

Robotic-assisted surgery compared with laparoscopic resection surgery for rectal cancer: the ROLARR RCT

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Plain English summary

The ROLARR RCT

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Plain English summary

Robotic systems are being used to remove cancers of the rectum (back passage), but there is little evidence that they produce better results than standard laparoscopic (keyhole) surgery. The aim of the ROLARR study was to perform a thorough investigation of the benefits of robotic rectal cancer surgery, comparing it with laparoscopic rectal cancer surgery.

A total of 471 patients with rectal cancer, from 26 hospitals in 10 countries, were allocated at random to undergo either robotic or laparoscopic surgery. Data were collected at 30 days, at 6 months and annually until 3 years following surgery.

There was no significant difference in the numbers of patients who required conversion to an open operation, involving a large cut on the abdomen, to complete their surgery between the robotic (8.1%) and laparoscopic (12.2%) treatments. Male patients undergoing robotic surgery were less likely to need an open operation. Similarly, there were no differences in surgical complications, bladder and sexual function, and quality of life between the robotic and laparoscopic surgery. Robotic surgery produced similar results to laparoscopic surgery in treating rectal cancer. Overall, males were more at risk of the cancer coming back. Robotic operations were £980 more expensive than laparoscopic operations because the surgery took longer and the robotic instruments were more expensive.

We conclude that robotic surgery does not reduce the need to perform open surgery in a small number of patients with rectal cancer. Robotic surgery is more expensive than laparoscopic surgery, with no obvious benefits for patients in the short or long term.

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This report

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