

PTU-026 **THE PREVALENCE AND SIGNIFICANCE OF ANAEMIA IN PATIENTS RECEIVING NEO-ADJUVANT CHEMO-RADIOTHERAPY FOR TREATMENT OF RECTAL CARCINOMA**

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**Introduction** Previous studies have shown that anaemia during neo-adjuvant chemo-radiotherapy treatment (NCRT) for rectal carcinoma is associated with reduced down-staging when assessed histologically using the Rectal Cancer Regression Group (RCRG).<sup>1</sup>

The aim of this study was to assess the prevalence and significance of anaemia during NCRT for rectal cancer at our centre.

**Methods** Hospital coding databases were used to identify all patients undergoing NCRT for rectal cancer at our centre between start of 2004 and end of 2009. A retrospective review of computerised haematology and histology records was used to extract and record: patient details; haemoglobin (Hb) levels throughout NCRT and RCRGs (a 3-point scale where grade 1 represents the greatest histological regression and grade 3 the least). Anaemia was defined by our laboratory's standards (Hb <11.5 g/dl and <13 g/dl for women and men respectively). Results were analysed using GnuPSPP statistical software.

**Results** 24 (34%) of the 70 patients (51 male, 19 female) with a median age of 66 (IQR 60–72.75) treated with NCRT during the study period were shown to be anaemic. Two patients (3%) had no Hb's recorded.

Anaemic patients demonstrated significantly higher RCRG than non-anaemic patients with 17%, 38%, 46% versus 59%, 30%, 11% for RCRG 1–3 respectively  $p < 0.001$ .

Histology results from patients with lower RCRGs demonstrated lower T scores ( $p < 0.01$ ) from the TNM staging and a trend to lower N scores ( $p = 0.06$ ).

**Conclusion** At our centre the prevalence of anaemia in patients undergoing NCRT is 34%. Anaemia during NCRT in this study is associated with significant reductions in down-staging as demonstrated by higher RCRGs, which in turn, is associated with worse TNM staging.

**Competing interests** None.

**Keywords** anaemia, radiotherapy, rectal cancer.

#### REFERENCE

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