

Interstitial laser therapy for breast cancer

**Understanding NICE guidance –
information for people considering the
procedure, and for the public**

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About this information

This information describes the guidance that the National Institute for Clinical Excellence (NICE) has issued to the NHS on a procedure called interstitial laser therapy. It is not a complete description of what is involved in the procedure – the patient’s healthcare team should describe it in detail.

NICE has looked at whether interstitial laser therapy is safe enough and works well enough for it to be used routinely for the treatment of breast cancer.

To produce this guidance, NICE has:

- looked at the results of studies on the safety of interstitial laser therapy and how well it works
- asked experts for their opinions
- asked the views of the organisations that speak for the healthcare professionals and the patients and carers who will be affected by this guidance.

This guidance is part of NICE’s work on ‘interventional procedures’ (see ‘Further information’ on page 10).

About interstitial laser therapy

Cancer in the breast can be treated in several different ways. These include surgery to remove the lump (called a lumpectomy), or sometimes doctors will remove as much of the breast tissue as possible (called a mastectomy). Doctors have tried to develop other methods of destroying the cancerous area ('tumour') without the need to remove part of the breast. These are called 'minimally invasive' techniques, and include using heat (radiotherapy) or cold temperatures (cryotherapy) to destroy the tumour.

Interstitial laser therapy is a minimally invasive way of treating small tumours in the breast. The surgeon uses images from scans or ultrasound to guide a needle-shaped probe into the tumour. Laser energy is then used with the aim of destroying all the cancer cells.

How well it works

What the studies said

The studies looking at this procedure were all small. In one study, in which patients had interstitial laser therapy before planned surgery, 43 out of 44 patients who had laser therapy (that's 98%) were cancer-free after the procedure. But, patients were checked on at different times (anywhere between 2 and 26 months after having the laser therapy) and it was difficult to tell if the results were because of the laser therapy or the surgery they had had. In the same study, in 4 out of the 44 patients (9%), no evidence of damage to the cancer cells was seen when they were checked under a microscope.

What the experts said

The experts thought it was not certain that the whole tumour (that is, all the cancer cells) could be destroyed using this method. They also noted that there was no information about how this method compared with surgical removal of the lump and radiotherapy to destroy the tumour.

Risks and possible problems

What the studies said

In the studies NICE looked at, the following problems were seen:

- 4 patients out of 35 (11%) had small skin burns on the breast
- non-cancerous cells died in 2 patients out of 20 (10%), because the laser was not in the right position
- 3 patients out of 44 (7%) experienced pain that meant the treatment had to be stopped
- the tumour ruptured in 1 patient out of 35 (3%)
- 1 patient out of 44 (2%) had excessive bleeding (haemorrhage).

What the experts said

One expert thought that interstitial laser therapy should only be used in a clinical trial. Another expert listed healthy tissue dying (called necrosis), excessive bleeding and damage to cells caused by too much heat as possible problems.

What has NICE decided?

NICE has decided that, if a doctor wants to carry out interstitial laser therapy for breast cancer, it should be done only as part of a research study that has been approved by a research ethics committee. A research ethics committee is a body that exists to protect the safety and well-being of anyone who is taking part in, or may take part in, a research study.

NICE may look at the procedure again if more evidence becomes available.

What the decision means for you

Your doctor may have offered you interstitial laser therapy. NICE has considered this procedure because it is relatively new. NICE has decided that there are uncertainties about the benefits and risks of interstitial laser therapy. Because of these, NICE has recommended that interstitial laser therapy should be carried out only as part of an approved research study. Your doctor should explain the aim of the study and what is involved before you decide whether to take part.

Further information

You have the right to be fully informed and to share in decision-making about the treatment you receive. You may want to discuss this guidance with the doctors and nurses looking after you.

You can visit the NICE website (www.nice.org.uk) for further information about the National Institute for Clinical Excellence and the Interventional Procedures Programme. A copy of the full guidance on interstitial laser therapy for breast cancer is on the NICE website (www.nice.org.uk/IPG089guidance), or you can order a copy from the website or by telephoning the NHS Response Line on 0870 1555 455 and quoting reference number N0696. The evidence that NICE considered in developing this guidance is also available from the NICE website.

If you want more information on breast cancer, a good starting point is NHS Direct (telephone 0845 4647) or NHS Direct Online (www.nhsdirect.nhs.uk).

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