Echocardiogram

An echocardiogram or 'echo' is used to characterise the heart and nearby blood vessels.

Echocardiography uses ultrasound waves to create a picture of the heart. It can be used to assess a number of cardiac structures and function including:

- Cardiac function
- Heart failure
- Valvular heart disease
- Heart muscle abnormalities
- Fluid around the heart
- Pressures within the heart

The study can be performed by placing an ultrasound probe on the chest wall (transthoracic echocardiogram - TTE) or by placing a probe into the oesophagus (transoesophageal echocardiogram - TOE).

Transthoracic echocardiogram (TTE)

What is a TTE?

A transthoracic echocardiogram (TTE) is the most common type of echocardiogram test. An ultrasound probe is placed on the chest in a number of positions near the heart and sound waves are reflected off the muscles and tissues of the heart to creat a moving image on the screen.

How is a TTE performed?

You will be asked to remove any clothing covering the upper half of your body and be offered a hospital gown to cover yourself up during the test. 3 electrodes will be attached to your chest and will be used to monitor the heart rhythm during the test.

Lubricating gel will then be applied to your chest and an ultrasound probe will be used to obtain the pictures. The procedure is not painful but you will feel some pressure on the chest as the probe is pressed down to obtain high quality pictures.

The whole procedure takes approximately 30 minutes and you can go home immediately afterwards. The procedure is safe without the requirement of the administration of any medication. There is no specific preparation required prior to a TTE.

After the TTE

Prof Ruparelia shall explain the results to you following the investigation

Transoesophageal echocardiogram (TOE)

What is a TOE?

A transoesophageal echocardiogram (TOE) is performed by placing an ultrasound probe into the oesophagus to take images of the heart from inside of the body. The oesophagus lies immediately behind the heart and there is no interference from the ribs or lungs. It can therefore provide more detailed pictures of your heart.

How is a TOE performed?

TOE is usually performed as a day case procedure and you will be required to not eat or drink (fast) for 6 hours prior to your procedure. You should take all of your regular medication (a small sip of water is fine).

You will be administered a sedative (through a tube inserted into a vein the arm) to help you relax and some anaesthetic spray to the back of the throat. Your heart rhythm will also be monitored throughout the procedure.

You will be asked to lie on your side with your head tilted forward. You will be asked to hold a mouth guard in your mouth and then be asked to swallow to allow the probe to pass into your oesophagus.

The test is painless but may feel uncomfortable as the probe passes down.

After the TOE

The procedure usually takes less than 30 minutes and afterwards you will be given some time for the effects of the sedation to wear off. You will need a friend or family member to drive you home and will have to wait a few hours to eat and drink normally to allow for the local anaesthetic effects to pass.

The procedure is generally safe but there is small risk (<1%) of a sore throat following the procedure. Very rarely the procedure can cause dental damage or trauma to the oesophagus.