

# CARDIOLOGY REVIEW QUESTIONS

9:00 – 9:15 AM

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ACOI 2019 BOARD REVIEW COURSE

# Which is the correct order of importance in reducing myocardial oxygen consumption?

- a. Blood pressure, heart rate and LV volume
- b. Heart rate, LV size, blood pressure
- c. Antiplatelet agent, LV pressure, blood pressure
- d. Blood pressure, antiplatelet agent
- e. Heart rate, blood pressure, LV volume

e. Heart rate, blood pressure, LV volume

Patient presents with angina. Which of the following is found on physical exam?

- a. Third heart sound
- b. Fourth heart sound
- c. Increased BP and heart rate
- d. Mitral regurgitation
- e. All of the above

e. All of the above

Patient presents with strong angina history without diabetes and angiogram finding significant complex 3 vessel disease and syntax score  $>22$ .

- a. Patient has class I indication for CABG
- b. Patient has equal indication for PCI or CABG without LM or proximal LAD
- c. Patient should have global risk reduction and managed medically
- d. Patient has a class II A indication for PCI
- e. Patient has class II B for CABG

**a. Patient has class I indication for CABG**

# Patient presents with symptomatic CAD and is found to have LAD disease (to improve survival)

- a. Patient has class I indication for CABG
- b. Patient has equal indication for PCI or CABG without LM or proximal LAD both class I
- c. Patient should have global risk reduction and managed medically
- d. Patient has a class II A indication for PCI
- e. Patient has class II B for CABG



**e. Patient has class II B for CABG**

Patient presents from having sudden cardiac death with presumed ischemia mediated VT with high grade CAD. Which is best treatment to improve survival?

- a. He needs CABG as a class I B indication
- b. He requires PCI as class I A indication
- c. Global risk reduction to treat inducible ischemia
- d. Treat by symptoms

**a. He needs CABG as a class I B indication**

Patient presents with CAD and EF 40%. Which treatment improves survival with class I indication for revascularization?

- a. CABG is class III indication
- b. CABG is class II indication
- c. CABG is class I indication in patients with EF 35-50%
- d. CABG is class I if EF<35% without significant LM

**b. CABG is class II indication**

Patient has cardiac arrest. Nonischemic heart disease, no MI. What should be done?

- a. Patient needs further electrical monitoring with beta blocker treatment.
- b. Patient should have ICD implanted, a class I indication.
- c. Patient instructed to have further follow up with primary physician with global risk reduction
- d. Patient requires echocardiogram to further assess his need for ICD implant
- e. Patient needs no further treatment except for his ischemic heart disease

**b. Patient should have ICD implanted, a class I indication.**

Mr. Gomez is asymptomatic with neuromuscular disorder and ask if he needs an ICD. Your recommendation would be:

- a. He is not a candidate for ICD because he is asymptomatic.
- b. Mr. Gomez needs heart catheterization to evaluate his CAD status first before considering ICD.
- c. Patients with neuromuscular disorder, primary and secondary prevention, ICDs are recommended.
- d. Patient needs EP study and depending on results may need ICD.
- e. Patient would need to have documented complete heart block before further work up.



c. Patients with neuromuscular disorder, primary and secondary prevention, ICDs are recommended.

Miss Johnson is an asymptomatic 34 yo woman who presents for breast biopsy and EKG finds long QT interval  $>470$  ms. Which describes the best treatment option?

- a. Patient needs to be started on beta blocker and followed for symptoms
- b. Patient needs no further treatment since asymptomatic
- c. Patient is a candidate for biventricular pacemaker set at heart rate faster than her intrinsic rate.
- d. Patient is a candidate for ICD
- e. Patient needs ETT first to make further decisions

a. Patient needs to be started on beta blocker and followed for symptoms

# CARDIOLOGY REVIEW QUESTIONS

11:00 – 11:30 AM

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68 yo male with class II-III dyspnea, no syncope or chest pain has an echo which demonstrates a calcified and restricted aortic valve without significant aortic regurgitation but a mean aortic valve gradient of 27 mmHg. The estimated left ventricular ejection fraction is 25-30%. Does this patient have severe aortic valve stenosis?

- a. Yes, the left ventricular ejection fraction is severely impaired and thus the valve gradient, which is only 27 mmHg is misleading due to reduced stroke volume from the impaired left ventricular.
- b. No, the valve gradient is nowhere near 40 mmHg and regardless of the valve area the aortic stenosis is most likely not severe.
- c. Patient is a candidate for biventricular pacemaker set at heart rate faster than her intrinsic rate.

c. Patient is a candidate for biventricular pacemaker set at heart rate faster than her intrinsic rate.

45 yo female with history of moderate aortic regurgitation (documented by echo) and HTN was seen recently in the office. She is clinically stable and her BP is controlled. She has no other significant medical history. 1 week later her dentist's office calls you and requests recommendations regarding antibiotic prophylaxis prior to having a dental procedure performed. You recommend:

- a. No antibiotics necessary, based on most recent AHA guidelines.
- b. In light of relatively young age and clearly abnormal aortic valve on prior echo, she should have antibiotic prophylaxis.
- c. Not enough info to make recommendation.

a. No antibiotics necessary, based on most recent AHA guidelines.



Most common cause of death in patient's undergoing elective AAA repair is:

- a. Cardiovascular
- b. Pulmonary Embolus
- c. Hemorrhage
- d. Multi-organ failure

## a. Cardiovascular

A 76 yo male, diabetic, smoker is seen in the office with exertional bilateral leg discomfort after walking 1 block. He has a history of chronic low back pain and hyperlipidemia. You perform an exam including ABI's and they are 1.1 on the right and 0.9 on the left. You recommend to the patient:

- a. He most likely does not have significant PAD and should be evaluated for non-vascular causes of leg pain.
- b. He may have significant obstructive PAD despite the unremarkable ABI's and would recommend an exercise test with ABI's
- c. In light of his history, he most likely has significant PAD as the cause of his symptoms and you recommend aggressive risk factor modification.

b. He may have significant obstructive PAD despite the unremarkable ABI's and would recommend an exercise test with ABI's

Which of the following is not considered part of routine initial anti-thrombotic therapy for NSTEMI patients, at time of presentation to the ER?

- a. Aspirin
- b. Clopidigrel
- c. Heparin
- d. Abciximab (a IIb/IIIa inhibitor)

**d. Abciximab (a IIb/IIIa inhibitor)**

A 58 yo female with history of type II diabetes, smoker, remote history of NSTEMI and stenting of circumflex artery, presents to the ER with 24 hrs of intermittent chest pain. The initial EKG demonstrates ST depression in the inferior leads. Her symptoms resolve readily with conservative medical therapy and she is hemodynamically stable. A repeat EKG demonstrates resolution of ST changes and the patient feels well. Serial cardiac enzymes are mildly increased (troponinI = 0.03, 0.60, 0.90). The best approach to this patient is?

- a. Conservative, with hospital admission and continued medical therapy with anti-thrombotics, beta-blockers, statin, long acting nitrate and subsequent stress testing.
- b. Invasive approach, with recommendation for cardiac cath with possible PCI
- c. Consider aggressive anti-thrombotic therapy including lytic therapy with pre-discharge stress testing.
- d. Discharge to home on medications from ER if same-day stress test is normal.

**b. Invasive approach, with recommendation for cardiac cath with possible PCI**



# ENDOCRINOLOGY REVIEW QUESTIONS

2:30 – 3:00 PM

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A 65 year old male presents with recurrent calcium kidney stones. He is found to have a calcium level of 11.8 mg/dl. PTH level is mildly elevated. Serum creatinine is 1.4 mg/dl. 24 hour urine calcium excretion is elevated. Parathyroid Sestamibi scan is performed but does not reveal any abnormality. The most likely cause of the primary hyperparathyroidism is:

- a. MEN syndrome
- b. Parathyroid cancer
- c. Solitary benign parathyroid adenoma, but more than one adenoma is possible
- d. Tertiary hyperparathyroidism due to renal insufficiency
- e. Occult malignancy either metastatic to bone or producing PTH-related peptide

c. Solitary benign parathyroid adenoma, but more than one adenoma is possible

Treatment of the above patient with hypercalcemia might best include:

- a. Hydration; followed by monthly doses of zoledronic acid or pamidronate
- b. Glucocorticoids
- c. Stop all vitamin D supplementation
- d. Surgical neck exploration should be considered if: age under 50 years old; calcium  $1\text{ mg/dl}$  or more higher than the top normal range; worsening renal function; bone density with a T-score of  $-2.5$  or worse
- e. Furosemide

- d. Surgical neck exploration should be considered if: age under 50 years old; calcium  $\geq 1$  mg/dl or more higher than the top normal

A 74 year old Caucasian female had a bone density study (DXA) which revealed T-score of the right femoral neck of -2.8, left femoral neck of -2.9. The spine had degenerative changes and could not be interpreted. FRAX calculation revealed fracture risk of 10% ten year risk of hip fracture and 30% ten year risk of major osteoporotic fracture. She had a traumatic wrist fracture a few years ago. Family history is positive for a mother with a hip fracture. Management of this patient would best include:

- a. No treatment since her wrist fracture was traumatic
- b. No treatment since her FRAX risk is low
- c. Estrogen
- d. Denosumab (Prolia), or a bisphosphonate, or Forteo could be used interchangeably since they all are anti-resorptive agents
- e. Replete vitamin D if low and start an anti-resorptive or anabolic agent

- e. Replete vitamin D if low and start an anti-resorptive or anabolic agent

A 68 y/o Caucasian female has a routine vitamin D level of 18 (target range is at least 30). Typical regimens to try to replete vitamin D could include all except:

- a. Get out into the sunlight for 4 hours daily, 5 days a week, avoiding the use of sunscreen
- b. 2,000-4,000 IU vitamin D3 daily.
- c. 50,000 IU D2 every 2 weeks
- d. Increase intake of food that contains vitamin D



- a. **Get out into the sunlight for 4 hours daily, 5 days a week, avoiding the use of sunscreen**

A 50 y/o female presents with 10 pound weight gain in one year. BMI = 32. Thyroid is small without nodule. Heart is regular at 50 bpm and lungs are clear. Pseudomyotonia of the deep tendon reflexes is demonstrated on physical examination. Which of the following is mostly likely decreased?

- a. Potassium
- b. Sodium
- c. TSH
- d. Thyroid peroxidase anti-bodies
- e. CPK

## b. Sodium

A 44 y/o male presents with tachycardia and nervousness. Thyroid is tender to palpation. TSH  $< 0.07$  and Free T4 is elevated. The patient is on no medication. Nuclear thyroid scan shows a poorly visualized thyroid. 24 hour uptake is low. No iodine contamination. Which of the following is the suspected diagnosis?

- a. Thyroiditis
- b. Graves
- c. Toxic MNG
- d. Toxic nodule
- e. Cold nodule

## a. Thyroiditis

A 63 y/o female presents with dysphagia. Physical examination demonstrates a goiter, irregular to palpation. A nodule is identified by thyroid ultrasound. Which of the following would make the nodule more suspicious?

- a. Hyperechoic
- b. Low TSH
- c. High Free T4
- d. Microcalcification
- e. Solitary neoplasm

## d. Microcalcification

A 22 y/o female presents with a thyroid nodule. Thyroid aspiration biopsy is completed, and the result is suspicious. Thyroidectomy demonstrates malignancy. Which of the following is most likely to be present in the pathology report?

- a. Anaplastic
- b. Papillary
- c. Hurthle cell
- d. Medullary
- e. Lymphoma



**b. Papillary thyroid cancer**

A healthy but obese 55 year old African-American male has a fasting glucose of 150 mg/dl and an A1c of 7% at his yearly office visit. He is told he has type 2 diabetes mellitus. He is given a referral to see the dietitian and start diabetes education classes. Liver and kidney function tests are normal. He is given a prescription for a glucose monitor. The best next step is:

- a. MRI of the head and adrenals since he likely has Cushing syndrome.
- b. Institute metformin at this visit since his renal and hepatic function tests are normal
- c. Avoid exercise completely since he likely has undiagnosed heart disease
- d. Start a sulfonylurea or Actos as monotherapy at this visit
- e. Wait 3 months and if his A1c is still 7% or higher, start metformin

b. Institute metformin at this visit since his renal and hepatic function tests are normal

A 62 year old obese female with type 2 diabetes mellitus for 12 years is on a sulfonylurea alone. Metformin ER was stopped two years ago due to diarrhea at even a low dose. A1c is 10% but she has been having frequent hypoglycemia, even after reducing the dose of the sulfonylurea. She has significant lower extremity edema and recurrent episodes of congestive heart failure. The best answer is:

- a. Stop the sulfonylurea and change to a DPP-4 inhibitor since the risk of hypoglycemia is low on a DPP-4 inhibitor. Her A1c should normalize on a DPP-4 inhibitor alone.
- b. Pioglitazone is contra-indicated in her due to chronic congestive heart failure
- c. Add Lantus to the sulfonylurea
- d. Since she is likely insulin deficient, and the A1c is very high, and she has had diabetes for a long time, she is not a candidate for basal plus bolus insulin therapy
- e. She doesn't need to go to a dietitian or diabetes education classes since she is non-compliant

b. Pioglitazone is contra-indicated in her due to chronic congestive heart failure

## Regarding type I diabetes mellitus:

- a. Insulin pump therapy should be reserved for non-compliant patients or patients who have very high A1c's on conventional insulin therapy
- b. Antibodies that might help diagnosis this include GAD-65 antibody and insulin antibody. Other autoimmune diseases, such as celiac disease, hypothyroidism (Hashimoto's disease), rheumatoid arthritis, etc. are rare in patients with type I diabetes Mellitus
- c. DCCT (Diabetes Control and Complications Trial) was a major trial of patients in type 2 diabetes mellitus; UKPDS (United Kingdom Prospective Diabetes Study) was a major trial in type I diabetes
- d. Severe DKA (diabetic ketoacidosis) should generally be treated with intravenous Humalog drip or intravenous Novolog drip
- e. Many patients will benefit from MDI (multiple daily injections) including basal and bolus insulins, but must be taught how to use this regimen effectively

- e. Many patients will benefit from MDI (multiple daily injections) including basal and bolus insulins, but must be taught how to use this regimen effectively

In a patient with type I diabetes mellitus, a typical calculated daily dose of insulin would be:

- a. 0.5 units/kg day, given completely as basal insulin
- b. 0.5 units/kg/day given completely as meal-time rapid-acting insulin.
- c. 0.5 units/kg/day given as both basal insulin and meal-time rapid-acting insulin
- d. Insulin is not usually needed in a patient with type I diabetes mellitus



- c. 0.5 units/kg/day given as both basal insulin and meal-time rapid-acting insulin

# ENDOCRINOLOGY REVIEW QUESTIONS

4:45 – 5:00 PM

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A 22 y/o female presents with irregular menses and breast discharge. She is fatigued with a 5 pound weight gain in 3 months. Thyroid is small without nodule. Heart is regular and lungs are clear. Prolactin = 44, TSH = 32, BHcg = negative, FSH is low. Which of the following medications should be initiated first?

- A. Cabergoline
- B. Bromocriptine
- C. Thyroxine
- D. Triiodothyronine
- E. Estrogen

## c. Thyroxine

A 27 yo male patient presents with a female body habitus. Testicles are small. Absent secondary sex characteristics. Karyotype = 47 XXY. Which of the following is most likely to be seen with this clinical presentation?

- a. LH elevated
- b. Prolactin elevated
- c. Testosterone normal
- d. TSH elevated
- e. FSH low

a. LH elevated

A 22 y/o male presents to the ED with weakness and BP = 84/37. Sodium = 132, potassium = 5.9. Patient is lightheaded. ACTH is elevated at baseline. Then, Cosyntropin 250 mcg is given by IM injection. At 60 mins, serum cortisol = 10 mcg/dL. Which of the following etiologies is most likely for this presentation?

- a. Metastasis
- b. Tuberculosis
- c. Auto Immune
- d. Trauma
- e. Hemorrhage

c. Auto Immune primary adrenal insufficiency



A 34 y/o female presents with blood pressure = 180/101 on Lisinopril, Amlodipine and HCTZ. BMI = 23. Electrolytes, bun and creatinine are normal. No family history of hypertension. She reports diaphoresis. Carvedilol is added with a spike in blood pressure and tachycardia. Which of the following is most likely to be elevated as the etiology of the underlying diagnosis?

- a. Urine Metanephrines
- b. Serum Aldosterone
- c. Urine cortisol
- d. Serum ACTH
- e. DHEAS

## a. Urine Metanephrines

A normal weight 28 y/o female with secondary oligomenorrhea and galactorrhea presents to your office. Her prolactin level is elevated. MRI of the sella reveals a 5mm pituitary microadenoma. Prolactin level is elevated and you suspect this is a prolactinoma. Other pituitary hormones are normal. Which of the following statements regarding prolactinomas is/are true?

- a. She will never be able to become pregnant due to the adenoma
- b. Cabergoline or bromocriptine would likely be effective choices to lower the prolactin level and cause the prolactinoma to decrease in size
- c. MRI should be obtained yearly to follow the size, even if the prolactin level is suppressed with cabergoline
- d. Galactorrhea and oligomenorrhea will likely not improve with treatment
- e. Prolactinomas occur only in females

b. Cabergoline or bromocriptine would likely be effective choices to lower the prolactin level and cause the prolactinoma to decrease in size

A patient presents to the hospital with head trauma. He has an elevated sodium level and a large volume of dilute urine. He is found to have diabetes insipidus. Which is most true:

- a. This might represent partial or complete central diabetes insipidus
- b. DDAVP (desmopressin) should be started immediately even if sodium level is low
- c. Fluid restriction should be initiated
- d. DDAVP (desmopressin) will work as well if this is nephrogenic or central diabetes insipidus
- e. MRI of the head with attention to the pituitary does not have to be obtained, since it is obvious that head trauma caused the diabetes insipidus

- a. This might represent partial or complete central diabetes insipidus

A patient with a large non-functioning pituitary macroadenoma is found to have pan-hypopituitarism. He has had orthostasis, nausea, and weight loss for 8-12 months. Which of these would be most consistent with this?

- a. bilateral central visual field defects
- b. hypergonadotropic hypogonadism (i.e.: high LH and low testosterone)
- c. Striae and supraclavicular fat pads
- d. Normal ACTH stimulation test
- e. Low or inappropriately normal TSH and low free T4

e. Low or inappropriately normal TSH  
and low free T4



A 68 y/o Caucasian male develops acute worsening of his long-standing type 2 diabetes mellitus. Which is least likely to cause this:

- a. Cushing's disease or syndrome
- b. Acute infection
- c. Acute cardiac disease flare up
- d. Acute adrenal insufficiency

d. Acute adrenal insufficiency

# GASTROENTEROLOGY REVIEW QUESTIONS

3:00 – 3:15 PM

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32 y/o male presents with burning sensation in chest following most large meals for 2-3 months. He denies dysphagia, weight change, or bleeding. Which of the following studies has the highest sensitivity for the initial diagnosis of GERD with typical symptoms?

- a. Barium Swallow
- b. Empiric Omeprazole
- c. Wireless pH Monitor
- d. EGD

## b. Empiric Omeprazole

What is the single most informative study in patients with medically refractory GERD?

- a. EGD
- b. pH Monitor
- c. Barium Swallow
- d. CT scan of the chest

**b. pH Monitor**

A 52 y/o female who has GERD for the past 10 yrs, requiring standard PPI daily, has been inquiring about lifestyle modifications. Which of the following changes have been shown to improve gastroesophageal reflux disease?

- a. Smoking cessation
- b. Discontinuation of carbonated beverages
- c. Elevation of the head of the bed
- d. Avoid chocolate consumption



**b. Elevation of the head of the bed**

A 54 y/o mal with long history of GERD symptoms underwent an EGD to exclude Barrett's Esophagus. A 7cm salmon colored tongue extending from the esophagogastric junction was noted. Multiple biopsies revealed intestinal metaplasia with low-grade dysplasia. What should be the next step in this patient's management?

- a. Radio-frequency ablation
- b. Change treatment to a stronger PPI
- c. Have an expert GI pathologist review the biopsies
- d. Initiate more intense surveillance

**b. Have an expert GI pathologist review the biopsies**

A 36 y/o female presents with an 8 week history of recurrent watery, non-bloody diarrhea. Routine lab, endoscopic, and infectious evaluation thus far have not revealed a diagnosis. Which of the following suggest a secretory diarrheal etiology?

- a. Stool osmolality of  $<290$  mOsm/kg
- b. Stool osmolality of  $>290$  mOsm/kg
- c. Stool osmotic gap of  $< 50$  mOsm/kg
- d. Stool osmotic gap of  $>125$  mOsm/kg

c. Stool osmotic gap of  $< 50$  mOsm/kg

A 34 y/o woman presents with an 8 month history of bloating & abdominal pain relieved after BM. She tends toward constipation. She has a history of dysmenorrhea & a sister with dermatitis herpetiformis. She denies travel, ETOH use, or weight loss. Labs show mild Iron Deficiency Anemia and negative Tissue Transglutaminase Ab. What is the next best step in evaluation?

- a. Start Dicyclomine
- b. Diagnostic laparoscopy
- c. Small bowel biopsies
- d. Anti-gliadin Ab

## c. Small bowel biopsies

58 y/o male presents with diarrhea. His evaluation is positive for Tissues Transglutaminase Ab. He underwent EGD with small bowel biopsy which was consistent with celiac disease. Colonoscopy was normal. Labs: Hgb 11 (MCV 72), Ferritin 12, Alk Phos 2-fold elevation, Normal AST/ALT/ Bilirubin/ GGT. Fasting glucose 104. What additional testing would you recommend?

- a. Liver biopsy
- b. MRCP
- c. Bone marrow biopsy
- d. 25-hydroxy vitamin D



d. 25-hydroxy vitamin D

52 y/o recently traveled to Puerto Rico for 3 months. He developed fatigue, malaise, and abdominal cramps 1 week after returning followed by diarrhea and dyspepsia. Stools are “oatmeal-like”. Labs: Hgb: 11.3 (MCV103). Stool studies are negative for Enteric Pathogens. Enteroscopy is performed. What is the most likely diagnosis?

- a. Celiac Sprue
- b. Giardia
- c. Tropical Sprue
- d. Lactase Deficiency

c. Tropical Sprue

Which of the below answers is true regarding the difference between Crohn's disease and ulcerative colitis?

- a. One is easy to treat and one is not.
- b. One can effect the entire G.I. tract and one is confined to the colon.
- c. One is found in young people and the other in people over 65.
- d. Inflammation is usually more severe in Crohn's disease than ulcerative colitis

b. One can effect the entire G.I. tract and one is confined to the colon.

# Which of the following is true regarding panulcerative colitis?

- a. The risk of colon cancer increases with increasing duration of the disease.
- b. Corticosteroids are usually ineffective in treating it.
- c. Oral and enema formulations of mesalamine should never be used together.
- d. One goal of treatment is to wean the biologic treatment as soon as possible.

a. The risk of colon cancer increases with increasing duration of the disease.

Which of the below answers is true regarding the most common causes of lower G.I. bleeding?

- a. Colon cancer.
- b. Ischemic disease of the colon.
- c. G.I. infections
- d. Diverticulosis



## d. Diverticulosis

Lower G.I. bleeding from arterio-venous malformations (AVM's) is more prevalent in which group?

- a. Young adults.
- b. Hospitalized patients.
- c. The elderly
- d. Patients with coronary artery disease

c. The elderly

Gastroparesis is best diagnosed by history, upper endoscopy and which of the following?

- a. CT of the abdomen.
- b. Solid phase gastric emptying study.
- c. Upper G.I. barium swallow.
- d. Esophageal manometry study.

**b. Solid phase gastric emptying study.**

Peptic ulcer disease can be caused by all but which of the following?

- a. a bad diet
- b. Helicobacter Pylori.
- c. Nonsteroidal anti-inflammatory medications.
- d. Smoking.

a. a bad diet.

Atrophic gastritis can eventually lead to which type of cancer?

- a. Lymphoma
- b. Squamous cell cancer.
- c. adenocarcinoma.
- d. Carcinoid tumors.



## d. Carcinoid tumors

# GASTROENTEROLOGY REVIEW QUESTIONS

5:30 – 5:45 PM

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Basic treatment for almost all cases of acute pancreatitis includes which of the following?

- a. Fluids and antibiotics
- b. Pain control and antibiotics.
- c. Pain control and fluids.
- d. NPO and antibiotics.

c. Pain control and fluids.

All but which is a potential complication of acute pancreatitis?

- a. Ruptured viscus
- b. Abscess formation.
- c. Necrotic pancreatic tissue.
- d. Death.

a. Ruptured viscus

The reason cancer of the esophagus metastasizes so quickly is because of which?

- a. The rich blood supply of the esophagus
- b. The esophagus has no serosa.
- c. Proximity of the esophagus to lymph nodes, lung and other organs.
- d. Esophageal motility promotes movement of malignant cells.

**b. The esophagus has no serosa**



Which of the following is a risk factor for adenocarcinoma of the pancreas?

- a. Heavy coffee ingestion
- b. Foods high in nitrates.
- c. Being a male over 60 years of age.
- d. Females between the ages of 50 and 60.

c. Being a male over 60 years of age

Gastric cancer most commonly presents as which of the following?

- a. Peptic ulcer disease.
- b. Cholelithiasis.
- c. Bowel obstruction.
- d. Ruptured viscus.

## a. Peptic ulcer disease

The patient with colon cancer below that has the most genetic involvement with their disease is which?

- a. The patient with right sided disease
- b. The patient whose great aunt also has colon cancer.
- c. The patient with a first degree relative age 89 who has colon cancer.
- d. The patient who has Familial adenomatous polyposis.

d. The patient who has Familial adenomatous polyposis.

56 y/o obese female presents for gastric bypass surgery. She has failed multiple diets and medications. She doesn't have psychiatric issues other than depression due to condition. She has osteoarthritis of the hips and knees, & heartburn after large meals. PE: ht 65", wt 230 lb BMI 38.3 kg/m<sup>2</sup>, BP 150/100 Abd obese with palpable liver edge Labs: CBC normal, HgA1c 6.9, triglycerides 250 mg/dL, AST 65, Alk Phos 140 US hepatomegaly and fatty changes What criteria makes her eligible for bariatric surgery?

- a. Her BMI alone
- b. Obesity related joint dz, with reduced mobility & quality of life
- c. Her BMI together with features of metabolic syndrome
- d. Probable obesity related GERD and liver disease

c. Her BMI together with features of metabolic syndrome



Patient in question 1 is now 6 months post gastric bypass and has lost a significant amount of weight, but has been found to have significant normocytic anemia with low levels of both serum B12 and Iron. What is the most likely mechanism for the development of these deficiencies?

- a. Anastomotic ulcer with blood loss
- b. Post-op dietary restrictions
- c. Small intestinal bacterial overgrowth
- d. Mechanical bypass of the gastroduodenal segment

d. Mechanical bypass of the gastroduodenal segment

72 y/o female presented to the ER due to acute onset of severe abdominal pain and bloating. She was found to have a perforated gastric ulcer and underwent a gastrectomy. Upon returning home she noted postprandial N/V/D with diaphoresis, palpitations, and flushing. What is the most likely etiology?

- a. Side effect of anesthesia
- b. Dumping syndrome
- c. Food allergy
- d. Small intestinal bacterial overgrowth

## b. Dumping syndrome

57 y/o male i admitted with acute cholecystitis due to cholelithiasis and undergoes an uneventful laparoscopic cholecystectomy. He is discharged the next day but returns to the ER 2 days later due to abdominal pain, distension, and fever. Abdominal CT is only positive for moderate ascites. Paracentesis reveals 50 PMNs and bilious fluid. What is the most likely diagnosis?

- a. Cirrhosis of the liver
- b. Secondary bacterial peritonitis
- c. Bile leak
- d. Retained common bile duct stone

**c. Bile leak**

21 y/o presents to the ER with abdominal pain, fatigue, and loss of appetite. He admits to IV heroin use and drinks 2-3 beers/ day. He has mild scleral icterus, tender hepatomegaly, & antecubital needle tracks. Labs: T. Bili 5.6 mg/dL, AST & ALT 950 & 1280, Alk Phos 115, Albumin 3.4 HBsAg-, HAV IgM-, HBsAb+, HCV Ab-, HBcIgM- Which labs is most likely to make a diagnosis?

- a. AMA & Anti-Smooth muscle Ab
- b. HCV RNA
- c. HBc IgG
- d. HAV total

**b. HCV RNA**



19 y/o colleg student presents with 8 days of N/V/D and fatigue. She recently returned from a 2 week mission trip to Haiti. PE: low grade fever, tender hepatomegaly, mild scleral icterus. Labs: T.Bili 4.9, AST 1200, ALT 1980, Alk Phos 99, INR 0.9 Which of the following labs is most likely to reveal the diagnosis?

- a. HAV IgM
- b. HAV total
- c. CMV stool PCR
- d. HBsAb

b. HAV IgM

46 y/o asymptomatic male has a brother with hemochromatosis. He drinks 2 beers per day PE: Normal Labs: Iron 180 ug/dL, Transferrin saturation 88%, Ferritin 1200 ug/L, CBC normal, AST 52, Abd US normal HFE gene test +C282Y/C282Y mutation. The most appropriate next step would be:

- a. Liver biopsy
- b. Therapeutic Phlebotomy
- c. Stop ETOH and repeat iron studies in 1 year
- d. MRI of the liver

a. Liver biopsy

# GENERAL MEDICINE REVIEW QUESTIONS

9:00 – 9:15 PM

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ACOI 2019 BOARD REVIEW COURSE

Which of the following diets should be prescribed to a patient with Parkinson disease?

- a. Low protein
- b. mediterranean
- c. Paleolithic (paleo)
- d. Atkins
- e. Low-fat dairy

a. Low protein

Which of the following diets would be most helpful to a patient with gout?

- a. Low protein
- b. mediterranean
- c. Paleolithic (paleo)
- d. Atkins
- e. Low-fat dairy



e. Low-fat dairy

Infections with *Burkholderia cepacia* are typically associated with which of the following inherited disorders?

- a. Cystic fibrosis
- b. hemochromatosis
- c. Sickle cell anemia
- d. Wilson disease
- e. G6PD deficiency

## a. Cystic fibrosis

Mutations of the *ATP7B* gene is characteristic of which of the following?

- a. Cystic fibrosis
- b. hemochromatosis
- c. Sickle cell anemia
- d. Wilson disease
- e. G6PD deficiency

e. G6PD deficiency

50 yo patient presents with numbness of the first three fingers of the right hand. Which of the following findings on physical exam are supportive of carpal tunnel syndrome?

- a. reproduction of symptoms with gentle tapping at the carpal tunnel
- b. dropped biceps reflex on the same side as the numbness in the hand
- c. weakness of grip strength
- d. sensory loss is that does not split the ring finger

a. reproduction of symptoms with gentle tapping at the carpal tunnel

A 30 yo woman fell asleep with her legs crossed during a graduate lecture. When she awoke, she noted that the right foot was tingling and noted the foot was "slapping" on the ground. These most likely represent which of the following?

- a. Cauda equina syndrome
- b. Guillain-Barré syndrome
- c. Peroneal nerve palsy
- d. L5 radiculopathy



c. Peroneal nerve palsy

48 yo woman with lung cancer presents with onset of weakness in her legs and falls. She has been having difficulty with losing control of urine. On motor exam, she presents with bilateral arm/leg weakness with increased tone. The most appropriate test would be:

- a. Lumbosacral magnetic resonance imaging (MRI)
- b. Cervical-thoracic MRI
- c. Electromyography/nerve conduction study
- d. Test for a ruptured L4 disk

## **b. Cervical-thoracic MRI**

75 yo man with new back pain comes to your office with back pain shooting down his leg. He has weakness of foot extension and cannot stand on his toes on the left foot and a dropped ankle jerk on the left. This is a lesion of which of the following roots?

- a. C6 root
- b. L4 root
- c. L5 root
- d. S1 root

d. SI root

59 yo woman presents with onset of tingling in her toes. Her reflexes are depressed with downgoing toes. The finding that suggests most strongly that this is Guillain-Barré syndrome and not a spinal cord problem is:

- a. Her age
- b. The subacute onset
- c. The dropped reflexes
- d. The lack of bowel or bladder incontinence

**d. The lack of bowel or bladder incontinence**

45yo man presents to your office reporting diplopia in all directions. He has a history of hypothyroidism. Blood work and brain magnetic resonance imaging (MRI) are entirely normal. What would you do next?

- a. Write in his chart that he is malingering
- b. CT of the Chest
- c. Electromyography/nerve conduction velocity (EMG/NCV)
- d. Both B and C are correct



**d. Both B and C are correct**

28 yo female has a throbbing, one-sided headache three times a month. It occurs suddenly, persists for 2 days. This is what type of headache?

- a. Migraine with aura
- b. Migraine without aura
- c. Tension-type headache
- d. Cluster headache

## **b. Migraine without aura**

50 yo female with a 25-year history of migraine headaches with visual auras presents for her clinic visit and has been having them more frequently (once a week). What would you suggest next?

- a. Start a  $\beta$ -blocker as prophylaxis for the headaches
- b. Magnetic resonance imaging of the brain
- c. Send her for audiology testing
- d. Discontinue any nonsteroidal anti-inflammatory drug or aspirin she is taking

## **b. Magnetic resonance imaging of the brain**

# GENERAL MEDICINE REVIEW QUESTIONS

11:30 – 11:45 PM

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ACOI 2019 BOARD REVIEW COURSE

A 56 yo woman with a history of atrial fibrillation presents with 3 hours of acute-onset aphasia, hemiparesis, neglect, and forced gaze deviation. CT was WNL. The most common reason for this is:

- a. Malingering
- b. CT scans are often normal in the first 6 hours after stroke
- c. The etiology is a hemorrhage that does not show up on CT scan
- d. This is not stroke but status epilepticus

**b. CT scans are often normal in the first 6 hours after stroke**



66 yo woman presents to the emergency room with 3 hours of right-sided face and arm numbness and weakness. In the ER, her examination confirms both a sensory and motor deficit involving the right face and arm.. Which of the following statements is true regarding her condition?

- a. Antiplatelet therapy is a reasonable choice for treatment
- b. The lesion is most likely located in the thalamus
- c. The lesion is most likely located in the internal capsule
- d. If carotid Doppler exams reveal a right-sided stenosis of 50%, she would definitely benefit from carotid endarterectomy
- e. First-line treatment is tissue plasminogen activator (tPA) administered immediately

e. First-line treatment is tissue plasminogen activator (tPA) administered immediately

34 yo woman with history of a miscarriage 5 years ago presents with new right-sided hemiparesis and slurred speech for the past 2 hours. Her symptoms slowly resolve while in the emergency department. Which of the following is an appropriate course of action?

- a. No further testing is necessary, as this is her first transient ischemic attack (TIA)
- b. Check protein C and protein S levels
- c. Check for antiphospholipid antibodies
- d. Check factor VIII levels
- e. Both B and C

e. Both B and C

68 yo woman presents to the ER with the acute onset of mild aphasia, mild pronator drift on the right, and mild right-sided facial weakness. BP 195/90 mm Hg. The most appropriate next step is?

- a. Tissue plasminogen activator intravenously for acute stroke
- b. Emergent Endovascular Thrombectomy
- c. Intravenous antihypertensive medicine to lower the systolic blood pressure to a range of 120 to 138 mm Hg
- d. CT scan of the Brain and Blood Glucose

**d. CT scan of the Brain and Blood Glucose**

# HEMATOLOGY/ONCOLOGY REVIEW QUESTIONS 11:45AM – 12:00PM

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ACOI 2019 BOARD REVIEW COURSE

The biology of tumor growth most commonly follows which of the following mechanisms?

- a. Logarithmic progression
- b. Logarithmic regression
- c. Gompertzian kinetics
- d. Michaelis-Mendelson kinematics
- e. Orwellian statistical realization models



## c. Gompertzian kinetics

Vinyl chloride exposure is most commonly associated with which malignancy?

- a. Mantle cell lymphoma
- b. Anaplastic astrocytoma
- c. Renal cell carcinoma
- d. Urothelial carcinoma of the bladder
- e. Hepatic angiosarcoma

## e. Hepatic angiosarcoma

Which of the following is considered a non-modifiable risk factor for cancer development?

- a. Obesity
- b. Smoking cessation
- c. Use of sunscreens
- d. Genetic instability
- e. Occupational safety

## d. Genetic instability

Which of the following is not known to predispose to the risk of developing transitional cell carcinoma of the bladder?

- a. Smoking
- b. Paint and leather industrial workers
- c. Textile workers
- d. Past infection with *Schistosoma hematobium*
- e. Workers in tire and rubber plants

d. Past infection with  
*Schistosoma hematobium*

Which of the following measures improve the utility of serum prostate-specific antigen (PSA) in screening for prostate cancer?

- a. Digital rectal examination
- b. PSA velocity
- c. Measurement of free vs bound PSA
- d. Needle biopsy of suspicious masses
- e. All of the above



**e. All of the above**

Which of the following would be the most appropriate treatment for a 32 year-old, otherwise healthy, male with a newly diagnosed AJCC Stage IIB non-seminomatous germ cell tumor?

- a. Retroperitoneal radiation only
- b. Chemotherapy only
- c. Radical orchiectomy with either retroperitoneal lymph node dissection and/or chemotherapy
- d. Radical orchiectomy followed by observation
- e. Radical orchiectomy followed by autologous stem cell transplantation

c. Radical orchiectomy with either retroperitoneal lymph node dissection and/or chemotherapy

# For which of the following circumstances would anastrozole be best indicated?

- a. A 25 year-old woman with a 2 cm, lymph node negative, ER- tumor
- b. A 37 year-old woman with a 0.2 cm, lymph node negative ER+ tumor
- c. A 30 year-old pregnant woman with a 3 cm, lymph node positive, ER+ tumor
- d. A 69 year-old woman with a 3 cm, lymph node negative, ER+ tumor
- e. A 31 year-old woman with a 2.8 cm, lymph node positive, ER+, Her2+ tumor

d. A 69 year-old woman with  
a 3 cm, lymph node negative,  
ER+ tumor

Which of the following does not increase the risk of developing endometrial carcinoma?

- a. Obesity
- b. Unopposed estrogenic stimulation
- c. Anovulation
- d. Li Fraumeni syndrome
- e. Veganism

## e. Veganism

Which of the following is not associated with an increased risk for developing epithelial ovarian carcinoma?

- a. Late menopause
- b. Nulliparity
- c. Age less than 30 at first pregnancy
- d. Oral contraceptives
- e. Lynch syndrome



## d. Oral contraceptives

In the patient with cancer, which of the following are correct regarding fever?

- a. It is usually attributable to underlying infection
- b. The type of infection may be unusual due to cancer-related debility or granulocytopenia from treatment
- c. Infection by endogenous organisms may be causative
- d. Occasionally, be attributed to a cause intrinsic to the neoplasm itself.
- e. All of the above are correct

**e. All of the above are correct**

# Which of the following mechanisms best explains how antimetabolites work in cancer treatment?

- a. Inhibition of DNA transcription by direct binding and cross-strand breakage
- b. Inhibition of topoisomerases
- c. Inhibition of tyrosine kinases
- d. Compete with normal precursors for the catalytic site of key enzymes or substitute for metabolites that are incorporated into DNA or RNA.
- e. Intercalation with DNA causing disruption of transcription

d. Compete with normal precursors for the catalytic site of key enzymes or substitute for metabolites that are incorporated into DNA or RNA

54 year-old man with rectal carcinoma is receiving 5-FU by continuous infusion along with preoperative radiation. He presents with painfully swollen hands and feet, and blistering is noted. The most appropriate treatment for this patient is:

- a. Reassurance.
- b. Hold treatment and manage supportively until improved
- c. Discontinue treatment
- d. Topical steroid creams.
- e. Topical antimicrobial ointments and oral cephalexin

**b. Hold treatment and manage supportively until improved**

Which of the following attributes is associated with a relatively low risk for treatment-related toxicity?

- a. Prior cancer-directed therapy.
- b. Historic exposure to chemotherapy
- c. Discontinue treatment
- d. Worse performance status.
- e. Younger age



d. Younger age

In general, chemotherapy is discouraged in patients with a poor performance status unless which condition exists?

- a. The patient's attorney demands it under threat of legal action
- b. The tumor type is known to have a slow response to treatment
- c. The potential for improvement in quality of life is very real
- d. Prospective randomized clinical trials provide demonstrated efficacy for the treatment

c. The potential for improvement in quality of life is very real.

Opioids are often utilized in patients in palliative settings. Which side effect is generally associated with their use in this patient population?

- a. Diarrhea
- b. Increased vigilance
- c. Nausea
- d. Dyspnea

c. Nausea

## All are true in anemia except:

- a. Ferritin may be normal or elevated in true iron deficiency if there is coexistent inflammation
- b. Nearly all patients who have gastric bypass for weight loss will eventually require IV iron replacement
- c. Patients who have Thalassemia should never take iron.
- d. Anemia of chronic disease is a diagnosis of exclusion.
- e. A senior who's hemoglobin is  $< 13$  should be considered anemic and deserves work-up.

c. Patients who have Thalassemia should never take iron.

All the following are false in thrombocytopenia except:

- a. Low molecular weight heparin and fondaparinux never cause HIT.
- b. The diagnosis of DIC can be made with a concomitant decline in platelet count and fibrinogen level.
- c. The diagnosis of TTP requires a bone marrow biopsy.
- d. A platelet transfusion is always needed when the platelet count declines below 20,000.
- e. Platelets are never transfused in a patient with a normal platelet count.



**b. The diagnosis of DIC can be made with a concomitant decline in platelet count and fibrinogen level.**

In thrombosis and hemostasis, all the following are true except:

- a. The most common cause of spontaneous bleeding after the age of 50 is a Factor VIII inhibitor.
- b. The diagnosis of mild vonWillebrand's disease can be difficult as factor levels are frequently normal.
- c. Warfarin should be started day 1 of treatment for DVT/PE
- d. Patients who develop spontaneous thrombosis before age 50 should undergo a hypercoaguable work-up.
- e. Myocardial infarction or stroke at a young age is not considered a reason to obtain a hypercoaguable work-up.

e. Myocardial infarction or stroke at a young age is not considered a reason to obtain a hypercoagulable work-up.

## In Leukemia, all are true except:

- a. WBC is always elevated at the time of diagnosis of acute leukemia
- b. The diagnosis of CLL is usually made on routine lab work rather than symptoms
- c. It is common for CML to present with unusual infections
- d. The Philadelphia chromosome may not always be present in CML
- e. The molecular hallmark of CML is BCR/ABL

a. WBC is always elevated at the time of diagnosis of acute leukemia

All are false in lymphoma except:

- a. The diagnosis of lymphoma is easily made by FNA
- b. B symptoms are a good prognostic feature
- c. Reed-Sternberg cells are the classic cells of Hodgkin lymphoma
- d. The combination of chemotherapy and radiation therapy rarely increases the risk of secondary malignancies
- e. All lymphomas require treatment

c. Reed-Sternberg cells are the classic cells of Hodgkin lymphoma

All are true except:

- a. Serum M protein is always elevated in myeloma at diagnosis
- b. Bence Jones proteins are not always present in 24 hour urine in myeloma
- c. A bone scan is not usually helpful in diagnosing boney lesions of myeloma
- d. Erythropoietin alone is usually the first treatment of choice in MDS
- e. Not all genetic changes in MDS indicate a poor prognosis



a. Serum M protein is always elevated in myeloma at diagnosis

# INFECTIOUS DISEASES REVIEW QUESTIONS

2:45 – 3:00PM

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ACOI 2019 BOARD REVIEW COURSE

An otherwise healthy 32 y.o. is seen in your office/ER soon after a cat bite. Typical of cat bites, the wound demonstrates several small puncture wounds that are not really amenable to irrigation or other wound care. Should you give an antibiotic? If so, which one would be considered a poor choice?

- a. cephalexin (Keflex®)
- b. Doxycycline
- c. ampicillin
- d. amoxicillin/clavulanate (Augmentin®)
- e. ceftriaxone

a. cephalexin (Keflex®)

This pleasant 58 y.o male, diabetic for at least the last 10 years, is brought to the emergency room by his wife because of her concern over foul smelling drainage and discoloration from a long standing callus on his foot. He is noted to have a low grade fever, with a WBC of 13,000. You decide to order antibiotics. Which empiric option would make the most sense?

- a. vancomycin
- b. trimethoprim/sulfa
- c. vancomycin + cefipime
- d. vancomycin + clindamycin
- e. piperacillin/tazobactam [Zosyn ®]

e. piperacillin/tazobactam  
[Zosyn ®]

Sitting with your kids, a cat with her kittens that you have never seen before, shows up on your porch. Of course, your kids are excited to see them and promptly begin playing with them, suffering numerous scratches and small bites as a result. After they are gone, you begin to wonder if there are any infectious disease issues associated with this event. Assuming you love your kids, which of the following is most worrisome?

- a. feline leukemia
- b. rabies
- c. hand, foot and mouth disease
- d. variant CJD disease
- e. histoplasmosis

## **b. Rabies**



After “having a few”, your patient made the mistake of talking politics with a couple of strangers. Badly bruised, he now presents to your office/ER with a swollen hand with multiple lacerations that, as best he recalls, were the result of punching someone in the mouth. Some appear infected. All but which of the following would be considered poor choices?

- a. amoxicillin/clavulanate (Augmentin®)
- b. clindamycin
- c. cephalexin (Keflex®)
- d. metronidazole (Flagyl®)

**a. amoxicillin/clavulanate  
(Augmentin®)**

After diagnosing secondary syphilis (rash involving palms and soles of a traveling salesman), you should recommend all but the following:

- a. HIV testing
- b. benzathine PCN 2.4 mill. units I.M. x 1
- c. benzathine PCN 2.4 mill. units I.M. weekly x 3
- d. azithromycin 1 gm p.o. x 1
- e. partner notification

c. benzathine PCN 2.4 mill. units  
I.M. weekly x 3

Which of the following organisms is an unlikely cause of endocarditis?

- a. *S. aureus*
- b. *E. coli*
- c. *S. bovis/gallolyticus*
- d. *Enterococcus* spp.
- e. *Cardiobacterium* spp.

**b. E. coli**

In consideration of major dental surgery, which underlying cardiac condition does not warrant endocarditis prophylaxis?

- a. mitral valve prolapse
- b. previous endocarditis
- c. prosthetic valve
- d. cardiac transplant w/ valvulopathy
- e. unrepaired cyanotic congenital heart dx

**a. mitral valve prolapse**



Your patient with a recently placed prosthetic aortic valve is about to undergo dental extraction. She reports anaphylaxis to amoxicillin. Which of the following should be offered:

- a. Cephalexin 500 mg x 1 prior to procedure
- b. Clindamycin 300 mg x 1 prior to, then 3 additional doses q 8 hrs following the procedure
- c. Doxycycline 200mg x 1 prior to procedure
- d. Clindamycin 600 mg x 1 prior to procedure
- e. Ciprofloxacin 500 mg x 1 prior to procedure

d. Clindamycin 600 mg x 1 prior  
to procedure

Within a 2 - 3 day time period, multiple patients from an ECF are seen in your ER with severe N/V and non-bloody diarrhea. Temperature elevations are minimal, if any. What is the most likely explanation?

- a. *S. aureus* food poisoning
- b. *B. cereus* food poisoning
- c. *E. coli* 0157 H7 food poisoning
- d. *Shigella* - foodborne or otherwise
- e. Norovirus - foodborne or otherwise

e. Norovirus - foodborne or otherwise

A colleague's wife presents to your office, ill appearing, w/ severe abdominal pain and bloody diarrhea. Dietary hx is not helpful. What should NOT be offered?

- a. sympathy
- b. hydration
- c. empiric quinolones
- d. culture (or other diagnostic assays) of a stool specimen

**c. empiric quinolones**

You are called to the ER to see one of your patients w/ hypertension, diabetes and chronic hepatitis C. He appears septic w/o an obvious focus. He was just in New Orleans for Mardi Gras. A most important question to ask:

- a. Were you bitten by any mosquitos?
- b. Any tick exposure?
- c. Any drug use?
- d. Any new sexual partners?
- e. What did you eat while there?

e. What did you eat while there?



During the “window phase” of acute HIV infection, individuals:

- a. are most always quite ill
- b. commonly present w/ “opportunistic” infections
- c. should have CD4 and “viral loads” obtained
- d. are considered highly infectious
- e. need counseling and support

d. are considered highly  
infectious

Suspecting acute *Pneumocystis pneumonia*, which is the most important study to immediately order?

- a. ABGs
- b. CD4 count
- c. Viral load
- d. Blood cultures
- e. Sputum for gm stain, culture, and special studies for pneumocystis

a. ABGs

## When is treatment for HIV contraindicated?

- a. concomitant drug abuse
- b. pregnancy
- c. concomitant active hepatitis B and or C
- d. CD4 count above 500
- e. pt unwilling and/or non-compliant

e. pt unwilling and/or non-compliant

In counseling a newly diagnosed HIV + patient, which of the following comments are most accurate (based on current data)?

- a. Even with appropriate and effective therapy, the average lifespan of an HIV + individual is reduced by at least 10 years
- b. With appropriate and effective therapy, an HIV+ individual can live a normal to near-normal lifespan
- c. With appropriate and effective therapy, “diseases of aging” occur no more frequently in the HIV+ individual than in an uninfected person
- d. Markers of inflammation return to normal, once an HIV + individual no longer has detectable viremia

**b. With appropriate and effective therapy, an HIV+ individual can live a normal to near-normal lifespan**



Which of the following organisms are the the major causes of community-acquired bacterial meningitis in adults in developed countries?

- a. Streptococcus pneumoniae and Neisseria meningitidis
- b. Staphylococcal aureus
- c. Pseudomonas aeruginosa

**a. Streptococcus pneumoniae  
and Neisseria meningitidis**

If aseptic meningitis due to HSV is suspected empiric therapy with which antimicrobial is indicated?

- a. Abacavir
- b. Acyclovir
- c. Ribavirin

**b. Acyclovir**

True or false: the risk factors for spinal epidural abscesses include epidural catheters, diabetes mellitus, alcoholism, HIV infection, bacteremia, and intravenous drug use.

True

Which of the following are symptoms consistent with the Ebola virus disease?

- a. Fever
- b. Malaise
- c. Vomiting and diarrhea
- d. All of the above

**d. All of the above**



Which serologic tests are the main methods for diagnosis of either acute infection by hantaviruses?

- a. Anti-hantavirus IgM
- b. Anti-hantavirus IgG
- c. Hantavirus viral load by PCR

**a. Anti-hantavirus IgM**

Which of the following test are necessary for the diagnostic evaluation for fevers of unknown origin?

- a. Blood cultures
- b. HIV antibody test
- c. Tuberculin skin test or interferon-gamma release assay
- d. Computed tomography scan of abdomen and chest
- e. All of the above

**e. All of the above**

Which of the following symptoms are common clinical features of community acquired pneumonia?

- a. Cough
- b. Fever
- c. Pleuritic chest pain
- d. Sputum production
- e. All of the above

**e. All of the above**

True or false: Initial treatment regimens for community-acquired pneumonia are empiric and epidemiological and clinical clues should be considered when selecting an empiric regimen.

True



# Pulmonary complications of TB include:

- a. Hemoptysis
- b. Pneumothorax
- c. Extensive pulmonary destruction
- d. Malignancy
- e. All of the above

**e. All of the above**

# NEPHROLOGY REVIEW QUESTIONS

2:30 – 2:45 PM

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ACOI 2019 BOARD REVIEW COURSE

# Which of the following statements are true regarding fluid management in AKI?

- a. Hetastarch is preferred over albumin for colloid replacement
- b. Ringer's lactate has better outcomes
- c. Normal saline has better outcomes
- d. Both Ringer's and normal saline have the same outcomes
- d. None of the above

d. Both ringers lactate and normal saline have the same outcomes

# Which of the follow are true regarding fluid management in AKI?

- a. Aggressive fluid resuscitation has a lower mortality
- b. More conservative fluid resuscitation has a lower mortality
- c. Low doses of loop diuretic have a lower mortality
- d. Continuous infusion of a loop diuretic has better outcomes as compared to Intermittent boluses
- d. None of the above

**b. More conservative fluid resuscitation has a lower mortality**

# What is the most important measure to prevent contrast induced AKI in a patient with CKD?

- a. Pre and post procedure hydration with normal saline
- b. Pre and post hydration with sodium bicarbonate
- c. Pre and post N-acetyl cysteine
- d. Do and MRI with Gadolinium
- d. Hold metformin



e. Hold metformin

A newly diagnosed Type 2 diabetic is being seen in your office. They are well controlled on oral medications, following a diet, exercising and losing weight. Which of the statements is/are true concerning this patient's risk for progression to ESRD?

- a. Retinopathy is predictive for renal disease
- b. The degree of proteinuria
- c. The degree of creatinine elevation at the time of diagnosis
- d. The degree of systolic BP
- e. All of the above

e. All of the above

You are seeing a type 2 diabetic in your office. He has a history of stage 3 CKD and a creatinine clearance is 34 ml/min/M2. His potassium is 5.7mg/dl and his bicarbonate is 19mg/dl. This is consistent with which of the following?

- a. Type 1 RTA
- b. Type 2 RTA
- c. Type 3 RTA
- d. Type 4 RTA

d. Type 4 RTA

A 72 yo male presents to the E.D. with obtundation, a 3 cm mass in his right upper lobe of his lung, dehydration and a calcium of 16.4 mg/dl. The most likely cause of his hypercalcemia is:

- a. Direct bone invasion/osteolysis
- b. Elevated Parathyroid related Protein (PTHrP) levels
- c. Excess 1,25 dihydroxycholecalciferol (D3) levels
- d. PTH-like substance
- e. Acute kidney injury

**b. Elevated Parathyroid related Protein (PTHrP)  
levels**

You are seeing a 61 yo African-American male for back pain, the follow lab is obtained: creatinine 1.9 mg/dl, Hb 8.8, uric acid 10.1 mg/dl, Ca 11.8 mg/dl, anion gap is 5 and urine dip is negative for protein. What would be your next diagnostic test?

- a. Bone scan
- b. Renal ultrasound
- c. ANA
- d. Serum protein electrophoresis
- e. Ionized calcium level



## d. Serum protein electrophoresis

A 56-year-old woman is found to have normochromic-normocytic anemia, hypophosphatemia, hypouricemia, glycosuria, proteinuria (+1 by dipstick testing), and renal insufficiency (serum creatinine concentration of 2.6mg/dl). Urine protein creatinine ratio (UPC) was 3.1. urine albumin creatinine ratio(UAC) was .3. Urine albumin protein ratio(UAPR) 10% Which ONE of the following is the MOST LIKELY cause of this constellation of findings?

- a. Minimal change disease
- b. Lead intoxication
- c. Aristolochic acid intoxication
- d. Multiple myeloma
- e. Focal segmental glomerulosclerosis

## d. Multiple myeloma

26-year-old man is found to have IgA nephropathy on a renal biopsy performed for intermittent hematuria and persistent proteinuria (UPC 1.8). His serum creatinine is 1.2 mg/dl. UPC declines to 1.5 and the serum creatinine increases to 1.3 mg/dl after 3 months of lisinopril 10 mg/d. The urinary Na excretion is 180 mmol/d. Which ONE of the following should be done next?

- a. Add 50 mg/d losartan
- b. Increase lisinopril to 20 mg/d
- c. Add 25mg/d spironolactone
- d. Start oral steroids at 1 mg/kg per d
- e. Instruct on a low NaCl diet

e. Instruct on a low NaCl diet

A 75 yo woman admitted with 3 month hx of progressive fatigue, edema, mild hemoptysis and dyspnea. CXR bilateral infiltrates, CRE 4.1, BUN 55. UA +3 blood and protein. UAC 2300, UPC 4300. C3 and C4 are low. Which is the most likely diagnosis?

- a. Granulomatous polyangiitis
- b. Microscopic polyangiitis
- c. Systemic lupus erythematosus
- d. Goodpasture syndrome
- e. IgA vasculitis

## c. Systemic lupus erythematosus

A 49-year-old African-American man presents with an unremarkable history. Six months ago, his serum creatinine was 0.9 mg/dl. He presents with 2+ pitting edema to the knees. A renal biopsy revealed FSGS not otherwise specified. When compared with an identical Caucasian patient, which ONE of the following statements is MORE likely to be true in African Americans?

- a. Response to corticosteroids is better
- b. Progression to end-stage kidney disease is more rapid
- c. Peak age of onset is older.
- d. APOL-I mutation is less frequent.



b. Progression to end-stage kidney disease is more rapid

# NEPHROLOGY REVIEW QUESTIONS

4:30 – 4:45 PM

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ACOI 2019 BOARD REVIEW COURSE

Man in ER coma. Labs: Serum Na 131 mEq/L, K 2.9 mEq/L, Cl 70 mEq/L, CO<sub>2</sub> 21 mEq/L, blood urea nitrogen 34, creatinine 1.4 mg/dl, glucose 240 mg/dl, serum osmolality 320 mOsm/kg H<sub>2</sub>O, serum ketones weakly +, pH 7.53, PaCO<sub>2</sub> 25, and serum albumin 3.8. Which ONE of the following choices BEST describes his acid-base disturbance?

- a. Metabolic acidosis
- b. Respiratory alkalosis
- c. Metabolic acidosis and respiratory alkalosis
- d. Metabolic acidosis and metabolic alkalosis
- e. Metabolic acidosis, metabolic alkalosis, and respiratory alkalosis

e. Metabolic acidosis, metabolic alkalosis, and respiratory alkalosis

Weakness for 2-3 months. Labs: Na 135 , Cl 105 , K 3.0 , HCO<sub>3</sub> 18 , CRE 1.8 , BUN 22 , glucose 110 , PO<sub>4</sub> 1.2 , PCO<sub>2</sub> 30 , pH 7.31, hematocrit 25%; urinalysis shows +1 protein, 2+ glucose, normal sediment, UPC 4.2 and UAC .25, UNa 30, UK 20, UCl 80 Which ONE of the following is a CHARACTERISTIC of the renal abnormality present in this patient?

- a. Evidence of nephrocalcinosis on KUB consistent with distal RTA
- b. urine immunoelectrophoresis will show a monoclonal protein
- c. A bladder scan will show PVR of > 500 ml
- d. Testing for cathartics in stool will be +
- e. Testing in urine for diuretics will be +

**b. urine immunoelectrophoresis will show a monoclonal protein**

Woman presents with belly pain. She was taking acetaminophen 4 g/d for 7 days. PMH PVD. PE + tenderness no rebound. Labs: Na 138, K 4.9, Cl 102, HCO<sub>3</sub> 7, creatinine 1.4, glucose, serum osmolarity 295, lactate 2.5. ABG: pH 7.17, PCO<sub>2</sub> of 18; UA: pH of 5.5, tr ketones. Surgery revealed no IBD Which ONE of the following is the MOST likely cause of the metabolic acidosis in this patient?

- a. Pyroglutamic acidosis resulting from the administration of acetaminophen.
- b. D-Lactic acidosis as a result of bacterial overgrowth.
- c. Malignant hyperthermia with secondary lactic acidosis.
- d. Diabetic ketoacidosis.
- e. Salicylate toxicity.

a. Pyroglutamic acidosis resulting from the administration of acetaminophen.



61 yo woman. Weakness and polyuria. Hx PUD (antacids/baking soda), COPD(40 pk/yr), PE frail and dry. Labs: Hematocrit 41, Na 152, K 3.0, Cl 100, HCO<sub>3</sub> 40, BUN 98, creatinine 7.1, Ca 14.4, PO<sub>4</sub> 6.3, I, 25-VitD low, PTH 16 pg/ml. UA NL. US kidneys. This presentation is MOST consistent with?

- a. Vitamin D intoxication.
- b. Chronic kidney disease as a result of longstanding hypertension.
- c. Multiple myeloma.
- d. Milk-alkali syndrome
- e. Primary hyperparathyroidism.

## d. Milk-alkali syndrome

You are treating a 66-year-old man with stable angina with a statin, a b-blocker, a diuretic, and an ACE inhibitor. His BP is 130/82 mmHg and his heart rate is 64 beats/min. He generally feels fine; however, he has started to play golf since his retirement 4 months ago and his knee osteoarthritis is more apparent now. Which ONE of the following treatment recommendations would you suggest for this patient?

- a. Any over-the-counter nonsteroidal anti-inflammatory agent should be fine.
- b. Acetaminophen in doses  $\leq 3$  g/d is a safe choice.
- c. Celecoxib should be avoided because it increases the LDL cholesterol concentration.
- d. Current data indicate that the choice of pain medication is less important than the effect it has.
- e. He should try to limit analgesic usage to just the times when he plays.

b. Acetaminophen in doses  $\leq 3$  g/d is a safe choice.

55 yo man with a reliable home BP device. He is treated with HCTZ, ACEI, CCB, and eplerenone. Home BPs for the last 6 months show values of  $124 \pm 11 / 73 \pm 7$  mmHg with  $>109$  readings taken in AM/PM. His examination NI. His in-office BP is 140/88 mmHg. Which ONE of the following statements BEST reflects his hypertension control?

- a. The home readings likely best reflect his overall CV risk
- b. The office readings, by virtue of the 10-mmHg difference between office versus ambulatory systolic pressure, are more precise for reflecting BP control.
- c. You need ABPM to estimate the degree of daytime BP control.
- d. You need a urine albumin/creatinine ratio to determine whether the home BP values are truly reflective of overall control.

a. The home readings likely best reflect his overall CV risk

62 yo man with > 75% R renal artery stenosis on CTA. PMH –CAD and HTN. His medications: ACEI, BB, ASA, and statin. His BP is 126/78 and his HR is 64. PE is unremarkable. Creatinine is 1.1 and stable for 1 year. CT – NL size kidneys. Which ONE of the following describes the MOST appropriate course of action at this time?

- a. No change in management. Repeat imaging in 6–12 months.
- b. Lisinopril should be discontinued. Repeat imaging in 6–12 months.
- c. Surgical (open bypass) revascularization is indicated.
- d. Angioplasty with stenting is indicated.
- e. Addition of warfarin is indicated. Repeat imaging in 6–12 months

# PULMONARY DISEASES REVIEW QUESTIONS

11:15 – 11:45 AM

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ACOI 2019 BOARD REVIEW COURSE



A 70-year-old woman hospitalized one week ago for acute on chronic kidney injury. Since her hospitalization, she has been receiving hemodialysis through a temporary femoral catheter. Last night she developed a fever 101.7°F. On examination, she is confused; blood pressure 76/40 mmHg the heart rate of 108 b/min. Weight is 60 kg (132 pounds). She has adequate peripheral venous access and is given a 1-liter bolus of normal intravenous saline over 30 minutes. After receiving fluids, her blood pressure is 78/44 mmHg. Oxygen saturation 96% breathing ambient air. Cardiac examination is a regular tachycardia rhythm. There is no jugular venous distention. There is erythema without purulent drainage noted at the femoral catheter site. The extremities are warm with bounding pulses without edema. Data: Hemoglobin 9 g/dL; leukocytosis 16,000; Creatinine 2.6; Potassium 5.6 mEq/L. Blood cultures are growing gram-positive cocci. A chest radiograph is normal. EKG shows sinus tachycardia without ischemia. In addition to replacing the hemodialysis catheter which of the following is the most appropriate next step in treatment?

- a. Administer another fluid bolus
- b. Initiate dobutamine infusion
- c. Insert a central venous catheter
- d. Transfuse 1 unit of packed red blood cells

**a. Administer another fluid bolus**

A 63-year-old patient with a past medical history of hypertension and diabetes presents with community-acquired pneumonia that progresses to acute respiratory distress syndrome. On hospital admission, mechanical ventilation is initiated. Continuous enteral nutrition is started by a 14-French nasogastric tube targeted to deliver 25 kcal per kilogram per day. Which of the following strategies would be implemented to reduce ventilator-associated pneumonia during mechanical ventilation?

- a. Monitor residual gastric volume
- b. Elevate the head of the bed
- c. Administer proton pump inhibitors
- d. Administer postpyloric feedings

**b. Elevate the head of the bed**

A 30-year-old woman is admitted to the ICU for management of respiratory failure due to influenza A. She is intubated and mechanically ventilated. Ventilator settings are in the volume control continuous mandatory ventilation (assist control) with a respiratory rate of 18, tidal volume of 360 mL, (6 cc/kg of ideal body weight) and an FiO<sub>2</sub> of 0.9, and a positive end-expiratory pressure of 14 cmH<sub>2</sub>O. Her plateau pressure is 28 cmH<sub>2</sub>O. Because of difficulty with oxygenation, she is paralyzed and appropriately monitored for depth of paralytic and sedation. Medical history is otherwise unremarkable. On physical examination, the temperature is 101.8°F; blood pressure is 112/64 mmHg, pulse rate is 85 b/min, respiratory rate is 18. BMI is 29. There is no jugular venous distention. Coarse breath sounds noted bilaterally. No other physical exam findings noted. Chest radiograph shows appropriate placed endotracheal tube with diffuse patchy infiltrates throughout both lung fields. Arterial blood gas study showed pH 7.41, PaCO<sub>2</sub> of 38 mmHg, PaO<sub>2</sub> of 55 mmHg. Which of the following is the most appropriate next step in the management of this patient?

- a. Inhaled surfactant
- b. Start inhaled nitric oxide
- c. Initiate prone positioning
- d. Administer steroid

**c. Initiate prone positioning**

A 36-year-old male was injured in a high-speed motor accident. He is unbelted and, as a result, was ejected from vehicle. On arrival to the trauma bay. His GCS scale was 7 leading to emergently intubated. Injuries included moderate subdural hematoma and subarachnoid hemorrhage. Multiple bilateral nondisplaced rib fractures, bilateral pulmonary contusions, grade 3 splenic injury managed non-operatively and left femur fracture managed with an intramedullary rod on postoperative day 6. On post-trauma day 9, his GCS score is 11T and he qualifies for extubation. Which of the following criteria for extubation is best supported by the literature?

- a. Negative inspiratory force
- b. Vital capacity
- c. Successful 30 minutes spontaneous breathing trial
- d. Cuff leak
- e. Twinkle in their eye

c. Successful 30 minutes spontaneous breathing trial



# With the following statements is true regarding sleep apnea and a surgical patient?

- a. The STOP BANG screening questionnaires a high sensitivity and specificity in detecting moderate to severe sleep apnea
- b. The American Society of Anesthesiology guidelines recommend postponing surgery in patients at high risk for sleep apnea until diagnostics testing is completed
- c. Presence of an untreated presence of untreated sleep apnea is associated with a high risk for perioperative complications
- d. CPAP use has been shown clearly shown to reduce perioperative complications

c. Presence of an untreated presence of untreated sleep apnea is associated with a high risk for perioperative complications

A 45-year-old woman presents with a chief complaint of fatigue. Her BMI is 27, and her sleep experience includes frequent loud snoring and witnessed apneas. A polysomnography is performed and reveals an apnea hypopnea index of 11 (normal less than 5). Patient is started on continuous positive airway pressure (CPAP) therapy, as well as dietary modification and recommended an exercise program. At follow-up visit patient reports compliance with CPAP therapy and improved energy. She has also lost 6 kg because of lifestyle modifications. Her BMI is now 24. Which of the following management strategies would be most appropriate for this patient?

- a. Discontinue CPAP therapy and evaluate symptoms in 4 weeks
- b. Schedule a repeat polysomnography and CPAP titration
- c. Decreased CPAP settings by 20% and reevaluate response in 4 weeks
- d. Continue CPAP therapy at current settings
- e. Replace CPAP with an oral appliance

**b. Schedule a repeat polysomnography and CPAP titration**

A 50-year-old male with a BMI 45 reports chronic fatigue, intermittent headaches, infrequent mild snoring. He has a history of type II diabetes, chronic obstructive pulmonary disease, hypertension and myocardial infarction. Which one of the following evaluations is most appropriate for this patient?

- a. Home sleep study with portable monitor
- b. Multiple sleep latency test
- c. Nocturnal oxygen testing
- d. Pulmonary function assessment
- e. In- laboratory polysomnography

e. In- laboratory polysomnography

A 45-year-old morbidly obese man with a history of untreated obstructive sleep apnea and type II diabetes presents with lower extremity swelling in 3 months of progressive shortness of breath. A transthoracic echocardiogram performed revealed severe pulmonary hypertension with a right ventricular systolic pressure of 85 mmHg with preserved right ventricular function. The patient's vital signs are normal except for an oxygen saturation of 85% while he is breathing ambient air. He has elevated jugular venous pressures, as well as a loud P2 component of the 2nd heart sound on cardiac auscultation. His lung examination is clear. He has no rash or synovitis. Which one of the following tests is most appropriate next step for better identifying the cause of this patient's hypoxemia and peripheral edema?

- a. Pulmonary ventilation perfusion scan
- b. Full pulmonary function tests with diffusing capacity
- c. Arterial blood gas
- d. Echocardiogram with bubble study
- e. High resolution CT scan

## c. Arterial blood gas



A 68-y old male with a longstanding history of cigarette smoking presents with a 3-month history of progressive shortness of breath and dyspnea on exertion. The symptoms have been ongoing and indolent. He reports chronic cough productive of his usual yellow sputum. Physical exam is notable for normal vital signs, prolonged expiratory phase and wheeze bilaterally, elevated jugular venous pressure, and moderate pedal edema. Hematocrit 49%. Which of the following is most likely to prolong his survival?

- a. Phosphodiesterase-4 inhibitor
- b. Oral glucocorticoid
- c. Inhaled anticholinergic
- d. Oxygen
- e. Inhaled corticosteroid

d. Oxygen

A 34-y old lifelong nonsmoking male presents for evaluation of dyspnea, fatigue, and nonproductive cough which is worse in the evening. His symptoms have been ongoing for the last 6 months. He is an auto mechanic working in an autobody shop for the last 4 years. He believes his symptoms are work related. Medical history is otherwise negative and he is on no medications. Physical exam and vital signs are normal. CXR and spirometry are normal. What is the most appropriate next step?

- a. CT chest
- b. Repeat spirometry after workplace exposure
- c. Allergy testing
- d. Inhaled glucocorticoid
- e. Methacholine challenge testing

**b. Repeat spirometry after workplace exposure**

A 22-y male with cystic fibrosis with F508 del mutation presents for evaluation of worsening shortness of breath, wheezing, and cough productive of dark sputum. He was treated a month ago for similar symptoms with a course of antibiotics and tapering prednisone. Medications include lumacaftor/ivacaftor, inhaled tobramycin and albuterol, along with his usual oral medications. Vital signs are normal. Physical exam is notable for diffuse wheezing bilaterally. WBC count is normal with 15% eosinophils. CXR shows scattered infiltrates. What is the most likely diagnosis?

- a. *Mycobacterium avium intracellulare*
- b. *Burkholderia cepacia* infection
- c. Allergic bronchopulmonary aspergillosis
- d. Hypersensitivity pneumonitis
- e. Eosinophilic granulomatosis with polyangiitis

c. Allergic bronchopulmonary aspergillosis

72-y female with a 40-pack year smoking history presents to the hospital with a 4-week history of hemoptysis and progressive dyspnea. She reports lower extremity weakness while climbing stairs. Vital signs are notable for HR 104 bpm and pulse oximetry 91% on room air. Physical exam identifies symmetric proximal muscle weakness in both upper and lower extremities. Lungs are clear. CT chest shows a 4 cm right hilar mass with bilateral mediastinal lymphadenopathy. What is the most likely diagnosis?

- a. Thymoma
- b. Small cell carcinoma
- c. Squamous cell carcinoma
- d. Atypical carcinoid
- e. Adenocarcinoma

## **b. Small cell carcinoma**



20-y nonsmoking female presents with persistent complaints of dyspnea, wheeze, and cough productive of yellow sputum. She was treated with a course of tapering steroids, levofloxacin, bronchodilators, and inhaled corticosteroids which provided some relief. She has been treated repeatedly for similar symptoms over the course of two years. VS stable. Physical exam identifies diminished breath sounds with localized wheeze at the right lung base. Available chest x-rays show persistent right lower lobe infiltrate over the last 8 months. What is the most likely diagnosis?

- a. Adenocarcinoma
- b. Pulmonary alveolar proteinosis
- c. Chronic eosinophilic pneumonia
- d. Bronchial carcinoid tumor
- e. Allergic bronchopulmonary aspergillosis

d. Bronchia carcinoid tumor

75-y male presents with a fifteen-pound weight loss over the last 3 months. He denies fever, chills, or night sweats. Travel history is negative. Prior occupation significant for many years of mining. Medical history otherwise unremarkable. VS stable. Physical exam is normal with the exception of decreased breath sounds bilaterally. CT chest one year ago showed upper lobe scarring and nodularity along with eggshell calcifications in the hilar region. Tuberculin skin testing performed 6 months ago was negative. What is the most appropriate next step?

- a. Tuberculin skin testing
- b. Bronchoscopy
- c. CT chest
- d. PET scan
- e. MRI chest

c. CT chest

# RHEUMATOLOGY REVIEW QUESTIONS

10:30 – 10:45 AM

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Which of the following auto-antibodies is associated with aggressive erosive Rheumatoid Arthritis?

- a. ANA
- b. Anti-CCP (ACPA)
- c. ANCA
- d. Anti-SSA AB

**b. Anti-CCP (ACPA)**

Extra-articular manifestations of Rheumatoid Arthritis include all of the following except:

- a. Sjogren's Syndrome
- b. Felty's Syndrome
- c. Tophi
- d. Subcutaneous nodules



c. Tophi

Inflammatory joint pain would be associated with:

- a. Prolonged morning stiffness that improves with use
- b. Knee pain that is worse with use
- c. Bone hypertrophy of the DIP joints
- d. Presence of osteophytes on radiograph

- a. Prolonged morning stiffness that improves with use

Janus Kinase is a new therapeutic target in the treatment of:

- a. Systemic Lupus Erythematosus
- b. Rheumatoid Arthritis
- c. Granulomatosis with Polyangiitis
- d. Polymyalgia Rheumatica

## **b. Rheumatoid Arthritis**

Anti-neutrophilic Cytoplasmic Antibodies are associated with all the following except:

- a. Granulomatosis with Polyangiitis GPA (aka Wegener's Granulomatosis)
- b. Polyarteritis Nodosa
- c. Microscopic Polyangiitis MPA
- d. Eosinophilic granulomatosis w Polyangiitis (Churg-Strauss disease)

## b. Polyarteritis Nodosa

## Giant Cell Arteritis:

- a. Is treated with low dose prednisone (less than 10 mg daily)
- b. Does not usually threaten vision
- c. May be associated with symptoms of Polymyalgia Rheumatica
- d. Typically affects patients younger than 50 years of age.



c. May be associated with symptoms  
of Polymyalgia Rheumatica

Granulomatosis with Polyangiitis is associated with:

- a. Anti-MPO AB
- b. Hepatitis B infection
- c. ANA
- d. Anti-PR3 AB

**d. Anti-PR3 AB**

Features of Spondyloarthropathies include all of the following except:

- a. Enthesitis
- b. Familial clustering
- c. Positive Rheumatoid Factor
- d. Sacroiliitis

## c. Positive Rheumatoid Factor

## Types of Psoriatic Arthritis include:

- a. Spondyloarthritis
- b. DIP arthritis
- c. Atrhritis Mutilans
- d. All the above

**d. All the above**

All of the following are FDA approved treatments for Psoriatic arthritis except:

- a. adalimumab
- b. apremelast
- c. methotrexate
- d. abatacept



c. methotrexate

Anti Synthetase syndrome is associated with:

- a. ANA
- b. Anti CCP
- c. JO-1
- d. Anti PM-1
- e. ANCA

c. JO-I

What treatment should be used in all SLE:

- a. Hydroxychloroquine
- b. Azothioprine
- c. Mycophenolate mofetil
- d. Prednisone
- e. Cyclophosphamide

## a. Hydroxychloroquine

Which of the following is a correct part of the 2018 ACR/EULAR diagnostic criteria for SLE?

- a. Alopecia 3 points
- b. Anti Smooth muscle antibody 6 points
- c. Delirium 2 points
- d. Painful oral ulcers 2 points

## c. Delirium 2 points

Explanation: Alopecia is 2 points Anti smooth muscle antibody is associated with autoimmune hepatitis Oral ulcers are typically painless aphthous ulcers

What type of crystal is associated with CPPD?

- a. Positively birefringent parallelogram shaped crystal
- b. Negatively birefringent parallelogram shaped crystal
- c. Positively birefringent needle shaped crystal
- d. Negatively birefringent needle shaped crystal
- e. Non - birefringent needle shaped crystal



a. Positively birefringent parallelogram shaped crystal

A treatment for Acute Gout is:

- a. Allopurinol
- b. Azathioprine
- c. methotrexate
- d. colchicine
- e. endothelin receptor antagonist

d. colchicine

Under what circumstances does hyperuricemia require treatment?

- a. Calcium oxalate Kidney Stones
- b. Acute Gout
- c. asymptomatic hyperuricemia
- d. all of the above
- e. none of the above

## b. Acute Gout

What type of infectious arthritis is associated with migratory arthritis and or arthralgia?

- a. Gonococcal
- b. JIA
- c. Staph aureus
- d. Rocky mounted spotted fever
- e. Pamlico fever

a. **Gonococcal**

What is the most common organism seen in Osteomyelitis?

- a. Strep pyogenes
- b. Neisseria species
- c. Pseudomonas
- d. Candida
- e. Staph aureus



e. *Staph aureus*

What are the major criteria in the updated Jones Criteria for Rheumatic Fever?

- a. Arthritis, Coronary artery disease, erythema marginatum, nodules
- b. Arthritis, Carditis, erythema marginatum, nodules
- c. Arthralgia, Carditis, erythema marginatum, nodules
- d. Arthritis, Carditis, erythema marginatum, positive ASO titer
- e. Arthritis, Carditis, erythema multiforme, nodules

**b. Arthritis, Carditis, erythema marginatum, nodules**

Which type of synovial fluid is seen in thyroid disease?

- a. Group 5
- b. Group 4
- c. Group 3
- d. Group 2
- e. Group 1

e. Group I

Group II synovial fluid is typical of:

- a. Osteoarthritis
- b. Infection
- c. Hemorrhage
- d. Inflammatory arthritis
- e. Lyme Disease

## d. Inflammatory arthritis

What disease is associated with Cholesterol Crystals?

- a. Hyperlipidemia
- b. High serum Cholesterol
- c. Low serum Cholesterol
- d. Normal finding in long standing joint effusion
- e. Type II synovial fluid



d. Normal finding in long standing joint effusion