Oestrogen receptor signalling and colorectal cancer

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Dear Editor:

Grivas et al. are to be congratulated on their elegant demonstration of a convincing correlation between steroid hormone receptors and colorectal carcinogenesis (Oestrogen receptor α/β , AIB1, and TIF2 in colorectal carcinogenesis: do coregulators have prognostic significance? *Int J Colorectal Dis.*, 2009). Since Kuiper first described ER β , it has been surmised that its presence in non-traditional target organs for oestrogens may function in the regulation of pathological processes. However, the present study provides the first true quantitative analysis of expression of ER β and its coregulators (AIB1 and TIF2) in normal and malignant human colonic mucosa. It suggests that colorectal tumourigenesis (like breast cancer) is hormone-dependant, as overexpression of ER β , AIB1 and TIF2 was associated with advanced disease (T3/T4) stage.

It appears that despite recently awakened worldwide interest in colorectal cancer as a hormone-dependent entity, oestrogen receptors remain poorly understood. Not only are

their intracellular location (nuclear versus cytoplasmic versus membrane-bound), ability to migrate and morphological fluidity equivocal, but little is known about the molecular basis of how an anti-carcinogenic function is exerted. Expression throughout the gastrointestinal tract (full thickness) has not been described. This may be explained by findings of heterogenous receptor expression on immunohistochemistry leading to inconclusive results and thus a reluctance to publish findings.

The present study provides impetus for further investigation regarding both qualitative ER expression and specific mechanism of action. Undoubtedly, findings by Grivas represent the tip of an unexplored iceberg, and it is becoming increasingly likely that hormonal manipulation may soon obviate surgery as treatment of choice for early localised colon cancer.

Yours faithfully,
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