PROCEDURE

Colposcopy - directed biopsy

A colposcopy-directed biopsy removes a small tissue sample from an abnormal-looking area of the cervix for laboratory testing.

PURPOSE
Examine abnormal tissue and collect a sample for laboratory testing

PROCEDURE TYPE
Diagnostic, minimally invasive examination with targeted tissue sampling

WHERE IT IS DONE
Outpatient clinic or hospital colposcopy unit

ANAESTHESIA
Usually none; local anaesthetic sometimes used

HOW LONG IT TAKES
About 10 to 20 minutes

PREPARATION
Usually no fasting; follow instructions about medicines and vaginal products

RECOVERY
Same day; avoid driving only if sedated

MAIN RISKS
Bleeding, infection, pain, and inadequate tissue sampling

RESULTS
Visual findings immediately; pathology usually within days to several weeks

Overview

A colposcopy-directed biopsy is used to examine and sample abnormal-looking tissue, usually on the cervix. The cervix is the lower part of the uterus that opens into the vagina.

During colposcopy, a clinician uses a magnifying instrument called a colposcope. It stays outside your body. A speculum holds the vagina open, similar to during cervical screening. A small sample is then taken from any area that needs laboratory testing.

The biopsy can show whether cells are normal, inflamed, precancerous, or cancerous. Most abnormal cervical screening results do not mean that you have cancer, but a biopsy may be needed to identify the type of cell change.

Why the procedure is performed

You may be offered a colposcopy-directed biopsy after:

Colposcopy allows a closer view than cervical screening alone. The biopsy provides tissue, which usually gives more definite information than a swab or visual examination.

- An abnormal cervical screening result, including certain HPV or Pap test findings
- An area of the cervix that looked unusual during an examination
- Unexplained bleeding, such as bleeding after sex
- Previous treatment for abnormal cervical cells that requires follow-up
- An abnormal-looking area of the vagina or vulva

Who should and should not have it

Whether you need a biopsy depends on your screening results, medical history, age, previous treatment, pregnancy status, and what is seen during colposcopy. Not everyone with HPV or a mildly abnormal screening result needs an immediate biopsy. Monitoring may sometimes be appropriate.

Colposcopy itself can be performed during pregnancy. A biopsy may also be taken when it is clinically important, although pregnancy can make the cervix bleed more easily. Sampling from inside the cervical canal, called endocervical curettage, is not performed during pregnancy.

The procedure may be delayed or changed if you have:

Taking blood thinners like warfarin or apixaban does not automatically rule out biopsy. Your healthcare team needs to balance the reason for the medicine against the risk of bleeding. Do not stop a prescribed blood thinner unless the clinician managing it tells you to.

- Heavy vaginal bleeding that makes the cervix difficult to examine
- A suspected or active pelvic or cervical infection
- A bleeding disorder or increased bleeding risk from medication
- A medical condition that makes positioning or an office procedure unsafe
- Difficulty giving informed consent at that time

How to prepare

Your treating facility's own instructions take priority because preparation can differ between clinics.

Fasting is not usually needed because sedation is uncommon. If sedation or another procedure is planned, you may receive separate instructions about eating and drinking.

Tell the clinic before the appointment if you may be pregnant, take blood thinners, have a bleeding disorder, or have reacted to iodine, latex, local anaesthetic, or other medical products.

You may be asked to avoid vaginal sex, tampons, douching, and vaginal medicines for about 24 hours beforehand. Do not skip prescribed vaginal medicine unless your facility tells you to.

Some people take a non-prescription pain reliever before the appointment. Ask whether this is suitable for you, especially if you have kidney disease, stomach ulcers, medication allergies, or take blood thinners.

Try to empty your bladder before the examination. Bring a sanitary pad for spotting or discharge afterward. If your period begins, contact the clinic. Light bleeding may not prevent the procedure, but heavy bleeding can make the examination less useful.

What happens during the procedure

You will usually undress from the waist down and lie on an examination table with your legs supported. A sheet or gown will cover you.

A clinician gently places a speculum into the vagina so the cervix can be seen. The colposcope remains outside your body and does not enter the vagina.

The cervix is wiped with a dilute vinegar-like liquid called acetic acid. This can make abnormal cells easier to see and may cause mild stinging. An iodine solution may also be used unless there is a reason to avoid it.

If an area needs testing, a small instrument removes a piece of tissue. You may feel a sharp pinch followed by a brief cramp. One or several samples may be taken. Local anaesthetic is not always needed for a small cervical biopsy, but it may be offered in some situations.

The clinician may also collect cells from inside the cervical canal. This is a separate sampling method and is not used during pregnancy.

Pressure, silver nitrate, or a dark paste called Monsel's solution may be applied to reduce bleeding. Monsel's solution can later cause dark brown or black discharge.

Recovery and what to expect afterward

Pain: Mild period-like cramps or tenderness can occur for several hours. A pain reliever may help if it is safe for you.

Eating: You can usually eat and drink normally immediately afterward because general anaesthesia is not normally used.

Activity: Light activity is usually fine the same day. Spotting and dark discharge may continue for several days. Use pads rather than tampons while bleeding. Follow your clinic's instructions about sex, swimming, tampons, and strenuous exercise; these are often avoided until bleeding has stopped.

Driving: You can usually drive if you did not receive sedation and feel well. Do not drive if you feel faint or if you were given a sedating medicine.

Work: Many people return to work the same day or the following day. You may prefer to rest if your work is physically demanding or you have cramping.

Risks and possible complications

A directed biopsy is a small procedure, but it is not risk-free. Possible problems include:

Bleeding may be more noticeable during pregnancy or if you take medicine that affects clotting.

A small punch biopsy does not usually affect fertility or the ability to carry a pregnancy. This is different from excisional treatments, such as LEEP or a cone biopsy, which remove a larger area of the cervix and have additional risks.

- Brief pain or cramping
- Spotting or bleeding
- Infection
- Feeling faint during or shortly after the examination
- A sample that is too small or does not explain the screening result

Results and follow up

The clinician may tell you what the cervix looked like immediately, but appearance alone cannot confirm the diagnosis. The tissue must be processed and examined under a microscope by a pathologist.

Results may show normal tissue, inflammation, low-grade cell changes, high-grade cell

changes, or cancer. Cervical cell changes are often called cervical intraepithelial neoplasia, or CIN. CIN is not cancer, but some higher-grade changes are treated because they are more likely to progress over time.

Results commonly take several days to a few weeks. Your clinic should tell you how and when they will contact you.

Routine follow-up may involve:

Ask the clinic whom to contact if you have not received your result within the expected time.

- Returning to regular cervical screening
- Repeat HPV testing or cervical cell testing
- Another colposcopy
- Treatment that removes abnormal tissue, such as LEEP or cone biopsy
- Referral to a specialist team if cancer is found

Alternatives

The alternatives depend on why colposcopy and biopsy were recommended.

Repeat HPV or cervical cell testing avoids a biopsy and may be suitable for some lower-risk results. The trade-off is waiting longer and not having a tissue diagnosis now.

Colposcopy without biopsy allows visual examination but cannot confirm what the cells are. An area that looks mildly abnormal may prove more or less significant when tested.

Immediate excisional treatment , such as LEEP, removes a larger piece of the cervix and can diagnose and treat abnormal cells at the same time. It causes more bleeding and cervical tissue loss than a small biopsy, so it is reserved for selected situations.

Choosing not to investigate avoids the immediate discomfort and risks. However, important cell changes may remain unidentified. Ask what your individual screening result means and what could happen if assessment is delayed.

When to call your healthcare team

Some spotting, dark discharge, and mild cramping are expected. Contact your healthcare team promptly if you develop:

Seek emergency care for very heavy bleeding accompanied by fainting, trouble breathing, severe pain, confusion, or a feeling that you are seriously unwell.

Questions about results, activity restrictions, or mild symptoms can usually wait for routine clinic hours.

- Bleeding heavier than your usual period
- Bleeding that continues longer than your clinic said to expect
- Increasing pelvic or lower abdominal pain
- Fever, chills, or foul-smelling discharge
- Persistent dizziness or weakness

Common questions

Will I be asleep?

Usually not. Most directed biopsies are performed while you are awake without sedation. Local anaesthetic may be used in some circumstances.

Can I drive home?

Usually yes, provided you received no sedating medicine and do not feel faint. Arrange a ride if sedation is planned or your clinic advises it.

How painful is it?

The speculum may feel uncomfortable. Cleaning the cervix can sting, and the biopsy often feels like a brief pinch with a short period-like cramp. Tell the clinician if you need a pause.

When will I know the results?

The clinician can discuss what was seen immediately, but biopsy results take longer. Laboratory processing may take several days to a few weeks.

Can I have the procedure during my period?

It may be possible with light bleeding. Heavy bleeding can block the view of the cervix, so contact the clinic before attending.

Can I have a biopsy if I am pregnant?

Colposcopy can be performed during pregnancy, and a biopsy may be taken when needed. Tell the clinic that you are or may be pregnant. Sampling from inside the cervical canal is avoided during pregnancy.

Sources

- American College of Obstetricians and Gynecologists. "Colposcopy." Patient Frequently Asked Questions.
- National Health Service. "Colposcopy." NHS health information.
- Cancer Research UK. "Colposcopy and cervical biopsy." Cervical cancer diagnostic information.
- Wentzensen N, Massad LS, Mayeaux EJ Jr, et al. "ASCCP Colposcopy Standards: How Do We Perform Colposcopy? Implications for Establishing Standards." Journal of Lower Genital Tract Disease . 2017;21(4):235-241.
- International Agency for Research on Cancer. Colposcopy and Treatment of Cervical Precancer . IARC Technical Publication No. 45; 2017.