References

- Mackie, FL et al. The accuracy of cell-free fetal DNA-based noninvasive prenatal testing in singleton pregnancies: a systematic review and bivariate meta-analysis. BJOG 2017; 124: 32– 46
- 2. Gregg AR, et al. Noninvasive prenatal screening for fetal aneuploidy, 2016 update: a position statement of the American College of Medical Genetics and Genomics. Genet Med. 2016 Oct;18(10):1056-65
- American College of Obstetricians and Gynaecologists Committee on Practice Bulletins—Obstetrics; Committee on Genetics; Society for Maternal-Fetal Medicine. Screening for Fetal Chromosomal Abnormalities: ACOG Practice Bulletin, Number 226. Obstet Gynecol. 2020 Oct;136(4):e48-e69
- Alberry M. et al. Free fetal DNA in maternal plasma in anembryonic pregnancies: confirmation that the origin is the trophoblast. Prenat Diagn. 2007 May;27(5):415-8
- Papageorghiou A. et al. Clinical evaluation of the IONA® test: a non-invasive prenatal screening test for Trisomy 21, 18 and 13 Ultrasound Obstet Gynecol 2015 47 (2): 188–193
- GP Guy et al. Secondary non-invasive prenatal screening for fetal trisomy: an effectiveness study in a public health setting BJOG 2020 128(2): 440-2446
- Khalil A. et al. Non-invasive prenatal screening in twin pregnancies with cell-free DNA using the IONA[®] test: a prospective multicentre study AJOG. 2021 225(1):79.e1-79.e13
- Akolekar. R et al. Risk of miscarriage following amniocentesis or chorionic villus sampling: systematic review of literature and updated meta-analysis. Ultrasound Obstet Gynecol, 2019 54:4

Talk to your healthcare provider for more information and how to get started with the Vantage[®] Test.



Our mission is to empower lives through genomics; revolutionise personalised healthcare towards a patientcentric approach by providing more accurate and clinically relevant testing with better accessibility.

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Obtain a Vantage view of your pregnancy, Safely and Peacefully



The Vantage® Test is powered by the IONA® Nx NIPT platform, a CE-IVD in vitro diagnostic test from Yourgene Health PLC, a molecular diagnostic company from Manchester, UK.

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What is the Vantage® Test?

The Vantage[®] Test is a non-invasive prenatal screening test (NIPT/NIPS) that uses a type of DNA sequencing technology known as whole genome sequencing (WGS) to estimate the risk of chromosomal abnormalities and other genetic conditions such as Down's Syndrome in a developing foetus by using a sample of the mother's blood. It is generally done during the first or second trimester of pregnancy. It is considered a highly accurate¹ test compared to traditional antenatal screening tests such as the Combined Test (also known as the OSCAR Test in some countries)^{2,3}.

How does the Vantage® Test work?

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During pregnancy, the placenta sheds cell-free DNA (cfDNA) into the mother's bloodstream⁴. As a result, the mother's blood contains a mixture of placental and maternal cfDNA. By evaluating the cfDNA in blood and combining this with the mother's background risk of a trisomy (i.e. the mother's age), a likelihood ratio is derived to predict the possibility of a chromosomal condition such as Down's Syndrome in the foetus.



What does the Vantage® Test screen for?

It screens for many common genetic abnormalities⁵⁻⁷, including common trisomy conditions such as Down's Syndrome (Trisomy 21), sex chromosomal conditions such as Turner Syndrome (Monosomy X), and clinically relevant microdeletion syndromes such as DiGeorge Syndrome (22q11.2 deletion).

List of conditions the Vantage® Test screens for:

Common Trisomy	Trisomy 21 (Down's Syndrome)
	Trisomy 18 (Edwards' Syndrome)
	Trisomy 13 (Patau's Syndrome)
Microdeletions	22q11.2 (DiGeorge Syndrome)
	1p36 (1p36 Deletion Syndrome)
	15q11.2 (Prader-Willi / Angelman Syndrome [#])
	5p (Cri-du-Chat Syndrome)
	4p16.3 (Wolf-Hirschhorn Syndrome)
Add-on optional screening options	
Add-o	n optional screening options
Add-or Sex Chromosomal	n optional screening options Monosomy X (Turner Syndrome)
Add-or Sex Chromosomal Aneuploidies	n optional screening options Monosomy X (Turner Syndrome) Trisomy X (Triple X Syndrome)
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Add-or Sex Chromosomal Aneuploidies	n optional screening options Monosomy X (Turner Syndrome) Trisomy X (Triple X Syndrome) XXY (Klinefelter's Syndrome) XYY (Jacob's Syndrome)
Add-or Sex Chromosomal Aneuploidies Extended Autosomal Aneuploidies	n optional screening options Monosomy X (Turner Syndrome) Trisomy X (Triple X Syndrome) XXY (Klinefelter's Syndrome) XYY (Jacob's Syndrome) Additional chromosomal analysis across the rest of the other 19 chromosomes for monosomy or trisomy conditions.

*Prader-willi and Angelman Syndrome are two specific clinical conditions affected by the same microdeletion. 'Not available in selected countries and not applicable for nonidentical twins. Please check with your healthcare provider for more information.

Can the Vantage[®] Test screen for all genetic conditions?

While most NIPT/NIPS, including the Vantage® Test, screen for the more common chromosomal abnormalities, it cannot detect all genetic conditions. Some genetic diseases, such as single gene disorders and structural chromosomal abnormalities, may not be detected by NIPT/NIPS. Your healthcare provider may recommend another genetic test if you are suspected to be at an increased risk for a particular genetic condition.

Who are suitable candidates for the Vantage® Test?

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Suitable for:

- Pregnancies from 10 weeks of gestation
- Singleton or twin pregnancies
- IVF, donor egg or surrogate pregnancies

Unsuitable if the mother:

- Has cancer
- Has received an organ transplant
- Has undergone immunotherapy or stem cell therapy
- Has a chromosomal or genetic condition
- Had a blood transfusion in the last four months

How is the Vantage® Test reported?

Low Risk: It is unlikely that your baby is affected by a genetic condition.

High Risk: There is an increased risk that your baby is affected by a genetic condition. Further confirmatory testing will be required.

No Result: In a small number of cases, the test may not yield a result for various reasons. Your healthcare provider will discuss the other options with you for such instances.

What happens if I get a "High Risk" Result?

Your healthcare provider will review the result with you and help you understand the available options to make an informed decision. An invasive procedure such as amniocentesis or chorionic villus sampling (CVS) may be offered to confirm the screening result. However, both these procedures are invasive and carry a small risk of miscarriage⁸. The risk of miscarriage often presents a dilemma for parents, with many preferring NIPT/NIPS, such as the Vantage[®] Test, instead of these invasive procedures as a first-line testing option.

It is important to remember that NIPT/NIPS is a screening test, not a diagnostic test. As false positive and false negative results may occur, NIPT/NIPS results are never definitive. If you have concerns about your result, you should discuss them with your healthcare provider.

When will I receive my result?

Your healthcare provider will usually receive your results within four to six working days from the day the laboratory receives your blood sample.