Regional audit of surgical dates in relation to patients receiving short course pre-operative radiotherapy for a rectal cancer diagnosis.

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Background
Short course pre-operative radiotherapy (SCPRT) should be considered in order to reduce risk of local recurrence for some rectal cancers ¹⁻³. SCPRT acute toxicity commonly occurs 2 weeks from the start of treatment. These acute toxicities may impact on surgical outcomes ⁴. Therefore it is recommended that surgery is undertaken within 1 week following completion of SCPRT ³⁻⁴.

Aims and standards
Manchester Cancer’s local standard is that 95% of patients will receive surgery within 10 days from the start of SCPRT.

The primary aim of this audit was to assess the timing of surgery in relation to SCPRT for patients within the Greater Manchester and Cheshire network.

A secondary aim was to define a clinical pathway regionally within the multi-disciplinary teams to ensure a patient centred approach whilst achieving best clinical outcomes.

Methodology
A retrospective audit of patients treated with SCPRT between 1/1/16 - 31/3/16 (1st audit) and 1/1/16 – 31/3/16 (Re-audit). Data was collected in relation to:
• SCPRT start date
• Surgical date

Results of 1st audit
43 patients (30 males: 13 females) received SCPRT. The range of days between SCPRT commencing and surgery was 5-25 days (Figure 1). 13 out of the 43 (30.2%) patients underwent surgery within 10 days from the start of SCPRT.

1st action plan
These results were discussed at the Manchester Cancer Colorectal Pathway Board (MCCPB). Due to the demonstrated pathway variability, it was recommended that:
• Patients should undergo surgery within 12 calendar days from the start of SCPRT.
• Referrals would include a planned surgical date to aid SCPRT scheduling.
• Re-audit patients treated with SCPRT between 1/1/16-31/3/16 to assess implementation and impact

Results of 2nd audit
20 patients (12 males: 8 females) received SCPRT. The smaller cohort size reflected referrals received during the audit period and not any change in treatment policy. The range of days between SCPRT commencing and surgery was 7-18 days (Figure 2). 19 out of the 20 (95%) patients underwent surgery within 12 days from the start of SCPRT.

2nd action plan
These results were discussed again at the MCCPB. Re-audit demonstrated that significant reduction in pathway variability had been achieved.

The one outlier was discussed to identify ways to further improve the patient pathway.

Re-audit is planned in 5 years or as deemed clinically appropriate.

Conclusion
This simple pathway change of referring patients with a proposed surgical date led to a dramatic improvement in the number of patients treated in line with local guidance (30.2% to 95%). This has the potential to reduce the risk of adverse surgical outcomes related to radiotherapy toxicity.

References

Figure 1: Number of days between start of SCPRT and surgery

Figure 2: Re-audit - Number of days between start of SCPRT and surgery