

Low energy contact X-ray brachytherapy (the Papillon technique) for early stage rectal cancer

Information for the public

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What has NICE said?

Low-energy contact X-ray brachytherapy (the Papillon technique) for early-stage rectal cancer is safe enough and works well enough for use in the NHS for patients who cannot have surgery.

There is not much good evidence about how well this procedure works in patients who can have surgery, but have chosen not to. It should only be used if extra care is taken to explain the risks and extra steps are put in place to record and review what happens. More research on this procedure is needed and NICE may look at it again if more evidence is published.

NICE is asking health professionals to send information about everyone who has the procedure and what happens to them afterwards to the colorectal database to check how

well the procedure works over time.

What does this mean for me?

Your health professional should fully explain what is involved in having this procedure and discuss the possible benefits and risks with you. In particular, if you have chosen not to have surgery, they should explain the uncertainty about the evidence on how likely it is to improve your symptoms. You should also be told about other treatment options, given written information and told how to find more information about the procedure. You should only be asked if you want this procedure after having this discussion. Your health professional should ask you if details of your procedure can be collected.

Your healthcare team

A healthcare team experienced in managing colorectal cancer should decide which patients should be offered this procedure. The team should include an oncologist (cancer specialist) and a colorectal surgeon (specialist in bowel surgery) with expertise in the techniques needed for the procedure.

The condition

Rectal cancer is a common form of bowel cancer that affects the rectum (the end part of the bowel). Symptoms include rectal bleeding and change in bowel habit. Surgery to remove the affected part of the rectum is the main treatment, keeping the anus if possible. In some patients, radiotherapy or chemotherapy or both are used before, during or after surgery to reduce the chances of the cancer spreading or coming back.

Radiotherapy can use radiation from outside the body (external-beam radiotherapy) or radiation placed inside the body. Radiation placed inside the body (brachytherapy) involves inserting radioactive pellets directly into the tumour or a placing a tube containing radioactive material inside the rectum near the tumour. Radiation kills the cancer cells.

NICE has looked at using [low-energy contact X-ray brachytherapy](#) as another treatment option.

NHS Choices (www.nhs.uk) and NICE's [information for the public about colorectal cancer](#)

may be a good place to find out more.

The procedure

Low-energy contact X-ray brachytherapy (the Papillon technique) aims to cure rectal cancer, or stop it spreading.

Patients usually have low-energy contact X-ray brachytherapy as day patients. An enema is given to clear the bowel before treatment starts. With the patient lying face up, face down or curled up, a local anaesthetic and a muscle relaxant are applied to the ring of muscle around the anus. A tube (sigmoidoscope) is inserted through the anus into the bowel to see the size and position of the tumour. An applicator containing an X-ray tube is placed in contact with the tumour. The X-rays only penetrate a few millimetres so damage to tissues that are not associated with the cancer is reduced. If the tumour does not shrink after contact X-ray brachytherapy, or if it comes back after treatment, surgery may be needed, if the person can have it.

Benefits and risks

NICE decided that more evidence is needed about how well low-energy contact X-ray brachytherapy works. The 10 studies that NICE looked at involved a total of 1149 patients.

When given with another type of radiotherapy (external-beam radiotherapy) low-energy contact X-ray brachytherapy had the following benefits:

- Rates of survival, disease recurrence and disease spread were similar to those in patients who had external-beam radiotherapy alone.
- More patients who had both types of radiotherapy treatment needed less extensive surgery to remove the cancer than after external-beam radiotherapy alone.

When low-energy contact X-ray brachytherapy was given with or without other types of brachytherapy:

- Between 85% and 92% of people had tumours that responded to treatment after 1–2 months.
- At 5 years 83% of people were still alive and at 8 years 63% were still alive.

- A permanent colostomy (when 1 end of the large intestine is brought out through an opening made in the abdominal wall) was needed in 3% of patients.

The studies showed that the risks of the procedure when given with or without other types of radiotherapy were:

- Bleeding from the rectum between 6 months and 3 years after treatment in about 38% of people. One patient needed occasional blood transfusions.
- Problems with the skin around the rectum and anus in 19% of people, sometimes with soiling and needing to go to the toilet urgently. The skin problems healed within 3 to 6 months.
- Ulcers (which healed) inside the lining of the rectum in 27% of people.
- Slight inflammation of the anus and rectum in 10% of people.
- A constant feeling of needing to open their bowels, urgency of bowel movement or diarrhoea, in about 15% of people.

NICE was also told about some other possible risks: a hole developing in the bowel wall, narrowing of the rectum, an abnormal connection between the vagina and rectum, inability to control bowel movements.

If you want to know more about the studies, see the [guidance](#). Ask your health professional to explain anything you don't understand.

Questions to ask your health professional

- What does the procedure involve?
- What are the benefits I might get?
- How good are my chances of getting those benefits? Could having the procedure make me feel worse?
- Are there alternative procedures?
- What are the risks of the procedure?
- Are the risks minor or serious? How likely are they to happen?

- What care will I need after the procedure?
- What happens if something goes wrong?
- What may happen if I don't have the procedure?

About this information

NICE [interventional procedures guidance](#) advises the NHS on the safety of a procedure and how well it works.

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Accreditation

