



► In(sub)fertility

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Infertility/ Subfertility

Inability of a couple to conceive after 12 months of regular intercourse without use of contraception in women less than 35 years of age, and 6 months in women 35 years and older.

Fecundability

- ▶ Probability of achieving a pregnancy in one menstrual cycle



Fecundability of normal population 20%



85% of couples achieve a pregnancy within one year



95% of couples achieve a pregnancy within 2 years

Primary versus secondary Subfertility

Primary: never achieved pregnancy before

Secondary: has achieved pregnancy before regardless of outcome

Causes of Subfertility



1/3 MALE FACTOR

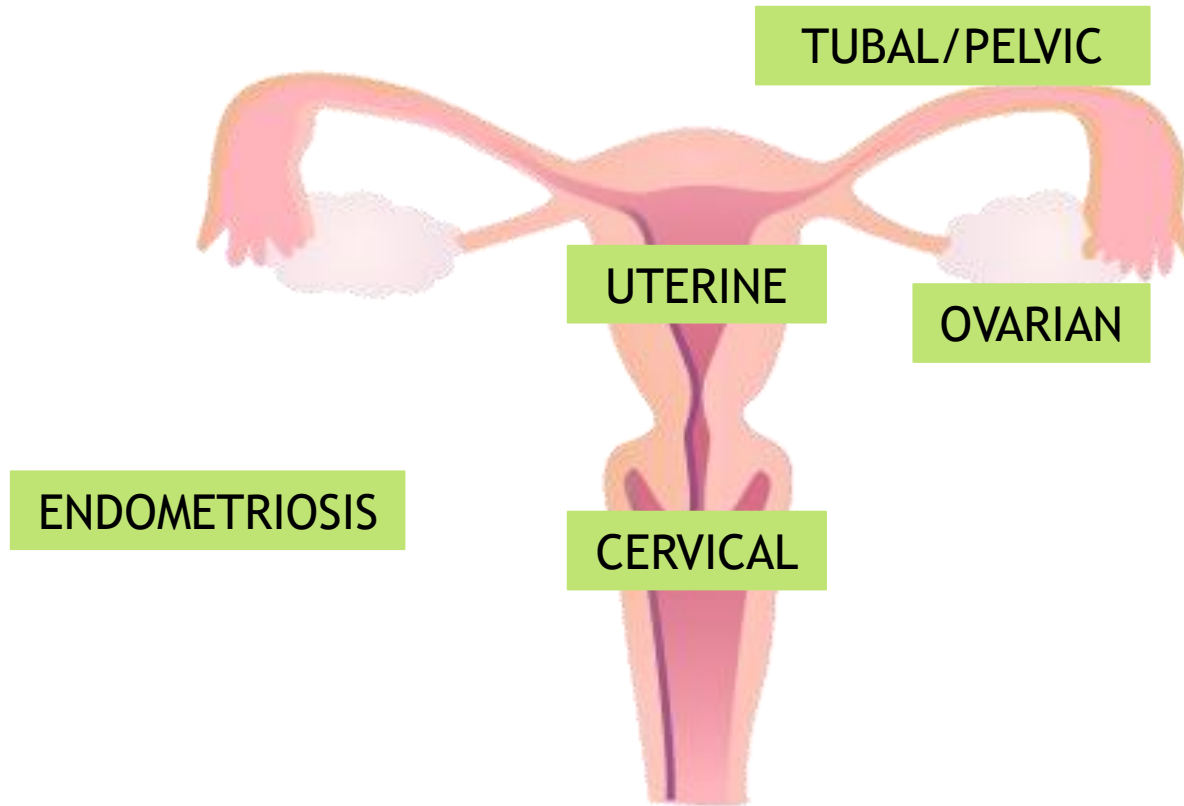


1/3 FEMALE FACTOR



1/3 UNEXPLAINED OR
COMBINED FACTORS

Female Subfertility



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Ovarian Subfertility

Ovulatory dysfunction:
oligoovulation,
anovulation

Oocyte aging

Ovulatory Disorders

WHO
Classification
of
anovulation:

WHO Class I: Hypogonadotropic Hypogonadal Anovulation

WHO Class II: Normogonadotropic Normoestrogenic Anovulation

WHO Class III: Hypergonadotropic Hypoestrogenic Anovulation

Hyperprolactinemic Anovulation

Tubal/Pelvic Subfertility

PID

Adhesions from previous surgery and nontubal infections

Severe endometriosis

Pelvic TB

Pseudo-obstruction: mucous plug, tubal spasm

Uterine Subfertility

Fibroids: only those with a submucosal or intracavitary component

Uterine anomalies: Mullerian anomalies, endometrial polyps

Intrauterine adhesions

Cervical Factors

Congenital malformations

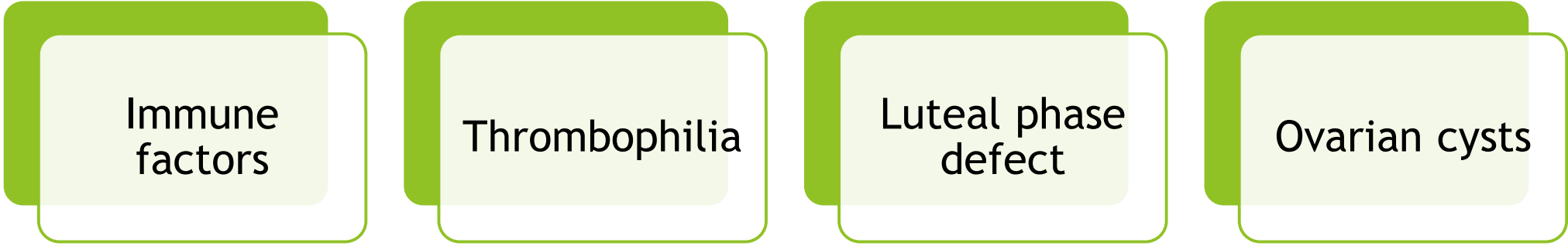
Cervical injury

Endometriosis

Causes:

- Anatomic distortion
- Damage to ovarian tissue
- Production of inflammatory substances

Controversies



Immune
factors

Thrombophilia

Luteal phase
defect

Ovarian cysts

Male Subfertility



Pre- testicular Factors

Congenital hypogonadotropic hypogonadism

Acquired hypogonadotropic hypogonadism

Drugs

Systemic diseases

Testicular Factors

Idiopathic dysspermatogenesis

Genetic causes

Congenital and developmental disorders

Acquired testicular disorders

Post- testicular Factors

Abnormalities of the epididymis, vas deferens, ejaculatory duct, seminal vesicles, and prostate.

Sexual dysfunction

Evaluation of the Infertile Couple



Timing is important



Always evaluate as a couple



Take psychology into consideration



Complete history and physical examination

Investigations

Male:

- ▶ SFA

Female:

- ▶ Assessment of ovulation
- ▶ Assessment of ovarian reserve
- ▶ Assessment of genital tract anatomy
- ▶ Assessment of tubal patency
- ▶ Thyroid function
- ▶ Hormone profile

SFA

Volume

Concentration

Total count

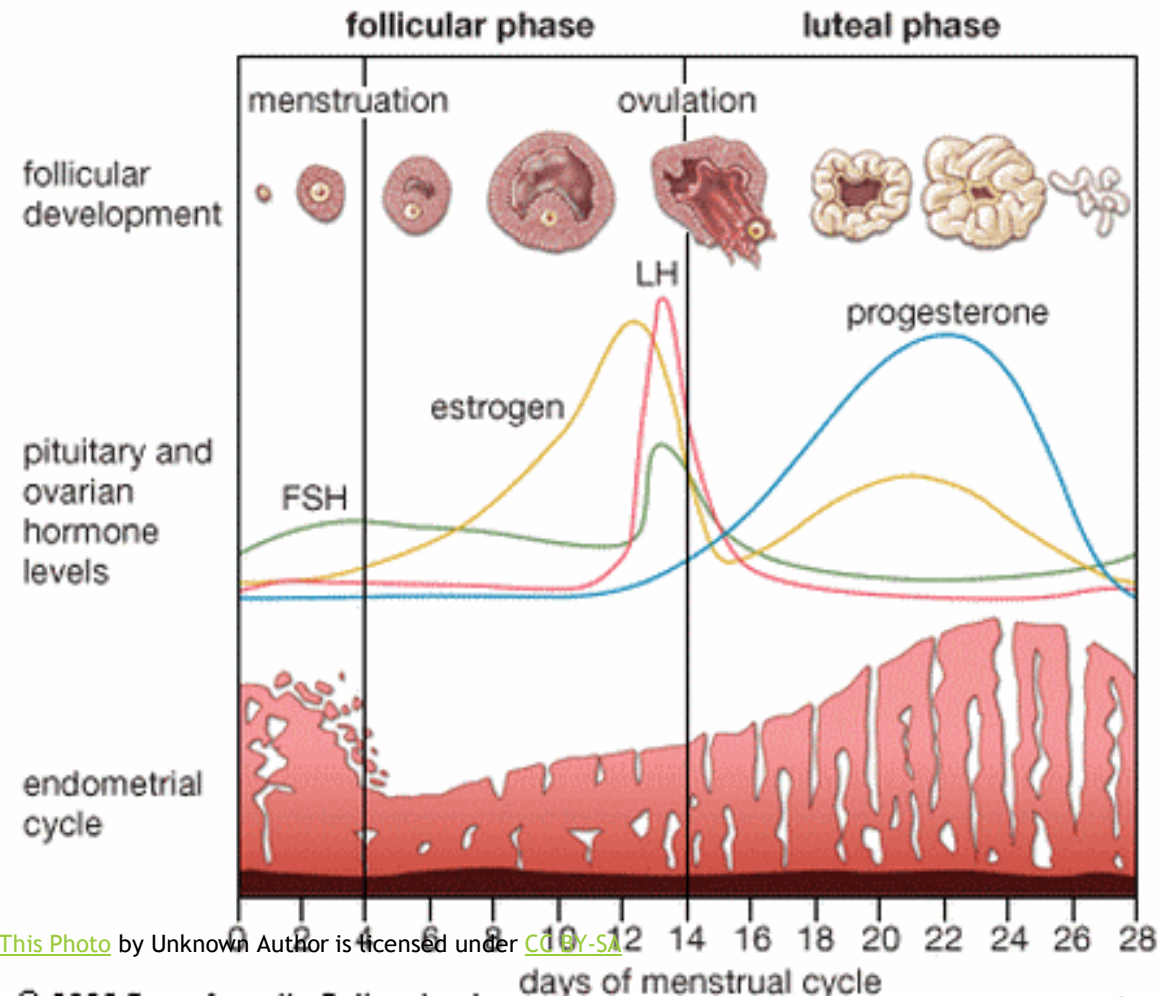
pH

Motility

Morphology

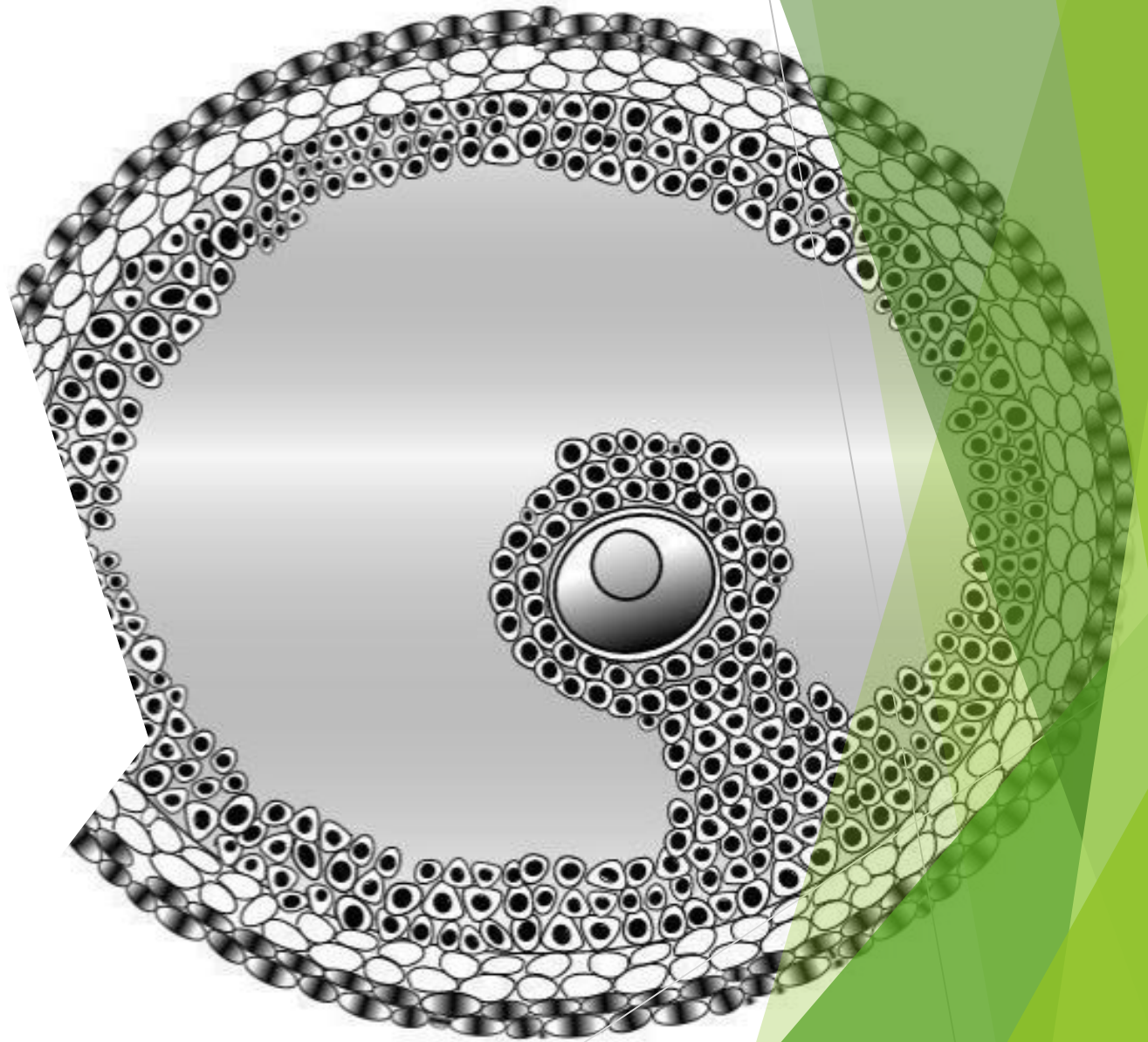
Midluteal Progesterone Level

The menstrual cycle



AMH

- ▶ Released from granulosa cells of antral follicles
- ▶ Declines with age
- ▶ Marker of ovarian reserve
- ▶ Predictor for response to ovarian stimulation

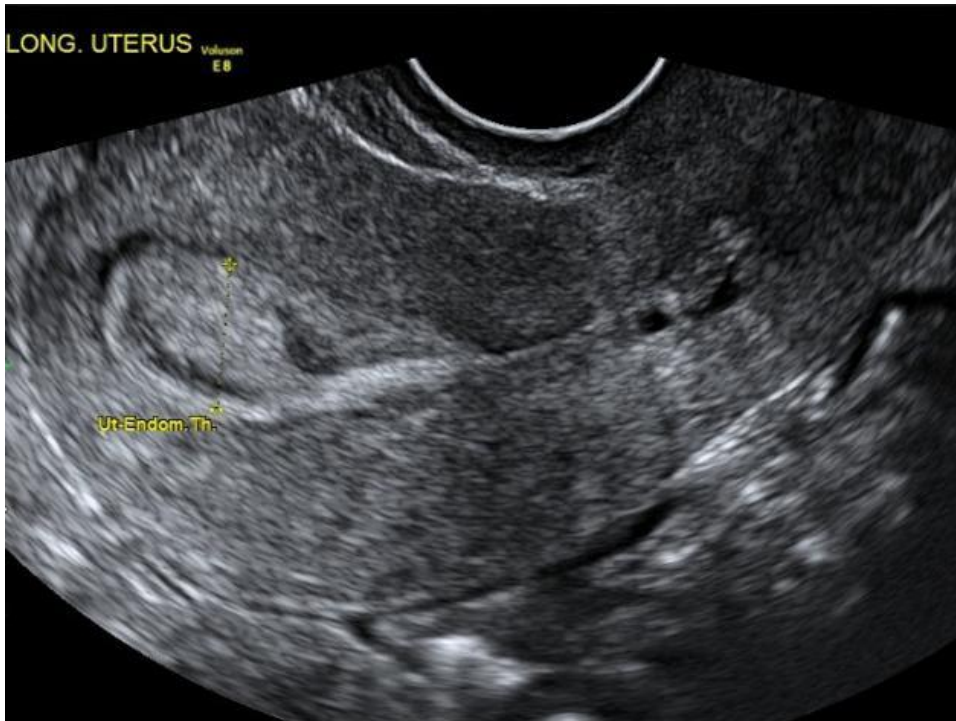


Antral Follicle Count



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Pelvic Ultrasound



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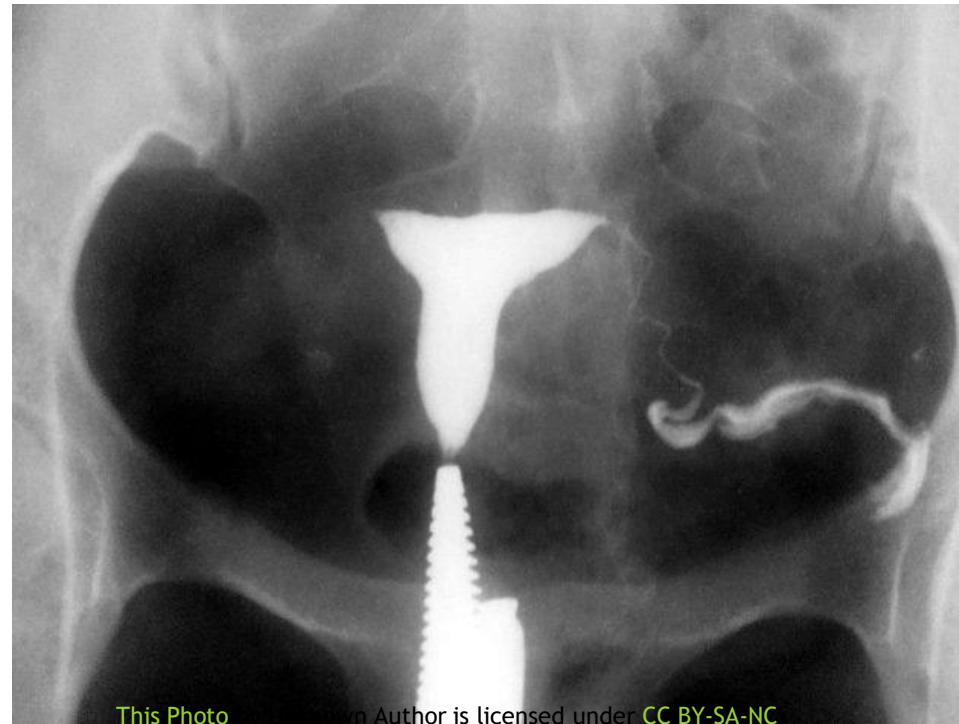


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hysterosalpingogram



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Treatment



Correct reversible causes



Overcome irreversible factors

Treatment

Ovulatory disorders >>> correct underlying cause if possible, ovulation induction with or without ART, oocyte donation

Uterine anomalies >>> surgical, surrogacy, uterine transplant

Tubal factors >>> IVF

Endometriosis >>> IVF, surgical

Cervical factors >>> surgical, some are difficult to treat

Male factor >>> ICSI, sperm donation

Unexplained >>> IVF

THE END