

PERCUTANEOUS FINE NEEDLE ASPIRATION (FNA)/ BIOPSY OF LIVER AND LIVER MASS

Information for patients

Introduction

- Needle biopsy is a medical procedure performed to identify the nature of a lump or a mass or other abnormal condition in the body. During the procedure, a small needle is inserted into the abnormal area through skin under X-ray, ultrasound or other imaging guidance. A sample of tissue is removed via the needle and sent to a pathologist for diagnosis. Because the biopsy is performed through the skin, it is called a percutaneous biopsy. For a mass lesion, we may use a very fine needle to aspirate tissue sample and the procedure is then called fine needle aspiration (FNA).
- 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 subsequent management.
- This procedure will be performed by radiologists with special training in interventional radiology. The procedure will generally be performed in the Department of Radiology under image guidance, such as ultrasound or computed tomography (CT).

Procedure

- The procedure will be performed under local anesthesia and aseptic technique. If needed, an intravenous tube is used to give sedatives and pain medication. The doctor makes a small incision in the abdominal wall, either toward the bottom of the rib cage or just below it, and inserts the biopsy needle under imaging guidance. Patients will be asked to hold their breath while the needle is inserted and a liver sample is quickly withdrawn. Several samples may be collected, requiring multiple needle insertions.
- 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.
- Do not expect to get the result of the biopsy / FNA before you leave, as it may take a few days to do all the necessary tests on the specimen.
- During and after the procedure, your vital signs (like blood pressure and pulse rate) will be monitored.

Potential Complications

- Minor bleeding: less than 6%
- Significant bleeding requiring treatment (either surgical repair or blockage of the bleeding artery with a catheter): less than 3%
- Death: less than 0.1%
- Bile peritonitis and other complications: rare

- Tumor seeding/ recurrence along the needle tract for biopsy / FNA of hepatocellular carcinoma: less than 2%
- Risk of infection or organ injury requiring surgery: rare
- Unfortunately, not all biopsies / FNAs are successful. They are subjected to sampling error, or the abnormal tissue obtained is not adequate for diagnosis. In such circumstances, the biopsy / FNA may have to be repeated on another day.
- 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 has been prepared by the Hong Kong Society of Interventional Radiology. This leaflet is intended as general information only. Nothing in this leaflet should be construed as the giving of advice or the making of a recommendation and it should not be relied on as the basis for any decision or action. It is not definitive and the Hong Kong Society of Interventional Radiology Limited does not accept any legal liability arising from its use. We aim to make the information as up-to-date and accurate as possible, but please be warned that it is always subject to change as medical science is ever-changing with new research and technology emerging. Please therefore always check specific advice on the procedure or any concern you may have with your doctor.

Prepared in 2010. Version 2.0