expression of TGF-βRI in HCT116 cells. Addition of SB431542, a selective inhibitor of TGF-βRI, suppressed p53 elevation despite of TGF-β1 suppression. Consistently, suppression of TGF-βRI inhibited p53 elevation and cell apoptosis when expression of TGF-β1 was suppressed in HCT116.
Conclusion: These results indicate that in TGF-βRII-dysfunctional colorectal cancer cells, endogenous TGF-β1 has the potential to suppress p53 expression via reduced TGF-βRI expression, leading to resistance to apoptosis.
Disclosure of Interest: None declared

P1655 SURVEILLANCE COLONOSCOPY IN PATIENTS WITH SERRATED LESIONS AT BASELINE

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Introduction: Serrated lesions of the colon comprise of a group of heterogeneous lesions with distinct histological features. The large serrated polyps, in particular, are associated with advanced colonic neoplasia and possibly higher risk of colorectal cancer.[1,2] However, there is a paucity of data on the optimal surveillance interval for patients with different serrated lesions of the colon.
Aims & Methods: We aim to determine the polyp and adenoma detection rate on surveillance colonoscopy in patients with different serrated lesions.
We identified patients who were diagnosed to have serrated lesions during colonoscopy in our hospital between January 2008 and June 2011. Patients with concurrent or past history of colorectal cancer were excluded. Patients were categorized according to their baseline lesions: serrated adenoma (SA), large ($\geq$10mm) serrated polyps (LSP) and medium-sized (5-9mm) hyperplastic polyps (MHP) without concomitant or past history of adenoma. Patients with SA and LSP (SA + LSP group) were grouped together for analysis because of the small number of patients in these groups. The proportion of patients and the time to recurrent colonic polyps/adenoma on surveillance colonoscopy between the two groups (SA + LSP vs MHP) were compared.
Results: 98 patients (24 SA, 9 LSP and 65 MHP) were included for analysis. Surveillance colonoscopy was completed in 65 (66.4%) patients (20 SA, 7 LSP and 38 MHP) with a total of 75 colonoscopy performed. The median age of the patient in the SA + LSP group was significantly older than the MHP group (64.3 years, range 34-86 vs 55.8 years, range: 26-89; $p = 0.023$). The median time of surveillance colonoscopy was 40.7 and 44.3 months in SA + LSP group and MHP group respectively ($p = 0.332$). The proportions of patients with recurrent colonic polyps (including serrated lesions and adenoma) on surveillance colonoscopy were 63.0% and 36.8%, respectively (SA + LSP group vs MHP group) ($p = 0.038$). There was also a significant difference on the time to polyps recurrence between the two group, with a lower rate in the MHP group (Log Rank; $P = 0.006$). The adenoma detection rate on surveillance colonoscopy for SA + LSP group and MHP group were however comparable (29.6% and 28.9%; $p = 0.952$). Amongst those who have recurrent polyps, 41.2% and 35.7% of patients developed serrated lesions in SA + LSP group and MHP group respectively.
Conclusion: Patients with baseline SA and LSP have a significantly higher polyp recurrence rate on surveillance colonoscopy. However, the adenoma detection rate on surveillance colonoscopy was similar. These findings provide new data when deciding on the optimal screening interval for patients with different baseline serrated lesions.

References

1. Holme O, Bretthauer M and Eide TJ, et al.et , et al.al. Long-term risk of colorectal cancer in individuals with serrated polyps. *Gut* 2014; 0: 1–8.
2. Gao Q, Tsoi KK and Hirai HW, et al. Serrated Polyps and the Risk of Synchronous Colorectal Advanced Neoplasia: A Systematic Review and Meta-Analysis. *Am J Gastroenterol* 2015 Apr; 110(4): 501-509.

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P1656 MECHANISM OF PROKINETICIN RECEPTOR 2 IN COLON CANCER

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Introduction: Prokineticin-1 (PROK1) is thought to be involved with cell invasion through the intermediary of prokineticin receptor 2 (PK-R2), that is one of the Prokineticin-1 receptors. We report a function via PROK1-PK-R2 signaling in vitro.
Aims & Methods: 1: Four colon cancer cell lines (DLD1, HCT116, SW620 and HT29) were analyzed for PROK1 and PK-R2 protein expressions. 2: Two colon cancer cell lines (DLD1 and HT116) stimulated with PROK1 protein, were observed for 24 hours using "Olympus Fluoview 10i-w", for the presence of change in cell movement. Furthermore, we measured the moving distance of five cells in non-stimulated group and PROK1 stimulated group, compared using the U test of Mann-Whitney. 3: The expression of PROK1 and PK-R2 protein was assessed in 325 colorectal cancer tissues by immunohistochemical staining using anti-PROK1 antibody and anti-PK-R2 antibody. We investigated the relation between PROK1 and PK-R2 expression and clinicopathological factor. The association of PROK1 and PK-R2 expression with serosal invasion, lymphatic invasion, venous invasion, lymph node metastasis, peritoneal metastasis, and hematogenous metastasis was assessed by cross-tabulation, and statistical significance was determined by the c^2 test. Life-table analysis was performed using Kaplan-Meier technique and outcomes from different groups of patients were compared by the log rank test.
Results: 1: The expression of PROK1 and PK-R2 protein was detected in four colon cancer cell lines. 2: The PROK1 stimulated group, compared to non-stimulated group is a highly deformation of cells, and observed increased motility. The average of the moving distance of the cells of DLD1 was 380.96 pixel in non-stimulated group, in PROK1 stimulated group was 581.50 pixel. The average of the moving distance of the cells of HCT116 was 286.29 pixel in non-stimulated group, in PROK1 stimulated group was 400.90 pixel. Both cell lines showed a significant extension of the moving distance of the cells in PROK1 stimulated group. 3: Group1, positive both PROK1 and PK-R2, was 117 cases. Group2, positive either PROK1 or PK-R2, but not both, was 109 cases. Group3, negative both PROK1 and PK-R2, was 99 cases. According to the clinicopathological examinations, the frequency of Group1 was significantly higher in cases with lymphatic invasion, venous invasion, lymph node metastasis and hematogenous metastasis. The prognosis for patients with Group1 were significantly worse than the other groups.
Conclusion: Colon cancer cell lines stimulated with PROK1 protein, showed enhancement of moving distance and deformation and motility of cells. Signaling cascade thought PROK1/PK-R2 was suggested likely to be involved in metastasis, especially cell invasion.
Disclosure of Interest: None declared

P1657 USE OF SOMATIC MUTATIONS IN BRAF AND KRAS AS MOLECULAR MARKERS OF RISK IN SERRATED POLYPS

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Introduction: Serrated polyps comprise a heterogeneous group of lesions. The reliable classification and their molecular profile are important to implement a surveillance and screening approach.
Aims & Methods: We aimed to study BRAF and KRAS mutations and CpG island methylator phenotype (CIMP) in the DNA of polyps in order to determine molecular and histological differences and the prognostic value of these markers in patients with serrated polyps. We performed a retrospective study with patients recruited between 2007and 2009 with at least one surveillance colonoscopy. A total of 994 polyps from 313 patients were collected for histological and molecular analysis. We analyzed KRAS and BRAF mutations in the DNA of all these polyps, and CIMP in 404 polyps from 103 patients. Mutation analysis for KRAS (codons 12 and 13) was performed by DNA sequencing and BRAF mutation (V600E) using allelic discrimination. CIMP was examined by MS-MLPA, considering CIMP-positive when 5 out of 8 markers were methylated.
Results: Adenomas were the main lesion (68%, $n = 676$), being 0.8% of them mutated for BRAF, 11% for KRAS and 1.1% CIMP-positive. A total of 318 (32%) polyps were classified as serrated lesions: 265 (83.3%) were hyperplastic polyps (HPs), 47 (14.8%) sessile serrated polyps (SSP) and 6 (1.9%) traditional serrated adenomas (TSA). Of the serrated polyps, 39.7% of them showed BRAF mutation, 20.3% KRAS mutation and 12.8% CIMP. Considering only serrated polyps, we found BRAF mutation in 39.4% of HPs and in 40.8% of SSP and KRAS mutations in 18.7% of HP and in 28.6% of SSP. There were no differences in the morphology, size and location of the serrated polyps depending on the BRAF mutational status, while KRAS mutation was predominantly present in rectum-sigmoid ($p = 0.014$). Serrated polyps were found in 104 patients at baseline colonoscopy. The mutational status of BRAF did not predict the finding of advanced adenomas or serrated lesions at follow-up. However the presence of somatic mutations in KRAS in serrated polyps at baseline predicts advanced lesions at follow-up. Patients with somatic BRAF mutation in polyps at baseline do not show a higher proportion of advanced adenomas or large (> 1cm) or proximal serrated polyps at follow-up (BRAF mutation: 34.5% vs no-BRAF mutation 45.9%; $p = 0.35$). Regarding KRAS, there is a higher proportion of advanced adenomas or advanced serrated polyps when serrated polyps at baseline showed KRAS mutation (60.9% vs 30.2%; $p = 0.016$).
Conclusion: We found a low frequency of somatic BRAF or KRAS mutations in serrated polyps. The presence of BRAF or KRAS mutation was not associated with location, size or histology in serrated polyps. Patients with KRAS mutations in serrated polyps show a higher risk of new advanced lesions in follow-up colonoscopies.
Disclosure of Interest: None declared

P1658 THE RELATIONSHIP BETWEEN PROXIMAL COLONIC DISTRIBUTIONS OF ADVANCED POLYPS AND THOSE OF INVASIVE CANCER

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Introduction: Colorectal polyps with advanced pathology (adenoma with high-grade dysplasia; HGD or intramucosal cancer) are considered to be precursor lesions developing into invasive cancer. In the present study we aimed to evaluate the relationship between the distributions of colorectal polyps with advanced patholgy and those of invasive cancers with a special attention to proximal location.
Aims & Methods: The study included 1064 patients (mean age 66.1+-10.2yr, M:F= 2.07:1) having colorectal polyps with advanced histology which were