

DIAGNOSTIC ULTRASOUND

During an ultrasound examination a small electronic device, called a transducer, is placed on the patient's skin over the area of interest. The transducer produces sound waves that penetrate the body. When the sound wave strikes a tissue boundary, echoes are produced. The returning echoes are detected by the transducer and then electronically converted into an anatomic image which is displayed on a screen.

Ultrasound imaging is commonly used to monitor the development of the fetus and to detect fetal abnormalities. Ultrasound is also used to demonstrate pathology in internal structures such as the liver, gallbladder, kidneys and heart or superficial structures such as the breast or thyroid gland. Doppler ultrasound is a technique which has been developed to investigate blood flow while musculo-skeletal ultrasound is used in the investigation of sport injuries.

The sonographer is a highly skilled professional who integrates patient history and supporting clinical data with the sonographic examination to obtain diagnostic results. Ultrasound is a quick, non-invasive and inexpensive investigation which is generally believed to be safe since it does not make use of ionizing radiation. It does, however, have a long learning curve to acquire the technical ability to produce good quality images and the expertise to interpret the images. The quality of the sonographic examination and the final diagnostic report strongly relies on the technical and intellectual skills of the sonographer.