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Understanding NICE guidance

Information for people who use NHS services

National Institute for Health and Clinical Excellence

Using an ultrasound-guided bronchoscope to take tissue samples from the area between the lungs

NICE 'HealthTech guidance' advises the NHS on when and how new procedures can be used in clinical practice.

This leaflet is about when and how an ultrasound-guided bronchoscope can be used in the NHS to take tissue samples from the area between the lungs. It explains guidance (advice) from NICE (the National Institute for Health and Clinical Excellence).

This HealthTech guidance makes recommendations on the safety of a procedure and how well it works. An interventional procedure is a test, treatment or surgery that involves a cut or puncture of the skin, or an endoscope to look inside the body, or energy sources such as X-rays, heat or ultrasound. The guidance does not cover whether or not the NHS should fund a procedure. Decisions about funding are taken by local NHS bodies (primary care trusts and hospital trusts) after considering how well the procedure works and whether it represents value for money for the NHS.

NICE has produced this guidance because the procedure is quite new. This means that there is not a lot of information yet about how well it works, how safe it is and which patients will benefit most from it.

This leaflet is written to help people who have been offered this procedure to decide whether to agree (consent) to it or not. It does not describe growths in the area between the lungs or the procedure in detail – a member of your healthcare team should also give you full information and advice about these. The leaflet includes some questions you may want to ask your doctor to help you reach a decision. Some sources of further information and support are on page 7.

What has NICE said?

This procedure appears to be safe enough and to work well enough to be used to take tissue samples from the area between the lungs, provided that doctors are sure that:

- the patient understands what is involved and agrees to the treatment, and
- the results of the procedure are monitored.

This procedure requires many different skills, and doctors who plan to carry it out should receive special training.

Other comments from NICE

Some patients have reported feeling pain while having this procedure, and so doctors should pay particular attention to giving pain relief if needed.

This procedure may not be the only possible procedure for taking tissue samples from the area between the lungs. Your healthcare team should talk to you about whether it is suitable for you and about any other options available.

Using an ultrasound-guided bronchoscope to take tissue samples from the area between the lungs

The procedure's medical name is 'endobronchial ultrasound-guided transbronchial needle aspiration for mediastinal masses'.

The procedure is not described in detail here – please talk to your doctor for a full description.

This procedure can be used for patients who are being tested for various diseases, including lung cancer and sarcoidosis.

The first stage of investigating a possible growth is to use a type of scan called a CT scan or PET scan, which gives a three-dimensional view of the inside of the body. If a growth is detected, doctors take a sample of cells (called a biopsy) from the growth and the nearby lymph nodes for further examination.

This procedure is done when doctors want to take a biopsy from a growth in the area (or ‘space’) between the lungs, called the mediastinum.

Under a local or general anaesthetic, a thin flexible tube (bronchoscope) is inserted via the patient’s mouth into the lungs. Images of the region between the two lungs are obtained using an ultrasound probe attached to the bronchoscope. The operator uses these images as a guide when taking samples of cells from growths suspected of disease. Several samples can be taken during the session and may be taken from one or more areas. The bronchoscope is then removed and the samples sent for examination.

The aim of the procedure is to help diagnose disease associated with growths in the mediastinum and to determine the stage of lung cancer if it is detected.

What does this mean for me?

NICE has said that this procedure is safe enough and works well enough for use in the NHS. If your doctor wants to use this procedure, they should still make sure you understand the benefits and risks before asking you to agree to it.

You may want to ask the questions below

- 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 operation?
- What happens if something goes wrong?
- What may happen if I don’t have the procedure?

You might decide to have this procedure, to have a different procedure, or not to have a procedure at all.

Summary of possible benefits and risks

Some of the benefits and risks seen in the studies considered by NICE are briefly described below. NICE looked at seven studies on this procedure.

How well does the procedure work?

Six studies looked at patients with suspected or known lung cancer.

One study of 502 patients compared ultrasound-guided bronchoscopy with more invasive diagnostic procedures. The accuracy of ultrasound-guided bronchoscopy was 94% in this study.

One study compared ultrasound-guided bronchoscopy with bronchoscopy on its own without ultrasound. The study found that in the group who had ultrasound-guided bronchoscopy, samples were successfully taken in 80 out of 100 patients. In the group who had bronchoscopy without ultrasound, samples were successfully taken in only 71 patients. A further study of 100 patients showed that the procedure was 92% accurate.

Four studies (involving a total of 745 patients) found that the percentage of accurate diagnoses with ultrasound-guided bronchoscopy ranged from 89% to 98%. One of these studies involved 102 patients, and compared the use of ultrasound-guided bronchoscopy with CT and PET scans. The results showed that the diagnosis was accurate in 61% of patients who had CT scans, 73% of patients who had PET scans and 98% of patients who had ultrasound-guided bronchoscopy. Another study of 33 patients compared ultrasound-guided bronchoscopy with a slightly different procedure which involved taking the samples through the wall of the gullet (oesophagus). In this study, ultrasound-guided bronchoscopy was accurate in 89% of patients, compared with 86% accuracy for the alternative procedure.

As well as looking at these studies, NICE also asked expert advisers for their views. These advisers are clinical specialists in this field of medicine. The advisers said that the aims of the procedure are to correctly identify the extent of lung cancer, to obtain good quality samples and for the procedure to be as accurate as other techniques, such as scans or lung operations, for identifying diseases.

Risks and possible problems

One patient (from a study of 108 patients) had a small amount of bleeding at the place where the needle entered the sampled area. None of the other studies reported any problems.

As well as looking at these studies, NICE also asked expert advisers for their views. These advisers are clinical specialists in this field of medicine. The advisers said that possible problems with the procedure included a hoarse voice, a sore throat, a cough or a fever, coughing up a small amount of blood, serious bleeding, air becoming trapped in the lining of the lungs or in the area between the lungs, inflammation of the areas sampled and problems with the lungs not working properly.

More information about lung cancer and other diseases that cause growths in the area between the lungs

NHS Direct online (www.nhsdirect.nhs.uk) may be a good starting point for finding out more. Your local Patient Advice and Liaison Service (PALS) may also be able to give you further advice and support.

About NICE

NICE produces guidance (advice) for the NHS about preventing, diagnosing and treating different medical conditions. The guidance is written by independent experts including healthcare professionals and people representing patients and carers. They consider how well an interventional procedure works and how safe it is, and ask the opinions of expert advisers. This guidance applies to the whole of the NHS in England, Wales, Scotland and Northern Ireland. Staff working in the NHS are expected to follow this guidance.

To find out more about NICE, its work and how it reaches decisions, see www.nice.org.uk/aboutguidance

This leaflet is about 'Endobronchial ultrasound-guided transbronchial needle aspiration for mediastinal masses'. This leaflet and the full guidance aimed at healthcare professionals are also available at www.nice.org.uk/guidance/HTG163

You can order printed copies of this leaflet from NICE publications (phone 0845 003 7783 or email publications@nice.org.uk and quote reference N1472).

We encourage voluntary sector organisations, NHS organisations and clinicians to use text from this booklet in their own information about this procedure.

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