ABNORMALUTERINE CYNTHIA MORRIS DO, FACOOG, FACOS CLEVELAND ACADEMY OF OSTEOPATHIC MEDICINE 54TH ANNUAL CONFERENCE JANUARY 19,2019







FIGO MDG(International Federation of Gynecology and Obstetrics Menstrual Disorders Group) introduced new definitions and classifications of abnormal uterine bleeding in 2011. This is intended to replace confusing and nonspecific terms including menorrhagia, menometrorrhagia, metrorrhagia, dysfunctional uterine bleeding, polymenorrhea, oligomenorrhea and uterine hemorrhage.



- 30% of women will have some abnormal uterine bleeding during their reproductive years.
- To understand abnormal, we need to know what is normal

THE MENSTRUAL CYCLE.



Menstrual cycles are determined to be normal or abnormal based on their length, regularity, duration and volume.

NORMAL MENSTRUAL CYCLES

Length

• 24 to 38 days

Regularity

Should be the same cycle length within 9 days

Duration

Should last 8 or less days

Volume

- Should be a normal volume
- 80 ml blood loss

THE OVARIAN CYCLE.

Cycle length abnormalities

- Frequent menstrual cycles are less than 24 days
- Infrequent are more than 38 days
 - A term previously known as oligomenorrhea
- Secondary amenorrhea
 - No menses for 3 months if previously regular periods
 - No menses for 6 months if previously irregular periods
- Primary amenorrhea
 - No periods by age 15

Duration abnormalities

Prolonged bleeding is more than 8 days of menses

Regularity abnormalities

 Irregular periods if greater than 7 to 9 days variation (some say +/-4 days)

Volume abnormalities

 Heavy flow is subjective to the patient who states that their period interferes with their life

Intermenstrual bleeding (bleeding between periods) IMB

- Random
- Cyclic
 - Early cycle
 - Midcycle
 - Late cycle

Unscheduled bleeding on hormone medication (breakthrough bleeding)

Acute AUB

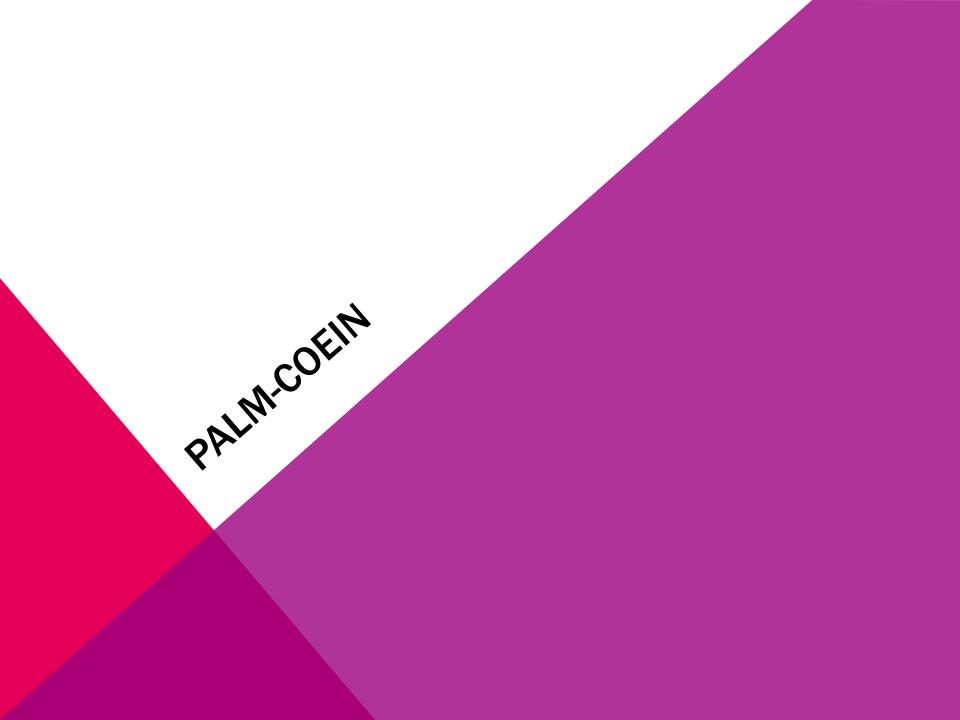
 Uterine bleeding that requires immediate intervention to prevent further blood loss

Chronic AUB

 Abnormal frequency, regularity, duration or volume of menses that has been present for the majority of the past 6 months or longer

OVARIAN ACTIVITY





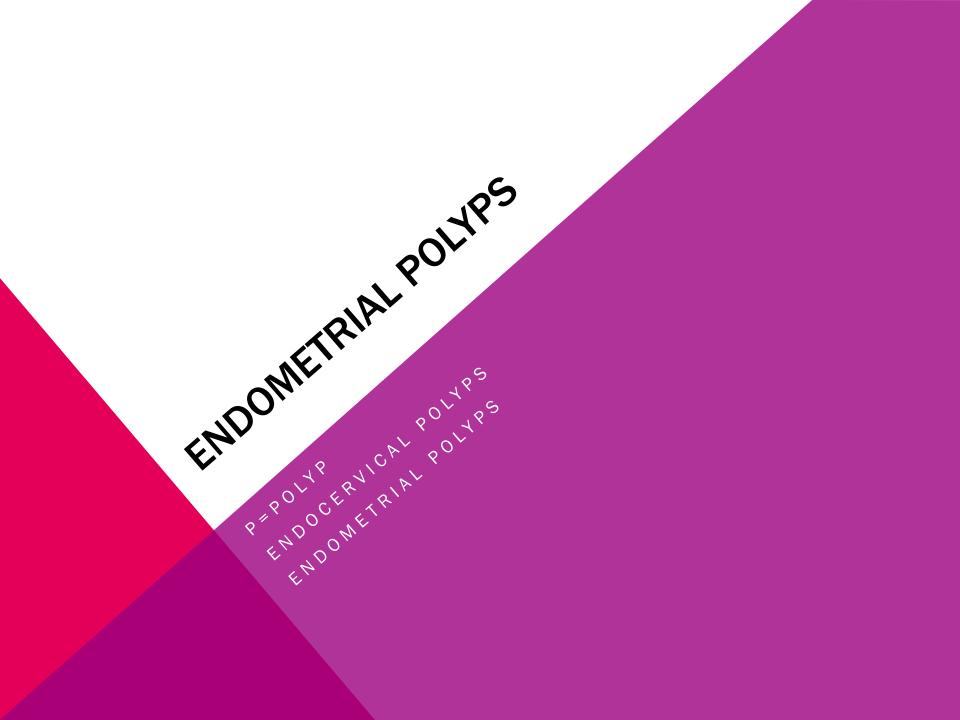
PALM-COEIN

P=polyp A= adenomyosis L=leiomyoma M=malignancy and hyperplasia C=coagulopathy O=ovulatory dysfunction E=endometrial I=iatrogenic N=not otherwise classified

PALM

Anatomical causes of bleeding

- Polyps
- Adenomyosis
- Leiomyoma
- Malignancy



ENDOMETRIAL POLYPS

DIAGNOSIS

Visualization on exam

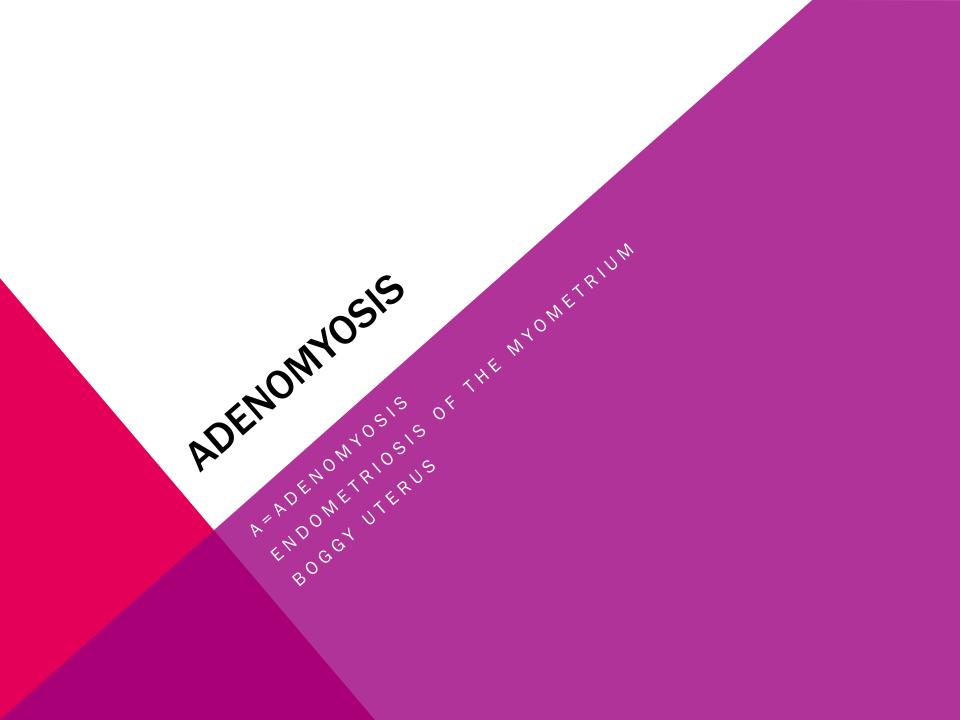
Ultrasound

Hysteroscopy

TREATMENT

Removal

- Polypectomy
- Dilation and Curettage (D&C)
- Myosure or similar hysteroscopic surgery



ADENOMYOSIS

DIAGNOSIS

No way to make the diagnosis without pathology

High index of suspicion

Exam

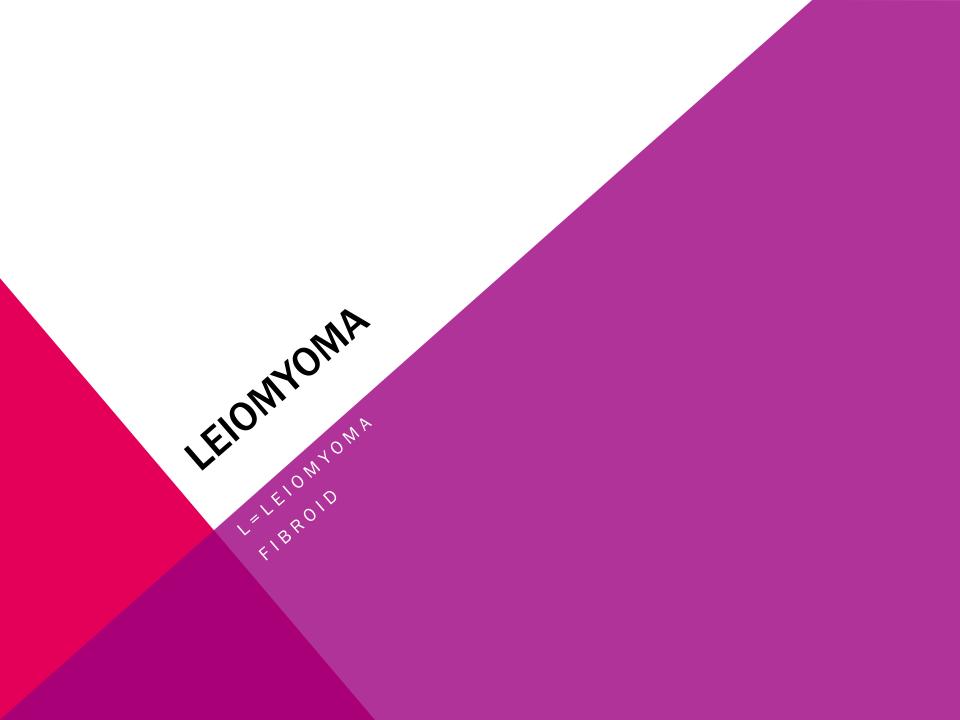
US/ MRI

TREATMENT

Hysterectomy

Other options to preserve uterus

- Levonorgestrel IUD
- Birth control pills
- Progesterone
- Leuprolide or GnRH agonist
- Endometrial ablation
- Uterine Artery Embolization (UAE)



LEIOMYOMA

DIAGNOSIS

Exam

US/MRI

TREATMENT

Hormonal therapy

- Contraceptives
- IUD
- Progesterone
- GnRH agonists

Surgery

- UAE
- Myomectomy
- Endometrial ablation
- Hysterectomy



UTERINE CANCER

Exogenous estrogen/ estrogen agonists unopposed estrogen hormone therapy tamoxifen Endogenous estrogen obesity chronic anovulation estrogen secreting tumors Family history BRCA Lynch syndrome Infertility Hypertension and Diabetes

ENDOMETRIAL CARCINOMA AND ATYPICAL ENDOMETRIAL HYPERPLASIA

DIAGNOSIS

Exam

US

- **Endometrial biopsy**
- In office
- Dilation and Curettage

TREATMENT

Hysterectomy

Progestin therapy

CERVICAL CARCINOMA

DIAGNOSIS

Exam

Pap smear with HPV testing

Colposcopy with biopsy

Biopsy

TREATMENT

Hysterectomy

Radiation

Chemotherapy

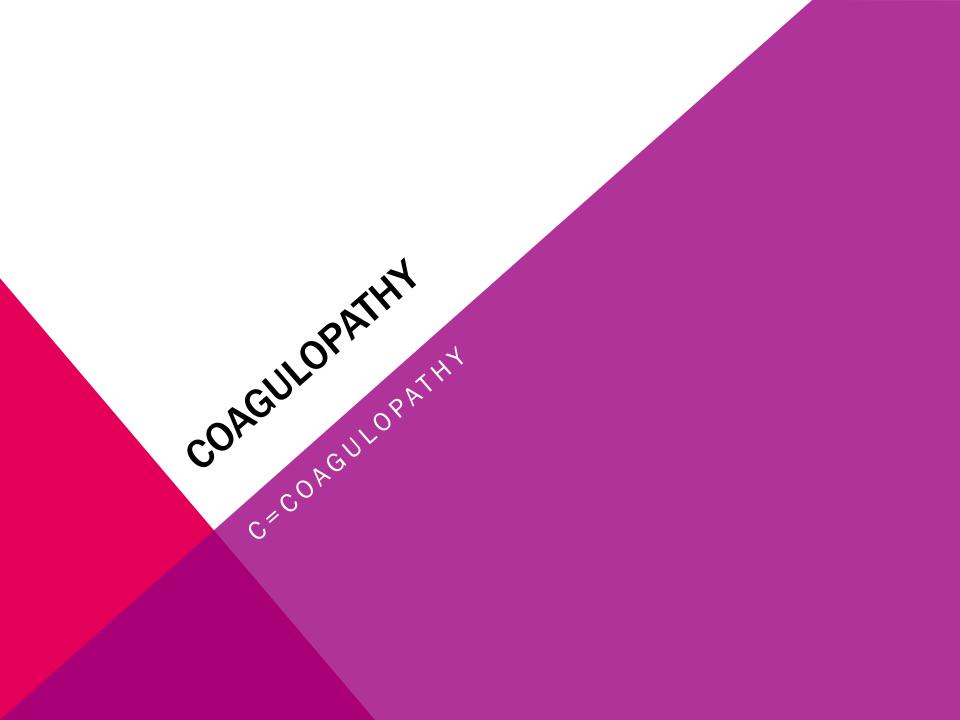
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COEIN

Non anatomical causes

- Coagulopathy
- Ovulatory Dysfunction
- Endometrial
- Iatrogenic
- Not Otherwise Classified



COAGULOPATHY

DIAGNOSIS

Labs

- CBC
- PT/PTT

FURTHER INFORMATION

- 15-24% of patients with HMB (heavy menstrual bleeding) have a bleeding disorder
- Most common is von Willebrand disease
- Thrombocytopenia
- Platelet function defect

Especially need to consider if heavy prolonged bleeding begins with menarche

Family history is important

Don't forget to check medication list

History of other bleeding-nose bleeds, easy bruising



OVARIAN (OVULATORY DYSFUNCTION)

DIAGNOSIS AND TREATMENT

Lab

Correct underlying problem

Cycling with progestin

MORE INFORMATION

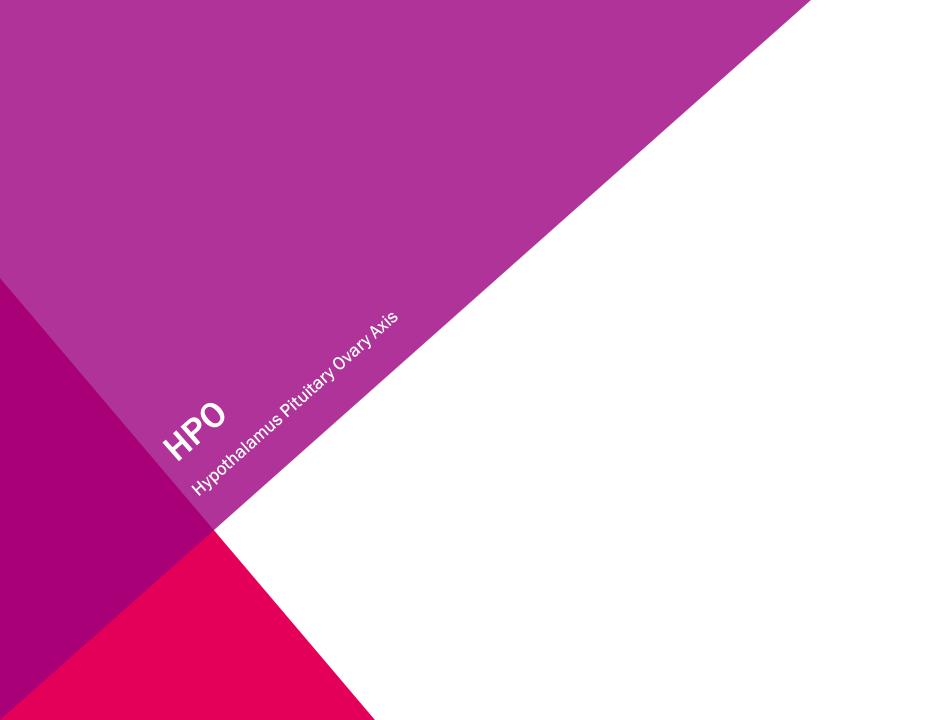
Often no identifiable cause

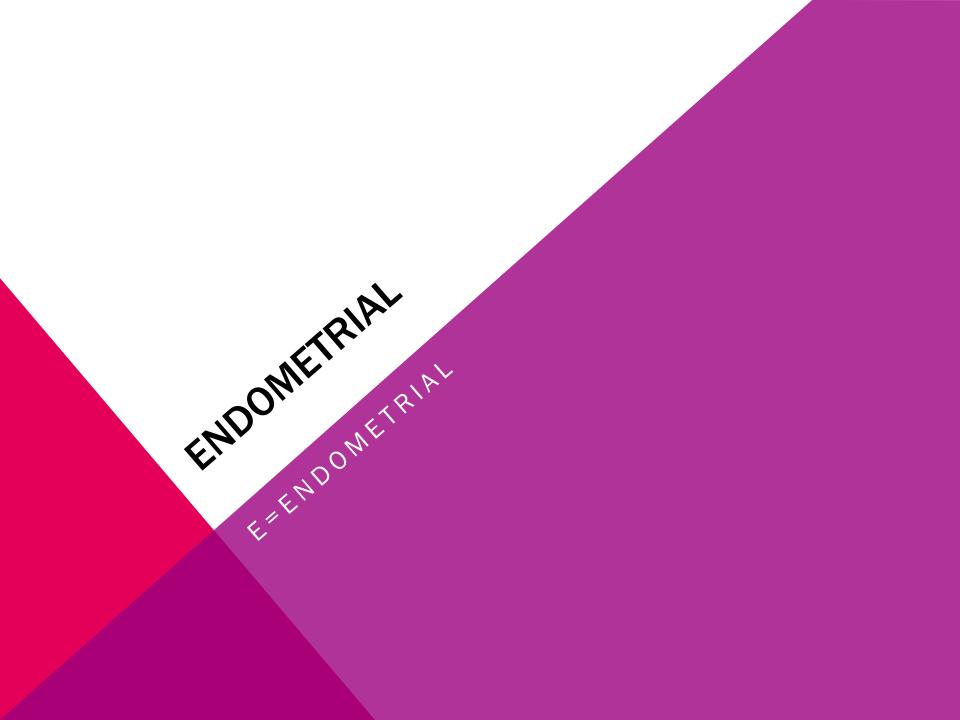
Perimenopausal

Can be related to stress, weight loss/gain, excessive exercise

Factors effecting HPO axis

- PCOS
- Thyroid
- Prolactin





ENDOMETRIAL

DIAGNOSIS OF EXCLUSION

No testing available

T R E A T M E N T Hormone therapy IUD Endometrial ablation Hysterectomy



IATROGENIC

MEDICAL DEVICES OR MEDICATIONS

IUD

Hormones

Hormone related therapy

- GnRH
- Aromatase inhibitor
- SERM

Anticoagulant

Medications that interfere with ovulation

- Antipsychotics
- antidepressants

TREATMENT

Remove the IUD

Change medications

Adjust therapy



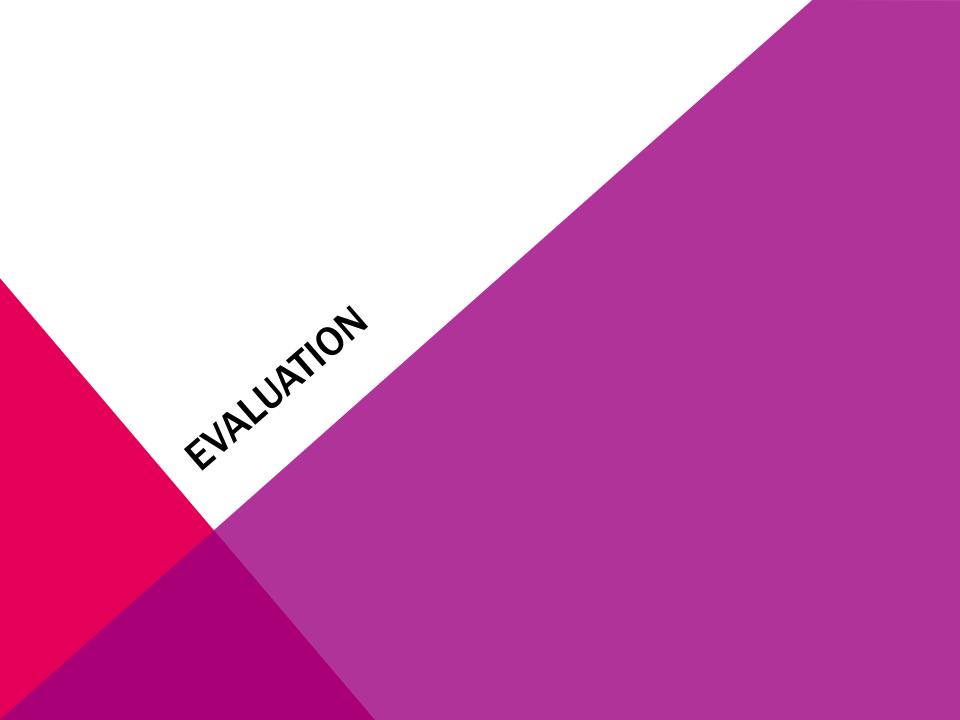
NOT OTHERWISE CLASSIFIED

Infection

Endometritis

Pelvic Inflammatory Disease

Gestational Trophoblastic Disease (Molar Pregnancy)



EVALUATION OF ABNORMAL UTERINE BLEEDING

- **1.** Is the bleeding from the uterus?
- 2. Is the bleeding postmenopausal?
- 3. Is the patient pregnant?

EVALUATION OF ABNORMAL UTERINE BLEEDING

1. Take a history including

- 1.Menstrual history
- 2.Symptoms related to bleeding
- 3.Medical, surgical and gynecological history
- 4. Medications
- 5.Risk factors for endometrial carcinoma
- 6.Family history of bleeding disorders

2. Physical exam

- 1.Vital signs
- 2.Speculum and bimanual exam

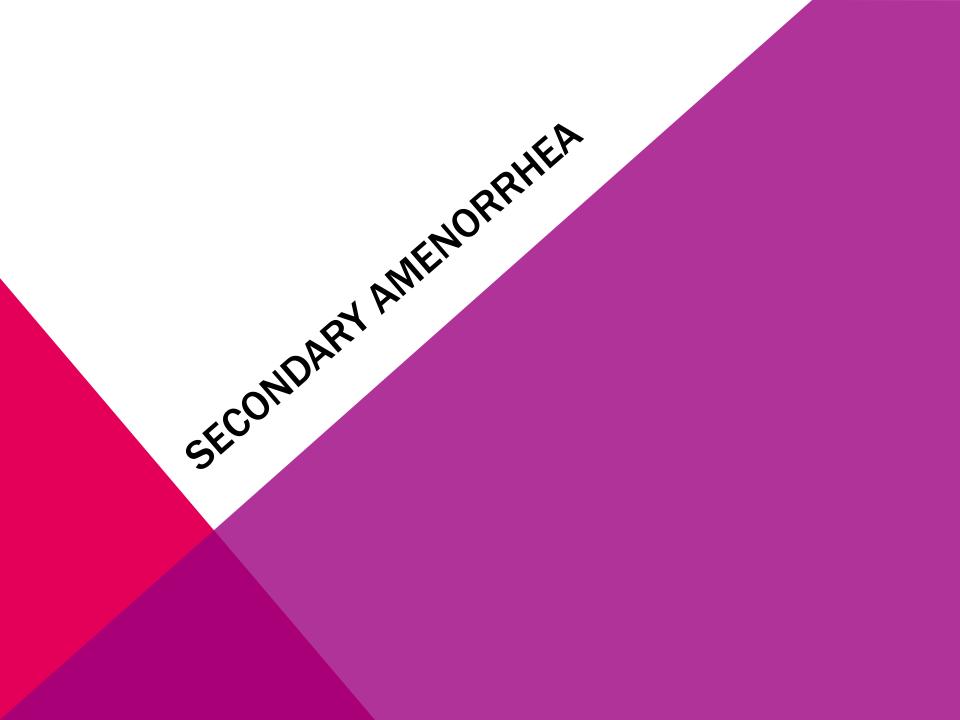
3. Labs 1.HCG

2.Hgb/Hct

FURTHER EVALUATION

- 1. Pelvic Ultrasound
- 2. Additional labs
- 3. Endometrial biopsy
- 4. Cervical evaluation





SECONDARY AMENORRHEA: ETIOLOGIES

Endocrine

- Hypothyroid
- Cushing's disease
- Adrenal tumor
- Ovarian testosterone producing tumor

Hypothalamic-Pituitary

- Hypothalamic dysfunction
- Low body fat
- Eating disorder
- Pituitary tumor
- Sheehan's syndrome

Ovarian

- PCOS
- Premature ovarian failure
- oophorectomy

Uterine

- Asherman's syndrome
- hysterectomy

CAUSES OF SECONDARY AMENORRHEA

Pregnancy

#1 cause

Ovarian

- **40**%
 - 30% PCOS
 - 10% POI

Hypothalamic

- **35**%
 - Functional hypothalamic amenorrhea

Pituitary

- **17**%
 - 13% hyperprolactinemia
 - 1.5% empty sella
 - 1.5% Sheehan's syndrome
 - 1% Cushing's disease

Uterus

- **7**%
 - Asherman's syndrome

Other

- `1%
 - Ovarian tumors, adrenal tumors, hypothyroidism,

FUNCTIONAL HYPOTHALAMIC AMENORRHEA

Female athlete triad

- Amenorrhea
- Eating disorder
- Bone loss
- Ballet, gymnastics, running especially
- Weight loss
- Stress
- Low BMI

Excessive exercise

Nutritional disorders

Celiac disease

Severe illness

CYNTHIA'S QUICK AND EASY SECONDARY AMENORRHEA WORK UP

Pregnancy test negative

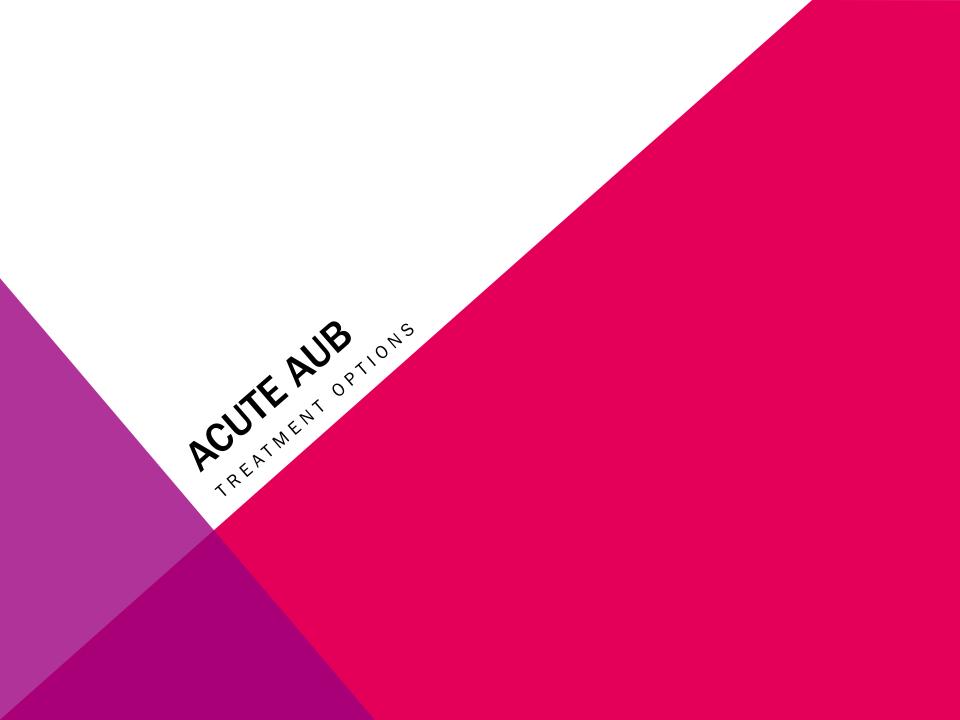
- Exam normal? Obese? Thin?
- History-birth control? Meds?
- Labs: TSH, testosterone, prolactin
- TSH abnormal-treat
- **Testosterone elevated-PCOS**
- If testosterone >150 do US ovaries
- Treat PCOS with birth control pill

All normal? Progesterone withdrawl.

- Bled-great-now what?
- No bleeding? Now what?

Premature ovarian failure

- FSH, estradiol level
- Functional hypothalamic amenorrhea (GnRH deficiency)



ACUTE ABNORMAL UTERINE BLEEDING

Patient with prolonged or heavy bleeding that needs to be stopped due to anemia and/or life impact.

Treatment options (ACOG Committee Opinion 557):

- conjugated equine estrogen 25mg IV every 4-6 hours for 24 hours
- combined oral contraceptives 35mcg monophasic pill tid X7 days
- medroxyprogesterone acetate 20mg tid X7 days
- tranexamic acid 1.3 g orally tid for 5 days

ACUTE ABNORMAL UTERINE BLEEDING

Cynthia's protocol

- Norethindrone acetate 5mg every 4 hours until bleeding stops and then for 24 hours and then taper down. Rx for #40 and taper by doing every 6 hours for 3 days and then every 8 hours for 3 days and then every 12 hours for 3 days and then daily until medication is gone. If they have breakthrough bleeding increase to the previous dose. Don't start taper until no bleeding for 24 hours.
- Will usually have a period after finishing taper because now you have done progesterone withdrawl.





What are some patients that you have had concerns with evaluation?