

PRENATAL CARE

Only Labcorp can help detect preeclampsia across all pregnancy trimesters



Identifying and managing preeclampsia

While the exact cause of preeclampsia isn't fully understood, the condition is thought to be a result of placental dysfunction and poor blood vessel development between mother and baby restricting blood flow.

The United States is considered to be 5-7 years behind other developed countries in services like preeclampsia reproductive care. Women who have had preeclampsia have 3-4 times the risk of high blood pressure and double the risk of heart disease and stroke. They also have an increased risk of developing diabetes.³

5%-7%

of all pregnancies in the U.S. are affected¹ 60%

of preeclampsia deaths are preventable⁴

\$2.18 billion

U.S. economic burden of preeclampsia during the first 12 months after birth, primarily due to premature birth²



What are the signs of preeclampsia?



Preeclampsia presents in diverse ways, often with the same symptoms as a regular pregnancy, and therefore can be difficult to identify and diagnose early enough to avoid progression to a serious lifethreatening situation.

Early intervention can help enhance patient care and management



With first-trimester preeclampsia screening, you can:

- Help determine earlier in the pregnancy the risk of developing the condition before 34 weeks
- Assess alternate pregnancy management pathways (e.g., blood pressure monitoring, aspirin prophylaxis)
- Allocate valuable resources to those most at risk



With second/third trimester preeclampsia screening, you can:

- Get prognostic data to identify risk of hospitalized patient's progression to severe features within two weeks
- Help determine who will need to be transferred to a tertiary care hospital
- Evaluate the potential need for medical treatment and/or intervention for the pregnant person and developing baby

Comprehensive solutions that improve patient outcomes

Labcorp's first trimester preeclampsia screening test uses a blood specimen drawn between 11 and 14 weeks' gestation and assesses a combination of maternal factors plus two biochemical markers and two biophysical markers. The screening delivers higher sensitivity compared to using maternal history and demographics alone. The test also includes a proprietary algorithm to assess the risk of developing preeclampsia later in pregnancy. This screening test is suitable for any pregnant patient and may be especially helpful for first-time pregnancies or those with no known risk factors.

Labcorp's second and third trimester preeclampsia test uses a blood specimen drawn between 23 and 34.9 weeks' gestation. The screening test uses two biochemical markers (sFlt-1 and PIGF) to assess the risk of preeclampsia progressing to severe symptoms within the subsequent two weeks. This test is FDA cleared for use in hospitalized patients.

	1st Trimester Preeclampsia Screen, 486230	Preeclampsia Risk Evaluation for 2nd and 3rd Trimester, 486226	
Intended use	Screening test - risk of developing preeclampsia prior to 34 weeks' gestation	Prognostic confirmation test - risk of preeclampsia progressing to severe symptoms within the subsequent two weeks	
Blood draw	First trimester (11 - 14 weeks' gestation)	Second and third trimesters (23 - 34.9 weeks' gestation)	
Specimen type	Serum, frozen or refrigerated	Serum or plasma (K2 EDTA), frozen	
Results	Individualized risk: <1:100 = High risk	sFlt-1:PIGF ratio (≥ 40 = High risk)	
TAT	2-5 days	1-2 days	
Biomarkers	 PIGF = Placental growth factor (protein) PAPP-A = Pregnancy associated plasma protein A (protein) MAP = Mean arterial pressure (dual-cuff blood pressure monitor) UtAPI = Uterine artery pulsatility index (transvaginal ultrasound/doppler) 	 sFlt-1 = Serum soluble fms-like tyrosine kinase 1 (protein) PIGF = Placental growth factor (protein) 	
Test performance ^{5,6}	Sensitivity 90%Specificity 90%PPV 47%NPV 99%	Sensitivity 93.5%Specificity 74.9%PPV 65.2%NPV 95.8%	

Table 1. Preeclampsia testing features

Factors used in preeclampsia risk assessment	Sensitivity	Specificity
Maternal factors, PIGF, PAPP-A	68.3% (55.0-79.7)	90%
Maternal factors, PIGF, PAPP-A, MAP	76.7% (64.0-86.6)	90%
Maternal factors, PIGF, PAPP-A, UtAPI	78.3% (65.8-87.9)	90%
Maternal factors, PIGF, PAPP-A, UtAPI, MAP	90.0% (79.5-96.2)	90%

 $Table~2.~Various~approaches~to~using~maternal~and~biochemical~factors,~as~well~as~biophysical~markers~in~first-trimester~preeclampsia~risk~assessment^7\\$

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Racial Disparities in Maternal Mortality

The maternal mortality rate among non-Hispanic Black women is 3.5 times that of non-Hispanic white women.⁸ Preeclampsia—as well as other blood pressure and heart conditions—are leading causes of maternal death for Black women.⁸



Scan the QR code

to read a mother's story about advocating for her health when facing a preeclampsia diagnosis.

References

- Centers for Disease Control and Prevention. Preeclampsia, genomics and public heath. cdc.gov. October 25, 2022. Accessed April 24, 2024. https://blogs.cdc.gov/genomics/2022/10/25/preeclampsia/
- ACOG Practice Bulletin No. 202: Gestational Hypertension and Preeclampsia. *Obstet Gynecol*. 2019;133(1):1. doi:10.1097/AOG.0000000000003018
- Preeclampsia Foundation. Heart disease is the leading cause of death for women and appears to be increasing in women aged 35 to 54 years. Preeclampsia.org. Updated November 22, 2021. Accessed April 21, 2024. https://preeclampsia.org/ long-term-impact-healthcare-providers
- Main EK, McCain CL, Morton CH, Holtby S, Lawton ES. Pregnancy-related mortality in California: causes, characteristics, and improvement opportunities. *Obstet Gynecol*. 2015;125(4):938-947. doi:10.1097/AOG.000000000000000746
- 5. Internal Labcorp data.
- Levine RJ, Maynard SE, Qian C, et al. Circulating angiogenic factors and the risk of preeclampsia. N Engl J Med. 2004;350(7):672-683. doi:10.1056/NEJMoa031884
- Tan MY, Wright D, Syngelaki A, et al. Comparison of diagnostic accuracy of early screening for pre-eclampsia by NICE guidelines and a method combining maternal factors and biomarkers: results of SPREE. *Ultrasound Obstet Gynecol*. 2018;51(6):743-750. doi:10.1002/uog.19039.
- MacDorman MF, Thoma M, Declcerq E, Howell EA. Racial and Ethnic Disparities in Maternal Mortality in the United States Using Enhanced Vital Records, 2016–2017. Am J Public Health. 2021;111(9):1673-1681. doi:10.2105/AJPH.2021.306375

Partner with us for early detection of preeclampsia to help save and improve lives.

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