Established in 1994

25 Years of Experience

Staff of 29 incl.
- 7 Scientists
- 4 Doctors
- 9 Fertility nurses
- 1 Fertility Counsellor
- 8 Administration Staff
SERVICES OFFERED

- Semen Assessments
- DNA Fragmentation testing of Sperm
- Donor Sperm Treatments
- Testicular Biopsy for Sperm Retrieval
- Intra Uterine Insemination
- IVF / ICSI
- Frozen Embryo Replacement Cycles
- Genetic Testing of Embryos (PGT-A)
- Egg Freezing
- Embryo Freezing
- Surrogacy Support

www.fertilityclinic.ie
Andrology Services

- Sperm Count
- Sperm Motility
- Morphology / Quality / Normal Forms
- Anti-Sperm Antibodies
- DNA Fragmentation Test
- Survival studies of the sperm
- Retrograde Ejaculation
- Post – Vasectomy Checks
- Banking of Sperm / Freezing

Reference Standards: WHO 2010
Oocyte Cumulus Complex (OCC)

Egg / Oocyte

GV  MI  MII
Development of the Human Embryo

Day 0: Egg Retrieval / Thawing & Insemination

Day 1: 2 pronuclei zygote (2PN's)

Day 2: 4 cells (cleavage stage)

Day 3: 8 cells

Day 4: Morula & Cavitating Morula

Day 5: Blastocyst & Expanding Blastocyst

Day 6: Hatching Blastocyst

Day 6-7: Implantation into the endometrium
Influences on Embryo Development

Embryo Development

Female age
BMI lifestyle
Stimulation regime, Oocyte retrieval, AMH
Oocyte quality, quantity
Oocyte maturity

Lab Conditions.
Staff Experience
Temperature, Top Equipment

Male lifestyle
Sperm Quality
DNA integrity

Clinical Oversight
Medical Optimisation
Attention to Details
Sperm : DNA integrity

Sperm DNA should be packed tightly to be protected, and deliver the haploid nucleus into the oocyte.

Sperm with high level of DNA damage can complete fertilization, but carry this damage to the embryo.

Improving DNA integrity can reduce Miscarriage Rates
IVF with ICSI

Intra Cytoplasmic Sperm Injection

Always required for:

- Vitrified Eggs
- Poor Sperm
- PGT-A
- Frozen Sperm
How successful IVF will be depends primarily on the woman’s age / age of the eggs. The graph here shows the average chance of a birth from IVF treatment (in green), following a positive pregnancy test result (in purple) depending on the woman’s age. These figures use the per embryo transfer measure, and include all patients treated in GFC over the years 2012 to 2017.
Cryopreservation

SPERM: Uncomplicated & well established for decades. Donor Sperm Banks Storage & shipping worldwide Back-up for treatments Pre-Medication or Chemo Banking. Survival varies, but sperm are in abundance, usually millions of cells. Can be shipped safely to other clinics.

OOCYTES: Newer Technology, but showing promise. Survival rates not as high as with embryos. Increased risk of damage, technically difficult.

EMBRYOS: Costly & tricky, but well validated. Survival rates >95% with vitrification. Comparable Success rates with Fresh Embryos.
There are Inherent Risks with Transportation & Handling of cells in Liquid Nitrogen.

Use a specialist Courier, providing Door to Door delivery, 100% supervised.

Use a Clinic with “Known Consignor” Status, allowing for special security arrangements through Dublin Airport.

Any temperature increase, even for a millisecond can damage embryos. Even putting the shipper on its side! Sperm are a little more resilient, but still vulnerable.
Surrogacy Case

IVF treatment in Galway

Export Licence

Intersono, Surrogacy Clinic

Door to Door Courier

Vitrified in Galway

Irish Baby born in Lviv, brought home to Ireland.

2 blastocysts created

Embryos Thawed out in Intersono, Lviv
Number of Embryos to Transfer?

**Grade 1 embryo:**
Transfer one at a time.
or consider ET x 2 if from older eggs.

**Grade 2 Embryos:** consider ET x 2
to increase the chances of a positive test, but brings risks of a multiple pregnancy.

**Grade 3 Embryos:** Slim chances of a pregnancy, but not zero.
The UK, unlike Ireland, have an official register of all treatments performed, and publish the statistics for success rates on their website.

If we compare our (GFC) success rates (Green Bars) to the average across all UK clinics (Red Bars), you can clearly see our take home baby rate in the different patient age categories.

The measure here is the birth of a baby from the first Embryo Transfer procedure, and does not include additional chances of a pregnancy from any frozen embryos.
Our Embryology Team

Embryologists:
• Jenny Cloherty
• Sharon Warner
• Fiona Toal
• Catherine Gibbons
• Laura Salvatore

Andrologist:
• Yvonne Duggan

Lab Assistant:
• Alex Murphy

Thank You for your Attention.