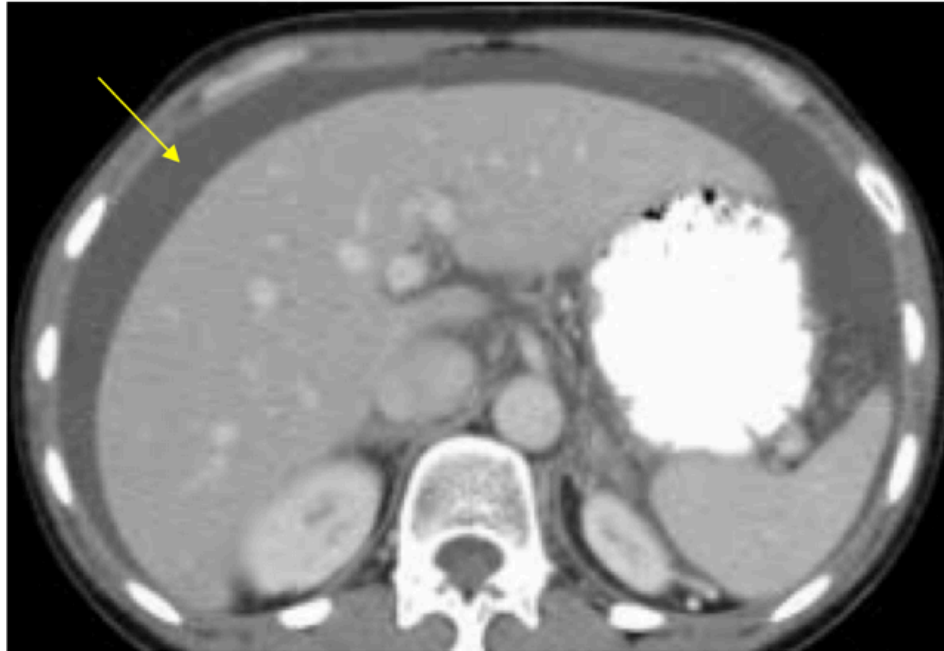
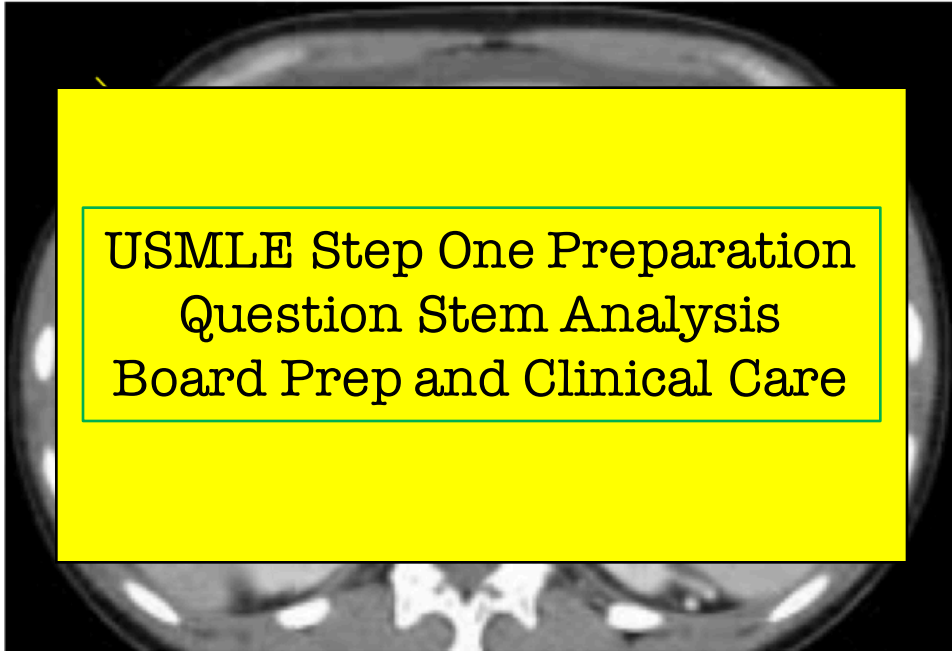


The Year in Review Series: Case 1. Ascites
Case-based NBME review



Howard J. Sachs, MD
www.12DaysinMarch.com
E-mail: Howard@12daysinmarch.com

The Year in Review Series: Case 1. Ascites
Case-based NBME review



USMLE Step One Preparation
Question Stem Analysis
Board Prep and Clinical Care

Howard J. Sachs, MD
www.12DaysinMarch.com
E-mail: Howard@12daysinmarch.com

The Year in Review Series: Case 1. Ascites
Case-based NBME review



Tutorial Services

Howard J. Sachs, MD
www.12DaysinMarch.com
E-mail: Howard@12daysinmarch.com

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.
Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which of the following is the most likely diagnosis?

- A. Cirrhosis
- B. Cor Pulmonale
- C. Constrictive Pericarditis
- D. Congestive Heart Failure
- E. Chronic Kidney Disease
- F. Cardiac Tamponade



84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. **Neck: no JVD**; Lungs clear, Cor: S1, S2 normal; RRR. No murmur/rub/gallop
Abd: shifting dullness and bulging flanks. Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which test would be most useful in determining the etiology of his expanding abdominal girth?



- A. Calorie count
- B. Echocardiography
- C. Hepatic ultrasound with doppler and paracentesis
- D. Chest CT scan
- E. Brain Natriuretic Peptide
- F. Alpha fetoprotein

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.
Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which of the following is the most likely diagnosis?

- A. Cirrhosis
- B. Cor Pulmonale
- C. Constrictive Pericarditis
- D. Congestive Heart Failure
- E. Chronic Kidney Disease
- F. Cardiac Tamponade

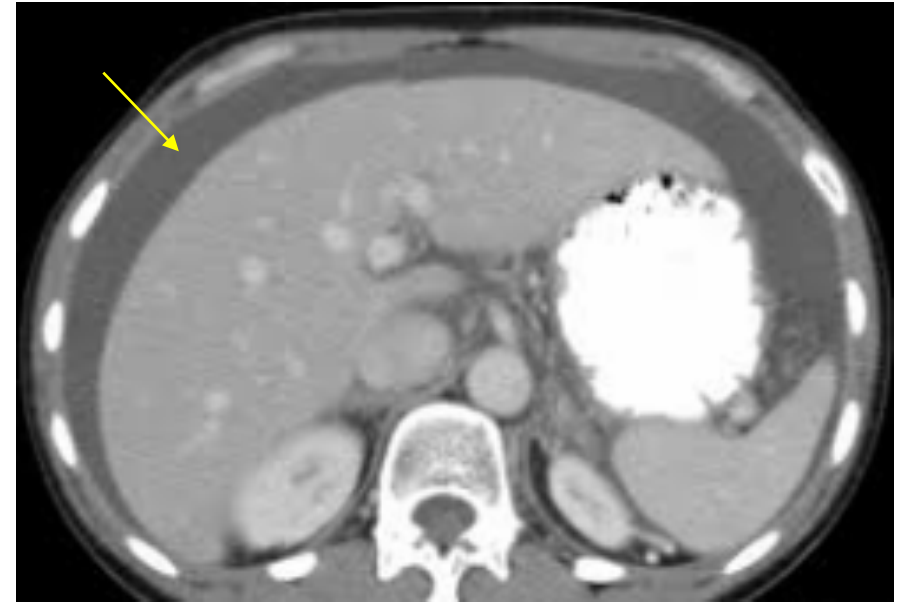


84 y.o. gentleman with **progressive** weakness, **SOB** and **increasing abdominal girth**.



84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth.

SOB:
Heart disease
Lung disease
(RBC)



84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth.

SOB:
Heart disease
Lung disease
(RBC)

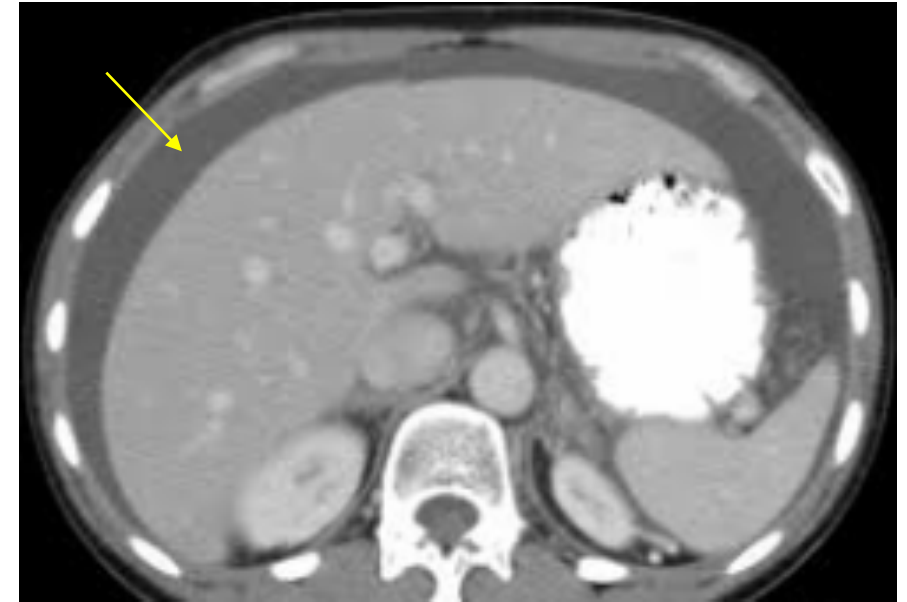
Think in Categories

Heart:

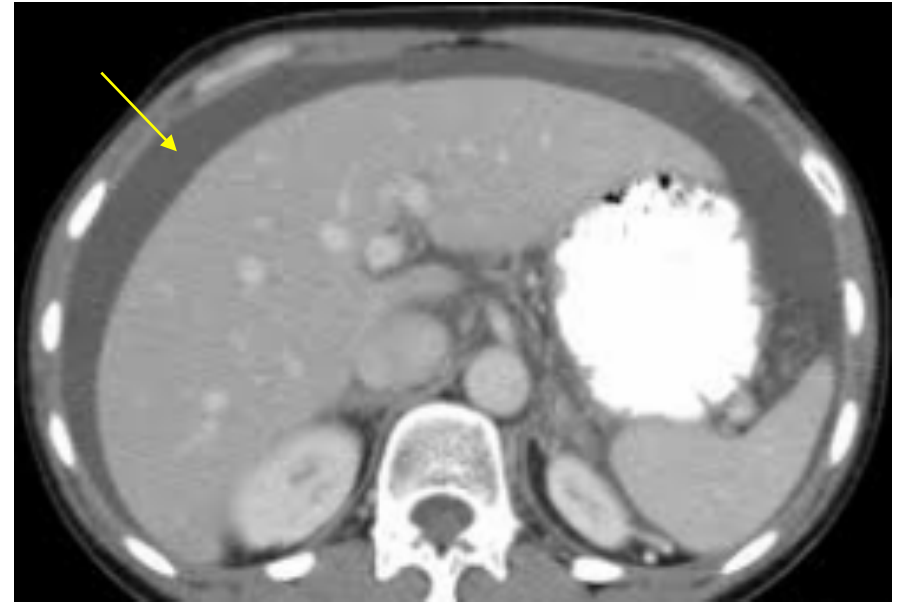
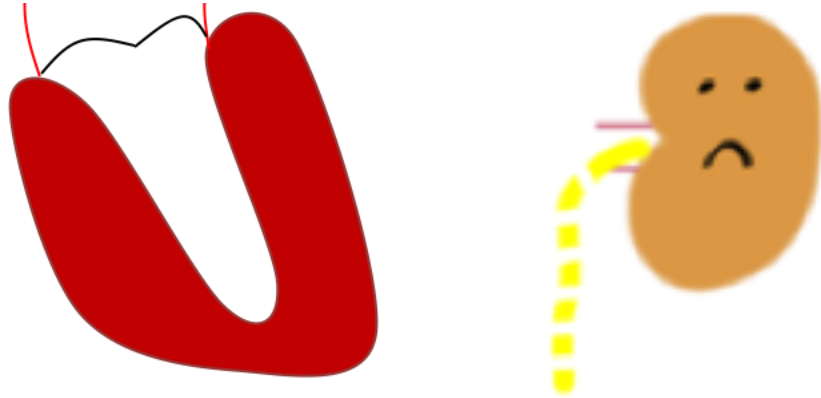
1. Ischemia
2. Pump failure
3. Valve disease
4. Pericardium
5. Rhythm

Lung:

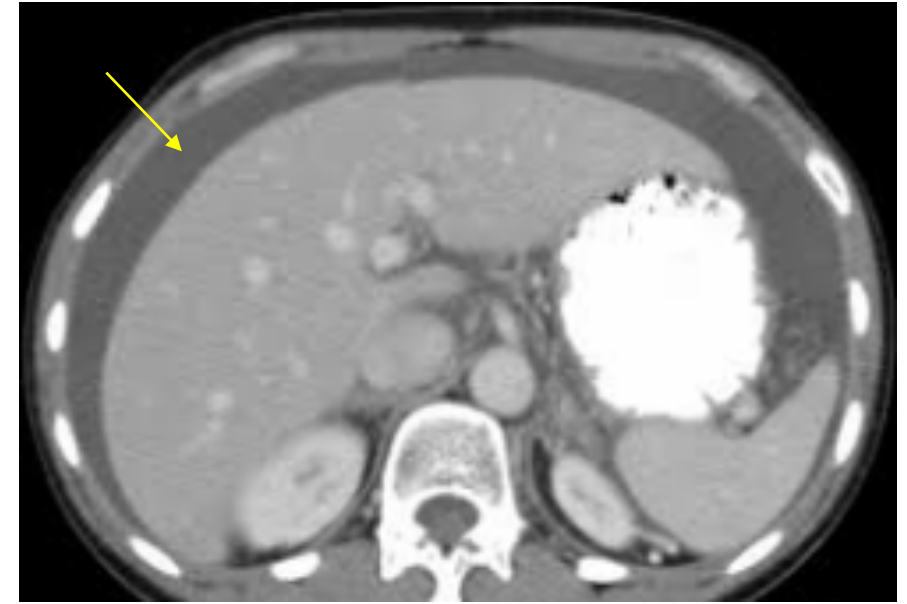
1. Neuromuscular
2. Airways
3. Alveoli
4. Interstitium
5. Vascular
6. Pleura



84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15).



84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). **ROS: negative orthopnea/PND**

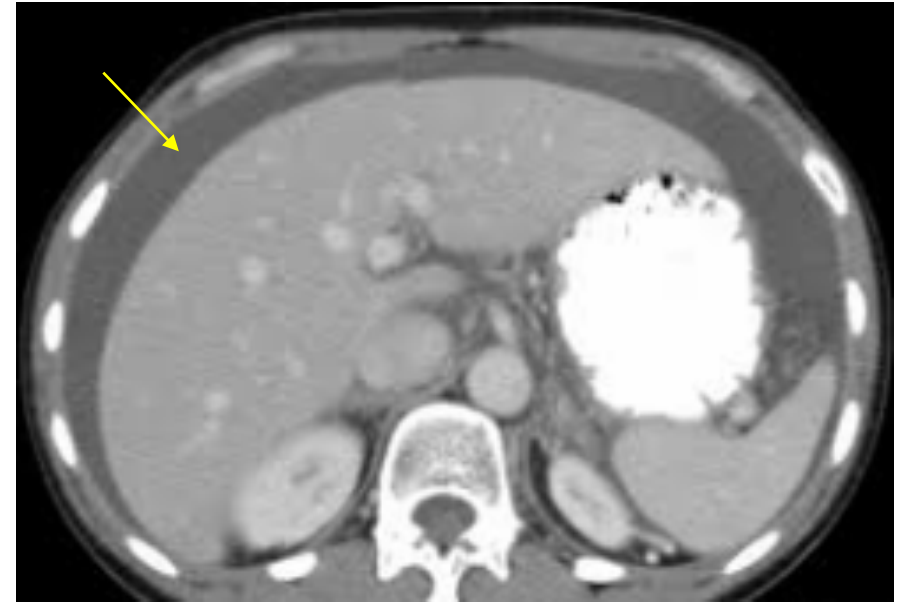


84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

This is a declarative statement.
LV Pump failure is excluded

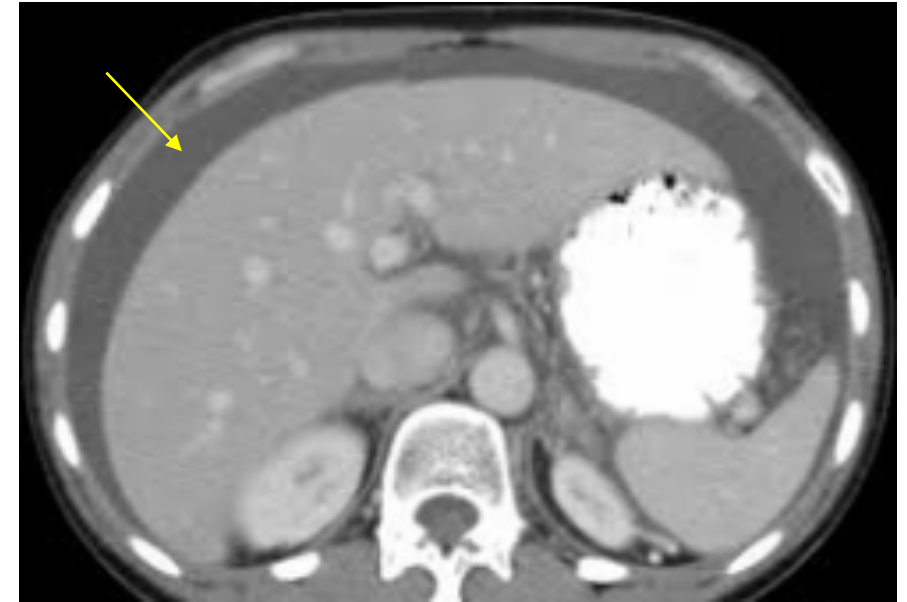
Heart:

1. Ischemia
- ~~2. LV Pump failure~~
3. Valve disease
4. Pericardium
5. Rhythm



84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.
Ext: 2-3+ edema.



84 y.o. gentleman with **progressive** weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: **negative orthopnea/PND**

PE: 110/60, **HR 64**, afebrile. **Lungs clear**,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; **RRR**.
No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.
Ext: 2-3+ edema.



Heart:

- ~~1. Ischemia~~
- ~~2. LV Pump failure~~
- ~~3. Valve disease~~
4. Pericardium
- ~~5. Rhythm~~

LV Systolic Pump Failure:

Rales
S3

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; **Abd: shifting dullness and bulging flanks.**
Ext: 2-3+ edema.



84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; **Abd: shifting dullness and bulging flanks.**
Ext: 2-3+ edema.

Pathognomonic feature of Ascites



84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; **Abd: shifting dullness and bulging flanks.**
Ext: 2-3+ edema.



Graphics Caveat:
Rarely required
Often misleading

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; **Abd: shifting dullness and bulging flanks.**
Ext: 2-3+ edema.



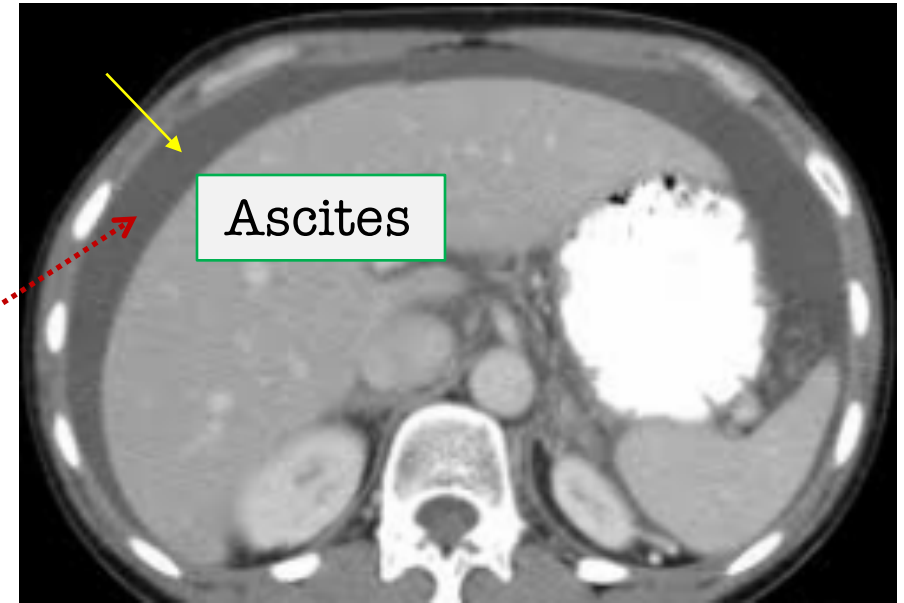
Graphics Caveat:
Rarely required
Often misleading

Important Information

Not so much

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; **Abd: shifting dullness and bulging flanks.**
Ext: 2-3+ edema.



Graphics Caveat:
Rarely required
Often misleading

Important Information

Not so much

When considering a graphic, do so in context of question stem

Work in this direction...



84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; **Abd: shifting dullness and bulging flanks.**
Ext: 2-3+ edema.



NOT in this direction...

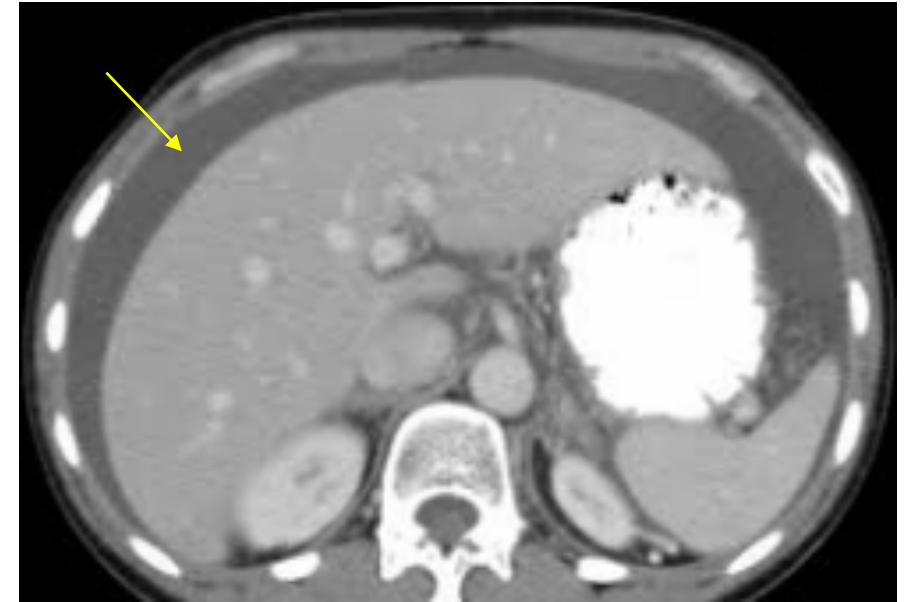
84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,

Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.

No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.

Ext: 2-3+ edema.



84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

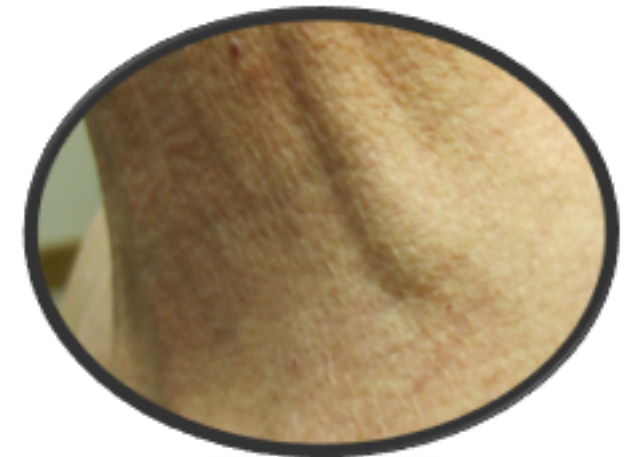
PE: 110/60, HR 64, afebrile. Lungs clear,

Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.

No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.

Ext: 2-3+ edema.

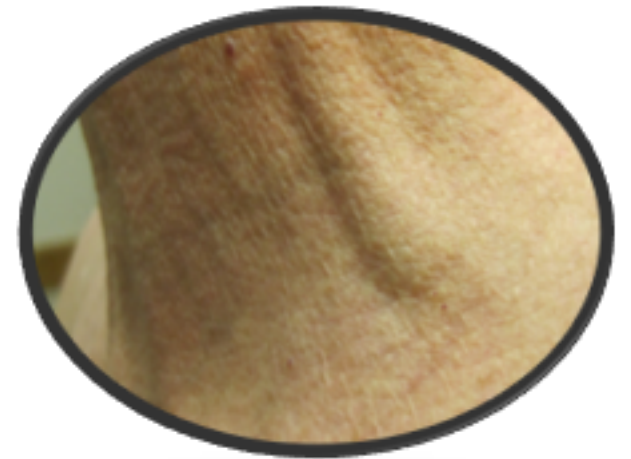
Kussmaul's Sign*



84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.
Ext: 2-3+ edema.

Kussmaul's Sign*



Cardiology: Diseases of the Pericardium for USMLE Step One

Part I: Overview and Acute Pericarditis

Part II: Tamponade and Constrictive Pericarditis

Howard J. Sachs, MD
www.12DaysinMarch.com

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,

Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.

No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.

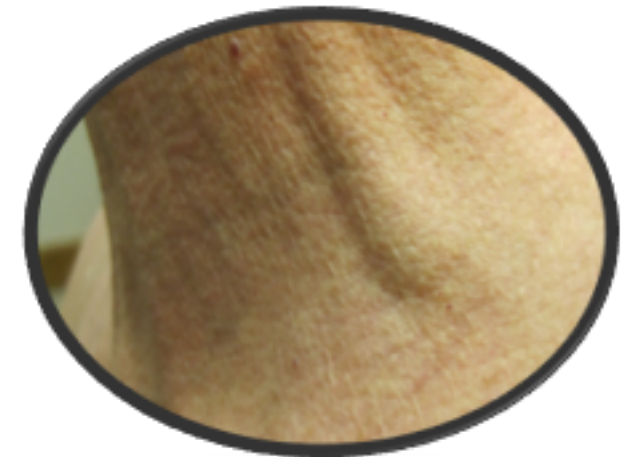
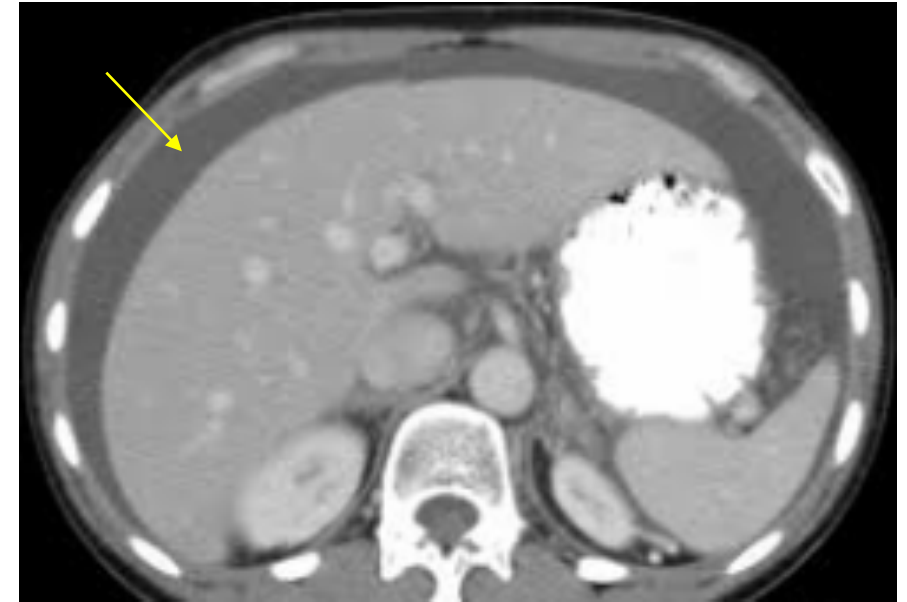
Ext: 2-3+ edema.

Kussmaul's Sign*

A **paradoxical** rise in JVP during inspiration

Why paradoxical?

The JVP normally decreases during inspiration
due to drop in intrathoracic pressure.

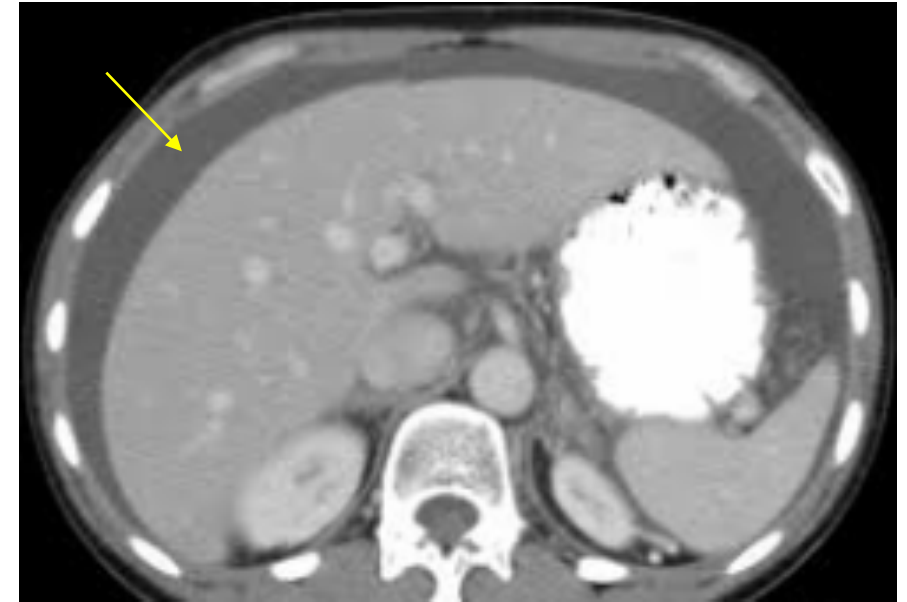


84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.
Ext: 2-3+ edema.

Data: **CT shown with abnormal finding highlighted at arrow.**
BUN/Cr 97/4.27

Which of the following is the most likely diagnosis?



- A. Cirrhosis - causes ascites but not Kussmaul's (or any JVD)
- B. Cor Pulmonale
- C. Constrictive Pericarditis
- D. Congestive Heart Failure
- E. Chronic Kidney Disease
- F. Cardiac Tamponade

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.
Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which of the following is the most likely diagnosis?



- A. Cirrhosis - causes ascites but not Kussmaul's (or any JVD)
- B. Cor Pulmonale
- C. Constrictive Pericarditis
- D. Congestive Heart Failure
- E. Chronic Kidney Disease
- F. Cardiac Tamponade

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

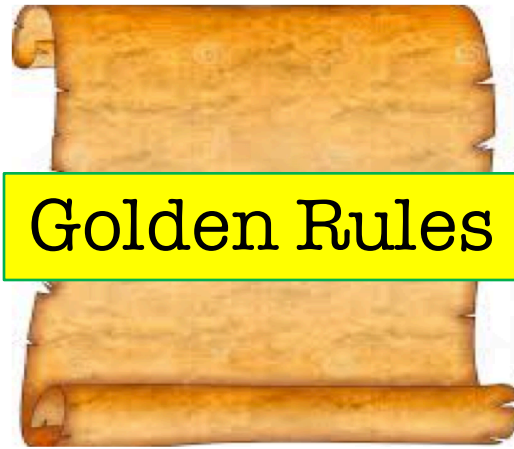
PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.
Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which of the following is the most likely diagnosis?

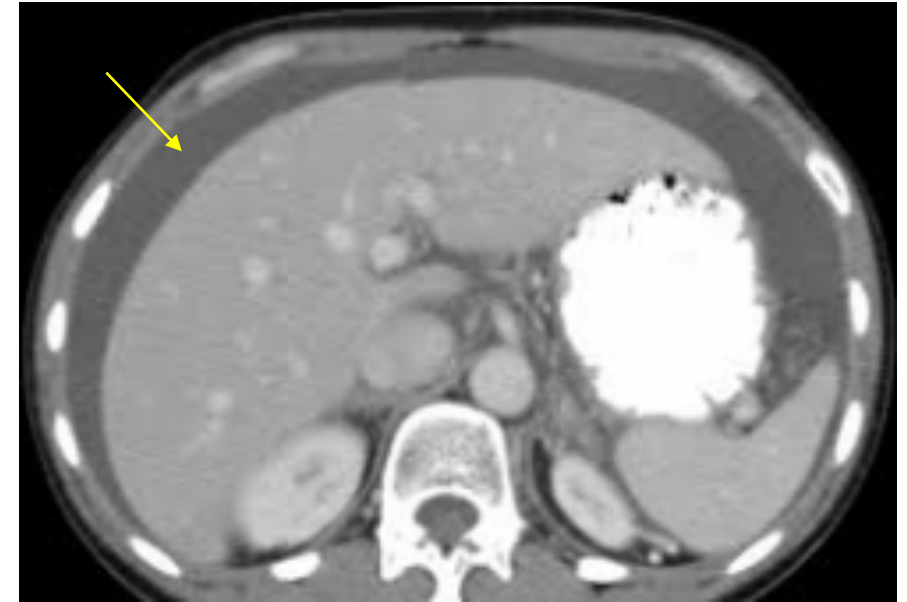


- A. ~~Cirrhosis~~ - causes ascites but not Kussmaul's (or any JVD)
- B. Cor Pulmonale - no Kussmaul's; no lung disease or demographic to suggest pulm HTN
- C. Constrictive Pericarditis
- D. Congestive Heart Failure
- E. Chronic Kidney Disease
- F. Cardiac Tamponade



Golden Rules

Pay attention to what the stem says.
Pay attention to what the stem does **NOT** say.



- A. ~~Cirrhosis~~ - causes ascites but not Kussmaul's (or any JVD)
- B. Cor Pulmonale - no Kussmaul's; **no lung disease or demographic to suggest pulm HTN**
- C. Constrictive Pericarditis
- D. Congestive Heart Failure
- E. Chronic Kidney Disease
- F. Cardiac Tamponade

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.
Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which of the following is the most likely diagnosis?



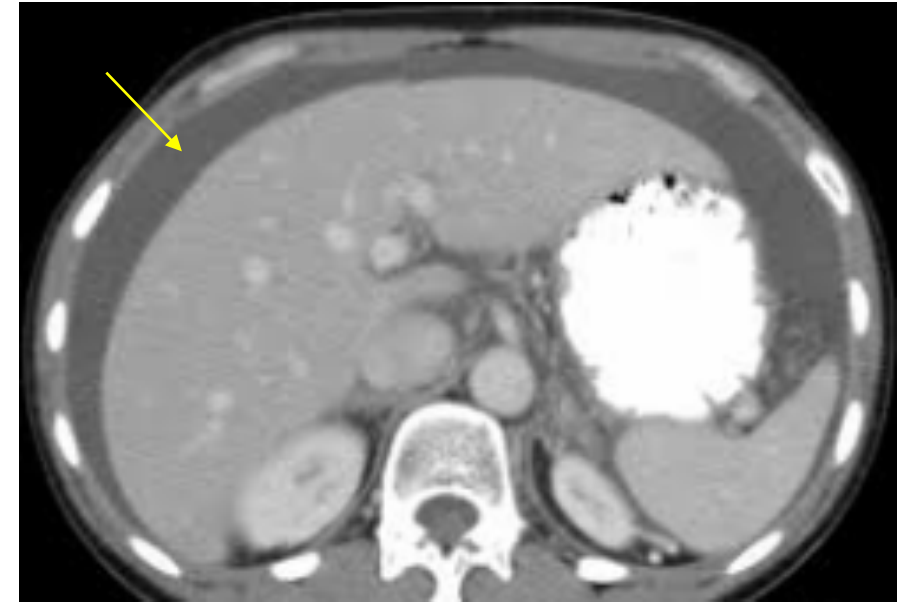
- A. ~~Cirrhosis~~ - causes ascites but not Kussmaul's (or any JVD)
- B. ~~Cor Pulmonale~~ - no Kussmaul's; no lung disease or demographic to suggest pulm HTN
- C. Constrictive Pericarditis
- D. Congestive Heart Failure - ROS negative; **no S3; lungs are clear**
- E. Chronic Kidney Disease
- F. Cardiac Tamponade

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.
Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which of the following is the most likely diagnosis?



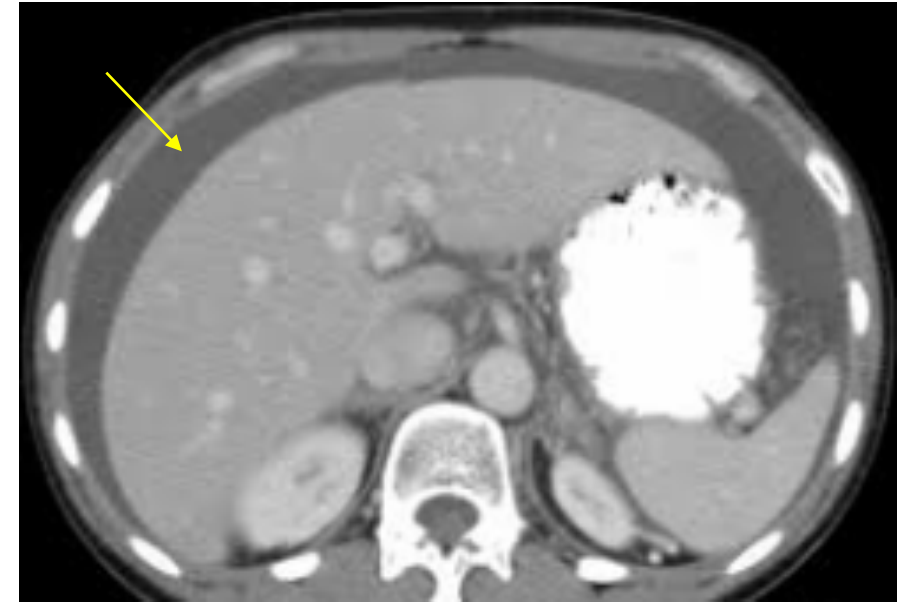
- ~~A. Cirrhosis~~ - causes ascites but not Kussmaul's (or any JVD)
- ~~B. Cor Pulmonale~~ - no Kussmaul's; no lung disease or demographic to suggest pulm HTN
- C. Constrictive Pericarditis
- ~~D. Congestive Heart Failure~~ - ROS negative; no S3; lungs are clear
- E. Chronic Kidney Disease - present but does not cause Kussmaul's
- F. Cardiac Tamponade

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.
Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which of the following is the most likely diagnosis?



- ~~A. Cirrhosis~~ - causes ascites but not Kussmaul's (or any JVD)
- ~~B. Cor Pulmonale~~ - no Kussmaul's; no lung disease or demographic to suggest pulm HTN
- C. Constrictive Pericarditis
- ~~D. Congestive Heart Failure~~ - ROS negative; no S3; lungs are clear
- ~~E. Chronic Kidney Disease~~ - present but does not cause Kussmaul's
- F. Cardiac Tamponade**

84 y.o. gentleman with **progressive** weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: **110/60, HR 64**, afebrile. Lungs clear,
Cor: **JVP 12 cm H₂O**, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.
Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which of the following is the most likely diagnosis?



Tamponade:

(+) JVD

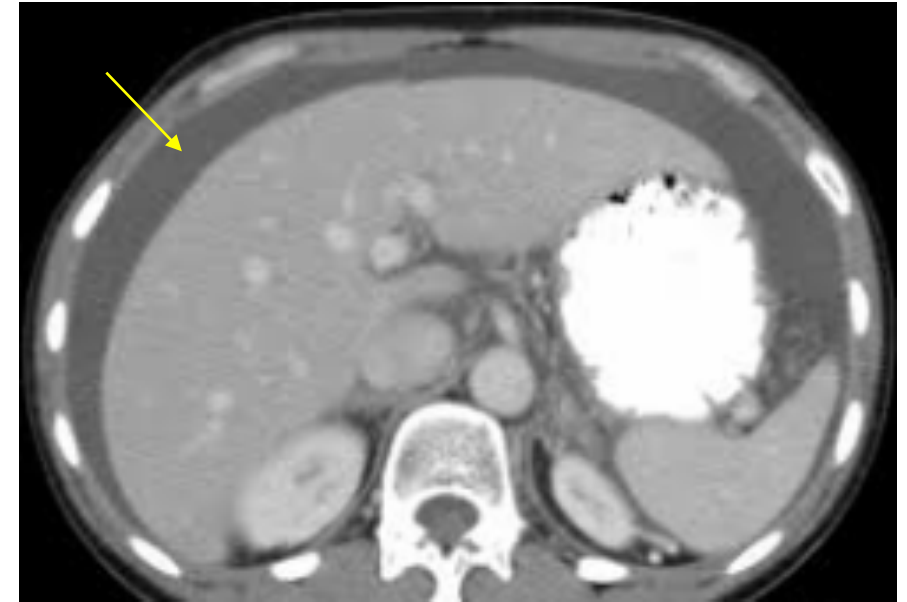
(+) Pulsus paradoxus

84 y.o. gentleman with **progressive** weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: **110/60, HR 64**, afebrile. Lungs clear,
Cor: **JVP 12 cm H₂O**, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.
Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which of the following is the most likely diagnosis?



Tamponade:

(+) JVD

(+) Pulsus paradoxus

USMLE usually presents tamponade as an acute catastrophic event such as LV rupture or in setting of Coxsackie infection

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal
No murmur, S3 or S4; Abd: shifting dullness and bulging flanks
Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow
BUN/Cr 97/4.27

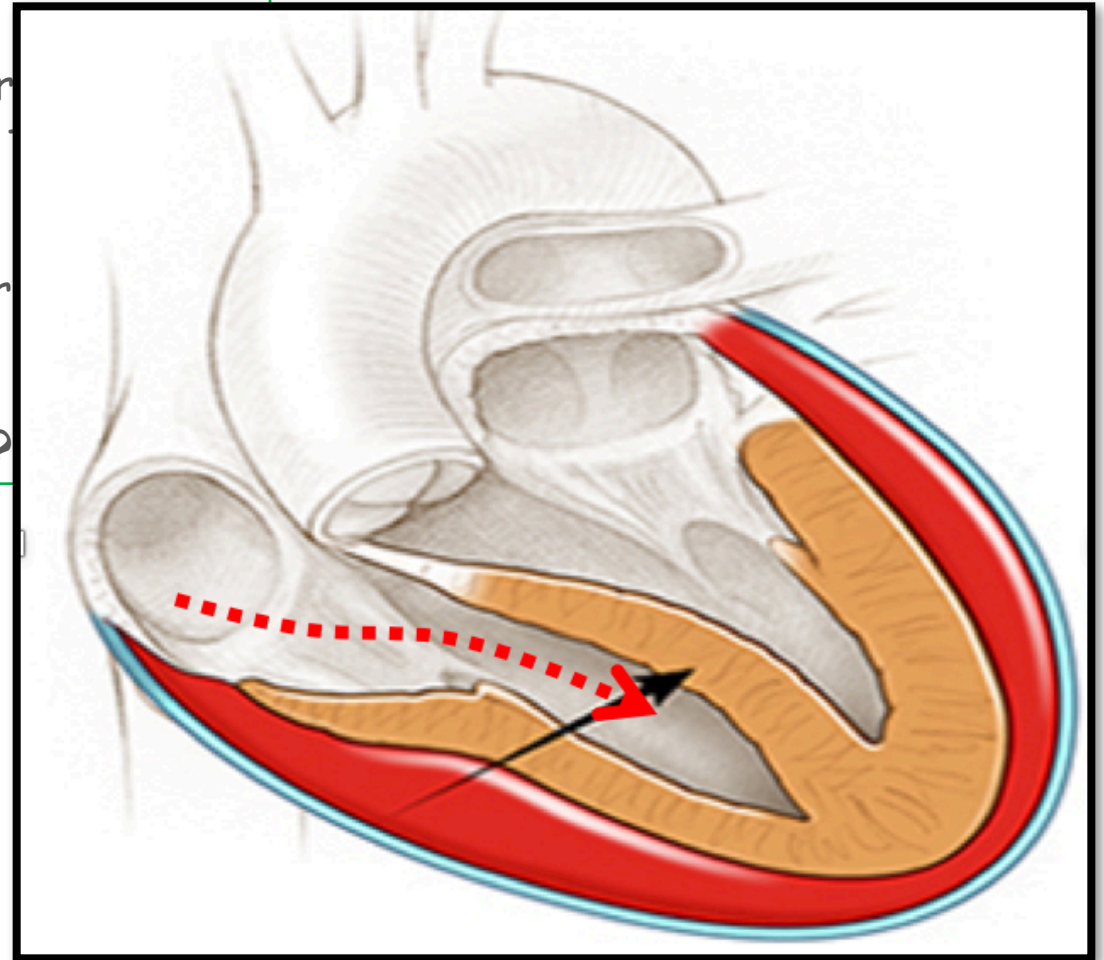
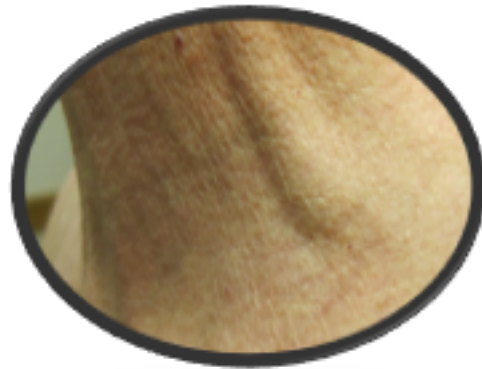
Which of the following is the most likely diagnosis?

Tamponade:

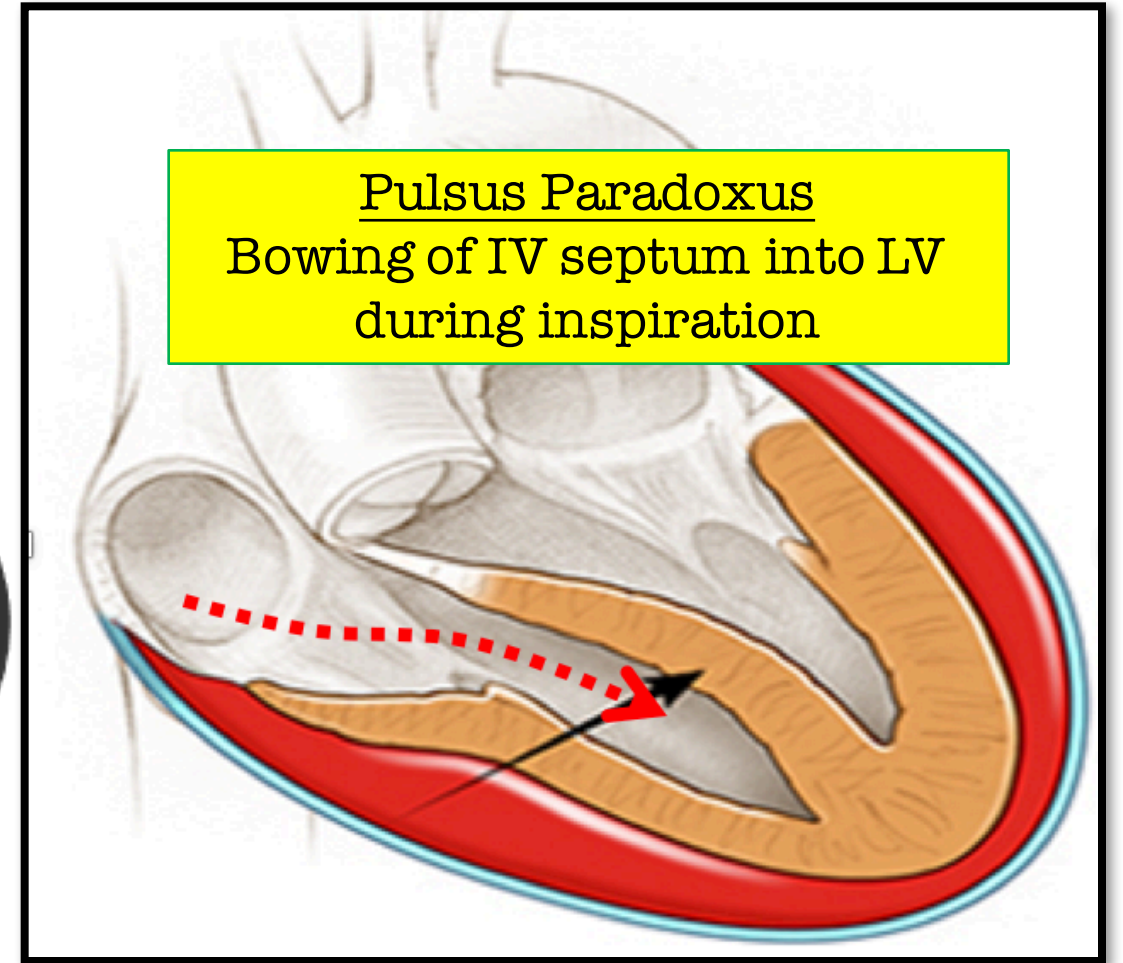
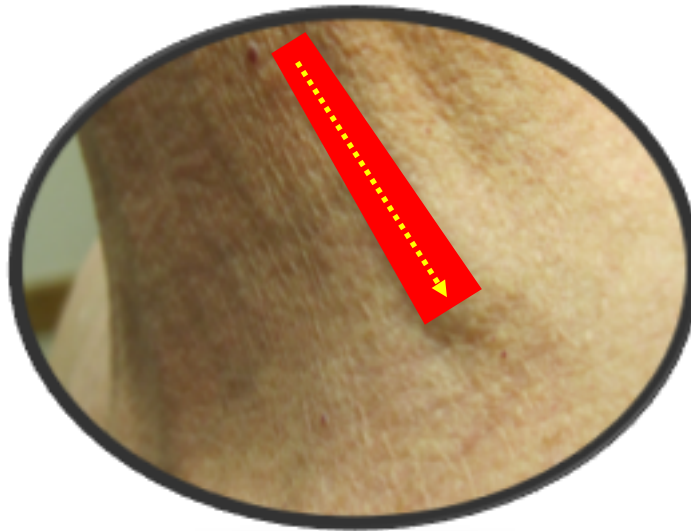
(+) JVD

(+) Pulsus paradoxus

(-) Kussmaul's



Tamponade:
(+) JVD
(+) Pulsus paradoxus
(-) Kussmaul's

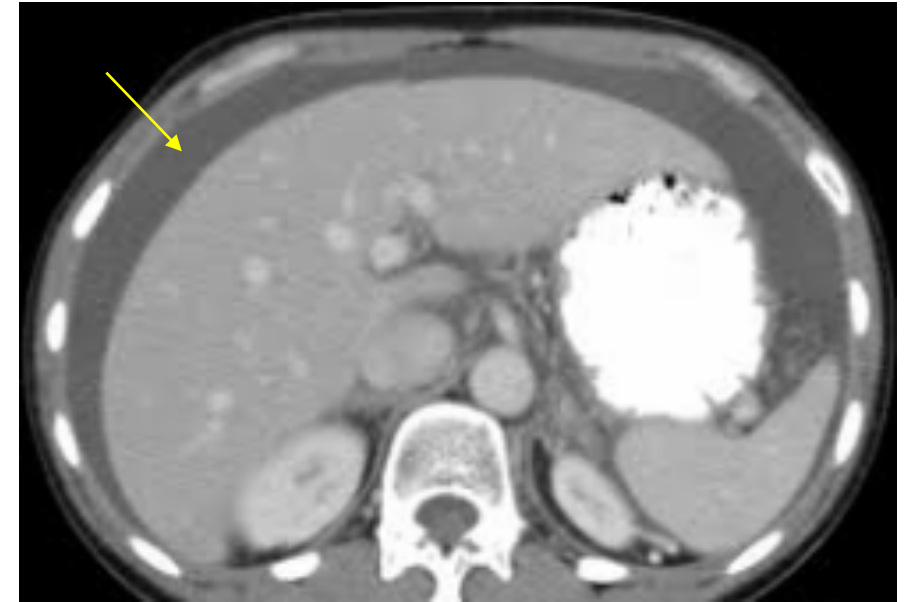


84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.
Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which of the following is the most likely diagnosis?



- ~~A. Cirrhosis~~ - causes ascites but not Kussmaul's (or any JVD)
- ~~B. Cor Pulmonale~~ - no Kussmaul's; no lung disease or demographic to suggest pulm HTN
- C. Constrictive Pericarditis**
- ~~D. Congestive Heart Failure~~ - ROS negative; no S3; lungs are clear
- ~~E. Chronic Kidney Disease~~ - present but does not cause Kussmaul's
- F. Cardiac Tamponade - excluded by lack of pulsus paradoxus and hemodynamic stability

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.
Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which of the following is the most likely diagnosis?



Constrictive Pericarditis:

Kussmaul's sign is classic

Predisposing demographic: postcardiotomy

Congestive hepatopathy: centrilobular hemorrhagic necrosis

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.
Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which of the following is the most likely diagnosis?

Constrictive Pericarditis:

Kussmaul's sign is classic

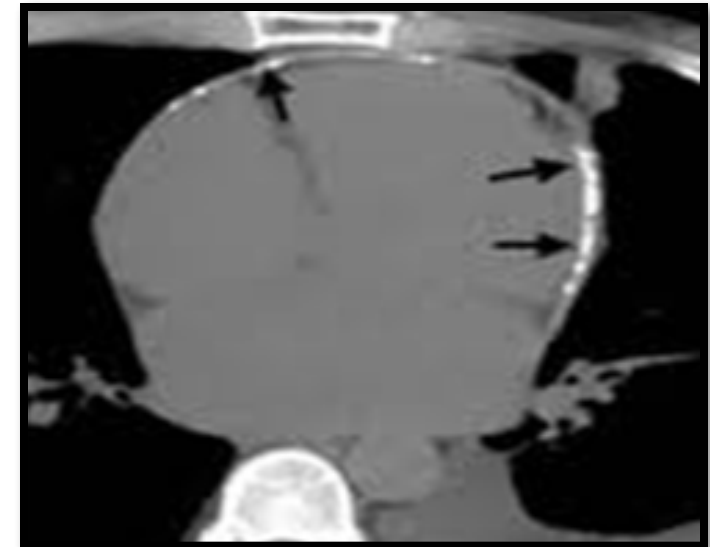
Predisposing demographic: postcardiotomy

Congestive hepatopathy: centrilobular hemorrhagic necrosis

Other signs (not described):

Pericardial calcification

Pericardial knock

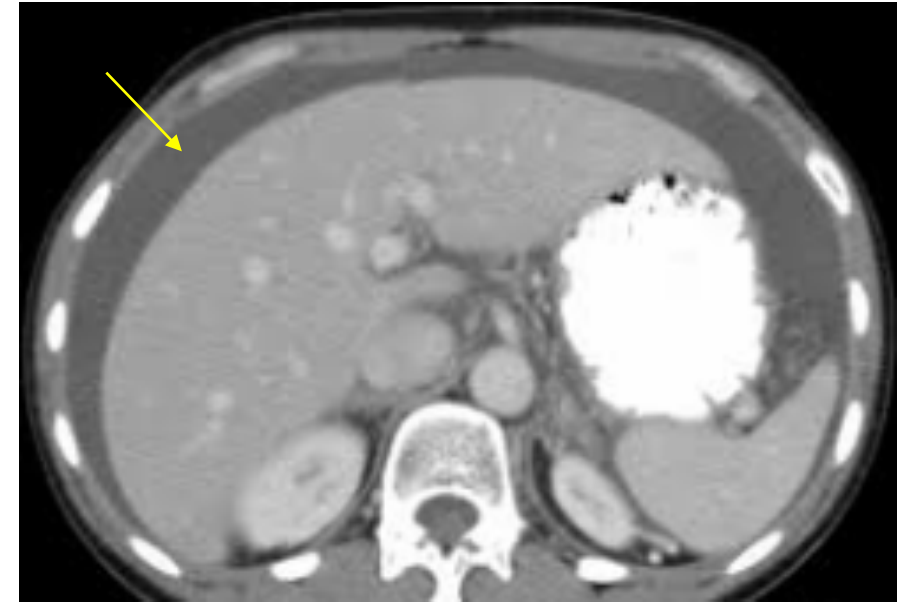


84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Lungs clear,
Cor: JVP 12 cm H₂O, increasing during inspiration, S1, S2 normal; RRR.
No murmur, S3 or S4; Abd: shifting dullness and bulging flanks.
Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which of the following is the most likely diagnosis?



- ✓
- A. Cirrhosis
 - B. Cor Pulmonale
 - C. Constrictive Pericarditis
 - D. Congestive Heart Failure
 - E. Chronic Kidney Disease
 - F. Cardiac Tamponade

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. **Neck: no JVD**; Lungs clear, Cor: S1, S2 normal; RRR. No murmur/rub/gallop
Abd: **shifting dullness and bulging** flanks. Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which test would be most useful in determining the etiology of his expanding abdominal girth?

- A. Calorie count
- B. Echocardiography
- C. Hepatic ultrasound with doppler and paracentesis
- D. Chest CT scan
- E. Brain Natriuretic Peptide
- F. Alpha fetoprotein

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. **Neck: no JVD**; Lungs clear,
Cor: S1, S2 normal; RRR. No murmur/rub/gallop
Abd: **shifting dullness and bulging** flanks. Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which test would be most useful in determining the etiology of his expanding abdominal girth?

- ~~A. Calorie count~~
- ~~B. Echocardiography~~
- C. Hepatic ultrasound with doppler and paracentesis
- ~~D. Chest CT scan~~
- ~~E. Brain Natriuretic Peptide~~
- F. Alpha fetoprotein

Ascites with no JVD
EXCLUDES cardiac etiologies

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. **Neck: no JVD**; Lungs clear,
Cor: S1, S2 normal; RRR. No murmur/rub/gallop
Abd: **shifting dullness and bulging** flanks. Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which test would be most useful in determining the etiology of his expanding abdominal girth?


- ~~A. Calorie count~~
- ~~B. Echocardiography~~
- C. Hepatic ultrasound with doppler and paracentesis
- ~~D. Chest CT scan~~
- ~~E. Brain Natriuretic Peptide~~
- F. Alpha fetoprotein - can cause decompensation in patient w/ underlying liver disease/cirrhosis.

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. **Neck: no JVD**; Lungs clear, Cor: S1, S2 normal; RRR. No murmur/rub/gallop
Abd: **shifting dullness and bulging** flanks. Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which test would be most useful in determining the etiology of his expanding abdominal girth?

- 
- ~~A. Calorie count~~
 - ~~B. Echocardiography~~
 - C. Hepatic ultrasound with doppler and paracentesis**
 - ~~D. Chest CT scan~~
 - ~~E. Brain Natriuretic Peptide~~
 - ~~F. Alpha fetoprotein~~

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. **Neck: no JVD**; Lungs clear,
Cor: S1, S2 normal; RRR. No murmur/rub/gallop
Abd: **shifting dullness and bulging** flanks. Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which test would be most useful in determining the etiology of his expanding abdominal girth?

C. Hepatic ultrasound with doppler and paracentesis

Ultrasound with doppler:
Assess hepatic architecture
Assess portal circulation

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; CKD Stage V (GFR<15). ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. **Neck: no JVD**; Lungs clear,
Cor: S1, S2 normal; RRR. No murmur/rub/gallop
Abd: **shifting dullness and bulging** flanks. Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which test would be most useful in determining the etiology of his expanding abdominal girth?

C. Hepatic ultrasound with doppler and **paracentesis**

Ultrasound with doppler:
Assess hepatic architecture
Assess portal circulation

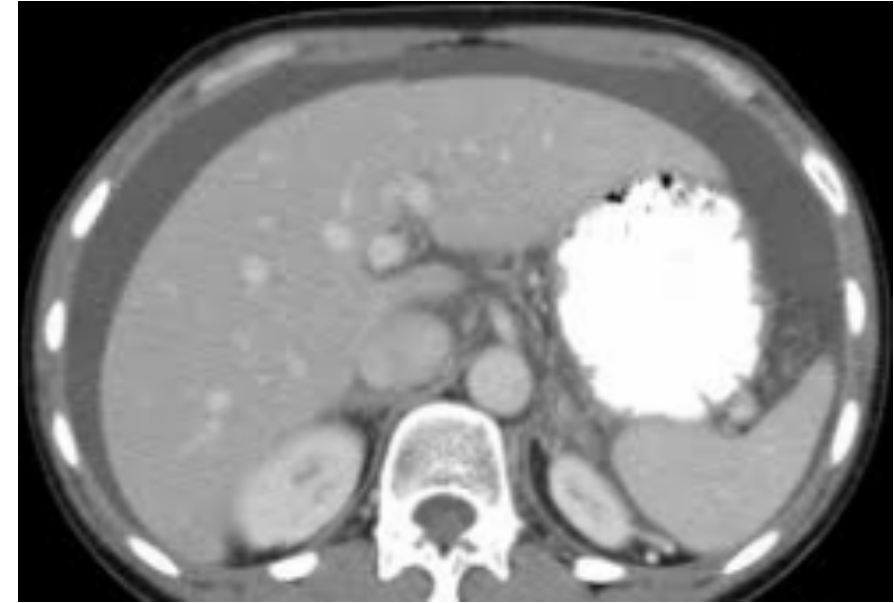
Paracentesis (diagnostic):
Infection
Cytology

84 y.o. gentleman with progressive weakness, SOB and increasing abdominal girth. PMH: CABG 15 yrs ago with ischemic cardiomyopathy; **CKD Stage V (GFR<15)**. ROS: negative orthopnea/PND

PE: 110/60, HR 64, afebrile. Neck: no JVD; Lungs clear, Cor: S1, S2 normal; RRR. No murmur/rub/gallop
Abd: shifting dullness and bulging flanks. Ext: 2-3+ edema.

Data: CT shown with abnormal finding highlighted at arrow.
BUN/Cr 97/4.27

Which test would be most useful in determining the etiology of his expanding abdominal girth?




C. Hepatic ultrasound with doppler and paracentesis



Conclusion:
Hepatic studies were negative

Final Diagnosis:
ESRD presenting with Ascites
SOB multifactorial (heart, renal)





Golden Rules

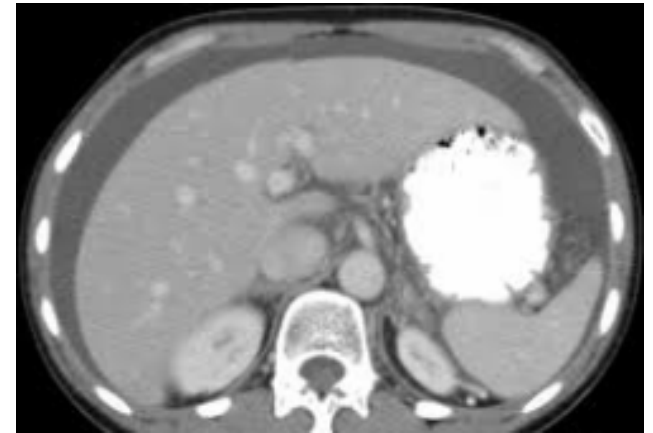
Pay attention to what the stem says.
Pay attention to what the stem does **NOT** say.



Work in this direction..



NOT in this direction...



The Year in Review Series: Case 1. Ascites
Case-based NBME review



Howard J. Sachs, MD
www.12DaysinMarch.com
E-mail: Howard@12daysinmarch.com