Aims: Determining factors affecting the WCC and CRP in laparoscopic and robotic colorectal cancer resections within the immediate 48-hour period.

Methods: Single centre data was collected retrospectively. 100 robotic and 193 laparoscopic cases were included. Cut offs for WCC and CRP were set at >11 and >50. Fisher’s Exact test was used for analysis.

Results: Robotic group had 67% left sided operations vs 43% laparoscopically. Stoma formation was higher in the robotic group (61% vs 15%). Other patient demographics including male to female ratio, BMI, ASA and tumour size were comparable. Average length of stays (LOS) and operation times were longer for robotic than laparoscopic approaches of the same operation. Average lymph node yield was higher for robotic right hemicolectomy 26.6 (vs 23.5 laparoscopic) (P=0.05).

Median WCC within 48-hours was higher in the laparoscopic group 10.9 (vs 11.3 robotic). More laparoscopic cases 53% (vs 35% robotic) had WCC >11 (P=0.006). Median 48h CRP was higher in robotic 51.6 (vs 45.6 laparoscopic).

CRP was consistently higher in operations involving stoma formation (P= 0.008) and operative time >4 hours (P=0.001) both laparoscopically and robotically.

Conclusions: Absolute median immediate WCC and CRP were similar between laparoscopic and robotic colorectal resections although operative times were longer and stoma formation higher in the robotic group. Stoma formation and longer operations correlated with higher CRPs. No firm conclusions can be drawn about differences in the immediate serum WCC and CRP between laparoscopic and robotic cases in this study due to confounding factors.