



## Introduction

1. FNA or biopsy is a medical procedure performed to identify the nature of a lump or a mass or other abnormal condition in the body. The procedure can be done under X-Ray, ultrasound or CT guidance through the overlying skin (i.e. percutaneous). Small amount of tissue or fluid sample inside the lesion can be obtained by inserting a very small needle to the region of interest, so called the fine needle aspiration (FNA). Or a complete core of tissue can be obtained via a larger biopsy needle under imaging guidance, so called the core biopsy.
2. The nature of liver disease or a liver mass may not be determined by imaging studies and other clinical investigations. Biopsy / FNA will then be required for a more definitive diagnosis.
3. This procedure will be performed by trained specialists. The procedure will generally be performed in the Department of Radiology under imaging guidance, such as ultrasound or computed tomography (CT).

## The Procedure

1. The procedure will be performed under local anesthesia and aseptic technique. The nurse will sterilize the field of procedure and cover it with sterilized towel.
2. FNA is usually performed via a very fine needle inserting into the lesion concerned.
3. Core biopsy is usually performed via two or more passes of biopsy needle in order to obtain adequate tissue for optimal assessment. A “click” sound will be encountered due to movement of needle parts during the biopsy procedure.
4. Doctors will ask the patient to hold the breath while piercing through the incision site with the biopsy needle into the liver to obtain tissue.
5. Duration of the procedure varies, depending on the complexity of the condition. It may take only 30 minutes though you may need to stay in the Department of Radiology for over an hour altogether.
6. Before, during and after the procedure, your vital signs (like blood pressure and pulse rate) will be monitored.
7. Specimen will be sent to pathological laboratory for examination which may take a few days to complete.

## Before the Procedure

1. A written consent is required.
2. Please inform our staff before the examination if the patient thinks she is pregnant.
3. Check clotting profile for any bleeding tendency, to be corrected if abnormality detected.
4. Except medication, fast for 6 hours before examination.

## After the Procedure

1. After the procedure, the vital signs will be continue monitored by medical staff and nursing staff.
2. Patient may resume oral feeding when the condition is stable.
3. Vigorous physical activity should be avoided within 2 weeks after the biopsy to prevent bleeding from the biopsy site.

## Risk and Complication

1. About 20% of the patient have mild pain in upper abdomen for several minutes to several hours after the procedure.
2. About 1 in 600 patients has minor internal bleeding.
3. Major bleeding requiring blood transfusion (0.3-0.5%).
4. Other complications include accidental injury of other organs like gallbladder, kidney, lung, intestine, etc. Serious complications may need radiological or surgical intervention.
5. Death (0.01%).
6. Tumor seeding / recurrence along the needle tract for biopsy / FNA of hepatocellular carcinoma (less than 2%).
7. Unfortunately, not all biopsies / FNAs are successful. They are subjected to sampling error, or rarely the abnormal tissue obtained is not adequate for diagnosis. In such circumstances, the biopsy / FNA may have to be repeated on another day.
8. Despite these potential complications, percutaneous biopsy / FNA is normally very safe and is designed to save you from having a major procedure. A positive diagnosis can help you to get the appropriate treatment. Common complications are generally minor and severe complications do not happen very often.



### **Disclaimer**

This leaflet only provides general information pertaining to this operation / procedure. While common risks and complications are described, the list is not exhaustive, and the degree of risk could also vary between patients. Please contact your doctor for detailed information and specific enquiry.

### **Reference**

1. The Hong Kong Society of Interventional Radiology Limited, Patient Information Leaflet: Percutaneous Fine Needle Aspiration (FNA) / Biopsy of Liver and Liver Mass (2010)
2. Smart Patient Website by Hospital Authority: Percutaneous Liver Biopsy (2021)