

Symptomatology in Gynecology & clinical reasoning (Part II)

Part II

1. Vaginal discharge:
2. Genital Ulcers
3. Pelvic pain
4. Abnormal vaginal bleeding:
5. Mass or lumps
6. Amenorrhea
7. Pelvic Organs Prolapse
8. Abnormal pregnancy(ante/Intra/Post partum)
9. Infertility
10. Hirsutism
11. Galactorrhea

Part III

ยากระดับสอบ
วุฒิบัตร ถ้าออก
เอาแค่**basic**

Mnemonic for Differential diagnosis: TICGO

TICGO

Trauma: Hx อุบัติเหตุ, กระทบกระเทือน

Infection: ไช้

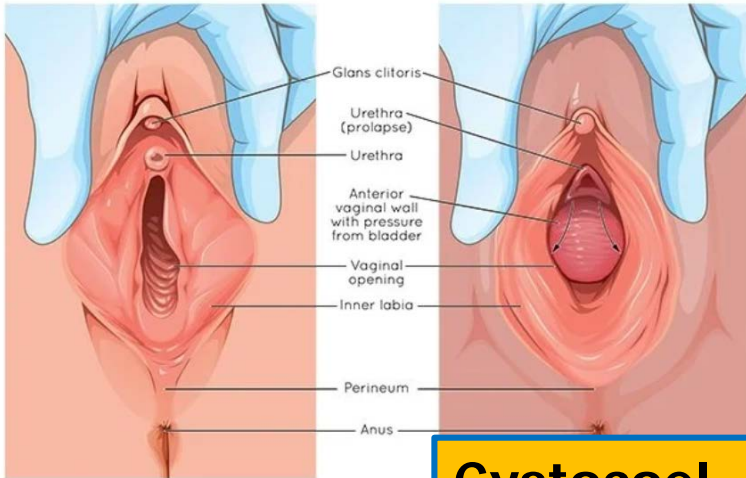
Congenital anomaly: เป็นมาแต่กำเนิด แต่อาจมาแสดงอาการช้าภายหลัง เช่น
Imperforated Hymen / Mullerian agenesis / โรคลิ้นหัวใจรั่ว ...

Growth(tumor): มีก้อน

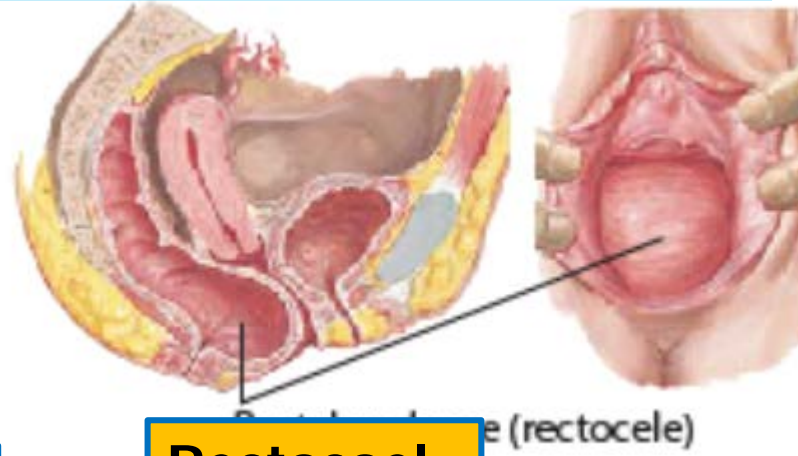
Others: โรคที่สำคัญเฉพาะอวัยวะนั้นๆ เช่น สมอ (เส้นเลือดแตก ตีบ) มดลูก
(ตั้งครรภ์

เลือดออก) ตับ(ตัวเหลือง)

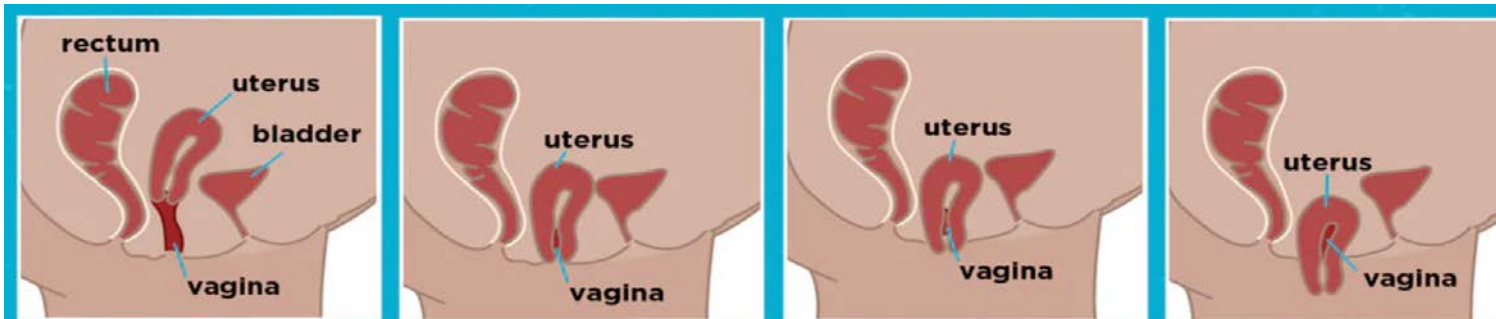
7. Pelvic Organs Prolapse



Cystocele



Rectocele



The uterus is in the upper half of the vagina

The uterus has now descended nearly into the opening of the vagina

1st degree Prolapse Ut

The uterus has protruded out of the vagina

2nd degree Prolapse Ut

The uterus is completely out of the vagina

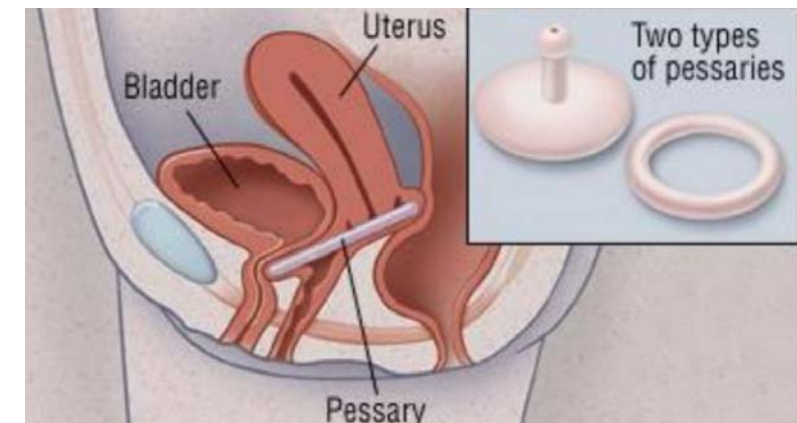
3rd degree Prolapse Ut

อาการ

- stress incontinence
- ก้อนที่ปากช่องคลอด
- ถ่ายลำบาก

Rx;

- pelvic floor muscle training (PFMT)
- Vg pessary
- Vg Hysterectomy



Pelvic Floor Muscle Training (PFMT)

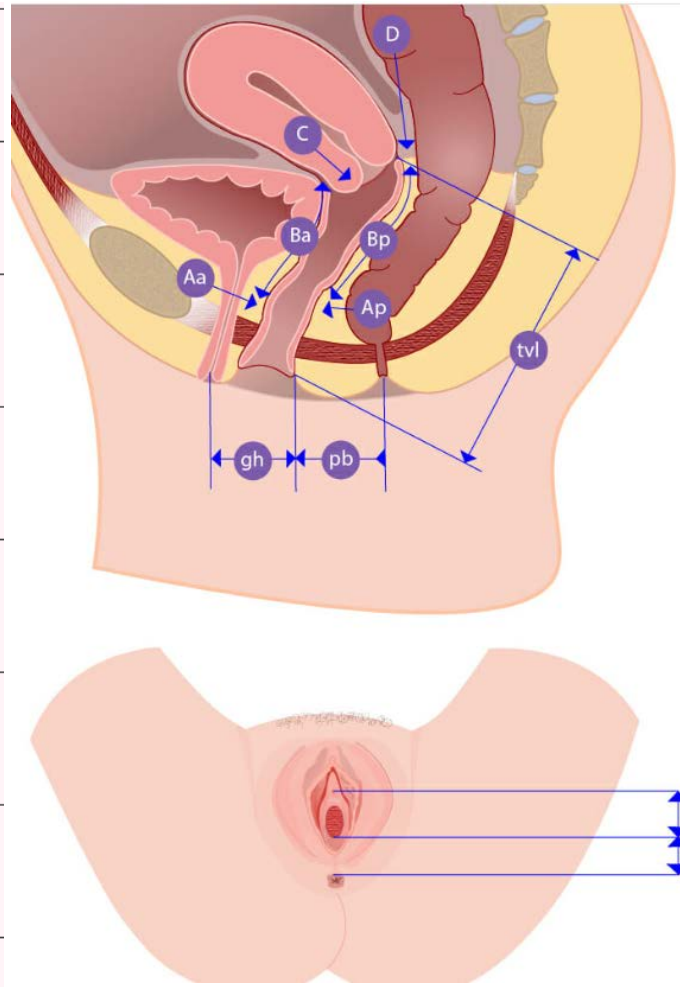
- squeezing and lifting m. around pelvic openings (urethra, vg anus).
(lying down, sitting, and standing) ไม่เกร็งกระเพาะ ต้นขา ไม่กลั้นหายใจ
- 1st line Rx for urinary incontinence (stress, urgency, and mixed):during and after pregnancy.
- routine performed multiple times(2-3) a day
- Contract and rest:** Hold 6 to 8 sec/ rest 2-3 sec.
.gradually increas length/number of contractions/ decrease the rest periods.

Male: benefits

- Dribble after urination.
- urge incontinence
- fecal incontinence.
- may improve sexual function.

FIGO

ละเอียดเกินไป ใช้
ประโยชน์ได้น้อย



Aa	Center of Front Vaginal Wall
Ba	Highest Point Vaginal Wall (Front)
C	Bottom Edge of Cervix
D	Highest Point in Vagina
Ap	Center of Back Vaginal Wall
Bp	Highest Point Vaginal Wall (Back)
tvl	Total Vaginal Length
gh	Genital Hiatus
pb	Perineal Body

POP-Q Staging Criteria	
Stage 0	Aa, Ap, Ba, Bp = -3 cm and C or D \leq - (tvl - 2) cm
Stage I	Stage 0 criteria not met and leading edge < -1 cm
Stage II	Leading edge \geq -1 cm but \leq +1 cm
Stage III	Leading edge > +1 cm but < + (tvl - 2) cm
Stage IV	Leading edge \geq + (tvl - 2) cm

มดลูกหย่อน uterine prolapse : เพราะมีการหย่อนยานของ

1 ligament ที่ยึดมดลูก

**Cardinal lig: หนาและแข็งแรงที่สุด
(transverse cx lig) ยึดด้านข้าง**

Uterosacral lig.

Round lig.

Suspensory lig.

- lig.อื่นๆ
- broad lig .
- Ovarian lig
- mesovarium lig
- Pubocervical ligยึด ant
- Utersacral ligยึด post

- broad lig .
- Ovarian lig
- mesovarium lig
- Pubocervical lig ยึด ant
- Utersacral lig ยึด post

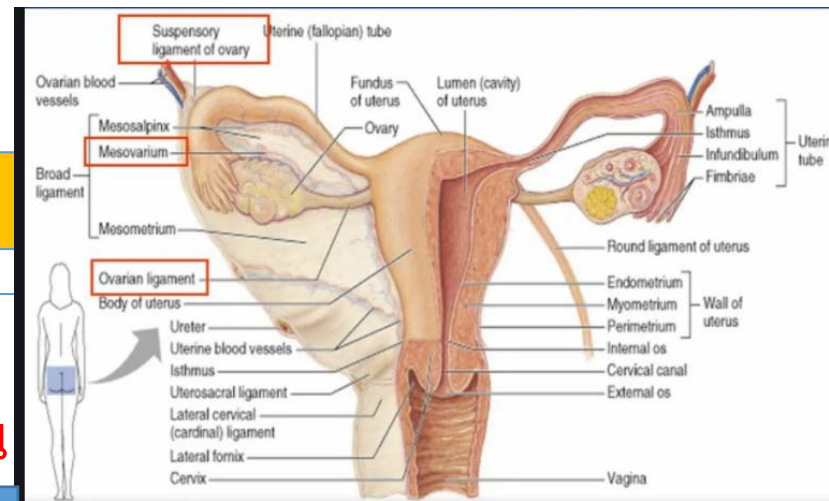
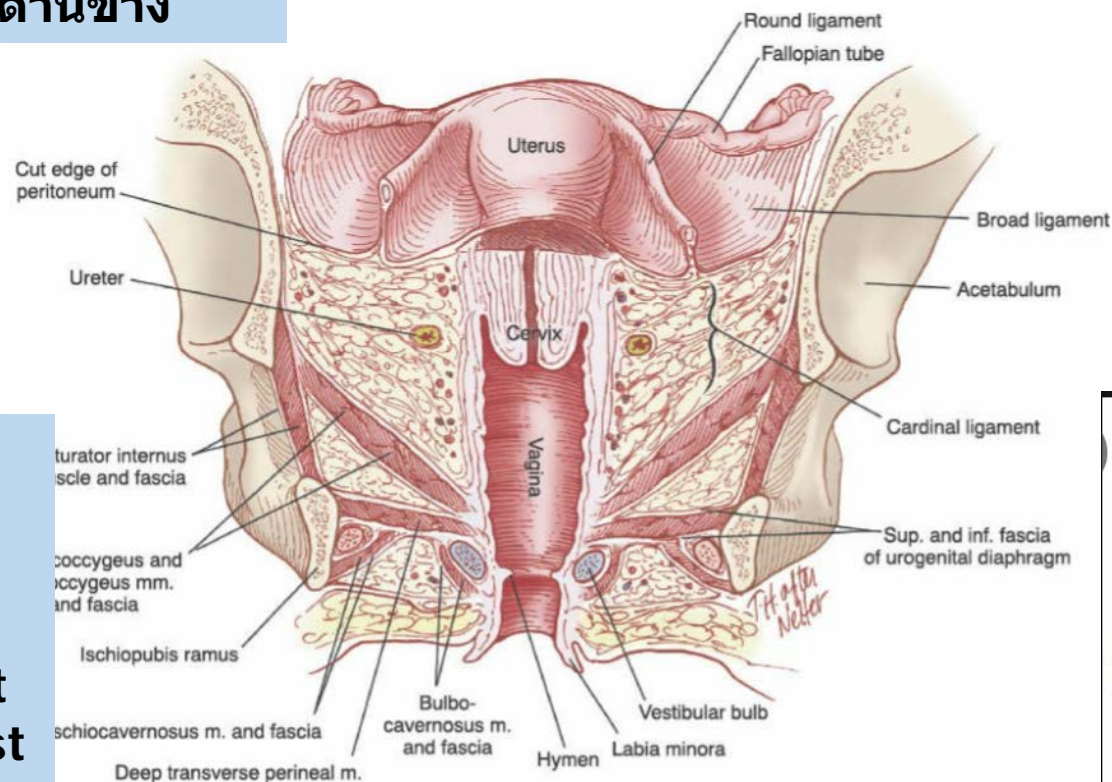
- Ovarian lig
- mesovarium lig
- Pubocervical lig ยึด ant
- Utersacral lig ยึด post

- mesovarium lig
- Pubocervical lig ยึด ant
- Utersacral lig ยึด post

- Pubocervical lig ยึด ant
- Utersacral lig ยึด post

- **Utersacral lig**ยึด post

2. กล้ามเนื้อช่วยพยุง pelvic diaphragm หย่อน



puborectalis

pubococcygeus

Illococygeus

coccygeus

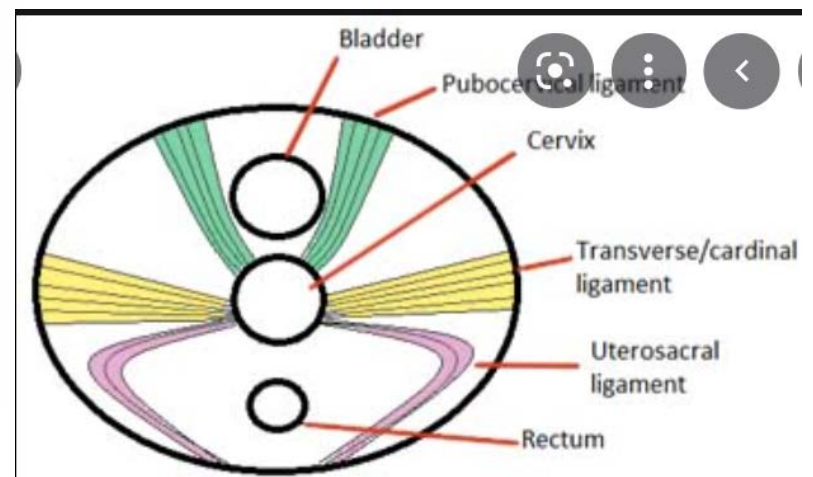
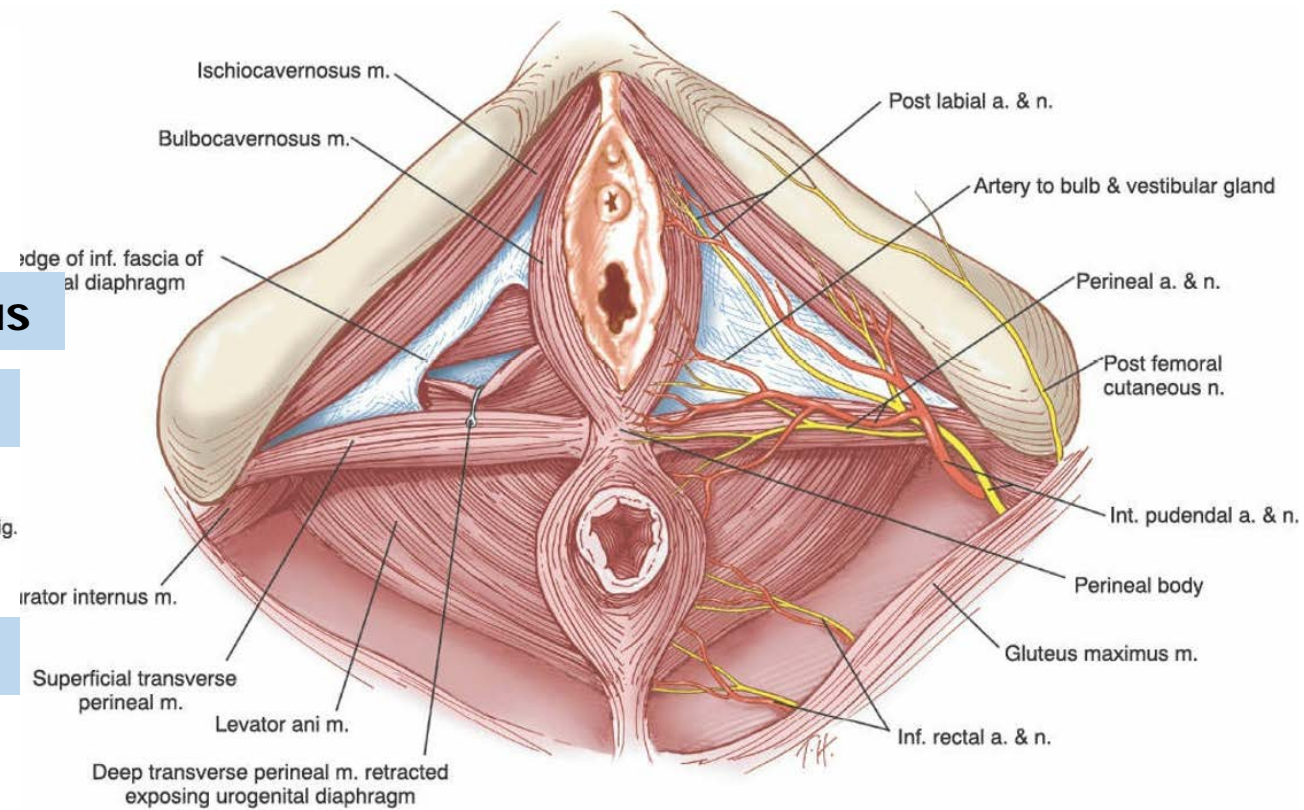
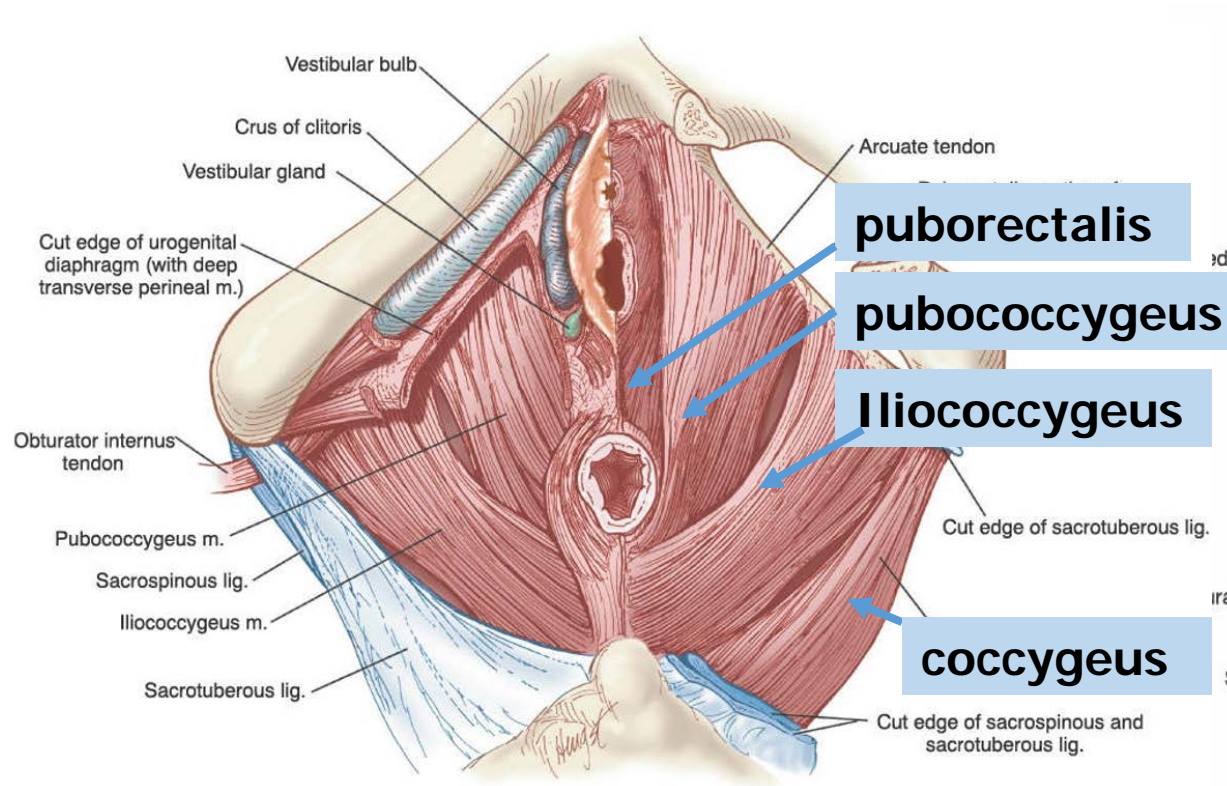


FIGURE 5-8 The ligaments and fascial support of the pelvic viscera.



Novak' gynecology:

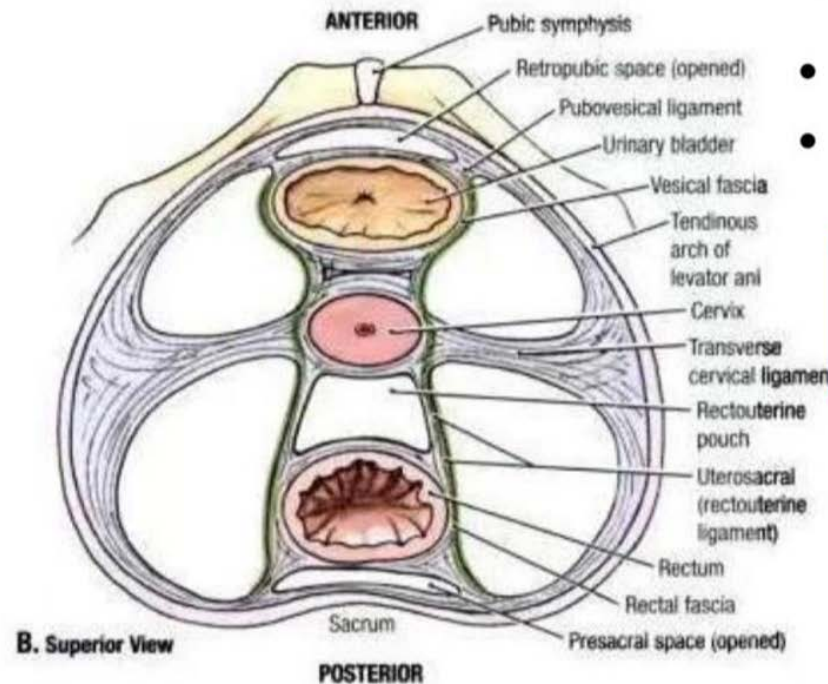
levator ani m.= puborectalis+ pubococcygeus +iliococcygeus

Pelvic diaphragm= Levator ani + coccygeus m.

8. A 45-year-old woman is admitted to the hospital with **lower abdominal and pelvic discomfort**. Pelvic examination reveals moderate **uterine prolapse**.

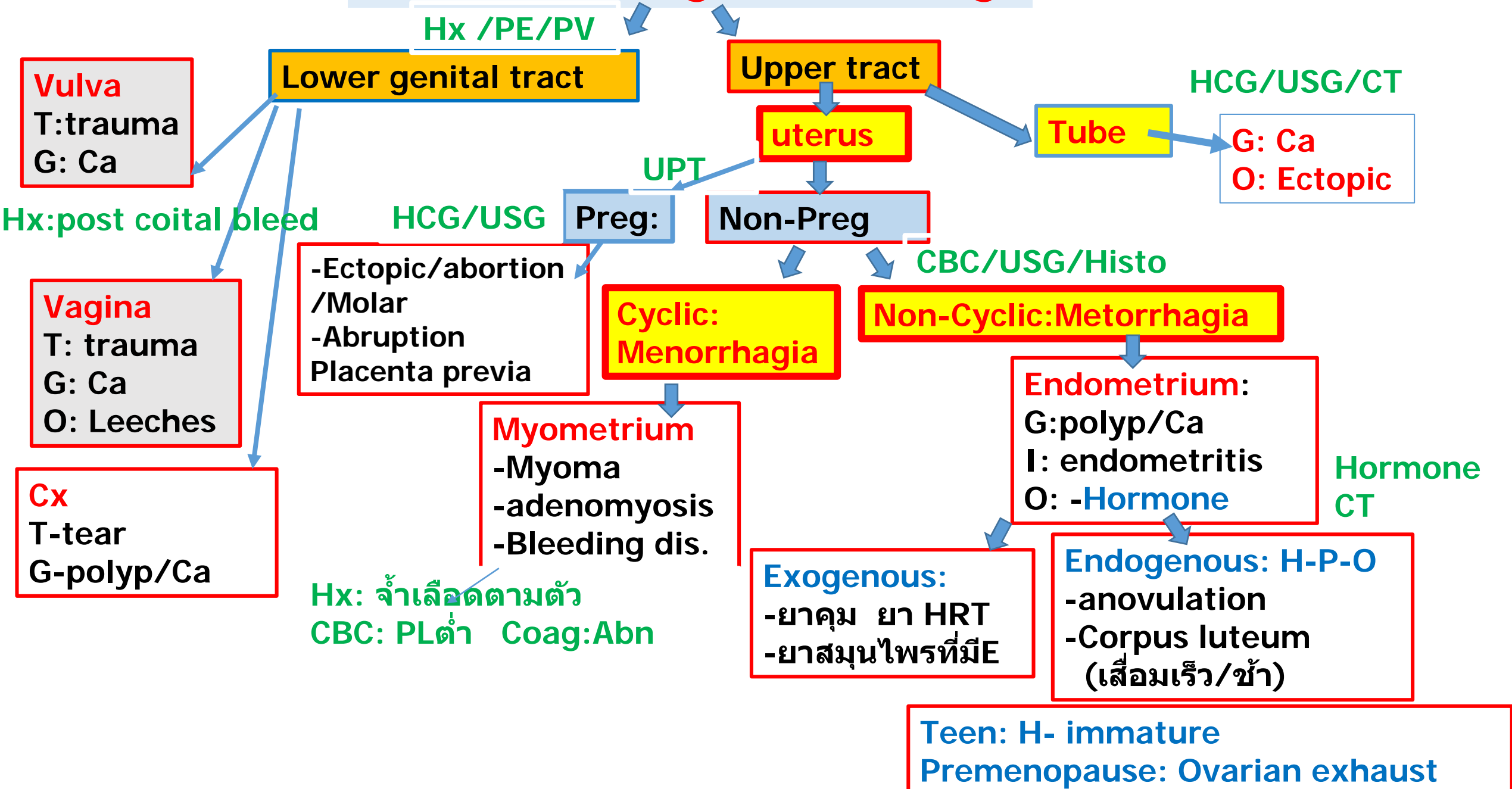
Which of the following structures is involved in this condition?

- a) Round ligament of the uterus
- b) Suspensory ligament
- c) Cardinal ligament
- d) Broad ligament
- e) Mesovarium



- Supports of uterus :
- * Levators ani
- * three important ligaments
 - **transverse cervical (cardinal)**
 - **pubocervical** (puboprostatic in male)
 - **sacro cervical or rectouterine** (rectoprostatic in male)
- * Urinary bladder

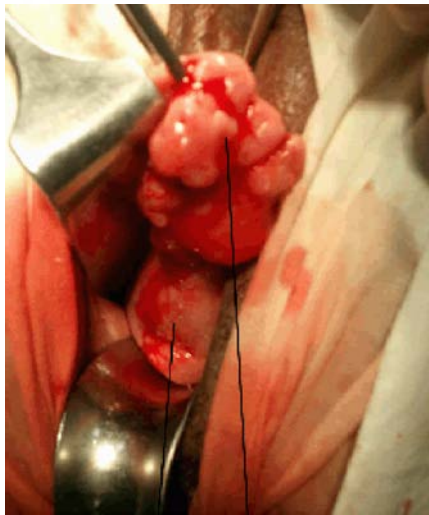
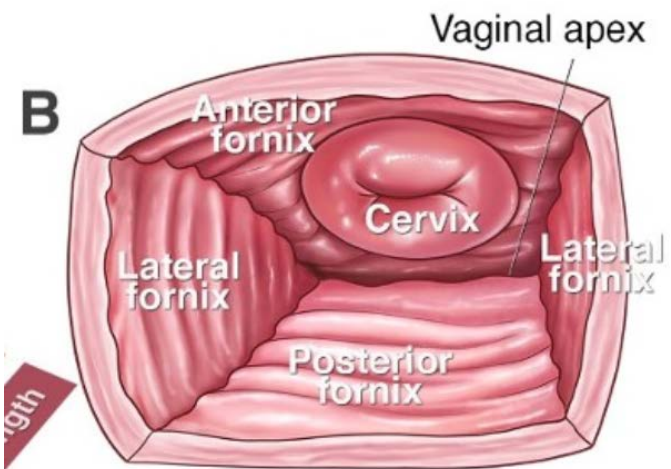
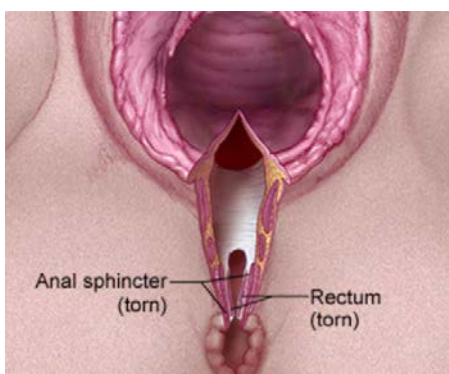
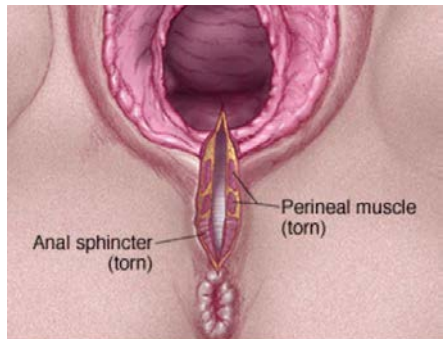
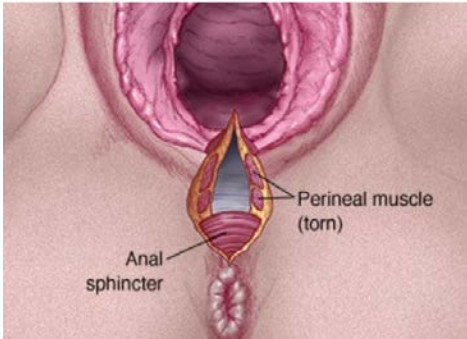
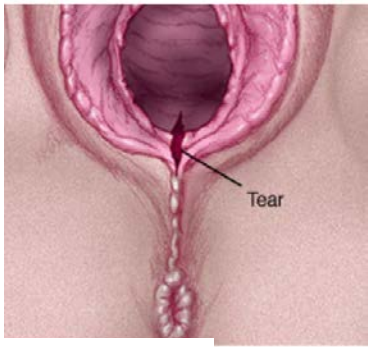
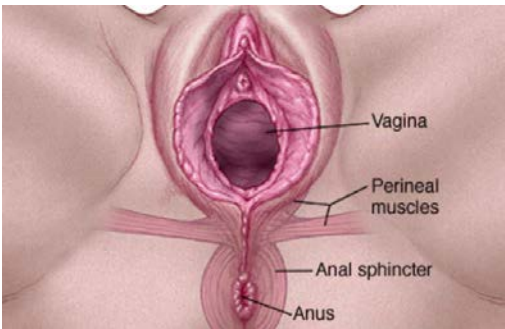
4. Abnormal vaginal bleeding:

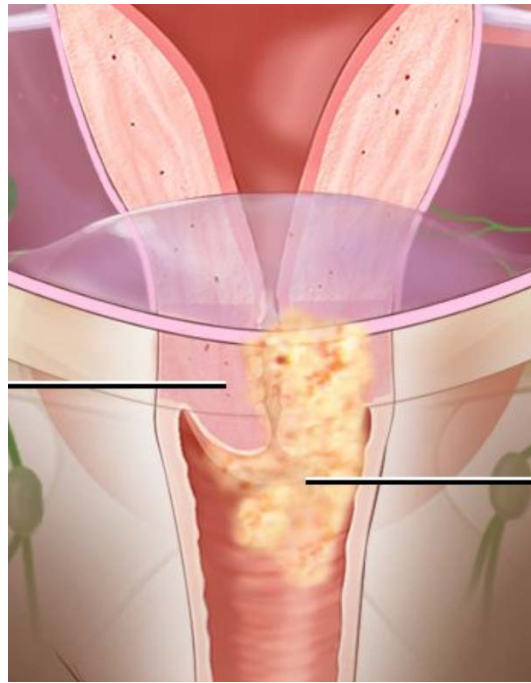
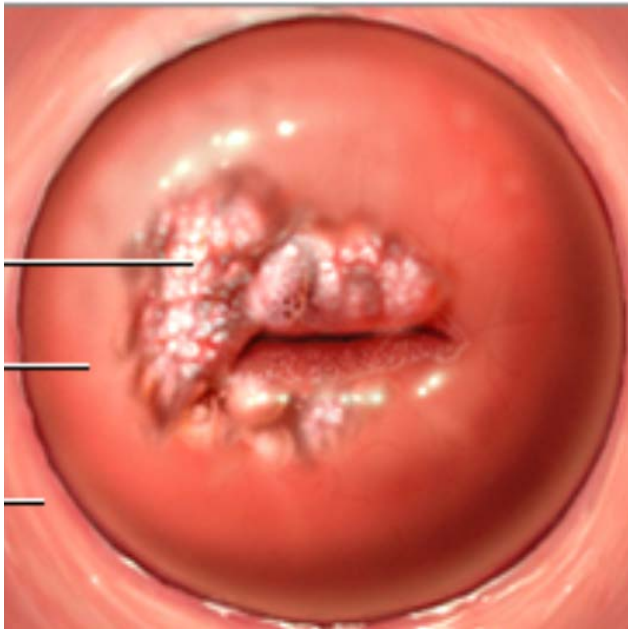
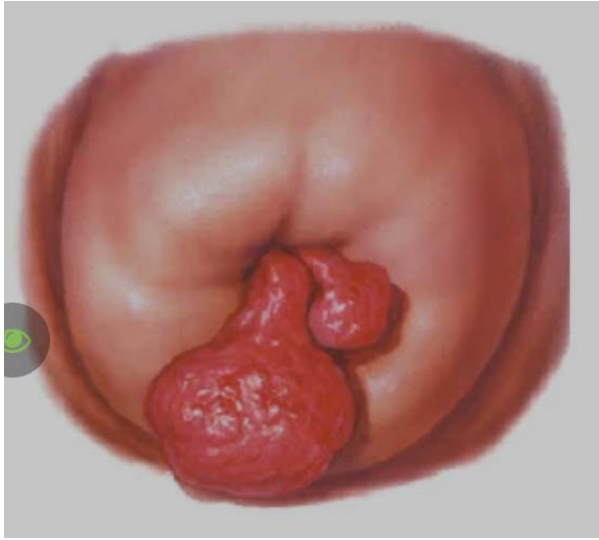


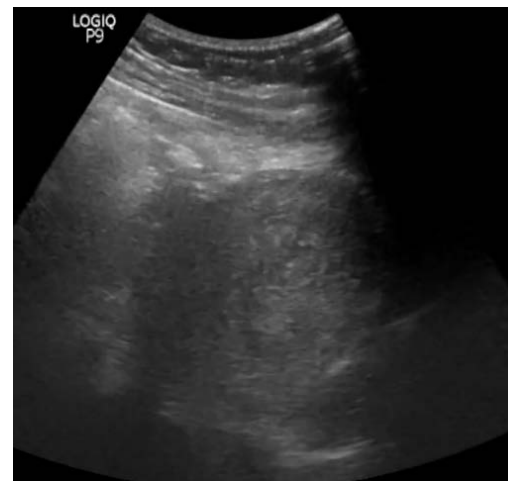
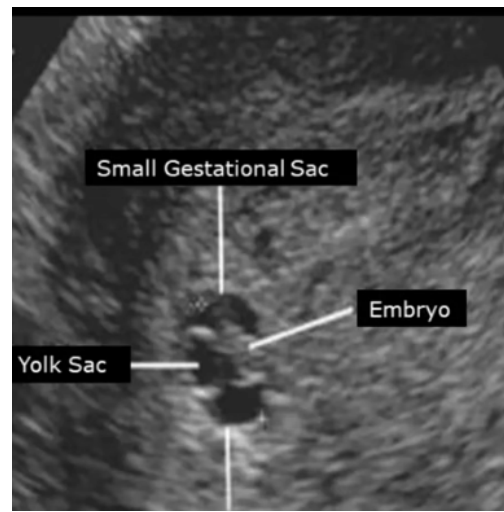
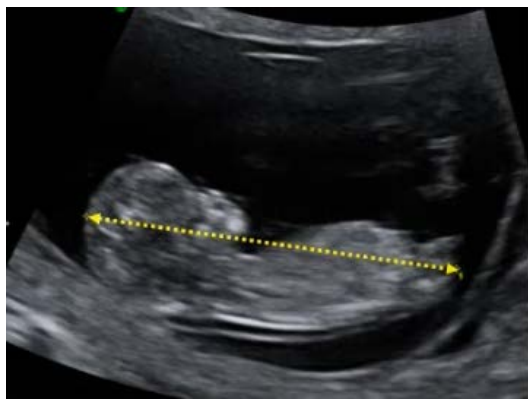
PALM-COEIN: จำง่าย แต่ไม่ช่วยสืบค้นตาม anatomy

PALM (Structural Causes):

- **P:** Polyps:
- **A:** Leiomyoma
- **M:** Malignancy and hyperplasia:
- **COEIN (Non-Structural Causes):**
- **C:** Coagulopathy:
- **O:** Ovulatory dysfunction:.
- **E:** Endometrial: such as inflammation.
- **I:** Iatrogenic: medical procedures or treatments.
- **N:** Not otherwise classified:

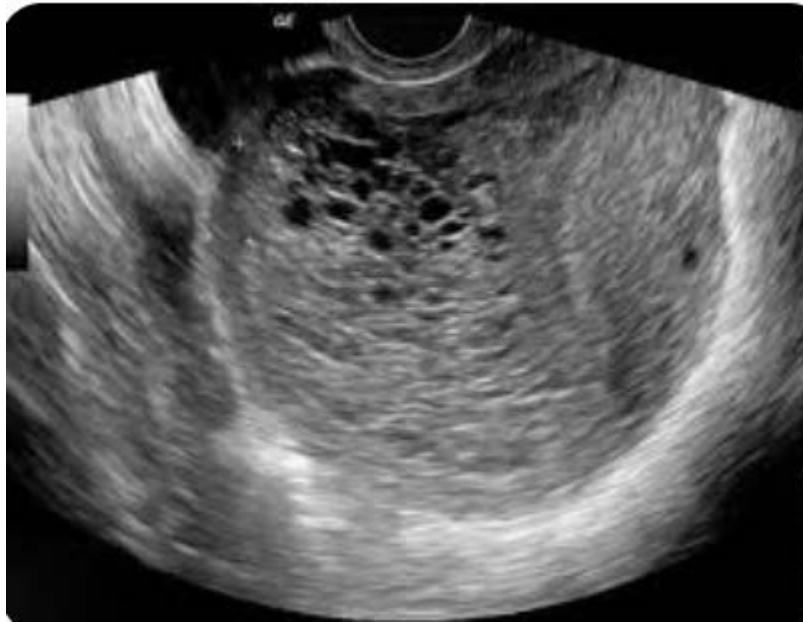


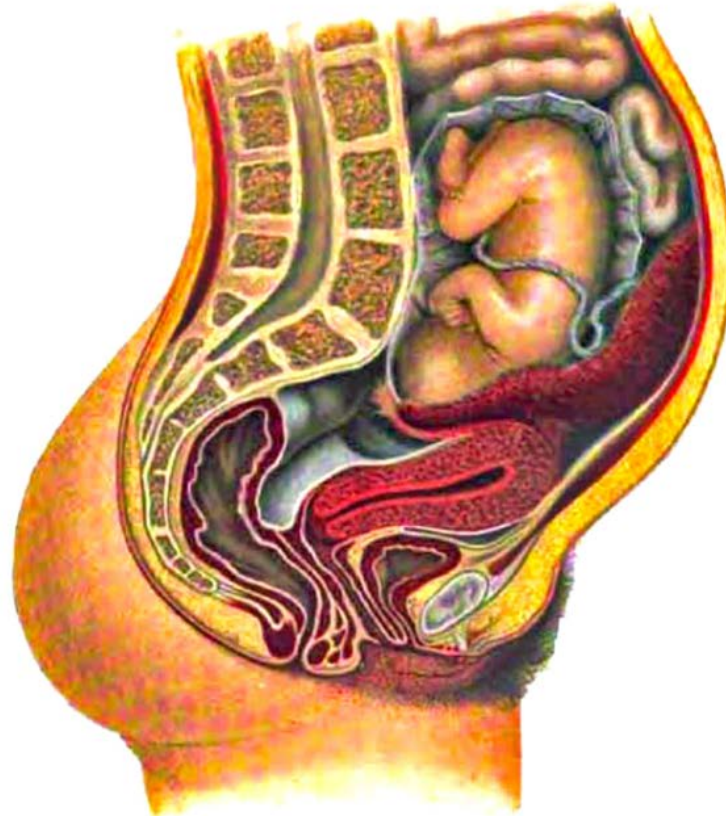
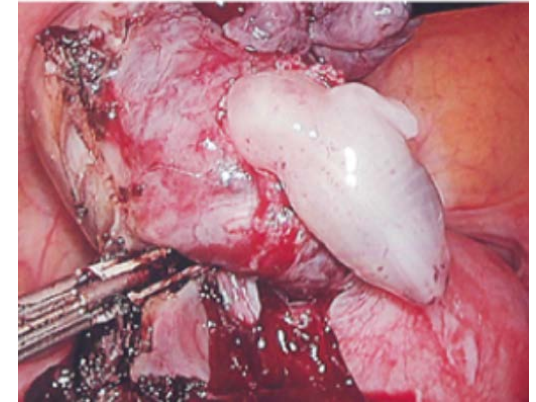


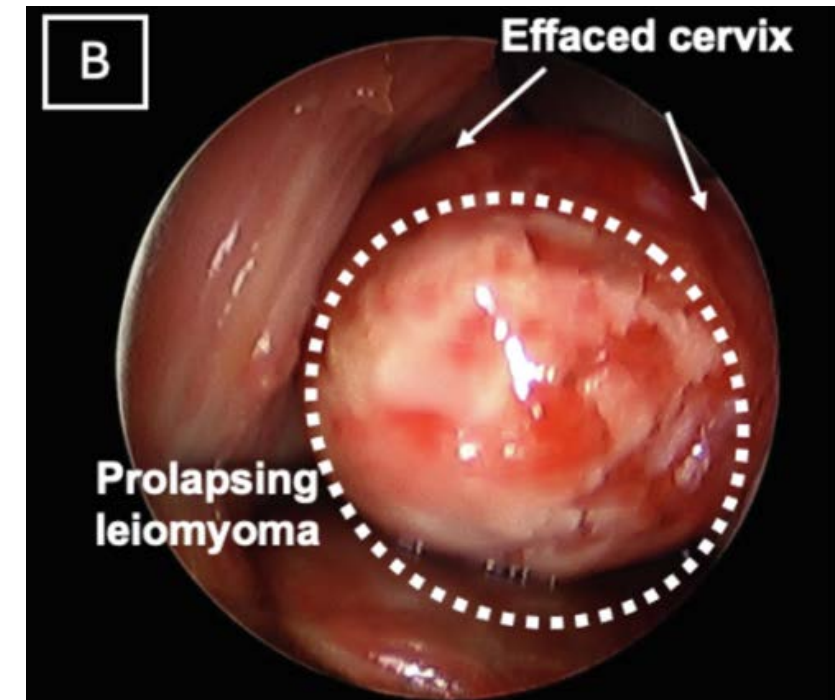
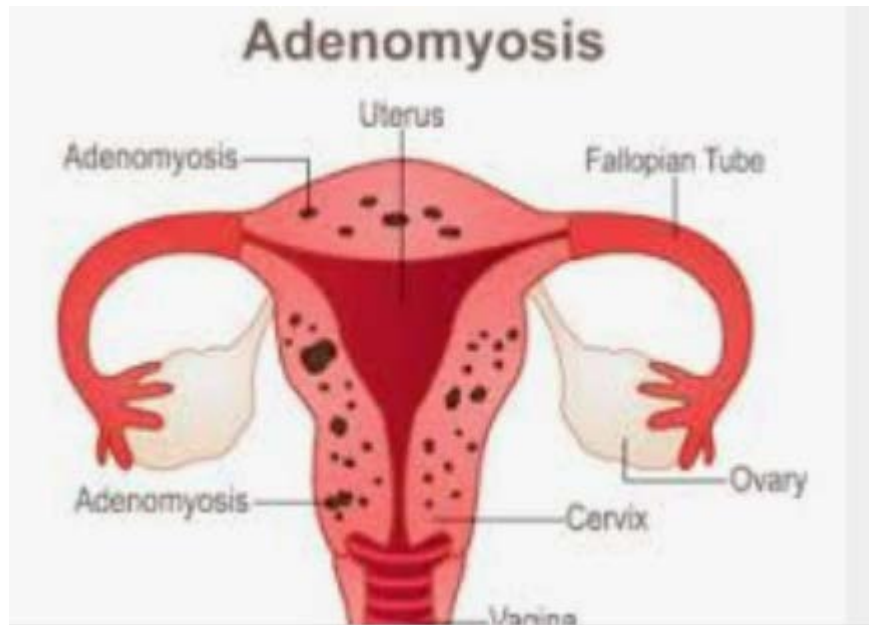
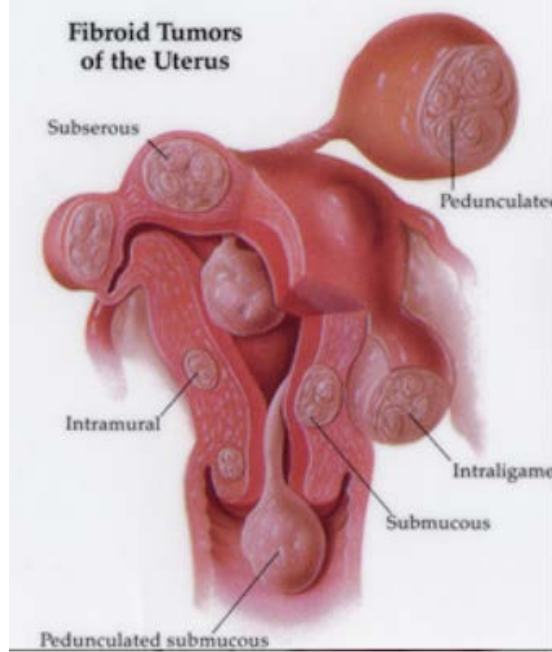
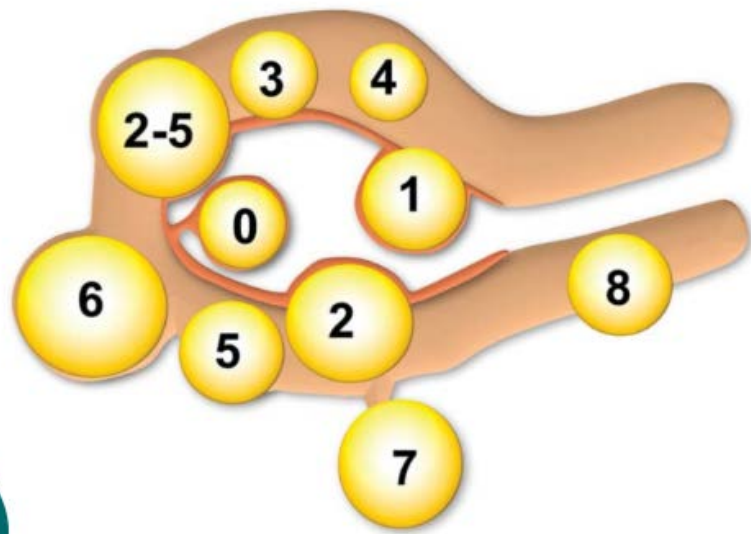


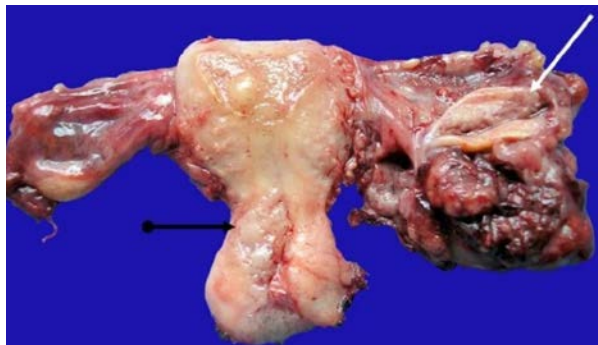
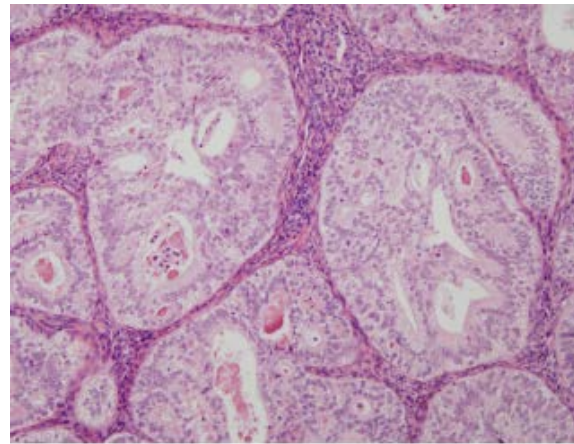
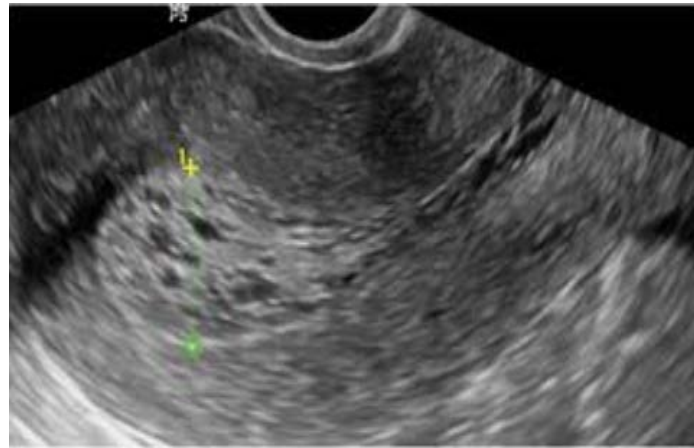
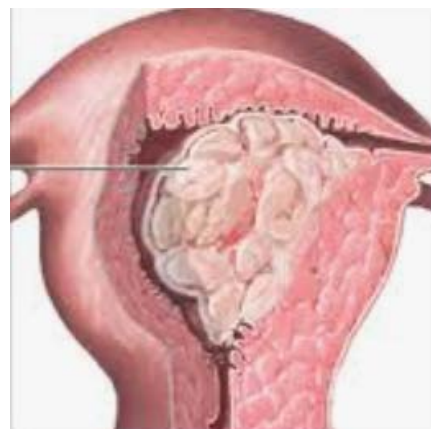
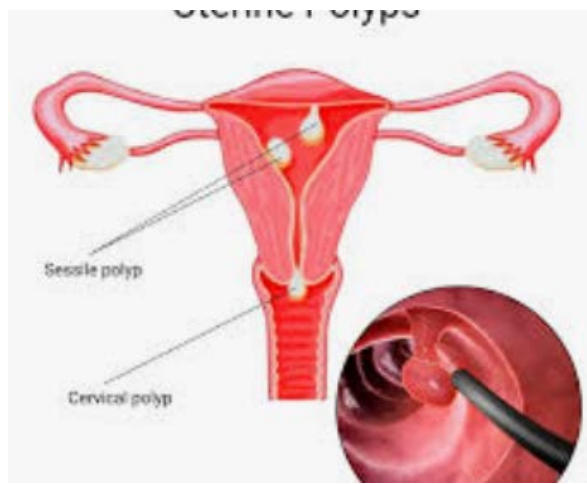
HCG/USG

- Ectopic
- abortion
- Molar









Risk-factors-for-endometrial-cancer

- Increasing age
- Obesity
- Hypertension
- Diabetes
- Unopposed estrogen replacement therapy
- Extended use of tamoxifen (>5 y)
- Personal or family history of breast or ovarian cancer
- Personal or family history of colon cancer^a
- Nulliparity
- Infertility
- Late menopause (>55 y)
- PCOS with prolonged anovulation
- Previous pelvic radiation therapy

A 39 years old women Para 6 has presented with complaint of post coital bleeding for the past three months. Your first investigation should be:

- a) Dilatation & Curettage.
- b) Cone biopsy of cervix.
- c) Pap smear.
- d) Colposcopy.
- e) Laparoscopy.

16. A 65-year-old present with bilateral progressive enlarge breasts. He has herbal medicine for a year. Which of the following is the component of drug?

- a) Estrogen
- b) Progesterone
- c) Testosterone
- d) Androstenedione
- e) Dihydrotestosterone

11. A 25 year old women use combined oral contraceptive present spotty vaginal bleeding one week prior to her normal menstruation. Which of therapeutic modification to decrease side effect?

- a) increase progestin dose
- b) decrease progestin dose
- c) increase estrogen dose
- d) decrease estrogen dose
- e) decrease both estrogen and progestin

เฉลยC :Spheroff textbook 9th ed. 2020

Chap.22 Hormonal contraception → Breakthrough Bleeding

21. 40-yr-woman **heavy and pain** menstruation for 4 months. PE and investigation lead to **uterine fibroid**. **Surgery schedule has planned**. Which drug should be given to treat her symptoms?

- a) Ethynyl estradiol
- b) Finasteride
- c) Medroxyprogesterone
- d) Mifepristone
- e) Tamoxifen

Pisek note:

Choice น่าจะมี GnRH agonist: เช่น **Leuproleline**(Enantone)

RTCOG :Management of Uterine
Leiomyoma in Infertility

i.Surger 2. **Medical Rx**

2.1 GnRH agonist pre-op for myomectomy ช่วยเพิ่มHb ลดsize(12)(**Level II-1 a**)
มีฤทธิ์4-8w(13) และใช้ในART(14)

-มีรายงานอาจเพิ่ม leiomyoma recurrenceแต่ข้อมูลยังไม่ชัดเจน(12)(**Level II-1c**)
จึงใช้ ก่อนผ่าตัด

2.2. ยาอื่น: **DMPA(16), antiprogestins, selective P receptor modulators(17),**Aromatase Inhibitor, danazol **ปัจจุบันยังไม่มีข้อมูลเชิงประจักษ์**

5. Pelvic mass

Hx/PE/PV

G: Ca
O: Ectopic

Lower genital tract

Upper tract

Tube

uterus

ovary

USG/tumor marker/
Histo

UPT/USG

Preg:

Non-Preg

True neoplasm

USG/Histo

Myometrium
G: Myoma
sarcoma
adenomyosis.

Endometrium:
G: Ca /sarcoma

Tumor-like mass

I: TOA

O:

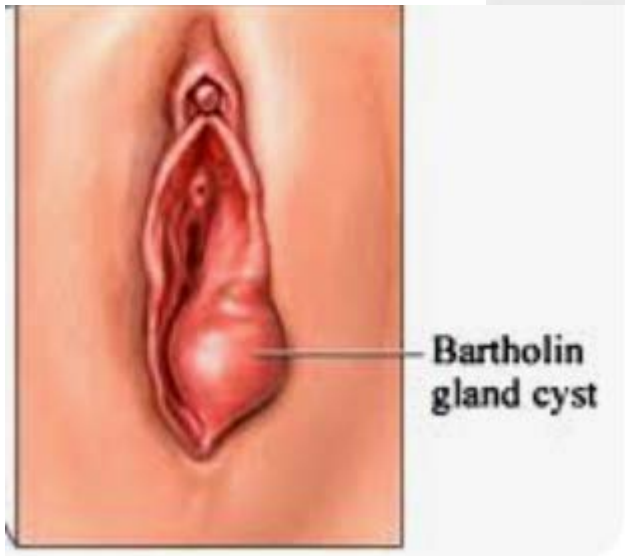
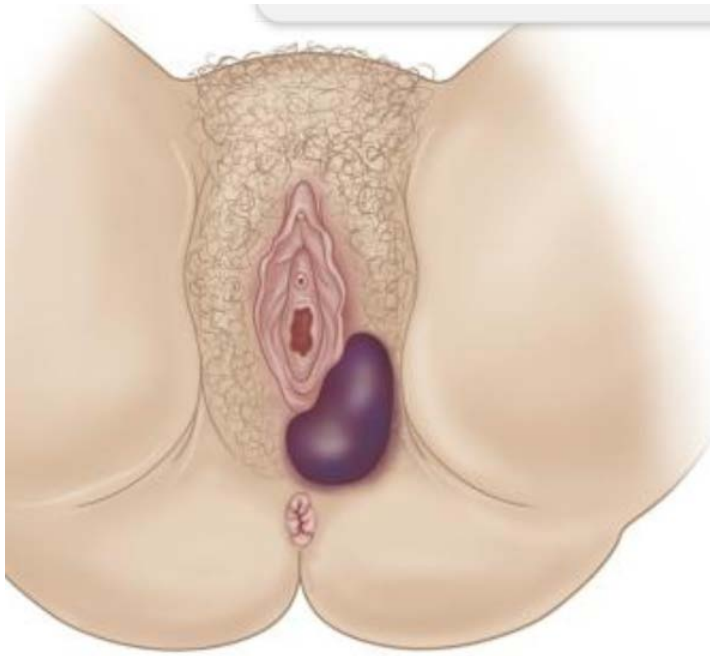
- High HCG: Theca lutein cyst
- Endometriotic cyst
- Pregnancy: luteoma
- Corpus luteum cyst
- Post implant P

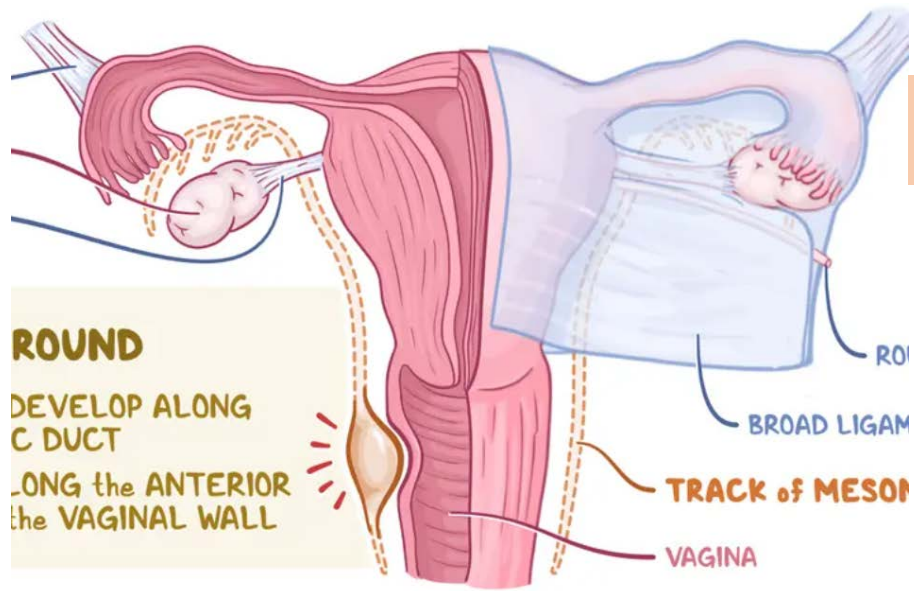
G: Benign /borderline/malignant
-Common epithelium
-Germ cell: **Dermoid**
-Sexcord/stromal cell:
estrogen producing
Androgen producing

Vulva
T: hematoma
I: Bartholinitis
Condyloma
G: Ca vulva
fibroma

Vagina
T: hematoma
G: Ca
C: Gartner's duct cyst
O: cysto/rectocoel

Cx
G: polyp/Ca/myoma
I: condyloma
O: nabothian cyst
Cx prolapse

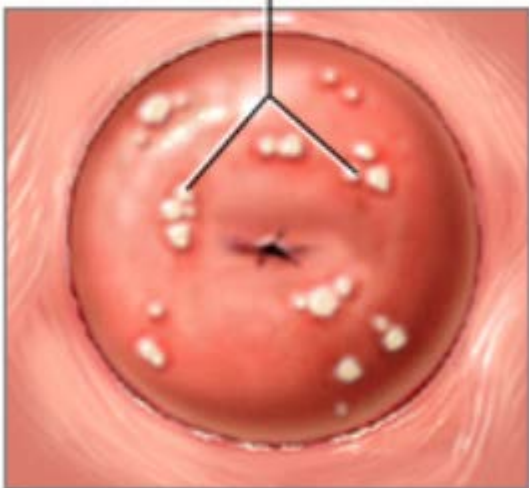




Gartner's duct cyst

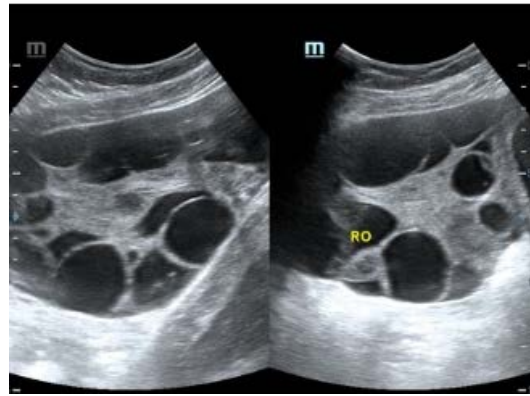


Nabothian cysts
on the cervix

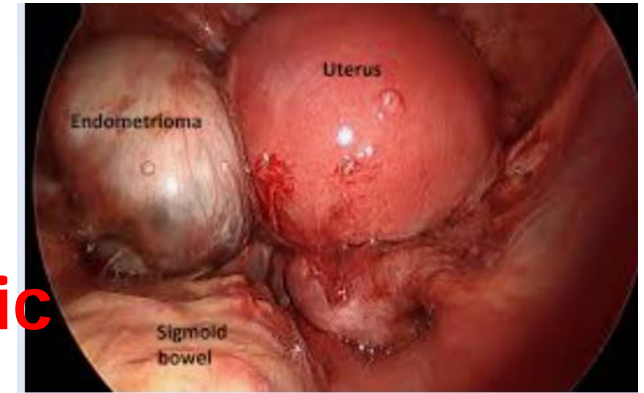
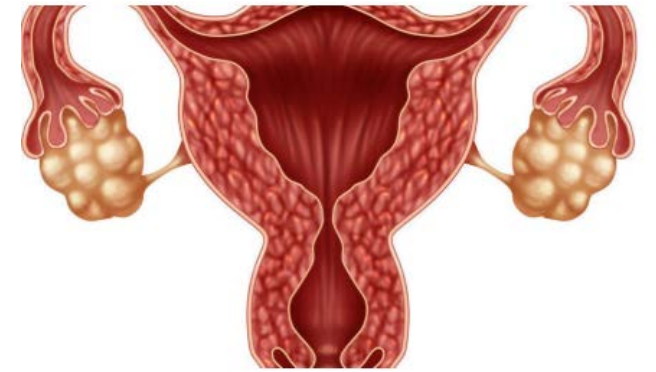




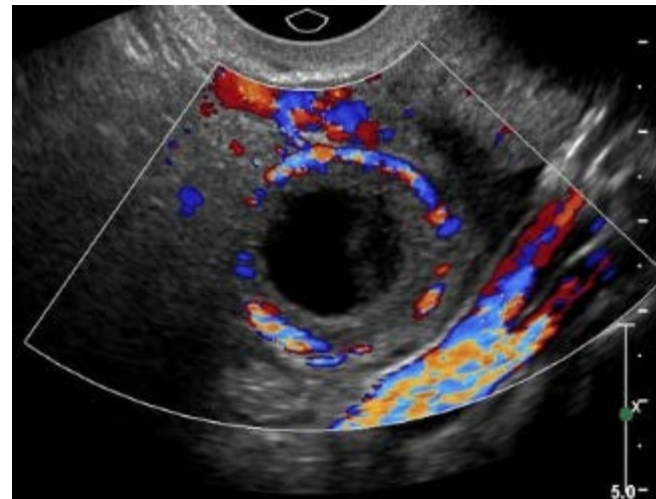
Dermoid



PCOS



Endometriotic cyst



Corpus luteum cyst



Question :

An **asymptomatic 34-year-old** woman at **20 weeks'** gestation is found to have a **10-cm complex mass** in the **right ovary**.

Which one of the following is the **MOST likely diagnosis**?

- a. *Dermoid cyst (CORRECT ANSWER)
- b. Theca lutein cyst
- c. Serous cystadenoma
- d. Dysgerminoma

A young girl, 23 years old is presented with complaint of abdominal pain, menorrhagia and 18 weeks size mass arising from hypogastrium. The most likely diagnosis is:

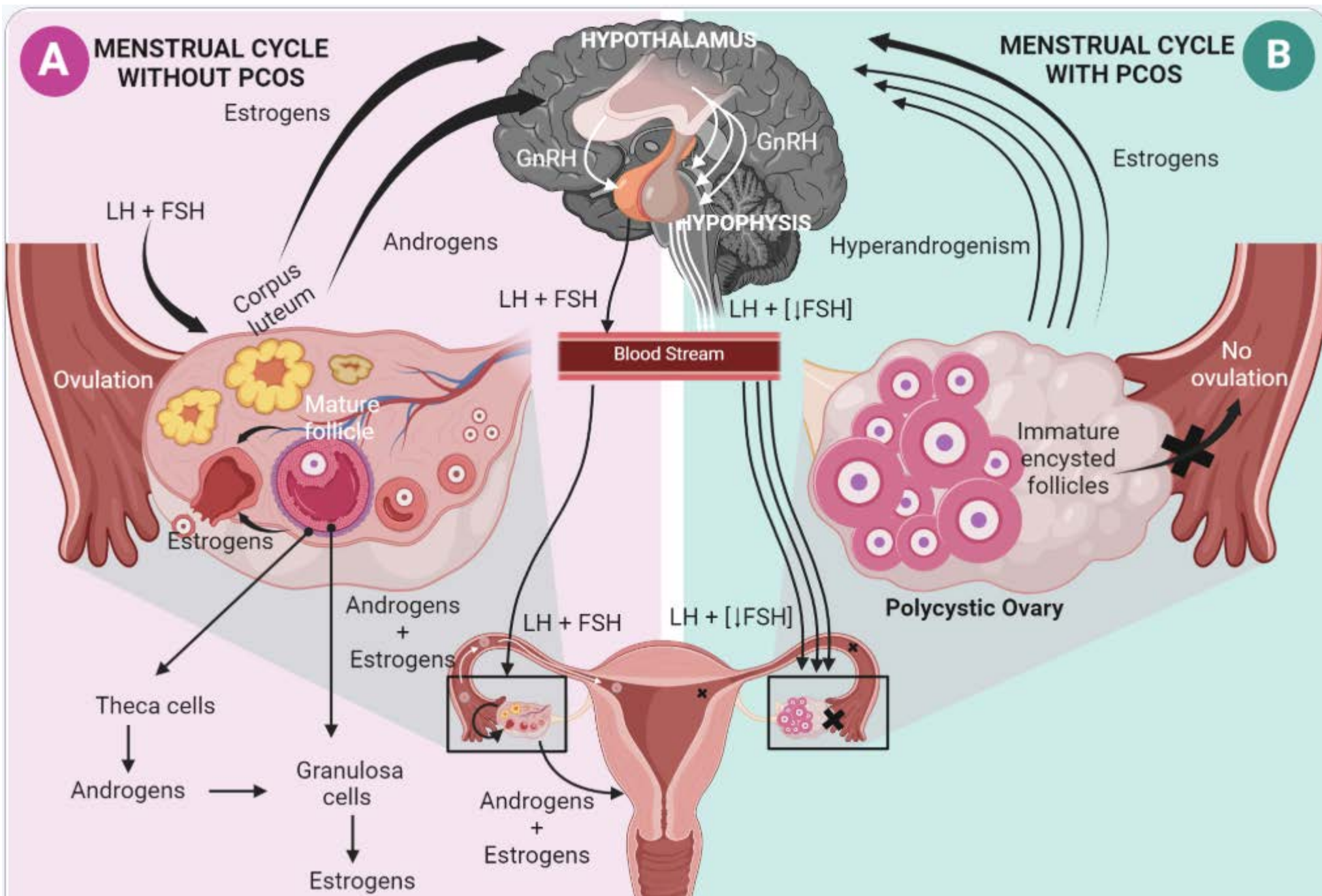
- a) Endometriosis.
- b) Pelvic inflammatory disease.
- c) Ovarian cyst.
- d) Fibroid uterus.
- e) Mesenteric cyst.

A 43 year old, lecturer has come to you with complaints of heavy but regular menstrual bleeding with flooding and clots. There is no anatomical reason for heavy flow. The most effective remedy for reducing her menstrual flow is:

- a) Tranexemic acid.
- b) Dilatation and Curettage.
- c) Depomedroxy progesterone acetate.
- d) Misoprostol.
- e) Ergometrine maleate.

6.Amenorrhea

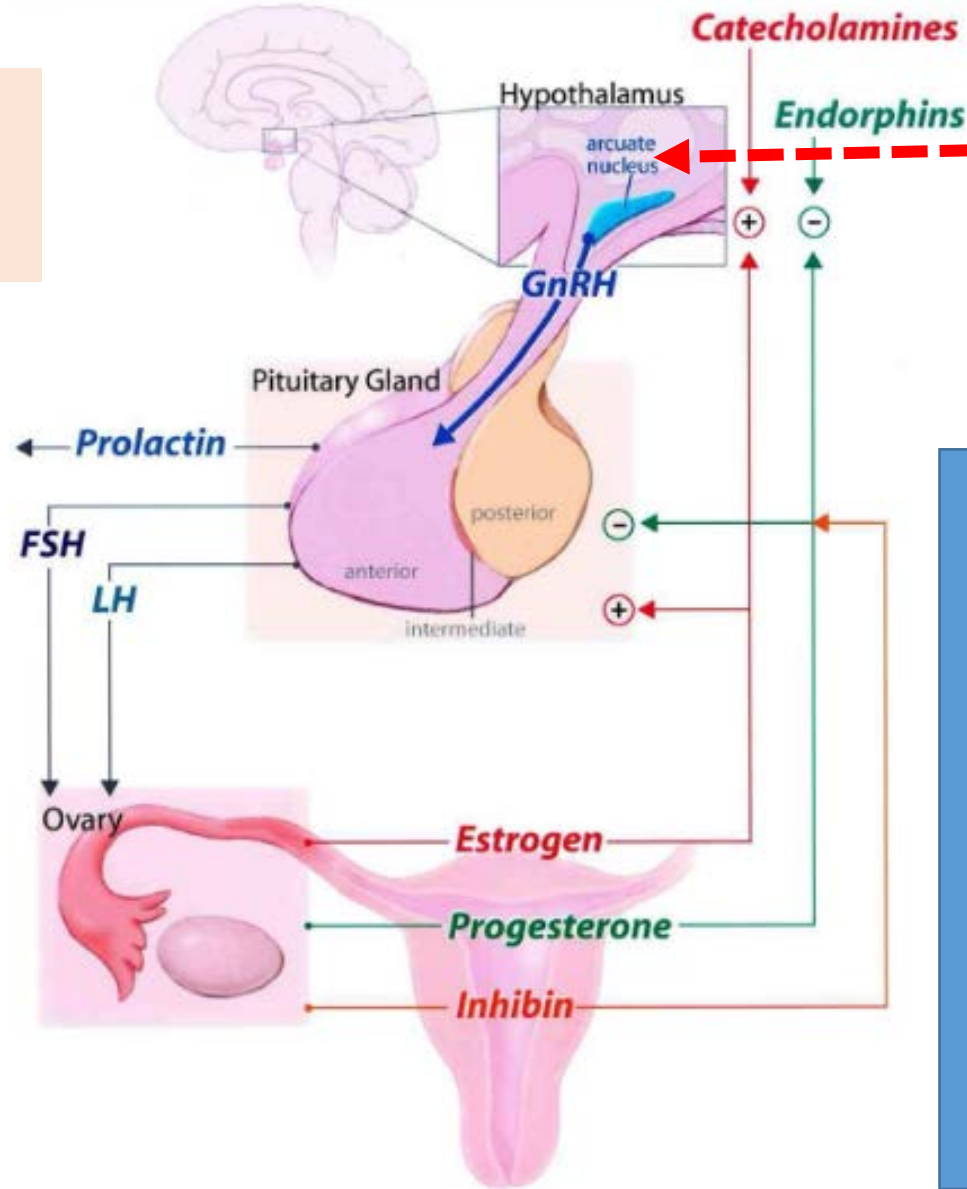
เข้าใจยากมาก ระดับ แพทย์ประจำบ้าน
แต่ ข้อสอบNL จะออก ไม่ยาก



Puberty: Genetic influence & environmental factors

Hearing, Visual, smelling, taste, Tactile, emotion

1. Inhibitory nt
: GABA, opioid,
melatonin



switches on

2. Excite: NE, dop, Glutamate,
neuropeptide Y

H: Leptin
Neurokinin B
& kisspeptin in KNDy neurons:

Pubertal change

- ☐ Growth accelerate
- ☐ Thelarche
- ☐ Adrenarche
- ☐ Growth spurt
- ☐ Menarche

A MENSTRUAL CYCLE WITHOUT PCOS

Diagram illustrating the hormonal regulation of the menstrual cycle without PCOS, showing the interaction between the Hypothalamus, Hypophysis (Pituitary), and the Ovary/Uterus.

Hypothalamus: Releases GnRH (Gonadotropin-Releasing Hormone).

Hypophysis (Pituitary): Stimulated by GnRH, releases LH + FSH (Luteinizing Hormone + Follicle-Stimulating Hormone).

Ovary:

- Corpus luteum:** Formed after ovulation, producing Estrogens.
- Mature follicle:** Responds to LH + FSH, leading to Ovulation.
- Estrogens:** Produced by the corpus luteum and mature follicle, providing negative feedback to the Hypothalamus and positive feedback to the Hypophysis.
- Androgens:** Produced by theca cells, which are converted to Estrogens by granulosa cells.

Uterus:

- Endometrium:** Responds to LH + FSH, leading to the shedding of the lining (menstruation).
- Androgens + Estrogens:** Stimulate the endometrium.

Blood Stream: Carries hormones (LH + FSH, Estrogens, Androgens) between the hypothalamus/pituitary and the reproductive organs.

Feedback Loops:

- Negative Feedback:** Estrogens from the corpus luteum inhibit the Hypothalamus and Hypophysis.
- Positive Feedback:** Estrogens from the mature follicle stimulate the Hypophysis to release LH + FSH, triggering ovulation.

❑ Cx mucus change
ใช้คุมกำเนิด Cx mucus
ตรวจ LH peak

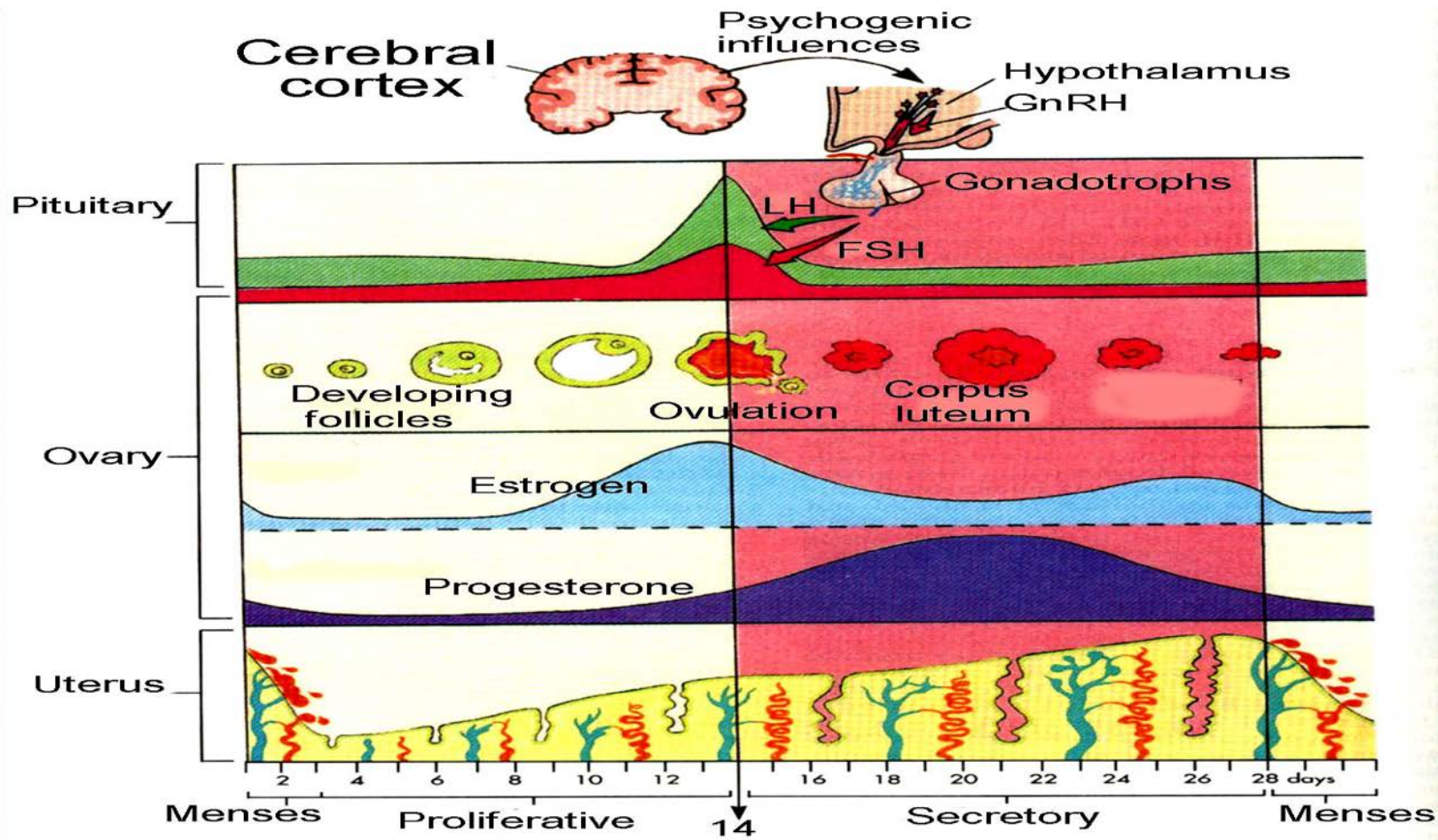
❑ Basal body T. เพิ่มจาก P

หงุดหงิด ขาดสมาธิ ตึงหน้าอก
ท้องอืด กินของแปลก

- ❑ Corpus luteal cyst

☐ Menstruation/

❑ dysmenorrhea



ระดูปกติบ่งถึงความปกติ
ของการทำงานเชื่อมโยง
ของ

1. Hypothalamus
2. Pituitary
3. Ovary
4. Uterus
5. Metabolic / endocrine
6. Outflow tract

A 25 years old school teacher Para 1 wants to use oral contraceptive pills for contraception. She is asking about the mode of action of oral contraceptive pills. The mechanism of action of oral contraceptive pills is:

- a) Inhibiting ovulation by suppression of serum FSH.
- b) Inducing endometrial atrophy.
- c) Increasing cervical mucous hostility.
- d) Inducing endometritis.
- e) Inhibiting prolactin.

Anatomy & Physiology Men:

- 1CNS- hypothalamus
- 2 anterior pituitary
- 3.ovary
- 4Uterus

Pathology:

1CNS- hypothalamus:
nutrition, Stress, exercise,
hormone , tumor

Hx ที่ต้องซัก

ปวดหัว อาเจียน เดินเซ อ่อน
แรง รับกลิ่นลดลง นน.ลด
Stress exercise **drugs**

Anosmia : kallmann syndrome

- Stress, exercise, anorexia nervosa
- Drugs: contraceptive, Antipsychotic...

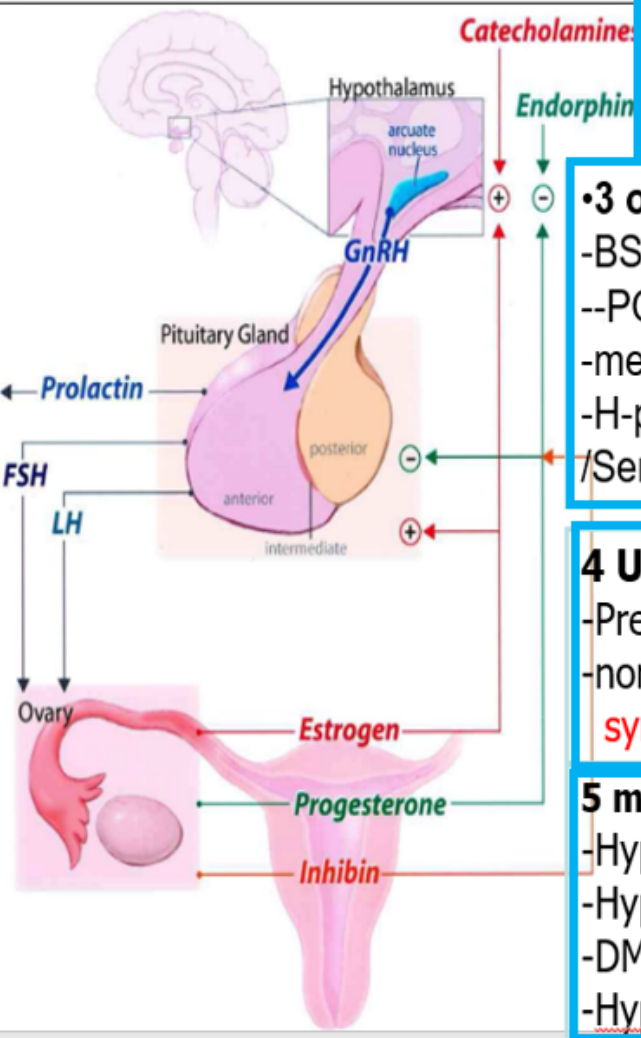
2pituitary: tumor
(most lactotroph:PRL)
Sheehan's syn

Hx ที่ต้องซัก

ตามัว น้ำนมไหล กระตุ้น
หัวนม อาการhypothyroid

•Sheehan's synd: ตกเลือดหลังคลอด ไม่มี
นมให้ลูกกิน

- ปวดหัว ตามัว น้ำนมไหล: **prolactinoma**
- Lactation amenorrhea:**ให้นมบุตร



•3 ovary:

- BSO/Radiation/chemo
- POF
- menopause
- H-producing; thecoma
- /Sertoli –Leydig ...

Hx ที่ต้องซัก

โรคประจำ ผ่าตัด
ร้อนวูบวาบ
.คลำก้อนในท้อง
hirsutism acne
virilization

•Natural menopause

- Surgical/radiation/Chemotherapy(ชั่วคราว)
- **PCOS**
- **anovulation**
- **Premature ovarian failure(POF)**

4 Uterus

- Preg
- non preg
- synerchia, TAH**

Hx ที่ต้องซัก

-preg คลื่นไส้ อาเจียน
คัดเต้านม
-ตัดมดลูก ขูดมดลูก

•Pregnancy : UPT

- Uterine synechiae(Asherman syn):**หลัง
คลอด รกค้างต้องขูดมดลูก มีนมให้ลูกกิน แต่ ไม่
มีระดูแม้จะเลิกให้นมบุตรแล้ว

5 metabolic/endocrine

- Hyperthyroid
- Hypothyroid
- DM
- Hyperandrogen:PCOS, tumorสร้าง androgen

Hx ที่ต้องซัก

อาการhyper/hypo
ขน สิว เสี่ยงหัวใจ **ระดู**

•Hyper/hyperthyroid

- DM
- Some Chronic diseases

6 Vg:

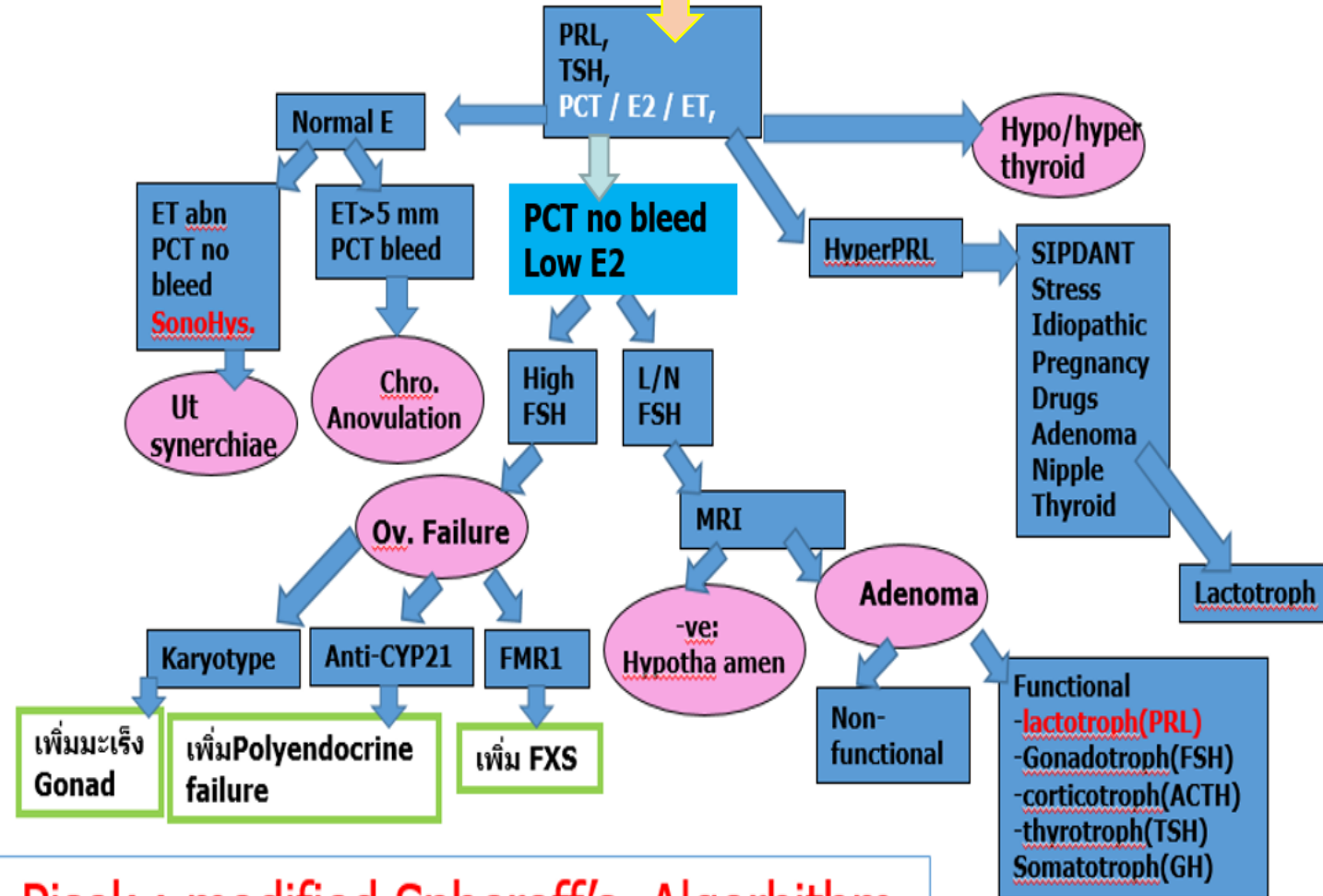
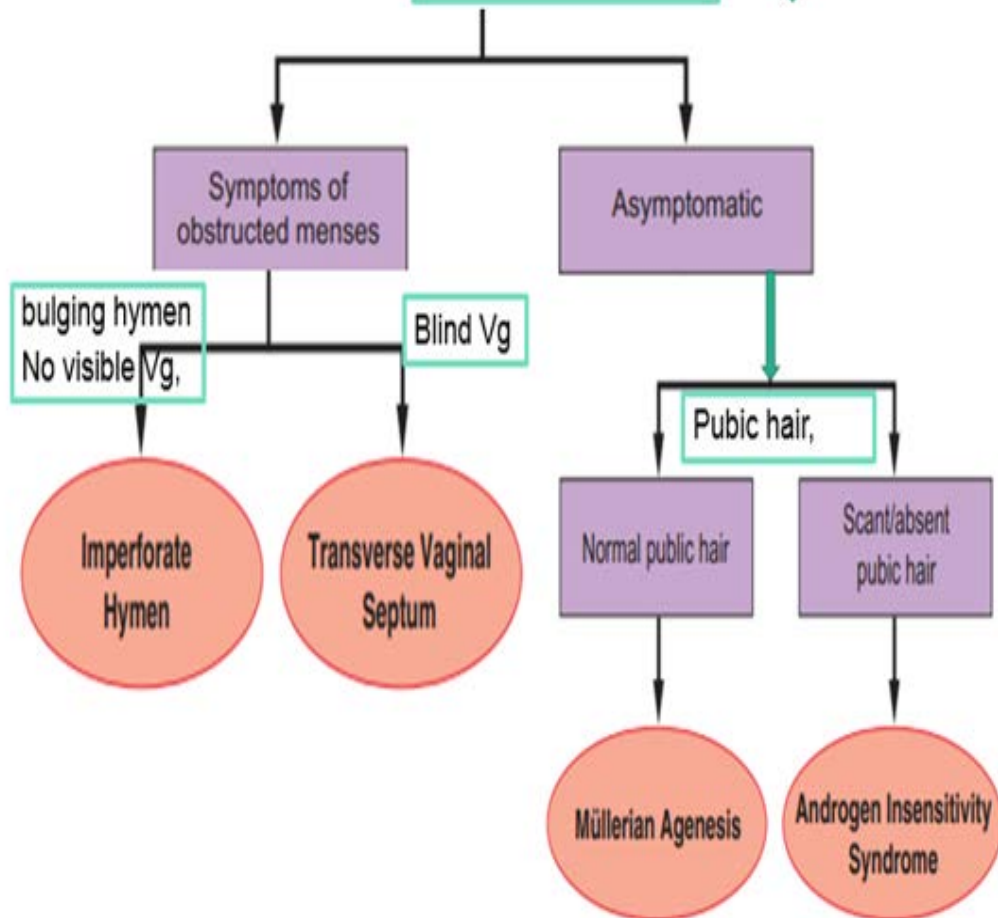
•Imperforate hymen: 1amenorrhea ,cyclic lower abd pain, pelvic mass

PV

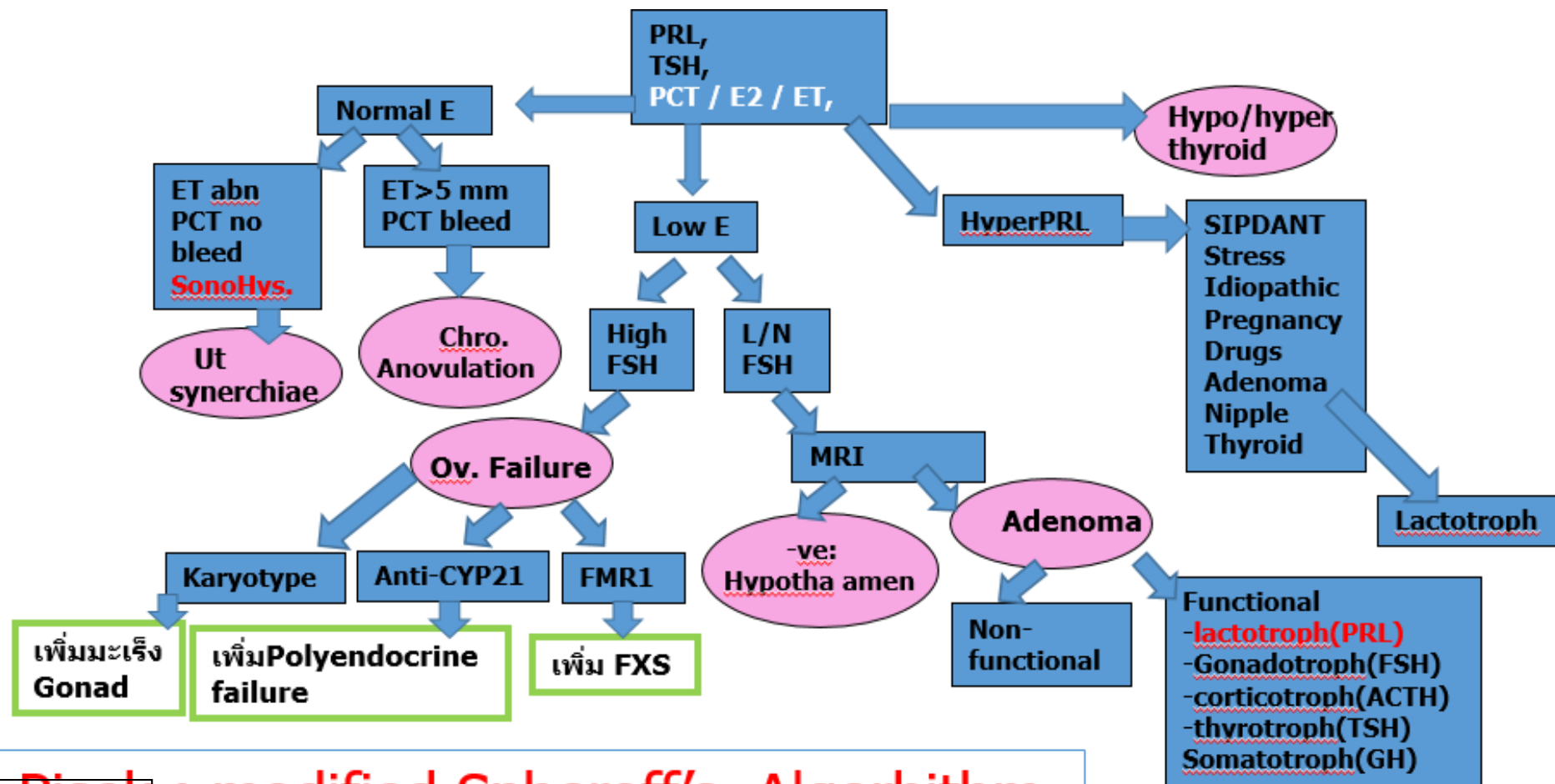
Blind or Absent

Normal Vg,
R/O preg,
Lactation, DMPA, Implant

Hx: Cyclic lower abd. pain



Pisek : modified Spheroff's Algorithm



Pisek : modified Spheroff's Algorithm

AutoImmune(AI) adrenocortical insuff:

- strongest association with POF;
- **Ab to steroid-producing cells** & L infiltrate in the ovaries (AI oophoritis).
- **POF** อาจนำ adrenal insufficiency หลายปี,
- POF ควรตรวจ anti-adrenal Ab (most 21-OHlase, CYP21), & anti-thyroid Ab (anti-thyroid peroxidase and anti-thyroglobulin Ab).
- ถ้าพบ *anti-adrenal Ab strongly implies AI.* POF ต้องเฝ้าระวังadrenal insuff.
- แต่ *thyroid autoAb* ไม่ได้ prove AI POF เพียงบ่ง risk for thyroid disorders.

FMR1(Fragile X Mental Retard.) (Xq27.3)

- most common inherited MR& autism
- Abn. repeat CGG in FMR1 gene
- ปกติมี 30 CGG repeats,
- **Fragile X premutations** FMRP 55–200: → POF
- Fragile X syndrome(FXS) > 200.

*Permutation: 55–200 repeats มี 2 disorders ต่างจาก FXS.

1. fragile X-associated tremor/ataxia synd (FXTAS), neurologic disorder ช>ญ.
2. POF, พบ 15% ในหญิงที่มี premutation

เปรียบเทียบโจทย์ NL2

NL2 A 14-year-old girl. She has had progressive cyclic pelvic pain for 6 months. Her growth and development are normal. She has never had menstruation. PE — normal secondary sexual development, uterus 12 weeks size, mild tenderness. What is the most appropriate investigation ?

- A. Vaginal examination
- B. Pelvic ultrasonography
- C. Serum FSH, prolactin
- D. Progesterone challenge test
- E. Chromosome study

Ans. PV : imperforated hymen

13. A 30 years old woman presents with secondary amenorrhea for 3 months. Liver function test and prolactin level are normal. Urine pregnancy test is negative. Thyroid function test and prolactin levels are normal. Progesterone withdrawal test shows no bleeding. Which of the following is the most likely pathophysiology?

- a) high level of GnRH
- b) High level of estrogen
- c) ovarian dysfunction
- d) low level of estrogen
- e) low level of progesterone
- f) high level of LH

ข้อนี้ choice เกิน 5 แสดงว่าจำมาคลาดเคลื่อน
จริงๆ จะมี 5 choice
ข้อนี้เป็นข้อสอบ NL2 บางปี
ให้ Progesterone แล้ว no bleed อาจเป็น low
- low E (เสียที่ Ovary or Pituitary. Or Hypothalamus)
step ต่อไปต้อง ตรวจ FSH ถ้าสูงเสียที่ ovary
ANS D
แต่ถ้าให้ Progesterone แล้ว bleed =
anovulatory problem (ovarian dysfunction : ยัง
ทำงานได้ แต่ไม่สมบูรณ์พอที่จะทำให้ไข่ตกได้)

A young medical student has come to you with complaints of oligomenorrhea, hirsutism and weight gain, ultrasound reveals bulky ovaries with sub-capsular cysts. Most likely diagnosis is:

- a) Ovarian cancer.
- b) Cushing's syndrome.
- c) Polycystic ovarian disease.
- d) Diabetes mellitus.
- e) Pelvic inflammatory disease.