Patient Name	**: Mrs. DIVYA JUVEKAR**	Specimen Drawn ON	: 25/Aug/2024 06:18PM
Age/Gender	: 31 YRS /F	Specimen Received ON	: 26/Aug/2024 12:48PM
UHID/MR No	: APUN.0000076331	Report Date	: 26/Aug/2024 04:39PM
Visit ID	**: MPUN76331**	Client Code	: PUNE325
Ref Doctor	: Dr.SELF	Barcode No	: B8174131
Client Name	: M.K.DIAGNOSTIC CENTER	Ref Customer	: SELF

DEPARTMENT OF MATERNAL MARKER

Test Name	Result	Unit	Bio. Ref. Range	Method
DOUBLE MARKER(FIRST TRIMESTER SCREENING)				
Clinical Details				
Birth Day	20/01/1993		Age	
Age At Term	32.10			
Maternal Weight	81.00	Kg		
Gestational Age By CRL	12 weeks 5 days			
Scan Date	24/08/2024			
Previous trisomy	NO			
Pregnancy	SINGLE			
Dibetes melitus	NO			
Smoking	NO			
Result of Measured val, Risk Val				
Mom Papp A	0.72			
Mom HCG	3.00			
Mom Nuchal Translucency	0.74			
Risk Factor				
Age Risk at term	1:727			
Trisomy 21 Risk With Nt	~1:582			
Risk for Trisomy 13/18 (With NT)	1:99000			

Cut off levels in various disorders and detection rate

ABNORMALITY	CUT OFF	DETECTION RATE	FALSE POSITIVE
TRISOMY-21	1:250	Approximately 85%	5-10%
TRISOMY -13/18	1:100	Approximately 85 %	5-10%

Useful For

Prenatal screening for Down syndrome (nuchal translucency, pregnancy-associated plasma protein A, human chorionic gonadotropin) and trisomy 18 (nuchal translucency, pregnancy-associated plasma protein A, human chorionic gonadotropin).

Clinical Information

Multiple marker serum screening has become a standard tool used in obstetric care to identify pregnancies that may have an increased risk for certain birth defects such as Down syndrome and trisomy 18. Second-trimester multiple marker screening has been well established for over a decade. During 2002 through 2006, firsttrimester screening has been established as an alternative option of equal or better performance compared with the best second-trimester screening programs.

This report has been validated by:

DR. ANIL GUPTA
M.B.B.S , M.D. (PATH)
SR. CONSULTANT PATHOLOGIST
REGD. NO. 5015

DR. PAWAN KUMAR
Phd. BIOCHEMISTRY
CONSULTANT BIOCHEMIST

DR. NEERU AGARWAL
M.B.B.S , M.D. (PATH)
DEPUTY LAB DIRECTOR
DMC NO. 21087

DR. UMA SHANKAR
M.B.B.S , M.D. (PATH)
CONSULTANT PATHOLOGIST
DMC NO. 68471

QR CODE

CRL DIAGNOSTICS PVT. LTD.
Plot No. 10, Avtar Enclave, Opposite Metro Pillar No. 227, Paschim Vihar, Rohtak Road, New Delhi-110063
E-mail : info@crldiagnostics.com, web : www.crldiagnostics.com, Phone : + 011-42-78-78-78

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DEPARTMENT OF MATERNAL MARKER

Test Name	Result	Unit	Bio. Ref. Range	Method

The first-trimester screen is performed by measuring analytes in maternal serum that are produced by the fetus and the placenta. Additionally, the nuchal translucency (NT) measurement is a sonographic marker shown to be effective in screening fetuses for Down syndrome. A mathematical model is used to calculate a risk estimate by combining the analyte values, NT measurement, and maternal demographic information. The laboratory establishes a specific cutoff for each condition, which classifies each screen as either screen-positive or screen-negative. A screen-positive result indicates that the value obtained exceeds the established cutoff. A positive screen does not provide a diagnosis, but indicates that further evaluation should be considered.

Serum Analytes

Human chorionic gonadotropin (total/free beta-hCG):
hCG is a glycoprotein consisting of alpha and beta subunits. hCG is synthesized by placental cells starting very early in pregnancy and serves to maintain the corpus luteum and, hence, progesterone production during the first trimester. Thereafter, the concentration of hCG begins to fall as the placenta begins to produce steroid hormones and the role of the corpus luteum in maintaining pregnancy diminishes. Increased total /free hCG levels are associated with an increased risk for Down syndrome.

Pregnancy-associated plasma protein A (PAPP-A):
PAPP-A is a 187 kDA protein comprised of 4 subunits: 2 PAPP-A subunits and 2 pro-major basic protein (proMBP) subunits. PAPP-A is a metalloproteinase that cleaves insulin-like growth factor-binding protein-4 (IGFBP-4), dramatically reducing IGFBP-4 affinity for IGF1 and IGF2, thereby regulating the availability of these growth factors at the tissue level. PAPP-A is highly expressed in first-trimester trophoblasts, participating in regulation of fetal growth. Levels in maternal serum increase throughout pregnancy. Low PAPP-A levels before the 14th week of gestation are associated with an increased risk for Down syndrome and trisomy 18.

Nuchal translucency (NT):
The NT measurement, an ultrasound marker, is obtained by measuring the fluid-filled space within the nuchal region (back of the neck) of the fetus. While fetal NT measurements obtained by ultrasonography increase in normal pregnancies with advancing gestational ag, Down syndrome fetuses have larger NT measurements than gestational age-matched normal fetuses. Increased fetal NT measurements can therefore serve as an indicator of an increased risk for Down syndrome.

Interpretation

Screen-Negative:
A screen-negative result indicates that the calculated screen risk is below the established cutoff of 1/250 for Down syndrome and 1/100 for trisomy 18. A negative screen does not guarantee the absence of trisomy 18 or Down syndrome. Screen-negative results typically do not warrant further evaluation.

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DEPARTMENT OF MATERNAL MARKER

Test Name	Result	Unit	Bio. Ref. Range	Method

Screen-Positive:
When a Down syndrome risk cutoff of 1/250 is used for follow-up, the combination of maternal age, pregnancy-associated plasma protein A, human chorionic gonadotropin, and nuchal translucency has an overall detection rate of approximately 85% with a false-positive rate of 5% to 10%. In practice, both the detection rate and false-positive rate increase with age, thus detection and positive rates will vary depending on the age distribution of the screening population.

Cautions:
Upon receiving maternal serum screening results, all information used in the risk calculation should be reviewed for accuracy (eg, maternal date of birth, demographics, sonographic information). If any information is incorrect, the laboratory should be contacted for a recalculation of the estimated risks. This test does not screen for neural tube defects.

Variables Affecting Marker Levels:
● All serum marker multiple of medians are adjusted for maternal weight (to account for dilution effects in heavier mothers). The estimated risk calculations and screen results are dependent on accurate information for gestation, maternal age, and weight. Inaccurate information can lead to significant alterations in the estimated risk.

● A screen-negative result does not guarantee the absence of fetal defects. A screen-positive result does not provide a diagnosis, but indicates that further diagnostic testing should be considered (an unaffected fetus may have screen-positive result for unknown reasons). In fact, given the low prevalence of Down syndrome, the majority of women with a positive screen will not have a Down syndrome fetus.

● In twin pregnancies, the risk for Down syndrome is approximated, using twin-adjusted medians. A specific risk for trisomy 18 cannot be calculated; therefore, results for trisomy 18 are reported as either screen-negative or screen-positive. Risks for triplets and higher multiples cannot be calculated.

Note-A positive screen must be followed with triple/quadruple screen, NIPT (non-invasive prenatal testing) or an amniocentesis test along with imaging studies.

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

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DUAL MARKER

PATIENT INFORMATION

NAME: Mrs. DIVYA JUVEKAR
PATIENT CODE: B8174131
DOB: 20/01/1993 (DDMMYYYY)
LMP:
PHYSICIAN:

CLINICAL INFORMATION

GESTATIONAL AGE: 12 weeks 5 days from CRL of 62.9 mm on 24/08/2024
MATERNAL AGE AT TERM: 32.1 years
MATERNAL WEIGHT: 81.0 kg
MATERNAL RACE: INDIAN
MATERNAL HISTORY: IDDM(N), SMOKER(N), RH(N), VPA(U), SSRI(U), CBZ(U), IVF(N)
GESTATION: Singleton
SCREENING STATUS: Initial sample
PARA / GRAVIDA: 0 / 1

SPECIMEN

SPECIMEN CODE: NA
COLLECTION DATE: 25/08/2024

RECEIVED: 26/08/2024
REFERRING LAB #: NA
REPORTED: 26/08/2024

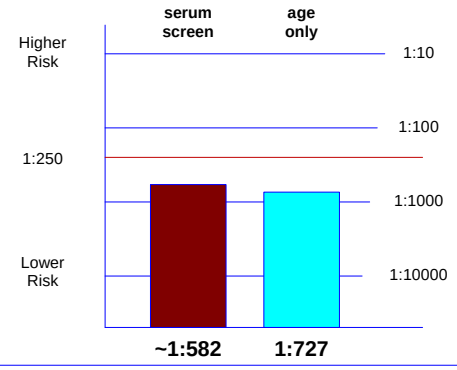
CLINICAL RESULTS

Assay	Results	MoM
PAPP-A	813.30 ng/mL	0.72
hCG (T1)	269.0 IU/ml	3.00
NT	1.2 mm	0.74
NB:	Present	

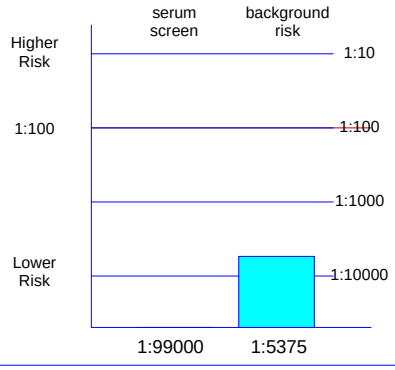
Risk Assessment (at term)

Down Syndrome	~1:582
Age alone	1:727
Equivalent Age Risk	33.4
Trisomy 18/13	1:99000

DOWN SYNDROME



TRISOMY 18/13



Interpretation* .

DOWN SYNDROME — **Screen Negative**
The risk of Down syndrome is LESS than the screening cut-off.

TRISOMY 18/13 — **Screen Negative**
The risk of Trisomy 18/13 is less than the screening cut-off.

Comments:

Accuracy of gestational age is essential for valid interpretation.

Reviewed by: _____