Objective: Explore the role of mutant K-ras signaling in inflammation-driven tumourigenesis and the involvement of interleukins in colorectal tumourigenesis progression.

Method: Inhibition of Ras signaling using Manumycin A and Sequence Analysis of K-ras exon 1 in colorectal cancer patients. Immunohistochemical analysis of IL-17, IL-22, IL-23 using ELISA SPOT and correlation with GM-CSF and IFN-γ expression levels in cancer tissues.

Results: Specific interleukins are differentially expressed in K-ras positive patients and the use of K-ras inhibitor Manumycin A decreases both interleukin levels and apoptosis in Caco-2 cells by inhibiting cell viability. In addition, inflammation-driven GM-CSF and IFN-γ levels are modulated through interleukin expression in tumour patients, with interleukin expression in the intestinal lumen and cancerous tissue mediated by aberrant K-ras signaling.

Conclusion: Collectively, the findings a) indicate that interleukin expression is influenced by ras signaling and specific interleukins play an oncogenic role in colorectal cancer, highlighting the molecular link between inflammation and tumourigenesis, and b) accentuate the interwoven molecular correlations as leads to new therapeutic approaches targeting neoplasia.

PS-16-022
Ileal adenocarcinoma in Crohn disease: An unicentric experience emphasizing the importance of screening for dysplasia
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Objective: Association between small bowel adenocarcinoma (SBA) and Crohn’s disease (CD) is well-known but rare, following a dysplasia-cancer sequence. We reviewed the clinicopathological characteristics of a series of SBA surgically resected in patients with CD.

Method: A distal ileal SBA was diagnosed in 9 of 441 patients who underwent small bowel resection for ileal CD between 2006 and 2016. They were retrospectively analyzed and followed during a mean time of 20 months [2–71]. Genetic mutations of BRAF, KRAS were tested. MSI phenotype was investigated.

Results: The median age of diagnosis was 46 years; median CD duration was 15 years. Seven patients (78 %) had obstructive symptoms refractory to treatment. Pre-operative biopsies made in 6 patients were informative in 5 (83 %), revealing cancer, dysplasia and indefinite for dysplasia lesions in 2, 2 and 1 patients respectively. SBA developed in active ileitis to treatment. Pre-operative biopsies made in 6 patients were informative in all patients. In our center, an ileal SBA was diagnosed in 2 % of patients with CD. They were retrospectively analyzed and followed during a mean time of 20 months [2–71]. Genetic mutations of BRAF, KRAS were tested. MSI phenotype was investigated.

Conclusion: Collectively, the findings a) indicate that interleukin expression is influenced by ras signaling and specific interleukins play an oncogenic role in colorectal cancer, highlighting the molecular link between inflammation and tumourigenesis, and b) accentuate the interwoven molecular correlations as leads to new therapeutic approaches targeting neoplasia.

PS-16-023
Molecular biomarkers in a representative sample of Colombian patients with colorectal cancer studied at Fundación Santa Fe de Bogotá
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Objective: The aim of this study was to characterize the molecular and histopathological features of colorectal cancer (CRC) in a sample of Colombian patients.

Method: A representative and aleatory sample of 45 cases was selected from the total cases diagnosed as CRC (2008–2014): 15;<49 years-old (Group 1), 15; 50-64 (Group 2) and 15; ≥65 (Group 3). Cases were held on KRAS exon 2 mutational status and those who were wild type were subjected to KRAS exon 3,4, NRAS exon 2,3,4 and BRAF-V600E study by direct sequencing. Microsatellite instability was evaluated with Promega MSI analysis system v.1.2 and Miss Match Repair proteins by Immunohistochemistry. The study was aimed using paraffin embedded tissues.

Results: 45 patients with CRC average age 58.3 years-old, 97 % (44) adenocarcinomas. KRAS exon2 mutations were detected in: Group 1; 11/15 (73.3 %), Group 2; 7/15(46.6 %) and Group 3; 5/15(33.3 %). Among the KRAS exon 2 wild-type patients; 0 % harbored additional RAS mutations (KRAS Exon 2,3,4, NRAS Exon 2,3,4) and 13.6 % presented V600e-BRAF mutation (2 in Group 2, 1 in Group 3). Bethesda panel exposed 2 cases with Microsatelite Inestability in each group which was correlated with IHQ expression. Statistical analysis revealed that patients with <49 years-old presented more frequency of KRAS exon2 mutations than older ones (p: 0.03; OR: 4.12 I95% 1.06-16)

Conclusion: The clinicopathologic features and tumour cell gene expression patterns are different according age group, younger patients are phenotypically and molecularly different from older patients.

PS-16-024
Distinct expression profile of key molecules of crawling type early gastric carcinoma
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Objective: Gastric “crawling-type” adenocarcinoma (CRA) is a tumour histologically characterized by irregularly fused glands with low-grade cellular atypia. To date, the expression characteristics of key molecules in the CRA are still uncovered. Then, using immunohistochemistry and in situ hybridization, we tried to elucidate molecular characteristics of CRA subtype on large series of CRA (n = 94).

Method: We constructed tissue microarrays of 94 CRAs and 72 conventional type differentiated adenocarcinomas (CDAs) of early gastric cancers to evaluate and compare clinicopathological and expression profiles of important molecules in gastric cancer (EBV, MMR protein, HER2, c-MET, EGFR, PTEN, and p53).

Results: CRA was significantly associated with the younger patient age, larger in size, and more frequent involvement of resection margin than CDA (p<0.001, p=0.048 and p=0.048, respectively). None of the CRAs showed MMR protein deficiency (0.0 vs. 5.6 %, p=0.036), HER2 overexpression (0.0 vs. 12.5 %, p=0.001), and loss of PTEN (0.0 vs. 9.7 %, p=0.003). Moreover, other expression alterations, such as c-MET overexpression (4.4 vs. 19.4 %, p=0.004), and mutant-pattern of p53 (either complete loss or diffuse positive, 12.4 vs. 62.5 %, p<0.001) were significantly less common in CRAs than CDAs.

Conclusion: CRA demonstrated a unique clinicopathological characteristics. Furthermore, this subtype showed a distinct expression profile of key molecules. Those results support that CRA is a distinct subgroup of gastric adenocarcinoma.

PS-16-025
Expression of beta-catenin in premalignant lesions of the colon and rectum
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**Objective:** Beta-catenin acts as intercellular signal transducer in Wnt-signaling pathway. Its abnormal nuclear expression is a marker of “classical” carcinogenesis.

**Method:** We immunohistochemically assessed distribution patterns of nuclear beta-catenin expression in 24 hyperplastic polyps (HPs), 29 sessile serrated adenomas (SSAs), 14 traditional serrated adenomas (TSAs), 30 tubular adenomas (TAs) and 28 tubulovillous adenomas (TVAs).

**Results:** HPs and SSAs showed no nuclear beta-catenin expression. Strong or moderate nuclear reaction with beta-catenin was detected in 15.4% TAs, 51.7% TAs, 72.0% TVAs. Among lesions with nuclear accumulation of beta-catenin sporadic singular positive cells were found in 66.7% TAs, 44.4% TVAs; small foci of positive cells were detect- ed in 20.0% TAs, 50.0% TVAs, 7.7% TVAs; diffuse reaction was revealed in 13.3% TAs, 5.6% TVAs, 7.7% TVAs. Reaction was more prominent superficially in 80.0% TAs, 55.6% TVAs, 7.7% TVAs.

**Conclusion:** Among serrated lesions only small portion of TVAs showed nuclear accumulation of beta-catenin while conventional adenomas showed pretty high rate of nuclear expression of beta-catenin. This suggests Wnt-signaling pathway plays a small part in malignization of serrated lesions in contrast to conventional adenomas. The reported study was funded by RFBR according to the research project No.16-34-00179 mol_a.

**PS-16-028**

**Surviving expression occurs in precancerous colorectal lesions**

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**Objective:** The risk stratification of patients with colorectal polyps still requires identification of novel molecular markers of carcinogenesis like survivin. Survivin is a member of the apoptosis inhibitors family, involved in regulation of cell division, angiogenesis and inhibition of apoptosis. Our objective was to study the survivin expression in different types of colorectal polyps and adenomas (A/P).

**Method:** We studied 91 colorectal A/Ps (hyperplastic polyps, sessile serrated adenomas, traditional serrated adenomas and conventional adenomas with low and high grade dysplasia) from the archived biological material of the Pathology Department of the Clinical County Hospital of Targu-Mureş, Romania. We performed survivin (Merck Millipore, Germany, AB3610, 1/1500) immunohistochemistry, using the Dako EnVision system.

**Results:** Survivin expression was detected in most A/Ps in the cytoplasm and nucleus (p<0.05). There were no statistically significant correlations between clinico-pathological parameters and expression of this protein. Moderate and increased survivin expression was observed most frequently in conventional adenomas and traditional serrated adenomas.

**Conclusion:** Survivin expression in most A/Ps is suggestive of its involvement in the early steps of colorectal carcinogenesis. Acknowledgements. The study is supported by the Internal Research Grants of the University of Medicine and Pharmacy, Târgu-Mureş, Romania (contract no. 20/23.12.2014).

**PS-16-030**

**Prognostic significance of clinico-pathological variables in rectal cancer resected after neoadjuvant chemoradiotherapy**

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**Objective:** To investigate clinico-pathological factors affecting cancer-specific survival (CSS) and disease-free survival (DFS) of patients with rectal cancer after preoperative chemoradiotherapy (CRT) and surgical resection.

**Method:** The prognostic relevance of clinico-pathological variables on CSS and DFS was analyzed in 238 patients with rectal adenocarcinoma surgically resected after neoadjuvant CRT. Tumour regression grade by using Dworak score, clinical TNM (cTNM) and yTNM staging were evaluated in all the cases.

**Results:** Dworak grade was 0 in 38, 1 in 84, 2 in 62, 3 in 18 and 4 in 36 cases. Acellular mucin pools in 8 non-mucinous cases were considered as total regression (Dworak 4). Cranio-caudal extension <3cms, yT, cN0, yN0, cM0, yM0, total/subtotal regression (Dworak 3/4) were significantly associated with longer CSS and DFS (P < 0.05). Mucin pools had not prognostic significance in cases with complete pathologic response. Cranio-caudal extension and yN were significant independent variables. Regression grade was an independent prognostic factor for DFS.

**Conclusion:** Pathological tumour regression by Dworak score has prognostic significance in rectal cancer treated by CRT. Presence of acellular mucin pools in surgical specimens is not related with mucinous histotype, while it is associated with clinical behaviour similar to that of cases with total regression and absence of mucin pools.

**PS-16-031**

**Calretinin use for serosal invasion detection in case of colorectal cancer**

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**Objective:** Serosal involvement by colorectal cancer can remain underdiagnosed due to evaluation difficulties, subjective approach and lack of appropriate criteria [Stewart et al., 2011]. Thus, we investigated the validity of immunohistochemical visualization of the mesothelial marker calretinin to detect serosal invasion by advanced colorectal cancer.

**Method:** Non-perforated colorectal cancers, previously routinely classified as pT3-4 were retrieved from the archives. Immunohistochemistry