PROCEDURE

Skin lesion biopsy

A skin lesion biopsy removes a small tissue sample for laboratory examination.

PURPOSE
Identify abnormal, inflamed, infected, or cancerous skin changes

PROCEDURE TYPE
Diagnostic, sometimes therapeutic; minor surgical procedure

WHERE IT IS DONE
Outpatient clinic or at the bedside

ANAESTHESIA
Local anaesthesia; sedation is rarely needed

HOW LONG IT TAKES
Usually 10 to 30 minutes

PREPARATION
Usually none; review medicines and bleeding risk

RECOVERY
Same day; driving usually allowed after local anaesthesia

MAIN RISKS
Bleeding, infection, scarring, incomplete sampling

RESULTS
Several days to two weeks for pathology

Overview

A skin lesion biopsy removes all or part of an area of skin so it can be examined under a microscope. A lesion may be a mole, lump, sore, discoloured patch, or area of persistent rash.

A doctor called a pathologist examines the sample. The findings can help distinguish harmless changes from inflammation, infection, precancerous cells, or skin cancer.

There are several biopsy methods. A shave biopsy removes surface layers. A punch biopsy takes a small, round core through deeper skin layers. An incisional biopsy removes part of a lesion, while an excisional biopsy removes the whole lesion. The method chosen affects the wound, stitches, scar, and information available.

Why the procedure is performed

A biopsy may be recommended when looking at the skin alone cannot provide a reliable diagnosis. Reasons include a lesion that is changing, has unusual features, is not healing, or has not responded as expected to treatment.

A biopsy may also identify the cause of ongoing inflammation or possible infection. If the whole lesion is removed, the biopsy can sometimes provide treatment as well as a diagnosis. Further treatment may still be needed if abnormal tissue extends to the sample's edges.

Who should and should not have it

You may be offered a biopsy when knowing exactly what a lesion is will affect treatment or follow-up. The expected benefit should outweigh the risks of bleeding, infection, scarring, and an inconclusive sample.

A biopsy may be delayed or its method changed if you have an uncontrolled bleeding problem, significant illness, or an infection near the planned site. Poor circulation or a history of difficult wound healing may also affect the timing and technique.

Blood-thinning medicines do not automatically prevent a skin biopsy. Stopping them can carry serious risks, so do not stop aspirin, warfarin, clopidogrel, apixaban, or similar medicines unless the treating team gives specific instructions.

Tell the team about allergies to local anaesthetics, dressings, antiseptics, or adhesives. Some raised scars, called keloids, grow beyond the original wound. A history of keloids may influence whether and where a biopsy is performed.

How to prepare

The treating facility's own instructions take priority over general information in this article.

Most skin biopsies do not require fasting because they use local anaesthesia rather than sedation or general anaesthesia. If sedation is planned, you will receive separate instructions about eating, drinking, medicines, and transport.

Before the appointment:

Ask whether you should bring wound-care supplies or arrange help if the biopsy is on a place that is difficult to reach.

- Provide an up-to-date list of medicines and supplements

- Report bleeding problems, allergies, pregnancy, or previous poor wound healing
- Avoid applying make-up or heavy skin products over the site
- Wear clothing that gives easy access to the area

What happens during the procedure

The clinician checks the lesion and confirms the biopsy site. Photographs or measurements may be taken. Your skin is cleaned with an antiseptic.

Local anaesthetic is injected around or beneath the lesion. The injection can sting or burn briefly. After it works, you should feel pressure, movement, or pulling rather than sharp pain. Tell the clinician if you still feel pain so more anaesthetic can be given.

The biopsy method is chosen according to the lesion's size, depth, location, and suspected diagnosis:

Bleeding is controlled with pressure, a chemical treatment, heat, or stitches. The sample is labelled and sent to a pathology laboratory. The wound is then covered with ointment and a dressing. Some stitches dissolve; others need removal at a planned visit.

- Shave biopsy: A blade removes a thin surface sample
- Punch biopsy: A circular tool removes a narrow core of skin
- Incisional biopsy: A scalpel removes part of a larger lesion
- Excisional biopsy: A scalpel removes the entire visible lesion

Recovery and what to expect afterward

Mild soreness, bruising, itching, or a small amount of oozing is common. The local anaesthetic may leave the area numb for a few hours. Simple pain relief may be recommended, but check which medicines are suitable for you.

You can usually eat normally straight away. Keep the wound clean and follow the instructions about dressings, bathing, ointment, and stitch care.

Light activity is often possible the same day. Avoid stretching, rubbing, swimming, or strenuous exercise if these could reopen the wound. The limits are usually greater for biopsies over joints, on the lower leg, or in areas under clothing pressure.

You can usually drive after local anaesthesia alone if you can control the vehicle safely. Do not drive after sedation, or if the dressing, pain, numbness, or biopsy location limits movement.

Many people return to desk work the same day or the next day. Physical work may require a short break or modified duties.

Risks and possible complications

Every biopsy leaves some type of mark. Scars may be flat, pale, darker than nearby skin, indented, or raised. Their appearance changes over several months.

Other possible complications include:

A lesion can remain or return after a partial biopsy. This does not by itself show whether it is harmless or concerning.

- Bleeding or a collection of blood beneath the skin
- Wound infection
- Temporary or lasting numbness from nerve irritation
- Wound separation or delayed healing
- Reaction to anaesthetic, adhesive, or antiseptic
- An incomplete or unclear sample requiring another biopsy

Results and follow up

A pathology report is usually available within several days to two weeks. Special stains, genetic tests, or review by another pathologist can take longer. Ask when and how you will receive the result, and whom to contact if it has not arrived.

The report may identify a benign growth, inflammation, infection, precancerous change, or cancer. It may also describe the margins, meaning the edges of the removed tissue.

Routine follow-up may involve wound review, stitch removal, treatment for an identified condition, or skin monitoring. If abnormal cells reach a margin, more tissue may need to be removed. Occasionally, the result is uncertain and another or deeper biopsy is recommended.

Alternatives

Observation with measurements or photographs avoids a wound and scar, but it delays tissue diagnosis and may miss important changes. Dermoscopy, which uses a magnifying light, can improve visual assessment but cannot replace laboratory examination when cancer is a

concern.

Treating a suspected rash before biopsy may be reasonable in selected cases, but treatment can alter the skin and delay a diagnosis. Removing a lesion with freezing, burning, or laser treatment may destroy tissue, leaving little or nothing for the pathologist to examine.

Blood tests and scans generally cannot identify what a skin lesion is. If the diagnosis will change treatment, biopsy is often the most direct option. You can ask whether monitoring, referral to a dermatologist, or a different biopsy technique would be reasonable.

When to call your healthcare team

Contact your healthcare team promptly if the wound becomes increasingly painful, warm, swollen, or red, or if it produces pus. Also call if the wound opens, stitches come out early, you develop a fever, or bleeding continues despite firm, continuous pressure as instructed.

Seek emergency help for heavy bleeding with faintness or weakness, or for trouble breathing, facial swelling, or other signs of a severe allergic reaction.

Mild tenderness, limited bruising, and a small spot of blood on the dressing are usually part of routine recovery. Follow the facility's instructions if you are unsure.

Common questions

Will I be asleep?

Usually not. Most skin biopsies use local anaesthesia, so you remain awake while the area is numb. Sedation or general anaesthesia is uncommon.

Can I drive home?

Usually, if you received only local anaesthesia and can move safely. Arrange transport if you receive sedation or if the biopsy affects your vision, grip, footwear, or ability to control a vehicle.

How painful is it?

The anaesthetic injection may sting briefly. You may then feel pressure or pulling. Mild soreness afterward is common, but severe or worsening pain should be reported.

Will it leave a scar?

Yes. Any biopsy that cuts or removes skin can leave a scar. Its size and appearance are influenced by the biopsy method, location, healing, and your tendency to form raised scars.

When will I know the result?

Many results return within several days to two weeks. Complex samples can take longer. Make sure you know how the result will be communicated.

Sources

- American Academy of Dermatology Association. Skin biopsy: Dermatologist-recommended wound care
- British Association of Dermatologists. Skin biopsy patient information leaflet
- DermNet. Skin biopsy
- National Institute for Health and Care Excellence. Melanoma: assessment and management, guideline NG14
- Pickett H. Shave and punch biopsy for skin lesions. American Family Physician. 2011;84(9):995-1002