



**FERTILITY  
PRESERVATION**

**ISAR FERTILITY PRESERVATION  
SPECIAL INTEREST GROUP**

## What do we mean by fertility preservation and why should we do it?

Fertility preservation is a conscious effort to help patients retain their fertility, or ability to procreate in future. Fertility preservation is being done for two very different set of patients now a day, so we can divide it into two groups.

- **Fertility preservation on medical grounds** – patients diagnosed with cancer undergoing chemotherapy or radiotherapy, patients diagnosed with endometriosis, people suffering from some genetic or immunological diseases, which lead to premature ovarian and testicular failure.
- **Social egg freezing** - for people who want to procreate later in their life but do not want to let their biological clock affect this process.

## Which are the non-cancerous situations where fertility preservation is required?

Following are the non-cancerous situations where fertility preservation acts like a boon:

### Autoimmune diseases

- SLE
- CREST syndrome
- Multiple sclerosis
- Behçet disease
- Takayasu arteritis
- ANCA-associated vasculitis
- Polyarteritis nodosa
- APS-1

### Hematological

- Thalassemia
- Sickle cell disease
- Fanconi anemia
- Aplastic/myelodysplastic anemia

### Genetic

- Fragile X
- Turner syndrome
- BPES
- Galactosemia
- BRCA carriers
- POI Family history
- Hurler Syndrome

### Gynecological

- Endometriosis
- Ovarian cysts
- Borderline tumors

## What is the ideal time to give this information?

The ideal time to provide information is before initiating treatment with radiation, chemotherapy, or endocrine agents or immunosuppressive therapy for autoimmune conditions.





## What are the options for fertility preservation for these women?

Looking at the time frame, stage of the disease and age of the patient these are few options for women to **freeze their eggs**. In case of social freezing, the ovaries are stimulated for about 10 – 12 days and the eggs, that are retrieved, are frozen. For women with cancer, one can **freeze either eggs or embryos**. As in social freezing, the ovaries are first stimulated so that they produce an adequate number of eggs. These eggs are then taken out and can be frozen if the patient is not married or has no partner. In the case of women suffering from cancer and who has either a partner or are married, the eggs can be fertilized with their partner's / husband's sperm and made into embryos which can then be frozen. ***This is a time-tested method and the embryos retrieval rates after thawing are very good. It must be understood that the oocyte freezing is also an accepted modality and it is no longer considered experimental.***

**In-Vitro Maturation** - A technique consisting of retrieval of immature oocytes, which are then matured outside in the laboratory.

**Advantages of IVM** -faster, cost effective as there is no need for ovarian stimulation, more physiological as there will not be a supra-physiological rise in estradiol levels, can be done with COH as well, around 50% oocytes get matured. This is usually done when there is not enough time to go through the whole IVF procedure, which usually takes 10 – 15 days. Hence, with minimal stimulation, immature oocytes can be obtained from the ovaries.

**Ovarian tissue cryopreservation** - In this technique, there is surgical retrieval of ovarian tissue including whole ovarian cortical tissue. Once this ovarian tissue is obtained, it can be used for post-chemotherapy transplantation into the same patient. This tissue can then be stimulated to produce mature or immature oocytes that could be used for producing embryos. This technique is no more considered experimental, as about more than 100 babies have been born worldwide through this technique.

**Whole ovary cryopreservation** – This procedure can also be done but it is still in the experimental phase.

**Semen freezing** - Sperm banking or semen cryopreservation is a method for boys / men who want to retain their fertility in future.



# ISAR FERTILITY PRESERVATION SPECIAL INTEREST GROUP

Dr. Devika Gunasheela    Chair  
Dr. Seema Pandey        Co chair

Dr. Kaberi Banarjee      Member  
Dr. Kedar Padte          Member  
Dr. Kalyani Shrimali     Member  
Dr. Goral Gandhi         Member  
Dr. Yuvraj Jadeja         Member  
Dr. Ashwini N             Member  
Dr. Harsha Bhadraka      Member  
Dr. Geeta Haripriya      Member  
Dr. Rohan Palshetkar     Member



Indian Society For Assisted Reproduction (ISAR) Flat No. 23A, 2nd Floor, Elco Arcade,  
Hill Road, Bandra West, Mumbai – 400050. Tel: 26456488 / 26406070  
Website: [www.isarindia.net](http://www.isarindia.net), email: [isar.office@gmail.com](mailto:isar.office@gmail.com)  
<https://www.facebook.com/ISARofficial>