Vantaan ja Keravan hyvinvointialue
Vanda och Kervo välfärdsområde

HUS

NIPT and prenatal ultrasound screenings

Wellbeing services county of Vantaa and Kerava offers voluntary and free NIPT screenings (for those eligible and willing to undergo the study) at the city's maternity and child health clinics, as well as an early pregnancy ultrasound examination (during gestational weeks 11+0 to 13+6) and a structural ultrasound examination (during gestational weeks 19 to 21 or gestation week 24+0) at the HUS Prenatal Screening Unit, carried out by a midwife. As of 1 January 2026, NIPT screenings will be offered to NIPT screening candidates on their first visit to the maternity and child health clinic instead of a combination screening.

What the screening is for and why

Approximately three per cent of newborn children are diagnosed with some kind of structural abnormality. Common factors behind structural abnormalities are chromosomal abnormalities in the foetus, the most common of which are abnormalities in the number of chromosomes. Trisomy is a situation where an individual has three of the same chromosome instead of the normal two. The most common trisomy is trisomy 21, i.e. Down syndrome, which is the most common form of congenital intellectual disability. Trisomy 13 and 18 are less common and usually manifest themselves as severe congenital structural abnormalities. They often lead to death in utero or shortly after birth.

NIPT (non-invasive prenatal testing) is a method in which foetal chromosomal aberrations can be screened in more detail than with combination screening of a maternal blood sample by examining placental cell-free foetal DNA (cffDNA). The tests currently in use most commonly screen for the number of chromosomes 21, 18 and 13. The study does not provide information about other hereditary diseases or sex. Although NIPT is considered an accurate screening method, an abnormal result may be verified with an invasive foetal examination (amniotic sample) if the expectant mother desires this before any decision on continuing the pregnancy is made.

The suitability of the NIPT screening is tested at the maternity clinic and the prenatal screening unit. Certain factors have an impact on the reliability of the NIPT study. These factors include:

Determined at the maternity and child health clinic	Determined at the prenatal screening unit
• the expectant mother's cancer (in treatment or follow-up), a previous organ transplant or a chromosomal aberration of chromosomes 13, 18 or 21 of the mother (NIPT not applicable) • Known increased risk of hereditary foetal disease or chromosomal aberration, or structural foetal abnormality in a previous pregnancy (consult with Prenatal Research Unit on preferred screening methods)	• abnormal ultrasound finding (structural abnormality or accentuated neck swelling of over 3.5 mm) -> referral to the Prenatal Research Unit; other screening methods may be prioritised • vanishing twin situation (pregnancy began as twins, but one foetus died during early pregnancy) -> NIPT not applicable In the case of twin pregnancies, placental separation (NIPT is suitable, but in the case of non-identical twins, the result is

	less reliable, and it may be more difficult to interpret an abnormal result)

If the NIPT screening is suitable for you, we will take a blood sample after the first prenatal ultrasound. We will test the sample for three common chromosomal aberrations in the foetus (trisomy 21, 13 and 18) with the Vanadis NIPT method.

The NIPT sample is taken at a HUS laboratory (all HUS laboratories). Note, NIPT samples are only taken after the first prenatal ultrasound.

If the NIPT test is suitable, you should also have all the other early pregnancy blood samples taken after the first visit (all HUS laboratories).

If the NIPT test is unsuitable for you, the maternity and child health clinic will suggest a combination screening, in which case you will visit HUSLAB (all HUS laboratories) for a blood sample before the first prenatal ultrasound on gestation week 10+0–10+6, which will also concur with the other early pregnancy blood samples.

Results of the screening

Normal results of the NIPT screening (or combination screening) will be sent to you by letter in about one month. In the case of an abnormal result in the NIPT screening (or combination screening), the Prenatal Research Unit will contact you directly for possible further screenings.

1. Early pregnancy ultrasound and/or chromosomal aberration screening

Early pregnancy ultrasound examinations are performed by a specially trained midwife in gestation week 11+0–13+6, either through the vagina or from the top of the abdominal wall. The study will determine the number of foetuses and can be used to estimate the duration of the pregnancy more accurately based on the time of the last menstrual period alone. In addition, the screening can measure neck swelling and examine the general structure of the foetus. Increased neck swelling may indicate an increased risk of a chromosomal or structural abnormality. The early pregnancy prenatal ultrasound also reveals significant and severe structural abnormalities. If the foetus is found to have pronounced neck swelling or a structural abnormality, we will provide you with further information and arrange for further screening.

2. Structural survey

The structural ultrasound examination is performed by a specially trained midwife in gestation week 19–21 from the top of the abdominal wall. This examination can discover approximately three in four of significant structural foetal abnormalities. If the ultrasound examination raises a suspicion of an abnormality, the expectant mother is directed to further screening. It is possible to carry out a structural examination later, in gestation weeks 24–26, but abortion is no longer possible at that stage, even if a severe structural abnormality is discovered in the foetus.