

# Infertility

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استشارية أمراض وجراحة النساء والتوليد  
وعلاج العقم

الدكتور

أخصائي امراض  
نسائية وتوليد وعقم وجراحاتها

دكتورة

نساء وتوليد وعلاج العقم

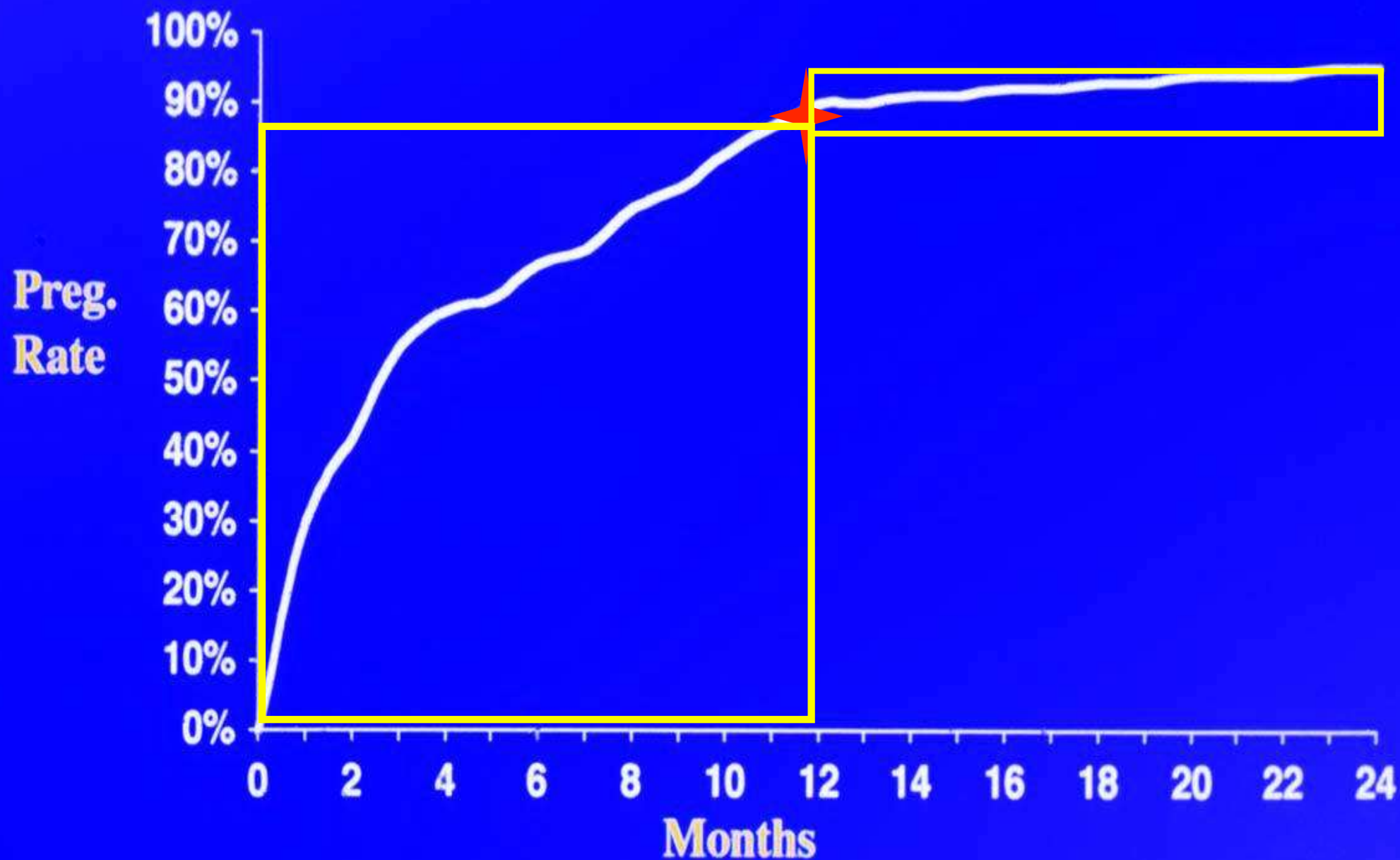
# **Infertility**

**Inability to conceive after 1 year  
of regular unprotected intercourse**

# Infertility

- **15-25% of couples**
- **70% primary**
- **30% secondary**
- **Psychological impact**

# Normal Cumulative Conception Rate

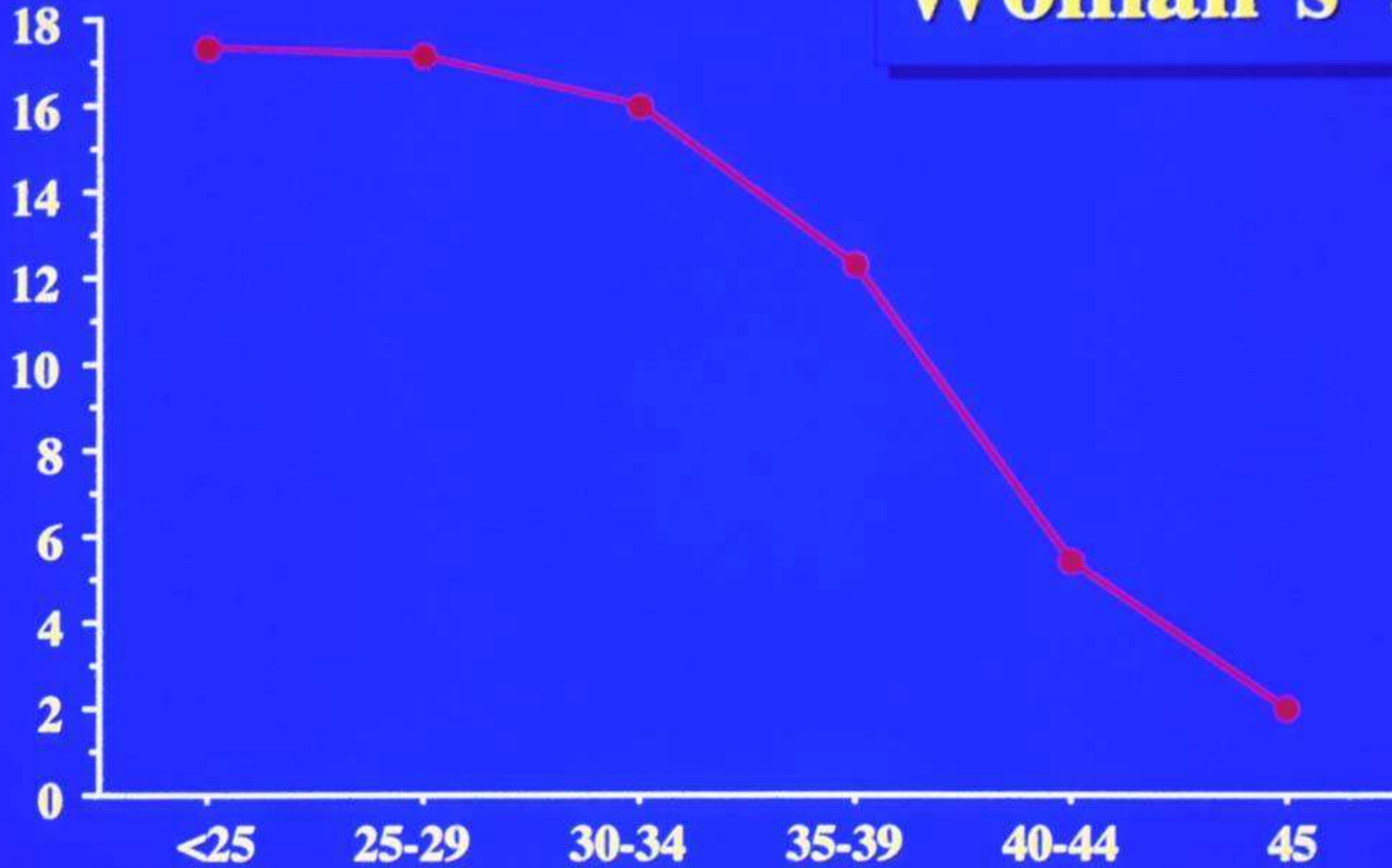


# **Most Important Factor Influencing Fertility**

- **Women's age**

**% LB/ Cycle**

**Woman's age**



**Age group**

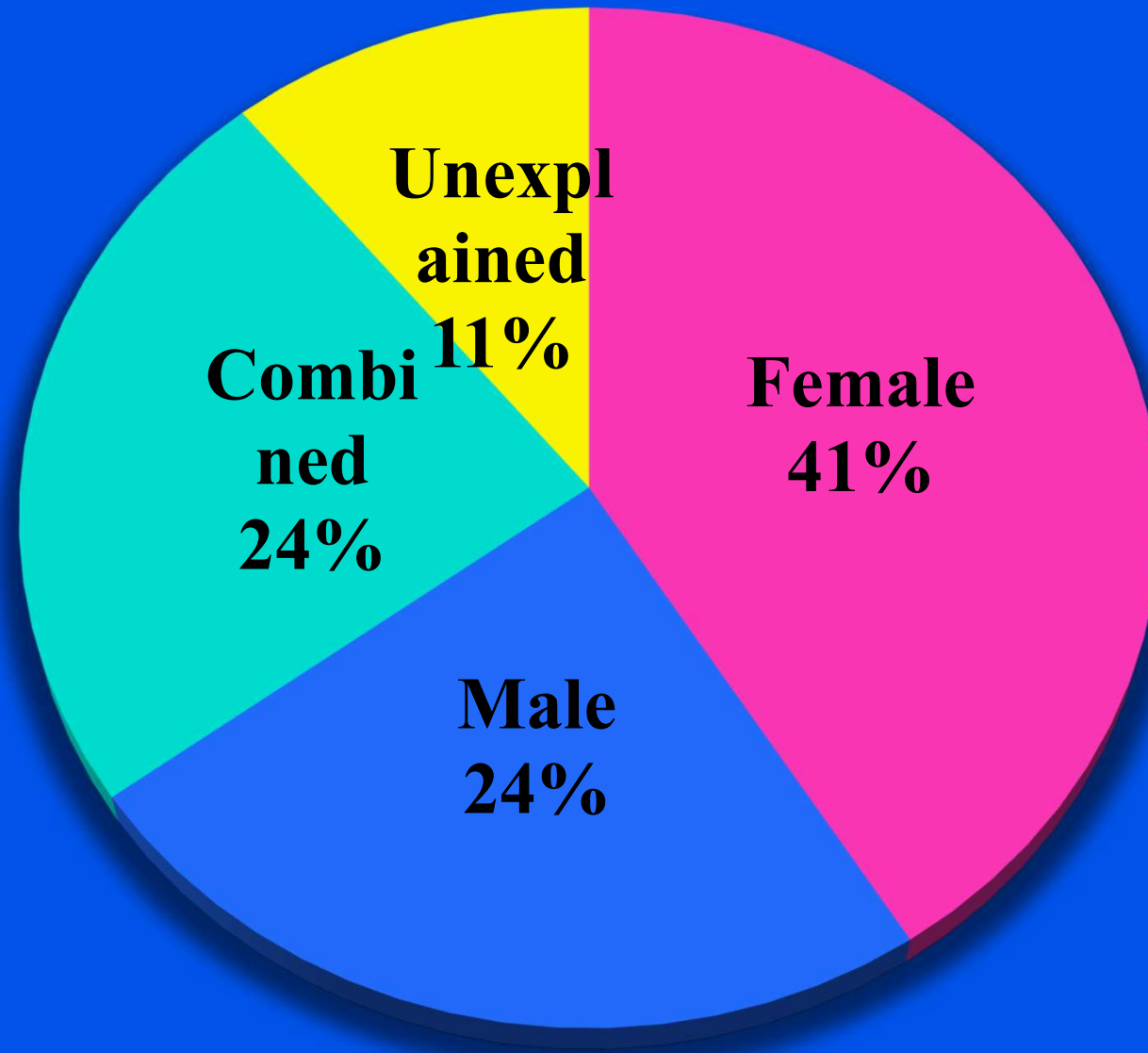
**P<0.001**

# International Recommendations on When to Investigate

- $\leq 35$ : 1 year
- 36-39: 6 months
- $\geq 40$ : on presentation



# Causes of Infertility



# Causes of Infertility

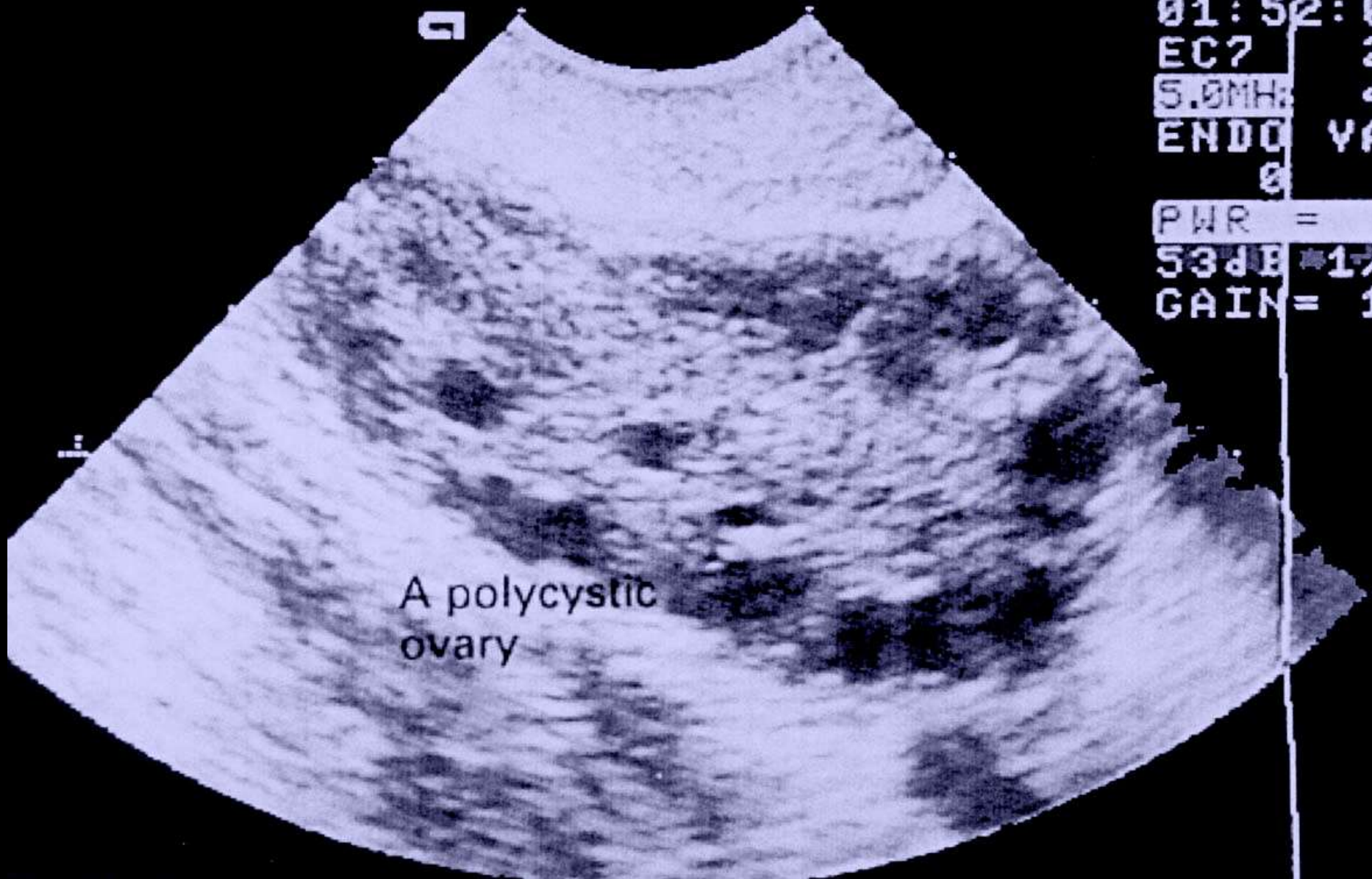
- **Anovulation**
- **Pelvic adhesions/ endometriosis**
- **Tubal damage**
- **Male Factor**

# Assessment of Ovulation

- Regular menstruation
- Mid-luteal progesterone
- Hormonal profile  
(FSH, LH, AMH, T, TSH, Prl)

# Causes of Anovulation

- **PCOS: USS, raised LH, AMH, Testo**
- **Hyperprolactinaemia: raised Prl**
- **Ovarian failure: raised FSH**
- **Hypo Hypo: low FSH, LH**
- **Hypothalamic**

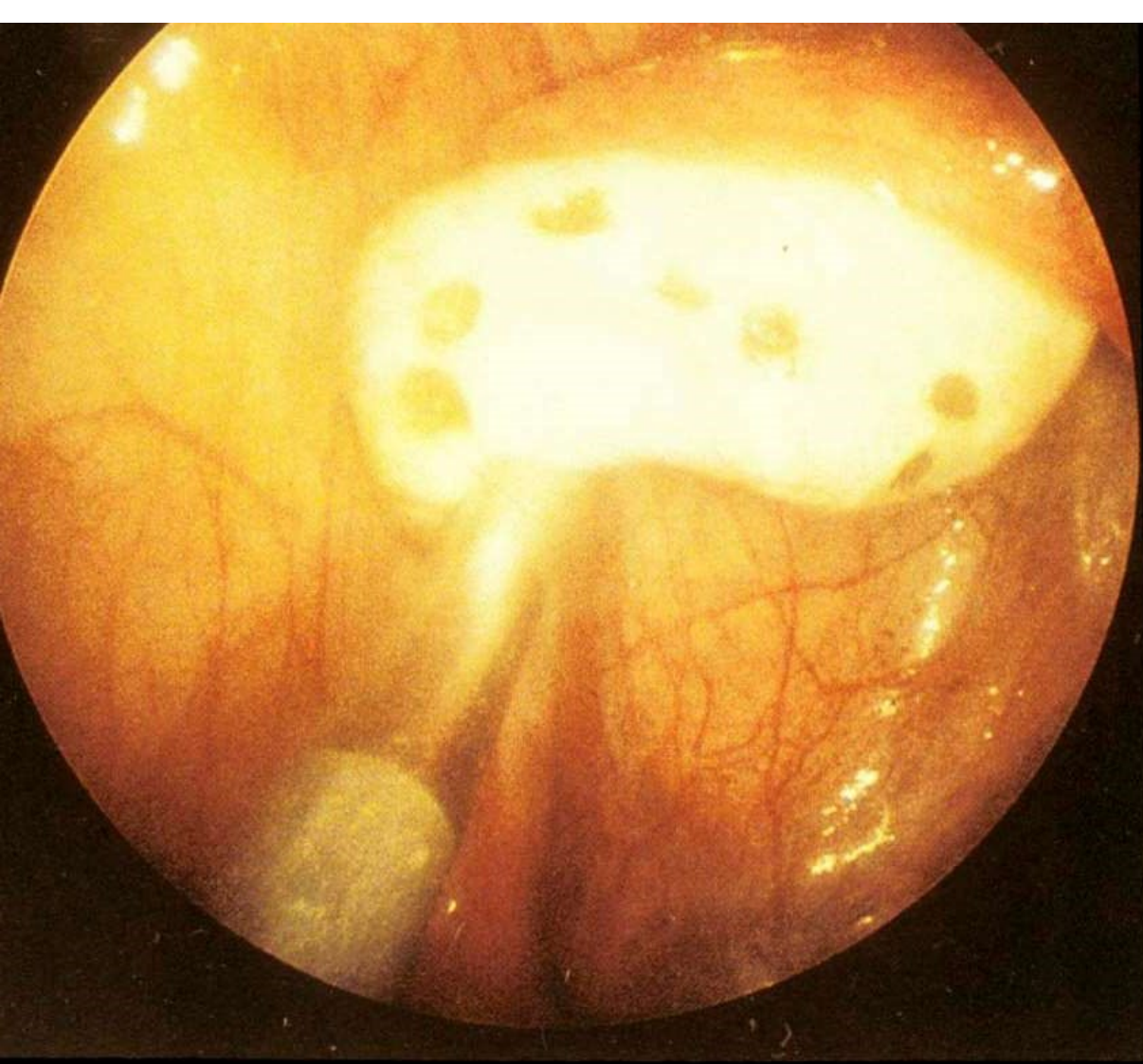


A polycystic  
ovary

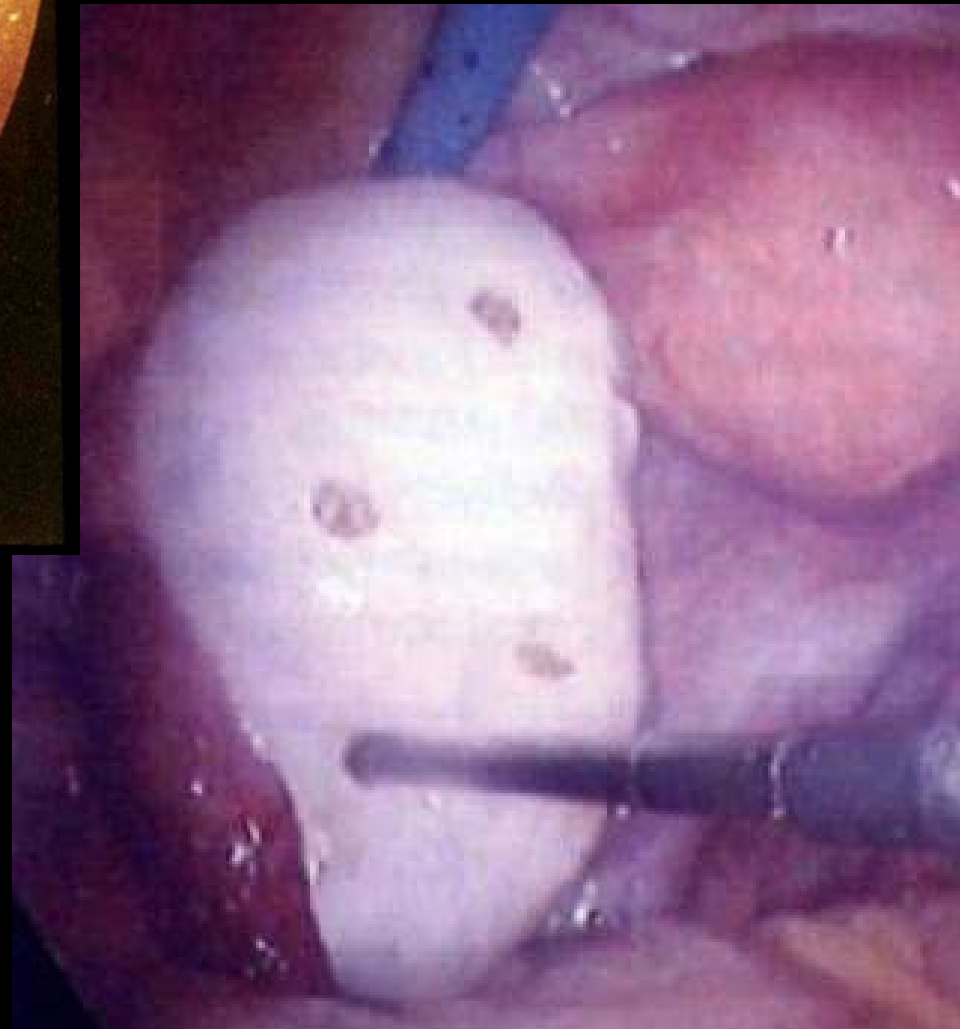
01:52:03  
EC7 28  
5.0MHz 40  
ENDO VAC  
0  
PWR =  
53dB \*1/3  
GAIN = 10

# Treatment of Anovulatory PCOS

- **Weight loss**
- **Clomiphene/ Letrozole**
- **Metformin**
- **Gonadotrophins**
- **Ovarian drilling**



Grilling



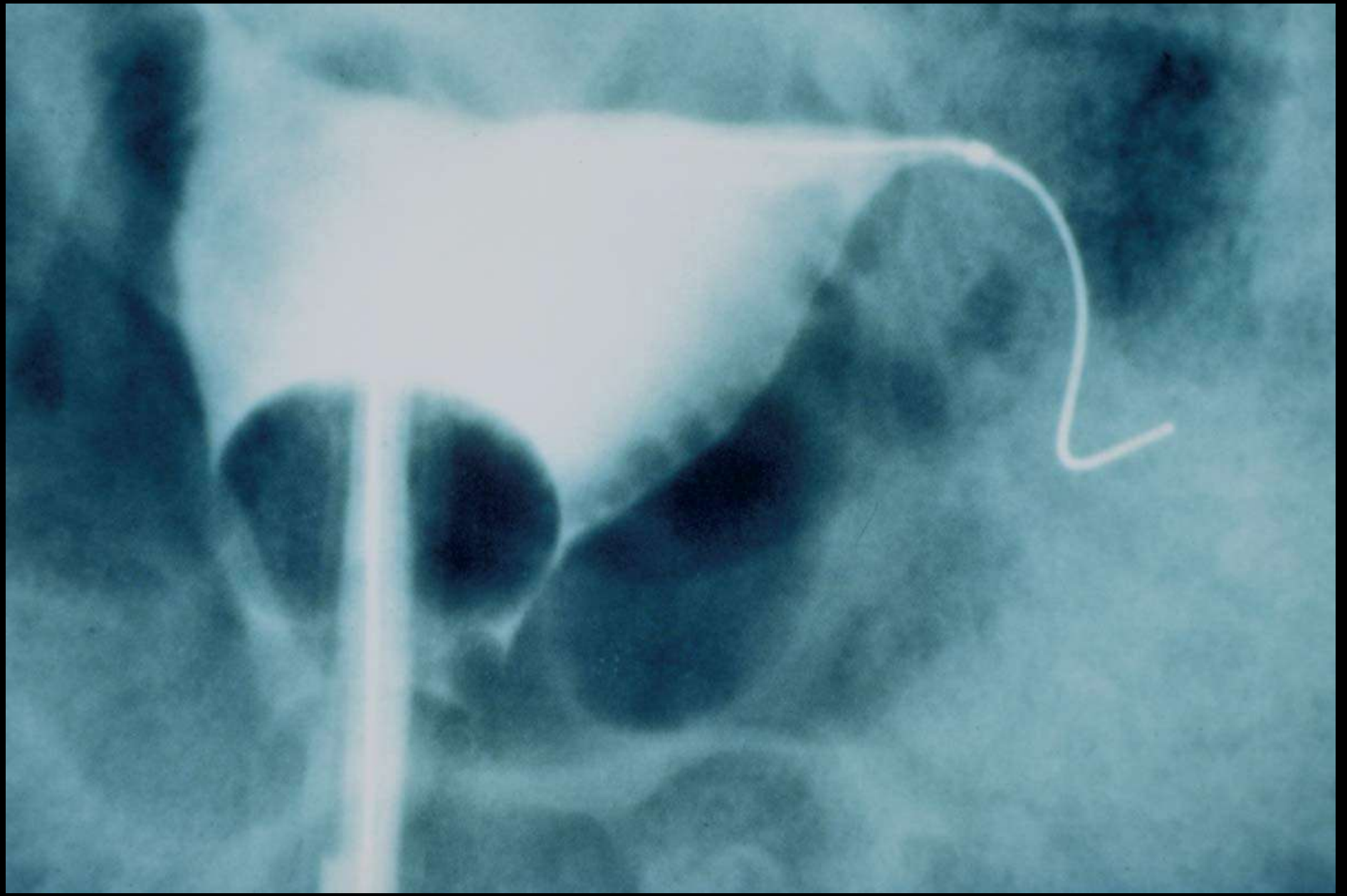
Drilling

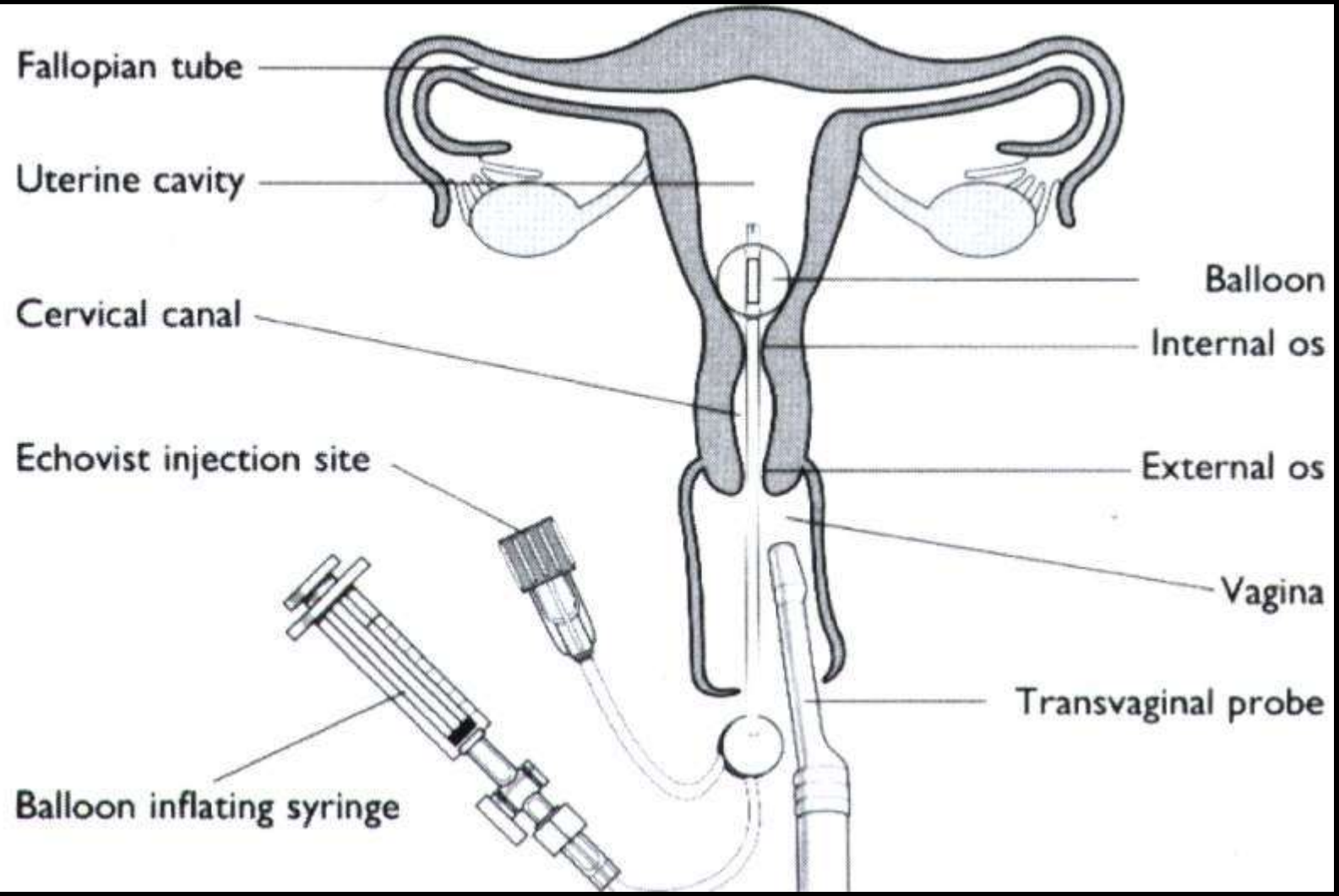
# Assessment of Fallopian Tubes

- **Hystero-salpingogram (HSG)**
- **Selective salpingography (SS)**
- **HyCoSy**
- **Laparoscopy and dye**







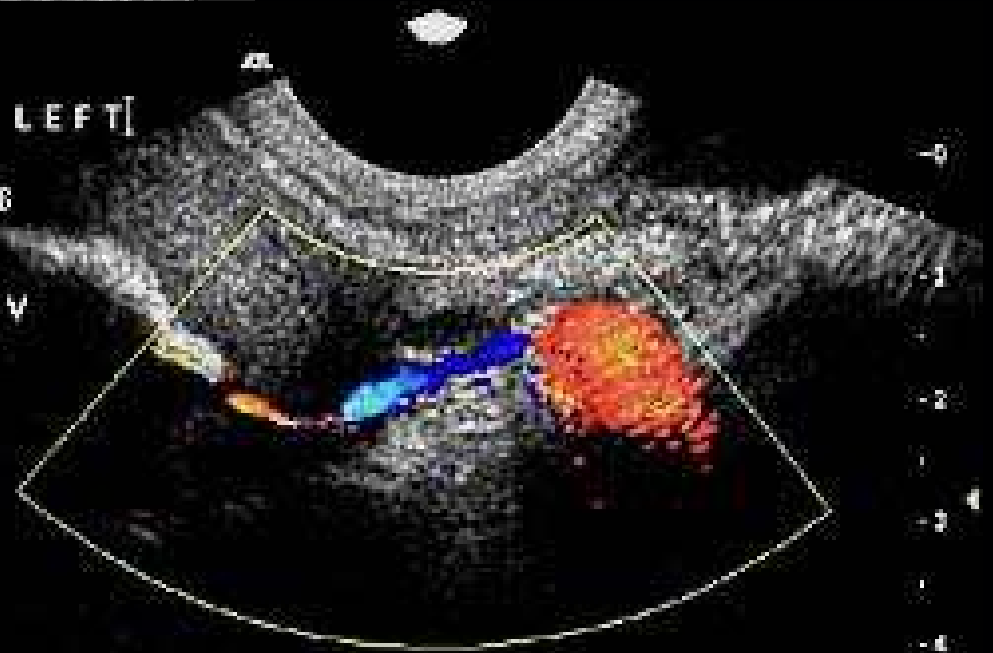


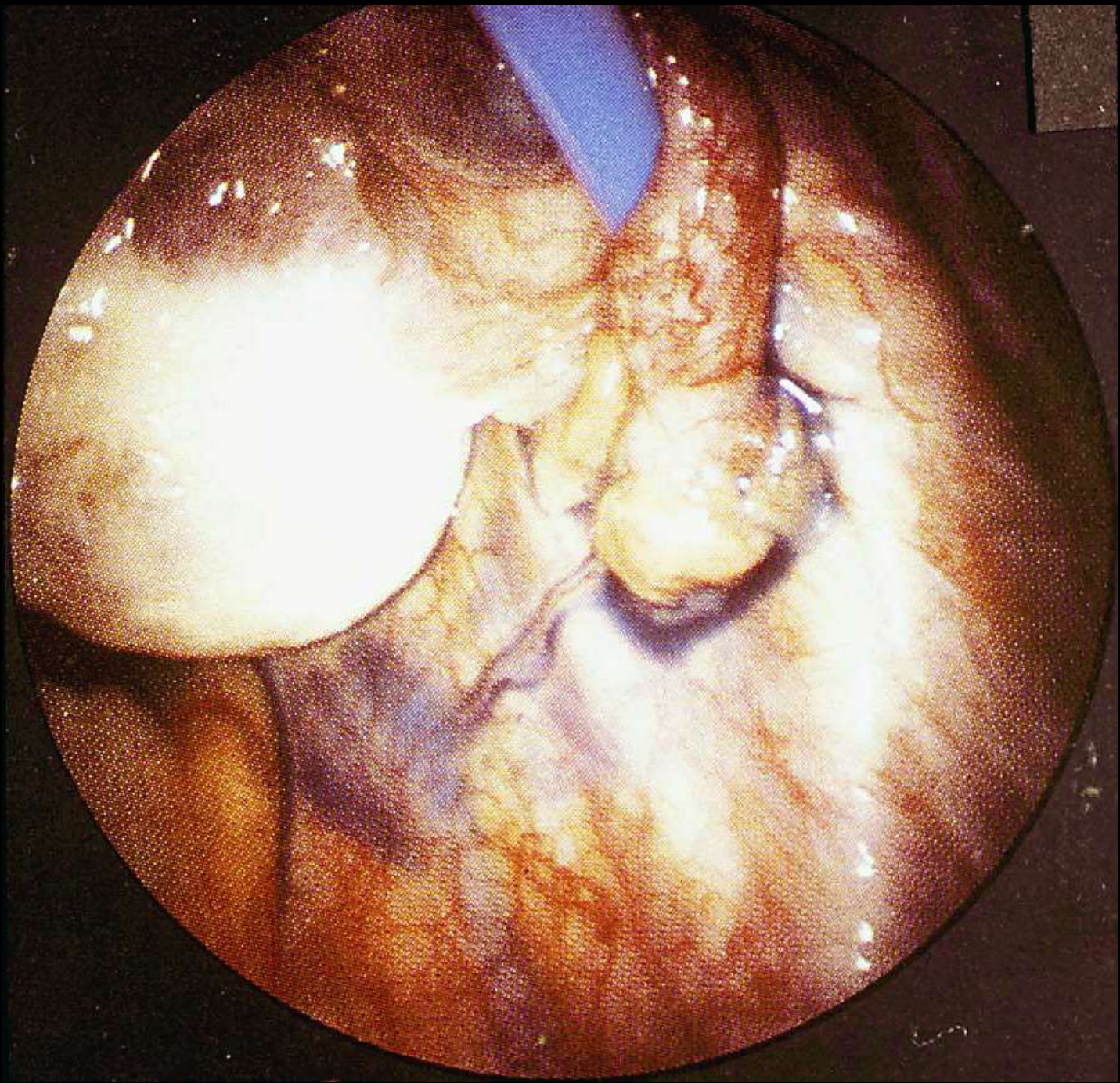
Map 3  
170dB/C-4  
Persist Med  
2D OptGen  
Fr ReflectMax

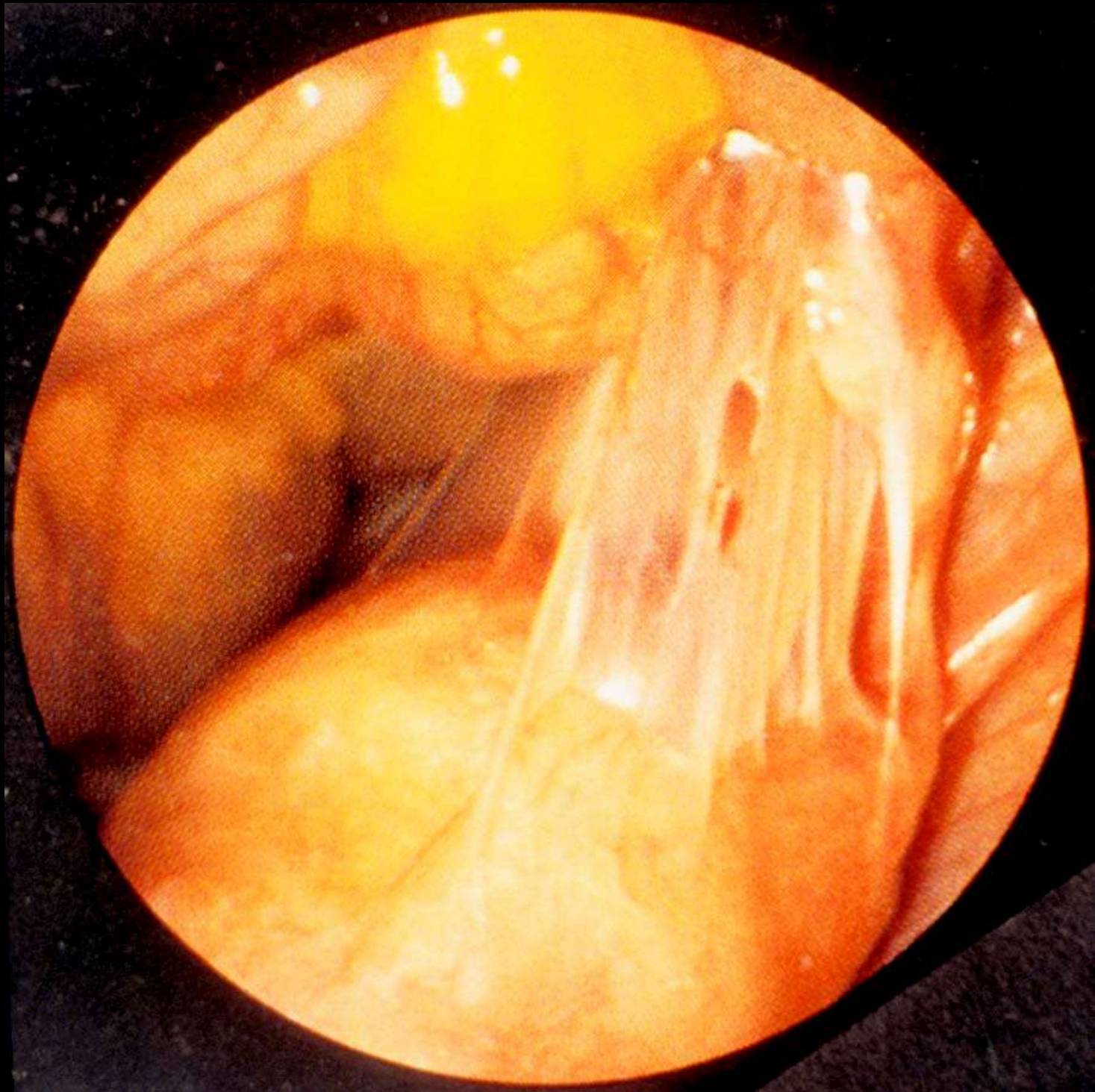
LT TUBE



Map 3  
170dB/C-3  
Persist Low  
2D OptHGen  
Col 79% Map 6  
WF Max  
PRF 2600 Hz  
Flow Opt Med V







# Causes of Tubal Damage

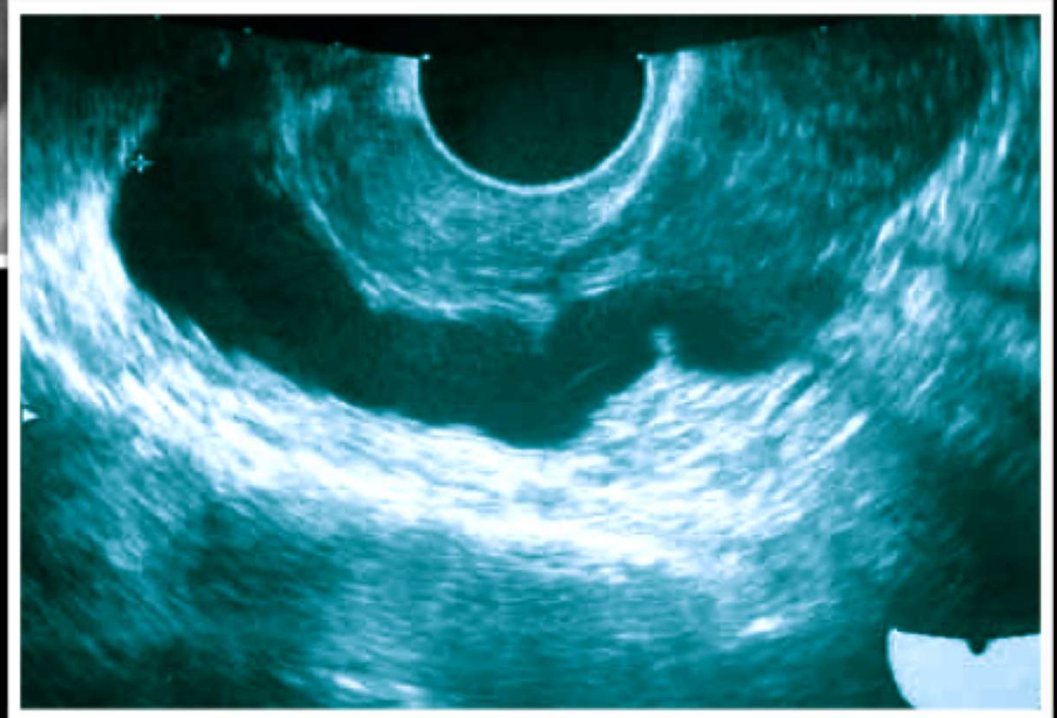
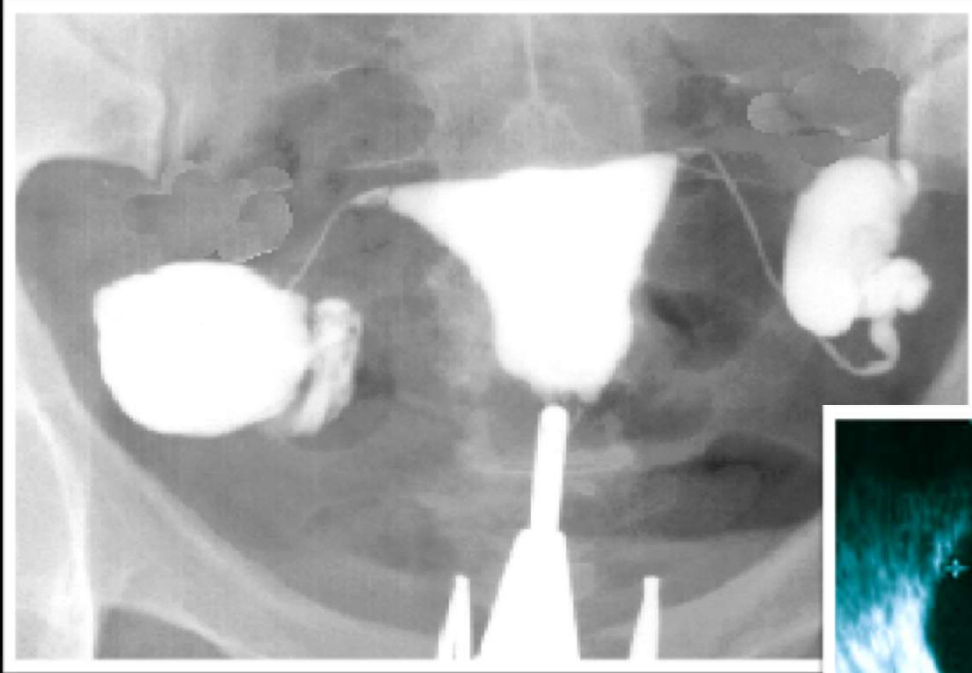
- **Pelvic inflammatory disease (PID)**
- **Surgery (could be yours!)**

# Treatment of Tubal Damage

- **Surgery: mild cases**
- **Selective Salpingography: Proximal block**
- **In-Vitro Fertilisation (IVF)**
- **Surgery before IVF**



# Hydrosalpinx



# Effect of hydrosalpinx

## Meta-analysis of 14 studies

Outcome criteria	Group with hydrosalpinx (%)	Group without hydrosalpinx (%)	Odds ratio	Confidence interval
Pregnancy rate	19.67	31.2	0.64	0.56–0.74 <sup>a</sup>
Implantation rate	8.53	13.68	0.63	0.55–0.72 <sup>a</sup>
Delivery rate	13.4	23.44	0.58	0.49–0.69 <sup>a</sup>
Early pregnancy loss rate	43.65	31.11	1.72	1.34–2.20 <sup>a</sup>

<sup>a</sup>Odds ratio significantly different from 1 ( $P < 0.05$ ).



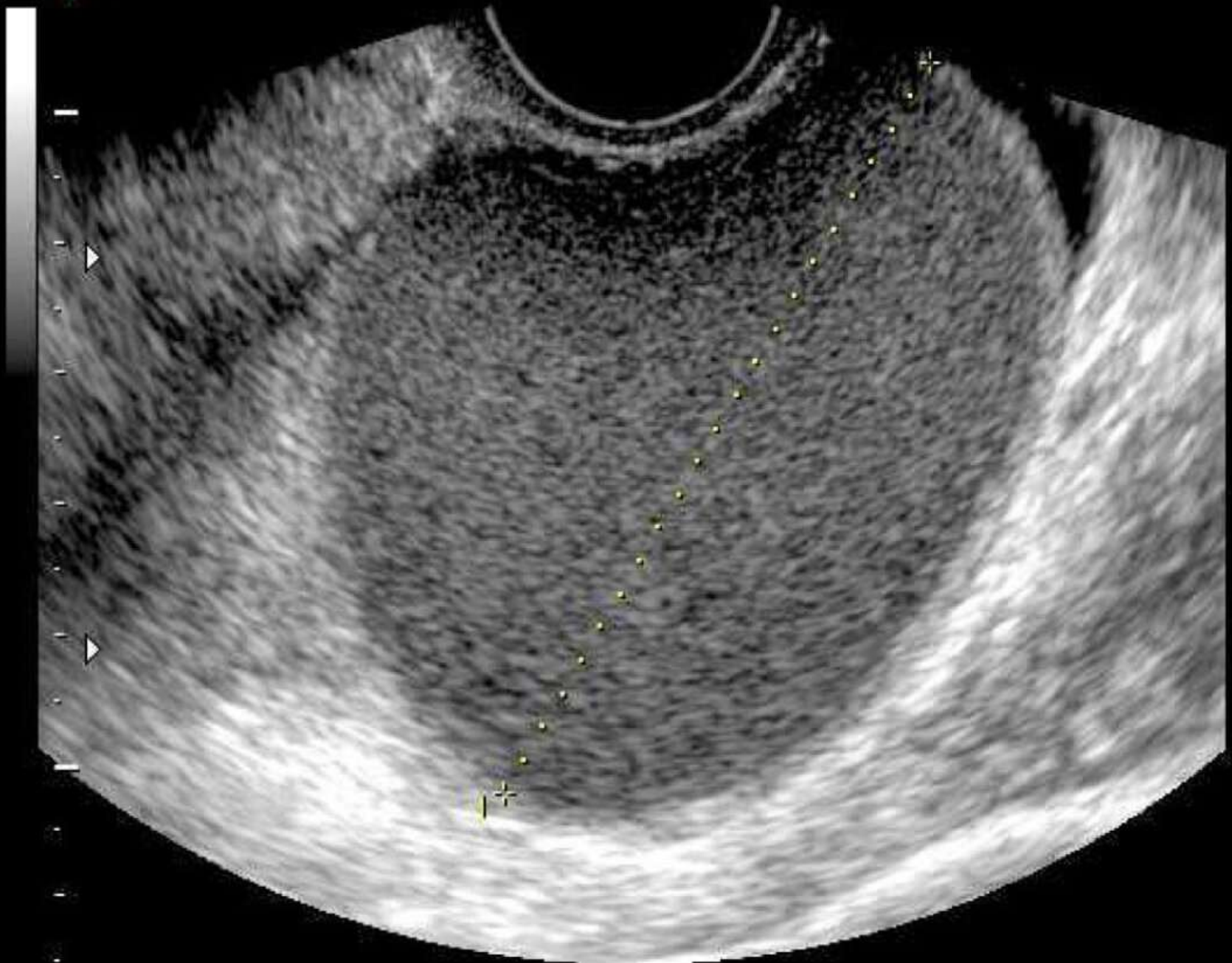


endometrioma

6.5cm

20Hz

Default  
9.30 - 3.30  
Pwr -1  
Gn -6  
C7 / M5  
P4 / E1  
MI 0.6



D1 6.55cm

# Treatment of Endometriosis

- **Laparoscopic Ablation**
- **Super-ovulation and intra-uterine insemination (IUI)**
- **Surgery (cystectomy)**
- **In-Vitro Fertilisation (IVF)**

# Assessment of Male Infertility

- **History**
- **Seminal Fluid Analysis**
  - **15 m/ml**
  - **40% motility**
  - **4% normal forms**

# Treatment of Male Infertility

- Wait & see
- IUI
- Intra-cytoplasmic sperm injection  
(ICSI)



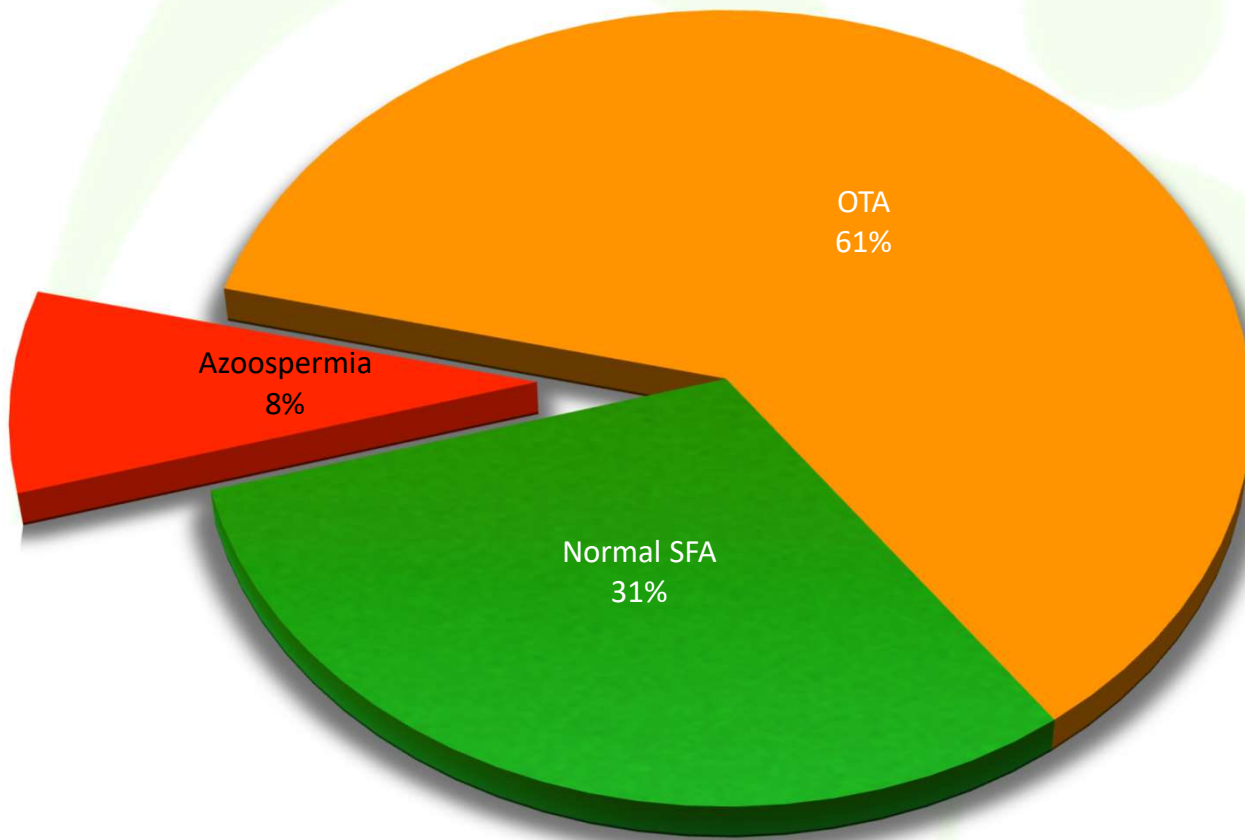


# Azoospermia

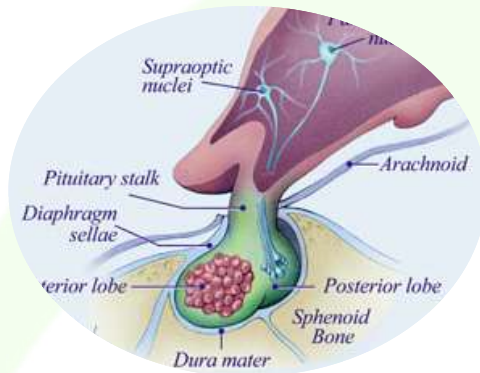


- **No sperm in the ejaculate**
- **2-5% of investigated infertile couples**

# Azoospermia

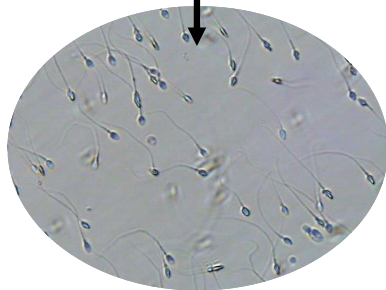
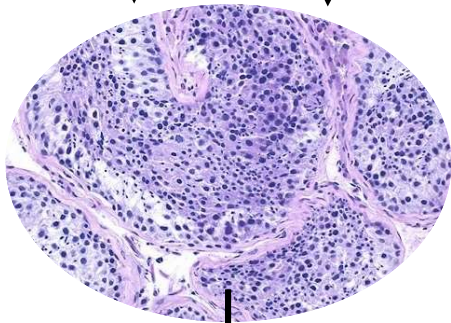


# Traditional Classification of Azoospermia



FSH

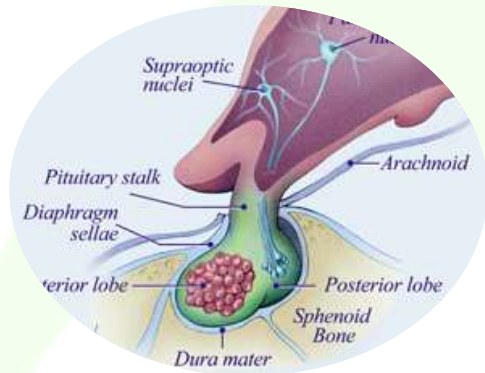
LH



• **Non-Obstructive**

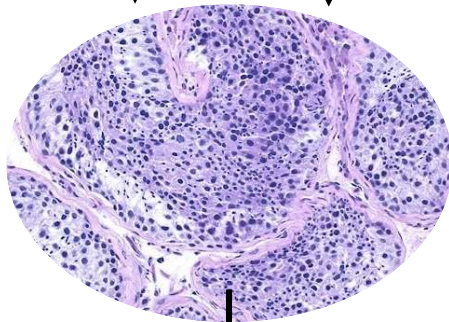
• **Obstructive**

# Modern Classification of Azoospermia

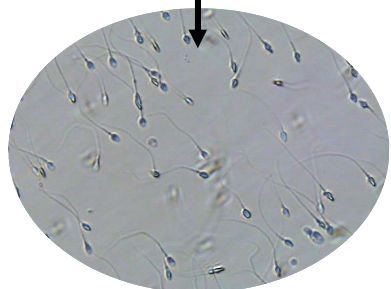


• **Pre-testicular**

FSH | LH

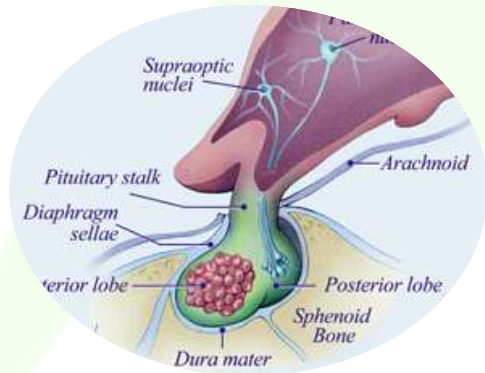


• **Testicular**

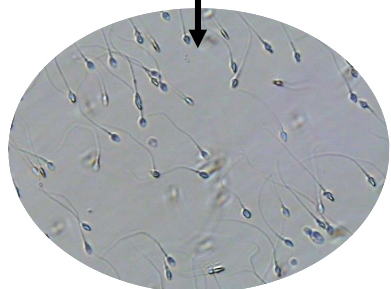
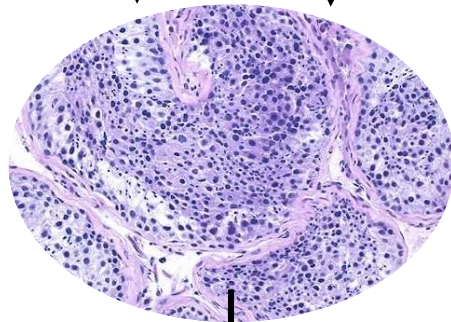


• **Post-testicular**

# Treatment of Azoospermia



FSH | LH



• **Pre-testicular: HRT**

• **Testicular: surgical sperm retrieval + ICSI**

• **Post-testicular: re-anastomosis or PESA+ ICSI**

# Unexplained Infertility

- **Diagnosis of exclusion**
- **Spontaneous pregnancy rate**
- **Clomid**
- **Sup OV + IUI**
- **IVF**

# Causes of Infertility

- **Anovulation**
- **Pelvic adhesions/ endometriosis**
- **Tubal damage**
- **Male Factor**
- **Unexplained**

# Investigations of Infertility

- **Ovulation**
- **Pelvic/ Tubal Assessment**
- **Seminal Fluid Analysis**

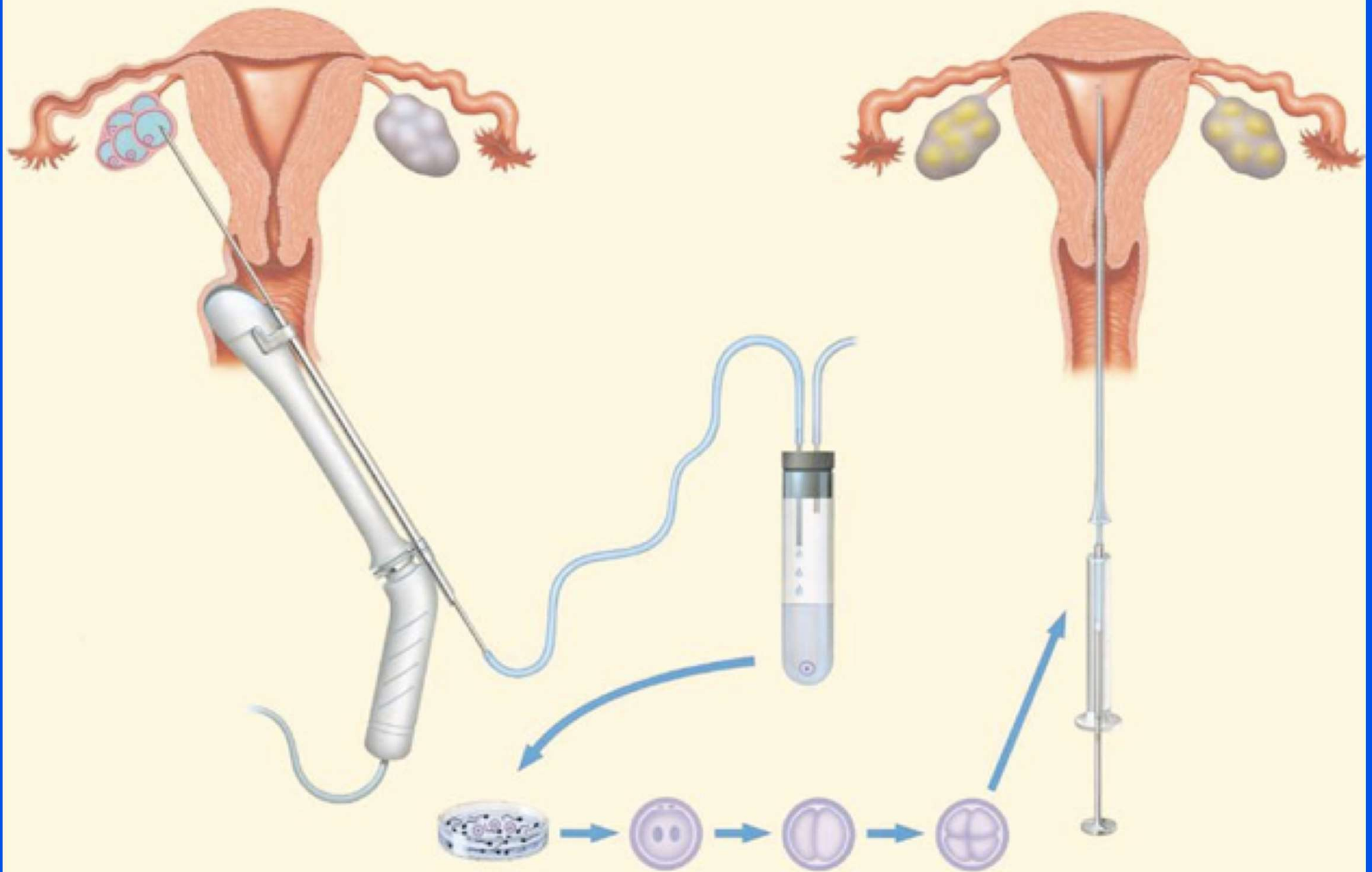


# Treatment of Infertility

- **Ovulation Induction**
- **Tubal surgery**
- **Assisted Conception (IUI/ IVF/ ICSI)**
- **Support and counselling**

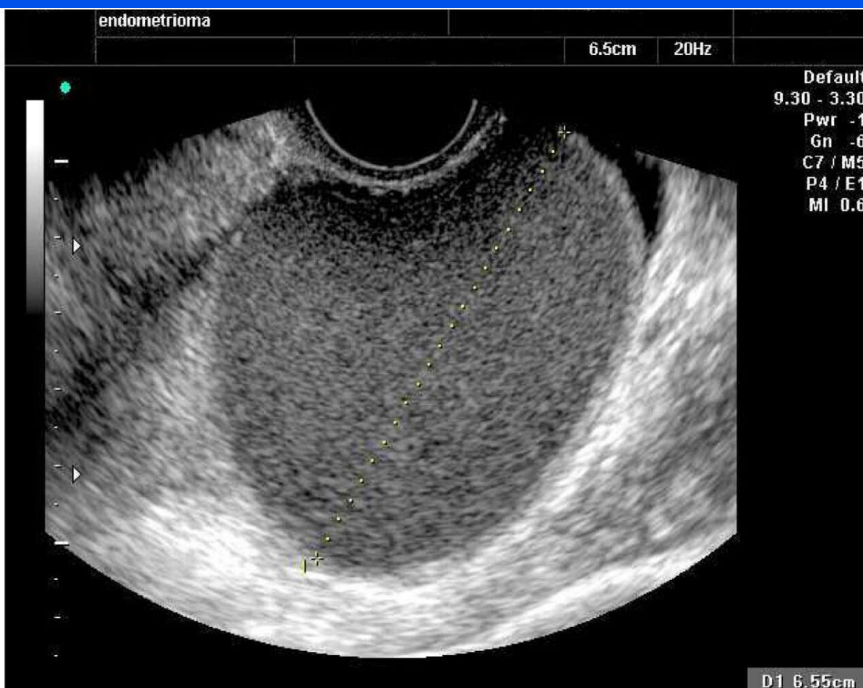
# **Treatment-associated vs treatment-independent pregnancies**

- **Cause of infertility**
- **Duration of infertility**
- **Women's age**



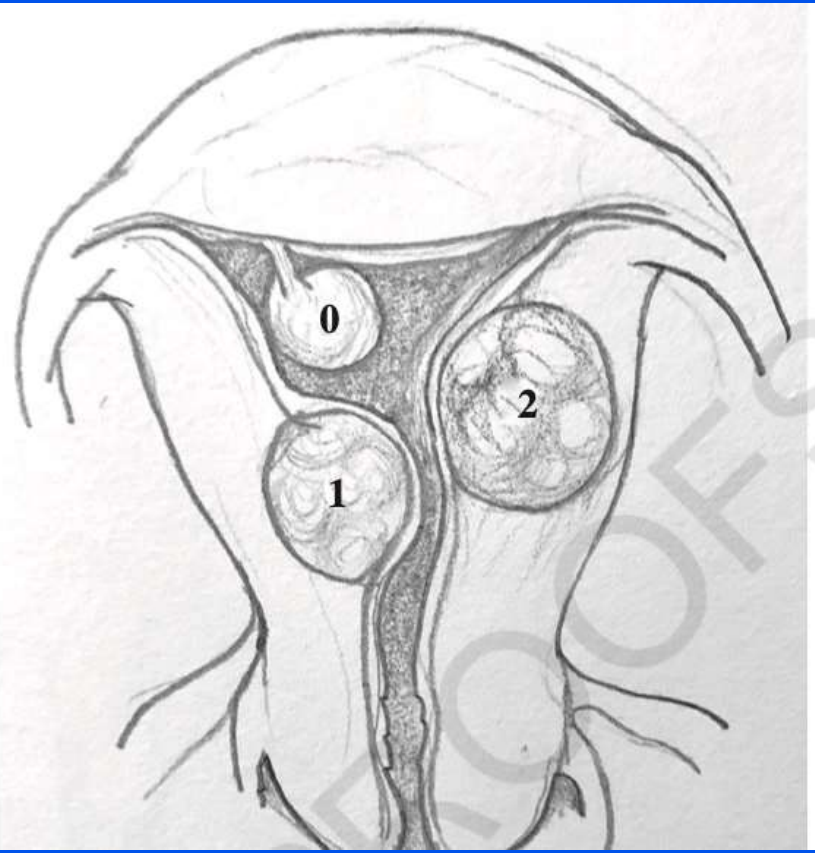
**IVF**

# Endometrioma: To remove or not to remove before IVF



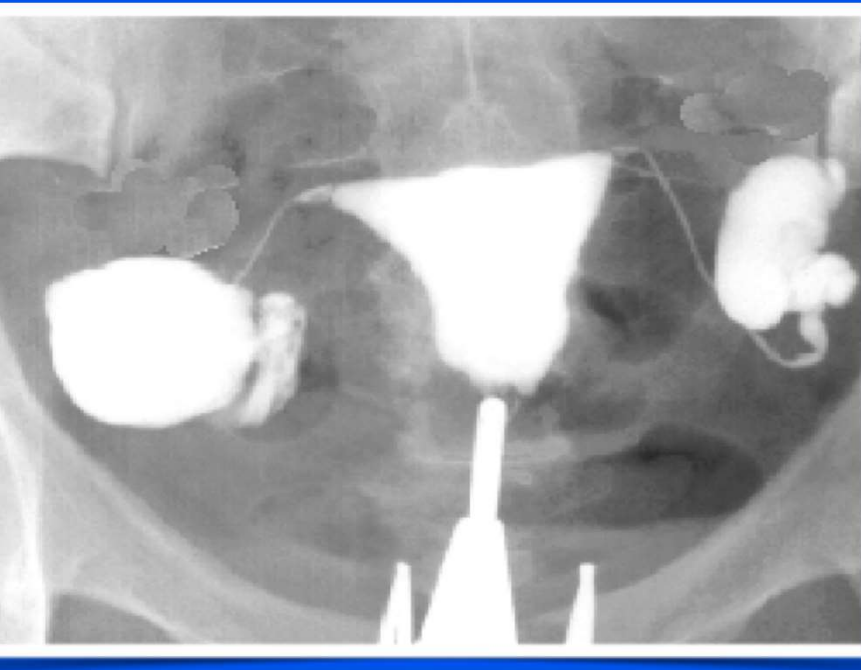
- Don't remove

# Fibroids: To remove or not to remove before IVF



- Remove submucosal

# Hydrosalpinx: To remove or not to remove before IVF



- **Remove or proximally occlude**

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