

## The Royal Children's Hospital Fertility Preservation Service Sperm Banking General Principles

It is important to offer sperm banking prior to the start of gonadotoxic therapy (chemotherapy, radiation or TBI), where possible, for the following reasons:

1. Even low risk treatments may cause sperm DNA fragmentation which increase the risk of mutagenesis, which can persist for up to 2 years
2. Significant decline in sperm count and quality or even Azoospermia may occur by three months increasing the risk of unsuccessful semen collection
3. Medical and psychosocial factors

If sperm collection is being undertaken as an interval procedure (within one year of gonadotoxic therapy), a sample may be stored at the patients/family's request. However, documentation of the risks should occur and a waiver should be signed. They should also receive recommendations to collect a revised sample at 6, 12 or 24 months after treatment if possible. If the quality of semen is normal, the previous sample may be discarded. For those patients at very high risk of infertility who place a high value on fertility and have already received gonadotoxic treatment, seek advice to discuss the most appropriate management.

If the semen analysis is normal, it is recommended that the patient freeze 10 straws (each straw is 0.5ml of which half is cryoprotectant) and potentially 15-20 straws if there are atypical results. This means the patient should be given the opportunity to collect multiple sperm samples if medically safe to do so.

Normal semen analysis results are as follows:

**Ph** 7.2-8

**Volume**  $\geq$  1.5 to 6ml

**Concentration**  $\geq$  16M/ml or 39M/ejaculate

**Motility** 42%

**Vitality** 58%

**Morphology** 4%

**Leukocytes**  $<$ 1M/ml

### Who do I contact for further information?

If you would like any further information, please contact the Oncofertility team at RCH.

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