

## How Can LifeCell Help Your Partner?

A thorough infertility evaluation that takes physical health and medical history of both the partners into account, is always considered a crucial deciding factor for the treatment process followed. LifeCell has, therefore, also come up with similar comprehensive female infertility testing options.

**InferGenes Male Infertility Package:** The test analyses upto 36 genes associated with increased risks for male infertility, including Y chromosome microdeletions, congenital absence of the vas deferens, sex chromosome aneuploidy, and other causes of male infertility.

## Other Value-added Offerings:

**1 InferGenes Preimplantation Genetic Screening (PGS):** InferGenes PGS is a genetic test performed using Next-Generation Sequencing (NGS) on embryos to identify numerical chromosomal abnormalities (aneuploidy).

The technology allows us to analyze all 24 chromosomes and detect greater than 20 Mb gains and losses in chromosomes.

Chromosomal abnormalities are detected prior to embryo transfer to enable ranking of embryos for transfer and increase the pregnancy rates.

**2 Semen Analysis & Sperm DNA Fragmentation**

**3 Sperm Banking:** Sperm banking or sperm cryopreservation is a successful way to preserve male fertility for those who plan to start a family later in their lives. It also offers hope to men who receive certain treatments including chemotherapy or radiotherapy that may affect fertility.



DISPEL YOUR DOUBTS AND  
PAVE YOUR JOURNEY TOWARDS  
**HEALTHY PARENTHOOD**

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**InferGenes Multigene Female Infertility Panel** is a comprehensive multigene testing panel that offers the most affordable and accessible way to evaluate infertility and identify the underlying causes responsible for it. This all-inclusive test screens for 26 genes that are associated with the female reproductive health conditions.

**InferGenes** Female Infertility test can help you make better decisions about when to get pregnant, how to prepare for a healthy pregnancy, and what to do when you need help.

### When To Take The Test?

- Failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse<sup>2</sup>
- History of recurrent miscarriages<sup>3</sup>
- Molecular confirmation of a clinical diagnosis<sup>3</sup>
- Irregular ovulation<sup>6</sup>
- Early menopause<sup>6</sup>
- Abnormal hormone test results

### Why Take The Test?

- Identification of infertility causes
- Assessment of reproductive risks for couples planning to conceive
- Identification of genetic diseases transmissible to the baby
- Optimization of the assisted reproductive technology (ART)

### What Does It Cover?

#### Primary Ovarian Insufficiency (POI)

**About:** POI (also referred to as early menopause) occurs when the ovaries stop functioning normally before the age of 40. This condition often leads to infertility.

**Incidence:** POI affects 10–28% of women and approximately 4–18% women with secondary amenorrhoea<sup>15</sup>.

**Management & Treatment Option:** Knowing POI risk factors can help women make important decisions regarding family planning and proactive preservation of fertility<sup>5</sup>.

#### Ovarian Hyperstimulation Syndrome (OHSS)

**About:** OHSS occurs as a side effect to fertility drugs used to stimulate the production and development of the ovarian follicles (eggs).

**Incidence:** It affects 3–6% of women taking follicle-stimulating drugs used particularly during IVF treatment.

**Management & Treatment Option:** In addition to adjusting the fertility medication dose or freezing embryos, delaying embryo transfer until the ovaries return to normal is a viable option.

#### Polycystic Ovary Syndrome (PCOS)

**About:** Polycystic ovary syndrome (PCOS) is a hormonal disorder that affects 5–10% of women between the ages of 15 and 44 years<sup>9</sup>.

**Incidence:** PCOS has three main features—irregular periods, polycystic ovaries, and high androgen levels. It is also one of the most common causes of infertility.

**Management & Treatment Option:** In addition to lifestyle changes, medications and regular exercise, assisted reproductive technologies is one of the recommended treatments for overcoming infertility caused due to PCOS<sup>1</sup>.

#### Sex Chromosomal Abnormalities (SCA)

**About:** SCA occurs when individuals have an abnormal number of sex chromosomes. It is one of the most common genetic causes of infertility in humans<sup>12</sup>.

**Incidence:** Turner syndrome (TS), the most common sex chromosome abnormality in women, is also a major risk factor for primary ovarian insufficiency (POI) and infertility<sup>4</sup>.

**Management & Treatment Option:** Although adoption is the primary recommendation for such women, other options such as unfertilized egg donations or assisted reproductive technologies (ART) can also be explored<sup>4</sup>.

#### Thrombophilia-Related Recurrent Pregnancy Loss

**About:** Thrombophilia is a condition wherein the patient tends to form blood clots. Women with thrombophilia are at an increased risk of suffering from recurrent pregnancy loss (RPL)<sup>13</sup>.

**Incidence:** RPL is usually defined as having three or more miscarriages before 20 weeks of gestation. RPL is a common clinical problem that occurs in approximately 5% couples.

**Management & Treatment Option:** In addition to anti-clotting medications, ART may also be advised for women with Thrombophilia-Related Recurrent Pregnancy Loss.

#### Disorders of sexual differentiation

**About:** Disorders of sexual differentiation are congenital conditions that are present at birth. In this group of conditions, a person's external genitals and internal reproductive organs don't match<sup>16</sup>. Such development often affects the ability to have biological children<sup>17,18</sup>.

**Management & Treatment Option:** In most cases patients with DSD are not able to naturally conceive and have to explore the possibility of adoption.



About 10% of women of reproductive age are unable to conceive or carry a pregnancy to term.

### What Makes InferGenes Better Than Conventional Infertility Testing?

	Conventional Infertility Testing	InferGenes Infertility Testing
<b>Comprehensive Offering</b>	Two or more layers of testing to detect genetic and chromosomal abnormalities	InferGenes uses next-generation sequencing platform to detect both genetic and chromosomal changes
<b>Cost Effective</b>	Multiple layers of testing increases cost significantly	Includes only one test that is 3X more cost-effective than the conventional approach
<b>TAT</b>	>40 Days	Within 15 days

### What Are The Benefits Offered By InferGenes Female Infertility Panel?

- Convenience: Only 3 ml of blood or buccal swab is all that's needed for the test to find out if you and your partner are carriers of genetic variants (or changes) that could affect your children.
- Reliable: Sensitivity & Specificity >99%
- Comprehensive: InferGenes Female Infertility panel screens for 26 genes associated with male fertility disorders, facilitated by next generation technologies that enable the expansion of screening without significantly higher costs
- Fast TAT: Actionable results interpreted by expert clinical geneticists within 15 days
- Genetic Counselling: Board certified genetic counsellors to support during pre-test and post-test counselling

### How Does LifeCell's InferGenes Female Infertility Test Work?

-  Talk to your doctor about infertility screening.
-  Your healthcare provider will take a blood draw or saliva sample and send it to our lab.
-  Get your doctor's prescription for the test.
-  Reports will be shared in 15 days.
-  Attend pre-test genetic counselling.
-  Attend post-test genetic counselling.



**GenesPass Carrier Screening** offered by LifeCell Diagnostics is a comprehensive investigation, which enables couples to make informed reproductive decisions and hence, plan for a health pregnancy and healthy baby. This test also allows doctors to identify if an individual could pass on serious inherited health conditions to the child.

#### Who Should Consider LifeCell's GenesPass?

- Couples who plan to start a family or extend it.
- Couples who have a family history of a genetic disorder.
- Couples who belong to certain ethnicities with a high risk of being carriers of hereditary recessive disorders.
- Couples who would like additional information about the reproductive risks of having a child with a genetic disorder.
- Couples who require gamete donation, in order to select the most appropriate donor for each recipient, minimizing the reproductive risk.
- Couples who are already pregnant and who wish to know more about the genetic health of their pregnancy.
- Gamete banks or IVF clinics that wish to analyze every egg or sperm donor, allowing recipients to avoid high reproductive-risk pregnancies.
- Couples in which one of the partners is consanguineous.

#### GenesPass Can Look For A Variety Of Serious Conditions

Many of the diseases included in the GenesPass panels are vital to know about. The categories below provide an overview of the types of conditions included in the GenesPass carrier screening.

- Conditions for which early treatment can make a difference (such as PKU)<sup>4</sup>
- Conditions that cause intellectual disability (such as fragile X syndrome)<sup>5</sup>
- Conditions that shorten lifespan (such as Cystic Fibrosis)<sup>6</sup>
- Conditions for which there are limited or no treatment options available (Spinal Muscular Atrophy)<sup>7</sup>

GenesPass offers screening panels based on the needs of the patient. In addition to the breadth of conditions, it ensures a greater depth of screening for specific conditions based on unique testing methodologies.

	Advanced Carrier Screening	Premium Carrier Screening
Number of genes	864	2000+
Includes all ACOG & ACMG recommended disorders	YES	YES
Sample type	Blood/Saliva	Blood/Saliva