



PRENATAL SCREENING

FMF APPROVED TESTING METHOD



ACCREDITED BY



Lab Reg. No. 94568



Maternal serum screening combines ultrasound measurements with the analysis of biochemical markers that aid in screening pregnancies for risks for trisomies 21, 18 and 13

Ultrasound measurements

Biochemical markers



Combined Screening

offers enhanced sensitivity towards early detection of common chromosomal abnormalities

First Trimester Screening (11-13.6 weeks)

Double Marker

Double marker offers early information about a baby's risk of having Down syndrome (trisomy 21), Patau syndrome (Trisomy 13) and Edward syndrome (Trisomy 18).

First trimester screening, also called the first trimester combined test, has two steps:

- A blood test to measure levels of two pregnancy-specific substances in the mother's blood - pregnancy-associated plasma protein-A (PAPP-A) and human chorionic gonadotropin (HCG)
- An ultrasound exam to measure the size of the clear space in the tissue at the back of the baby's neck (nuchal translucency)

First Trimester Quadruple

Parameters: PAPP-A + Free β hCG + PIGF + AFP
Risk assessment – Trisomy 21, Trisomy 18, Trisomy 13

Earlier risk assessment of other pregnancy complications like Pre-eclampsia and NTD

Detection rate without NT - 80% with 5% FPR
Detection rate with NT – 95% with 5% FPR

Penta Screening (11-13.6 weeks)

The Pentascreen maternal serum test is a first trimester screen that evaluates five maternal serum parameters to assess the risk of a baby being born with Trisomies 21, 18 and 13 and open neural tube defects. It can also predict maternal risk for early and late onset Pre-eclampsia*.

Parameters: Free β hG + PAPP-A + AFP + PIGF + Inhibin A

Risk assessment – Trisomy 21, Trisomy 18, Trisomy 13, Pre-eclampsia and Open Neural Tube Defects (NTDs).

*PIGF is a predictive marker for early and late onset Pre-eclampsia (PE).

	Detection Rate	False Positive Rate
Trisomy 21	93%	5%
Early onset PE	96%	10%
Late onset PE	77%	10%

Second Trimester Screening (15-20.6 weeks)

Quadruple Marker

Free β -hCG, AFP, Unconjugated estriol (uE3) Inhibin-A

The Quad Screen is a second trimester screen that assesses the risk of a baby being born with Trisomies 21,18 and 13 and open neural tube defects (ONTDs)

TEST	DETECTION RATE FOR TRISOMY 21	FALSE POSITIVE RATE
Double Marker Screening	85%	4-7%
First Trimester Quadruple	95%	5%
Penta Screening without NT	93%	5%
Triple Marker	69%	14%
Quadruple Screening	81%	7%

The Advantages of Free Beta hCG : The use of free beta hCG in screening for chromosomal abnormalities has been demonstrated to be more effective than intact or total hCG in the first trimester.

Non-Invasive Prenatal Screening (NIPS)

Noninvasive prenatal testing (NIPT) based on cell-free DNA analysis from maternal blood is a screening test for aneuploidy status for all autosomes including common chromosomal conditions like trisomy 13, trisomy 18, and trisomy 21, sex chromosome abnormalities and select microdeletion syndromes.

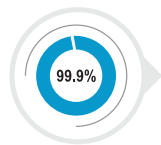
The American College of Obstetricians and Gynecologists (ACOG) and the Society for Maternal-Fetal Medicine (SMFM) endorse NIPT as having the highest detection rate and lowest false positive rate for the common aneuploidies regardless of maternal age or baseline risk, of all screening options.



Higher accuracy and lower false positive rates



Accurate fetal fraction measurement



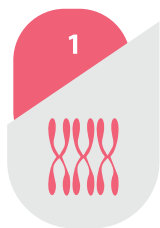
Higher than 99.9% sensitivity and specificity in detecting fetal trisomies



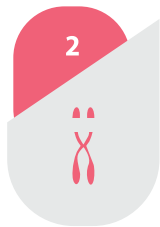
Can be done from 10 weeks of Pregnancy



Dual Technology
Massive Parallel Sequencing
Targeted Capture Sequences



Basic NIPS
Aneuploidies

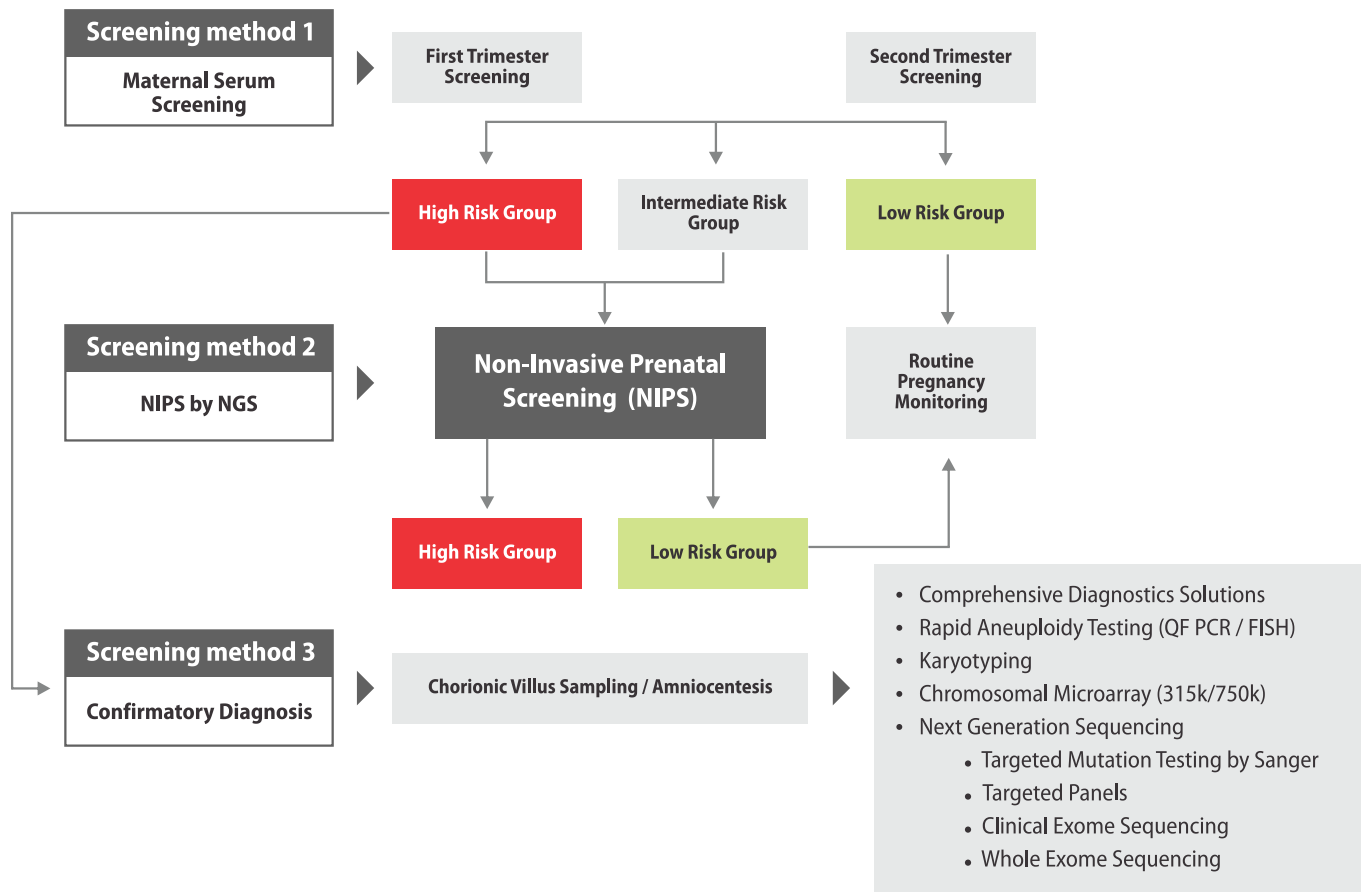


Advanced NIPS
Aneuploidies + microdeletion syndromes



Comprehensive NIPS
Aneuploidies + microdeletion syndromes+ 100 single gene disorders

Non Invasive Prenatal Screening Algorithm



Why choose us?

- Performed on FMF (UK) approved DELFIA® and Roche platforms
- Completely atomized analytical workflow cycles that ensure accurate testing and documentation
- Efficient specimen handling and reporting
- Assisting clinical decisions by internationally accepted and validated risk assessment software's – Life cycle & Astraia
- Validated reporting by national and international quality assessment programs
- Genetic counselling services for patient support
- End to end prenatal diagnostic solutions for patient who require advanced genetic testing

Central Processing Centre

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