

Robotic surgery put to the test for bowel cancer

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A robotic system that promises to improve the quality of 'keyhole' bowel cancer surgery is being put to the test for the first time.

The worldwide trial, led by the University of Leeds, UK, will show whether robotic assistance makes it easier to remove bowel tumours using laparoscopic or 'keyhole' techniques and whether using this approach makes the cancer less likely to come back. The study will also show whether giving surgeons a robotic 'helping hand' means that patients spend less time in hospital after keyhole bowel surgery and suffer fewer complications.

Many operations to remove bowel tumours can now be done using [keyhole surgery](#), during which surgeons use special elongated instruments, inserted through small holes in the abdominal wall, to remove cancers. In the hands of an experienced surgeon, keyhole surgery is just as good as open surgery for curing [bowel cancer](#). Patients who have their tumours removed via keyhole surgery also benefit from shorter hospital stays and faster recovery times.

However, removing a bowel cancer using keyhole surgery is a challenging procedure. Sometimes surgeons have to switch to [open surgery](#) mid-way through the operation and make a large cut in the patient's stomach to get to the cancer.

To address this, robotic systems have been developed that can make it easier for surgeons to see and take out bowel cancers using keyhole

techniques. These systems let surgeons sit comfortably a few feet away from the patient and watch magnified video images of the operation. Guided by these images, the surgeon then uses precise hand movements to carefully control a set of robotic surgical instruments inside the patient's body to remove the cancer.

Researchers and surgeons now want to find out what difference robotics actually make in practice. To do this, they are comparing what happens to bowel [cancer patients](#) who undergo robotic-assisted keyhole surgery against those who have standard laparoscopic surgery.

David Jayne, Senior Lecturer in Surgery at the University of Leeds and Chief Investigator for the ROLARR (Robotic versus Laparoscopic Surgery) trial, said: "It has been very exciting to see the emergence of robotic surgery and I am hopeful that such systems will be of real benefit to patients with bowel cancer. However, it is vitally important that the value of robotic assistance is evaluated properly. Surgeon, patients, and healthcare providers need to know what difference this expensive and specialist technology will make – which is exactly what this study will show."

Professor Julia Brown, Director of the University of Leeds' Clinical Trials Research Unit, said: "We are delighted to be building on our track record in the evaluation of new surgical procedures and to be extending into a worldwide evaluation."

The first patients to take part in this trial of next-generation surgical technology are now being recruited. The study will eventually involve 400 patients in more than 20 centres across Europe, the US and Asia.

The ROLARR trial is being managed by the University of Leeds' Clinical Trials Research Unit (CTRU), part of the University's School of Medicine. The trial is a partnership between the University of Leeds and

Leeds NHS Teaching Hospitals Trust.

Provided by University of Leeds

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