What is an Echocardiogram?

An echocardiogram (or echo) uses sound waves to create a moving picture of the heart. An echo provides a much more detailed picture than an X-ray because it allows the sonographer to capture images of how the heart is functioning. No radiation is involved in an echocardiogram. An echo can help possible reasons for AFib and the risk of complications.

An echocardiogram will allow a doctor to see:
- The heart’s contraction motion
- The valves as they open and close
- The size of the heart and its chambers
- The blood volume flowing through the heart
- The appearance and function of other structures like the dividing wall (called the septum) and the artery leading out to the body (called the aorta)

THERE ARE TWO TYPES OF ECHOCARDIOGRAMS

1. Transthoracic Echocardiogram (TTE) – External Sonogram
   - A TTE echocardiogram is a non-invasive, painless procedure.
   - It uses an instrument called a transducer. A transducer sends out high-frequency sound waves and, after receiving those sound waves back, it then translates the sounds patterns into images.
   - The technician applies gel on the skin near the heart to help get an accurate reading.
   - You may be asked to lie on your left side.
   - The transducer is then placed on your chest to collect the pictures.
   - The technician will label and capture the recordings to share with your healthcare provider.
   - The procedure is usually completed within 15 minutes.
Transesophageal Echocardiogram (TEE) – A more invasive treatment

In some cases, images are needed from a different angle or a person’s lungs, tissues, or even ribs, can prevent the sound waves from providing a clear picture of the heart. In this case a transesophageal echocardiogram is used. This treatment is brief but is considered invasive because a scope is inserted down your throat. On the end of the scope is the same type of transducer used in a transthoracic echocardiogram, only smaller.

- You will most likely need to refrain from eating for several hours before the test.
- A technician will spray your throat with a numbing medication that can also suppress the gag reflex.
- You will be given an IV and a mild sedative to stay calm.
- Electrodes are placed on your chest and are attached by wires that will record your ECG to track your heartbeat during the test.
- A heart doctor with special training will guide the scope down the esophagus until an accurate picture can be captured.
- You may have a sore throat for a few days, may have a hard time swallowing at first.
- You will likely be encouraged to avoid alcohol for a few days due to the sedatives you have had.

![TEE Image](image-url)

TEE uses sound waves to see the heart’s function from behind.