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Non-invasive Prenatal Test (NIPT) , *BLOOD IN STRECK TUBE*

PATIENT DETAILS:			
Maternal Weight (Kg)	49	**Pregnancy Status**	Singleton
Maternal Height (ft)	-	**Clinical Indication**	Increased Risk for Trisomy 21 in Dual Marker Test
Gestational Age	14 Weeks 1 day	**Sample Quality**	Optimal

TEST RESULT SUMMARY	
Chromosomes	**Screening Test Result**
Chromosome 13	Low Risk
Chromosome 18	Low Risk
Chromosome 21	Low Risk
Sex Chromosomes	Low Risk
Other Chromosomes	Low Risk

INTERPRETATION	
Result	**Interpretation**
Low Risk Aneuploidy	Low probability for the fetus to be affected with specific chromosomal anueuploidy
High Risk Aneuploidy	High probability for the fetus to be affected with specific chromosomal anueuploidy. Confirmatory invasive diagnostic testing is recommended.
Test Failed	Due to indefinite reasons result is not obtained with the given sample. Repeat sample testing is advised. Invasive testing is recommended if No Result of repeat sample.

This test does not report the gender of the fetus.

Genetic counseling recommended.

PCPNDT Registration Number: NMMC/PNDT/314

*** Marked values are the critical values.**

***** End Of Report *****

Patient Details			
Patient UHID	LDAA03362121	**SIN No.**	MO00063578
Gestational Age	14 Weeks 1 day	**Pregnancy**	Singleton

Sample Information	
Fetal Fraction	11.20%
Sample Information	Qubit Fluorometer (ng/ul):9.38; Volume (ul): 50; Total amount (ng): 469

I. Screening results

Chromosomes	Risk	Z score	Test Results	Reference interval
Chromosome 13 		1.94	Low Risk	-6<Z score<2.8
Chromosome 18 		0.68	Low Risk	-6<Z score<2.8
Chromosome 21 		-0.19	Low Risk	-6<Z score<2.8
Sex Chromosomes		Part II	Low Risk	Part II
Other Chromosomes		Part III	Low Risk	Part III

Low Risk; High Risk — Further Investigation Recommended

II. Sex Chromosomes

Sex Chromosome Aneuploidies	Risk	Z score	Test Results
XO		0.09	Low Risk
XXY/XYY			Low Risk
XXX			Low Risk

Low Risk; High Risk — Further Investigation Recommended

III. Other Chromosomes

Chromosome	Risk	Z score	Test Results	Reference interval
Chromosome 1 		0.22	Low Risk	-6<Z score<6
Chromosome 2 		-1.23	Low Risk	-6<Z score<6
Chromosome 3 		-0.12	Low Risk	-6<Z score<6
Chromosome 4 		-0.49	Low Risk	-6<Z score<6
Chromosome 5 		-0.27	Low Risk	-6<Z score<6
Chromosome 6 		0.57	Low Risk	-6<Z score<6
Chromosome 7 		0.11	Low Risk	-6<Z score<6
Chromosome 8 		1.05	Low Risk	-6<Z score<6
Chromosome 9 		-0.92	Low Risk	-6<Z score<6
Chromosome 10 		0.07	Low Risk	-6<Z score<6
Chromosome 11 		-0.76	Low Risk	-6<Z score<6
Chromosome 12 		-0.61	Low Risk	-6<Z score<6
Chromosome 14 		0.49	Low Risk	-6<Z score<6
Chromosome 15 		0.47	Low Risk	-6<Z score<6
Chromosome 16 		-0.09	Low Risk	-6<Z score<6
Chromosome 17 		-1.23	Low Risk	-6<Z score<6
Chromosome 19 		-0.36	Low Risk	-6<Z score<6
Chromosome 20 		-0.62	Low Risk	-6<Z score<6
Chromosome 22 		1.13	Low Risk	-6<Z score<6

Low Risk; High Risk — Further Investigation Recommended

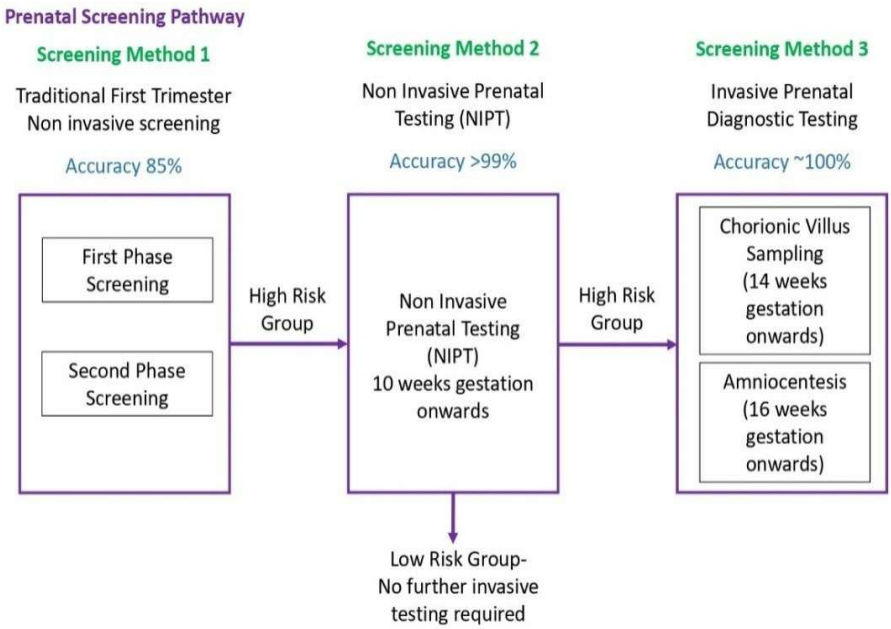
Pipeline version: 97bef21

IV. Supplementary information

1. The NIPT test screens a maternal blood sample for chromosome aneuploidy in placental DNA using the following methodology:
   (1) Extraction of cell-free placental DNA from the maternal blood sample
   (2) High throughput sequencing of the extracted cell-free placental DNA
   (3) Calculation of molecular mass of placental DNA in all chromosomes
2. The method is intended for use in pregnant women who are at least 10 weeks of pregnancy. The method is suitable for both singleton and twin pregnancies. The accuracy may be slightly lower in twin pregnancies due to multiple sources of fetal DNA.
3. Based on the scope, the NIPT test can detect the followin:
   Whole Genome - 23 pairs of human chromosomes
   Sex chromosomal aneuploidies: XO, XXX, XXY/XYY
4. The test is capable of genome-wide aneuploidy detection over the whole fetal genome and gives the results for 23 pairs of chromosomes. This test confers an accuracy of up to 99% on the detection of fetal aneuploidy for chromosomes 13, 18 and 21. In a study of over 2000 samples, 6 samples were determined to be at high-risk of having an autosomal aneuploidy other than 13, 18 and 21. This is a prevalence rate of 0.3%, which is consistent with prevalence in published studies.

Results are indicated for screening, NOT diagnosis. – (Results should be reviewed and discussed with your clinician.)

This test does not report the gender of the fetus.



About NIPT prenatal screen

The NIPT prenatal screen is a new advanced non-invasive prenatal screening solution using the latest developments in DNAtechnology to detect placental DNA in maternal blood. It offers a menu-based chromosome analysis to estimate the risk of afetus having Down's syndrome and other genetic disorders. Enabling pregnant women and their families fast, safe and reliable results and reducing the need for invasive tests and the associated risks, stress and anxiety. NIPT Prenatal screen is indicated for use in pregnantwomen who are at least 10-week pregnant. Chromosomal aneuploidy can then be detected using bioinformatics analyses, where the detection rate and sensitivity are over 99%.

Limitations

NIPT prenatal screen is a screening test and all high-risk results should be confirmed through further investigation which may include tests such as amniocentesis or Chorionic Villus Sampling (CVS). Pregnant women with a high-risk result should be referred for geneti counseling and offered invasive prenatal diagnosis for confirmation of test results. Pregnant women with a negative test result do not ensure an unaffected pregnancy. While results of this testing are highly accurate, not all chromosomal abnormalities may be detected due to placental, maternal or fetal mosaicism, or other causes (micro-deletions, chromosome re-arrangements, translocations, inversions, unbalanced translocations, uniparental disomy). The test is not reportable for known multiple gestations, or if the gestational age is less than 10 weeks.

Test method

A simple maternal blood sample is taken from the pregnant mother from 10-week gestation with no risk to the fetus. Circulating cell-free placental DNA was purified from the plasma component of anti-coagulated 10mL of maternal whole blood. It was thenconverted into a genomic DNA library for Next Generation Sequencing and then determination of chromosomal aneuploidy.

References:

1. Obstet Gynecol 2012;119:890-901.
2. BMJ 2011;342:c7401.
3. Prenat Diagn 2012;32:c7401.
4. ACOG/SMFM Joint Committee Opinion No. 545, Dec 2012.