



Plain Language Summary

Placental growth factor (PIGF)-based testing to help diagnose suspected preterm pre-eclampsia

SHTG Recommendation | March 2023

What is preterm pre-eclampsia?

Pre-eclampsia is a condition that you can get when you are pregnant. Early signs of pre-eclampsia are having high blood pressure and having protein in your urine. Pre-eclampsia affects up to 6% of pregnancies in the UK. Most of the time it is mild but sometimes it can be dangerous for both parent and baby.

‘Preterm’ means between 20 weeks and 36 weeks and 6 days of a pregnancy.

Pregnant people with suspected preterm pre-eclampsia are monitored closely and may need treatment. Some people can be monitored at home with regular checkups, but some people will need to be admitted to hospital.

Many pregnant people who are monitored for suspected pre-eclampsia do not go on to develop complications.

What are PIGF-based tests?

PIGF stands for ‘placental growth factor.’ PIGF is a hormone that helps new blood vessels to grow in the placenta. In pre-eclampsia, PIGF levels can be low.

PIGF-based tests measure the levels of PIGF in the blood. PIGF-based tests can help to show if someone has pre-eclampsia, or help rule out pre-eclampsia.

Why is this important?

It is important to know if someone who is pregnant has pre-eclampsia. For a small number of people, pre-eclampsia can develop into a more serious illness that can affect both parent and baby. Some people with pre-eclampsia will have symptoms, and will seek medical advice. Not everyone with pre-eclampsia will have symptoms. For people who don't have symptoms, suspected pre-eclampsia may be picked up at their routine antenatal appointments.

For some pregnant people, pre-eclampsia can be hard to diagnose, as their symptoms aren't obvious.

PIGF-based testing is another test that health care staff can use to help diagnose or rule out pre-eclampsia. This will help them decide on the best care options for pregnant people with suspected preterm pre-eclampsia.

What we did

The National Institute for Health and Care Excellence (NICE) in England published guidance on PIGF-based tests in July 2022. We used the work that NICE did to produce recommendations for people in Scotland. We used an internationally-recognised adaptation process to do this.

What we found

NICE said that four PIGF-based tests can be used to test for suspected preterm pre-eclampsia:

- DELFIA Xpress PIGF 1-2-3
- DELFIA Xpress sFlt-1/Xpress PIGF 1-2-3 ratio
- Elecsys immunoassay sFlt-1/PIGF ratio
- Triage PIGF Test

NICE also said that:

- the tests should be used alongside standard clinical assessment
- the tests could be particularly helpful for pregnant people from an African, Caribbean or Asian family background, because there is evidence that the risk of developing pre-eclampsia is higher in pregnant people in these groups
- the tests should not be used to make decisions on timing of birth, and
- more research is needed on how to use the tests in pregnancies with more than one baby, and whether it is appropriate to test someone more than once.

Following our adaptation process, we came up with recommendations for NHSScotland that are very similar to the recommendations produced by NICE.

What is our conclusion?

PIGF-based tests, used alongside standard clinical assessment, are recommended as an option to help clinicians rule in or rule out preterm pre-eclampsia.

This plain language summary has been produced based on SHTG Recommendation of Placental Growth Factor (PIGF)-based testing to help diagnose suspected preterm pre-eclampsia, March 2023