

# **Patient Encounters in the Primary Care Setting**

*Carmine D'Amico, D.O.*

## **Clinical Cases**

### **Overview**

- **Learning objectives**
- **Clinical case presentations**
- **Questions for audience participation**

## Clinical Cases

## Learning Objectives

1. Realize that patients with undiagnosed cardiovascular disease will sometimes present to their primary care physician's office.
2. Appreciate that web-based resources are available that can be very useful to health care providers in managing patients with cardiovascular disease.
3. Apply current practice guidelines to clinical scenarios.

## Cardiovascular Cases

### Case 1

A 60-year-old female presents to your office as a new patient. She recently moved here from out of town and she would like to establish care with you. What has prompted her to seek medical attention at this time is a 1-2 week history of palpitations (feeling like her heart was stopping) associated with lightheadedness and chest tightness. These symptoms seem to be getting worse, although she denies syncope. Her medical history is significant for osteoarthritis, hypertension, venous insufficiency, and schizophrenia. She has no known allergies. Her medications include meloxicam 15 mg PO daily, amlodipine 10 mg PO daily, furosemide 80 mg PO daily, metolazone 2.5 mg PO daily, and thioridazine 200 mg PO BID. She smokes cigarettes, and she has a 40-pack-year history of smoking (one pack of cigarettes per day for 40 years). She denies use of alcohol or illicit drugs. She has had no previous surgeries. Her family history is unknown, as she is adopted.

## Cardiovascular Cases

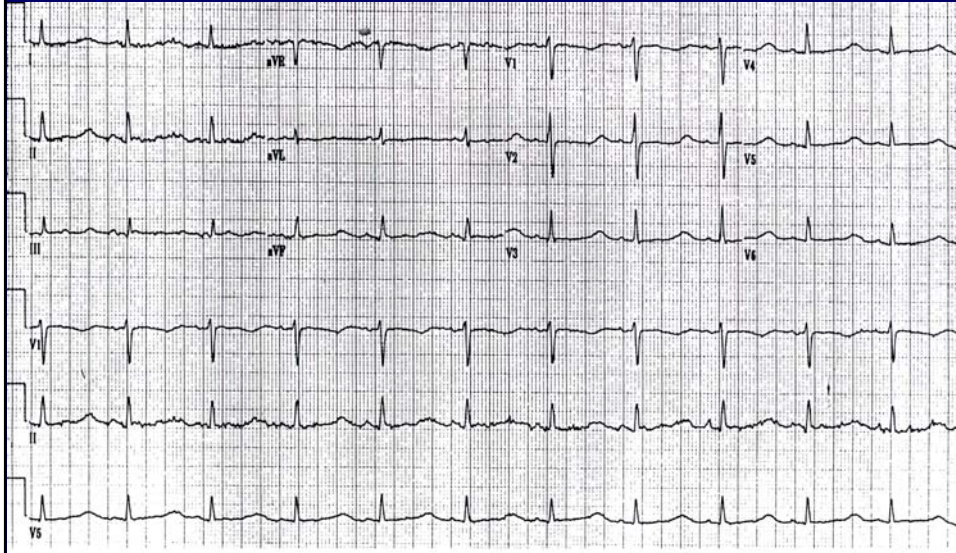
## Case 1 (cont.)

Physical examination reveals: blood pressure 126/82 mmHg, pulse 64 bpm, and respirations 12 per min. There is no jugular venous distension. There are no carotid bruits. Lungs are clear to auscultation bilaterally. Cardiac rhythm is regular. S1 and S2 are normal. There is no third or fourth heart sound. There is no cardiac murmur. There is no pericardial friction rub. The abdomen is soft and nontender, with no palpable masses or organomegaly. Bowel sounds are active. There is mild pitting edema of the distal aspects of both lower extremities. Stasis dermatitis changes are present on the distal aspects of both lower extremities. Distal pulses are intact and bilaterally equal in both the upper and the lower extremities. There is no evidence of gross motor or sensory neurological deficits.

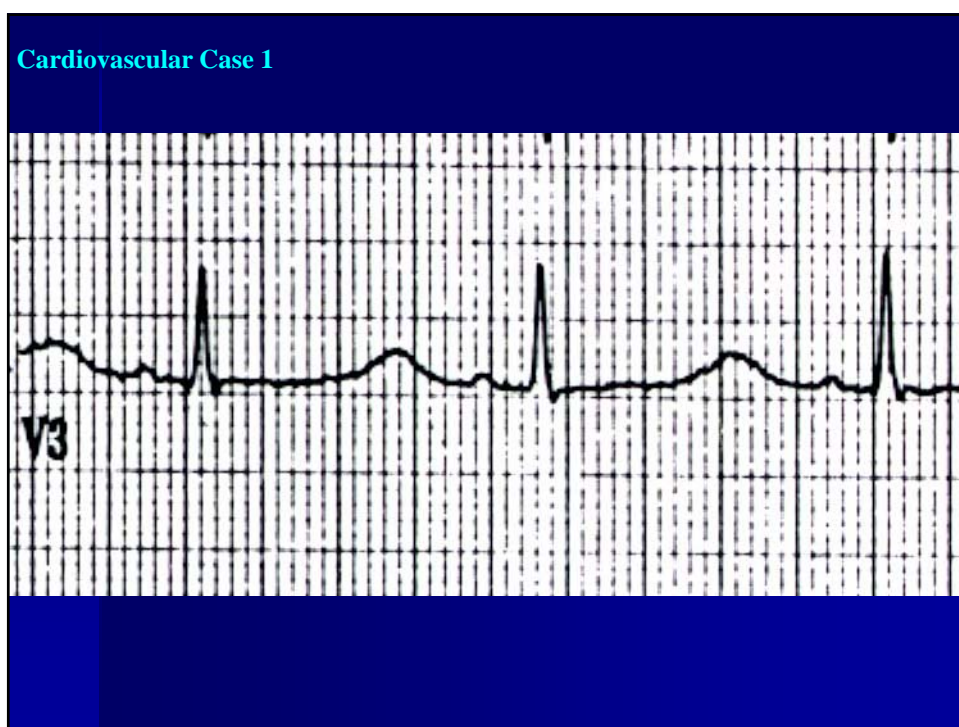
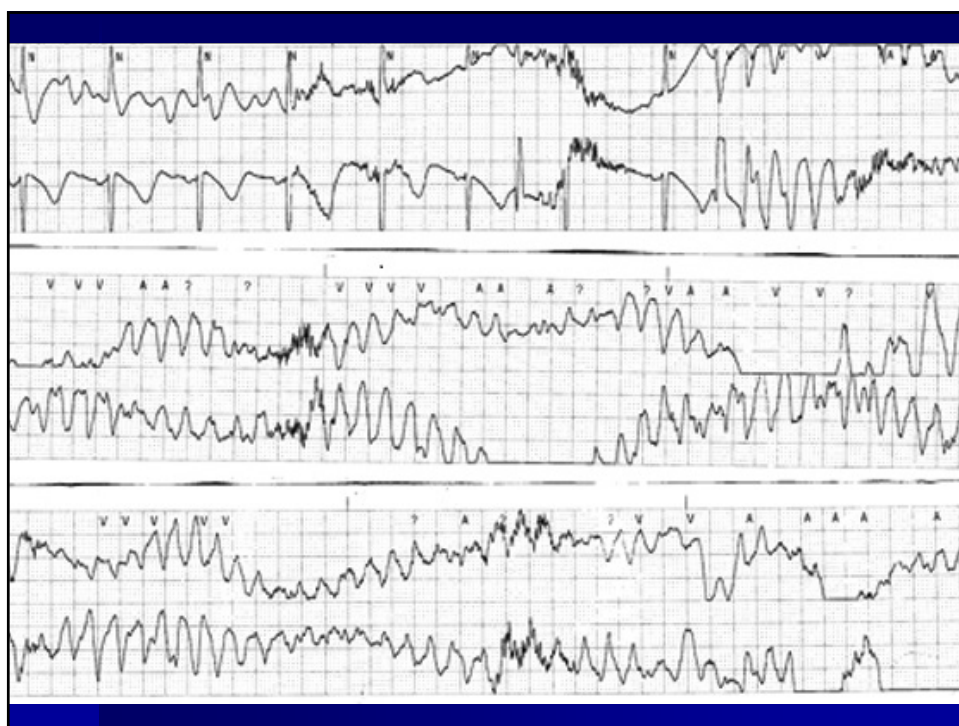
## Cardiovascular Cases

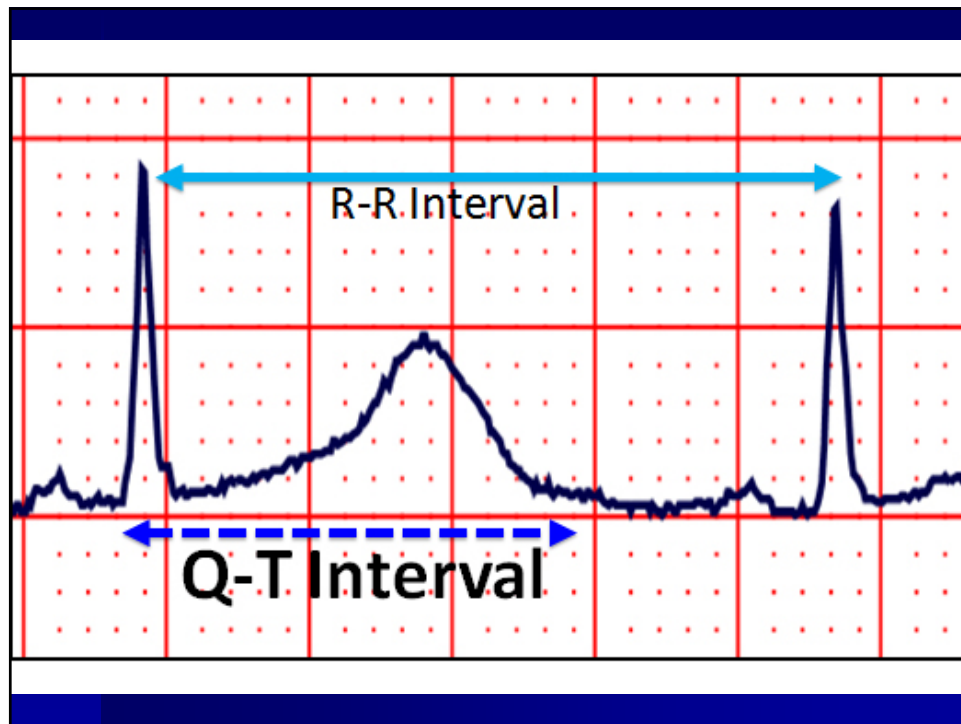
## Case 1 (cont.)

Prior to sending this patient elsewhere for further evaluation, is there anything else that can be done in the office that could be of value in determining the cause of her symptoms?

**Cardiovascular Case 1****Cardiovascular Cases****Case 1 (cont.)**

**The following rhythm change occurred 29 minutes after the preceding EKG was recorded...**





Cardiovascular Cases

Case 1 (cont.)

Is any additional testing indicated at this time?

## Cardiovascular Case 1

Glucose	(65 - 99 mg/dL)	108
BUN	(7 - 18 mg/dL)	32
Creatinine	(0.7 - 1.3 mg/dL)	1.2
Na+	(135 - 145 mmol/L)	131
K+	(3.5 - 5.0 mmol/L)	2.1
Cl-	(101 - 111 mmol/L)	96
CO2	(21 - 31 mmol/L)	35
Calcium	(8.5 - 10.5 mg/dL)	9.9
Phosphorous	(2.5 - 4.5 mg/dL)	3.7
Uric acid	(2.5 - 8.0 mg/dL)	5
Total protein	(6.4 - 8.2 g/dL)	6.4
Albumin	(3.4 - 5.0 g/dL)	3.5
Globulin	(2.3 - 3.5 g/dL)	2.9
A / G ratio	(0.9 - 1.6)	1.2
Total bilirubin	(0.2 - 1.0 mg/dL)	0.8
Alk. Phosphatase	(50 - 136 U/L)	47
AST	(15 - 37 U/L)	60
ALT	(30 - 65 U/L)	45
LDH	(94 - 172 U/L)	146
Cholesterol	(0 - 200 mg/dL)	167
Triglycerides	(30 - 150 mg/dL)	169
HDL	(40 - 60 mg/dL)	46
LDL	(0 - 100 mg/dL)	87
Chol. / HDL ratio	(< 4.5)	3.6

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**Cardiovascular Cases****Case 1 (cont.)**

**How could this problem have been prevented?**

**Cardiovascular Cases****Case 2**

**A 46-year-old female presents for preoperative evaluation prior to elective total abdominal hysterectomy. Her medical history is significant for uterine fibroids, hypertension, and paroxysmal atrial fibrillation. An echocardiogram performed last month revealed normal left ventricular systolic function, mild tricuspid regurgitation, trace mitral regurgitation, and no significant structural abnormalities. Her medications include warfarin 2 mg PO daily and atenolol 25 mg PO BID. Her INR is 2.8. The remainder of her lab work (CBC and CMP) is within normal limits. Physical examination reveals: blood pressure 126/82 mmHg, pulse 80 bpm, and respirations 12 per min. There is no jugular venous distension, lungs are clear to auscultation bilaterally (no crackles or wheezes), cardiac rhythm is regular and there is no S3, S4, murmur, or rub. There is no peripheral edema.**



## Cardiovascular Cases

## Case 2 (cont.)

What is this patient's CHADS<sub>2</sub> score?

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4
- F. 5
- G. 6

## Atrial Fibrillation Anticoagulation

CHADS<sub>2</sub> Risk Stratification Scheme

Risk Factors		Score
<b>C</b>	<b>Congestive heart failure</b>	<b>1</b>
<b>H</b>	<b>Hypertension</b>	<b>1</b>
<b>A</b>	<b>Age ≥75 years</b>	<b>1</b>
<b>D</b>	<b>Diabetes mellitus</b>	<b>1</b>
<b>S<sub>2</sub></b>	<b>History of stroke or transient ischemic attack</b>	<b>2</b>

Rockson et al. *J Am Coll Cardiol.* 2004;43:929-935.

## Cardiovascular Cases

## Case 2 (cont.)

What is this patient's CHADS<sub>2</sub> score?

- A. 0
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## Cardiovascular Cases

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- A. 0
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- C. 2
- D. 3
- E. 4
- F. 5
- G. 6

## Atrial Fibrillation Anticoagulation

**CHADS<sub>2</sub> Risk Stratification Scheme (cont.)**

<b>Score</b>	<b>Recommended therapy</b>
<b>0</b>	<b>Aspirin (81 to 325 mg daily)</b>
<b>1</b>	<b>Aspirin (81 to 325 mg daily) or Warfarin (INR 2.0 – 3.0)</b>
<b>2 - 6</b>	<b>Warfarin (INR 2.0 – 3.0)</b>

Rockson et al. *J Am Coll Cardiol.* 2004;43:929-935.

## Cardiovascular Cases

**Case 2 (cont.)**What is this patient's CHA<sub>2</sub>DS<sub>2</sub>-VASc score?

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4
- F. 5
- G. 6
- H. 7
- I. 8
- J. 9

## Atrial Fibrillation Anticoagulation

**CHA<sub>2</sub>DS<sub>2</sub>-VASc Risk Stratification Scheme**

Risk Factors		Score
<b>C</b>	<b>Congestive heart failure</b>	<b>1</b>
<b>H</b>	<b>Hypertension</b>	<b>1</b>
<b>A<sub>2</sub></b>	<b>Age ≥75 years</b>	<b>2</b>
<b>D</b>	<b>Diabetes mellitus</b>	<b>1</b>
<b>S<sub>2</sub></b>	<b>History of stroke or transient ischemic attack</b>	<b>2</b>
<b>V</b>	<b>Vascular disease</b>	<b>1</b>
<b>A</b>	<b>Age 65 - 74 years</b>	<b>1</b>
<b>Sc</b>	<b>Sex category (female gender)</b>	<b>1</b>

Lip et al. *Chest*. 2010;137:263-272.

## Cardiovascular Cases

**Case 2 (cont.)**What is this patient's CHA<sub>2</sub>DS<sub>2</sub>-VASc score?

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4
- F. 5
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- H. 7
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## Cardiovascular Cases

## Case 2 (cont.)

What is this patient's CHA<sub>2</sub>DS<sub>2</sub>-VASc score?

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4
- F. 5
- G. 6
- H. 7
- I. 8
- J. 9

## Atrial Fibrillation Anticoagulation

CHA<sub>2</sub>DS<sub>2</sub>-VASc Risk Stratification Scheme (cont.)

Score	Recommended therapy
0	"It is reasonable to omit antithrombotic therapy."
1	**** "No antithrombotic therapy, treatment with oral anticoagulant, or aspirin may be considered."
> 2	"Oral anticoagulants recommended."

January et al. *J Am Coll Cardiol*. 2014;64(21):2246-2280.

## Atrial Fibrillation Anticoagulation

**CHA<sub>2</sub>DS<sub>2</sub>-VASc Score of “1”:**

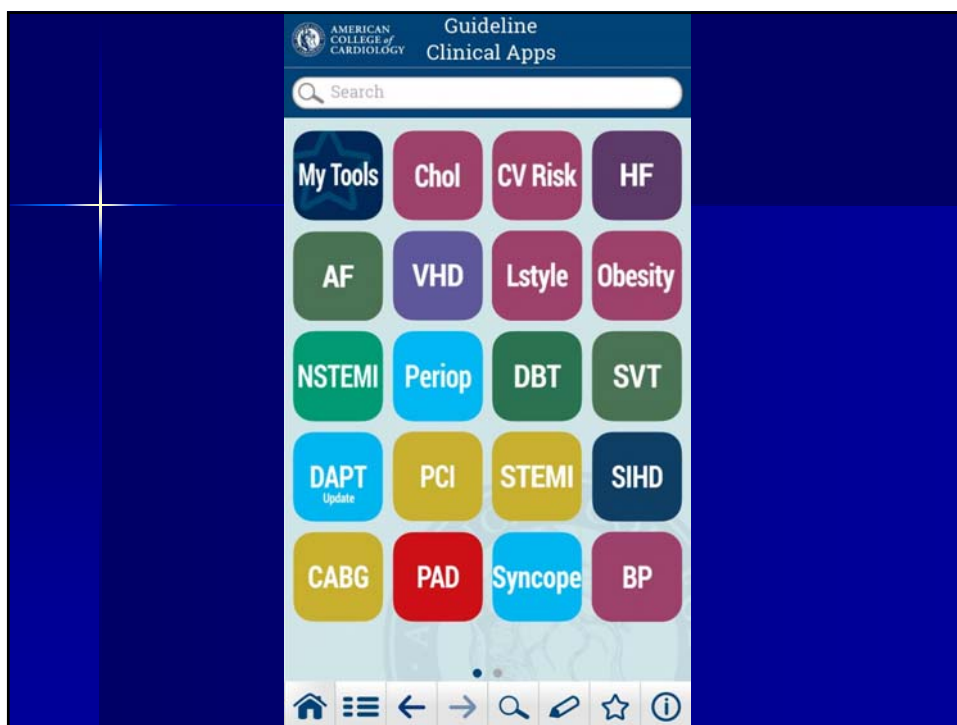
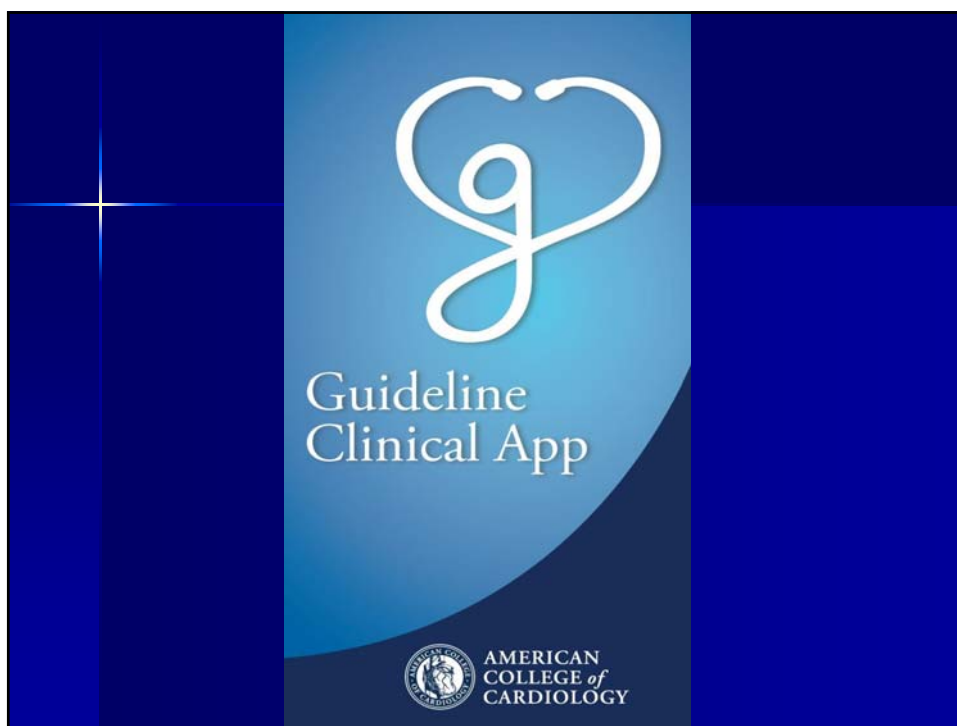
\*\*\* Females with a CHA<sub>2</sub>DS<sub>2</sub>-VASc Score of “1” are probably truly low-risk for stroke (and may not require anticoagulation for nonvalvular AF), whereas males with a CHA<sub>2</sub>DS<sub>2</sub>-VASc Score of “1” are probably at higher risk for stroke (and thus probably should be anticoagulated).

Kovacs et al. *J Am Coll Cardiol*. 2015;65(13):1340-1360.

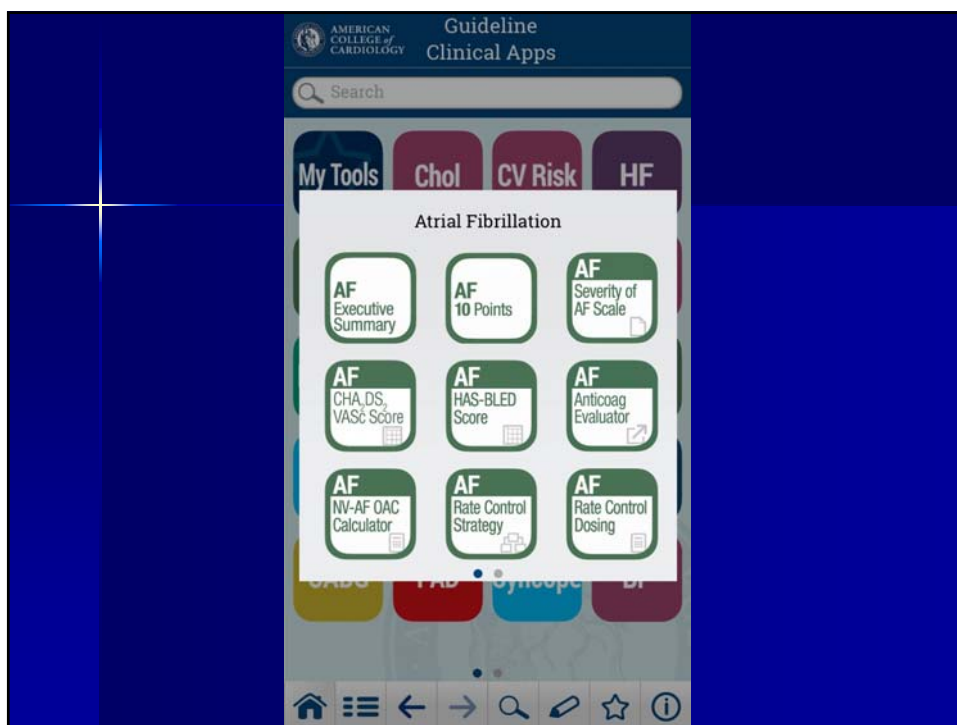
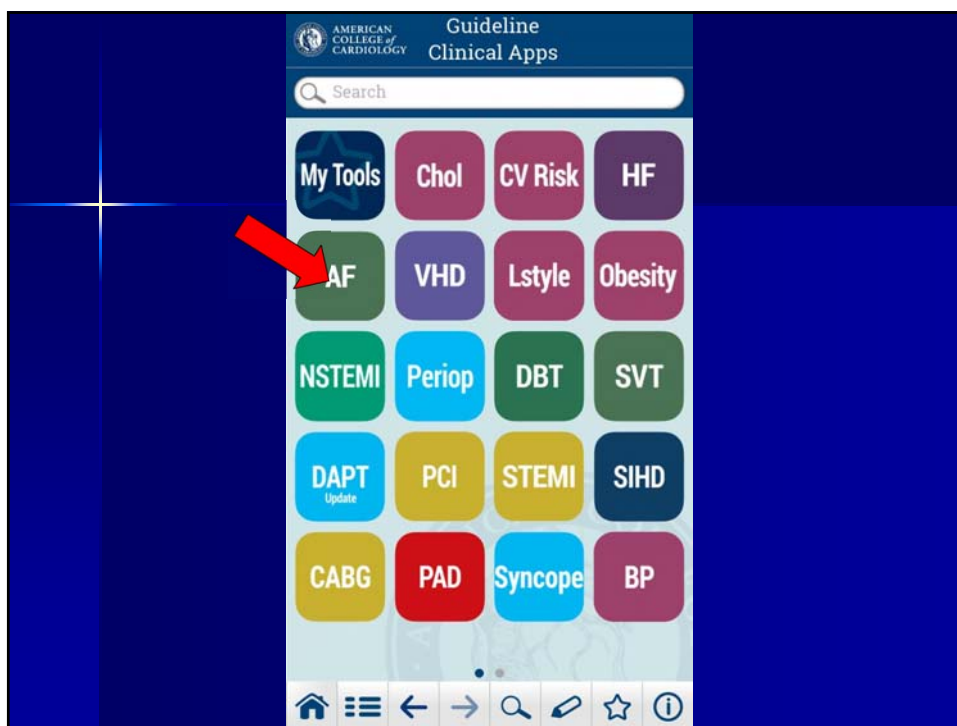
## Cardiovascular Cases

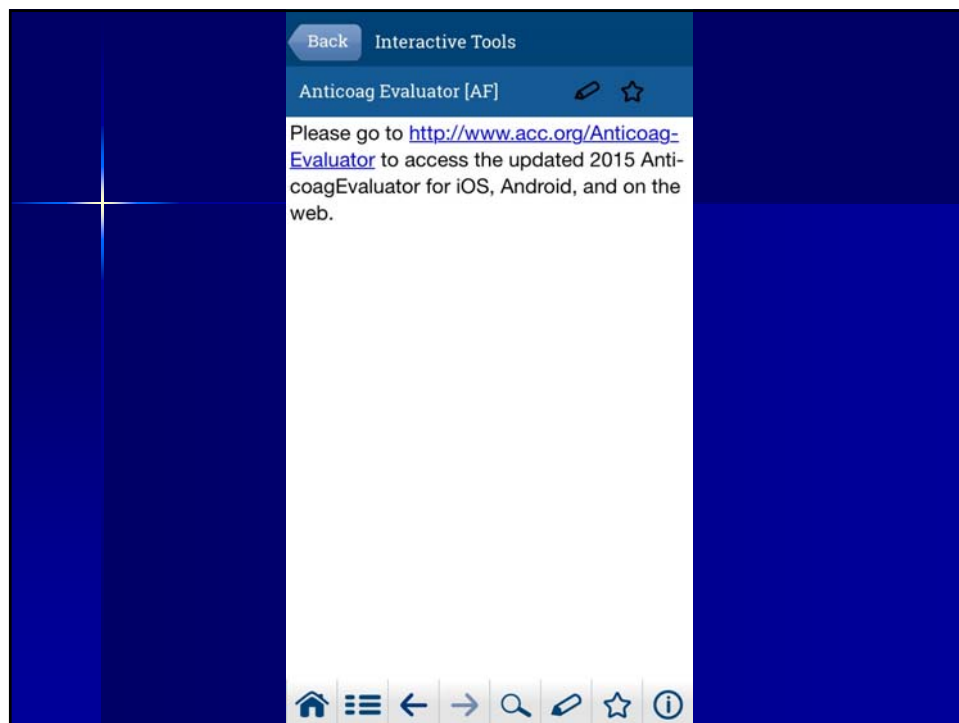
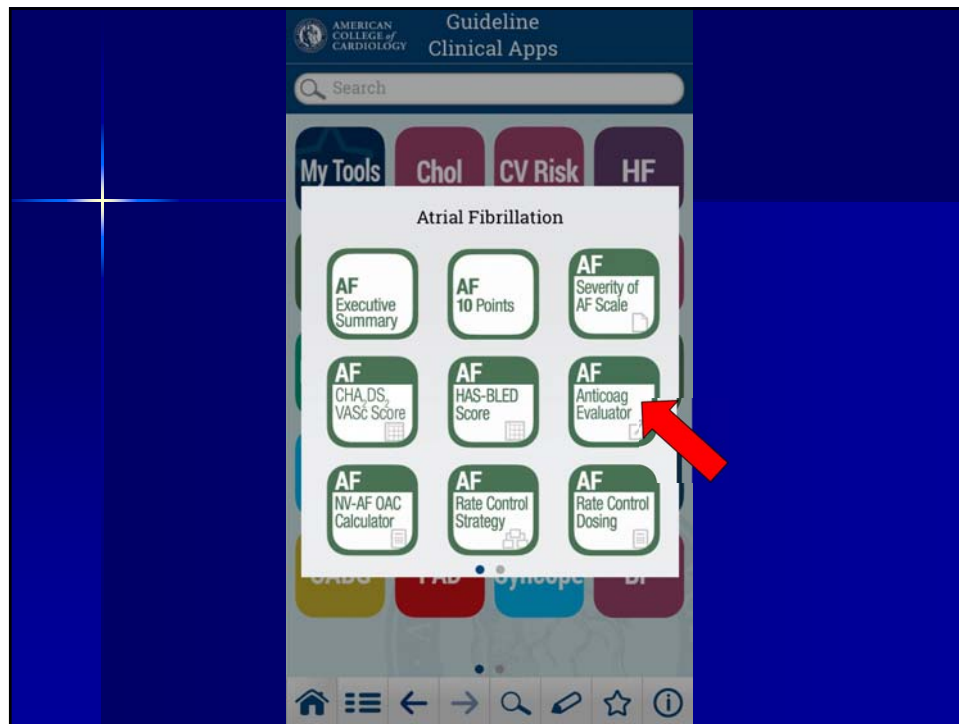
**2017 ACC/AHA Guidelines****Current ACC Guidelines (AF and many others):**

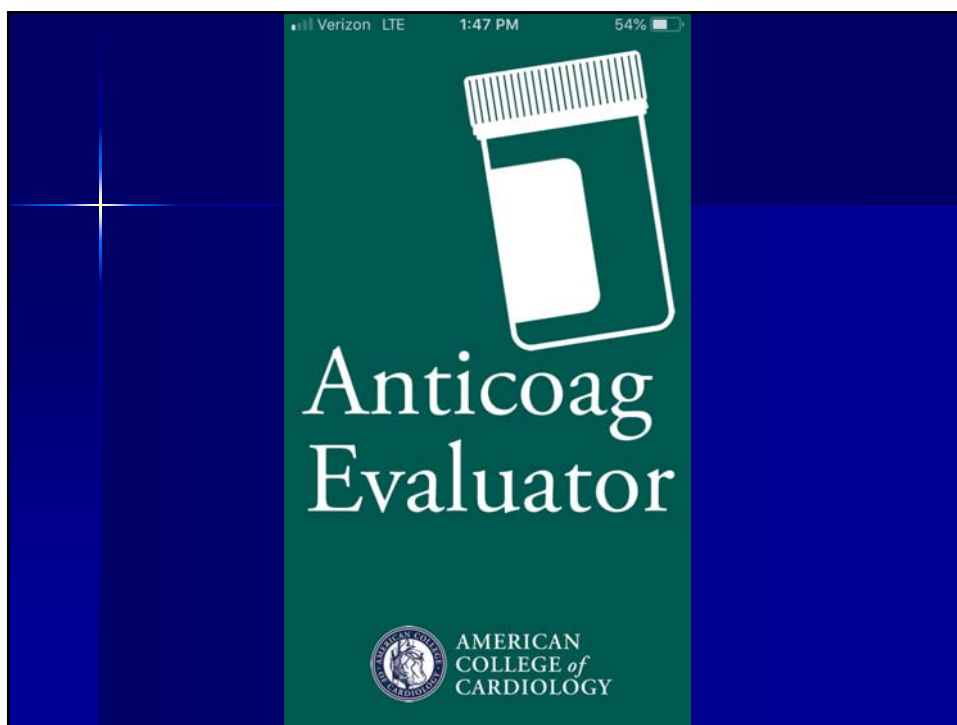
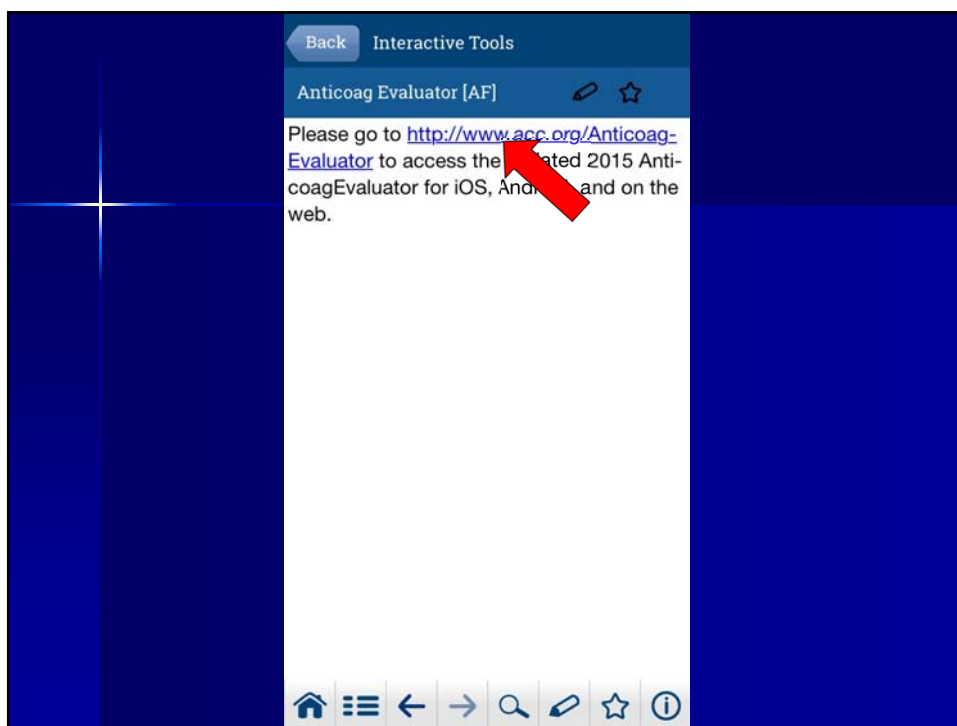
- There's an app for that!
- Enter: “ACC Guideline Clinical Apps”











Verizon LTE 1:48 PM 54%

**Calculate Risk** Review Therapy

**Stroke Risk** CHA<sub>2</sub>DS<sub>2</sub>-VASc

**Renal Function** SCr mg/dL CrCl mL/min

**ⓘ** This app is for non-valvular atrial fibrillation patients only, and should not be used to guide therapy in patients with mechanical or bioprosthetic valves. X

Calculate Risk [Reset All](#)

**Patient Information**  
Required to derive therapy options

Age

Verizon LTE 1:48 PM 54%

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Calculate Risk [Reset All](#)

**Patient Information**  
Required to derive therapy options

Age

App Store LTE 1:20 PM 66%

**Calculate Risk** Review Therapy

Stroke Risk CHA<sub>2</sub>DS<sub>2</sub>-VASc Renal Function SCr mg/dL CrCl mL/min

Calculate Risk [Reset All](#)

**Patient Information**  
Required to derive therapy options

Age  Yrs

Sex

Verizon 11:20 AM 55%

**Calculate Risk** Review Therapy

Stroke Risk CHA<sub>2</sub>DS<sub>2</sub>-VASc **1** Intermediate risk Renal Function SCr mg/dL CrCl mL/min

Calculate Risk [Reset All](#)

**Patient Information**  
Required to derive therapy options

Age  Yrs

Sex

App Store LTE 1:21 PM 65%

**Calculate Risk** Review Therapy

Stroke Risk CHA<sub>2</sub>DS<sub>2</sub>-VASc Renal Function SCr mg/dL CrCl mL/min

**CHA<sub>2</sub>DS<sub>2</sub>-VASc**

Select all that apply

- ☐ CHF/LV dysfunction ⓘ
- ☐ Hypertension ⓘ
- ☐ Age ≥ 75 yrs
- ☐ Diabetes mellitus
- ☐ Stroke/TIA/TE ⓘ
- ☐ Vascular disease ⓘ
- ☐ Age 65-74 yrs
- ☐ Sex: Female

App Store LTE 1:30 PM 61%

**Calculate Risk** Review Therapy

Stroke Risk CHA<sub>2</sub>DS<sub>2</sub>-VASc 2 High Risk Renal Function SCr μmol/L CrCl mL/min

**CHA<sub>2</sub>DS<sub>2</sub>-VASc**

Select all that apply

- ☐ CHF/LV dysfunction ⓘ
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- ☒ Sex: Female

App Store LTE 1:24 PM 64%

**Calculate Risk** Review Therapy

Stroke Risk CHA<sub>2</sub>DS<sub>2</sub>-VASc Renal Function SCr  $\mu\text{mol/L}$  CrCl mL/min

### Creatinine Clearance

(Cockcroft-Gault Equation)

All four values are required to calculate Creatinine Clearance

Select Units ☒ SI ☐ US

Age  Yrs

Sex

Weight  kgs

App Store LTE 1:24 PM 64%

**Calculate Risk** Review Therapy

Stroke Risk CHA<sub>2</sub>DS<sub>2</sub>-VASc Renal Function SCr  $\mu\text{mol/L}$  CrCl mL/min

### Creatinine Clearance

(Cockcroft-Gault Equation)

All four values are required to calculate Creatinine Clearance

Select Units ☒ SI ☐ US

Age  Yrs

Sex

Weight  kgs



Verizon 9:34 AM 65%

**Calculate Risk** Review Therapy

Stroke Risk CHA<sub>2</sub>DS<sub>2</sub>-VASc Renal Function SCr mg/dL CrCl mL/min

### Creatinine Clearance

(Cockcroft-Gault Equation)

All four values are required to calculate Creatinine Clearance

Select Units ☐ SI ☒ US

Age  Yrs

Sex

Weight  lbs

Verizon 12:02 PM 41%

**Calculate Risk** Review Therapy

Stroke Risk CHA<sub>2</sub>DS<sub>2</sub>-VASc 2 High Risk Renal Function SCr mg/dL 1 CrCl mL/min 79.5

Select Units ☐ SI ☒ US

Age  Yrs

Sex

Weight  lbs

Serum Creatinine  mg/dL

Verizon 12:18 PM 38%

**Calculate Risk** **Review Therapy**

Stroke Risk **2** CHA<sub>2</sub>DS<sub>2</sub>-VASc High Risk

Renal Function **1** SCr mg/dL **79.5** CrCl mL/min

**Bleed Risk Considerations**

Consider a patient's bleed risk when evaluating for anticoagulation therapy, and minimize bleed risk whenever possible.

Select all that apply

**HAS-BLED** **SCORE: 1**

☒ Hypertension

☐ Abnormal Renal Function

☐ Abnormal Liver Function

☐ Stroke/TIA/TE

☐ History of Major Bleeding

Verizon 12:18 PM 37%

**Calculate Risk** **Review Therapy**

Stroke Risk **2** CHA<sub>2</sub>DS<sub>2</sub>-VASc High Risk

Renal Function **1** SCr mg/dL **79.5** CrCl mL/min

☒ Hypertension

☐ Abnormal Renal Function

☐ Abnormal Liver Function

☐ Stroke/TIA/TE

☐ History of Major Bleeding

☐ History of Labile INR

☐ Age > 65 yrs

☐ Current "excess" of Alcohol

☐ Currently taking antiplatelet drugs or NSAIDs

Verizon 12:35 PM 33%

**Calculate Risk** **Review Therapy**

**Stroke Risk** **Renal Function**

**2** CHA<sub>2</sub>DS<sub>2</sub>-VASc **1** SCr **79.5** CrCl  
High risk mg/dL mL/min

**Concomitant Medications**

☐ Aspirin (any dose)

☐ P2Y12 Inhibitors ⓘ

☐ NSAIDs

☐ Other antiplatelets ⓘ

**Review Therapy** ➔

AMERICAN COLLEGE of CARDIOLOGY AnticoagEvaluator

Verizon 12:35 PM 33%

**Calculate Risk** **Review Therapy**

**Stroke Risk** **Renal Function**

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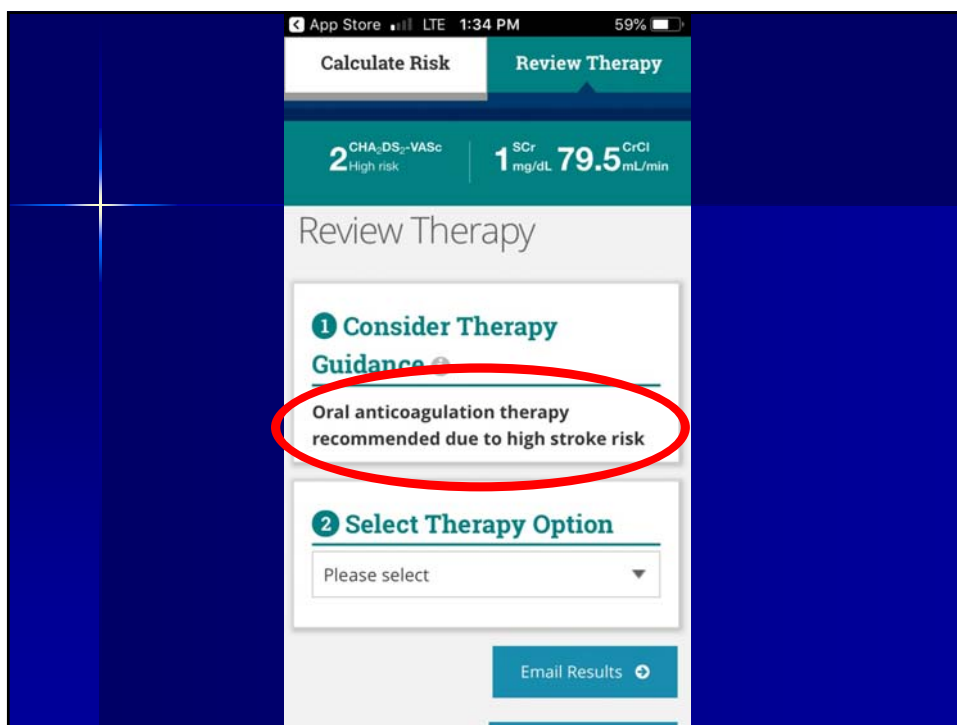
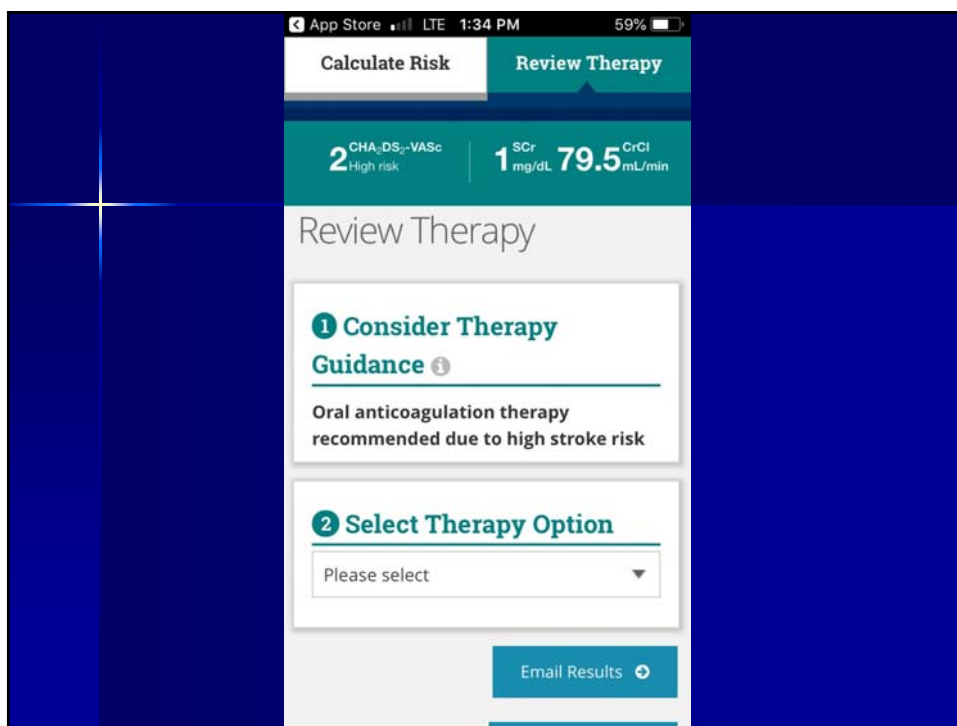
☐ P2Y12 Inhibitors ⓘ

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☐ Other antiplatelets ⓘ

**Review Therapy** ➔

AMERICAN COLLEGE of CARDIOLOGY AnticoagEvaluator



App Store LTE 1:34 PM 59%

Calculate Risk Review Therapy

2 CHA<sub>2</sub>DS<sub>2</sub>-VASc High risk 1 SCr mg/dL 79.5 CrCl mL/min

### Review Therapy

**1 Consider Therapy**  
**Guidance**

Oral anticoagulation therapy recommended due to high stroke risk

**2 Select Therapy Option**

Please select

Email Results

App Store LTE 1:36 PM 58%

Oral anticoagulation therapy recommended due to high stroke risk

**2 Select Therapy Option**

Please select

Email Results

Calculate Risk

Done

Dabigatran  
Edoxaban  
Rivaroxaban  
Warfarin

App Store LTE 1:36 PM 58%

Oral anticoagulation therapy recommended due to high stroke risk

### 2 Select Therapy Option


Please select ▼

Email Results +

+ Calculate Risk

^ v Done

Dabigatran  
Edoxaban  
Rivaroxaban  
Warfarin



App Store LTE 1:37 PM 58%

Oral anticoagulation therapy recommended due to high stroke risk

### 2 Select Therapy Option

Warfarin ▼

### 3 Evaluate Therapy

Standard Initial dose 2-5 mg  
RID: Individualize and

^ v Done

Dabigatran  
Edoxaban  
Rivaroxaban  
✓ Warfarin

App Store LTE 1:37 PM 58%

Oral anticoagulation therapy recommended due to high stroke risk

**2 Select Therapy Option**

Warfarin

**3 Evaluate Therapy**

Standard Initial dose 2-5 mg  
 BID. Individualize and adjust dose

Done

Dabigatran  
 Edoxaban  
 Rivaroxaban  
 ✓ Warfarin

App Store LTE 1:39 PM 58%

Calculate Risk Review Therapy

2 CHA<sub>2</sub>DS<sub>2</sub>-VASc High risk 1 SCr mg/dL 79.5 CrCl mL/min

Stroke Risk/Benefit Bleed Risk Safety Info

**Risk/Benefit Information\***

Patient's ANNUAL risk of stroke + thromboembolism with Warfarin 1.0%

Relative risk reduction	66%
Absolute risk reduction	1.9%
Chance of benefit per year	1 in 51

Based on SPARC Tool developed by Peter Loewen, ACPR, Pharm.D., FCSHP

\*This table refers to Warfarin (Initial dose 2-5 mg BID. Individualize and adjust dose)



## Cardiovascular Cases

## Case 2 (cont.)

Which of the following is the most appropriate recommendation regarding anticoagulation prior to surgery?

- A. Discontinue warfarin now, as anticoagulation is not indicated in this patient.
- B. Discontinue warfarin four days prior to scheduled surgery. Check the INR daily. When the INR is  $< 2$ , begin enoxaparin 1 mg/kg SQ BID and continue it until the morning of surgery.
- C. Discontinue warfarin four days prior to scheduled surgery. Check the INR the morning of scheduled surgery. Proceed with surgery if the INR is  $< 2$ .
- D. Continue warfarin through the day before scheduled surgery. Withhold warfarin on the morning of surgery and initiate a continuous intravenous infusion of unfractionated heparin, which may then be discontinued on call to the operating room.

## Cardiovascular Cases

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## Cardiovascular Cases

## Case 2 (cont.)

Provided that the surgery was uneventful, which of the following is the most appropriate recommendation regarding anticoagulation postoperatively?

- A. Do not resume anticoagulation postoperatively, as it is not indicated in this patient.
- B. Resume warfarin as soon as the surgeon feels that the patient is at a low risk for bleeding. Discharge the patient when the INR is  $\geq 2$ .
- C. Begin enoxaparin 1 mg/kg SQ BID and resume warfarin 2 mg PO daily as soon as the surgeon feels that the patient is at a low risk for bleeding. Check the INR daily. Discontinue enoxaparin and discharge the patient when the INR is  $\geq 2$ .
- D. Begin enoxaparin 1 mg/kg SQ BID and resume warfarin 2 mg PO daily as soon as the surgeon feels that the patient is at a low risk for bleeding. Check the INR daily until the INR is  $\geq 2$ . Discontinue enoxaparin after 10 doses regardless of INR.

## Cardiovascular Cases

## Case 2 (cont.)

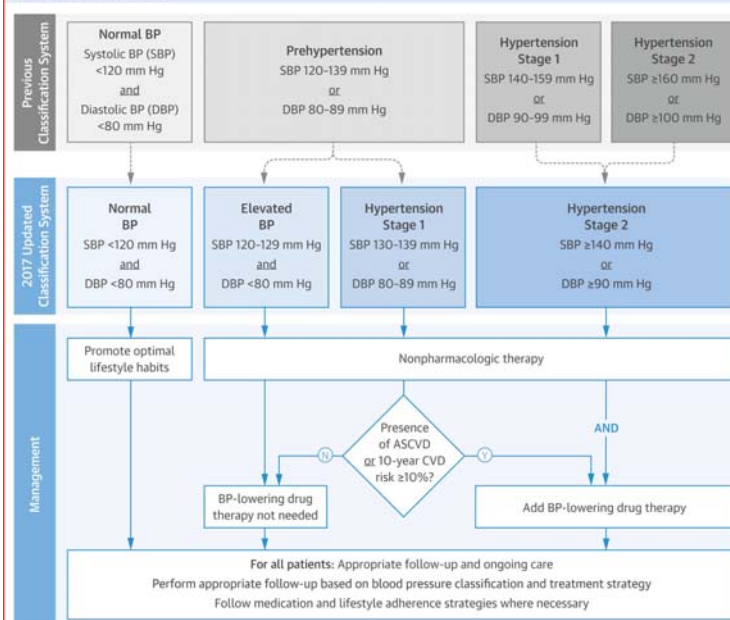
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- C. Begin enoxaparin 1 mg/kg SQ BID and resume warfarin 2 mg PO daily as soon as the surgeon feels that the patient is at a low risk for bleeding. Check the INR daily. Discontinue enoxaparin and discharge the patient when the INR is  $\geq 2$ .
- D. Begin enoxaparin 1 mg/kg SQ BID and resume warfarin 2 mg PO daily as soon as the surgeon feels that the patient is at a low risk for bleeding. Check the INR daily until the INR is  $\geq 2$ . Discontinue enoxaparin after 10 doses regardless of INR.

## Cardiovascular Cases

## Case 3

**62-year-old African American male without clinical CVD presents for routine medical evaluation. He is a nonsmoker and he is not diabetic. He has a history of asthma, for which he takes montelukast 10 mg PO daily. His total cholesterol is 192 mg/dL, his HDL-cholesterol is 38 mg/dL, triglycerides are 180 mg/dL, and his LDL-cholesterol is 118 mg/dL. His blood pressure is 134/76 mmHg, averaged from two separate occasions. Does his blood pressure require pharmacologic treatment at this time?**

**CENTRAL ILLUSTRATION: 2017 Updated Classification and Management of High Blood Pressure in Adults**


Whelton, P.K., et al. J Am Coll Cardiol. 10.1016/j.jacc.2017.11.006.

App intended for primary prevention patients (without ASCVD) who have LDL-C < 190 mg/dL (4.921 mmol/L)

<b>Current Age</b> <input type="text"/> <small>Age must be between 40-79</small>	<b>Sex</b> <input type="button" value="Male"/> <input type="button" value="Female"/>	<b>Race</b> <input type="button" value="White"/> <input type="button" value="African American"/> <input type="button" value="Other"/>
<b>Systolic Blood Pressure (mm Hg)</b> <input type="text"/> <small>Value must be between 90-200</small>	<b>Diastolic Blood Pressure (mm Hg)</b> <input type="text"/> <small>Value must be between 60-130</small>	
<b>Total Cholesterol (mg/dL)</b> <input type="text"/> <small>Value must be between 130 - 320</small>	<b>HDL Cholesterol (mg/dL)</b> <input type="text"/> <small>Value must be between 20 - 100</small>	<b>LDL Cholesterol (mg/dL)</b> <input type="text"/> <small>Value must be between 30-300</small>
<b>History of Diabetes?</b> <input type="button" value="Yes"/> <input type="button" value="No"/>	<b>Smoker:</b> <input type="button" value="Yes"/> <input type="button" value="Former"/> <input type="button" value="No"/>	
<b>On Hypertension Treatment?</b> <input type="button" value="Yes"/> <input type="button" value="No"/>	<b>On a Statin?</b> <input type="button" value="Yes"/> <input type="button" value="No"/>	<b>On Aspirin Therapy?</b> <input type="button" value="Yes"/> <input type="button" value="No"/>

Do you want to refine current risk estimation using data from a previous visit?

<b>10.3%</b> <b>Current 10-Year ASCVD Risk</b>		
Calculator only provides lifetime risk estimates for individuals 40 to 59 years of age. <b>Optimal ASCVD Risk: 6.2%</b>		
App intended for primary prevention patients (without ASCVD) who have LDL-C < 190 mg/dL (4.921 mmol/L)		
<b>Current Age</b> 62 <small>▲ Lifetime Risk Calculator only provides lifetime risk estimates for individuals 40 to 59 years of age.</small> <small>Age must be between 40-79</small>	<b>Sex</b> <input checked="" type="button" value="Male"/> <input type="button" value="Female"/>	<b>Race</b> <input type="button" value="White"/> <input checked="" type="button" value="African American"/> <input type="button" value="Other"/>
<b>Systolic Blood Pressure (mm Hg)</b> 134 <small>Value must be between 90-200</small>	<b>Diastolic Blood Pressure (mm Hg)</b> <input type="text"/> <small>Value must be between 60-130</small>	
<b>Total Cholesterol (mg/dL)</b> 192 <small>Value must be between 130 - 320</small>	<b>HDL Cholesterol (mg/dL)</b> 38 <small>Value must be between 20 - 100</small>	<b>LDL Cholesterol (mg/dL)</b> <input type="text"/> <small>Value must be between 30-300</small>
<b>History of Diabetes?</b> <input type="button" value="Yes"/> <input checked="" type="button" value="No"/>	<b>Smoker:</b> <input type="button" value="Yes"/> <input type="button" value="Former"/> <input checked="" type="button" value="No"/>	
<b>On Hypertension Treatment?</b> <input type="button" value="Yes"/> <input checked="" type="button" value="No"/>	<b>On a Statin?</b> <input type="button" value="Yes"/> <input type="button" value="No"/>	<b>On Aspirin Therapy?</b> <input type="button" value="Yes"/> <input type="button" value="No"/>

Do you want to refine current risk estimation using data from a previous visit?

***Yes!***

Cardiovascular Cases

**Summary**

- 1. Patients with undiagnosed cardiovascular disease are commonly encountered in the primary care setting.**
- 2. Web-based resources are available that can be very useful to health care providers in managing patients with cardiovascular disease.**
- 3. Never be too proud to ask for help.**

<https://www.youtube.com/watch?v=aS3xaXsh6vo>

[https://www.youtube.com/watch?v=3TveJLAi\\_y4](https://www.youtube.com/watch?v=3TveJLAi_y4)

