

Infertility

Understanding of IVF

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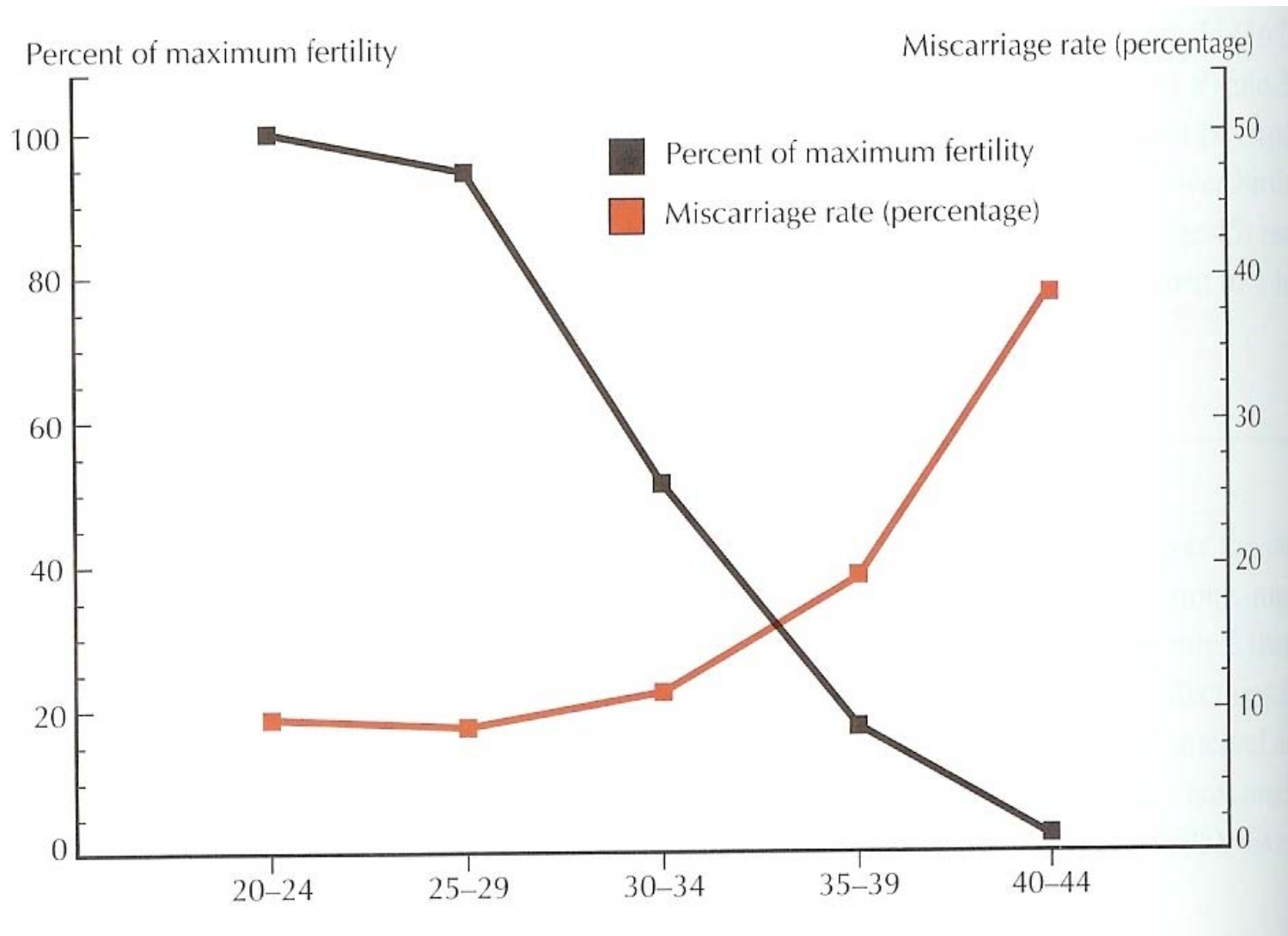
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Infertility is the inability to become pregnant after **one year** of unprotected intercourse.

Approximately 15% of married couples in the reproductive age group have infertility (7.5 million couples yearly in the US)

Aging and Reproduction



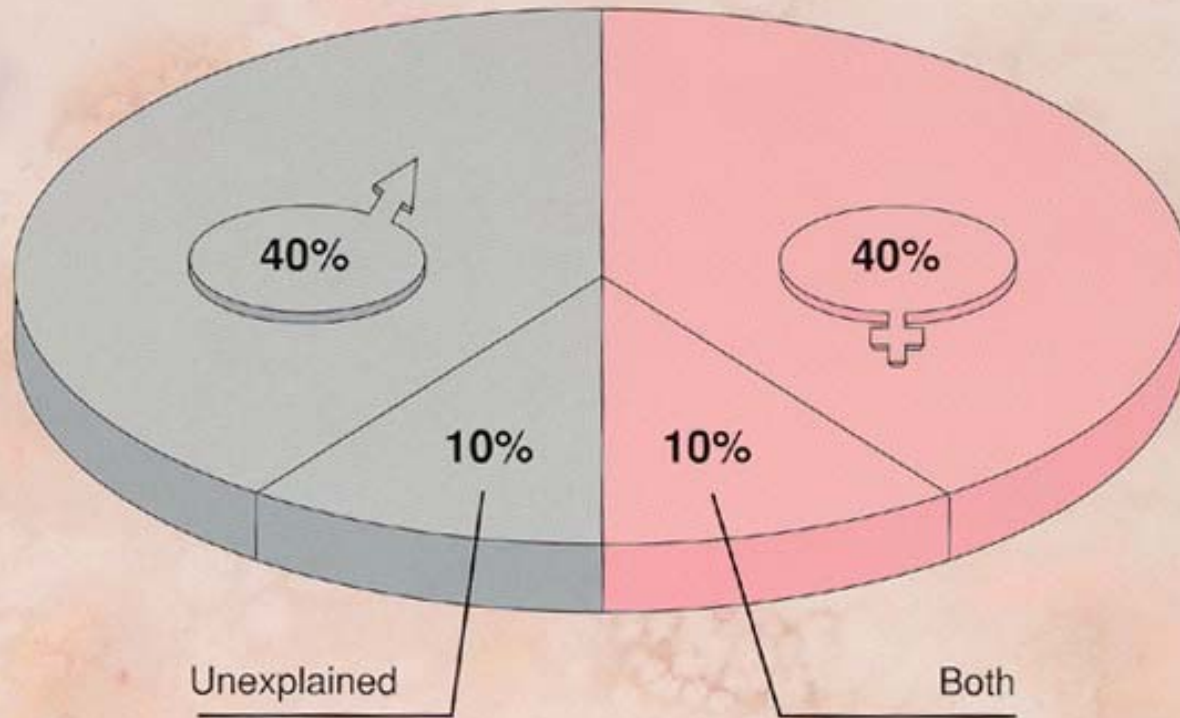
Lifestyle and Infertility

**Sex, Weight, Smoking, Drug,
Alcohol, Caffeine, Exercise,
Environmental Factors
will affect your Fertility**



**Body Mass Index (BMI) 20-25, Alcohol 4 or fewer drinks per week,
Caffeine intake less than 250 mg/day,
Smoking cessation**

Causes



Adapted from Cardone et al.¹

Evaluation of the infertile couple

- **H & P**
- **Pelvic Ultrasound**
- **HSG**
- **Hormonal profiles**
(**FSH**, **E2**, **TSH**:
luteal phase P4)
- **Determination of ovulation**
- **Antibody testing**
- **Semenanalysis**
- **Postcoital test**
- **Laparoscopy and Hysteroscopy**

Acupuncture

Hi-Tech

IVF



Lifestyle



Herbs

Age

What is IVF

- IVF or In Vitro Fertilization is a method of assisted reproduction to increase the possibility of pregnancy.
- As the term '*in vitro* fertilization' or 'test tube baby' explains itself, it is the procedure to fertilize eggs with sperm outside the human body.

Who needs IVF?

There are different reasons why IVF is recommended which include: blocked or damaged fallopian tubes, abnormal sperm, endometriosis or immunologic problems, failed attempts of artificial insemination or other infertility treatment, advanced maternal age.

Indication for IVF

- **Tubal factor infertility**
- **Male factor infertility**
- **Pelvic factor infertility**
- **Unexplained infertility**
- **Failed conservative management**

Procedures of IVF & ET

1. Controlled Superovulation (COH)
(Clomiphene, hMG, uFSH, rFSH)
2. Monitoring (Ultrasound, E2)
3. Egg retrieval & IVF (or ICSI)
4. Embryo culture
5. Embryo Transfer (ET)
6. Luteal phase support (progesterone)
7. Pregnancy test

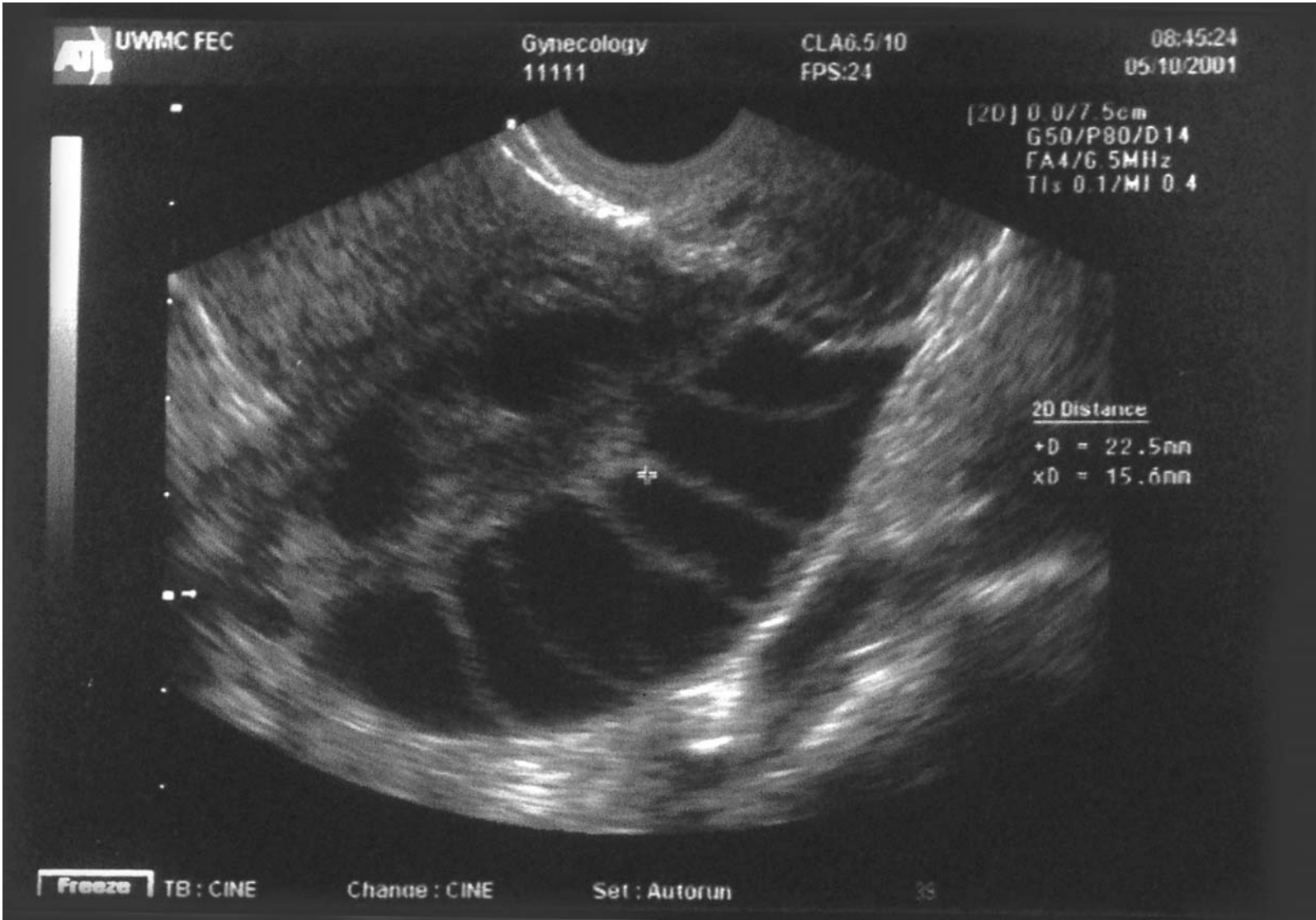
1. Controlled Ovarian Hyperstimulation with Exogenous Gonadotropins

New Follistim[®] AQ Cartridge
(follitropin beta injection)
For use only with
Follistim Pen[™]

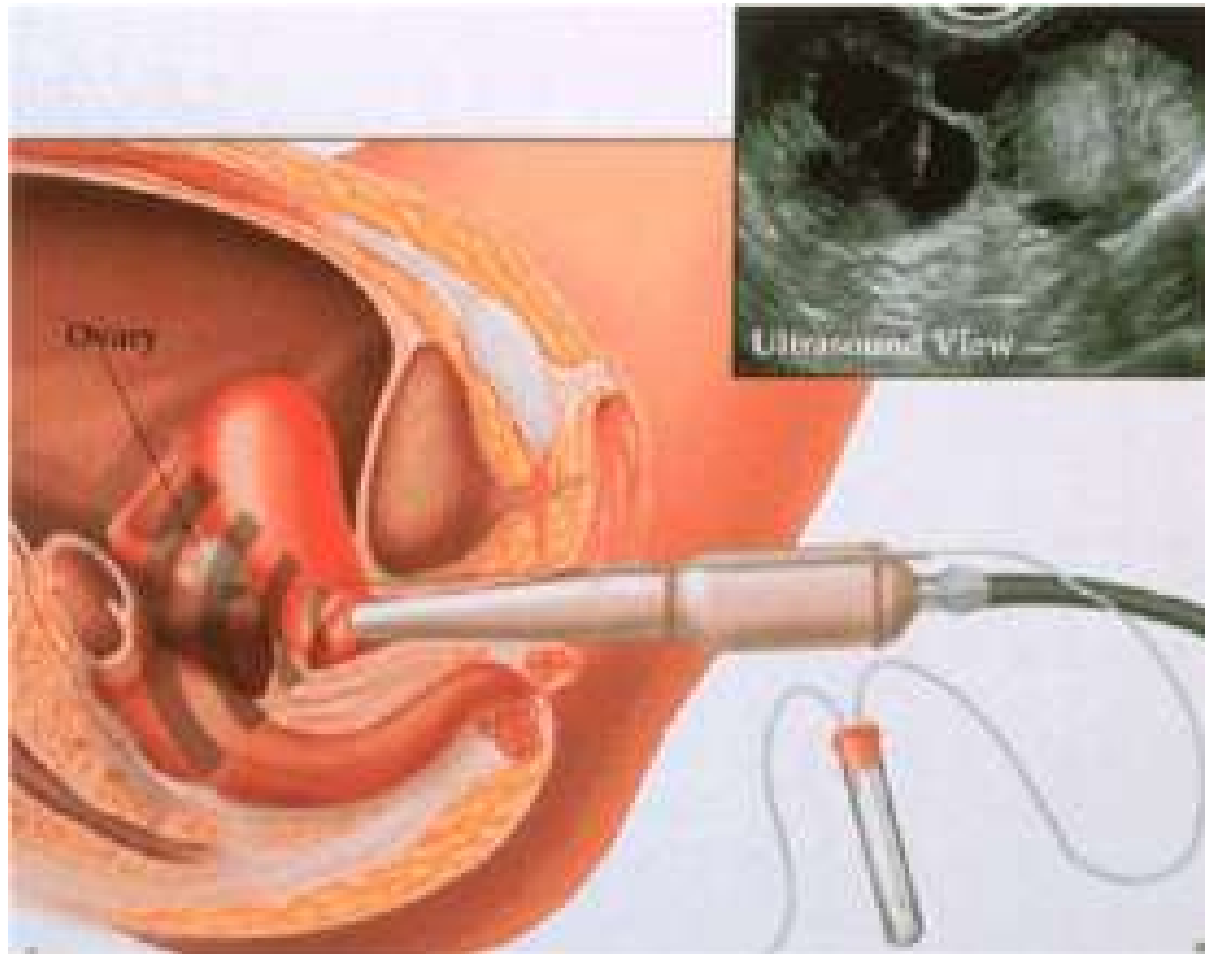


2. Monitoring: E2, Ultrasound

2. Ultrasound monitoring of follicles



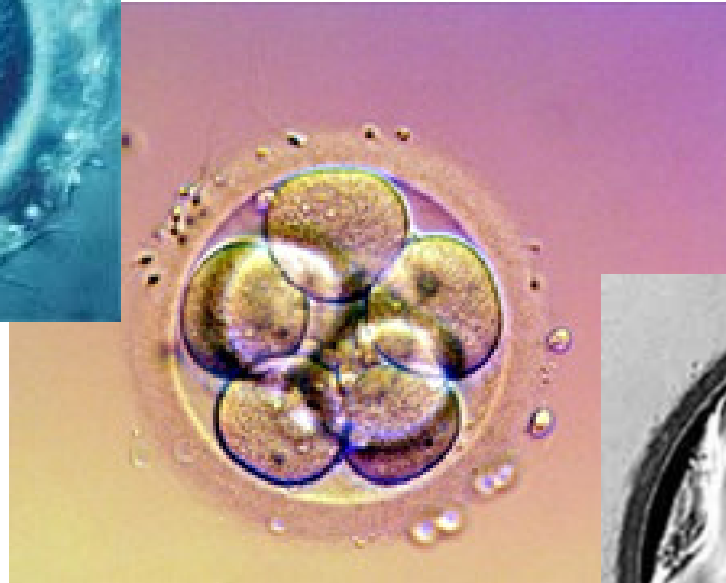
3. Ultrasound Guided Oocyte Retrieval



4. Embryo Culture



Pronucleus

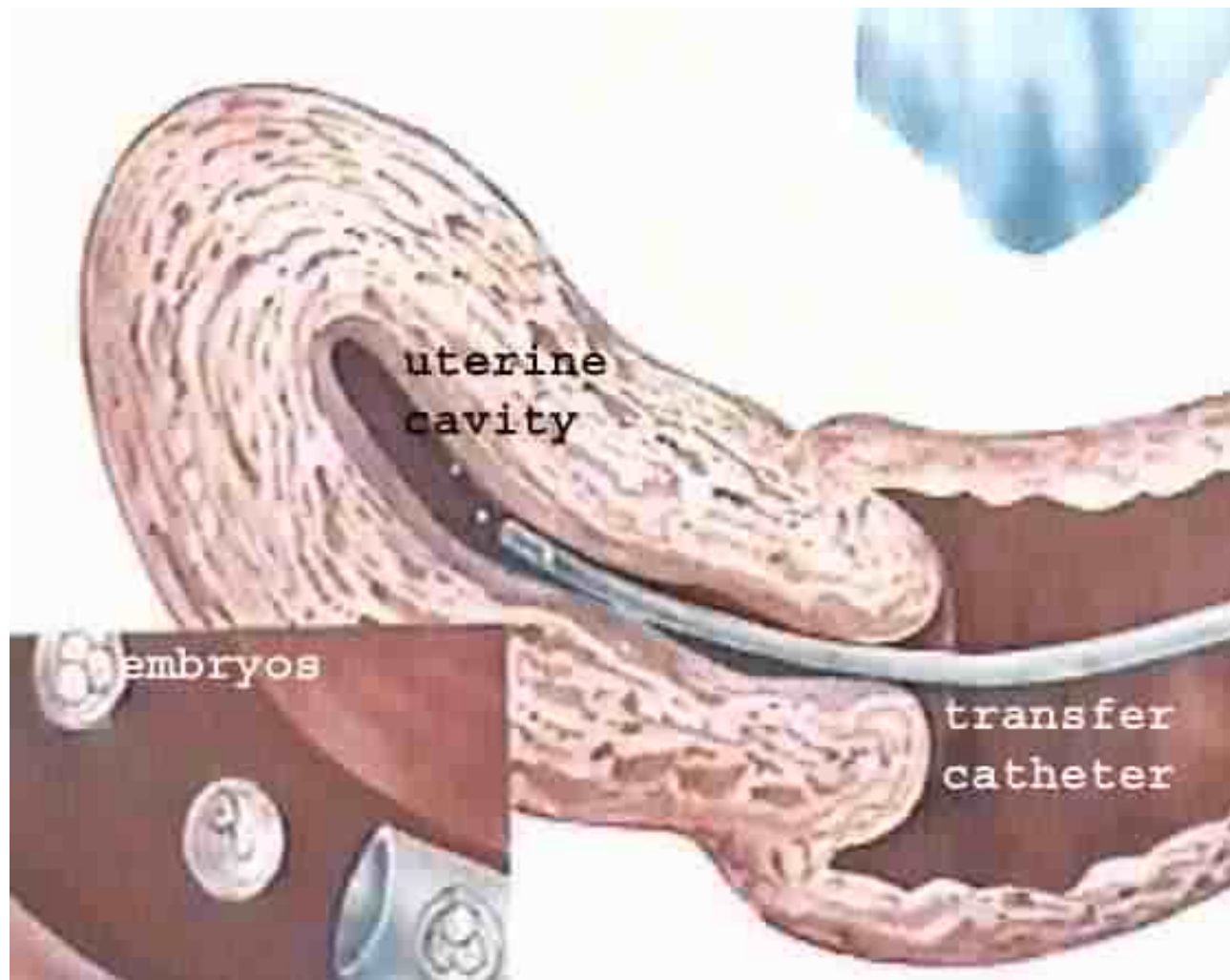


8-cell embryo



blastocyst

5. Embryo Transfer



Assisted Reproductive Technologies offered by CARM

- IVF & ET
- Embryo Freezing and Storage
- ICSI (intracytoplasmic sperm injection)
- AH (assisted hatching)
- Blastocyst culture
- PGD (preimplantation genetic diagnosis)
- Donor egg IVF
- TESE (testicular sperm extraction)
- MESA (microsurgical epididymal sperm aspiration)

Freezing and Storage of superfluous embryos

Cryopreservation Services at CARM

1. Sperm
2. Embryos
3. Oocytes
4. Ovarian Tissue



Intracytoplasmic sperm injection (ICSI)

ICSI is a highly technical procedure designed to insert a sperm into the cytoplasm of egg using a thin glass tube under the special microscope with a manipulator.

Indications:

- Severe male factor infertility
- Poor quality eggs with thickened shell (zona)
- Prior or repeated fertilization failure with standard IVF
- Anti-sperm antibodies
- Use of surgically retrieved sperm directly from the epididymis or testis

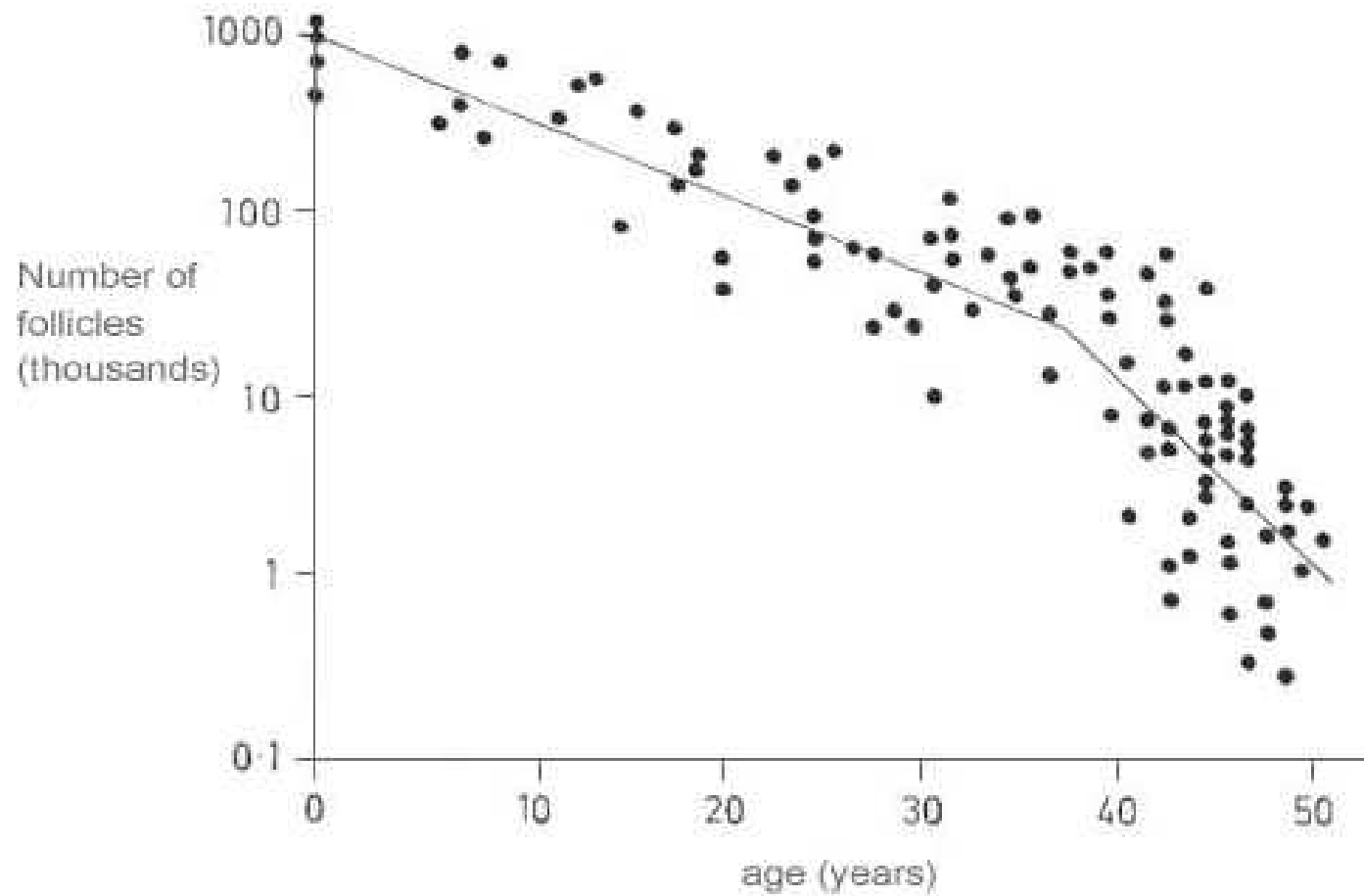
Intracytoplasmic sperm injection (ICSI)



Factors affecting IVF results

- Age !!!!!!!!!!!!!
- Sperm quality
- Causes of infertility
- Responsiveness to ovulation induction
- IVF lab quality
- Embryo transfer technique

Age and number of eggs



Faddy et al., 1992

Problems with IVF

- *Stress*
- *Cost*
- *Surgical risks*
- *Multiple pregnancy*
- *OHSS*

Fee Schedule

IVF Package: \$6,850 (Medications are not included)

Office Visits

Blood Tests (Estradiol Hormone Tests)

Ultrasound Exams

Egg retrieval including procedure, room fee and surgical supplies

Anesthesia

Fertilization & Culture of Embryos

Blastocyst culture (if needed)

Embryo transfer with Ultrasound Guidance and supplies

Consultation to review cycle and plan next step

Additional Services if applicable to your protocol:

ICSI (Intracytoplasmic Sperm Injection) \$1,200

Assisted Hatching (AH) \$ 500

PGD (Pre-Implantation Genetic Diagnosis) \$3,500

(Fee may be varied)

Where is a will, there is a way.

Please do not give up.
But do not wait too long.

Visit

'Center for Advanced
Reproductive Medicine' !

