VERACITY®
new generation NIPT



Delivering
results you can
trust

MEDICOVER
GENETICS

VERACITY NEW GENERATION NIPT

VERACITY is a **non-invasive prenatal test** (NIPT) that analyses cell-free foetal DNA (cfDNA) circulating in maternal blood to evaluate the risk of selected chromosomal abnormalities in the foetus. Suitable from the **9th week of pregnancy**, VERACITY can be offered to all expecting mothers, regardless of maternal age and risk classification.

VERACITY panels have been specifically designed to screen for frequent and clinically relevant chromosomal abnormalities, providing reliable and meaningful information during pregnancy.

WHY RECOMMEND **VERACITY**?

VERACITY enables clinicians to deliver clear, evidence-based results early in pregnancy, facilitating timely counselling, diagnostic follow-up, and coordinated management planning.

VERACITY aligns seamlessly with first-trimester combined screening workflows by offering cfDNA-based risk assessment that can be performed alongside ultrasound and biochemical evaluation. When used alongside conventional prenatal screening tests, VERACITY contributes to a more comprehensive assessment of the pregnancy, facilitates clinical counselling, and helps clinicians identify patients who may benefit from further diagnostic testing.

Clinical Utility

According to professional societies such as ACMG, ACOG and ISPD, NIPT is the most accurate screening test for the detection of common foetal aneuploidies[1,2,3]. The use of NIPT in combination with conventional prenatal screening tests provides thorough evaluation of the pregnancy and improves prenatal care.

NIPT can reduce the number of invasive diagnostic procedures for common foetal autosomal aneuploidies and can also increase the prenatal detection rate for **sex chromosome aneuploidies** (SCAs) and **microdeletions** which:

- are not associated with maternal age
- often do not have ultrasound or biomarker findings

Early and accurate cfDNA screening in the first trimester enhances risk assessment and supports informed pregnancy management and clinical decision-making.

The ACMG recommends[1]:

- NIPT screening for all pregnant patients with singleton and twin gestations for foetal trisomies 21, 18 and 13
- NIPT screening for patients with singleton gestation for SCAs
- NIPT screening for all patients for 22q11.2 deletion

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 on Practice Bulletins. "Screening for Fetal Chromosomal Abnormalities." Obstetrics & Gynecology, vol. 136, no. 4, 2020, pp. 859–867*
3. *Hui, Lisa, et al. "Position Statement from the International Society for Prenatal Diagnosis on the Use of Non-Invasive Prenatal Testing for the Detection of Fetal Chromosomal Conditions in Singleton Pregnancies." Prenatal Diagnosis, vol. 43, no. 7, 16 May 2023, pp. 814–828*

VERACITY PANELS

VERACITY is available in three validated panels designed to meet different levels of prenatal screening needs. Each focuses on chromosomal conditions with established medical relevance and clear clinical management pathways.

VERACITY Core

Screens for the most common chromosomal abnormalities associated with significant clinical outcomes.

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

Optional reporting of presence/absence of Y chromosome.

VERACITY Plus

Includes all conditions from the Core panel and the following sex chromosome aneuploidies (SCAs).

Turner syndrome (*Monosomy X*)
Triple X syndrome (*Trisomy X*)
Klinefelter syndrome (*XXY*)
Jacob's syndrome (*XYY*)
XXYY syndrome

Reporting of presence/absence of Y chromosome.

VERACITY Advanced

Comprehensive screening that includes all conditions from the Plus panel and the most prevalent microdeletion syndromes of clinical significance.

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

Reporting of presence/absence of Y chromosome.

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

WHO IS **VERACITY** APPLICABLE FOR?

	Autosomal	Sex Chromosome Aneuploidies	Microdeletions
Singleton	●	●	●
Twin/Vanishing Twin	●		●
IVF (Self-egg used) Singleton	●	●	●
IVF (Self-egg used) Twin/Vanishing Twin	●		●
IVF (Donor egg used or Surrogate) Singleton	●	●	●

Clinical Results that Matter

TARGETED METHODOLOGY

Unlike whole-genome sequencing, **VERACITY's** targeted methodology reduces background noise and analytical artifacts and focuses only on genomic regions of proven medical significance. This approach supports high sensitivity and specificity for both common aneuploidies and clinically significant microdeletions for reliable results. **VERACITY** uses novel Targeted Capture Enrichment Technology that enables aneuploidy detection as well as foetal fraction measurement with unparalleled **accuracy** and **reliability**.

TEST **PERFORMANCE**

VERACITY's performance has been validated through peer-reviewed and internal studies demonstrating **high sensitivity**, **specificity**, and **reproducibility** for common trisomies, sex chromosome aneuploidies, and clinically significant microdeletions. Its analytical process maintains robust performance even in low foetal fraction samples (≥3%).

Autosomal Aneuploidies

KARYOTYPE	NO.	FOLLOW-UP	CORRECT CALLS	SPECIFICITY	NPV
NORMAL	10280	10280	10280	99.98% (95% CI, 99.93 - 99.998%)	100% (95% CI, 99.96 - 100%)
KARYOTYPE	**NO.**	**FOLLOW-UP**	**CORRECT CALLS**	**SENSITIVITY**	**PPV**
Trisomy 21	126	44	44	100% (95% CI, 92 - 100%)	100% (95% CI, 92 - 100%)
Trisomy 18	24	10	10	100% (95% CI, 69 - 100%)	100% (95% CI, 69 - 100%)
Trisomy 13	16	7	5	100% (95% CI, 48 - 100%)	71% (95% CI, 29 - 96%)

Sex Chromosome Aneuploidies

KARYOTYPE	NO.	FOLLOW-UP	CORRECT CALLS	SPECIFICITY	NPV
NORMAL	6200	6200	6200	99.95% (95% CI, 99.86 - 99.99%)	100% (95% CI, 99.94 - 100%)
KARYOTYPE	**NO.**	**FOLLOW-UP**	**CORRECT CALLS**	**SENSITIVITY**	**PPV**
45, X	16	7	4	100% (95% CI, 40 - 100%)	57% (95% CI, 18 - 90%)
47, XXX	6	2	2	-	-
47, XXY	10	4	4	-	-
47, XYY	3	0	-	-	-
48, XXYY	1	1	1	-	-

Kypri et al. "Non-invasive Prenatal Testing of Fetal Chromosomal Aneuploidies: Validation and Clinical Performance of the Veracity Test." Molecular Cytogenetics vol. 12 34. 15 Jul. 2019

Microdeletions

	SENSITIVITY	SPECIFICITY
DiGeorge syndrome (22q11.2)*†	100% (95% CI: 73.5-100%)	100% (95% CI: 99.5-100%)
Wolf-Hirschhorn syndrome (4p16.3)*†	100% (95% CI: 39.8-100%)	100% (95% CI: 99.5-100%)
Smith-Magenis syndrome (17p11.2)*†	100% (95% CI: 69.2-100%)	100% (95% CI: 99.5-100%)
1p36 deletion syndrome*†	100% (95% CI: 29.2-100%)	100% (95% CI: 99.5-100%)
Prader-Willi and Angelman syndromes (15q)*	91% (95% CI: 72-99%)	100% (95% CI: 99.3-100%)
Cri-du-Chat syndrome (5p)*	92% (95% CI: 64-99.8%)	100% (95% CI: 99.3-100%)

**Internal validation was conducted using spiked samples*
†Internal validation was conducted with clinical samples

BENEFITS OF **VERACITY**

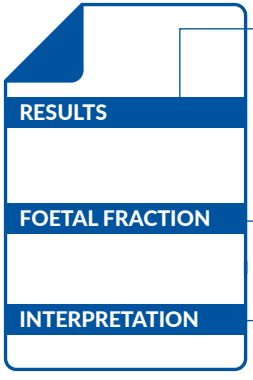
ACCURATE
>99% accuracy

SAFE
Non-invasive procedure

EASY
Blood sample from pregnant woman

FAST
Results in 4-7 working days from sample receipt

WHAT WILL THE **REPORT** TELL ME?



VERY LOW RISK
Reduced likelihood of the foetus having one of the tested conditions

VERY HIGH RISK
Increased likelihood of the foetus having one of the tested conditions
As VERACITY NIPT is a screening test, high-risk results should always be confirmed with a diagnostic test.

According to the ACMG 2016 Position Statement, foetal fraction is accurately measured and reported for every sample using validated bioinformatic analysis (*Gregg et al. 2016)*

Concise, standardised explanation of findings and clear recommendations for appropriate clinical follow-up or confirmatory testing when indicated

A negative result does not eliminate the possibility of other genetic conditions, nor does it guarantee a healthy baby.

What can I do after VERACITY?

- Inform your patient about the result
- Recommend genetic counselling, if applicable
- Confirm very high risk results with a prenatal diagnostic procedure
- Discuss next steps and management
- Genetic counselling can be offered to doctors or patients upon request

Compliance Disclaimer
VERACITY NIPT is a screening test, not a diagnostic test. Any very high risk result should be confirmed with invasive diagnostic testing, such as amniocentesis, before clinical decisions are made.
VERACITY is validated for singleton, twin, and vanishing twin pregnancies, including IVF (self egg, donor egg singleton, and surrogate) cases, but is not suitable for patients with recent transfusion, transplant, or malignancy.
Availability of specific test panels may vary by region depending on local legislation.
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HOW TO ADMINISTER THE **VERACITY** TEST?

Recommend **VERACITY** to the expectant parents

Collect a blood sample from the pregnant woman



Send the samples to **Medicover Genetics**

The samples will be analysed at **Medicover Genetics** laboratories

Results will be available within 4-7 working days from sample receipt, through a secure digital portal

MORE **QUESTIONS**?

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

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