

INFORMATION ABOUT THE MID-TRIMESTER SCREENING SCAN (ANOMALY SCAN)

What is an ultrasound scan?

Ultrasound scanning is an imaging technique allowing the visualization of parts of the body by using high-frequency sound waves (ultrasound, not audible by human ear) able to go through the tissues. When the sound waves reach the fetus, echoes are produced and transformed into images on the ultrasound machine screen.

When and why the mid-trimester scan is performed?

Fetal malformations are anomalies occurring in about 2-3% of pregnancies. All pregnant women have a baseline risk, also called “general population risk”. This is why all pregnant women should undergo screening scans during pregnancy with the aim to identify, among a population of apparently healthy babies, those with a malformation, in order to offer them an appropriate management.

The anomaly scan should be performed between 19 and 21 weeks of gestation. The aims of such evaluation are to check the viability and the physical development of the baby. This examination allows also the assessment of the amount of amniotic fluid and the placental position. If the first trimester scan has been missed, the due date can be estimated during the mid-trimester scan.

What could be seen at the mid-trimester scan?

The anomaly scan allows to obtain the measurements of some parts of the fetal body, which are compared with reference curves in order to evaluate if the baby’s growth is adequate for the gestational age. During the same examination the placental insertion site, the amount of amniotic fluid and the structure of the main fetal organs are also assessed.

How is the mid-trimester scan performed?

The doctor, after applying a small amount of gel, places a probe on the maternal abdomen. Sometimes some pressure is needed to obtain clear images. Sometimes the examination cannot be completed due to persistently unfavorable fetal position or to poor visualization of some organs (i.e. empty stomach or bladder). In such cases, either an extension of the exam time or planning a further attempt (during the same or following day) could be needed. If a fetal anomaly is suspected, the doctor may request an additional evaluation at a referral center, for expert ultrasound evaluation (referral scan). However, in most cases, a suspicious finding at the screening scan would not result in an abnormal finding at the referral scan.

Can ultrasound detect fetal malformations?

Apart from few exceptions, there are no fetal abnormalities that can be always identified with certainty. Available Italian data show that only 32% of birth defects are identified in the II and III trimester of pregnancy. Therefore, due to the limitations of the ultrasound technique, it is possible that some fetal malformations may not be detected prenatally, even if severe.

The ability to detect an abnormality does not necessarily depend on the severity of the defect, but on its size and obviousness of modification of the ultrasound view due to the defect.

The accuracy of the scan to detect structural defects may be limited by: unfavorable position of the fetus in the uterus, reduced amniotic fluid and other factors such as abdominal scars, twins, fibroids

and poor ultrasound penetration through the maternal abdominal wall (a common condition in obese pregnant women). Moreover, a group of fetal malformations potentially involving each anatomical fetal district could appear only later in pregnancy or even after delivery (evolving or late-onset conditions), being not detectable during the mid-trimester scan. Considering all the above-mentioned limitations, even if the mid-trimester screening scan shows normal fetal anatomy (as it is in most cases), congenital malformations cannot be certainly excluded.

Can ultrasound suspect genetic abnormalities?

The detection of genetic abnormalities (chromosomal or not) is not the aim of the mid-trimester scan. Moreover, not all genetic conditions are associated with significant and detectable malformations at the ultrasound examination.

Is the ultrasound scan safe for the baby?

Ultrasound has been used in obstetric practice for over thirty years and no harmful effects on the fetus, including long term, have been reported. For this reason, with the current procedures, the diagnostic use of ultrasound is considered safe during pregnancy.

INFORMED CONSENT TO MID-TRIMESTER SCREENING SCAN

I hereby (name, surname) _____ declare that:

- I have been correctly informed about the mid-trimester screening scan and understood the contents of this information.
- I had the opportunity of clarifying my doubts with a doctor and all my questions were satisfactorily answered.
- I am aware that this examination is suggested but not mandatory and I would like to undergo the examination aware that the mid-trimester screening scan might identify fetal conditions requiring further diagnostic examinations.

Date

Patient's signature