VERAgene®
comprehensive NIPT



Single test for aneuploidies,
microdeletions
and monogenic diseases

MEDICOVER
GENETICS

VERAgene NEW GENERATION NIPT

VERAgene is a **comprehensive non-invasive prenatal test (NIPT)** that can accurately identify pregnancies at high risk of certain foetal genetic conditions such as **chromosomal aneuploidies**, **microdeletions**, and **single-gene (monogenic) diseases**, as early as the **9th week** of pregnancy.

- Applicable for women of **all ages**
- Validated for **singleton** and **twin** pregnancies
- Self-egg **IVF** pregnancies
- Preferred for its **clinical performance**

WHAT IS A PRENATAL TEST?

Prenatal test is a test that a pregnant woman can take to check if her foetus has certain genetic conditions. Prenatal tests are divided into **screening** and **diagnostic**, which **work synergistically**.

WHY SHOULD I CONSIDER NIPT?

Every pregnancy carries a chance of chromosomal abnormalities, regardless of maternal age or family history. NIPT is the most accurate non-invasive screening test available for common chromosomal conditions, including Down syndrome[1,2]. With a simple blood test, it provides reliable information about your baby's risk and can help support informed decisions about your pregnancy care.

Because of its high accuracy, NIPT reduces the likelihood of false-positive results and may help avoid unnecessary invasive procedures such as amniocentesis or CVS. Additionally, certain genetic conditions, such as **sex chromosome aneuploidies** and **selected microdeletions**, are **not always associated with maternal age** and may not be detected through traditional biochemical screening.

WHY TEST FOR **MONOGENIC DISEASES** DURING MY NIPT?

VERAgene provides a broader view of your baby's genetic risk during pregnancy. In addition to screening for common chromosomal conditions and selected microdeletions, it also assesses the risk for certain monogenic disorders.

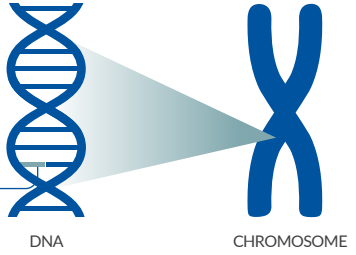
This can be especially important if carrier screening was not performed before pregnancy, as some inherited conditions may still be present even when there is no known family history and both parents are healthy. By combining these different layers of screening in one test, VERAgene can provide earlier information to support counselling, follow-up testing when needed, and informed decision-making.

1. *Dungan, Jeffrey S., et al. "Noninvasive Prenatal Screening (NIPS) for Fetal Chromosome Abnormalities in a General-Risk Population: An Evidence-Based Clinical Guideline of the American College of Medical Genetics and Genomics (ACMG)." Genetics in Medicine, vol. 25, no. 2, 2023, p. 100336*
2. *ACOG Committee Practice on Bulletins. "Screening for Fetal Chromosomal Abnormalities." Obstetrics & Gynecology, vol. 136, no. 4, 2020, pp. 859–867.*
3. *Gregg, Anthony R., et al. "Noninvasive Prenatal Screening for Fetal Aneuploidy, 2016 Update: A Position Statement of the American College of Medical Genetics and Genomics." Genetics in Medicine, vol. 18, no. 10, 2016, pp. 1056–1065.*

WHAT DOES **VERAgene** NIPT TEST FOR?

The conditions tested by VERAgene are relatively common in the population and can significantly affect the health, development, and quality of life of the affected individual.

Prenatal detection of these conditions can **improve prenatal care** and facilitate making **informed decisions** early on.



GENE MUTATION
A change in the DNA

AUTOSOMAL ANEUPLOIDIES

A change in one of the chromosomal pairs 1-22

Down syndrome *(Trisomy 21)*
Edwards syndrome *(Trisomy 18)*
Patau syndrome *(Trisomy 13)*

Down, Edwards and Patau syndromes are the most common autosomal foetal aneuploidies. The incidence of these conditions **increases with maternal age**.

SEX CHROMOSOME ANEUPLOIDIES (SCAs)

A change in the 23rd chromosomal pair, which defines gender

Turner syndrome *(Monosomy X)*
Triple X syndrome *(Trisomy X)*
Klinefelter syndrome *(XXY)*
Jacobs syndrome *(XYY)*
XXYY syndrome

SCAs occur frequently in the population. They are not associated with maternal age, and as such they could potentially occur in pregnancies **irrespective of maternal age**.

MICRODELETIONS

A small part of a chromosome is missing

DiGeorge syndrome *(22q11.2)*
1p36 deletion syndrome *(1p36)*
Smith-Magenis syndrome *(17p11.2)*
Wolf-Hirschhorn syndrome *(4p16.3)*
Cri-du-Chat syndrome *(5p)**
Prader–Willi & Angelman syndromes *(15q11–q13)**

Apart from DiGeorge syndrome, which occurs frequently in the population, most microdeletions are rare. Microdeletions are **not associated with maternal age**, and as such have the same possibility of occurring in women **of all ages**.

**These microdeletions are currently tested at Medicover Genetics' laboratories in Cyprus and will be progressively introduced across additional laboratories within the Medicover Genetics network.*

MONOGENIC DISEASES

A DNA change in a specific gene

100 Monogenic diseases

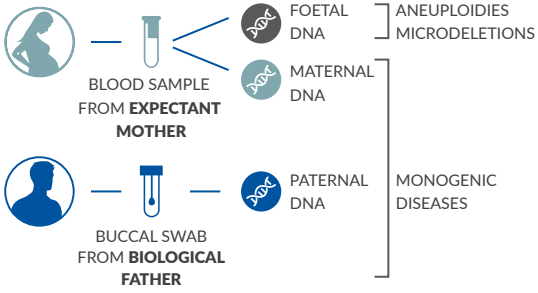
Disorders tested are of haematological, renal, cardiac, and metabolic nature, among others.

For a complete list of the diseases, please visit www.medicover-genetics.com

Monogenic, or single-gene, diseases are inherited diseases caused by a change in a specific gene. Examples include **alpha-thalassaemia**, **cystic fibrosis**, and **sickle cell disease**. These conditions may not present abnormalities detectable through conventional screening methods, such as ultrasound. Therefore, early identification of the risk for a monogenic disease during pregnancy can support improved clinical management and informed decision-making.

HOW DOES **VERAgene** WORK?

During pregnancy, foetal DNA travels from the placenta to your bloodstream and circulates along with your own DNA. The healthcare provider will collect a blood sample from you, and a buccal swab from the biological father and send them to our laboratory for analysis. The blood sample, containing your DNA and the foetal DNA, will be analysed for aneuploidies and microdeletions. The biological father's DNA will be analysed along with your DNA to assess the risk to the foetus for monogenic diseases based on the genetic status of the parents. Our proprietary technology and bioinformatics will accurately calculate the risk of the foetus having an aneuploidy, microdeletion or monogenic disease.



HOW SAFE IS VERAgene?

VERAgene is safe and does not pose any risk for you or your baby.

ARE THE CONDITIONS TESTED BY VERAgene ASSOCIATED WITH MATERNAL AGE?

The incidence of autosomal aneuploidies increases with maternal age. However, SCAs, microdeletions and monogenic diseases are not associated with maternal age so they can manifest at any maternal age group. In fact, medical gynaecological societies[1,2] recommend testing for:

- Trisomies 21, 18, 13
- SCAs
- 22q11.2 deletion

The VERAgene test can be done by all pregnant women regardless of age or risk category.

WHAT ARE THE BENEFITS OF VERAgene NIPT OVER OTHER NIPTs?

VERAgene is an advanced and comprehensive NIPT that provides a broader assessment of your baby's genetic health compared to conventional NIPTs. While traditional NIPTs mainly screen for common chromosomal conditions and selected microdeletions, VERAgene goes a step further by also assessing the risk for 100 inherited monogenic disorders.

By combining multiple layers of genetic screening into a single test, VERAgene offers a more complete picture of foetal genetic risk, focusing on conditions with established clinical significance and high prevalence in the general population.



BENEFITS OF **VERAgene**

EASY
Blood sample from the pregnant woman and buccal swab from the biological father

SAFE
Non-invasive sample collection

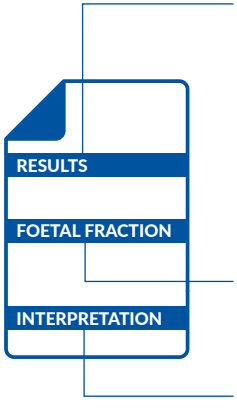
ACCURATE
>99% detection rate*

FAST
Results in 4-7 working days from sample receipt

**The percentage refers to the detection of aberrations (changes in the chromosomes or the DNA) covered by VERAgene*

WHAT WILL THE **REPORT** SAY?

The VERAgene report will be sent to your healthcare provider. It will include a detailed explanation which will guide your healthcare provider on the best clinical management for you.



VERY LOW RISK

Reduced possibility of the foetus having one of the tested conditions

- In cases of very low risk results, your healthcare provider will continue with routine pregnancy clinical management.

VERY HIGH RISK

Increased possibility of the foetus having one of the tested conditions

- In cases of very high risk results, your healthcare provider will advise you on recommended next steps, such as genetic counseling and performing an invasive procedure to confirm whether the foetus has the genetic condition.

The percentage of the foetal DNA in the maternal circulation
Correct measurement of the foetal fraction is vital for accurate test results. VERAgene accurately measures foetal fraction using novel technology, and reports the foetal fraction percentage on the report as per recommendations from medical gynaecological societies[3].

A summary of the results and recommendations

Medicover Genetics offers upon request genetic counselling before and after VERAgene testing to help patients understand the purpose of testing, possible outcomes, and the implications of their results, supporting informed decisions throughout the process.

PEACE OF MIND

In cases where a high-risk result is reported, confirmatory testing using amniotic fluid can be performed upon request. This additional analysis helps verify the result and provides detailed information about the specific genetic variant(s) linked to the condition, offering greater clarity and confidence for you and your healthcare provider.

Compliance Disclaimer
VERAgene NIPT is a screening test, not a diagnostic test.
A high-risk result should always be confirmed by invasive diagnostic testing such as amniocentesis before any clinical decision is made.
VERAgene is validated for singleton, twin, and vanishing twin pregnancies (including IVF using self egg), but it is not suitable for patients with a history of malignancy, recent transfusion, or transplant, or for pregnancies achieved through donor eggs or surrogacy.
Availability and test configurations may vary by region and local legislation.
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HOW CAN I TAKE THE **VERAgene** TEST?



Be at least 9 weeks pregnant



Ask your healthcare provider about **VERAgene**



Your healthcare provider will collect a blood sample from you and a buccal swab from the biological father



The samples will be sent to **Medicover Genetics**



The sample will be analyzed at **Medicover Genetics** laboratories



Results will be sent to your healthcare provider within 4-7 working days from sample receipt

MORE **QUESTIONS**?

If you have additional questions or concerns, please contact us at **info.genetics@medicover.com**

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www.medicover-genetics.com

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