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## DDF 2015 - Abstract Submission

Submission for: Colon and anorectum

Submission for: Association of Coloproctology of Great Britain and Ireland

Category: Colon and anorectum - cancer including diagnosis, prevention & screening DDF15-1954

RECTAL CANCER RESECTION SPECIMEN QUALITY AND PATHOLOGICAL RESPONSE AT 6 VS. 12 WEEKS AFTER LONG-COURSE CHEMORADIOTHERAPY: DATA FROM A PILOT RANDOMISED CONTROLLED TRIAL

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**Introduction:** Long-course chemoradiotherapy (CRT) is often delivered to down-stage locally-advanced rectal cancer prior to surgical resection. Surgery is performed after an interval period to allow time for radiation-induced tumour shrinkage and to facilitate more accurate surgery. The optimal time interval remains unclear, with little high-quality evidence to guide clinical decisions about when to operate.

**Method:** This study explores pathological outcomes from a pilot Randomised Controlled Trial (RCT) comparing an interval of six weeks versus an interval of 12 weeks between CRT and rectal cancer resection surgery.

Thirty one patients requiring CRT for locally-advanced rectal cancer were recruited from seven UK centres between June 2012 and May 2014 and randomised to an interval of either 6 or 12 weeks. Photographs were taken of the intact mesorectal surfaces, and of the serial slices of resected specimens. These were assessed by an, blinded histopathologist to describe the quality of mesorectal dissection using a three-point scale. Rates of complete response, down-staging, and circumferential resection margin (CRM) involvement were assessed according to Royal College of Pathology guidelines. For tumour cell density (TCD) assessment, slides from the resected specimen and baseline biopsy were scanned at x40 magnification. For each patient, the slide with the greatest amount of residual tumour was selected and between 285 and 315 data-points were analysed by a blinded expert to describe the percentage of different tissue components for the whole tumour area.

**Results:** Twenty three patients underwent tumour resection within the trial (10 patients from the 6-week arm and 13 patients from the 12-week arm). A mesorectal specimen score of 3/3 (mesorectal fascia plane) was assigned to seven specimens from the 6-week arm (70%) and eight from the 12-week arm (62%). Three patients at 6-weeks and two patients at 12-weeks had a complete pathological response to CRT. Only one patient (from the 12-week arm) had an involved CRM. TCD was 0.3% (IQR 0.7) for the 6-week arm and 4.3% (IQR 8) for the 12 week arm (p=0.12) **Conclusion:** In this small randomised study, rates of mesorectal specimen quality, complete pathological response, and TCD were broadly similar when rectal cancer was resected after either a 6 or 12 week interval following CRT. Further studies are needed to further clarify whether a longer interval actually does facilitate ongoing down-staging.

Disclosure of Interest: None Declared