

# **PERCUTANEOUS FINE NEEDLE ASPIRATION/ (FNA) / BIOPSY OF PULMONARY 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 a pulmonary 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 X-ray, computed tomography (CT) or ultrasound.

## **Procedure**

- The procedure will be performed under local anesthesia and aseptic technique.
- 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**

- Air can get into the space around the lung, a condition called pneumothorax (less than 25%). Such conditions are usually self-limiting. However, if there is significant pneumothorax as shown up in the post-procedure chest X-ray (less than 1/3 of such cases), then the air will need to be drained via a wide-bore plastic tube (called a chest drain) inserted through the skin into the space around the lung.
- Bleeding occurs in the lung (manifests as coughing blood in sputum), usually self limiting (less than 10%).
- Massive bleeding in the lung (pulmonary haemorrhage) is rare.
- Death after the procedure, due to tension pneumothorax, air embolism and pulmonary hemorrhage (less than 0.02%).
- 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**

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