real time PCR and correlated with clinical and pathological parameters of the patients.

Results No association was found in relation to sex, age, smoking history, BMI, Histology grade and Dukes' stage. Interestingly normal mucosa from stage B had higher telomerase activity compared with normal mucosa from stage C/D (p=0.005) There was a significant difference in telomerase activity levels between cancerous and normal tissue (1.14×10^{-2} vs 6.53×10^{-3} Units, p=0.006) Right sided cancers had higher telomerase compared to left sided cancers. Moreover colon cancers had significantly more telomerase activity compared to rectal cancers.(7.7×10^{-3} vs 3.3×10^{-3}, p<0.003). The same was true for their adjacent normal mucosa

Conclusion There is a gradient in telomerase activity across the large bowel with higher values in the right side and lower in the rectum for both normal mucosa and cancer tissue. Cancerous lesions have significantly higher values from adjacent normal tissue. These results may in part explain the different biologic and clinical behaviour of cancer according to location and confirm the idea that the large bowel is not a homogeneous organ.

Competing interests None.

Keywords colorectal cancer, telomerase.

PTU-016 DIFFERENCES IN TELOMERASE ACTIVITY BETWEEN COLON AND RECTAL CANCER

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Introduction Colorectal cancer is developed in a multi-step process. One of the characteristic features of cancer is telomerase activation. The aim of this study was to evaluate telomerase activity between cancerous and adjacent normal tissue and to identify differences in telomerase activity between different locations in colon and rectum.

Methods Matched colon tumour samples and adjacent normal mucosa from 49 patients (28 male, 25 Dukes' stage B, 24 stage C/D, 8 right colon, 24 left colon, 17 rectum) were collected after colectomy, snap-frozen in liquid nitrogen and stored at −80°C until evaluation. Telomerase activity was measured by