Bronchoscopy. A bronchoscope is a thin, flexible tube that contains a tiny video camera. The tube is passed through your nose or mouth, down through your windpipe (trachea), and into your lungs. In addition to seeing what is happening inside your airways and lungs, your doctor can collect a small tissue samples during the procedure.

Endobronchial ultrasound. In this test a small ultrasound device is attached to the bronchoscope to capture a different type of image of suspicious tissue in the lungs and to collect lung tissue and fluid samples from both the lungs and nearby tissues.

Fine needle aspiration (FNA). If an x-ray or CT scan reveals a suspicious mass or possible tumor in the lungs, a radiologist may use a thin needle to take a tiny tissue sample of the abnormal area and send to a lab to see if there are cancer cells. The needle is guided by CT scan to determine the location of the mass as accurately as possible.

Core needle biopsy. A core needle biopsy is conducted similar to a fine needle aspiration. The difference is that core needle biopsies provide a bigger sample than fine needles. The needle is guided by CT scan to determine the location of the mass as accurately as possible.

Surgical lung biopsy. Depending on the location of the suspected tumor(s), surgery may be the best way to get a good tissue sample.

Thoracentesis. In this test, a hollow needle is inserted into the chest to remove fluid from the space around the lungs. The fluid can be sent to a lab and checked for the presence of cancer.

If the cancer is located in the outer parts of the lung, CT imaging-guided biopsies (sometimes also referred to as transthoracic biopsies) such as core tissue biopsy or fine needle aspirations are used to sample the abnormal spot. Core biopsies provide more tissue for carrying out diagnostic testing and biomarker testing, but the ultimate choice of technique depends on the health of the patient and the location of the cancer.