



**Spectrum®**  
Preimplantation genetics

A better start with  
our original single  
gene test

**Spectrum Preimplantation Genetic  
Testing for Monogenic / Single Gene  
Mutations (PGT-M) with Parental  
Support™ and 24-Chromosome  
Preimplantation Genetic Testing for  
Aneuploidy (PGT-A)**

# What is Spectrum PGT-M?



Natera's methodology uses patented technology to improve detection of single gene conditions. Originated in 2009, Spectrum informs embryo selection by combining PGT-M and PGT-A testing with a typical accuracy of greater than 99%.

A single gene condition is caused by a change, known as a mutation, in a particular gene which causes that gene to function improperly or not function at all. Single gene conditions are passed through families.

Spectrum PGT-M screens a sample of cells removed from an embryo for inherited single gene conditions such as cystic fibrosis, spinal muscular atrophy (SMA), hemophilia and Tay-Sachs disease. In many cases, couples are 'carriers' of a gene mutation that does not affect their health, but puts their children at risk of inheriting the genetic condition.

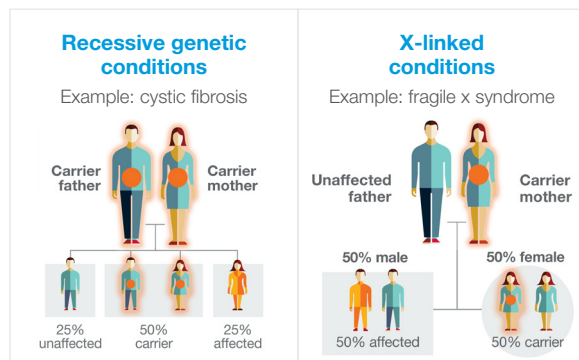
For individuals who know they are carriers of a single gene condition and are at risk for passing the condition on to their children, PGT-M can help identify unaffected embryo(s) for transfer through in vitro fertilization (IVF). PGT-M, performed concurrently with PGT-A, screens the embryo sample for the correct number of chromosomes, increases the likelihood of successful implantation, and lowers the chance for miscarriage.

# Who should consider Spectrum PGT-M?

If you have a child or relative with a single gene condition, or if you and your partner are carriers of a single gene condition, you may consider IVF with PGT-M to reduce the chance of having an affected child. Individuals who are affected with a single gene condition can use PGT-M to avoid passing down the condition.

## What is the likelihood that I could have an affected child if I am a carrier?

The likelihood of having an affected child depends on the type of genetic condition carried (see below image).



## How do I know if I am a carrier?

Carrier screening can be done prior to starting fertility treatment to see if you and your partner are carriers of a condition. If you want to learn more, visit [natera.com/horizon](https://natera.com/horizon), or talk to your doctor about Horizon carrier screening prior to starting your IVF cycle.

## How do I know if PGT-M can help me?

After we receive a completed Spectrum requisition from your doctor and a copy of your mutation report(s), our genetics team will perform an initial assessment, at no charge, to determine whether we can develop a customized test for you. Almost all cases can be accepted.

# How is Spectrum with Parental Support™ different from other PGT tests?

## The accuracy of Spectrum PGT-M testing is typically greater than 99%

Spectrum's patented technology has built-in safeguards to minimize the chances of a misdiagnosis. Although highly accurate, it is recommended that all pregnancies following PGT-M undergo prenatal diagnosis (CVS or amniocentesis) to confirm that the baby is not affected by the single gene condition.

## Spectrum is the only technology that confirms parentage

Natera's Parental Support technology uses genetic information from the parents to automatically confirm that the embryo samples match the parental samples.

## Spectrum improves the chance of a healthy pregnancy when PGT-M is performed concurrently with PGT-A<sup>1</sup>

PGT-A combined with PGT-M can:

- Increase the chance of embryo implantation
- Decrease the chance of miscarriage
- Reduce the time to pregnancy
- Reduce the chance of having a child with a chromosome abnormality or single gene condition

*"The genetic screening...created the opportunity for our family to be built SMA\*-free. Natera was there for us every step of the way, and they really were a bright spot in the process."*

- **Claire & Mark**, parents of a healthy baby girl

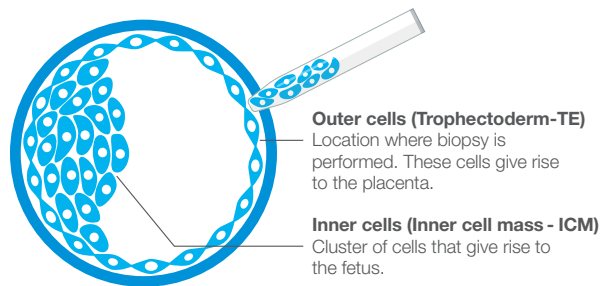
\* SMA stands for spinal muscular atrophy, an inherited single gene condition.



# How is PGT-M performed during an IVF cycle?

PGT-M requires embryo biopsy, the removal of either a single or a small number of cells from a growing embryo. This procedure can be performed on day 3 after egg retrieval, or more commonly, on days 5 - 7 when embryos reach the blastocyst stage of development.

## Blastocyst Terminology



## What other types of samples are required?



A blood, cheek, or sperm sample is required from BOTH the egg and sperm contributors. Family member samples may also be requested.

## How long does it take to make a custom test?



Test development typically takes 6-10 weeks from the receipt of all necessary samples.

## When will my results be available?



The cell(s) removed from the embryo are frozen and shipped to Natera for screening. Your embryo(s) remain at the clinic and are frozen, a process known as cryopreservation/vitrification. Results will be available in ~7 days after Natera receives the samples.

# Natera Support Services

## Learn more about Spectrum PGT-M

Please visit our website at [natera.com/spectrum](https://natera.com/spectrum) for additional information. Natera assigns a certified genetic counselor to your case once a requisition and mutation report(s) are received. The genetic counselor contacts you to discuss the PGT-M process including: Parental Support, test development, and the benefits and limitations of PGT-M testing.

Post-test information sessions can be scheduled to answer questions you could have after your doctor releases your results.

To schedule a session, visit [naterasession.com](https://naterasession.com) or call **1.877.476.4743**.



# Take advantage of our supporting services by texting the following keywords to 484848

## PGT to learn more about the test



Watch a short informational video about Spectrum PGT-A and PGT-M.

## DRAW for complimentary blood draw services



Once you receive your Spectrum parent collection kit and choose to submit blood samples, you can find a local blood draw site or schedule an appointment with a mobile phlebotomist.

## Learn more about Spectrum:

Call us **+1.877.476.4743**

Visit us **[natera.com/spectrum](https://natera.com/spectrum)**

### Footnotes:

1. Simon, Alexander L. et al. Fertility and Sterility (2018), Volume 110, Issue 1, 113–121.

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The test described has been developed and its performance characteristics determined by the CLIA-certified laboratory performing the test. The test has not been cleared or approved by the US Food and Drug Administration (FDA). Although FDA is exercising enforcement discretion of premarket review and other FDA legal requirements for laboratory-developed tests in the US, certification of the laboratory is required under CLIA to ensure the quality and validity of the tests. CAP accredited, ISO 13485 certified, and CLIA certified.

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