The Fetal Morphology Scan (“18 – 20 week routine scan”):

Your 18 to 20 week ultrasound scan is also known as the morphology scan or fetal anomaly scan. It looks for abnormalities in your baby's structural development and growth. It also checks the position of the placenta. It is not a screening test for chromosomal anomalies. The ultrasound scan also provides you with an opportunity to see your baby, possibly for the first time. While this can be a very exciting and emotional time it is important to remember that this is a medical examination and the main purpose of the scan is to detect structural abnormalities.

The ultrasound scan:

In Dr Stephen O’Callaghan’s private practice at Darwin Private Hospital, Dr O’Callaghan will personally perform your scan. Some ultrasound gel on your abdomen before using the transducer against your skin to create images of your baby.

The ultrasound works by pulses of sound waves passing from the transducer into the uterus which then bounce harmlessly off your baby, creating echoes. Your baby is unable to hear the sound as the power of the sound is very low. The computer then changes these echoes into images which appear on the screen and may be difficult for you to interpret. Bones appear white, fluid black and tissue a grey speckled colour.

Please do not be alarmed if Dr O’Callaghan re-examines a part of your baby; this may be necessary in order to get the most information from the morphology scan of your baby.

Dr O’Callaghan uses a state-of-the-art GE Voluson E8 Ultrasound Machine, which also provides 3D and 4D (or moving 3D) images. Where possible, you will be shown 3D/4D images of your baby’s face and so on during the scan. How clear this will be depends upon a number of technical factors, and sometimes this is not possible at all.

Pictures and Results:

At the conclusion of your scan, Dr O'Callaghan will counsel you about any findings, provide you with images and a finalised DVD of the whole examination to be played on a television DVD player

Areas examined during the ultrasound scan:

The head and its internal structures are examined closely. Measurements including the head circumference (HC) and biparietal diameter (BPD) are recorded and your baby's face is examined to see if there is any cleft of the lip. Clefts of the palate are very difficult to examine and often not detected by ultrasound.

The spine is checked to make sure that it is fully covered by skin and that the vertebra are forming and in alignment.

The abdominal wall is checked to ensure that it encases all the internal organs and the abdominal circumference is measured to assist with calculating your baby's size.

The heart is examined to see if the four chambers are the appropriate size and connected by valves which can be seen opening and closing with each heartbeat. The main vessels connecting the heart are examined. If there are concerns about your baby's heart it will usually be re-examined at around 24 weeks when the connecting vessels can be more clearly visualised.

The stomach should be located just below the heart and be filled with some amniotic fluid that your baby is constantly swallowing.

The kidneys and bladder will be checked to see if they are formed and functioning properly.

The arms, legs, hands and feet are checked to see if they are present. The femur (leg) and humerus (arm) bones are measured to check they are growing appropriately.

The placenta's position in the uterus is recorded. If it is close to the cervix the distance will be measured and a repeat scan maybe recommended between 32 and 34 weeks to check that the placenta has moved away from the cervix. Most placentas will have moved away from the cervix by this time.

The umbilical cord will be examined. The number of vessels within the cord is counted. Normally there are two arteries and one vein.

The amniotic fluid is assessed to check that the amount is within the normal range.

Can I find out whether my baby is a boy or girl?

If there is good visualisation of your baby and if you wish to know and if you want to know, then Dr O'Callaghan can notify you of the likely sex of your baby.

Limitations of the scan:

Although a number of birth defects can be identified by ultrasound, there are many that will not be detected. At 18 to 20 weeks the detection rates for structural anomalies is 40 to 70 per cent. It is important to remember that a normal ultrasound does not always mean your baby will be born without any abnormalities.

Generally the earliest time to look for birth defects is between 18 and 20 weeks of pregnancy however, some will not become evident until late in the pregnancy. Anatomic areas such as the heart, the face and the hands are difficult to assess and not all defects are detectable.

Other factors such as your build, scars from a previous operation and the way your baby is positioned may limit the diagnostic ability of this test.

Costs:

You will be informed of the cost of your scan when you make the appointment. The fee for the scan must be paid in full at the conclusion of the scan.

Booking your 18 to 20 week ultrasound scan:

Please ring Dr O'Callaghan's office on (08) 8927 0108 to make the appointment.

Preparation for your scan:

Please empty your bladder one hour before the scan time, then drink two glasses of water and then do not empty your bladder again until after the scan has been done; this should NOT be painful.

(Adapted from the Patient Advice Information provided by the Mater Mothers' Hospital Maternal-Fetal Medicine Unit in Brisbane, QLD, "Ultrasound Scan – Your 18–20 Week Scan).