

How is MitoSure Scores calculated?

The Mitosure score is based on a ratio that is calculated via our sequencing system which takes the total number of mitochondrial DNA sequences / total number of nuclear DNA sequences. That ratio is then multiplied by a constant to generate the Progenesis MitoSure score. Mitosure scores tend to be lower for normal developing embryos and higher for slower developing embryos.


How does the score work?

In genetics monosomy refers to the condition in which only one chromosome from a pair is present in cells rather than the two copies usually found in normal (diploid) cells. A karyotype noted as: 45, XY, - 16 is an example of a monosomy 16 sample on our reports

## WHY CHOOSE PROGENESIS?

## 6 accuracy

We use high-resolution next generation sequencing for greater accuracy and sensitivity.

## SPEED

We provide turnaround times within 5-7 business days.

## VALUE

We are dedicated to genetic testing with patient's financial means in mind.

## PATIENT-CENTERED

We provide our patients with support throughout their family planning journey. We work with a team of genetic counselors to provide you with information to make informed decisions. Sessions are included in the testing cost.

## ONLINE ACCESS

Sign electronic consent, request genetic counseling, access educational materials, and pay online.
www.progenesis.com
support@progenesis.com
(858) 257-2122
portal.progenesis.com/login


## How does it work?

## MITOSURE FREQUENCY BY PLOIDY ALL PATIENTS

## WHAT IS MITOSURE

Mitosure is a measure of mitochondrial DNA (mtDNA), which is distinct from the majority of DNA in our cells.

## FOR CLINICS

Mitosure is considered a research-based and preliminary metric, not intended to be the sole means of a clinical decision. It is most useful for patients who might have multiple transfer options and similar embryo grades to help identify a prioritization strategy for transfer. Karyotype and embryo grade remain the two most important factors in transfer decision, so the weight of Mitosure score is considered tertiary to those two metrics.

Different laboratories will calculate mtDNA in different ways, so our lab's scoring system is likely to differ from another lab's. When it comes to interpreting our Mitosure scores, lower scores are preferable to higher scores There are three tiers: 0.2-1 (low), 1-2 (moderate), and 2+ (high).
(Mitosure value represented by following scores <1; 1-2 ; >2)

| Euploid: | Mitosure <1 | Mitosure 1-2 M | Mitosure >2 |
| :---: | :---: | :---: | :---: |
| Aneuploid: | Mitosure <1 | Mitosure 1-2 M | Mitosure >2 |
| Mosaic: | Mitosure <1 | Mitosure 1-2 M | Mitosure >2 |
|  | 53.1\% | 39.9\% | \% 7\% |
| All | 45.4\% | 43.5\% | 11\% |
|  | 48\% | 41.8\% | 10.2\% |
| Egg Donor | 52.1\% | 40.9\% | \% 7\% |
|  | 45.2\% | 43.2\% | 11.6\% |
|  | 48.1\% | 40.7\% | 11.1\% |
| <35 | 53.7\% | 39.5\% | \% 6.8\% |
|  | 47.6\% | 41.9\% | 10.5\% |
|  | 50.2\% | 40.2\% | 9.6\% |
| 35-37 | 52.1\% | 40.9\% | \% 7\% |
|  | 45.6\% | 43.8\% | 10.6\% |
|  | 44.6\% | 44.7\% | 10.7\% |
| 38-39 | 53.5\% | 39.1\% | \% 7.3\% |
|  | 45.2\% | 44.3\% | 10.5\% |
|  | 47.7\% | 41.5\% | 10.8\% |
| 40-41 | 52.6\% | 40.2\% | \% 7.1\% |
|  | 43.9\% | 44.2\% | 11.9\% |
|  | 46.2\% | 43.5\% | 10.3\% |
| 40-41 | 48.1\% | 43.5\% | \% 8.4\% |
|  | 41.2\% | 45.6\% | 13.2\% |
|  | 43.6\% | 47\% | 9.4\% |

## WHAT DOES MONOSOMY REFER TO?

In genetics monosomy refers to the condition in which only one chromosome from a pair is present in cells rather than the two copies usually found in normal (diploid) cells. A karyotype noted as: $45, \mathrm{XY},-16$ is an example of a monosomy 16 sample on our reports

## WHEN IS IT USEFUL?

It is most useful for patients who might have multiple transfer options and similar embryo grades help identify a prioritization strategy for transfer. Karyotype and embryo grade remain the two most important factors in transfer decision, and so the weight of Mitosure score is considered tertiary to those two metrics. Different laboratories will calculate mtDNA in different ways.

There is much to learn about the implications of mtDNA on downstream outcomes like implantation potential or pregnancy rates, and that research is ongoing. A euploid embryo with a score above 2 is certainly still a candidate for transfer, and we have had patients transfer these kinds of embryos and have normal, healthy outcomes. For that reason, we remind clinicians and patients to take these metrics with a grain of salt.

