery with using circular and linear stapler.

Results: Linear stapler was used in 58 operations and circular stapler was used in 49 operations. Anastomosis leakage was observed in 9 patients after linear stapler and 4 patients after circular stapler. There was no significant difference in terms of age, sex, operation time between the two groups. Anastomosis leakage was significantly lower in operations using circular stapler. The length of stay in the patient was found to be statistically significantly lower in circular stapler patients. According to Clavien Dindo score, there was no statistically significant difference between two techniques.

Conclusions: Although the circular stapler may seem more expensive, the complications increase the cost even more. For this reason, we recommend the use of circular staplers in right colon surgeries.

Keywords: Right hemicolectomy, Linear vs circular stapler

[Abstract:0562]**Treatment of Hinchey Ib and Hinchey 2 diverticulitis: our clinical experience****Bartu Çetin*, Osman Bozbıyık, Tayfun Yoldaş, Cemil Çalışkan, Erhan Akgün, Mustafa Ali Korkut**

Ege University, Faculty of Medicine, Department of General Surgery, İzmir, Turkey

Background: Acute colonic diverticulitis are common emergencies. There has been a tendency toward non-operative treatment of abscesses caused by diverticulitis. In this report, we aimed to present the treatment strategies of diverticulitis with localized abscess.

Methods: We retrospectively evaluated patients treated for diverticulitis between 2014 and 2020. The clinical data, CT findings, length of stay, treatment methods and mortality status of the patients were recorded. Patients with Hinchey Ib and Hinchey II were evaluated.

Results: Of the 148 patients, 73 were female. The mean age was 60.5 ± 15.9 years. A total of 35 patients with Hinchey Ib and Hinchey II were evaluated. Of 23 patients whose abscess size was less than 4 cm, 18 had medical treatment, 1 had percutaneous drainage, and 4 had surgery. Medical treatment was applied to 5 of 12 patients with abscess size larger than 4 cm, percutaneous drainage to 4, and surgery to 2 patients. The mean length of stay was 8.57 days. All patients were discharged without any problem, except for one patient who died as a result of subarachnoid hemorrhage.

Conclusions: Medical therapy and percutaneous drainage are usually sufficient in the management of diverticulitis with localized abscess and surgical therapy is rarely necessary.

Keywords: Diverticulitis, Abscess

[Abstract:0564]**Genetic analysis for inherited colorectal cancer and polyposis: Experience from a high volume center****Osman Bozbıyık¹, Aslı Ece Solmaz², Mustafa Özgür Kılınçarslan^{*1}, Haluk Akın², Tayfun Yoldaş¹, Cemil Çalışkan¹, Mustafa Ali Korkut¹, Erhan Akgün¹**¹Ege University, Faculty of Medicine, Department of General Surgery, İzmir, Turkey²Ege University, Faculty of Medicine, Department of Medical Genetics, İzmir, Turkey

Background: Colorectal cancer is thought to have a family component in 25 % of instances, with up to one-third of these being hereditary. Pathogenic germline mutations in several genes have been linked to a genetic colorectal cancer risk.

Methods: We evaluated patients who received genetic counseling at our institution over a six-year period. Patients demographics, clinicopathologic characteristics, and personal and family history were reviewed. Patients tested with a multi-gene cancer panel (Illumina TruSight Cancer Sequencing Panel) using next generation sequencing.

Results: Genetic analysis was performed on 137 patients. Genetic variant was detected in 76 (55.4%) patients. The patients' phenotypes were categorized as polyposis or non-polyposis. Of 56 patients (40.8 %) with polyposis phenotype, 19

APC gene mutation, 4 homozygous MUTYH gene mutation, 2 heterozygous MUTHY gene mutation, 2 compound heterozygous MUTYH gene mutation, and 1 STK-11 gene mutation were detected. Of 81 patients (59.1 %) with non-polyposis phenotype, 10 MLH-1, 8 MSH-2, 1 PMS-1, 1 PMS-2 gene mutations were detected. In addition, variants of uncertain significance (VUS) was detected in 23 patients.

Conclusion: Colorectal cancer patients who had a family history or young-onset should receive genetic counseling. The modern treatment of colorectal cancer should include medical geneticists as part of the multidisciplinary approach.

Keywords: Colorectal cancer, Genetic testing

[Abstract:0567]**Does stoma opening and vacuum associated closure system affect mortality in Fournier's gangrene?****Gizem Kılınc Tuncer*, Korhan Tuncer, Serdar Aydoğan**

General Surgery Department, University of Health Sciences Tepecik Training and Research Hospital, İzmir, Turkey

Background: Fournier's gangrene is a necrotizing and gas-forming soft tissue infection of perineum. Normally, the decision for creating the stoma should be based on the condition of the anal sphincter tone, but in some cases it can also be used to divert stool. In this study we aimed to identify the affects of stoma and vacuum associated closure systems on postoperative mortality and hospital stay of Fournier's gangrene.

Methods: Patients that have Fournier's gangrene including anorectal region between 2010-2021 were analyzed retrospectively. Age, sex, comorbidities, number of debridements, stoma creation, tissue culture results, mortality and postoperative hospital stay were defined as parameters.

Results: A total of 66 patients were detected. 37 (56.1 %) of the patients were also have urogenital involvement additionally to anorectal area. 44(66.7%) of them were male. Age was the only parameter that affects the mortality ($p=0,013$). Also urogenital involvement was associated with ($p=0,039$). VAC systems were found to increase the need for debridement and length of stay ($p=0,042$ and $p<0,001$). In addition, stoma was not associated with mortality and postoperative length of stay ($p=0,190$ and $p=0,079$).

Conclusions: Stoma opening and VAC systems are not decreasing mortality and postoperative hospital stay in patients with Fournier's gangrene.

Keywords: Fournier's gangrene, Stoma

[Abstract:0568]**Laparoscopic approach in colorectal surgery requires more efforts in teaching surgeons****Ayşegül Bahar Özocak*, Aylin Erdim, Cihan Şahan, Vafi Atalay, Ömer Günel**

Marmara University, School of Medicine, Department of General Surgery, Pendik Educational and Research Hospital, İstanbul, Turkey

Background: The percentages of patients treated with surgery using minimally invasive techniques are still reduced. It

has been argued that the limiting factor for the use of laparoscopic procedures is the number of surgeons with adequate skills to perform a laparoscopic. We aimed to investigate our clinic's expertise on laparoscopic colorectal surgery during last ten years regarding this concept.

Methods: We have scrutinized the patients' records which had undergone colorectal surgery during last ten years. Patients' demographic data, benign and malignant etiology, lymph node number extracted, mesocolon resection, postoperative complications, operation time, hospital stay, and patient selection criteria were screened.

Results: Between 2011–2021, 1278 colorectal surgical operations of which 223 was laparoscopic were performed. From 2014 on, the proportion of laparoscopic surgery increased until 2019. Lymph node number excised, complete mesocolon resection rate, postoperative complications and hospital stay were similar in open and laparoscopic surgery groups. Surgeon experience, operational planning, and operation room facilities were the most important determinants in patient selection and decision making.

Conclusions: Our study have shown that minimally invasive colorectal surgery are still underused in our clinics due to the lack of surgical facilities. Thus, implementation of the laparoscopic approach requires more efforts in teaching surgeons.

Keywords: Laparoscopy, Colorectal surgery

[Abstract:0570]

Comparison of long-course chemoradiotherapy versus short-course radiotherapy followed by consolidation chemotherapy in locally advanced rectal cancer: Preliminary results of a multicenter cohort study

Cigdem Benlice^{*1}, Mehmet Ali Koc¹, Baris Gulcu², Ismail Ahmet Bilgin³, Cihangir Akyol¹, Bilgi Baca³, Ersin Ozturk², Mehmet Ayhan Kuzu¹

¹University of Ankara, Department of General Surgery, Ankara, Turkey

²Bursa Medicana Hospital, Bursa, Turkey

³Acibadem Mehmet Ali Aydinlar University, School of Medicine, Department of General Surgery, Istanbul, Turkey

Background: This multicentric study was designed to compare pathological clinical response (pCR) rates between different neoadjuvant treatment strategies in patients undergoing total mesorectal excision (TME) for locally advanced rectal cancer (LARC).

Methods: Consecutive patients who received neoadjuvant short-course radiotherapy (5×5Gy) followed by consolidation chemotherapy or long-course chemoradiation therapy (CRT) undergoing TME for LARC between January/2014 and June/2021 were queried from three high-volume tertiary care centers. Tumor responses, surgical complications and long-term oncologic outcomes were reviewed and compared. Pathologic complete response was defined as no viable tumor cells in the primary tumor and in the lymph nodes (ypT0N0) by histopathological assessment of the surgical specimen after CRT.

Results: A total of 270 patients underwent surgery met the study inclusion criteria. A pCR was achieved in 10 patients (22.7%) in the short-course CRT and consolidation group (10/44), 13 patients (9.4%) in the long-course CRT group (13/138), and 18 patients (20.4%) in the long-course RT and

consolidation group (18/88). Surgery was performed in 10 weeks (8–12) after completion of radiation therapy.

Conclusions: The pCR rates were similar compared to neoadjuvant short-course radiotherapy/consolidation and long-course CRT/consolidation chemotherapy strategy groups and both could be an alternative to the conventional chemoradiotherapy for patients diagnosed with rectal cancer.

Keywords: Rectal cancer, Consolidation therapy

[Abstract:0571]

Assessment of familial history of early versus late onset colorectal cancer: a multicentric epidemiological study from high-volume tertiary care centers

Guldane Sinem Ozkan^{*1}, Enes Kagan Cakirtas¹, Cigdem Benlice², Makbule Aysegul Bagda³, Mehmet Ali Koc², Cihangir Akyol², Bilgi Baca⁴, Mehmet Ayhan Kuzu²

¹University of Ankara, School of Medicine, Ankara, Turkey

²University of Ankara, Department of General Surgery, Ankara, Turkey

³Acibadem Altunizade Hospital, Department of General Surgery, Istanbul, Turkey

⁴Acibadem Mehmet Ali Aydinlar University, School of Medicine, Department of General Surgery, Istanbul, Turkey

Background: This multicentric retrospective cohort study is aimed to investigate the relationship between family history and anatomical distribution of colorectal cancer (CRC), and age at diagnosis for patients underwent surgery for CRC.

Methods: Patients underwent surgery for CRC between 2014–2021 were queried from two high-volume tertiary care centers. Demographics, family history, histopathologic and surgical data were gathered. Family history of CRC was collected on all first/second/third degree relatives (parents, siblings, and children). Patients diagnosed earlier or later than 45 were compared and analyzed.

Results: A total of 1507 patients met the inclusion criteria [mean age:60 and female: 915 (71%)]. Distribution of cancer location as following: right-sided (24%, N:359), left-sided (27%, N:410) and rectum (49%, N:734). More distal location was observed for patients diagnosed earlier than 45 (rectum:56.5%) compared to later onset (47.7%). Family history of CRC was present at 268 patients (17.8%) among entire cohort, which was significantly increased for patients diagnosed earlier than 45 (27.3%, N:53) compared to later onset (16.4%, N:215) ($p < 0.008$). HNPCC-related cancer was observed 9.7% of patients diagnosed earlier than 45.

Conclusions: Early onset cancers tend to located more distally, have a more prominent family history and hereditary component than later onset cancers, which might guide for earlier CRC screening strategies.

Keywords: Family history, Colorectal cancer

[Abstract:0572]**Can the De Ritis Ratio ratio (AST/ALT) be used to predict colon cancer stages?**

Mevlüt Recep Pekcici, Enes Cebeci, Bedri Burak Sucu, Mert Çöl, Ender Ergüder*, Saygın Altınar, Yılmaz Ünal, Salih Tuncal

Department of General Surgery, Ankara Research and Training Hospital, Ankara, Turkey

Background: The De Ritis ratio (Aspartat transaminase/alanine transaminase) is a critical prognostic factor for some kinds of malignant tumors. Nevertheless, the De Ritis ratio's prognostic value in preoperative colon cancer staging is unclear. The purpose of this research was to determine the De Ritis ratio in colon cancer and to determine its prognostic significance for colon cancer.

Methods: The clinicopathological data of 271 individuals with malign colon cancer were analyzed retrospectively, from January 2010 to January 2018 at a single center. The relationship between the De Ritis coefficient and clinicopathological findings in patients were evaluated before treatment. To compare groups, the Mann-Whitney U test and the Kruskal Wallis test were performed

Results: The results indicated that there were no statistically significant differences between the groups, in terms of pre-treatment De Ritis ratio assessment as a staging, localization, tumor diameter, lymph node metastasis, age and overall survival. However, differences in T staging between groups of male participants were shown to be statistically significant.

Conclusions: The De Ritis ratio evaluated before to treatment was not an independent variable a prognostic factor in the diagnosis and staging of colon cancer. However, future study may demonstrate the significance of the De Ritis ratio with more participants.

Keywords: Colon Cancer, De Ritis

[Abstract:0576]**Are NLR, PLR, LMR predictive for postoperative complications and mortality in inflammatory bowel disease?**

Gizem Kılınc Tuncer*, Korhan Tuncer, Serdar Aydoğan, Kemal Erdinç Kamer

General Surgery Department, University of Health Sciences Tepecik Training and Research Hospital, Izmir, Turkey

Background: Although inflammatory bowel diseases (IBD) are tried to be controlled with medical treatment, surgical intervention may be required as a result of complications. Neutrophil-to lymphocyte, platelet-to-lymphocyte and lymphocyte-to monocyte ratios could be potential inflammatory biomarkers of systemic inflammation in chronic diseases. In this study, we aimed to determine whether these ratios could be predictive of postoperative mortality and complications for IBD (ulcerative colitis and crohn disease).

Methods: Patients that operated for IBD between 2010–2021 were analyzed retrospectively. Age, sex, comorbidities, NLR, PLR, LMR, postoperative complications, mortality and postoperative hospital stay were defined as parameters.

Results: A total of 42 patients were detected. 29(69%) of them were male and 24(57%) of them were operated for crohn disease. Although mechanical bowel obstruction was the most common cause of operation for both, bleeding was more common for UC and fistula was more common in Crohn's disease. NLR and PLR may be parameters for IBD that can be used to differentiate between Crohn's and UC ($p=0,031$; $p=0,009$). However, none of these ratios were found to be related for postoperative early and delayed complications, mortality and reoperation.

Conclusions: NLR and PLR can be used to differentiate between Crohn's and UC, but NLR, PLR and LMR are not associated with postoperative complications and mortality.

Keywords: inflammatory bowel disease

[Abstract:0577]**Laparoscopic surgery for T4 colon cancer: Is it safe&feasible?**

İbrahim Halil Özata¹, Salih Nafiz Karahan*¹, Serkan Zenger², Serkan Sucu¹, İbrahim Fethi Azamat¹, Derya Salim Uymaz¹, Dursun Buğra², Emre Balık¹

¹Koç University Hospital, Department of Surgery, Istanbul, Turkey

²VKV American Hospital, Istanbul, Turkey

Background: It was aimed to compare laparoscopic surgery and open surgery in T4 colon tumors.

Methods: 51 patients who underwent laparoscopic resection and 25 patients who underwent open resection for T4 colorectal cancer between January 2014 and December 2018 were analyzed retrospectively.

Results: The mean age, BMI, and the female to male ratio of the patients were 64/66, 26/27 and 0.82/0.92 respectively for laparoscopic and open group without any significant difference in demographic data. All patients achieved R0 resection independent of the surgical technique. The conversion rate was 13.7% and the 30-day complication rate was 23.5% and 44% for laparoscopic and open surgery group respectively. Anastomotic leakage (3.9% in laparoscopy cohort vs 12% in open surgery), reoperation rate and Clavien-Dindo scores were comparable between two groups, while readmission rate within 30 days was lower in laparoscopic surgery group ($p=0.03$). Laparoscopic surgery resulted in shorter hospital stay (8/d vs 13/d, $p<0.01$) and comparable operative time (141/m vs 142/m). Longer OS and similar DFS was shown for laparoscopic surgery (75% vs 53.3%, $p=0.03$; 63.8% vs 52.1%, $p=0.39$).

Conclusion: This study showed that laparoscopic surgery in the treatment of T4 colorectal cancer is safe and has satisfying results if en-block resection can be achieved.

Keywords: T4, laparoscopiesurgery

[Abstract:0578]**Laparoscopic surgery can be safely performed in elderly patients with colon cancer****İbrahim Halil Özata¹, Salih Nafiz Karahan^{*1}, Mesut Yeşilsoy¹, Derya Salim Uymaz¹, Serkan Zenger², Emre Özorani¹, Emre Balık¹, Dursun Buğra²**¹Koç University Hospital, Department of Surgery, Istanbul, Turkey²VKV American Hospital, Istanbul, Turkey**Aim:** Despite being underresearched, laparoscopic colorectal surgery is expected to be the gold standard even in the elderly patients due to proven advantages.**Method:** This study included patients >75 years of age with colon cancer operated at VKV Hospitals between 2014–2019. 68 patients were eligible for this study with 34 patients in each group. The two groups were compared in terms of patient demographics, pathologic outcomes, perioperative results, and oncologic outcomes.**Results:** Two groups were similar in terms of demographics. The average age was 81.3/82.2, the mean BMI of patients was 26.5/26.4 for laparoscopic and open surgery groups respectively. Laparoscopic surgery didn't prolong the operative time and proved to decrease the LOS by a mean of 3.6 days ($p=0.042$), decrease time to flatus and increase the number of harvested lymph nodes (41.7 vs 36, $p=0.03$). Short term outcomes such as complications, readmission and reoperation within 30 days and long term outcomes like DFS and OS rates were similar in both groups.**Conclusion:** Considering merits of laparoscopic surgery, our findings stress the importance of laparoscopic colon surgery especially in the more complication-prone elderly population.**Keywords:** Elderly patients, Laparoscopic surgery**[Abstract:0579]****A novel predictive score for early detection of anastomotic leakage****İbrahim Halil Özata^{*1}, Emre Bozkurt¹, Serkan Sucu¹, Salih Nafiz Karahan¹, Emre Özorani¹, Orhan Ağcaoğlu¹, Emre Balık¹, Dursun Buğra²**¹Koç University Hospital, Department of Surgery, Istanbul, Turkey²VKV American Hospital, Istanbul, Turkey**Aim:** This study aims to find a novel scoring system to detect anastomotic leak after colorectal surgery using inflammatory and nutritional indicators.**Method:** Colon cancer patients, who underwent curative surgery in Koc University Hospital between 2014 and 2018 were included in our retrospective study. Patients were categorized into two groups depending on the presence of anastomotic leak and compared in terms of preoperative albumin levels. Leak score is calculated dividing CRP quotient by preoperative albumin, the cut-off value was calculated.**Results:** A total of 185 patients were included in our study. 11 out of 185 patients had anastomotic leakage (5%). Leak score, CRP POD 3 to 1 ratio and preoperative albumin levels were found to successfully detect anastomotic leakage ($p<0.01$ for all). Area under the curves were calculated. With 75% sensitiv-ity and specificity, cut-off value of leak score was 78. Patients with a leak score >78 were found to have significantly higher anastomotic leak rates ($p<0.01$).**Conclusion:** Leak score can be a valuable diagnostic tool to detect patients at risk for anastomotic leakage after colorectal surgery. Prediction of anastomotic leak sooner might be helpful in avoiding unwanted complication and might prevent morbidity, mortality and associated cost.**Keywords:** Anastomotic leakage, Leak score**[Abstract:0588]****Adverse effects of consolidation chemotherapy mimicking peritoneal carcinomatosis in locally advanced distal rectal cancer patients with clinical complete response****Cemil Burak Kulle¹, Metin Keskin¹, Halil Alper Bozkurt^{*1}, İrem Gider¹, Şule Karaman², Senem Karabulut³, Mehmet Türker Bulut¹**¹Istanbul University Faculty of Medicine, Department of General Surgery, Istanbul, Turkey²Istanbul University, Oncology Institute, Department of Radiation Oncology, Istanbul, Turkey³Istanbul University, Oncology Institute, Department of Medical Oncology, Istanbul, Turkey**Background:** After the establishment of total neoadjuvant therapy (TNT) the rate of clinical complete response (cCR) in locally advanced distal rectal cancer (LADRC) patients and the application of nonoperative management (NOM) has gradually increased. But consideration must be given to local regrowth, systemic dissemination and adverse effects of chemotherapy.**Case presentation:** We present the case of a 56-year-old woman with no significant past medical history and rectal cancer. The patient's initial staging revealed to be at locally advanced stage and received long-term neoadjuvant chemoradiotherapy (50,4 Gy and concomitant 5-fluorouracil) and consolidation chemotherapy consisting of six cycles of FOLFOX (5-fluorouracil and oxaliplatin). After restaging for neoadjuvant treatment assessment clinical complete response on endoscopy and pelvic magnetic resonance imaging (MRI) at the primary tumor site and ascites on abdomen computer tomography (CT) scan was detected. With the suspicion of peritoneal carcinomatosis, the patient received further eight cycles of FOLFOX without sampling or histological examination of the ascites. In later clinical and surgical evaluations the etiology of ascites was found to be oxaliplatin-induced liver cirrhosis.**Conclusion:** NOM is a widely accepted treatment option for LADRC patients with cCR. But care must be given to local regrowth, systemic dissemination and adverse effects of chemotherapy.**Keywords:** Non operative management, Consolidation chemotherapy

[Abstract:0590]**Our clinical experience in the surgical approach to Crohn's disease complications****Ömer Kubat*, Hüseyin Göbüt, Aydın Yavuz, Hasan Bostancı, Osman Yüksel**

Gazi University Faculty of Medicine, Department of General Surgery, Ankara, Turkey

Background: Surgery for CD is often performed to treat complications, and the choice of surgical procedure varies by patient. Our aim in this study is to share our surgical treatment results for the complications of CD.

Methods: We reviewed 17 patients retrospectively who were operated due to complications of CD between 2010–2020.

Results: 10 of the patients were operated for intestinal obstruction, 3 for enteroenteric fistula, 2 for enterovesical fistula, 2 for perforation. Ileocecal resection was performed in 7 patients, small bowel resection was performed in 10 patients, sigmoid colon resection was performed in 4 patients. Ileostomy was performed in 4 patients. In the postoperative period, wound infection was observed in 4 patients, intra-abdominal abscess in 2 patients, ileus in 1 patient. There was no need for reoperation in the follow-up of the patients for CD. While medical treatment was not started in 2 of the patients, medical treatment was started in 3 patients within the first 3 months, 3 patients within 3–6 months, 4 patients between 6–12 months, 5 patients after 1 year after symptoms were observed.

Conclusions: In the control of the complications of Crohn's disease, the rate of recurrence and reoperation can be reduced with the right surgical technique and preferences.

Keywords: Crohn's disease, Surgery

[Abstract:0591]**The prognostic effect of log odds of positive lymph nodes (LODDS) in rectal cancer****Ahmet Can Koyuncuoğlu*, Saygın Altınar, Çağrı Büyükkasap, Aydın Yavuz, Osman Yüksel**

Gazi University Faculty of Medicine, Department of General Surgery, Ankara, Turkey

Background: The TNM classification is still the most commonly used classification to show the prognostic value of colorectal cancers that is the third most common cancer. This study aimed to compare the effectiveness of TNM, log odds of positive nodes (LODDS) and lymph node ratio (LNR) on the prediction of prognosis in patients who underwent curative surgery.

Methods: This study retrospectively compares the prognostic effect of LODDS, LNR and TNM classifications of 128 rectal cancer patients who underwent R0 surgery at Gazi University Hospital between January 2010 and December 2018.

Results: Overall survival (OS) for 1, 5 and 10 years for LODDS, TNM and LNR classifications were compared. For TNM classification OS rates were 100 %, 85.2 %, 79.5 % for Stage I; 100 %, 78.8 %, 63.7 % for Stage II and 97.6 %, 44.9 %, 0 % respectively (p: 0.0001). For LODDS classification; 100 %, 81.4 %, 69.3 % for LODDS0; 96.3 %, 50.3 %, 0 % for LODDS1 and 83.3 %, 23.8 %, 0 % for LODDS2, respectively (p: 0.0001).

Conclusions: Our study suggests that a staging system using LODDS might be used for rectal cancer prognostic classification

similarly to TNM, and even could be superior to TNM especially for stage II cancer.

Keywords: LODDS, Rectal cancer

[Abstract:0597]**Is a strict compliance to ERAS protocol necessary in colorectal surgery?****Mehmet Ali Koç¹, Deniz Kütük*¹, Menekşe Özçelik², Cihangir Akyol¹**¹Ankara University, School of Medicine, Department of General Surgery, Ankara, Turkey²Ankara University, School of Medicine, Department of Anesthesia, Ankara, Turkey

Background: ERAS is a multimodal and multidisciplinary protocol developed to improve postoperative outcomes such as rapid recovery, fewer complications, and early discharge. There are recommendations under 25 headings in the guideline published for colorectal surgery. Many studies showed that the higher the rate of compliance to these recommendations, the better the postoperative results.

Method: Compliance of the colorectal surgery patients to ERAS protocol between February and July 2021 were evaluated.

Results: Compliance rates of the patients ranged from 68 to 88 %. Except for 2 patients, the compliance rate of all patients (38 patients) was 76 % or over, and it was determined as a good compliance according to the previous studies. The least adapted principles were preoperative patient optimization, prehabilitation and drain usage (100 % non-compliance for each one).

The mean compliance rate of 19 patients who developed complications was 78.53 % ± 4.46, while it was 81.9 % ± 3.49 for 21 patients who did not (p = .01).

Conclusion: All ERAS principles are recommendations for guiding clinicians, and compliance rates may vary regarding patient, hospital or surgeon related factors. However, as compliance with ERAS protocols increased, the complications were less common. Therefore, it should be recommended to comply with ERAS protocol as much as possible.

Keywords: ERAS, Compliance

[Abstract:0598]**Tumor location enigma: Does the site effect survival in colorectal cancer****Tuba Saydam*, Cemal Ulusoy, İsmayil Yılmaz, Hakan Güven**

Prof. Dr. Cemil Taşcıoğlu City Hospital, Istanbul, Turkey

Background: In this study we aimed to reveal the impact of tumor location on survival in patients at the same stage.

Methods: The records of 641 Colorectal cancer patients undergone surgery by the same surgery team between 2015 and 2020 at Prof. Dr. Cemil Taşcıoğlu Hospital were analyzed retrospectively. Stage IV was excluded. Patients were divided groups according to the stage (Stage I+II as early stage Group1 and Stage III as locally advanced Group2) and tumor location (ascending colon, transverse colon, descending colon, sigmoid colon, rectum). Kaplan-Meier method was used for analyzing overall survival (OS) rates.

Results: 465 patients were analyzed with a mean follow up period of 30.1 months. Group1 ($n=272$) OS rate was 84.9 % and Group2 ($n=223$) OS rate was 61.4 %. In Group1 the longest survival was in left colon tumor location (92.5 %) and shortest was in the sigmoid (81.4 %). In Group2 longest survival was sigmoid (69.4 %) and shortest was rectum (51.4 %). Statistically there were no significant differences in OS between patients according to the locations of tumor at the same stage.

Conclusions: This study revealed that tumor location is not the predictor of survival in Colorectal cancer patients. Early stage have better survival rates than locally advanced stage.

Keywords: Colorectal cancer, Survival

[Abstract:0604]

Anastomotic leak in rectal cancer surgery: Dokuz Eylul University experience

Ersan Gunenc*¹, Tayfun Bisgin¹, Berke Manoglu¹, Sevda Ozkardesler², Selman Sokmen¹

¹Dept. of Surgery Colorectal and Pelvic Unit, Dokuz Eylul University Medical Faculty, Izmir, Turkey

²Dept. of Anesthesiology and Reanimation, Dokuz Eylul University Medical Faculty, Izmir, Turkey

Background: Anastomotic leak (AL) is a dreadful complication in restorative rectal surgery. AL is associated with significant morbi-mortality rates and worsened outcomes. The aim of the study was to analyze our center's results of AL in rectal cancer surgery.

Methods: Prospectively maintained database of 491 patients who underwent restorative rectal surgery was analyzed. 53(10.7 %) patients with AL were included the study.

Results: The mean age was 57.3 ± 27.8 years and 39(73%) of the patients were male. 25(47 %) of the patients had an additional co-morbidity and coronary artery disease (20.7 %) was the most common of these. The mean tumor distance from the anal verge was 7.78 ± 3.47 cm and tumor localization was in the lower rectum in 27(%) patients. 45(84.9 %) patients had chemoradiotherapy. Loop-ileostomy was constructed in 43(81 %) patient. 17(32.1 %) patients had SIRS symptoms at the time of diagnosis. Of the 53 AL patients were treated successfully with conservative measures with antibiotics in 5, stenting in 1, endoluminal vacuum-assisted therapy in 3, endoscopic clip in 1, percutaneous drainage in 9, and surgical intervention in 4 patients.

Conclusion: AL is still life-threatening problem in rectal cancer surgery despite all preventing efforts. Specific attention, early detection, timely intervention and tailored treatments are crucial steps of optimal management.

Keywords: Anastomotic leak, Rectal carcinoma

[Abstract:0606]

Comparison of the outcomes of primary anastomosis and Hartmann's procedure in patients with obstructive left colon cancers

Alişan Berk Deniz, İnan Güden*, Elchin Alizade, Mehmet İlhan, Hakan Teoman Yanar, Mustafa Kayıhan Günay, Cemalettin Ertekin, Ali Fuat Kaan Gök

Department of General Surgery, Istanbul University School of Medicine, Istanbul, Turkey

Background: This study aims to compare the success and complication rates of the primary anastomosis (PA) and Hartmann's procedure (HP) in patients who underwent emergency surgery for an obstructive left-sided colon tumor.

Methods: Patients who underwent resection due to obstructive colon tumors between January 2010 and December 2020 were analyzed retrospectively. Patients with an obstructive tumor between the splenic flexure and rectosigmoid junction were included in the study.

Results: A total of 159 patients were included in the study. Eighty-three of them (52 %) were female. The median age was 62 (26–90) years. The PA was performed in 112 (70 %) patients while HP was performed in 47 (30 %) patients. In the PA group, 31 (28%), 13 (12 %) and 68 (60 %) patients underwent anterior resection, left hemicolectomy, and subtotal colectomy, respectively. Anastomotic leakage occurred in four (4 %) patients. Stoma complications developed in 11 (23 %) patients who underwent HP (4 % vs 23 %, $p < 0.001$). The most common stoma-related complication was retraction ($n=6$). There was no statistically significant difference in mortality in both groups (AP 9 % vs. HP 15 %, $p 0.267$).

Conclusions: Primary anastomosis is a safe option to achieve one-stage surgery in patients with obstructive left-sided colon tumors according to the results of this study.

Keywords: Obstructive colon tumor, One-stage surgery

[Abstract:0609]

A rare disease presacral cysts: a retrospective analysis of 6 patients

Emre Tunç*, Fadime Kutluk, Murat Süphan Ertürk

Istanbul University Cerrahpasa Faculty of Medicine, Istanbul, Turkey

Background: Retrorectal tumors are rare lesions located in the pararectal area. They are frequently seen in middle-aged women and detected incidentally. The majority are benign and have malignant potential.

Methods: Six patients who were operated by the same surgical team in our clinic between 2000 and 2020 with a preliminary diagnosis of retrorectal cyst were retrospectively analyzed.

Results: In our study, 5 of the patients were female and their mean age was 37.4. While complaints of abdominal pain were observed in 66.6 % of the patients, the average diagnosis time was 8.5 months. Because suspicion of malignancy, one of the patient evaluated with biopsy. Transperineal parasagittal approach was applied to 4 patients, Kraske approach (transcoccygeal) was applied to 1 patient, and anterior abdominal approach was applied to 1 patient. The average hospital stay was 11.3 days, and postoperative abscess was observed in 33 % of them as complication. The mean follow-up period was 65 months. In 2 of 6 patients, reoperation was required due to the development of recurrence.

Conclusions: Because of retrorectal tumors are rare and surgeons encounter tumors infrequently, there is need for diagnosis and treatment algorithms which created by multidisciplinary teams considering case series.

Keywords: Retrorectal cyst, Malignant potential

[Abstract:0611]**Factors affecting outcomes in rectovaginal fistula surgery****Feza Yarbuğ Karakayalı, Ramazan Gündoğdu*, Tugan Tezcanar, Hüseyin Onur Aydın, Ahmet Serdar Karaca**

Başkent University, Faculty of Medicine, Department of General Surgery, Istanbul, Turkey

Background: Rectovaginal fistula (RVF); It is a disease that negatively affects quality of life. There is no consensus on the ideal technique in the literature.**Methods:** Etiology, fistula size and location, previous interventions, seton applications, diversion ostomy, and surgical methods were evaluated. Functionally, Wexner and FSFI scales were used.**Results:** The mean age of 35 patients included in the study was 44.8 ± 14.6 (22-75); The mean BMI values were 27.7 ± 4.8 (20-38). Recurrence developed in 8 (23 %) patients, 44 surgeries were performed in 35 patients; Transperineal repair 28, Transvaginal repair 2, Rectal flap application 11, Martius flap 3. Recurrence rate was found to be statistically significantly higher in patients with prior surgical repair and high BMI. In the LR analysis, the independent risk factor affecting recurrence was found to be previous surgical repair (odds ratio 8.6 (95 % CI 1.2-16.9)). The median FSFI score of the patients was 35 (0-53), and the median WEXNER score was 3 (1-11). In patients who developed complications, Wexner incontinence score was highly statistically significant.**Conclusions:** For a successful outcome, choosing a surgical technique suitable for the patient and etiology in the first attempt and surgical experience are important.**Keywords:** Rectovaginal fistula, Recurrence**[Abstract:0618]****Novel in-vitro model to predict the prognosis of stage I/II colon cancer****Seçil Ak Aksoy*¹, Berrin Tunca², Fuat Aksoy³**¹Inegol Vocation School, Bursa Uludag University, Bursa, Turkey²Department of Medical Biology, Faculty of Medicine, Bursa Uludag University, Bursa, Turkey³Department of General Surgery, Bursa City Hospital, Bursa, Turkey**Background:** In this study, we aimed to develop a model that can be used to predict recurrence in early-stage colon cancers (eCC) and to decide on adjuvant therapy in patients with predicted recurrence. In our previously study shown that the high MALAT1 and low PTENP1 expressions play a role in drug resistance mechanisms and recurrence. In line with our findings, it was predicted that when the expression levels of MALAT1 and PTENP1 were brought to the levels in normal colon epithelial, the ability of tumor cells to metastasize and form drug resistance would be suppressed.**Methods:** Metastatic CC cells (HT-29FUR) were generated by subjecting HT-29 cells to increasing concentrations of 5-FU for 6 months. Transfection, WST-1, Annexin V, RT-PCR, colony formation and wound healing analyzes were used**Results:** The regulation of MALAT1, high expression of E-cadherin increased, and suppression of WNT and NOTCH signaling pathways were detected. With the regulation of MALAT1, a decrease in colony formation and invasion was determined in cells ($p=0.0023$, $p=0.0154$).**Conclusions:** MALAT1 may be a biomarker in predicting recurrence in early-stage CC. Our findings suggest that a cell-based therapy to target MALAT1 could be established for these patients to prevent metastasis and 5-FU resistance.**Keywords:** In-vitro model, Stage I/II Colon cancer**[Abstract:0623]****3D colorectal peritoneal metastases model: a preclinical tool****Aras Emre Canda*, Tolga Sever, Aslihan Karadağ, Gizem Çalibaşı Koçal, Hülya Ellidokuz, Yasemin Başbınar**

Dokuz Eylül University Institute of Oncology Department of Basic Oncology, İzmir, Turkey

Background: Hyperthermic intraperitoneal chemotherapy (HIPEC), integrates abdominal heated chemotherapy with surgery, comprising a multimodal treatment approach. The efficacy of HIPEC depends on tumor type, delivery technique, and treatment parameters like carrier solution, temperature, treatment duration, and dosage. Thus, we aimed to create a three-dimension (3D) colorectal peritoneal metastases model for mimicking HIPEC treatment to evaluate and predict the most accurate treatment options.**Methods:** HCT-116 colorectal cancer cell line is embedded in 1:3 matrigel in dropwise manner into 96-well plates. HIPEC-mimicked treatment has been performed on the 3D model with oxaliplatin (80-160-320-640-1280 μM) for 60 minutes at 37 °C and 42 °C individually. After 48 hours of incubation at 37 °C, cell viability was measured.**Results:** As expected, the model claims that 42 °C treatment has a more cytotoxic effect than 37 °C in every oxaliplatin dose. Especially higher doses of oxaliplatin show more significant differences than lower doses.**Conclusions:** The 3D colorectal peritoneal metastases model could be improved to become a preclinical tool for predicting the most effective parameters for HIPEC treatment.**Keywords:** HIPEC, Cell culture**Publisher's Note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Autorenverzeichnis

A

Abbas Maher: 0217
 Acar Turan 0351
 Acunaş Bülent: 0517
 Adsay Volkan: 0397
 Aghayeva Afag: 0558
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