



TRANSCRIPT

What is a “tissue block”?

This video has been designed to explain what is meant by the term “tissue block”. It will guide you through what happens to samples that are received in a pathology laboratory as part of the investigation and treatment of womb cancer.

Pathologists working in hospital pathology laboratories are doctors who are members of the **multidisciplinary team**, or **MDT**, that looks after people with cancer.

Let us start by understanding what is meant by the word **tissue**. In biology, the word “tissue” means a group of cells that make up a structure and work together. For example, **endometrial tissue** is the tissue that lines the womb or the **endometrium**.

There are two main types of sample taken to be looked at in the pathology laboratory.

A **biopsy** is a small piece of tissue used to make a diagnosis. For example, an endometrial biopsy is a small sample of endometrial tissue, usually taken from a person with abnormal bleeding. Since these samples are small, all of the tissue can be looked at under the microscope.

The second type of sample is a whole organ or a large part of an organ that is removed during surgery. For example, womb cancer is generally treated by taking out the womb, tubes and ovaries. When pathologists receive a large sample, such as the whole womb, they cannot look at all of it under the microscope. Instead, they choose the parts they need to look at.

First, the womb is weighed, measured, and described. Then it is cut open and chemicals are added to make sure that it is preserved well. This preservation is known as **fixation**. Once the womb is well preserved, it is carefully cut so that pathologists can look at it in more detail. Photographs may be taken of the womb before or after opening and slicing.

Pathologists then select areas that they would like to look at using a microscope. This includes the cancer as well as normal tissues. Around 20 separate pieces of tissue may be selected. The selected pieces are placed in cassettes and chemically processed to dry and harden the tissue. Once processing is complete, the tissue is set in a block of paraffin wax: this is the **tissue block**.

Tissue blocks are used to make slides. Very thin slices from the tissue block are put onto glass slides. Coloured dyes are added to make different and important parts of the cells easier to see down the microscope. Slides allow pathologists to look at cells and tissues in great detail, magnified up to 1000 times their actual size. The tissue block is also used for any further tests, such as **genetic testing**.

By looking at the cancer down the microscope, pathologists can tell the rest of the team all about the cancer so that the person receives the best possible treatment.

Once the diagnosis is complete, all of the tissue blocks are stored in the pathology department for at least 30 years, and maybe for longer, before being respectfully disposed of. In most cases, the blocks are not needed again for the care of an individual person.

If you take part in a research project, such as the ELECTRA Project, your permission will be requested for keeping one or more tissue blocks for future research.

It is important to keep a few things in mind:

- The tissue block can always be returned if it is needed for your care,
- If it is used for future research no one will need to know who it came from,
- Your generosity can help future patients with womb cancer through research.

Thank you for viewing this video. We hope that it has helped explain what is meant by the term "tissue block".