



IntAct: Intraoperative Fluorescence Angiography to Prevent Anastomotic Leak in Rectal Cancer Surgery

The IntAct Trial - Lay Summary of Trial Results

Why did we do this trial?

Bowel (colorectal) cancer is one of the most common cancers in the UK, causing 16,000 deaths each year. Surgery is required to remove the piece of bowel that contains the cancer, and then the two open ends of the bowel are joined together. One of the most serious complications is an anastomotic leak which happens when the join in the bowel does not heal properly. This can cause patients to become very unwell. Ensuring good blood supply to the bowel that is being joined can reduce the risk of an anastomotic leak. There is a new technology to assist surgeons called Indocyanine Green near infra-red angiography (ICG-NIR). During the operation, a dye is injected into the blood which glows and shows the blood supply to help the surgeons make decisions. We wanted to find out if using ICG-NIR reduces the number of anastomotic leaks.

What did we do?

Between 2017 and 2023, 766 patients who needed an operation for rectal cancer agreed to take part in the IntAct trial. To allow a fair comparison of treatments, half the patients were randomised to have a standard operation (surgery without ICG-NIR), and the other half were randomised to have their operation with ICG-NIR.

What did we find and what does this mean?

The IntAct trial has shown that the use of ICG-NIR during surgery reduces the rate of most types of anastomotic leaks, but did not change how often the worst leaks occurred. Using IFA helped surgeons to better choose which parts of the bowel to join, which helped prevent anastomotic leaks from happening. Reducing the risk of anastomotic leaks means that less patients will become unwell after having an operation for rectal cancer and overall cancer outcomes will improve.