

**USMLE PREP LECTURE
SERIES
Lecture 3.2**



ELITE MEDICAL PREP

What You'll Need

1

UW and the number of questions per system



2

Your Chosen Other Resources



and/or



3

Your Chosen Format



The First ~4 Months (80% of your time)

First 4
Months

MEDICINE

PEDIATRICS

SURGERY

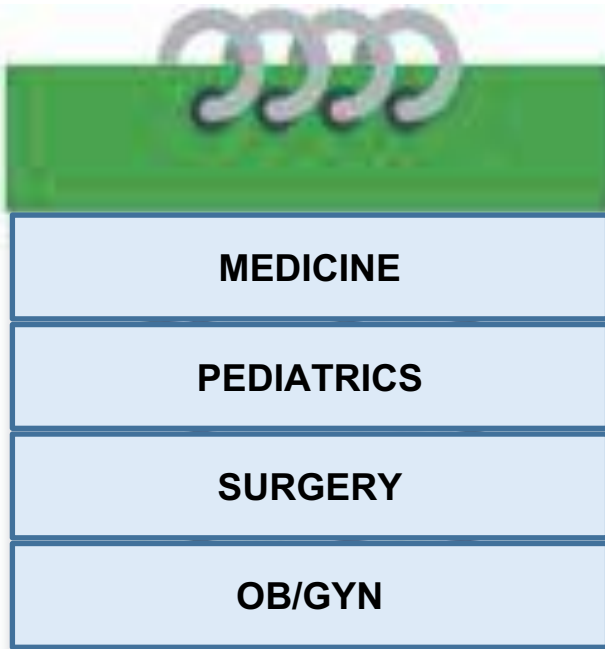
OB/GYN

- 1 UW system at a time
- 3-4 hours per day: Half on reading/videos, Half on questions
- ~40 questions per day in Tutor mode, untimed until the topic is complete
- 1-2 days for review of incorrects
- Build in a break/catch-up day in between



The First ~4 months (80% of your time)

First 4 Months



MEDICINE
PEDIATRICS
SURGERY
OB/GYN

SAMPLE:

1HR: OME
2HR: 40 Qs

1HR: OME
2HR: 40 Qs

1HR: OME
2HR: 40 Qs

2HR:
Amboss &
OME
2HR: 40 Qs

2HR:
Amboss &
OME
2HR: 40 Qs

2HR:
Amboss
Videos
2HR: 40 Qs

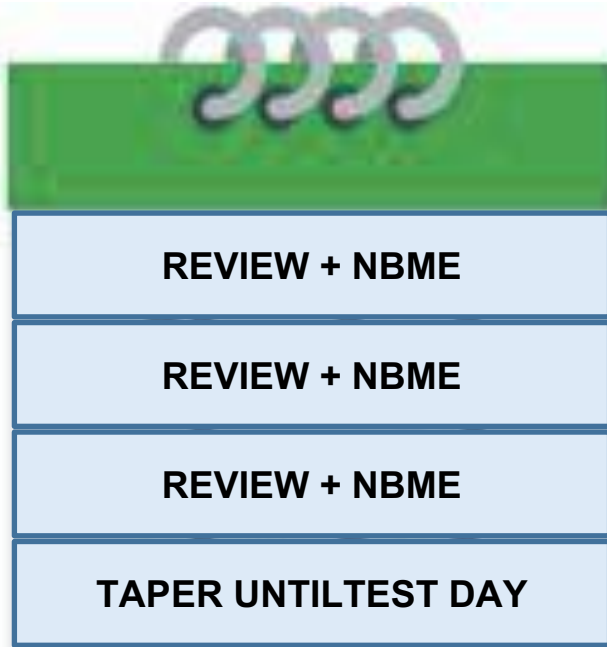
Continue
until Qs Done
.....

4HR: Review
Incorrect ?s

+1 day for Catch-up and/or Review



The Last ~1 month (20% of your time)



- **Mixed, Timed Review – 20-160 Qs (3-4 blocks) per day**
- **3 NBMEs: Average score is your objective assessment**
- **Taper Question Number until Test Day**
- **Review Flashcards Nightly**

Other Details to Consider

- Do at least 1 NBME as a baseline during the 2-3 months
- Break Medicine down into subtopics, complete 1 at a time during systems review
- Consider adding a few extra single days to do mixed review of topics previously covered
- Make Flashcards Daily, Review Nightly
- Consider YOUR personal schedule – Vacation, days off, Holidays, etc.
- Finally, STICK TO YOUR PLAN, BUT BE FLEXIBLE.



USMLE Practice Question Breakdown

3 A 26 year old woman is brought to the emergency department by her roommate because of vomiting for 4 hours. She also has a 2 day history of fatigue and dizziness on standing. She has had severe heartburn for 3 months; treatment with over-the-counter antacids has provided some relief. The vital signs of the patient are T 35.6C (96F), pulse 110/min, and blood pressure 80/55 mm Hg. Physical examination shows marked pallor. Laboratory studies show a hemoglobin concentration of 6 g/dL and hematocrit of 18%. A chest x-ray is obtained (shown) and a pulmonary catheter is inserted and laboratory values are measured.



1 The patient is most likely experiencing which of the following types of shock?

- 2
- A) Anaphylactic.
 - B) Cardiogenic.
 - C) Hypovolemic.
 - D) Neurogenic.
 - E) Septic.

1 The question stem – tells you what the question is asking

2 The answer choices – Given you some context as to what the question is about

3 The prompt – Summarize key information as it's given in your own words; ensure that the answer matches ALL of the information given, not just some

4 Labs and images. EVAL the labs. IGNORE the images if not obvious in 5 secs

EMP's SUGGESTED ORDER.

There is no one right way to do this.

Note about today's lecture

•When you see the participation from



GREEN BOX

it means we are asking for the audience

•We will be asking for submissions via:

- Chat function,
- Audio discussion and/or
- Polls



OB/GYN Challenge Questions and breakdowns



Repro Question #1

A 19-year-old primigravid woman at 40 weeks gestation undergoes fetal heart monitoring. Pregnancy has been uncomplicated. External monitoring shows a baseline fetal heart rate of 140 bpm with good variability. Over a period of 30 minutes, the rate increase is twice to 164 for 25 to 30 seconds.

Which of the following is the most appropriate next step in management?

- A. Reassurance.
- B. Biophysical profile.
- C. Oxytocin challenge test.
- D. Induction of labor.
- E. Cesarean delivery



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Group Feedback: How would you categorize the answers?

When are each of these responses indicated

- A. Reassurance.
- B. Biophysical profile.
- C. Oxytocin challenge test.
- D. Induction of labor
- E. Cesarean delivery



Consider what the answers mean...

A nineteen-year-old primigravid woman at 40 weeks gestation undergoes fetal heart monitoring. Pregnancy has been uncomplicated. External monitoring shows a baseline fetal heart rate of 140bpm with good variability. Over a period of 30 minutes, the rate increases twice to 164 for 25 to 30 seconds.

Which of the following is the most appropriate next step in management?

- A. Reassurance. – *Is everything is fine and normal?*
- B. Biophysical profile. – *Do we need to test the baby to see if it's ok?*
- 2 C. Oxytocin challenge test. – *Do we need to test if the baby will be ok during delivery?*
- D. Induction of labor – *Does this baby need to come out?*
- E. Cesarean delivery – *Is this an urgent/emergent situation?*

Quick assessment of the answers gives you a lot of context before diving into the prompt



Identify key prompt clues and summarize

3

A nineteen-year-old primigravid woman at 40 weeks gestation undergoes fetal heart monitoring. Pregnancy has been uncomplicated. External monitoring shows a baseline fetal heart rate of 140 with good variability. Over a period of 30 minutes, the rate increases twice to 164 for 25 to 30 seconds.

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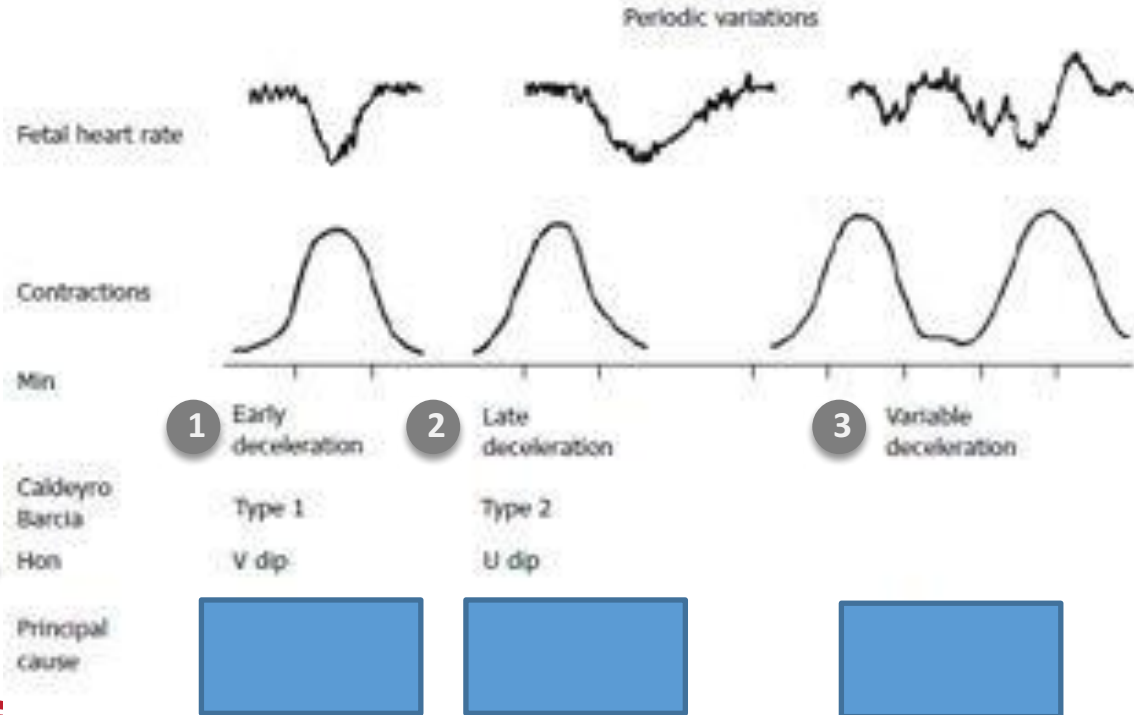
Summary in your OWN words:

Full-term pregnancy with fetal HR 140 and good variability and 2 observed accelerations

Take 15-30 seconds to summarize



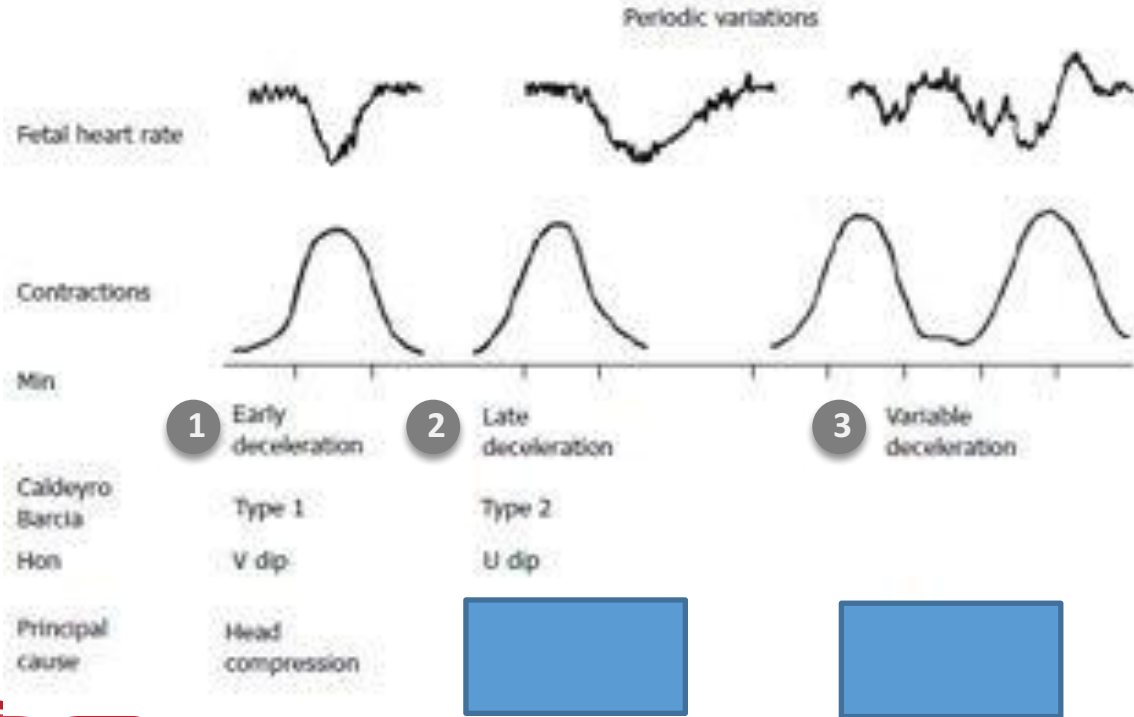
Recall: 3 types of decels—2 are bad



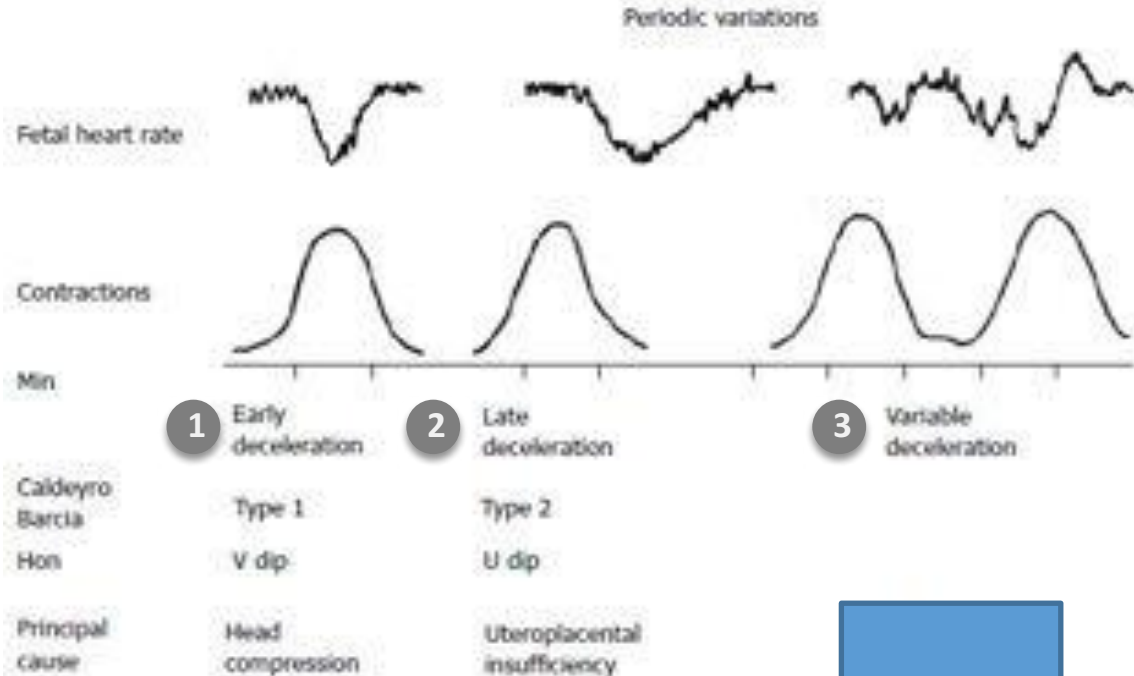
Can you name the MAIN causes of each DECEL type?



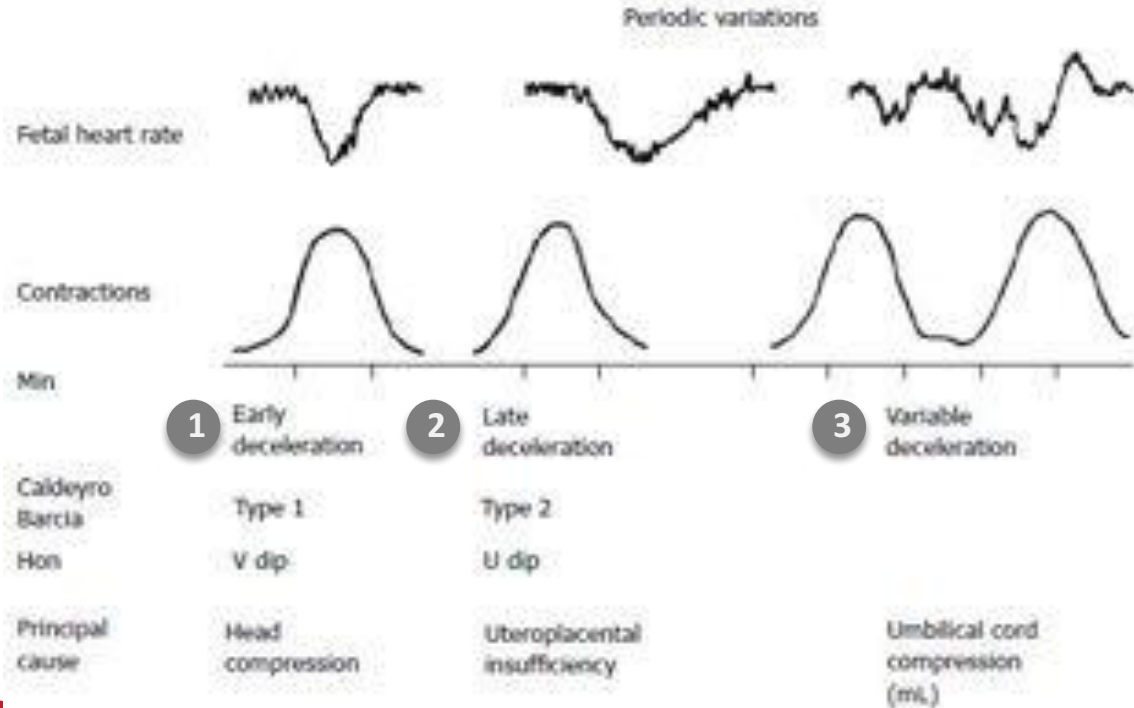
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Recall: 3 types of decels—2 are bad



Biophysical Profile – You should be aware of the 5 fetal wellness metrics it measures

Accelerations are normal and a sign of a healthy baby with plenty of oxygen

(i.e. can increase HR with activity just fine)

Parameter	Normal (2 points)	Abnormal (0 points)
NST/Reactive FHR	At least two accelerations in 20 minutes	Less than two accelerations to satisfy the test in 20 minutes
US: Fetal breathing movements	At least one episode of > 30s or >20s ^[3] in 30 minutes	None or less than 30s or 20s ^[3]
US: Fetal activity / gross body movements	At least three or two ^[3] movements of the torso or limbs	Less than three or two ^[3] movements
US: Fetal muscle tone	At least one ^[3] episode of active bending and straightening of the limb or trunk	No movements or movements slow and incomplete
US: Qualitative AFV/AFI	At least one vertical pocket > 2 cm in the vertical axis	Largest vertical pocket <= 2 cm

Non-Stress Test measures similar things

2. Nonstress test (NST)

- **Normal**

- Moderate variability
- Accelerations associated with maternal palpation
- FMs (accelerations graded for gestation) on 20-minute NST)
- **≥2 episodes of acceleration of 15 bpm and of ≥ 15 s associated with fetal movement in 20 min**

- **Abnormal**

- FM and accelerations not coupled
- Insufficient accelerations, absent accelerations, or decelerative trace
- Minimal or absent variability

Again,
accelerations
and variability
are GOOD

Decelerations or
low variability
are BAD

Back to the Question... Pick and Answer

A nineteen-year-old primigravid woman at 40 weeks gestation undergoes fetal heart monitoring. Pregnancy has been uncomplicated. External monitoring shows a baseline fetal heart rate of 140 with good variability. Over a period of 30 minutes, the rate increases twice to 164 for 25 to 30 seconds.

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Normal baby = Reassure

A nineteen-year-old primigravid woman at 40 weeks gestation undergoes fetal heart monitoring. Pregnancy has been uncomplicated. External monitoring shows a baseline fetal heart rate of 140 with **good variability**. Over a period of 30 minutes, the rate **increases twice to 164 for 25 to 30 seconds**.

Which of the following is the most appropriate next step in management?

- A. Reassurance.** – **Everything is fine and normal, baby is doing well.**
- B. Biophysical profile. – **The baby is doing well- Variability and Accels**
- 2** C. Oxytocin challenge test. – **The baby is doing well- Variability and Accels**
- D. Induction of labor – **Not yet >42 weeks, and baby doing well**
- E. Cesarean delivery – **Not an emergency, quite the opposite**



Repro Question #2

A 27 year old nulligravid woman comes to the physician because she has been unable to conceive for 2 years. She also has had pain with sexual intercourse over the past six months. She has been otherwise healthy. Menarche was at age 13 years, and menses have occurred at regular 28-day intervals. Her last menstrual period was 1 week ago. Her temperature is 98.6 F (37 C), pulse is 80 bpm, respirations are 20/min, and blood pressure is 120/80. Abdominal exam shows right lower quadrant tenderness. Pelvic exam shows a 5 cm, tender, right adnexal mass. Lab studies show:

Hemoglobin:	11
Leukocyte count:	9000
Seg Neut:	60%
Bands:	5%
Lymphocytes:	30%
Monocytes:	5%
ESR:	15

A urine pregnancy test is negative. Ultrasonography shows a 5 centimeter right adnexal mass containing low-level, homogeneous, internal echoes. A biopsy specimen of the mass is most likely to show which of the following?

- A. Atypical ovarian epithelial cells.
- B. Endometrial glands and stroma.
- C. Luteinized granulosa cells.
- D. Myometrium
- E. Squamous cells, cartilage, and bone

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Consider the answers...

1

A urine pregnancy test is negative. Ultrasonography shows a 5 centimeter right adnexal mass containing low-level, homogeneous, internal echoes. A biopsy specimen of the mass is most likely to show which of the following?

2

- A. Atypical ovarian epithelial cells. – Atypia indicates **Cancer** (ovarian)
- B. Endometrial glands and stroma. – Endometrial tissue?
- C. Luteinized granulosa cells. – Follicle turned Corpus luteum producing progesterone?
- D. Myometrium – Muscular layer of the uterus?
- E. Squamous cells, cartilage, and bone – **Teratoma?**

We have 2 tumors here, so deciding if it's cancer or not cancer will be key!

Read and Summarize in your OWN words

3 A 27 year old nulligravid woman comes to the physician because she has been **unable to conceive** for 2 years. She also has had **pain with sexual intercourse** over the past six months. She has been otherwise healthy. Menarche was at age 13 years, and menses have occurred at **regular 28-day intervals**. Her last menstrual period was 1 week ago. Her temperature is 98.6, pulse is 80, respirations are 20, and blood pressure is 120/80. Abdominal exam shows right lower quadrant tenderness. Pelvic exam shows a 5 cm, tender, right adnexal mass. Lab studies show:

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Summary in your OWN words:

27 yo F with infertility, painful sex, regular periods, and a painful RLQ adnexal mass. Otherwise healthy appearing aside from mild anemia.

Take 15-30 seconds to summarize



Point #1: Is this Cancer?

Summary in your OWN words:

27 yo F with infertility, painful sex, regular periods, and a painful RLQ adnexal mass. Otherwise healthy appearing aside from mild anemia.

Typical Cancer Symptoms

1. Weight loss – unintentional
2. Decreased appetite
3. Tiredness, low energy
4. Chronic malaise

Typical Ovarian Cancer Symptoms

1. Abdominal fullness
2. Ascites
3. Change in bowel or bladder habits
4. Changes in menstruation
5. Low back pressure or pain

This patient has none of these typical USMLE clues for cancer



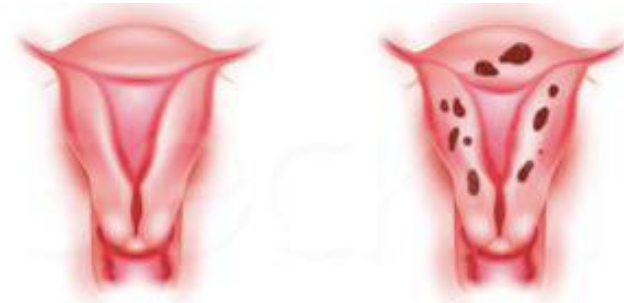
Point #2: Normal bleeding vs abnormal bleeding?... KNOW THE CAUSES!!

Heavy Bleeding #1- Fibroids



Asymmetrically enlarged uterus
Path: monoclonal benign tumors of smooth muscle cells

Heavy Bleeding #2- Adenomyosis



Normal Uterus

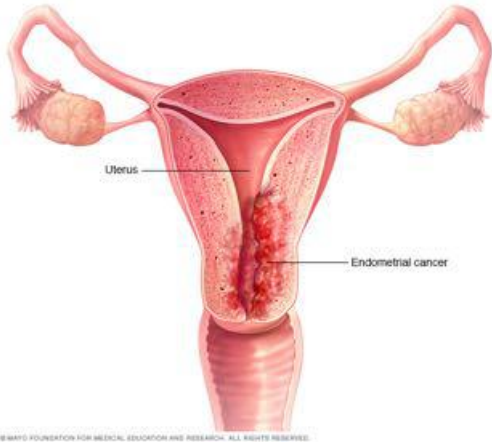
Adenomyosis

Symmetrically enlarged uterus
Path: ectopic glandular tissue that stimulates smooth muscle cell hyperplasia



Point #2: Normal bleeding vs abnormal bleeding?... KNOW THE CAUSES!!

Abnormal Timing #1- Endometrial Cancer



Spotting between periods, usually post-menopausal

Abnormal Timing #2- Anovulation



Normal Period comes earlier than expected (e.g. 21 days)



Point #2: Normal bleeding vs abnormal bleeding?... KNOW THE CAUSES!!

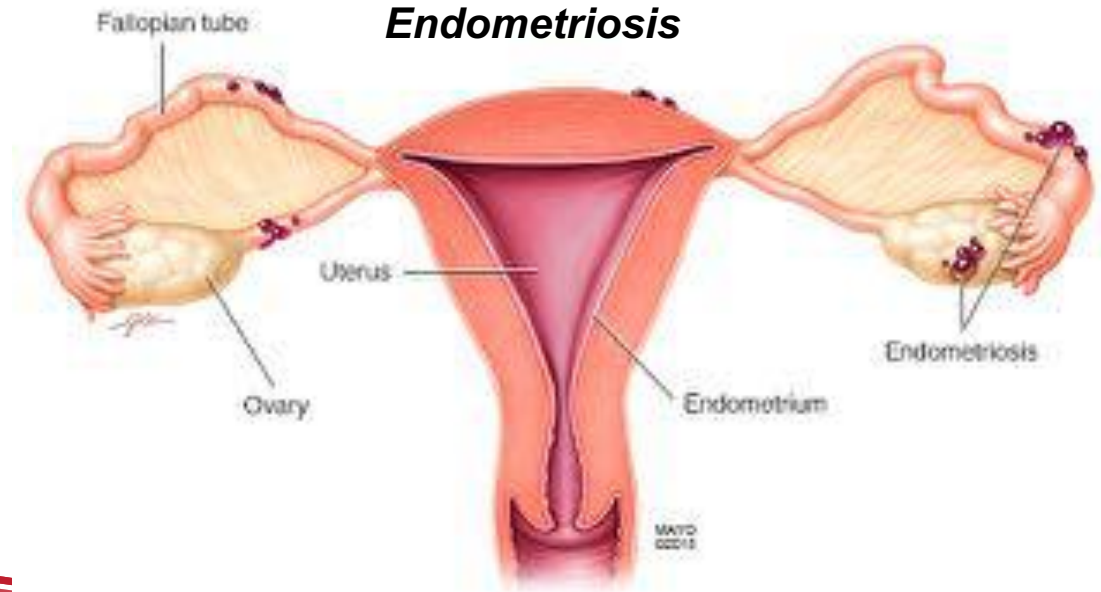
What disease/entity are we looking for?

Pain with menses but Normal Bleeding???

Normal Uterus and menstrual bleeding, but abnormal endometrial tissue bleeding in the adnexa that irritates surrounding structures

Painful sex and infertility are hallmarks

VERY HIGH YIELD!



Back to the question...

3 A 27 year old nulligravid woman comes to the physician because she has been unable to conceive for 2 years. She also has had pain with sexual intercourse over the past six months. She has been otherwise healthy. Menarche was at age 13 years, and menses have occurred at regular 28-day intervals. Her last menstrual period was 1 week ago. Her temperature is 98.6, pulse is 80, respirations are 20, and blood pressure is 120/80. Abdominal exam shows right lower quadrant tenderness. Pelvic exam shows a 5 cm, tender, right adnexal mass. Lab studies show:

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Choose the answer...

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Choose the answer...

A urine pregnancy test is negative. Ultrasonography shows a 5 centimeter right adnexal mass containing low-level, homogeneous, internal echoes. A biopsy specimen of the mass is most likely to show which of the following?

- A. Atypical ovarian epithelial cells. – **No typical symptoms of cancer**
- B. Endometrial glands and stroma. – **Endometrial tissue in the adnexa causing painful sex and infertility = Endometriosis**
- C. Luteinized granulosa cells. – **Corpus luteum producing progesterone would be a normal cystic finding**
- D. Myometrium – **Adenomyosis? – No, not heavy bleeding with symmetrically enlarged uterus**
- E. Squamous cells, cartilage, and bone – **Not a teratoma – would have weird bright and dark tissues of many types**



Repro Question #3

A 37 year old woman comes to the physician because of increasingly severe pain and masses in both breasts over the past three months. She has a 12-year history of similar episodes that were not as severe. The masses vary in size with her menstrual cycle. She has used an oral contraceptive for 16 years. Examination shows multinodular breasts, the largest mass is 1 by 2 cm. There is no axillary lymphadenopathy.

Which of the following is the most likely diagnosis?

- A. Benign cyst.
- B. Breast abscess.
- C. Breast carcinoma.
- D. Breast engorgement.
- E. Ductal papilloma.
- F. Fibroadenoma.
- G. Fibrocystic change of the breast.
- H. Mastitis.
- I. Oral contraceptive induced breast changes.

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**AH! SO MANY
ANSWERS!!!**

When you have lots of answers, Bucket them!

Benign

Malignant

Infectious



I'll choose some buckets.
Please help me sort the answer choices

Deciding which bucket to choose from is a HUGE first step to simplifying this question by eliminating answers



ELITE MEDICAL PREP

When you have lots of answers, Bucket them!

Benign

Malignant

Infectious

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Use the prompt to decide which Bucket

A 37 year old woman comes to the physician because of increasingly **severe pain and masses in both breasts** over the past three months. She has a **12-year history of similar episodes** that were not as severe. The **masses vary in size with her menstrual cycle**. She has used an oral contraceptive for 16 years. Examination shows multinodular breasts, the largest mass is 1 by 2 cm. **There is no axillary lymphadenopathy.**

Benign, Malignant, or Infectious??



Use the prompt to decide which Bucket

A 37 year old woman comes to the physician because of increasingly **severe pain and masses in both breasts** over the past three months. She has a **12-year history of similar episodes** that were not as severe. The **masses vary in size with her menstrual cycle**. She has used an oral contraceptive for 16 years. Examination shows multinodular breasts, the largest mass is 1 by 2 cm. **There is no axillary lymphadenopathy.**

Benign

- Bilateral: **Yes.**
- Size changes over time: **Yes.**
- No lymph nodes: **Yes.**

Malignant

- Gradual growth: **No.**
- Lymph nodes: **No.**
- Unilateral: **No.**
- Weight Loss and fatigue: **No.**



Infectious

- Fever: **No.**
- Redness: **No.**
- Pain: **Yes.**
- Acute onset: **No.**



Cross out wrong buckets

Benign

- A. Benign cyst.
- D. Breast engorgement.
- F. Fibroadenoma.
- G. Fibrocystic change of the breast.
- I. Oral contraceptive induced breast changes.

Malignant

- ~~C. Breast carcinoma.~~
- ~~E. Ductal papilloma.~~

Infectious

- ~~B. Breast abscess.~~
- ~~H. Mastitis.~~

5 choices is much more manageable!



Summarize

A 37 year old woman comes to the physician because of increasingly **severe pain and masses in both breasts** over the past three months. She has a **12-year history of similar episodes** that were not as severe. The **masses vary in size with her menstrual cycle**. She has used an oral contraceptive for 16 years. Examination shows multinodular breasts, the largest mass is 1 by 2 cm. **There is no axillary lymphadenopathy.**

Summary:

Multiple benign bilateral painful breast masses that fluctuate in size with the menstrual cycle



Consider the remaining answers

Benign

- A. Benign cyst**
- D. Breast engorgement**
- F. Fibroadenoma**
- G. Fibrocystic change of the breast**
- I. Oral contraceptive induced breast changes**



Consider the remaining answers

Benign

- A. Benign cyst – Note this answer is SINGULAR and we have multiple masses. Plus cysts don't change with the menstrual cycle.**
- D. Breast engorgement – Typically occurs in lactating women, NO mention of recent pregnancy or OB history. Although bilateral and can be painful, does not create discrete "masses".**
- F. Fibroadenoma. – Note this answer is SINGULAR. Plus fibroadenomas are typically unilateral and do not change with menstrual cycle.**
- G. Fibrocystic change of the breast. – DOES change with the menstrual cycle and can create multiple "masses".**
- I. Oral contraceptive induced breast changes- Can cause mild breast tenderness, but not severe pain and bilateral masses. No one would take OCPs if they did!!**



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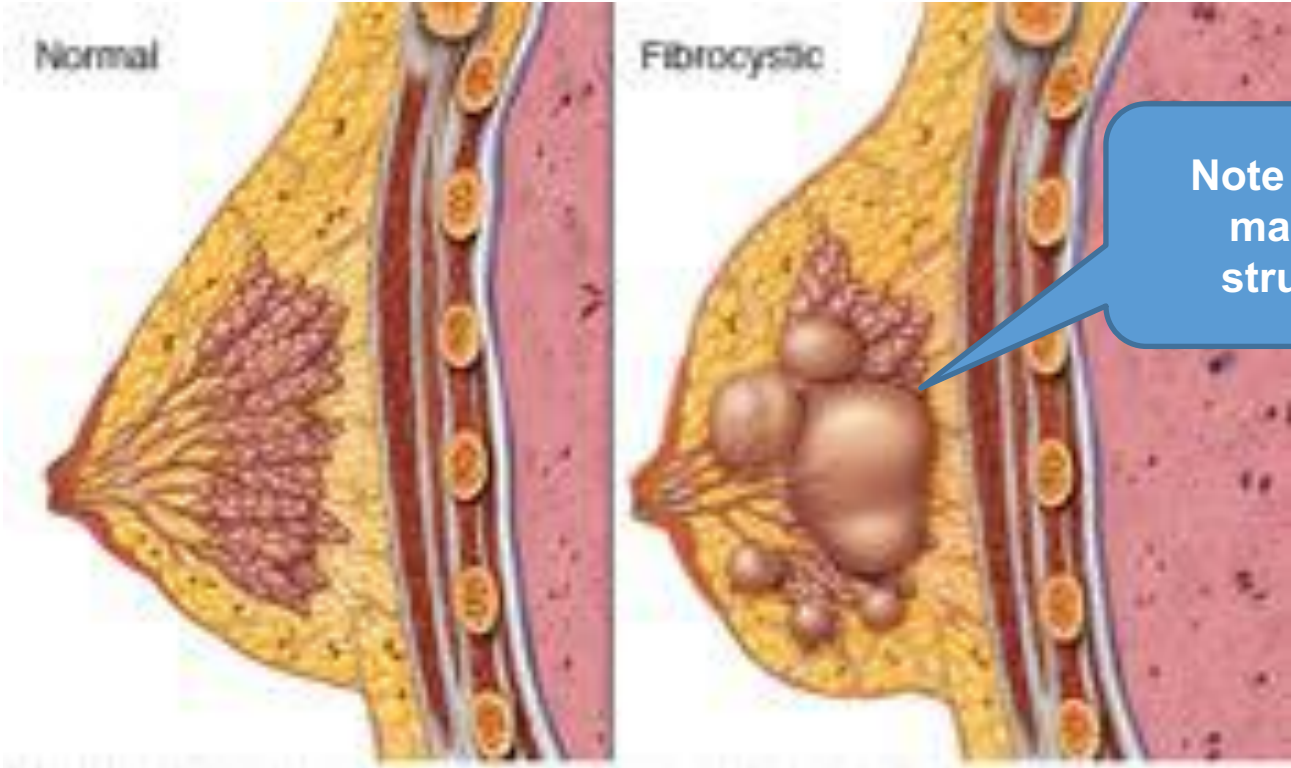
F. Fibroadenoma.

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Note multiple mass like structures

IMPORTANT Breast Mass Tips

Intraductal Papilloma: Bloody Nipple Discharge

Peau d' Orange: Inflammatory Breast Cancer

Mastitis: Usually in a nursing/new mother w/ Fever, areolar redness/pain

Abscess: Single fluctuant, painful mass + Fever



Reminders

- ❶ We are available for feedback and questions. A dedicated email has been created for students in your class year at Ben Gurion.
bgustep2@elitemedicalprep.com
- ❷ Please send questions and comments after the sessions to this email. Responses will be prompt and questions relevant to the group will be summarized and shared
- ❸ Collect feedback from you and the students regarding our service, so that we may better serve you all moving forward





Thank You.

