



**FERTILITY
PRESERVATION IN
OVARIAN
MALIGNANCY**

**ISAR FERTILITY PRESERVATION
SPECIAL INTEREST GROUP**

What is the incidence and statistics of ovarian cancer in the world and in India ?

Ovarian Cancer in the World Statistical Data

Ovarian Cancer in India

In most of the population based cancer registries in India, Ovarian Cancer is the third leading site of cancer among women, trailing behind cervix and breast cancer. The age adjusted incidence rates of ovarian cancer vary between 5.4 and 8.0 per 100,000 populations in different parts of the country.

OVARIAN CANCER	INCIDENCE 2012	MORTALITY 2012	5-YEAR PREVALENCE
ASIA	111,887	66,215	276,073
EUROPE	65,584	42,749	157,198
NORTH AMERICA	23,529	16,995	58,702
LATIN AMERICA AND CARIBBEAN	17,921	11,471	48,439
AFRICA	17,755	13,085	41,052
OCEANIA	2,043	1,402	5,160

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What is the eligibility criteria for fertility preservation?

Eligible women who are candidates for fertility preservation before radio and chemotherapy are those:

- Who have reasonable ovarian function (AMH >1ng/ml and AFC >6). The overall pregnancy outcome of cryopreserved oocytes is directly related to AMH and AFC at time of cryopreservation.
- All viral markers (HIV, HBsAg, HCV etc.) must be negative.
- Adequate consent forms must be signed.
- Patient must understand the overall reproductive potential of this process.
- Patient must be able to bear financial burden of this process.

1 in 78
women will
be diagnosed with
ovarian cancer in
their lifetime.

What are the options for Fertility Preservation in Ovarian Cancer patients?

Following are the different methods for fertility preservation in ovarian cancer patients:

Oocyte Cryopreservation -

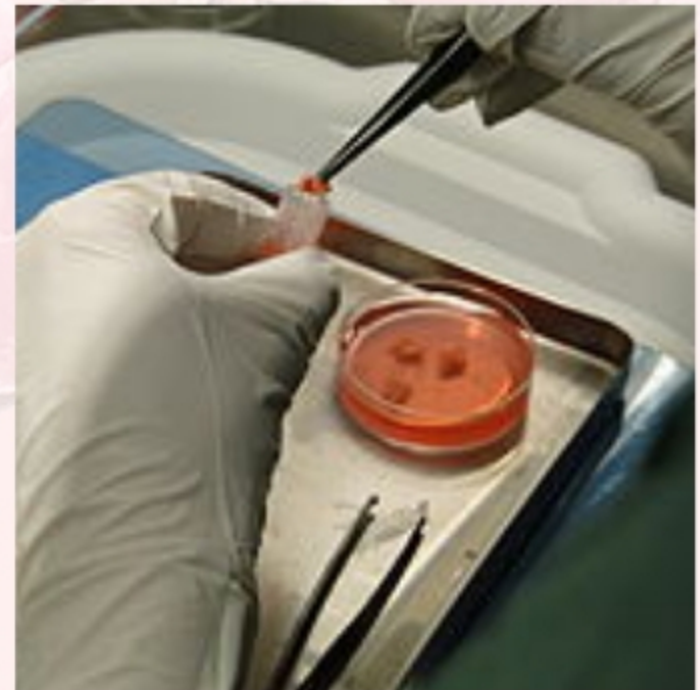
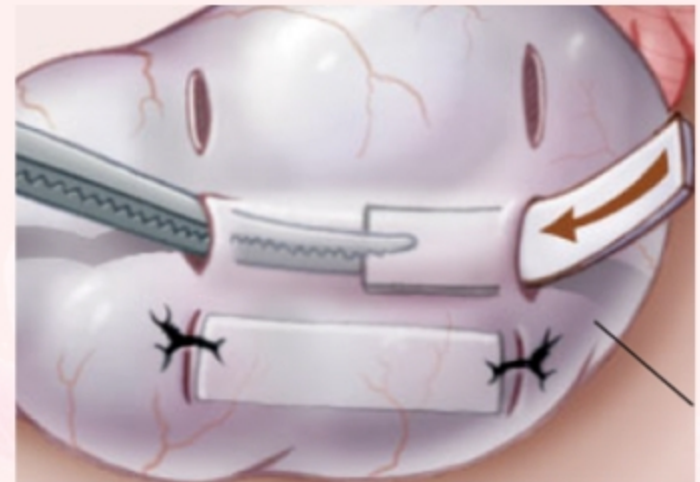
Egg freezing is a procedure to preserve a woman's eggs to enable women to delay conception and pregnancy until a later time. The ovaries are stimulated by hormonal injections to produce eggs. These eggs are then extracted, frozen and stored. Women may choose to have the eggs thawed, fertilized via IVF, and transferred to the uterus as embryos to enable a pregnancy.

Cortical and whole ovarian cryopreservation and transplantation –

Ovarian tissue cryopreservation is an option to preserve reproductive potential in patients who must urgently undergo aggressive chemotherapy or radiotherapy or who have other medical conditions requiring treatment that may threaten ovarian function. Most oocytes are located within primordial follicles in ovarian cortex (which is the top most egg producing area of the ovary); therefore obtaining a small volume of cortical tissue potential enables cryopreservation of large number of oocytes. Auto transplantation involves attaching viable cortical ovarian tissue into a pelvic (orthotopic) site or into an extra pelvic site (heterotopic) site such as forearm or the abdominal wall.

What are the challenges faced during Fertility Preservation in Ovarian Cancer patients?

- *They do not have much time before chemotherapy/radiotherapy can be started and therefore all the processes need to be done within a few days or maximum two weeks.*
- *The overall pregnancy outcome depends on the age and overall ovarian function. The pregnancy outcome is usually 50-60% for 7-10 oocytes cryopreserved. Older patients and women with poor ovarian function have less chances of a live born baby.*
- *It is an expensive process and not everyone can afford it.*
- *Fertility sparing surgery can be safely offered for borderline tumors of the ovary.*
- *In early ovarian malignancy, the ovarian cortical tissue that is frozen can carry malignant deposits which can result in reseeding of the tumor if the cortical tissue is transplanted back into the patient's pelvis after the cancer treatment is finished.*



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