COX2 expression, angiogenesis, proliferation and survival in Barrett's cancer.

OBJECTIVES: To examine COX2 expression and its relation to angiogenesis, Ki67 and Bcl2 expression in Barrett's cancer.

METHODS: Specimens from 48 R0-resected Barrett's adenocarcinoma were immunostained for cyclooxygenase 2 (COX2), CD 31 and alpha-sm actin to discriminate between mature and immature vessels, Mib-1 and Bcl2. COX2 staining, angiogenesis, Ki67 expression and Bcl2 expression were also measured. RESULTS: COX2 expression was increased in 25 of 48 cases. There was no significant correlation between COX2 expression and age, sex and tumor differentiation. A significant association was found between lymph node positive cases and elevated COX2 expression (p=0.008). The percentage of Ki67 positive cancer cells was 43.8% (range 15.4-67.5%) in the low COX2 group and 57.8% (range 12.0-84.6%) in the high COX2 group. The difference was statistically significant (p=0.046). The median neovascularisation coefficient in the low COX2 group was 11.68 (range 8.22-43.64) and 25.47 (range 8-38.3) in the high COX2 group. The difference was statistically significant (p=0.012). A significant difference in survival was observed between patients in the COX2 low category when compared with the COX2 high category (log-rank test p=0.013).

CONCLUSIONS: Elevated COX2 expression is associated with...
lymph-node metastases and reduced survival in Barrett's cancer. This appears to be related to the induction of angiogenesis and proliferation.