AUGUST 21-23, 2015
Loews Chicago O’Hare Hotel
Rosemont, IL

Matters of the Heart
Lindsay Saleski, DO, MBA

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Name of CME Activity: ACOFP Intensive Update and Board Review in Osteopathic Family Medicine
Dates and Location of CME Activity: August 20-23, 2015, Loews Chicago O'Hare Hotel, Rosemont, IL

**Topic(s):**
- EKG Case Presentations
  - Friday, 8/21/15  8:00-8:30am

**Matters of the Heart**
- Friday, 8/21/15  1:30-2:00pm

**Table Trainer - OMT Breakout Session #4: OMT for Extremities**
- Friday, 8/21/15  2:45-4:15pm & 4:30-6:00pm
- Saturday, 8/22/15  8:30-10:00am & 10:15-11:45 am

- Saturday, 8/22/15  6:30-9:30pm

**Name of Faculty/Moderator:** Lindsay Saleski, DO, MBA

**DISCLOSURE OF FINANCIAL RELATIONSHIPS WITHIN 12 MONTHS OF DATE OF THIS FORM**

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<table>
<thead>
<tr>
<th>Organization With Which Relationship Exists</th>
<th>Clinical Area Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My husband works at Becton Dickinson</td>
<td>makes needles &amp; test tubes</td>
</tr>
<tr>
<td>2.</td>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
<td>3.</td>
</tr>
<tr>
<td>4.</td>
<td>4.</td>
</tr>
</tbody>
</table>

*If you checked “Speakers’ Bureaus” in item B, please continue:

1. Did you participate in company-provided speaker training related to your proposed topic?  □ Yes □ No
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**Signature:**

Lindsay Saleski, DO, MBA

**Date:** 7/8/15

Please fax this form to ACOFP at 866-328-1835 or email to joank@acofp.org as soon as possible.

**Deadline:** July 10, 2015
Matters of the Heart

Case # 1

A 56 year old male with past medical history of non-insulin requiring type 2 diabetes presents to your office for routine follow up. He has no history of tobacco use. His medications include a statin, an ace-inhibitor, a thiazide diuretic, metformin and aspirin. His most recent fasting lipid panel shows an LDL of 210 mg/dL. What are the goals for his treatment and what therapies will you use to get there?

Hyperlipidemia

Abnormalities of lipoprotein metabolism include:
- elevations of total cholesterol, LDL-C, or triglycerides (TG)
- deficiencies of HDL-C
Can be acquired or familial
Causes → CHD and Stroke
USPSTF “increased risk” factors:
- Diabetes
- Previous personal history of CHD
- Other clinical forms of atherosclerotic disease
- Tobacco use
- Hypertension
- A family history of cardiovascular disease before age 50 in male relatives or age 60 in female relatives
- Obesity (BMI ≥ 30)

http://www.uspreventiveservicestaskforce.org/uspstf08/lipid/lipidrs.htm
Screening Recommendations

- U.S. Preventive Services Task Force (USPSTF) Recommendations
  - Screening Men
    - Grade: A recommendation: screening men aged 35 and older for lipid disorders
    - Grade: B recommendation: screening men aged 20 to 35 for lipid disorders if they are at increased risk for coronary heart disease.
  - Screening Women
    - Grade: A recommendation: screening women aged 45 and older for lipid disorders if they are at increased risk for coronary heart disease
    - Grade: B recommendation: screening women aged 20 to 45 for lipid disorders if they are at increased risk for coronary heart disease.
  - Screening Young Men and All Women NOT at Increased Risk
    - Grade: C recommendation: no recommendation for or against routine screening for lipid disorders in men aged 20 to 35, or in women aged 20 and older
  - Screening tests
    - Total cholesterol and HDL-C
    - Calculated LDL (total cholesterol - HDL - TG/5)

http://www.uspreventiveservicestaskforce.org/uspstf08/lipid/lipidrs.htm

ATP III – “Treat to Target”

- Increased LDL \( \rightarrow \) atherosclerosis/CHD
- HDL goal of greater than 40 mg/dl
  - \( > 60\text{mg/dl} \) is negative risk factor
- Calculate Framingham Risk Score
  - 10 year risk of cardiac event
- Therapeutic lifestyle changes
  - Diet, physical activity and weight loss
- Drug therapy with specific goals Statin therapy
  - Addition of secondary agents if goals not reached

ATP III (r) LDL Goals

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>LDL goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Risk: CHD or risk equivalents (10 year &gt;20%)</td>
<td>&lt;70</td>
</tr>
<tr>
<td>Moderately high risk: 2+ risk factors (10 year =10-20%)</td>
<td>100</td>
</tr>
<tr>
<td>Moderate risk: 2+ risk factors (10 year &lt;10%)</td>
<td>130</td>
</tr>
<tr>
<td>Lower risk: 0-1 risk factor</td>
<td>160</td>
</tr>
</tbody>
</table>

Circulation. 2004;110:227-239
2013 ACC/AHA Guidelines

- **Four Statin Benefit Groups**
  1. Patients with clinical ASCVD without NYHA Class II-IV heart failure or receiving hemodialysis
  2. Patients with primary elevations in LDL-C ≥ 190 mg/dl
  3. Patients 40-75 years of age with DM and LDL-C of 70-189 mg/dl without clinical ASCVD
  4. Patients 40-75 years of age without clinical ASCVD or DM with LDL-C 70-189 mg/dl and have an estimated 10 year ASCVD risk of ≥ 7.5%

- **Use Pooled Cohort Equations For ASCVD risk prediction**

- No LDL or HDL treatment targets

**Statin Therapy**

- The maximum tolerated statin intensity in persons who will benefit reduces ASCVD events

- **No specific target LDL levels**

- **High Intensity**
  - Daily dosage lowers LDL-C by approximately ≥ 50%
    - Atorvastatin (Lipitor), 40† to 80 mg
    - Rosuvastatin (Crestor), 20 (40) mg

- **Moderate Intensity Therapy**
  - Daily dosage lowers LDL-C by approximately 30% to 50%
    - Atorvastatin, 10 (20) mg
    - Rosuvastatin, (5) 10 mg
    - Simvastatin (Zocor), 20 to 40 mg

- **Low Intensity**
  - Daily dosage lowers LDL-C by < 30% average

**Case # 2**

- A 47-year-old male presents to your office for his yearly checkup. He is 5 foot 10 inches tall, weighs 250 pounds, smokes 2 packs of cigarettes a day and “slams” 12 oz of whisky a day. He is a truck driver who is on the road a lot and frequently consumes fast food. On physical exam his blood pressure is 180/105 mm Hg.
Hypertension

- Two or more properly measured readings at each of two or more visits after initial screen:
  - Normal: systolic <120 mmHg and diastolic <80 mmHg
  - Prehypertension: systolic 120 to 139 mmHg or diastolic 80 to 89 mmHg
  - Hypertension:
    - Stage 1: systolic 140 to 159 mmHg or diastolic 90 to 99 mmHg
    - Stage 2: systolic ≥160 or diastolic ≥100 mmHg

- Primary Hypertension
- Secondary Hypertension
  - OCP, renal disease, drug induced, pheochromocytoma, Cushing’s syndrome, OSA, endocrine disorders

Hypertension

- Risk Factors
  - Race – blacks
  - Family history
  - Excess sodium intake
  - Excess ETOH intake
  - Obesity and weight gain
  - Physical inactivity
  - Dyslipidemia
- Complications -increased in risk at BP above 115/75 mmHg
  - Premature cardiovascular disease – MC risk factor
  - Ischemic Stroke – MC risk factor
  - Heart failure
  - Intracerebral hemorrhage
  - Chronic kidney disease

Hypertension

- USPSTF Recommendations for BP screening:
  - Screen in adults age 18 or older
  - Optimal interval for screening not known
  - Every 2 years with BP <120/80
  - Every year with SBP of 120-139 mmHg or DBP of 80-90 mmHg

- Treatment: JNC 8
  - Lifestyle modifications
  - At ages 60 and older initiate pharmacologic tx at 150/90 mmHg
  - Age < 60 initiate pharmacologic treatment at 140/90
  - Age > 60 with diabetes or CKD, initiate pharmacologic treatment at 140/90
Hypertension

- Specific pharmacologic Treatment: JNC 8
  - General population and those with DM initial treatment:
    - Thiazide-type diuretic
    - Calcium channel blocker
    - ACE or ARB
  - General black population and those with DM initial treatment:
    - Thiazide-type diuretic or a CCB
  - In the population ages 18 or older with CKD and HTN:
    - ACE inhibitor or an ARB to improve kidney outcomes
  - If goal BP is not reached within a month of treatment
    - Increase the dose of the initial drug or add a second drug

Case # 3

- A 56 year old male states during the past few weeks he has been having dyspnea on exertion and near syncope. He often feels his heart skip a beat. He has a past medical history of type II diabetes, hypertension, hyperlipidemia and he does not smoke. He is currently taking simvastatin, ace-inhibitor, hydrochlorothiazide, metformin and aspirin.

Atrial Fibrillation

- Atrial fibrillation is the most common cardiac arrhythmia
  - "Irregularly irregular" pattern
  - No distinct P waves
- Causes:
  - Cardiac surgery
  - MI
  - CHF
  - Pericarditis
  - Alcoholism
  - Hyperthyroidism
  - Pulmonary Embolism
- Adverse consequences:
  - Reduction in cardiac output & thrombus formation → CVA
  - Si/Sx: palpitations, fatigue, dyspnea, dizziness, diaphoresis, heart failure, CVA
Atrial Fibrillation

- Rate control
  - Resting heart rate of less than 80 bpm at rest and 110 with exercise
  - Beta blockers and nondihydropyridine calcium channel blockers
- Rhythm Control: Cardioversion
  - Electrical
  - Anticoagulate 3 weeks before 4 weeks after
  - Pharmacologic
    - Medication choice depends on cardiac history
- Anticoagulation therapy to prevent CVA
  - CVA risk is 5% per year
  - CHA₂DS₂-VASc
  - Outpatient Bleeding Risk Index
  - Warfarin is superior to aspirin plus clopidogrel in CVA prevention
    - Goal INR 2-3

Atrial Fibrillation - Treatment

<table>
<thead>
<tr>
<th>Risk of Stroke Stratified by CHA₂DS₂ Score</th>
<th>Adjusted Stroke Rate</th>
<th>Risk Level</th>
<th>Recommended Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1.9</td>
<td>Low</td>
<td>ASA 81-325 mg</td>
</tr>
<tr>
<td>1</td>
<td>2.8</td>
<td>Low</td>
<td>Warfarin target INR of 2-3</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>moderate</td>
<td>Warfarin target INR of 2-3</td>
</tr>
<tr>
<td>3</td>
<td>5.9</td>
<td>moderate</td>
<td>Warfarin target INR of 2-3</td>
</tr>
<tr>
<td>4</td>
<td>8.5</td>
<td>high</td>
<td>Warfarin target INR of 2-3</td>
</tr>
<tr>
<td>5</td>
<td>12.5</td>
<td>high</td>
<td>Warfarin target INR of 2-3</td>
</tr>
<tr>
<td>6</td>
<td>18.2</td>
<td>high</td>
<td>Warfarin target INR of 2-3</td>
</tr>
</tbody>
</table>

- Patients less than 60 years of age with no heart disease = ASA or no therapy
- Therapy options:
  - ASA
  - ASA & clopidogrel (Plavix)
  - dabigatran (Pradaxa)
  - rivaroxaban (Xarelto)
  - warfarin (Coumadin)
  - apixaban (Eliquis)
Case #4

- 65 yo male with pmhx HTN and CAD with one previous MI presents with 1 month history of SOB with exertion and peripheral edema. His shortness of breath has gotten slightly worse over the last week and he has had to sleep propped up on 2 pillows at night. What are you going to consider regarding your workup for this patient.

Congestive Heart Failure

- AHA and ACC: “a complex clinical syndrome that can result from any structural or functional cardiac disorder that impairs the ability of the ventricle to fill with or eject blood.”

- Systolic ➔ CO is decreased directly through reduced left ventricular function; EF ≥40%
- Diastolic ➔ CO is compromised by poor ventricular compliance, impaired relaxation, and worsened end-diastolic pressure; EF ≥ 50%

Etiology

- Causes/risk factors:
  - CAD (60 to 70 %)
  - Hypertension
  - Valvular
  - Diabetes mellitus → cardiomyopathy
  - Smoking
  - Physical inactivity
  - Obesity
  - Lower socioeconomic status
Evaluation

- History
- Physical Exam:
  - Peripheral edema
  - Pulmonary Rales
  - JVD
  - Hepatojugular reflex
  - 3rd heart sound (ventricular filling gallop)
  - Displaced cardiac apex
- Clinical Diagnosis ➔ Framingham criteria
- NYHA Classification

Laboratory and Diagnostic Testing

- CBC, UA, lipid profile, BMP, TSH, LFTs
- BNP, N-terminal pro-BNP
  - Can rule out CHF
  - Outpatient targets of a BNP level less than 100 pg per mL (100 ng per L) and an N-terminal pro-BNP level less than 1,700 pg per mL (1,700 ng per L)
- Chest X-ray (heart size, pulmonary congestion)
- EKG
- 2-D ECHO with Doppler flow

Stages of CHF

- NYHA Functional Classification
  - I: No limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, dyspnea (shortness of breath)
  - II: Slight limitation of physical activity. Comfortable at rest. Ordinary physical activity results in fatigue, palpitation, dyspnea (shortness of breath).
  - III: Marked limitation of physical activity. Comfortable at rest. Less than ordinary activity causes fatigue, palpitation, or dyspnea.
  - IV: Unable to carry on any physical activity without discomfort. Symptoms of heart failure at rest. If any physical activity is undertaken, discomfort increases.
- ACCF/AHA/Stages of HF
  - A: No objective evidence of cardiovascular disease. No symptoms and no limitation in ordinary physical activity.
  - C: Objective evidence of moderately severe cardiovascular disease. Marked limitation in activity due to symptoms, even during less-than-ordinary activity. Comfortable only at rest.
  - D: Objective evidence of severe cardiovascular disease. Severe limitations. Experiences symptoms even while at rest.

http://www.heart.org/HEARTORG/Conditions/HeartFailure/AboutHeartFailure/Classes-of-Heart-Failure_UCM_306328_Article.jsp
Treatment

- **Stage A:**
  - Control HTN (diuretics, ACE, ARB, B-blockers)
  - Control Hyperlipidemia (statins)

- **Stage B:**
  - Control HTN: ACE and B-blocker
  - Consider cardioverter-defibrillator
  - Avoid nondihydropyridine calcium channel blockers

- **Stage C:** Symptom Management
  - Diuretics
  - Aldosterone receptor antagonists
  - Combo therapy with isosorbide dinitrate and hydralazine, digoxin, anticoagulants, and omega-3 polyunsaturated fatty acids

- Lifestyle modifications for all stages!

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Stages in the development of HF and recommended therapy by stage.

*Clyde W. Yancy et al. Circulation. 2013;128:e240-e327*

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**Case #5**

- A 66 year old male with PMHx of type 2 DM and current tobacco use presents to your office with complaints of left leg pain with walking. He states he can only walk about 50 feet without feeling a cramp-like feeling in his legs. The pain relieves with rest.
<table>
<thead>
<tr>
<th>Peripheral Arterial Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Atherosclerosis leading to narrowing of the major arteries distal to the aortic arch</strong></td>
</tr>
<tr>
<td><strong>MC presenting symptom is claudication (10%)</strong></td>
</tr>
<tr>
<td><strong>Risk factors:</strong></td>
</tr>
<tr>
<td>- Older age</td>
</tr>
<tr>
<td>- Smoking</td>
</tr>
<tr>
<td>- Diabetes mellitus</td>
</tr>
<tr>
<td>- Hypertension</td>
</tr>
<tr>
<td>- Hyperlipidemia</td>
</tr>
<tr>
<td>- Renal insufficiency</td>
</tr>
<tr>
<td>- Non-Hispanic black race</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Peripheral Arterial Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical examination:</strong></td>
</tr>
<tr>
<td>- Cool skin</td>
</tr>
<tr>
<td>- Non-palpable distal pulses</td>
</tr>
<tr>
<td>- Auscultation of bruits over iliac, femoral, or popliteal arteries</td>
</tr>
<tr>
<td>- Abnormal capillary refill time</td>
</tr>
<tr>
<td>- Non-healing wounds, absence of hair</td>
</tr>
<tr>
<td>- Shiny skin and pallor</td>
</tr>
<tr>
<td><strong>Diagnosis: ankle-brachial index [ABI] of less than 0.9</strong></td>
</tr>
<tr>
<td>- CTA, MRA for surgical considerations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Peripheral Arterial Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Screening:</strong></td>
</tr>
<tr>
<td>- The USPSTF recommends against routine screening for peripheral arterial disease [Grade D]</td>
</tr>
<tr>
<td>- American Diabetes Association – diabetics over age 50</td>
</tr>
<tr>
<td>- ACC/AHA – high risk population screening</td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
</tr>
<tr>
<td>- Lifestyle modifications – smoking cessation</td>
</tr>
<tr>
<td>- Medication</td>
</tr>
<tr>
<td>- Statins</td>
</tr>
<tr>
<td>- ASA (75-325mg) or Plavix 75mg</td>
</tr>
<tr>
<td>- Cilostazol</td>
</tr>
<tr>
<td>- Pentoxifylline</td>
</tr>
<tr>
<td>- Ramipril</td>
</tr>
<tr>
<td>- Surgery for lifestyle limiting claudication</td>
</tr>
</tbody>
</table>
A 64-year-old man presents for a routine wellness examination. His blood pressure and cholesterol level are within normal limits, and he has no history of tobacco use or heart disease. He is fearful of having a stroke and questions you if he should be screened.

**Carotid Artery Disease**

- Atherosclerotic narrowing of the proximal internal carotid artery
- Risk factors:
  - Male sex
  - HTN
  - Smoking
  - Hyperlipidemia
  - Diabetes
- Diagnosis:
  - Exam: listen for carotid bruits
  - Carotid duplex ultrasonography
  - Magnetic resonance angiography, contrast-enhanced MRA, and computed tomographic angiography

**Screening:**
- USPSTF & AHA/ASA do not recommend screening for general population and asymptomatic patients
- Joint guidelines say screening “may be considered” for atx patients with known atherosclerotic disease

**Treatment:**
- Reduction of risk factors for atherosclerosis
  - Goal BP <140/90 mmHg
  - Goal LDL <100 or optional <70 with a statin
- Antiplatelet drugs
  - ASA 75-325mg daily
- Carotid endarterectomy
- Carotid stenting
Case # 7

A 60 year-old male recently moved to town and comes to your office for his initial screening visit. He has seen a family doctor in the past, but not on a regular basis. He is a ½ ppd smoker and social drinker. He thinks his blood pressure might have been elevated in the past, but he never followed up for treatment. What screening recommendations do you have for this patient?

Screening

- Blood pressure:
  - Annually [USPSTF A]
- Lipids:
  - Every 5 years through age 75 [USPSTF A]
  - Screening interval is uncertain
  - Age to stop not established
- Aspirin use:
  - (81mg) for prevention of CHD age 45-79 [USPSTF A]
- AAA
  - USPSTF:
    - Men 65-75 who have ever smoked – [USPSTF B]
    - Men 65-75 who have never smoked – [USPSTF C]
    - Screening women –[USPSTF D]

References

- Hyperlipidemia
- PAD
Hyperlipidemia Question

A 56 year old male with past medical history of non-insulin dependent type 2 diabetes presents to your office for routine follow up. He has no history of tobacco use. His medications include a statin, an ace-inhibitor, a thiazide diuretic, metformin and aspirin. His most recent fasting lipid panel shows an LDL of 210 mg/dL. According to ATP III guidelines, the LDL goal for this patient should be:

A. 160
B. 130 with option of 100
C. 100
D. 70
E. 100 with option of 70
Hyperlipidemia Answer

The correct answer is E.

- Reference
  - ATP III

Hypertension Question

A 56 year old male with past medical history of non-insulin requiring type 2 diabetes presents to your office for routine follow up. He has no history of tobacco use. His medications include a statin, an ace-inhibitor, a thiazide diuretic and an aspirin. His blood pressure and cholesterol are at goal.

According to JNC VIII guidelines, the blood pressure goal for this patient should be:

A. 140/90
B. 135/85
C. 130/80
D. 120/80
E. 115/75

Hypertension Answer

Correct answer is A.

- Reference
  - JNC VIII
### Atrial Fibrillation Question

A 65 year old male with past medical history of hypertension and non-insulin requiring type 2 diabetes presents to your office for routine follow up. He has no history of tobacco use. His medications include a statin, an ace-inhibitor, a thiazide diuretic and an aspirin. His blood pressure and cholesterol are at goal. He states in the past few weeks he has been getting dyspnic on exertion and he often feels his heart skip a beat. He has no other medical history.

The CHADS2 score on this patient is:

<table>
<thead>
<tr>
<th>Option</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
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</tr>
<tr>
<td>B.</td>
<td>1</td>
</tr>
<tr>
<td>C.</td>
<td>2</td>
</tr>
<tr>
<td>D.</td>
<td>3</td>
</tr>
<tr>
<td>E.</td>
<td>4</td>
</tr>
</tbody>
</table>

### Atrial Fibrillation Answer

The correct answer is C.

**References**

- Gutierrez et al. Atrial Fibrillation: Diagnosis and Treatment. Am Fam Physician. 2011; 83 (1):61-68

### CHF Question

- 65 yo male with pmhx HTN, Hyperlipidemia, CHF and CAD with one previous MI presents with 1 month history of SOB with exertion and peripheral edema. His shortness of breath has gotten slightly worse over the last week and he experiences palpitations and fatigue when walking from the kitchen to bathroom. The patient is already on ASA, ACE and a Statin. He denies CP, fevers, chills or cough. Due to his relatively acute decomposition, what would your evaluation and treatment possibly include?

<table>
<thead>
<tr>
<th>Option</th>
<th>Evaluation/Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>ECHO</td>
</tr>
<tr>
<td>B.</td>
<td>Chest X-ray</td>
</tr>
<tr>
<td>C.</td>
<td>BNP</td>
</tr>
<tr>
<td>D.</td>
<td>Addition of diuretic to medication regimen</td>
</tr>
<tr>
<td>E.</td>
<td>All of the above</td>
</tr>
</tbody>
</table>
CHF Answer

The correct answer is E.

- This patient has CHF NYHA III: “Less than ordinary activity causes fatigue, palpitation, or dyspnea.”

Recommendations for evaluation and treatment include measurement of BNP and ECHO to compare to baseline, CXR to determine heart size and pulmonary edema, and addition of at least lasix to the medication regimen for diuresis.


Peripheral Arterial Disease Question

A 66 year old male with PMHx of type 2 DM and current tobacco use presents to your office with complaints of left leg pain with walking. He states he can only walk about 50 feet without feeling a cramp like feeling in his legs. The pain relieves with rest.

You perform an ankle-brachial index. What is the measurement that indicates peripheral vascular disease?

A. Greater than 0.1
B. Greater than 0.9
C. Less than 0.9
D. Less than 1.1
E. Greater than 0.5

Peripheral Arterial Disease Answer

The correct answer is C.

CAD Question

A 64-year-old man presents for a routine wellness examination. His blood pressure and cholesterol levels are within normal limits, and he has no history of tobacco use or heart disease. He is fearful of having a stroke and questions you if he should be screened for carotid artery stenosis.

Based on the USPSTF recommendations, the correct response to this patient’s question is:

A. Asymptomatic men older than 60 years should be screened once for carotid artery stenosis.
B. Men older than 65 should be screened annually for carotid artery stenosis.
C. Men should be screened for carotid artery stenosis every five years after 70 years of age.
D. Screening for asymptomatic carotid artery stenosis in the general adult population is not recommended.
E. The benefits of screening asymptomatic adults for carotid artery stenosis outweigh the potential harms of further testing and treatment.

CAD Answer

The correct answer is D.

- Reference