



## Biopsies

### Dear Patient,

Your doctor has referred you to us for a biopsy (tissue removal). A biopsy is always required if the doctor is only able to obtain information regarding whether an organ is diseased, the state of progression of the disease and whether treatment for a disease has been successful by examining a tissue sample. In order to obtain the biopsy exactly from the desired region of an organ, this is monitored and controlled by means of an imaging process. Either x-ray imaging, ultrasound, mammography, computer tomography (CT) or magnetic resonance tomography (MRI) is used as required.

### Biopsy procedure

In principle, a biopsy is always invasive into the body – even if usually to a minor degree - and therefore needs to be performed under germ-free (sterile) conditions.

According to the location and type of tissue removal, a local anaesthetic is administered.

During puncture or puncture biopsy, the doctor removes the sample using a hollow needle which he pricks through the skin into the tissue. If he uses a thicker needle, this is referred to as punch biopsy, if a thinner needle is used it is referred to as a fine needle biopsy. The choice of needle depends on the suspected diagnosis. Classic areas of application are the harvesting of tissue samples from the liver, the kidney, the thyroid, the prostate and the breast, for example.

The biopsy is generally performed using image monitoring. This helps the doctor to ensure that he is actually removing the sample from the diseased organ or the tumour. The examination itself will take place in the ultrasound, CT, MRI, mammography or screening rooms according to the imaging method used to monitor the intervention. For breast biopsies, the tissue removal site is marked with a clip at the end of the intervention in general. Some interventions are performed on an outpatient basis, some require an observation period of several hours following the procedure. Patients are constantly cared for by our employees or the ward staff during

this time. They are informed by our staff in advance as to whether they require an observation period following the procedure. Occasionally, images are produced following the observation period to rule out any complications.

### What side effects can occur?

Regardless of the removal procedure used, a biopsy is always a relatively minor intervention (compared to an operation) and is therefore not very onerous for the patient. Nevertheless, there are certain risks which need to be heeded as for all interventions:

- When a biopsy is performed, pathogens can penetrate into the body through the puncture site and cause an infection. The risk is small.
- A superficial bruise is very common and harmless. If the target region lies deep inside the body, the puncture needle may injure other organs or a blood vessel. A bruise can thus occur which needs to be further treated if need be.
- For a long time there were heated debates regarding whether cancerous cells could be transferred to a different region when the needle was pulled out and cause a tumour. However, in the meantime the risk has been evaluated as extremely small.
- For puncture sites near to the lung and in the lung itself, a pneumothorax (accumulation of air around the lung) can occur which only rarely needs to be treated as the hole usually heals itself.
- In any case, the biopsy can contain no tissue or non-desired tissue and needs to be repeated accordingly.

**Do not hesitate to contact us should you have any questions at any time before and during the examination.**

Surname:	<input type="text"/>
Forename:	<input type="text"/>
Date of birth:	<input type="text"/>

Please answer the following questions	Yes	No
Do you take blood thinners?	<input type="checkbox"/>	<input type="checkbox"/>
Are you currently suffering from an infection?	<input type="checkbox"/>	<input type="checkbox"/>
Do you suffer from a blood clotting disorder?	<input type="checkbox"/>	<input type="checkbox"/>
Do you suffer from allergies?	<input type="checkbox"/>	<input type="checkbox"/>
Are you or is there a possibility you could be	<input type="checkbox"/>	<input type="checkbox"/>

Date:	<input type="text"/>	Patient's signature:	<input type="text"/>	Radiologist:	<input type="text"/>
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