



Non-Invasive Prenatal testing for miscarriage

Patient Information

What is Non-Invasive Prenatal testing for miscarriage?

Non-Invasive Prenatal testing or NIPT for miscarriage is a blood test taken from the female partner in cases where a miscarriage has been diagnosed.

How does NIPT work?

DNA from the placenta of a pregnancy is present in the mother's blood and this can be detected by NIPT. This DNA is referred to as cell-free fetal DNA (cffDNA).

How can NIPT be helpful?

More than half of miscarriages occur because of a chromosomal abnormality within the pregnancy. This is not inherited but instead occurs by chance.

Knowing whether there was an underlying chromosomal abnormality can be invaluable. Not only does it provide information about the cause of the pregnancy loss which in turn helps guide further testing and future family planning, but more importantly having an answer can help couples significantly in processing the loss emotionally and psychologically.

Conventionally having confirmation of this involves direct testing of pregnancy tissue following miscarriage. This can be challenging for several reasons:

- Across most of the country, pregnancy tissue will only be tested after the 3rd or more miscarriage
- Obtaining the pregnancy tissue can be challenging, especially in cases of earlier miscarriage
- In over 1/3rd of cases, even when direct testing is undertaken, the result is inconclusive

NIPT can overcome these problems, providing valuable information about a pregnancy loss.



Who can have NIPT?

NIPT for miscarriage will provide information about the likely cause of miscarriage and can be useful for any couple wanting more information about their pregnancy loss. This is the case whether this is your first loss or you have had multiple losses. This also applies to couples who have had a loss through IVF as well as natural conception.

When can NIPT be done?

NIPT can be undertaken in pregnancies beyond the start of the 5th week of pregnancy based on the last menstrual period or embryo transfer date. The test must also be undertaken before the pregnancy has passed in order to reliably provide a result.

Does NIPT always provide an answer for the pregnancy loss?

Although NIPT will provide a result in the majority of cases, there are a few limitations to be aware of. In around 1.5% of cases, no result will be available. This is often because there was not enough cfDNA in the blood sample. Results are most consistent after the 7th week of pregnancy.

NIPT examines all 23 pairs of chromosomes for missing or extra chromosomes and therefore also determines the sex. These extra or missing chromosomes make up the majority of chromosomal abnormalities that cause miscarriage. However, up to 20% of miscarriages that occur due to a chromosomal abnormality are due to entire extra sets of chromosomes (polyploidy) or smaller chromosomal errors. These currently cannot be detected by NIPT and it is important to bare this is mind when interpreting the result.

How long does the result take?

Conventional testing directly on pregnancy tissue can take 6 or more weeks depending on geographical location. However, the result of NIPT testing will be available in 7-10 working days, following which we would recommend discussion with one of our doctors around the result.

If you would like to have this testing performed or would like further information please do contact the BCRM team and we will talk you through next steps.

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