

OBGYN

Urethral diverticulum presents with postvoid dribbling, dysuria, dyspareunia, and a tender anterior vaginal wall mass on pelvic examination. It is herniation of the urethral mucosa thru the muscle wall due to repeated infection, inflammation and trauma (i. vaginal delivery)

Dx testing: UA, Urine culture, MRI pelvis and Transvag ultrasound.

Endometriosis: [endometrial gland implantation outside the uterus]
dyspareunia, dysmenorrhea, dyschezia, chronic pelvic pain and Infertility.

PE: Immobile uterus, tender adnexal mass (i.e endometrioma) and nodularity along the posterior cul.de.sac.

Posterior Urethral Valve:

Congenital malformation that obstructs the flow of the urine. Presents with recurrent urinary tract infections, incontinence, stained voiding and bilateral hydronephrosis.

Pituitary gland infarction (eg, Sheehan syndrome) can occur due to hypotension and massive hemorrhage; this classically occurs postpartum. Patients can have amenorrhea; however, additional features of panhypopituitarism, including hypothyroidism (eg, cold intolerance) and adrenal insufficiency (eg, electrolyte abnormalities, hyperpigmentation), are present.

Kleihauer-Betke test: used to determine amount of Rho(D) that should be given.

Amniocentesis: [Done 15-20 weeks GA] Done for fetal karyotype after first semester screening.

Moderate-intensity exercise is recommended for most pregnant women. However,

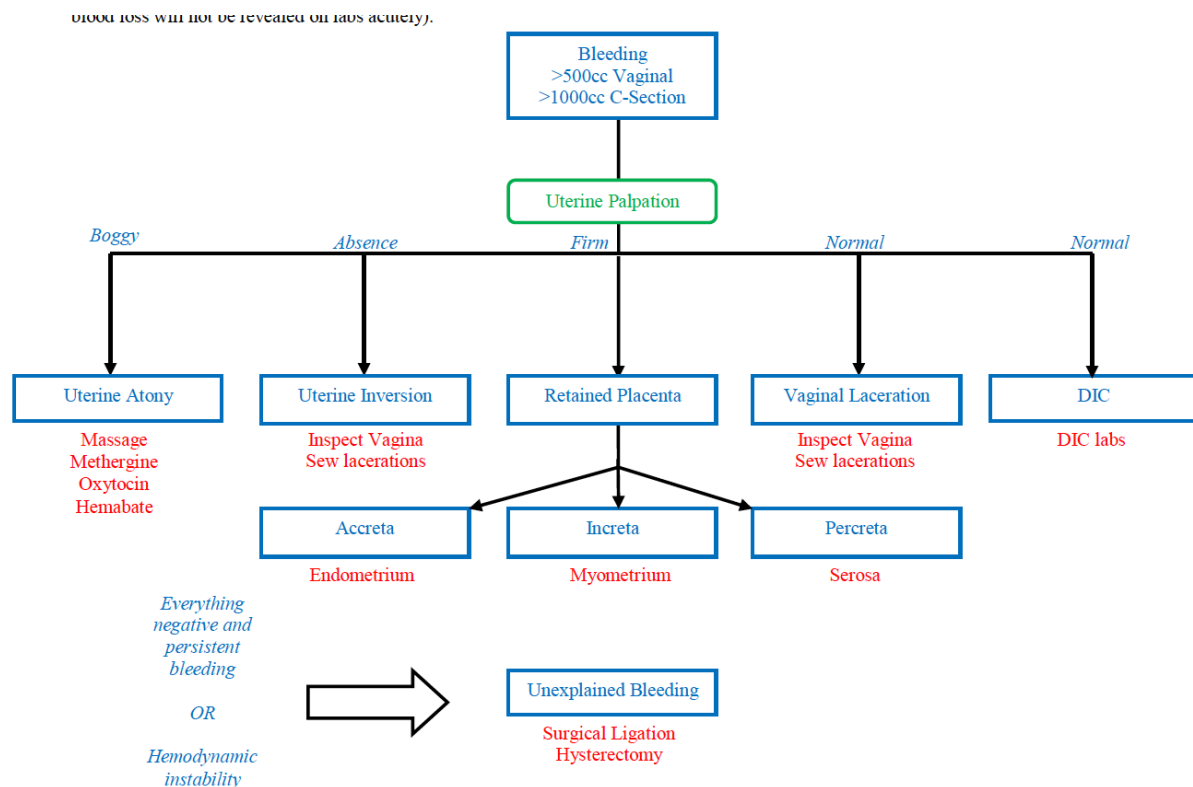
exercise is contraindicated in patients who have active vaginal bleeding, are at risk for preterm delivery (eg, cerclage), or have an underlying medical condition that could be exacerbated by exercise.

Vulvodynia is a chronic (≥ 3 months), raw, burning vulvar pain that occurs in the absence of a specific disorder.

First-line management includes pelvic floor physiotherapy and cognitive behavioral therapy.

Side note: **Topical clobetasol, a high-potency corticosteroid**

Post Partum Hemorrhage:



The most common cause of postpartum hemorrhage is uterine atony, **the failure**

of the uterus to contract after placental separation. First-line management for uterine atony is **bimanual uterine massage and oxytocin infusion.**

3rd trimester bleeding.

Placenta Previa:

Risk factors: Multiple gestations and multiparous
Due to placenta attaching at the cervical OS.

Painless bleeding because its baby blood.

Presentation: present with painless third.

Dx: Abdominal ultrasound

Tx: C section because baby losing blood and will be not stable.

Placenta Abruptio:

Risk factors: HTN, cocaine, MVA

Due to placenta tearing off of mom.

Painful bleeding because moms blood.

Dx: ultrasound

Vasa Previa:

Due to accessory lobe and blood vessels cross the os and dilation leads to tear.

Painless bleed because its baby's blood. Fetus distress

Dx:

Uterine Rupture:

Due to previous surgery/scars because that part weakens and during contraction it can tear.

Painful bleeding.

Stem can say "palpated a hole"

Urgent.

C section

	<i>Disease</i>	<i>Risk Factors</i>	<i>Diagnostics</i>	<i>Treatment</i>
Painless Bleeding	Placenta Previa	Multiparity Multiple Gestations	Ultrasound shows transverse lie	C-section
	Vasa Previa	Succinate Lobe Velamentous insertion of placenta	This triad: ROM Bleeding Fetal bradycardia	C-section
Painful Bleeding	Abruption	Trauma (MVA) Cocaine HTN	Ultrasound NST	C-section
	Uterine Rupture	Previous C-section Use of oxytocin	Fetal stress + Loss of contractions	Crash C-section

Blood transfusion workup:

After getting the blood, compatibility is determined.

1. ABO and Rh types of the patients are determined then patients serum is screened for unexpected antibodies via a procedure called pre-transfusion antibody screening. If this is **NEGATIVE** then transfusion can begin.

Bottom line: The major problem that leads to difficulties finding cross-matched blood in patients with a history of multiple transfusions is alloantibodies.

RBC destruction should be sought (e.g. elevated indirect bilirubin level, decreased haptoglobin, increased LDH, splenomegaly).

MTX causes folate depletion leading to macrocytic anemia. Treatment: **folinic acid** (Leucovorin).

Rh(D) incompatibility

It is only possible **if mother is Rh(D) negative and Rh (D) + father.**

It occurs when an **Rh(D)-negative mother** is exposed to the Rh(D) antigen, typically from fetomaternal hemorrhage in a prior pregnancy with an Rh(D)-positive fetus. The mother then produces IgG anti-D antibodies that cross the placenta and destroy Rh(D)-positive fetal red blood cells (eg, hemolysis) in a subsequent pregnancy. When Rh(D) incompatibility is unrecognized or untreated, alloimmunization can develop, resulting in **hemolytic disease of the fetus or newborn.**

Rho (D) immunoglobulin prevents alloimmunization in Rh-negative patients who deliver Rh-positive infants. Fetal Rh status is determined after delivery and Rho (D) immunoglobulin can be administered up to 72 hours postpartum.

Hemolytic disease of the newborn due to Rh(D) incompatibility is possible only in an **Rh(D)-negative mother** and Rh(D)-positive father.

Maternal serum alpha-fetoprotein screening [measured at 15-20 weeks]	
↑ MSAFP	↓ MSAFP
<ul style="list-style-type: none">• Open neural tube defects (eg, anencephaly, open spina bifida)• Ventral wall defects (eg, omphalocele, gastroschisis)• Multiple gestation	<ul style="list-style-type: none">• Aneuploidies (eg, trisomy 18 & 21)
MSAFP = maternal serum alpha-fetoprotein.	

TORCH Infections

TOXOPLASMOSIS:

Mom with mono like symptoms.

Baby will have **symmetrical intrauterine restriction + brain calcifications**

Rubella

Baby: blueberry muffin, petechiae, purpura

Cataracts, congenital heart defects and deafness - baby.

In a patient who develops a DVT as a result of a reversible or time-limited risk factor (eg, surgery, pregnancy, oral contraceptive use, or trauma), warfarin anticoagulation should be continued for a minimum of three months. Treatment for longer than six months, however, is not necessary.

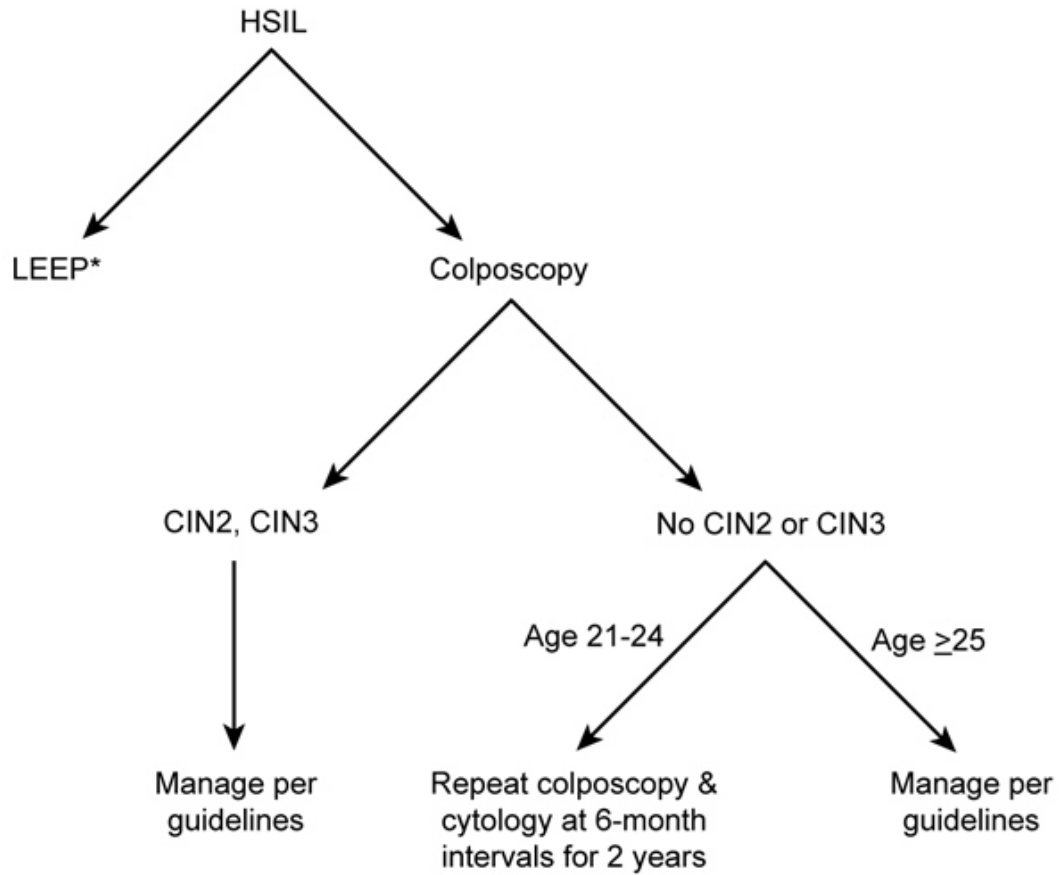
After bariatric surgery, it is recommended that pregnancy be delayed **for at least a year to optimize weight loss** and stabilize nutritional status.

Pregnancy and anticoagulation:

Use **LMWH** in first trimester and use unfractionated heparin right before delivery.




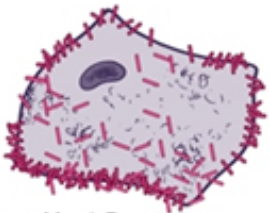


Abruptio placentae: abdominal/back pain, TENDER uterus

Management of high-grade squamous intraepithelial lesion



CIN = cervical intraepithelial neoplasia; **HSIL** = high-grade squamous intraepithelial lesion;
LEEP = loop electrosurgical excision procedure.

*Not indicated if pregnant, postmenopausal, or age <25.

Differential diagnosis of vaginitis			
Diagnosis	Bacterial vaginosis (<i>Gardnerella vaginalis</i>)	Trichomoniasis (<i>Trichomonas vaginalis</i>)	Candida vaginitis (<i>Candida albicans</i>)
Examination	 <ul style="list-style-type: none"> Thin, off-white discharge with fishy odor No inflammation 	 <ul style="list-style-type: none"> Thin, yellow-green, malodorous, frothy discharge Vaginal inflammation 	 <ul style="list-style-type: none"> Thick, "cottage cheese" discharge Vaginal inflammation
Laboratory findings	 <ul style="list-style-type: none"> pH >4.5 Clue cells Positive whiff test (amine odor with KOH) 	 <ul style="list-style-type: none"> pH >4.5 Motile trichomonads 	 <ul style="list-style-type: none"> Normal pH (3.8-4.5) Pseudohyphae
Treatment	Metronidazole or clindamycin	Metronidazole; treat sexual partner	Fluconazole

KOH = potassium hydroxide.

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Clue cells aka - epithelial cells covered in bacteria **

Human papillomavirus vaccine indications

- All girls & women* age 11-26
- Boys & men age 11-21 (up to age 26 for men who have sex with men)
- Immunocompromised individuals (including HIV patients) age 11-

26

- **Not** indicated in pregnant women
- **First dose at age 11-12 but it can be started any time (11-26)**

*Including those with history of genital warts, abnormal cytology, or positive human papillomavirus DNA test.

Selective serotonin reuptake inhibitors (SSRIs) are considered the first-line therapy for **premenstrual syndrome/premenstrual dysphoric disorder**. If the first SSRI is ineffective, try another SSRI. If SSRI fails and no desire to get pregnant then OCP can be used.

Sexual assault:

- victims need emergency contraception despite a negative pregnancy test
 - options: **Ulipristal and Copper IUD are most effective** and can be used 0-120 hrs. Their efficacy does not decrease.
 - Copper IUD cannot be used in ACUTE PELVIC INFECTION. so assault victim needs Ulipristal
-

Victim 9863

Sexual assault victims are treated empirically for **chlamydia, gonorrhea, and trichomoniasis**. Post-exposure prophylaxis for hepatitis B depends on immunity. HIV prophylaxis is offered **up to 72 hours after** the assault

BPH:

Retrograde ejaculation is the most frequent complication of transurethral resection of the prostate (TURP), which is an invasive procedure used in the management of benign prostatic hyperplasia (BPH).

Breast Cancer:

Male breast cancer is an uncommon condition. Risk is greatest in those with *BRCA* mutations and Klinefelter syndrome. If have *BRCA* mutation is found then risk increases 100 fold. Also,

BRCA 2 is the greatest single risk factor

Neonatal group b streptococcus infections (GBS)

- **Screen preg at 35-37 weeks.**
 - If [+] for GBS = treat with Intrapartum Penicillin
- GBS status unknown + anyone of the following patient needs GBS prophylaxis with penicillin
 - Give Penicillin only **if GBS unknown +**
 - Current pregnancy is preterm < 37 weeks OR
 - Intrapartum fever OR
 - ROM \geq 18 hours.

If GBS bacteriuria in current pregnancy = needs GBS prophylaxis

If GBS UTI infection in current pregnancy = need GBS prophylaxis

Prior pregnancy had active GBS infection [This means must had infection - GBS positive culture does not qualify]

- Prior pregnancy complicated by early-onset neonatal GBS disease (eg, meningitis, pneumonia, sepsis)

age >30 : Mammo. Less than 30 then Ultrasound

HYPERTENSION IN PREGNANCY

	<i>Blood Pressure</i>	<i>Timing</i>	<i>Urine</i>	<i>Symptoms</i>	<i>Treatment</i>
Transient HTN	>140 / >90	Unsustained after 20 weeks	o	o	Conservative Keep a Log
Chronic HTN	>140 / >90	Sustained, Starting before 20 weeks	o	o	α-methyldopa close follow-up
Mild PreE	>140 / >90	Sustained, Starting after 20 weeks	>300mg proteinuria	o	> 36 weeks mag + deliver urgently (induced) <36 weeks bed rest
Severe PreE	> 160 / > 110	Sustained, Starting after 20 weeks	>5 g proteinuria	Positive*	Mag + BP + deliver urgently (Induced)
Eclampsia	Any	Any	Any	Seizures	Mag + Deliver emergently (Section)
HELLP	Hemolysis	Elevated LFTs	Low	Platelets	Mag + Deliver emergently (Section)

*Positive = Abdominal Pain, Swelling, Blurry vision, scotomata, headaches, blurry vision, epigastric pain

Pre-Eclampsia:

- New onset HTN [140 and or > 90 DBP] 20 weeks gestation + Proteinuria and or end organ damage
- Management: 1) Stabilize mother if needed 2) **Hydralazine or labetolol**. then 3) Mag sulfate for seizure prophylaxis

Preeclampsia	
Definition	<ul style="list-style-type: none"> • New-onset hypertension (SBP \geq140 mm Hg &/or DBP \geq90 mm Hg) at \geq20 weeks gestation <p>plus</p> <ul style="list-style-type: none"> • Proteinuria &/or end-organ damage
Severe features	<ul style="list-style-type: none"> • SBP \geq160 mm Hg or DBP \geq110 mm Hg (2 times \geq4 hours apart) • Thrombocytopenia • \uparrow Creatinine • \uparrow Transaminases • Pulmonary edema • Visual or cerebral symptoms

Management	<ul style="list-style-type: none"> • Without severe features: Delivery at ≥ 37 weeks • With severe features: Delivery at ≥ 34 weeks • Magnesium sulfate (seizure prophylaxis) • Antihypertensives
DBP = diastolic blood pressure; SBP = systolic blood pressure.	

Proteinuria: $\geq 300\text{mg}$ in 24 hours or Protein/creatinine ratio > 0.3
CCSCASES : 90

HELLP syndrome:

it is a variant of pre eclampsia. It can occur 48 to 24 hours post partum after delivery also can have its normal trimester presentation

H (microangiopathic HA) - Schistocytes on peripheral smear, elevated bili, low serum haptoglobin

EL: Increased AST and ALT

LP: Platelets $< 100\text{k}$

Presents with RUQ or epigastric pain with N/V.

Pathogenesis: systemic inflammation. Especially the liver, and activation of coag cascade and platelets consumption.

patient with history of DVT/PE in previous pregnancy or if history of underlying thrombophilic condition should get prophylactic LMWH through out pregnancy. Normal heparin can be give during labor and delivery. Post partum give warfarin for 6 weeks.

Postpartum preeclampsia, new-onset hypertension with end-organ damage, can present up to 12 weeks postpartum and can be complicated by pulmonary edema

Genital Warts [Condyloma Acuminata]

37 week gestation patient had that.

Pink, skin colored lesions.

Can appear as smooth, flattened papules.

Treatment:

Chemical : Podophyllin, Trichloroacetic acid
Immunological : Imiquimod
Surgical: Cryotherapy, laser

Teaching point: C **section does not prevent** vertical transmission of this too baby. So pregnant patient can proceed vaginal delivery unless baby is too big.

Cesarean delivery does not prevent vertical transmission of human papillomavirus. Women with condyloma acuminata can proceed with a vaginal delivery unless the condyloma are large and obstruct the birth canal.

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Lactation mastitis:

Due to staph aureus entering milk duct through nipple and grows.
Most effective treatment is: Antibiotics + milk drainage.

Anovulation is common during the first few years of menarche and can cause **irregular, heavy menstrual periods**. **First-line treatment** is with combination **oral contraceptives** with **high-dose estrogen**

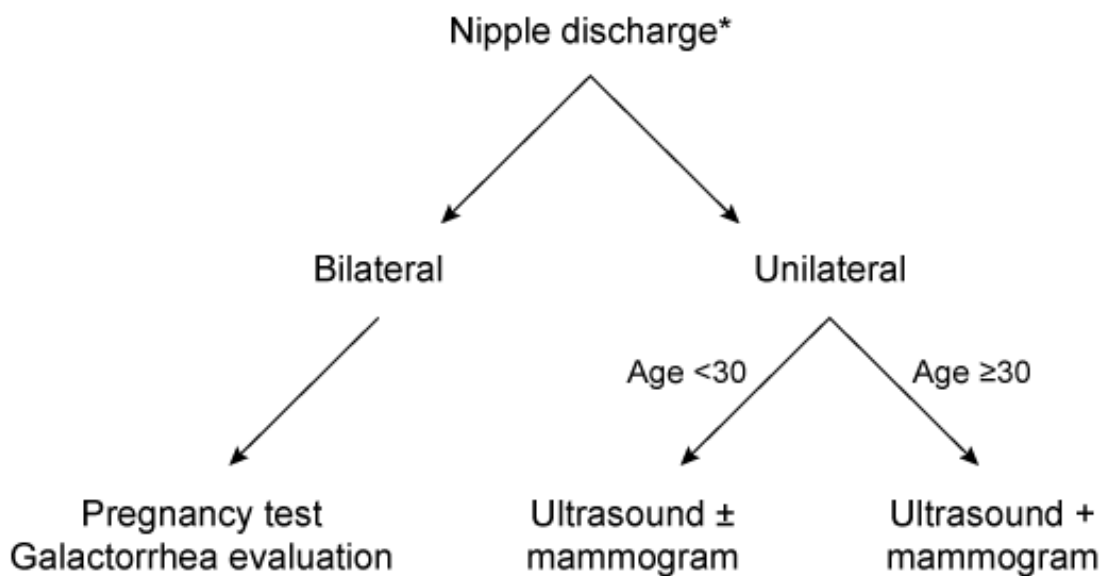
First-line treatment for patients with chlamydia infection confirmed by **nucleic acid amplification testing** is **azithromycin**. **In pregnancy if untreated can lead to preterm premature rupture of membranes, preterm labor, postpartum endometritis)**

Functional hypothalamic amenorrhea:

Exercise-induced hypothalamic amenorrhea	
Clinical presentation	<ul style="list-style-type: none">• Strenuous exercise• Relative caloric deficiency• Stress fractures• Amenorrhea• Infertility

Hormone levels	<ul style="list-style-type: none"> • ↓ GnRH • ↓ LH/FSH • ↓ Estrogen
Long-term consequences	<ul style="list-style-type: none"> • ↓ Bone mineral density • ↑ Total cholesterol • ↑ Triglycerides
Treatment	<ul style="list-style-type: none"> • Increased caloric intake • Estrogen • Calcium & vitamin D

Breast discharge evaluation



*No breast mass identified.

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Palpable breast masses in **women**:

- **age <30**
- **are initially evaluated with ultrasound.** Complex- or solid-appearing masses on ultrasound require additional imaging (eg, mammography) or biopsy to exclude malignancy.
- **age > 30**
 - first line imaging: Mammo (**spiculated soft tissue mass with calcifications, linear calcifications** = cancer). If no cancer then go to US

Most common cause of pathologic nipple discharge is benign papillary tumor.

Acute cystitis & asymptomatic bacteriuria during pregnancy		
Bug (E coli)	Clinical features	Management
Asymptomatic bacteriuria	<ul style="list-style-type: none"> • Positive urine culture (>100,000 colonies/mL) in asymptomatic patient • Screening at initial prenatal visit • Treatment ↓ progression to UTI & complications (eg, preterm birth) 	<ul style="list-style-type: none"> • Cephalexin • Amoxicillin-clavulanate • Fosfomycin
Acute cystitis	<ul style="list-style-type: none"> • Symptomatic patient with positive urine culture • Complicated UTI 	

Repeat urine culture 1 week after completion of treatment.

Fibroadenoma	
Epidemiology	Age <30
Clinical features	<ul style="list-style-type: none"> • Single, unilateral, mobile, well-circumscribed mass • ↑ Pain &/or size prior to menses
Management	<ul style="list-style-type: none"> • Observation & reassurance (adolescent) • Ultrasound for a persistent mass or older patient

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Fibrocystic disease:

- cyclical b/l painful breast lump
- varies with menstrual cycle
- tx: OCP

Fibroadenoma:

-discrete, firm, NT, high mobile breast mass

-CLue: highly mobile.

Pemphigoid gestationis is an autoimmune disease treated with high-potency topical corticosteroids (eg, triamcinolone).

Primary dysmenorrhea - Painful lower abdominal cramping associated with menses

Etiology	<ul style="list-style-type: none"> • Excessive prostaglandin production
Risk factors	<ul style="list-style-type: none"> • Age <30 • BMI <20 kg/m² • Tobacco use • Menarche at age <12 • Heavy/long menstrual periods • Sexual abuse
Clinical features	<ul style="list-style-type: none"> • Pain first 2-3 days of menses • Nausea, vomiting, diarrhea • Normal pelvic examination
Management	<ul style="list-style-type: none"> • Nonsteroidal anti-inflammatory drugs - first line • Combination oral contraceptives -

The first-line management of primary dysmenorrhea in non-sexually active patients is nonsteroidal anti-inflammatory drugs (eg, naproxen).

Dysmenorrhea

it is defined as recurrent, cramps lower abdominal menstrual pain.

Primary: Presents with recurrent cramps, lower abdominal pain along with N/v/ during menstruation.

Usually starts 2-5 years after onset of menstruation [`` 16 ish}. No pelvic abnormality

Sx due to excessive endometrial prostgalins F2

tx: NSAID first line. 2nd line: OCP

Secondary:

Same symptoms as above but there is abnormality .

Most common cause is: ENDOMETRIOSIS

Endometriosis: Cyclic pain that starts 1-2 weeks before menstruation. It can be seen as “mid cycle pain”

Usually is women > 30 years old

Sx: D's [dysmenoorhea, dyspanruenia, dyschezia, and infertility.

Most common site is: Ovary - chocolate cyst ovary

dx: laparoscopic visualtion

tx: Continues oral progesterone or OCP pill.

Lobular carcinoma in situ (LCIS) is a nonmalignant lesion, but has a significant association with future development of invasive breast cancer and at minimum close surveillance is required for the duration of the patient's life. If LCIS is detected on needle biopsy, excisional biopsy is recommended since a significant percentage of cases are upstaged to either invasive cancer or DCIS.

Postpartum endometritis (most common cause of postpartum fever) is a polymicrobial infection characterized by fever, uterine tenderness, and purulent vaginal discharge, boggy uterus. The first-line regimen for postpartum endometritis is **clindamycin and gentamicin**, which provides broad-spectrum antibiotic coverage.

Postpartum endometritis	
Risk factors	<ul style="list-style-type: none">• Cesarean delivery• Chorioamnionitis• Group B <i>Streptococcus</i> colonization• Prolonged rupture of membranes• Operative vaginal delivery
Clinical features	<ul style="list-style-type: none">• Fever >24 hours postpartum• Uterine fundal tenderness• Purulent lochia
Etiology	<ul style="list-style-type: none">• Polymicrobial infection
Treatment	<ul style="list-style-type: none">• Clindamycin & gentamicin

All women should be screened for **depression at the postpartum visit**. Postpartum depression is diagnosed using the same diagnostic criteria for major

depressive episodes that occur outside of the postpartum period. Postpartum blues is a milder form of depression with less impact on functioning and usually resolves within 2 weeks. It can be treated with Sertraline and paroxetine (both are first line). These ARE secreted into breast milk but low or undetectable.

Combination estrogen/progesterone menopausal hormone therapy increases the risk for stroke, coronary heart disease, breast cancer, and venous thromboembolism. However, this risk is age-related, with a higher risk seen in women age ≥ 60 . The risk of ischemic stroke is increased in all age groups, but the absolute risk in women age < 60 is small. It is an effective treatment for menopausal hot flashes.

Patients with suspected acute, uncomplicated cystitis are often treated empirically with nitrofurantoin or trimethoprim-sulfamethoxazole without additional testing (eg, urine culture) or evaluation

Anti-D immune globulin is administered at 28 weeks gestation to all Rh(D)-negative women with a negative anti-D antibody screen; a repeat dose is given < 72 hours after delivery if the infant is Rh(D) positive.

Indications for prophylactic administration of anti-D immune globulin for Rh(D)-negative patients*

- At 28-32 weeks gestation
- < 72 hours after delivery of Rh(D)-positive infant
- < 72 hours after spontaneous abortion
- Ectopic pregnancy
- Threatened abortion
- Hydatidiform mole
- Chorionic villus sampling, amniocentesis
- Abdominal trauma
- 2nd- & 3rd-trimester bleeding
- External cephalic version

***Antepartum prophylaxis is not indicated if the father is Rh(D) negative.**

Early **SCREENING** for trisomy: 21

- B hcg
- PAPA-A
- Nuchal translucency

	Trisomy 21	Trisomy 18		
Maternal AFP	Decreased	Decreased		
Estriol	Decreased	Decreased		
B-Hcg	Decreased	Decreased		
Inhibin A	Increased	Normal		

Remember - Screening test **ONLY** provides risk of a trisomy.

Definitive diagnosis = Fetal Karyotyping - Done via CVS [1st trimester]. Amniocentesis [2nd trimester]

Second trimester testing 15-20 weeks

Contraindications to breast feeding:

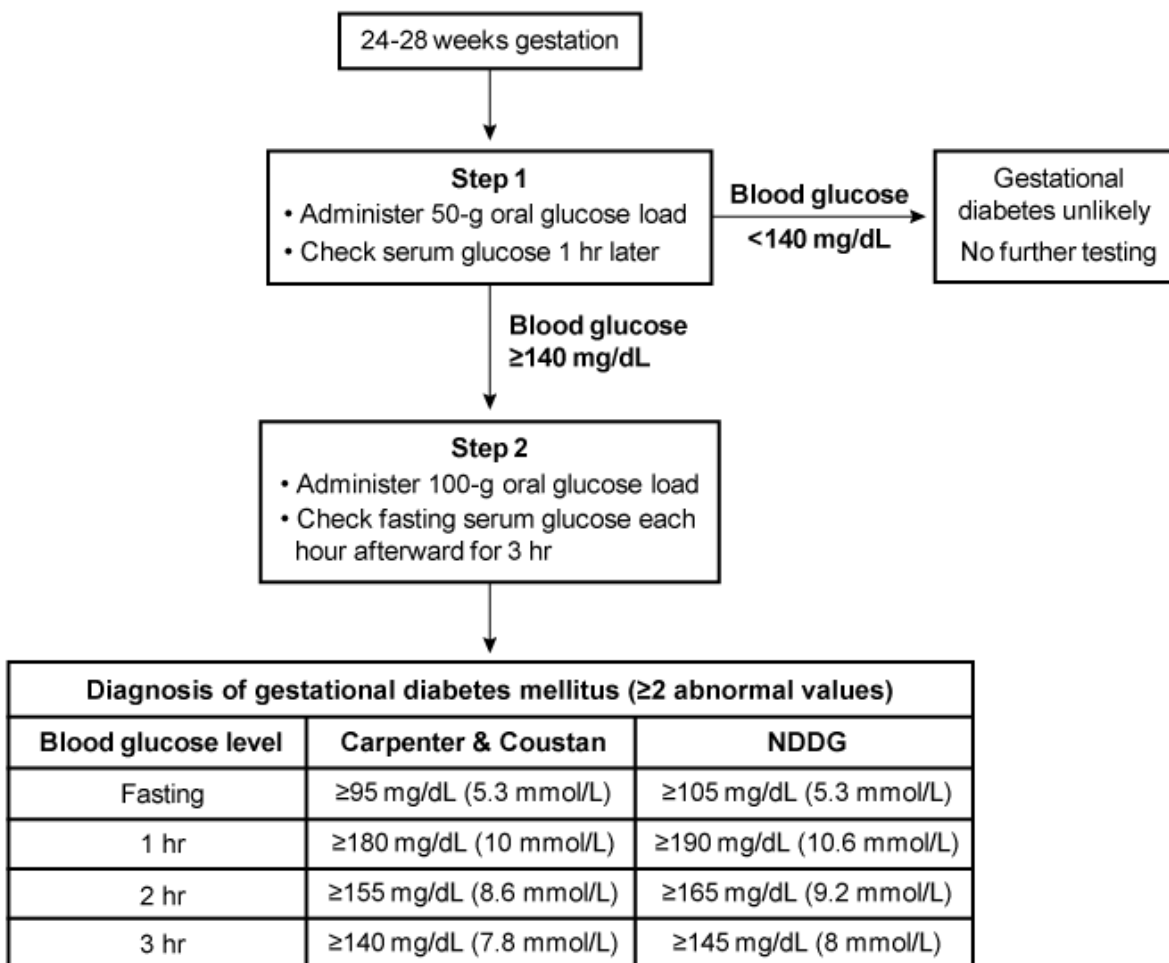
Maternal infection - hiv, cmv, active tb

Breastfeeding contraindications	
Maternal	<ul style="list-style-type: none">• Active untreated tuberculosis• Maternal HIV infection*

	<ul style="list-style-type: none"> • Herpetic breast lesions • Active varicella infection • Chemotherapy or radiation therapy • Active substance abuse
Infant	<ul style="list-style-type: none"> • Galactosemia

Gestational DM:

2-step approach for screening & diagnosing gestational diabetes mellitus



NDDG = National Diabetes Data Group criteria.

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A **2-step approach** is involved in screening for GDM. The first step is a **glucose challenge test** (GCT), a **screening test** that consists of a blood glucose level measured an hour after administration of a 50-g glucose load. A blood glucose level **>140 mg/dL** is an indication for the second step, a **3-hour glucose tolerance test** (GTT). The GTT is a **diagnostic test** that consists of a fasting blood glucose and blood glucose levels measured 1, 2, and 3 hours after a 100-g glucose load. GDM is diagnosed when **>2** of the GTT values are elevated. This patient has an elevated GCT and requires a 3-hour GTT

Gestational diabetes mellitus	
Target blood glucose levels	<ul style="list-style-type: none"> • Fasting ≤ 95 mg/dL (5.3 mmol/L) • 1-hour postprandial ≤ 140 mg/dL (7.8 mmol/L) • 2-hour postprandial ≤ 120 mg/dL (6.7 mmol/L)
Treatment	<ul style="list-style-type: none"> • 1st-line: Dietary modifications • 2nd-line: Insulin, metformin

UTI in pregnancy:

- Safe medications are:
 - Nitrofurantoin 5-7 days
 - Amoxicillin, amoxicillin-Clavul, cephalexin [3-7 days]
 - Fosfomycin [single dose]

Asymptomatic UTI

- presents with no urgency, no frequency, no burning, no fever. URINE CULTURE positive
- tx outpatient: PO nitrofurantoin. alternative: cephalexin or amox.

Acute cystitis:

presents with urgency, frequency, and burning, urine culture [+]

NO FEVER

tx: same as above

Pyelonephritis:

- Presents with urgency, burning, frequency, urine culture [+].
- Has fever and tenderness.
- tx: admit - IV hydration, IV cephalosporin or gentamicin and tocolysis
- can lead to preterm L/D and to sepsis

Patients with **polycystic** ovary syndrome typically have irregular menses, androgen excess, and polycystic ovaries on ultrasound. The unopposed estrogen excess caused by anovulation results in an increased risk for endometrial hyperplasia or cancer. The endometrium can be protected by use of a progestin-containing intrauterine device, which simultaneously provides contraception.

Polycystic ovary syndrome [PCOS]	
Clinical features	<ul style="list-style-type: none">• Androgen excess (eg, acne, male pattern baldness, hirsutism)• Oligoovulation or anovulation (eg, menstrual irregularities)• Obesity• Polycystic ovaries on ultrasound
Pathophysiology	<ul style="list-style-type: none">• <u>↑ Testosterone levels</u>• <u>↑ Estrogen levels</u>• <u>LH/FSH imbalance</u>
Comorbidities	<ul style="list-style-type: none">• Metabolic syndrome (eg, diabetes, hypertension)• Obstructive sleep apnea• Nonalcoholic steatohepatitis• Endometrial hyperplasia/cancer
Treatment options	<ul style="list-style-type: none">• Weight loss (first-line)• OCPs for menstrual regulation• Progestins for endometrial protection• Clomiphene citrate for ovulation induction

PCOS:

Dx: need 2 of 3

- Androgen excess (hirsutism, acne, androgenic alopecia)
- Oligo or anovulation
- Polycystic ovaries on US
- Has **INCREASED testosterone and increased Estrogen levels**

dx: Bilateral enlarged ovaries on ultrasound and see **elevated ratio of LH/FH**

tx: first line: WEIGHT LOSS bc it improves ability to ovulate. If does not work then OCP, spironolactone or Clomiphene ovulation

Anovulatory uterine bleeding in menopausal transition	
Pathophysiology	<ul style="list-style-type: none"> • Oocyte depletion & abnormal follicular development • Failure of ovary to secrete progesterone
Clinical presentation	Periods of amenorrhea followed by irregular unpredictable bleeding
Evaluation	<p>Endometrial biopsy for any of the following conditions:</p> <ul style="list-style-type: none"> • Age ≥ 45 with suspected anovulatory bleeding • Age < 45 with risk factors for unopposed estrogen (obesity, polycystic ovary syndrome), failed medical management, or persistent abnormal bleeding
Treatment options	<ul style="list-style-type: none"> • Cyclic progestin therapy • Low-dose oral contraceptive pill • Levonorgestrel intrauterine device • Cyclic hormonal therapy

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MENOPAUSE:

- 12 months of amenorrhea with elevation of FSH and LH with decreased estrogen
- Mean age is 51 yo.
- dx: with elevated FSH (more important than LH)
- If menopause < 30 = premature ovarian failure.
- sx of menopause: hot flashes, amenorrhea, more prone to get UTI
- **most common cause of mortality = Cardiovascular disease.**

Most women experience symptoms of menopause [hot flashes, irregular

menses, sleeping difficulties] over several years prior to cessation of menses —Because they are in menopause transition or Peri-menopause.

Hormone replace therapy

- only start for menopausal symptoms
- use lowest dose possible
- use shortest duration possible
- do not exceed 4 years of therapy.
- Benefits:
 - Decreases: rate of osteoporotic fractures and rate of colorectal cancer.

Risk:

- Increase: risk of DVT, MI.
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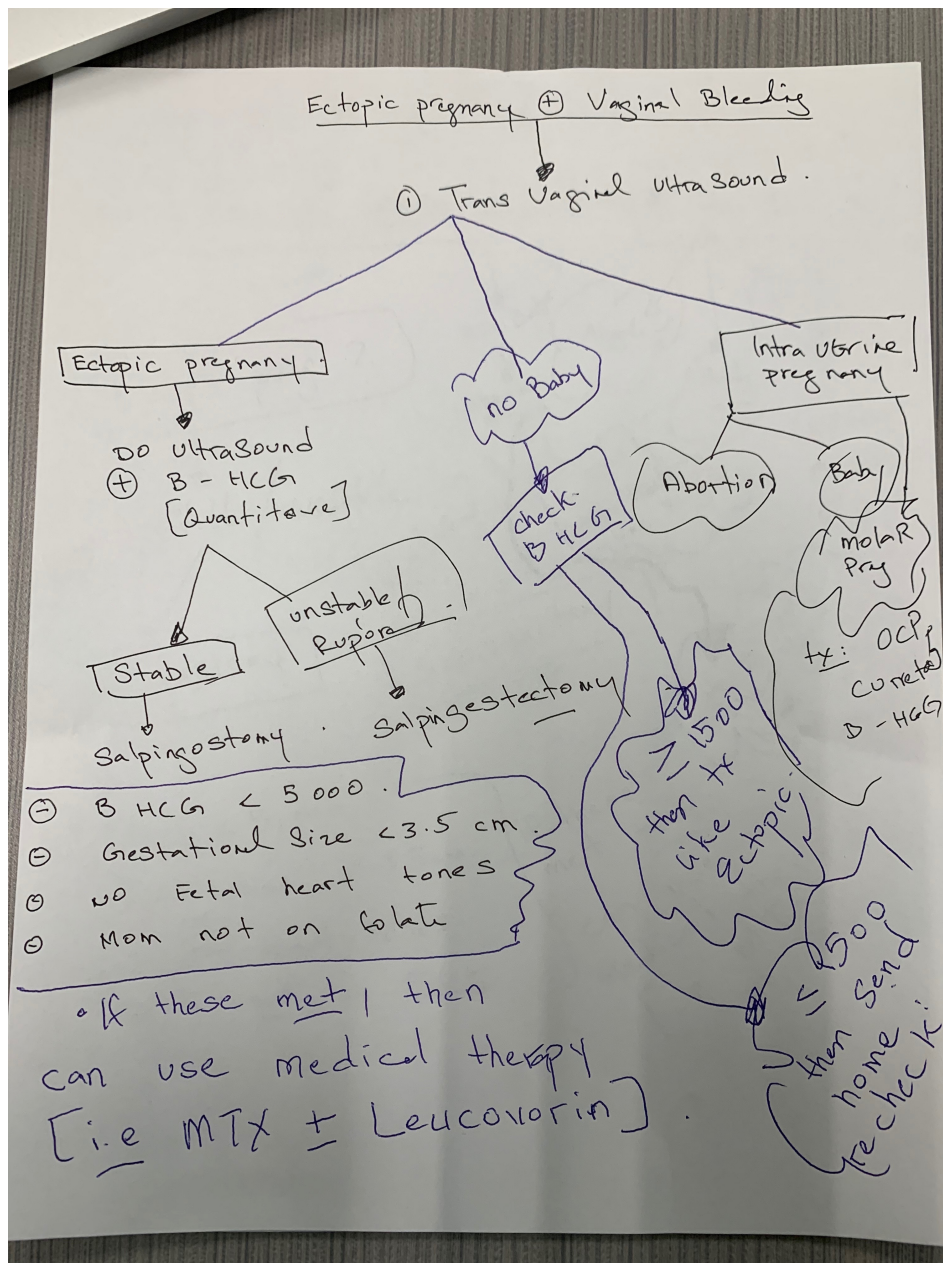
Abortions and type of abortion.

Intrauterine preg \rightarrow types of abortion ①

	Passage of content	OS	ultrasound
IUP	\emptyset	closed	live baby.
threatened	\emptyset	closed	live 1
Inevitable	\emptyset	open	Dead 1
In Comp	\oplus	open	Retained Prt
Complete	\oplus	closed	\emptyset
MBS	\emptyset	close	Dead 1

Misoprostol \rightarrow oxytocin \rightarrow D+C

Ectopic Pregnancy management:



Ectopic pregnancy: (can present with similar presentation as PID)

- unilateral lower abdomen pain/pelvic pain, vaginal bleeding, amenorrhea.
- Can have suprapubic pain, tenderness
- can have cervical motion tenderness [present in PID. But PID does not have INCREASED HCG]
- **tx: stable → methotrexate**

- **Unstable---> surgery (laparoscopy or laparotomy)**

Ruptured ectopic pregnancy:

- Hypotension
- abdominal guarding/rigidity and tachycardia
- tx: unstable -> IVF etc and then surgery after stabilizing
- also give rho to rh [-] and follow up with hcg

both dx: hcg > 1500 and no intrauterine pregnancy seen in vaginal ultrasound

Intrauterine pregnancy is seen on: Vaginal ultrasound @ 5 weeks with HCG > 1500. Ultrasound @ 6 weeks hcg > 6500

You cannot rule out normal interuterin pregnancy when hcg < 1500. So if it is < 1500 then next step: — —> re do hcg and ultrasound when hcg > 1500.

Infertility:

inability to achieve pregnancy after 12 months of unprotected and frequent sex.

Steps to workup:

1. Most common and first step is semen analysis. If this is abnormal then RE-D0 this in 4 weeks.
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Uterus can be enlarged due to:

Pregnancy

Leiomyoma - **Asynmmterical and NT**

Adenomyosis: **Symmetrical and tender uterus.**

Abnormal location of endometrial gland within the myometrium of the uterine wall.

Presents with regular, heavy menses; dysmenorrhea; and a uniformly enlarged, globular uterus.

Symmetrical and tender uterus.

The diagnosis is made clinically but MRI/US can be used.

Definitive treatment is via hysterectomy.

Postmenopausal bleeding:

- all are suspected to have **endometrial cancer until proven otherwise.**
- Most important risk factor for endometrial cancer is: unopposed estrogen and unopposed states such as : obesity, multiparity, an ovulation)
- All reproductive age women with chronic an ovulation (PCOS) are at high risk of endometrial cancer. Give them progestins to prevent endometrial hyperplasia.
- Never give estrogen alone to a women with a uterus. Always give with progestins to prevent unopposed estrogen.

Ovarian enlargement:

Due to following:

- Simple cyst (literal or follicular cysts)
 - common cyst without symptoms unless TORSION occurred.
 - B hcg negative
 - Ultrasound: fluid filled simple cystic mass.
 - If cyst > 7 cm diameter then remove via laparoscopic

Ovarian torsion:

- sudden onset of severe lower abdominal pain in the presence of an adnexal mass.
- Laparoscopy and detorsion needed asap. If blood supply is not affected then Cystectomy.
- If necrosis (aka blood supply affected) then Oophorectomy
- Initial workup: hcg, ovarian ultrasound, laparoscopy / laparotomy if complex or > 7cm.

Antibiotics for Gonorrhea:

IM ceftriaxone

PO Cefixime

PID

Chlamydia:

PO azithro

PO doxyc

Pelvic pain:

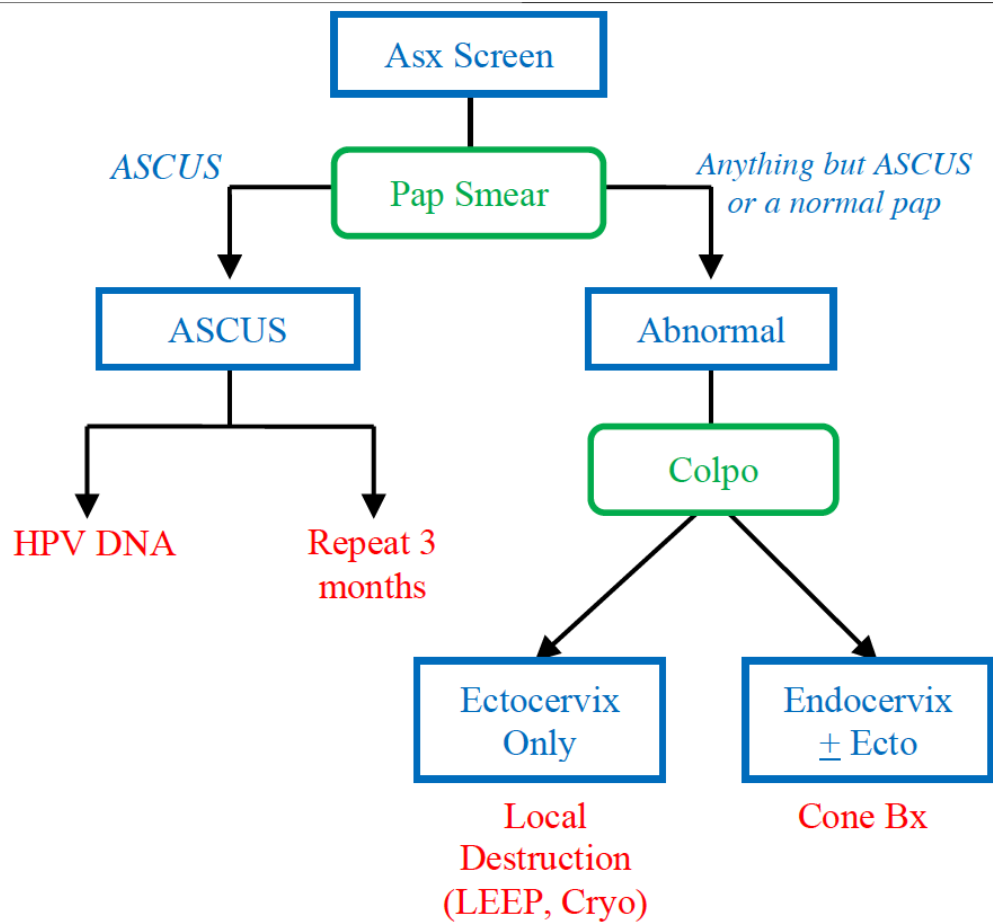
- Cervicitis
 - Patient presents with cervical discharge and its found on a routine exam.
 - Usually symptomatic patient
 - Get cervical cultures for Chlamydia and Gonorrhea.
 - tx: if positive then treat with Oral azithromy + IM ceftriaxone.
- PID
- Tubo-ovarian abscess

Gyn Cancer summary table

Cancer	Etiology	Pre Cancer	Cancer	Screening	Presentation
Cervical	HPV + smoking	CIS	SCC	Pap smear for Cervical	Post coital bleeding.
vaginal, vulvar	HPV	CIS	SCC	-	Black + Itchy
Endometrial	Estrogen	Dysplasia, Atypia	Adeno Carcinoma	-	Post menopausal bleed
Ovarian	Ovulation	-	Epithelial ovarian cancer	-	Renal failure, SBO, ascites

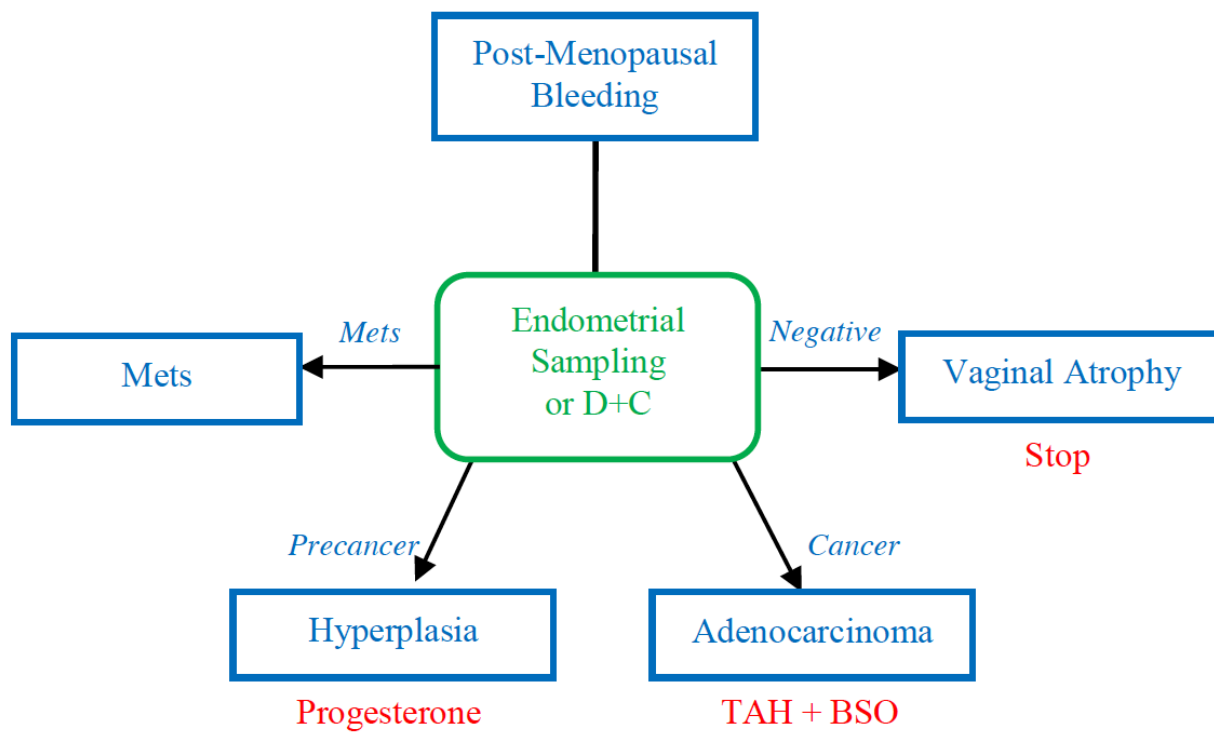
Chorio carcinoma	Gestational Tropholblast	-	Chorio carcinoma	H hcg, OCP	Hyperemesis gravidavis

Cervical Cancer

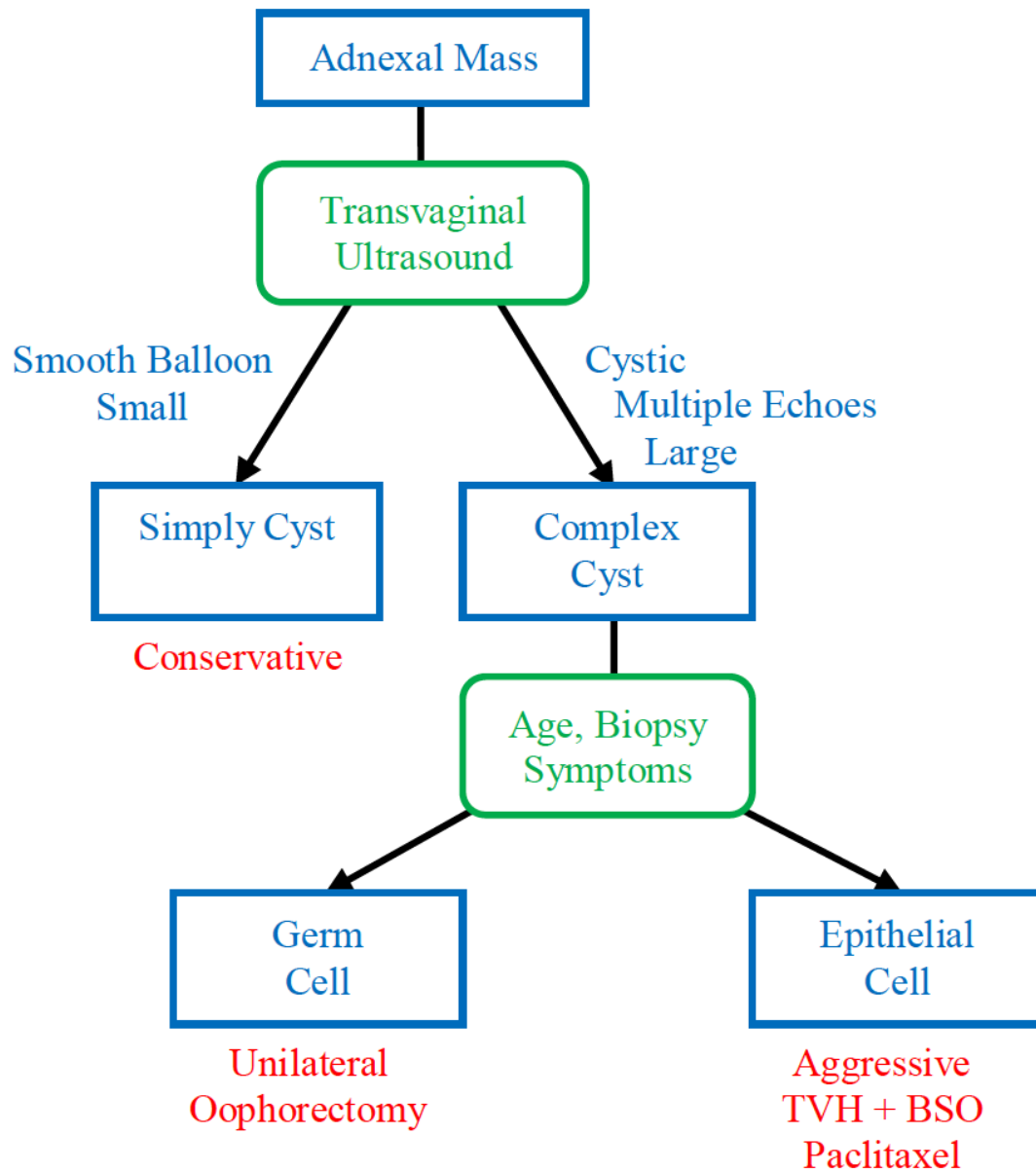


Endometrial cancer [page 119 OME pdf]

Postmenopausal bleeding needs endometrial sampling and D+C



Ovarian Cancer (207 OME .pdf)



Vaginal bleeding

- Pre menarchal vaginal bleeding.

- This occurs before menarche (12 yo)
- Most common cause is foreign body but need to rule out sarcoma
- Can also be due to sexual abuse.
- dx: Pelvic exam under sedation, then CT/MRI.

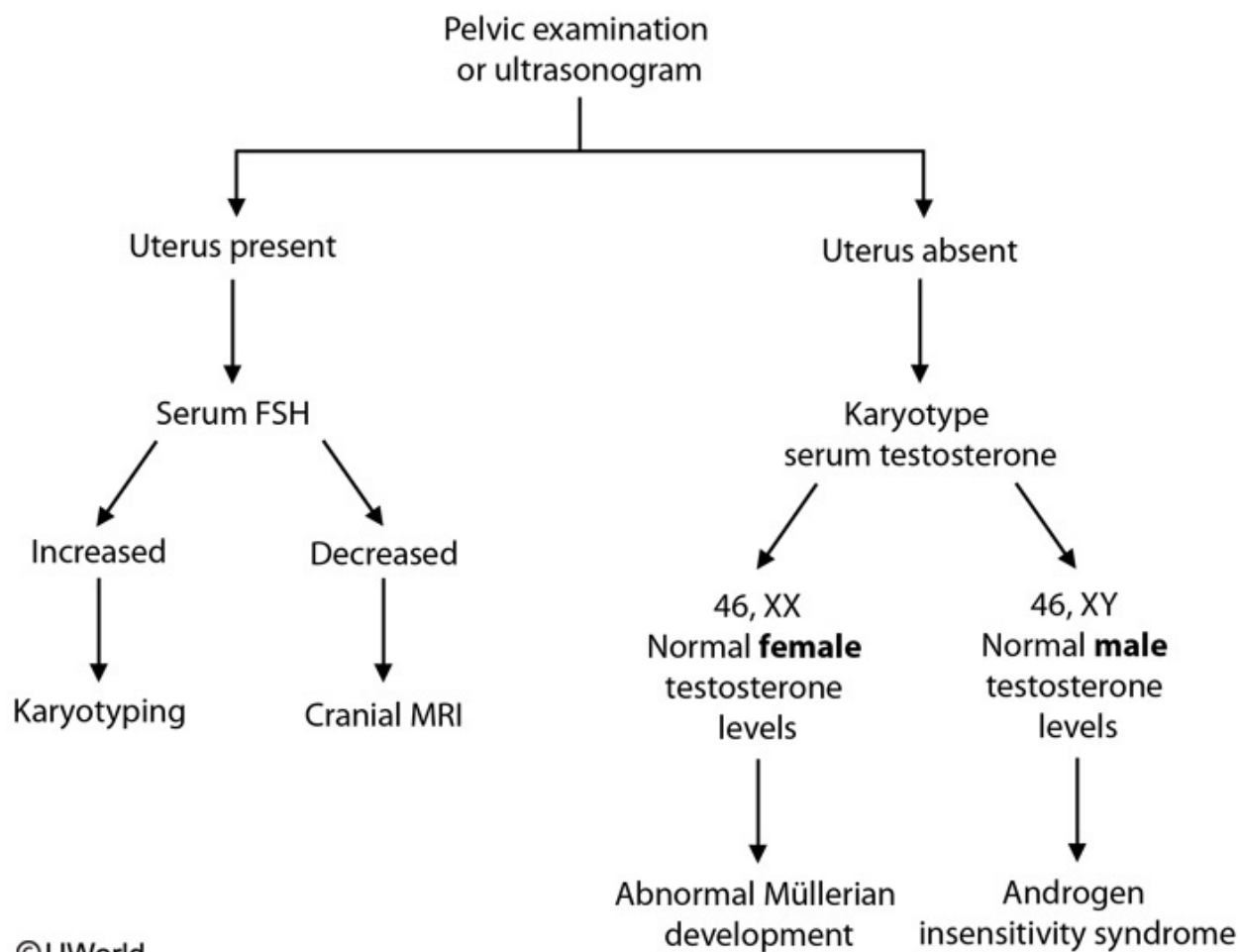
POSTCOITAL BLEEDING IS CERVICAL CANCER UNTIL PROVEN OTHERWISE.

Amenorrhea:

Primary:

- Absence of menses at age 14 without developmental of sexual characteristics
- Breasts present? Yes--> no problem with estrogen

Evaluation of primary amenorrhea



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Androgen insensitivity syndrome presents in phenotypical females with primary amenorrhea and absent pubic/axillary hair but normal breast development. Diagnostic features include an absent uterus but intact testes, a (46, XY) karyotype, and serum testosterone levels in the normal adult male range.

	Uterus +	Uterus -
Breasts +	workup similar to secondary amenorr <ul style="list-style-type: none"> Imperforate hymen Vaginal septum 	order testosterone and karyotype <ul style="list-style-type: none"> Müllerian agenesis XX karyotype

	<ul style="list-style-type: none"> • Anorexia • excessive exercise • pregnancy before 1st menses 	<ul style="list-style-type: none"> • Androgen insensitivity
Breasts -	Order FSH levels and karyotype <ul style="list-style-type: none"> • Gonadal dysgen (turner) • Hypothalamic pituitary failure 	rare

Secondary:

- Regular menses are replaced by absence of menses for 3 months
- irregular menses are replaced by absence of menses for 6 months.

before anything MUST RULE OUT PREGNANCY.

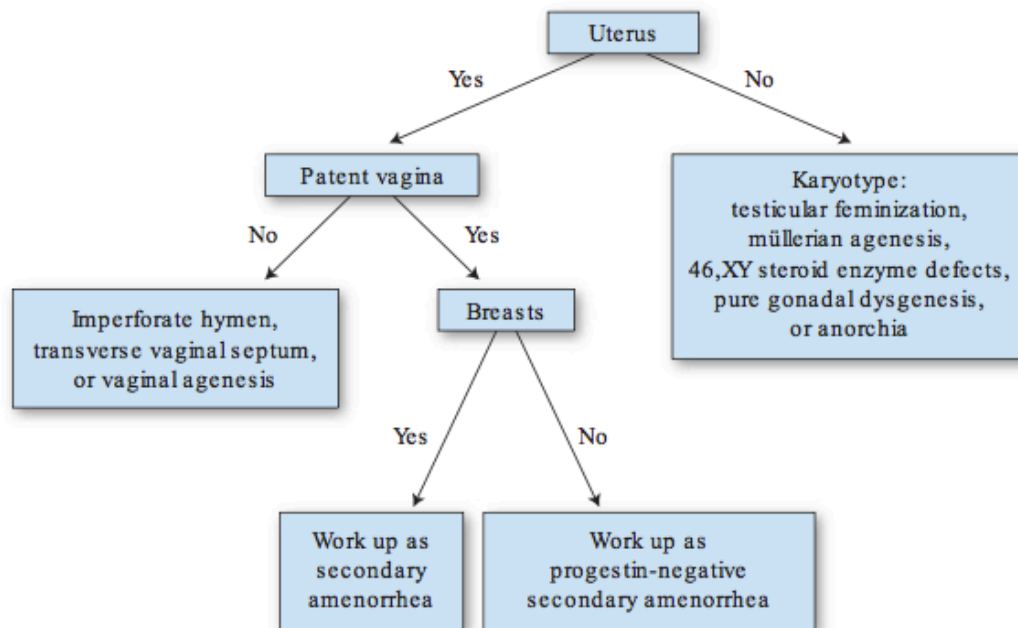


FIGURE 15-2. Workup for patients with 1° amenorrhea. (Adapted with permission from DeCherney AH, Nathan L. Current Diagnosis & Treatment: Obstetrics & Gynecology, 10th ed. New York: McGraw-Hill, 2007, Fig. 56-2.)

Secondary Amenorrhea:
workup steps.

1. Rule out pregnancy

2. Check TSH [rule out hypothyroidism]
3. Check prolactin
 1. If high: check meds
 2. CT/MRI of head to rule out pituitary tumor
 3. If nothing then bromocriptine
4. Progesteron challenge
 1. If its positive (any bleeding then this is the cause behind anovulation)
 2. if negative - then do estrogen challenge test.

Urinary incontinence			
Type	Symptoms	Treatment	Mechanism
Stress	Leakage with coughing, sneezing, laughing, lifting	<ul style="list-style-type: none"> • Lifestyle modification • Pelvic floor exercises • Pessary • Urethral sling surgery 	Weakness of the pelvic diaphragm
Urge	Sudden, overwhelming, or frequent need to urinate	<ul style="list-style-type: none"> • Lifestyle modification • Bladder training • Antimuscarinic medications 	involuntary and uninhibited detrusor contractions result in involuntary loss of urine [detrusor instability]
Overflow	Constant dribbling of urine, incomplete bladder emptying	<ul style="list-style-type: none"> • Intermittent catheterization • Correct underlying etiology 	Inadequate bladder contraction (can be due to impaired detrusor contractility) or

			bladder outlet obstruction leading to urinary retention and subsequent overdistention of the bladder.
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Contraception

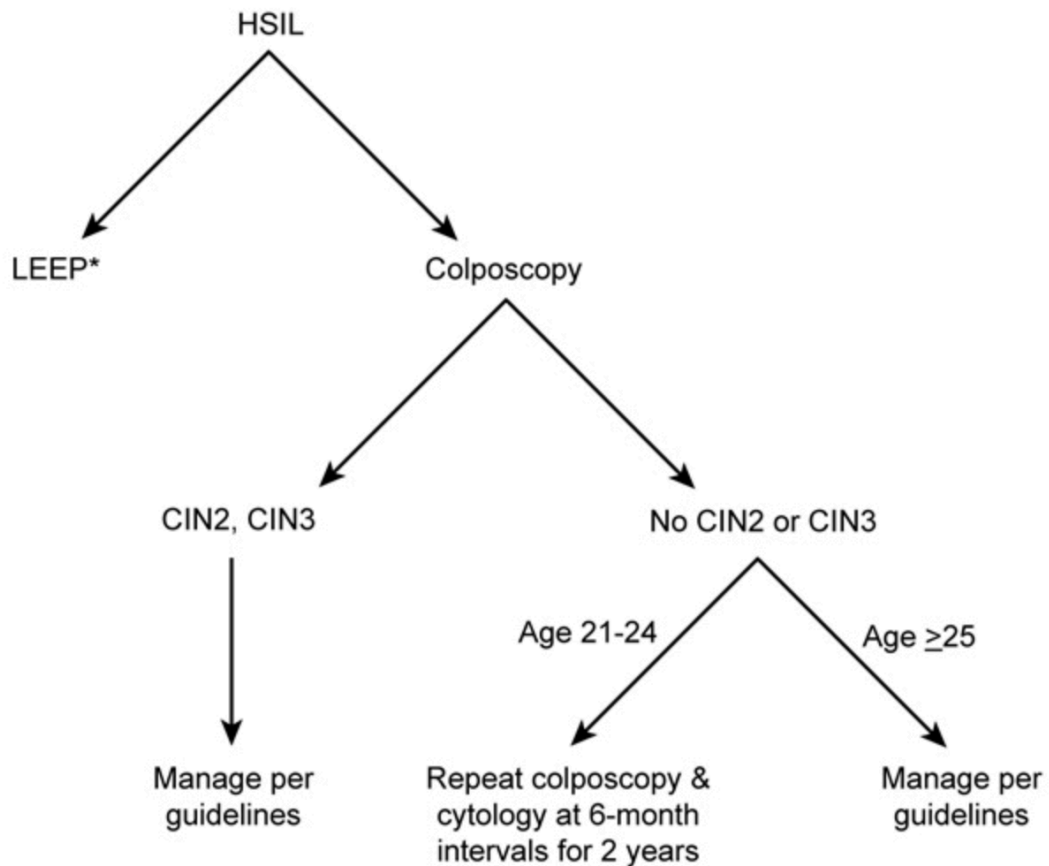
The progestin subdermal implant, which is long-acting and reversible, is the most effective contraceptive, with a >99% efficacy rate with typical use.

Long-acting reversible contraceptives (eg, intrauterine devices, subdermal implants) are first-line contraceptive **methods for adolescents**. They are safe, are effective, and result in a high rate of satisfaction, a long duration of use, and a quick return to fertility on discontinuation.

Tamoxifen, a selective estrogen receptor modulator, increases the risk for endometrial hyperplasia/cancer and uterine sarcoma in postmenopausal women. However, asymptomatic patients on tamoxifen do not require routine screening for these complications. Evaluation via ultrasound or endometrial biopsy is indicated only for symptomatic patients.

Another SERM [**Raloxifene**] is good for postmenopausal osteoporosis.

Management of high-grade squamous intraepithelial lesion



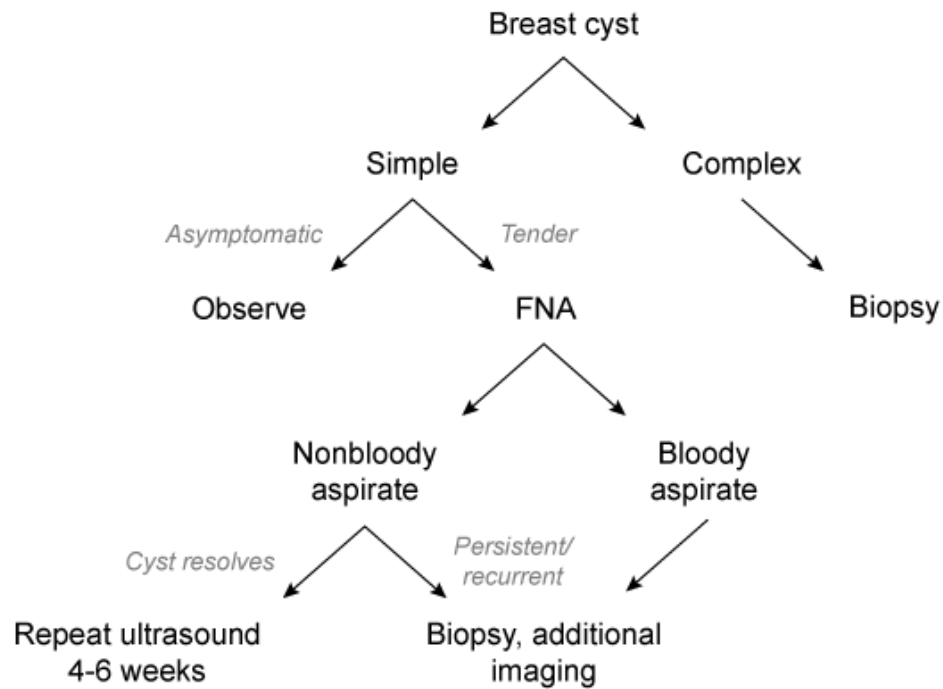
CIN = cervical intraepithelial neoplasia; **HSIL** = high-grade squamous intraepithelial lesion; **LEEP** = loop electrosurgical excision procedure.

*Not indicated if pregnant, postmenopausal, or age <25.

Management of Breast Cysts:

Palpable breast masses are usually cysts. If the cysts is simple and patient is asymp then just observe. If patient has symptoms then do FNA. Next steps depends on appearance of drainage.

Breast cyst management



FNA= Fine needle aspiration.

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