

INCREASING VIGILANCE WITH



PreeclampsiaScreen™ | T1 from PerkinElmer Labs/NTD

How to Measure Mean Arterial Pressure (MAP)

Measurement of mean arterial pressure (MAP) at 11 weeks, 0 days–13 weeks, 6 days' gestation can be useful as an added biophysical marker for accurate risk assessment of early onset preeclampsia. When combined with patient history and biochemical results, MAP measurement increases the detection rate of PreeclampsiaScreen™ | T1 to 77%, at a 5% false positive rate (FPR). When including uterine artery Doppler pulsatility index (UtAD-PI) measurement as well, the total combined detection rate for early onset preeclampsia is 91%, at a 5% FPR.¹

The patient's blood pressure should be taken using automated blood pressure devices that are calibrated at regular intervals.

FOLLOWING ARE THE NECESSARY STEPS TO OBTAIN AN ACCURATE MAP MEASUREMENT:

1. Instruct the patient to sit without crossing her legs and with her arms supported at the level of her heart (e.g., on armrests). See Figure 1.
2. Select an appropriate cuff size depending on the mid-arm circumference (small = 22–26 cm or 8.7–10.2 inches; regular = 27–34 cm or 10.6–13.4 inches; large = 35–44 cm or 13.8–17.3 inches).
3. After the patient has been at rest for 5 minutes, measure blood pressure in both arms simultaneously. A series of recordings at 1-minute intervals should be taken until readings become stable—i.e., when the difference in systolic blood pressure is less than 10 mmHg and the difference in diastolic blood pressure is less than 6 mmHg between consecutive readings in each arm.
4. Calculate the MAP by first figuring the average of the last two stable measurements of **each arm**. The measurement from the arm with **the higher final pressure** should be used for risk assessment by plugging it into the formula below, which results in one number (units in mmHg).



Figure 1

$$\text{MAP (in mmHg)} = \text{diastolic} + (\text{systolic} - \text{diastolic})/3$$

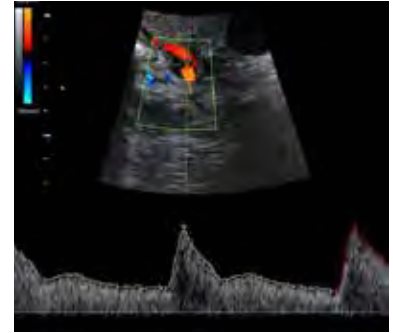
Please note: MAP increases with maternal weight in a normal pregnancy. In assessing whether a measurement is normal, maternal characteristics should be considered.

Questions? Contact us at 1-888-NTD-LABS (683-5227).

How to Obtain Uterine Artery Doppler (UtAD) Accreditation

PerkinElmer Labs/NTD supports appropriate training and accreditation of sonographers and physicians for measuring uterine artery Doppler pulsatility index (UtAD-PI). UtAD-PI measurement is not required for PreeclampsiaScreen™ I T1. However, the addition of this measurement, when combined with patient history and biochemical results, increases the detection rate to 82%, at a 5% FPR.¹ When including both UtAD-PI and MAP measurement, the total combined detection rate for early onset preeclampsia is 91%, at a 5% FPR.¹

The Fetal Medicine Foundation (FMF) USA offers a program of education, accreditation, and ongoing quality assurance for those who wish to obtain their UtAD-PI accreditation. For more information and to sign up for the course, please visit www.fetalmedicineusa.com/accreditation.php and scroll down to the section on Uterine Artery Doppler.



IN ORDER TO OBTAIN UTAD-PI ACCREDITATION, THE FOLLOWING MUST BE COMPLETED:

1. Complete the FMF USA online 11–13⁺⁶ Weeks Scan Course for Medical Practitioners, if you have not already done so.
2. Submit three images to FMF USA, all showing measurement of the UtAD-PI as well as the 2D plus color flow Doppler and pulsed Doppler gate placement. There is a one-time fee associated with film submission (if you have already paid this one-time fee to the FMF USA at any time, you do not need to pay again). Once the images are approved, the FMF USA will send a certificate for measuring uterine artery Doppler and you will be listed on the FMF USA weblist of Accredited Sonographers at <http://fetalmedicineusa.com>.

Working with Us

- Once accreditation is received, please fax certificates with your account number to PerkinElmer Labs/NTD at 1-631-425-0864. Please note, this process needs to be completed before submitting PreeclampsiaScreen™ I T1 samples that incorporate the UtAD-PI measurement.
- Consult our “PreeclampsiaScreen™ I T1 Getting Started” guide or contact your local PerkinElmer Labs/NTD sales specialist to educate your staff on the correct process for sending samples to our lab.

Don't Delay—Start Now!

Complete accreditation information is available at:
www.fetalmedicineusa.com/accreditation.php

Questions? Contact us at 1-888-NTD-LABS (683-5227).

¹PerkinElmer. Data on file.