The Fertility Preservation Service (FPS) has existed at The Royal Women’s Hospital and Melbourne IVF for over 20 years, with more than 2,000 patients registered.

Our FPS program aims to assist patients with optimising their fertility and improving their quality of life for both medical and non-medical reasons.

**Who should be considering fertility preservation?**

The ‘at risk’ patient:
- Cancer treatment
- Genetic risk of premature ovarian failure e.g. Fragile X
- Family history of premature menopause
- Older women
- Single women

**Medical fertility preservation**

Medical fertility preservation aims to protect and preserve fertility for the future using various treatment options. Given the imminent need for patients to start cancer treatment, the expert clinical and scientific team at Melbourne IVF recognise the importance of providing a rapid and coordinated response to optimise the care of these patients and therefore we offer *fertility specialist consultations within 24–48 hours.*

**Social egg freezing**

Social egg freezing is now an established form of treatment and gives women the opportunity to preserve their fertility for non-medical reasons. There are many personal and social reasons as to why women may delay starting a family beyond their most fertile years, which increases the risk of age-related infertility.

**Achievements in fertility preservation**

- **2006:** Melbourne IVF performed the first ovarian tissue grafting procedure in Australia
- **2009:** The Fertility Society of Australia special interest group on medical fertility preservation was founded
- **2013:** Melbourne IVF achieved the world’s first births from ovarian tissue grafted into a woman’s abdomen after ovarian cancer treatment left her infertile
- **2015:** Melbourne IVF achieved their second pregnancy and birth success from ovarian tissue grafted into the abdominal and pelvic walls of a woman left infertile after cancer
Options for females

Oocyte cryopreservation (Egg freezing)

Figure 1: Mature female oocyte

Storing a woman’s unfertilised eggs for use in the future. It involves undergoing an IVF cycle to collect the eggs for storage which can take between 10–12 days to complete. Once collected they undergo vitrification. A male partner is not required for oocyte preservation. In the future the eggs will be fertilised in an embryology laboratory with sperm.

Figure 2: Results and attrition with oocyte freezing

Approximately 79–90% of fertilised eggs would develop into good quality embryos depending on the age of the woman and her inherent egg quality. The key influence on the chance of pregnancy success in the future using thawed eggs, is the age at which the eggs were frozen. Egg freezing in women over the age of 37–38 would be expected to have a lower chance of pregnancy.

Embryo cryopreservation (Embryo freezing)

Figure 3: Blastocyst embryos created as part of an IVF cycle

For those women who have a male partner and are planning to have children, they can undergo IVF treatment prior to chemotherapy or radiotherapy with any resulting embryos being frozen for future use.

Ovarian tissue cryopreservation

Figure 4: Ovarian tissue

An emerging treatment option with a small number of babies born using this technique. The procedure takes place under local anaesthetic to remove a small piece of ovarian tissue from the ovary, is prepared into tiny slices and frozen. This procedure can be performed in one day.

Ovarian protection during chemotherapy

GnRH analogues can reduce the damage of chemotherapy drugs on the ovaries. GnRH analogues place the ovary in a dormant and non-functioning state to suppress a woman’s normal menstrual cycle. Monthly injections are taken during the course of chemotherapy treatment.

Options for males

Sperm cryopreservation (Sperm freezing)

Figure 5: Sperm cryopreservation (Sperm freezing)

This is an option for a vast majority of men, even those with poor sperm quality prior to chemotherapy or radiotherapy. Sperm samples are collected, frozen and stored at very low temperatures for a prolonged period. If the patient is unable to produce a sperm sample, it may be possible to collect directly from the testicles.

Testicular sperm cryopreservation

Tissue containing sperm is aspirated from the testicles under local anaesthetic, is collected and frozen. In the future it can be used to create embryos in an IVF cycle.

Urgent referrals

If you wish to refer a patient for medical fertility preservation, please contact one of our Community Liaison Administrators on 1800 111 483 and we will ensure your patient is seen within 24–48 hours by one of our Fertility Specialists, and a counsellor if required.