Genea
WORLD LEADING FERTILITY

Submission for the Review of the Western Australian Human Reproductive Technology Act 1991 and the Surrogacy Act 2008

Submitted by Dr Cynthia Roberts, Chief Risk Officer

On behalf of

Genea Limited

INTRODUCTION TO GENEA LIMITED

Genea Limited is a firm which provides assisted reproductive treatment (ART), produces medical devices for use in ART and embryonic stem cell research. Genea Limited operates 10 clinics in Australia and one in New Zealand New Zealand. The majority of our clinics are located in New South Wales. We own a 76% share of the Genea Perth Limited, trading as Hollywood Fertility Clinic and welcome the opportunity to make a submission to the legislative review.

POSTHUMOUS USE OF GAMETES

The posthumous use of gametes is currently prohibited in Western Australia. Other states in Australia, including New South Wales and Victoria permit posthumous use, with informed consent. Our general experience is that such gametes are used in the following circumstances:

- Where there are pre-existing children and the surviving partner wants more children. In the majority of cases this is the surviving female partner, creating full sibs to existing children. It is less common for a surviving male partner to use the oocytes of his deceased partner. This is usually because:
    a) they have a new partner and they will create a new family using her oocytes;

    b) treatment without a new partner would require the use of a surrogate to carry the pregnancy. (See also below access to surrogacy)

- The couple had intended to have children together but one partner dies prior to the first conception. The most common scenarios for requests for use of posthumous sperm in this scenario are:
    a) The partner had been diagnosed with a terminal illness and had cryostored gametes either before treatment such as chemotherapy (fertility preservation) or specifically for posthumous use alone;

    b) The couple were preparing for fertility treatment and had coincidentally had gametes frozen for use in treatment. There is some contradiction in that embryos created for fertility treatment can be used posthumously whereas gametes stored for intended treatment cannot.

    c) Similar to above, the couple were preparing for fertility treatment with donated gametes

- A male partner dies unexpectedly and the female partner seeks a court order to have sperm extracted posthumously. This scenario is rare. The use of the sperm without posthumous consent would only be allowable in states or territories without specific legislation requiring consent for posthumous (such as the ACT).

Recommendation 1 Posthumous use of gametes of a partner be permitted with consent. Posthumous use of donated gametes be permitted with consent.

ACCESS TO SUROGACY

Surrogacy has, until recently been used in associated with ART treatment when there is a medical problem/condition which prevents a woman carrying a pregnancy to term. More recently, the NSW Surrogacy 2010 has extended the permitted use of surrogacy to include social as well as medical need. This means that surrogacy is also available to:

- A single man
- A male couple

Denying access to males, based on social need could be a breach of the Sex Discrimination Act 1984, which requires fair treatment in access or use of services, including doctors.

Recommendation 2 Access to surrogacy be extended to males

ACCESS TO PREIMPLANTATION GENETIC SCREENING

Preimplantation genetic diagnosis was originally introduced as a form of treatment for couples who are known carriers of serious genetic conditions, to avoid the conception and birth of an affected child. As such is was more commonly used for fertile than infertile couples. The technique of embryo biopsy and genetic testing can also be used to identify the chromosome content of an embryo (called preimplantation genetic screening - PGS). Embryos with chromosome abnormalities will either not implant, implant and miscarry or result in the birth of a child with developmental/congenital abnormalities.

Currently in Western Australia, access to PGS is limited to women aged 38 or older. This is certainly a useful treatment for these older women as the chance of a chromosome abnormality significantly increases with age. However, chromosome abnormalities are identified in all age groups. In other Genea clinics, a majority of our patients elect to start their ART cycle with the intention of proceeding to PGS. Our results show a significant increase in pregnancy rate for the <38 age group when the treatment includes PGD (See table 1). This increased success is related to a combination of 3 factors:

1. Fresh and frozen, untested embryos will include both chormosonally normal and abnormal, In an IVF cycle, a number of embryos are usually created and the order of transfer is decided by an embryologist, purely based on its morphological appearance. This may have no correlation to whether an embryo is chromosomally normal or abnormal. Therefore patients can proceed through a number of embryo transfer cycles including abnormal embryos. These abnormal embryos will either i) not implant; ii) cause a miscarriage; or iii) result in the birth of an abnormal child. These outcome will lower the pregnancy and live birth rates compared with PGS tested (chromosomally normal embryos)

2. Quality of the embryo. Embryos are biopsied at the blastocyst stage (Day 5), whreas embryos used for fresh transfer or frozen embyo trasnsfer (FET) will include embryos of blastocyst stage or lower quality embryos which may not have reached blastocyst (<5 days)

or be unsuitable for biopsy. The lower quality may or may not reflect the chromosome status of the embryo.

3. Transfer of a frozen embryo following PGS. The pregnancy rate following a frozen embryo transfer compared with a fresh transfer can be increased because of the synchronicity between the stage of embryo development and developmental stage of the uterine lining.

Table 1. Comparison of results of patients <38 years

	< 38 years		
	Fresh	**FET**	**PGS/PGD**
# Embryo transfers			
12 mths to Dec-16	1,172	970	720
12 mths to Dec-17	1,021	948	811
Average Age			
12 mths to Dec-16	33.60	33.00	33.65
12 mths to Dec-17	33.87	32.97	33.50
Fetal Heart Preg Rate			
12 mths to Dec-16	36.4%	41.2%	52.6%
12 mths to Dec-17	42.8%	42.0%	52.0%
Live Birth Rate			
12 mths to Dec-16	33.4%	36.7%	49.3%
12 mths to Dec-17	na	na	na

By reducing transfer of abnormal embryos, the time to achieve a pregnancy without chromosome abnormality is significantly reduced. This results in greater patient satisfaction and, importantly a reduction in embryo transfer cycles which will be unsuccessful or result in abnormal pregnancies which carries a reduction in total spend on fertility treatment for the patient, including Medicare costs. There is a clear cost and emotional benefit to this treatment. Such treatment is not considered experimental and should not be restricted to particular age groups.

Recommendation 3 Access to PGS be permitted for any patient having IVF treatment