### ABSTRACTS

**# 240 Extended Bravo studies (≥48 hrs) offer an additional diagnostic yield of gastro-oesophageal reflux disease (GORD) in patients with normal multichannel intraluminal impedance-pH (MII-pH) studies**

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Wireless pH capsule (Bravo) can potentially increase the diagnostic yield of standard 24 hr catheter-based studies with prolonged monitoring. This study aims to assess the additional diagnostic yield of extended Bravo recordings (up to 96 hours) in patients with normal 24 hr MII-pH results. A total of 44 patients with GORD symptoms but normal MII-pH studies of proton pump inhibitor (PPI) were referred for Bravo capsule studies. Bravo studies were performed off PPI over an extended period beyond 48 hrs (up to 96 hrs). Cases with an abnormal acid exposure time (AET) were used as primary end-point based on ‘worst day analysis’. Reference values for MII-pH and Bravo equivalent were adopted from internationally established studies. Subgroup analyses were subsequently made on cohorts whose MII-pH showed normal AET with (A) normal number of total reflux episodes, (B) normal number of non-acid reflux (NAR) events and (C) increased number of NAR events. Subgroups (B) and (C) have normal number of acid reflux events. Statistical analysis was performed using SPSS v20. Our study group (male = 14 and female = 30) successfully completed Bravo studies beyond 48 hours in 97.7%. Bravo with AET cut-off >4.2% captured an additional 59.1% of cases with increased AET (p < 0.001) compared to MII-pH. In MII-pH subgroups (A), (B) and (C), Bravo was able to reveal an additional abnormal AET of 61.8% (p < 0.001), 60.9% (p < 0.001) and 50.0% (p = 0.016) respectively compared to MII-pH. Results were similar using other internationally published Bravo AET limits of >4.4% and >5.3%. Inclusion of cases with positive symptom reflux association for Bravo cohort also showed additional diagnostic yield ranging from 42.9 to 47.7% (p ≤0.033) across all subgroups. Extended Bravo studies managed to procure a diagnosis of GORD in more than half of the cases with an initial normal MII-pH but persistent symptoms. This has the potential to alter diagnosis in difficult cases and affect management by intensifying acid suppression therapy.

**Conclusion:** Empirical oral PPI treatment is still beneficial in more than half of GORD patients. A model consisting endoscopy and MII-pH parameters (acid refluxate, AET and SAP >95%) can predict successful treatment response and give better accuracy than MII-pH monitoring only. Endoscopy plus combined MII-pH monitoring should be considered in the initial diagnostic work-up of GORD patients to reduce unnecessary PPI treatment.

**# 352 Potentially functional polymorphisms in Methionyl-tRNA Synthetase related gene are associated with gastric cancer in a chinese population**

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Methionyl-tRNA synthetase (MARS) is responsible for cellular protein synthesis and cell viability in various process of tumorigenesis. We hypothesized that genetic variants in MARS might play an important role in the development of gastric cancer. Thus, a case-control study was conducted including 2211 gastric cancer cases and 2266 cancer-free controls to evaluate the associations of 13 potentially functional polymorphisms in MARS with gastric cancer risk. We found significant associations with the risk of gastric cancer for rs511752 (odds ratio (OR) 0.85, 95% confidence interval (CI): 0.76–0.96, P = 6.21E-03); rs542278 (OR = 0.84, 95% CI: 0.75–0.95, P = 6.30E-03) and rs508904 (OR = 0.88, 95% CI: 0.78–0.99, P = 3.15E-02). We further observed significant multiplicative interactions between rs511752 and drinking (P = 0.041). Combined analysis of these three SNPs showed a significant allele-dosage association between the number of risk alleles and gastric cancer risk (P for trend = 1.91E-4). Compared with individuals with “0–2” risk alleles, those carrying “3,” “4,” or “5 or more” risk alleles had a 1.32, 1.48, or 1.60 folds risk of gastric cancer, respectively. These findings indicate that genetic variants in MARS might modify the individual susceptibility to gastric cancer in Chinese population.

**# 673 Initial assessment using combined Multichannel Intraluminal Impedance and pH Monitoring (MII-pH) predicts empirical treatment response with Proton-Pump Inhibitor (PPI) in patients with Gastroesophageal Reflux Disease (GERD)**

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**Background:** Combined MII-pH has been recently introduced to characterize patients with (GERD). The use of MII-pH to predict initial treatment response with PPI has not been evaluated in Indonesia. **Method:** This was a prospective study using before-and-after treatment design. Patients were enrolled in Cipto Mangunkusumo Hospital between 2015 and 2016. Diagnosis of GERD was established using GERD questionnaires. Upper endoscopy was done to distinguish erosive and non-erosive reflux disease. All patients underwent MII-pH evaluation consisting of physical characteristics of the refluxate (liquid, gas or mixed); type of refluxate (acid or non-acid); percent acid exposure time, and symptom-associated probability. Then patients were given oral PPI treatment, twice a day, for 2 weeks. Treatment was considered fail if GERD score was >8 after PPI therapy. Predictors of treatment response were analyzed using logistic regression multivariate analysis. **Results:** A total of 75 patients was enrolled; 39 (52%) of them were women. Mean age was 40.4 ± 10.20 years. Forty-one (54.7%) patients responded to PPI therapy. Successful treatment response was associated with the presence of ERD (OR = 3.763; 95% CI = 1.381–10.253; p = 0.008), acid refluxate (OR = 10.636; 95% CI = 2.179–51.926); abnormal AET (OR = 5.357; 95% CI = 1.974–14.541; p = 0.001); and SAP >95% (OR = 5.524; 95% CI = 1.785–17.091; p = 0.002). Independent predictors of successful treatment response was the presence of ERD (ORadj = 5.337; 95% CI = 1.440–19.374; p = 0.012), acid refluxate (ORadj = 6.636; 95% CI = 1.131–39.554; p = 0.038) and SAP >95% (ORadj = 9.411; 95% CI: 2.245–39.192; p = 0.002). Goodness-of-fit-test showed that the prediction model was fit (Hosmer and Lemeshow test: p = 0.642, Nagelkerke R² = 0.482). ROC curve analysis showed that variables of MII-pH produced high accuracy (AUC = 0.817; p < 0.001), but when endoscopy is included, the accuracy was increased (AUC = 0.860; p < 0.001). **Conclusion:** Initial assessment using combined MII-pH monitoring should be considered in the initial diagnostic work-up of GERD patients to reduce unnecessary PPI treatment.

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and laparoscopic-assisted transverse colectomy was performed. The residual tumor invaded into the submucosal layer with moderate lymphatic invasion and one LN metastasis. Case 2: The patient was a 67-year-old male. Colonoscopy revealed a 15 mm flat, elevated lesion with slight central depression in the ascending colon, which was considered to be massive submucosal invasion. Laparoscopic-assisted right hemicolectomy was performed, and the pathological finding revealed that the tumor was composed of medullary carcinoma, which massively invaded into the submucosal layer like SMT with severe lymphatic invasion and one LN metastasis. Discussion: We reviewed the reported cases of colorectal carcinoma resembling SMT (SMT-like group, n = 70) and analyzed the clinicopathological characteristics of this group compared with typical colorectal carcinoma cases operated at our institution (control group, n = 1723). Tumors in the SMT-like group were smaller in size compared with the control group (22 mm vs. 37 mm, p < 0.01). In the T1 tumors, the rate of lymphatic invasion in the SMT-like group was higher than that in the control group (43.8% vs. 15.4%; p < 0.01). Conclusion: Colorectal carcinoma resembling SMT appears to be invasive even if small in size and has a high risk of lymphatic invasion.

# 411 Comparison of CEA level among tumor location and histopathological findings in colorectal cancer
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Introduction: Carcinoembryonic antigen (CEA) is one of the most widely used tumor markers, especially in colorectal malignancy. The purpose of this study was to investigate comparison of CEA levels among tumor location, histopathological findings, and correlation with routine blood test and body mass index (BMI). Methods: Cross-sectional study on sixty-five consecutive colorectal patients admitted to Adam Malik General Hospital Medan, Indonesia from November 2015–April 2016, which diagnosed by histopathology examination and were classified pathologically according to the degree of malignant cell differentiation into well differentiated, moderately differentiated, poorly differentiated, undifferentiated, and others. Serum samples were obtained to determine routine blood test and CEA level. Spearman Correlation and ANOVA test were used for univariate and bivariate statistical analysis. Results and Discussions: There were 61.5%, 23.1%, 15.4% patients with rectal cancer, left-sided colon cancer, and right-sided colon cancer, respectively. There were 38.5% biopsy tissues with well differentiated, 21.5% moderately differentiated, 15.4% poorly differentiated, 9.2% undifferentiated, and 15.4% others. There were no correlation between CEA level with level of haemoglobin, leucocyte, hematocrit, platelet, ureum, creatinine, and random blood glucose. There was significant negative correlation between CEA level and body mass index (r = 0.35, p=0.005). There was no significant difference in CEA level among tumor location, but CEA level was significantly different among histopathological findings (p=0.048). The level of CEA showed significant increase in poorly differentiated than well differentiated (p=0.036). Meanwhile, Ng et al. found that preoperative CEA was higher in tumors showing moderate and poor differentiation, although it did not reach statistical significance (p=0.068). Conclusion: CEA showed statistically significant difference among the degree of malignant cell differentiation.

# 1609 Usefulness of ESD with modified dental floss clip method for laterally spreading tumor (LST) in cecum bottom: A case report
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Case: 80-year-old male. Screening colonoscopy examination reveals laterally spreading tumor in the cecum bottom. The size of lesion was 35 mm in diameter, and small nodule was observed center of the lesion. Magnifying endoscopy showed type V-I (mild irregular) pit pattern according to Kudo’s classification. Estimated depth of tumor invasion was intramusosal or slight submucosal invasion. Therefore, ESD was planned as curative treatment. After circumferential mucosal dissection, submucosal dissection was technically difficult because of tumor location. Dental floss clip (DFC) method was tried to lift up the mucosa. However, effective traction was not obtained. To control the traction direction, additional clipping was put on the opposite side of colon wall. Additional clip efficiently worked. Then, submucosal dissection and one-piece was achieved easily and safely. The resection time was 100 min. Final pathological diagnosis was well differentiated adenocarcinoma. The depth of tumor invasion was intramusosal. No lymphovascular involvement was revealed. Discussion: The efficacy of DFC method for early gastric cancer has been reported. This method requires once withdrawing the scope to set up the DFC. These processes spend a time, and it may be difficult to perform in long colon cases. However, if the ESD is continued excursively in difficult case, it may cause perforation, etc. If the lesion is located in cecum bottom, modified DFC method should be tried immediately to achieve safe submucosal dissection. Conclusion: Modified DFC method was promising approach to removed LST in cecum bottom.

# 1520 "The great mimicker” a rare case of primary rectal malignant melanoma
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Significance: Rectal melanoma is a very rare malignancy constituting 0.4% to 1.6% of all anorectal tumors and 0.4% to 3% of all melanomas. Due to its aggressive nature, early diagnosis is required. There are no data published on anorectal melanoma in the Philippines. Clinical Presentation: A 78-year-old female with a 4-month history of hematochezia and weight loss. On PE, there were no skin lesions. She had pale palpebral conjunctivae. Cardiac and chest findings were unremarkable. Abdominal examination was normal. On rectal examination, there was a 2-cm mass at 2 cm from anal verge. Management: Hematologic examination showed anemia. Colonoscopy showed brown exophytic mass at the rectum. CEA was normal. Computed tomography revealed an enhancing, intraluminal rectal mass approximately 2 × 2 cm at the left side of the colon; bony pelvis and liver were normal. Chest CT-scan showed fibrosis at right lung apex. Biopsy of the mass was consistent with malignant melanoma. Treatment: She underwent abdominoperineal resection. Specimen showed a poorly circumscribed firm dark grey to black exophytic mass. Histopathologic diagnosis post-operatively confirmed malignant melanoma; pT2N1bMx. Based on AJCC criteria, patient was at stage IIIA. Chemotherapy was then advised. Recommendation: Despite its rarity, malignant melanoma should be considered in patients with hematochezia. Further studies are needed to document the long-term follow-up, survival and safety profile of the management approaches. Targeted biological therapies show promise in the management and should be further studied.