Lilac Insights™ passion • commitment • genetics

EVICO Screen™ Evidence Based Comprehensive Screening

EVICO DUO PE+ Dual Marker Screening

To: **SJS HealthCare Limited**
Birthing Centre, Department of Obstertics - Gynaecholgy
1st Floor, Gynec OPD, SPS Apollo Hospital, Sherpur Chowk , G.T Road ,Ludhiana
Punjab
Ludhiana - 141003
Contact: 8872027206

Sample ID	2320000789
Patient ID	160248328
Collected on	12/07/2024
Reported on	-
Referred by	**Dr. NIDHI THAKUR**

Understand Your Report In Detail

Scan QR code

Patient Name: Mrs. RITU VERMA **Patient DOB: 30/03/1985**

EVICO DUO PE+ : Dual Marker Screening

A. Common Aneuploidies Screening

Conditions (Disorder)	Final Adjusted Risk (at term)	Interpretation	
T21 (Down syndrome)	**1: 2**	High Risk	LOW INTERMEDIATE HIGH
T18 (Edwards' syndrome)	**1: 4257**	Low Risk	LOW HIGH
T13 (Patau syndrome)	**1: 6810**	Low Risk	LOW HIGH

Marker	Multiple Of Median(MoM)
Free ß-hCG	3.64
PAPP-A	0.33
PLGF	0.51
UTPI	0.71

Suggestions

• Detailed anomaly scan with integrated testing combining the second trimester biochemistry and Genetic Sonogram to assess for markers and defects for chromosomal abnormalities
• Definitive testing through fetal karyotyping to confirm.
In view of free bHCG MoMs observed in the mother, kindly consider correlation with fetal growth and well being scan at 28 - 30 weeks.

B. Pre-eclampsia Screening

Final Adjusted Risk **1: 193** **Low Risk**

Interpretation LOW HIGH

Reference: Ultrasound Obstet Gynecol 2018; 52: 186 - 195, K. H. Nicolaides et.al (Fetal Medicine Foundation (UK) 2018)

C. SGA/IUGR

In the view of maternal history, patient demographics and observed biochemical MoM values, there appears to be **increased predisposition to SGA/IUGR**. Consider clinical correlation and increased surveillance in pregnancy.

Reference: Ultrasound Obstet Gynecol 2021; 57: 52-61, K. H. Nicolaides et.al (Fetal Medicine Foundation (UK) 2021)

D. Fetal Macrosomia

In the view of maternal history, patient demographics and observed biochemical MoM values, there appears to be **low predisposition to Fetal Macrosomia.**.

Reference: Ultrasound Obstet Gynecol 2016; 47: 332-339, K. H. Nicolaides et.al (Fetal Medicine Foundation (UK) 2016)

Note: All the above assessments have been calculated based on the clinical information provided in the test requisition form.

MoM: Multiple of Median , SGA: Small for Gestation Age, IUGR: Intrauterine Growth Restriction

NABL MC-6043 UK NEQAS International Quality Expertise Lab Reg. No. 90968

Verified by
Mr. Pradip Kadam
Incharge Biochemistry
(FMF ID: 147760)

Verified by
Dr. Suresh Bhanushali
MD (Path), Consultant Pathologist

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Patient name : Mrs. RITU VERMA **Sample ID** : 2320000789

EVICScreen™ is an evidence based Comprehensive prenatal screening program curated by Lilac Insights in accordance with the Fetal Medicine Foundation (UK) guidelines for First Trimester Screening to determine the probability of **most common chromosomal aneuploidies** in a pregnancy as well as the common pregnancy disorders such as **pre-eclampsia, fetal macrosomia, IUGR/SGA.** It utilizes

- Hormonal values from the pregnancies measured on Fetal Medicine Foundation (UK) accredited analyzers and reagents
- Robust indigenous medians from over 10 lac+ pregnancies for different gestation age & maternal age screened at Lilac Insights
- Risk predictions from evidence based algorithms developed and validated through large international studies carried by Fetal Medicine Foundation (UK)

UKNEQAS: United Kingdom National External Quality Assessment Service

RIQAS: Randox International Quality Assessment Scheme

ASSURED QUALITY ASSURED

The Risk Assessment Performed Using CE-marked Antenatal Risk Evaluation Software Certified by the British Standards Institute (BSI)- ISO 13485:2016

Ongoing Pregnancy Details

No. of fetuses : 1
EDD : 14/01/2025
Age at Term : 39.8 Years
GA is Based on : CRL 73.2mm at 12/07/2024
LMP Date : 13/04/2024
Certainty : Regular
Smoking : None
Assisted Reproduction : No

Parity : Nulliparous
Height : 146.0 cm
Weight : 61.00 Kg
Ethinicity :Asian

Previous Pregnancy Details

Aneuploidies
- ☐ Down syndrome
- ☐ Patau syndrome
- ☐ Edwards' syndrome
- ☐ NTD syndrome

Pre-eclampsia
- ☐ PE in previous pregnancy
- ☐ Pat. mother had PE

Other
- ☐ Insulin dependent diabetes
- ☐ Chronic hypertension

EDD: Estimated Due Date | GA: Gestation Age | LMP: Last Menstrual Period | FHR: Fetal Heart Rate | NTD: Neural Tube Defect | PE: Pre-eclampsia | DOB: Date of Birth | CRL: Crown Rump Length | free-ß-hCG: free-Beta Human Chorionic Gonadotropin | NT: Nuchal Translucency | NB: Nasal Bone | PAPP-A: Pregnancy-associated Plasma Protein-A | MAP: Mean Arterial Pressure | UTPI- Uterine Artery Pulsality Index | PLGF: Placental Growth Factor | AFP: Alpha-Fetoprotein

Sample Type: Serum
Method: Time-resolved Fluroimmunoassay
Risk assessment: Algorithm validated by SURUSS 2003, N.J Wald

Specimen Details

Pregnancy Type: Singleton
Sample ID: 2320000789
Collected On: 12/07/2024
Received On: 14/07/2024
Scan by: DR.RAMANDEEP KAUR
Scan Date: 12/07/2024
CRL : 73.2 mm

Patient ID: 160248328
GA at Coll Date: 13 W 3 D
Registered On: 14/07/2024
GA at Scan Date: 13 W 3 D

Parameter	Concentration	Units	Corr. Mom
Free-ß-hCG	106.00	ng/mL	3.64
PAPP-A	1693.78	mU/L	0.33
PLGF	45.29	pg/mL	0.51
NT	2	mm	1.29
NB	Present		
MAP	86.83	mmHg	1.02
UTPI	1.09	--	0.71

Detailed Risk Assessment

Disorder	Aneuploidies			Pre-eclampsia
	Trisomy 21 (Down Syndrome)	Trisomy 18 (Edwards' Syndrome)	Trisomy 13 (Patau Syndrome)	PE before 34 weeks (Early PE)
Cut-off	1:250	1:100	1:100	1: 100
Age/ Apriori risk	1:136	1:1223	1:3670	--
Final risk (at term)	1:2	1:4257	1:6810	1: 193
Result	High Risk	Low Risk	Low Risk	Low Risk

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Verified by Mr. Pradip Kadam Incharge Biochemistry (FMF ID: 147760)

Verified by Dr. Suresh Bhanushali MD (Path), Consultant Pathologist

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Prenatal Screening Background

Every pregnant woman carries a certain degree of risk that her fetus/baby may have certain chromosomal defect/ abnormalities. Diagnosis of these fetal chromosomal abnormalities requires confirmatory testing through analysis of amniocytes or Chorionic Villous Samples (CVS). However, amniocentesis and CVS procedures carry some degree of risk for miscarriage or other pregnancy complications (Tabor and Alfirevic, 2010). Therefore, in routine practice, prenatal screening tests are offered to a pregnant woman to provide her a personalised risk for the most common chromosomal abnormalities (T21-Down syndrome, T18- Edwards' syndrome, T13- Patau syndrome) using her peripheral blood sample. Based on this risk assessment, if the risk is high or intermediate, you can take informed decision of opting for invasive procedure such as amniocentesis or CVS followed by confirmatory diagnostic test(s), as per discussion with your clinician.

PRENATAL SCREENING TESTS ARE NOT CONFIRMATORY TESTS. THEY ARE LIKELIHOOD ASSESSMENT TESTS.

You may get your prenatal screening result as either of the following:-

High Risk — A High Risk Result does not mean that the pregnancy is affected with the condition. It means that the likelihood of the pregnancy having a condition is higher than the cut-off (Most commonly used cut-off is 1:250 and this represents the risk of pregnancy loss from confirmatory testing through CVS or amniocentesis).

Low Risk — A Low Risk result does not mean that the pregnancy is not affected with a condition. It means that the likelihood of the pregnancy having a condition is lower than the cut-off.

Intermediate Risk — An intermediate Risk result means that the pregnancy has an equivocal or a borderline risk of being affected with a condition. In this case, you may want to choose a second stage screening modality like an Integrated Screening Test that is done between 16 to 20 weeks of pregnancy or a Non-invasive Prenatal Screening Test between 12 to 20 weeks of pregnancy before taking a decision on an invasive confirmatory testing. This will help you improve the sensitivity of the screening test keeping an invasive test a last option were you to come as a high risk in the second stage screening test.

Significance Of Multiple Of Medians (MoMs)

Prenatal screening involves assessing the likelihood of specific pregnancy-related conditions by analyzing various markers, including hormonal levels, biophysical measurements, and ultrasound findings. Hormones, particularly those produced by the fetus or placenta, not only provide insights into the risk of chromosomal abnormalities but also signal potential issues with placental function. This, in turn, can lead to complications such as pre-eclampsia, intrauterine growth restriction (IUGR), and fetal macrosomia.

In addition to hormonal markers, various other biophysical and ultrasound markers can also offer indications of possible placental impairment. Therefore, it is essential to consider both the reported multiples of the median (MoMs) for these markers and the available information about the pregnancy when interpreting the screening results. This comprehensive approach provides a more thorough understanding of the pregnancy's status and potential risks.

Limitations of the Test:

As prenatal screening tests are not confirmatory diagnostic tests, the possibility of false positive or false negative results can not be denied. The results issued for this test does not eliminate the possibility that this pregnancy may be associated with other chromosomal or sub- chromosomal abnormalities, birth defects and other complications.

Nuchal Translucency is the most prominent marker in screening for Trisomy 13, 18, 21 in the first trimester and should be measured in accordance with the Fetal Medicine Foundation (UK) guidelines. Nuchal Translucency or Crown Rump Length measurement, if not performed as per FMF (UK) imaging guidelines may lead to erroneous risk assessments and Lilac Insights bears no responsibility for errors arising due to sonography measurements not performed as per these criteria defined by international bodies such as FMF (UK), ISUOG.

It is assumed that the details provided along with the sample are correct. The manner in which this information is used to guide patient care is the responsibility of the healthcare provider, including advising for the need for genetic counselling or additional diagnostic testing like amniocentesis or Chorionic Villus Sampling. Any diagnostic test should be interpreted in the context of all available clinical findings. As with any medical test, there is always a chance of failure or error in sample analysis though extensive measures are taken to avoid these errors.

Note:

- Quality of the Down syndrome screening program (Biochemical values, MoMs and Risk assessments) is monitored by UKNEQAS on an ongoing basis.
- This interpretation assumes that patient and specimen details are accurate and correct.
- Lilac Insights does not bear responsibility for ultrasound measurements like CRL,NT,NB etc. We strongly recommend that ultrasound measurements are performed as per FMF (UK)/ISUOG practice guidelines.
- It must be clearly understood that the results represent risk and not diagnostic outcomes. Increased risk does not mean that the baby is affected and further tests must be performed before a firm diagnosis can be made. A Low Risk result does not exclude the possibility of Down syndrome or other abnormalities, as the risk assessment does not detect all affected pregnancies.
- Each sample received at Lilac Insights' processing centre is handled with the utmost sensitivity and care. All samples received on Sundays and National holidays are stored as per specific guidelines for the respective specimens and processed on the next day.
- PE risk stratification is done using a cut-off of 1:100 as per ASPRE study.

For more information, visit our website at: www.lilacinsights.com/faq-pns

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