ACC's Point of Care Tools: Quick Answers at your Fingertips

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ACC Latin America Conference 2016

Disclosures

None: I am *still* a fellow-in-training

Outline

- Background
- ACC's Collection of Point-of-Care Clinical Tools
  - ASCVD Risk Estimator
  - ACC Guideline App
  - Anticoag Evaluator
- Live Demo

Audience Response System

Do you use Point-of-Care apps in the office with your patients?

A. Yes

B. No

C. Not Yet, But I Want To

D. What's an App?

Survey Says …

According to 2015 Survey of 500 professionals:

- 16% currently use mobile apps with patients → 46% plan to do so in next 5 years
- 86% believe mobile apps will increase knowledge of patients' conditions
- 46% believe apps will improve relationships with patients

http://www.modernhealthcare.com/article/20151128/MAGAZINE/311289981/easy-on-those-apps-mobile-medical-apps-gain-support-but-many-lack

Mobile Devices and Apps for Health Care Professionals: Uses and Benefits

Table 1 Uses for Mobile Devices and Apps by Health Care Professionals

Information Management
- Write notes
- Dictate notes
- Record audio
- Take photographs
- Organize information and images
- Use e-book reader
- Access cloud service

Time Management
- Schedule appointments
- Schedule meetings
- Record call schedule

Health Record Maintenance and Access
- Access EHRs and EMRs
- Access images and scans
- Electronic prescribing
- Coding and billing

Communications and Consulting
- Voice calling
- Video calling
- Texting
- E-mail
- Multimedia messaging
- Video conferencing
- Social networking

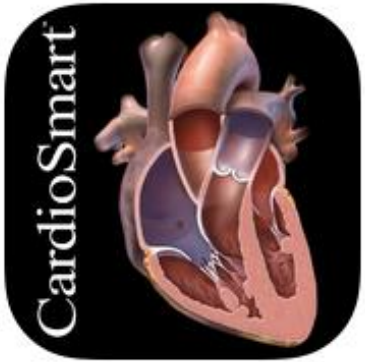
Reference and Information Gathering
- Medical textbooks
- Medical journals
- Medical literature
- Literature search portals
- Drug reference guides
- Medical news

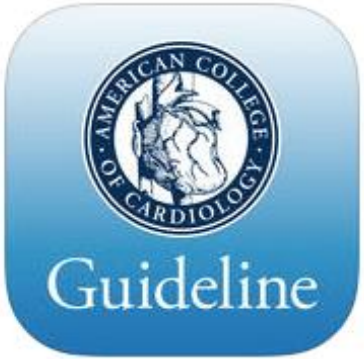
Clinical Decision-Making
- Clinical decision support systems
- Clinical treatment guidelines
- Disease diagnosis aids
- Differential diagnosis aids
- Medical calculators
- Laboratory test ordering
- Laboratory test interpretation
- Medical exams

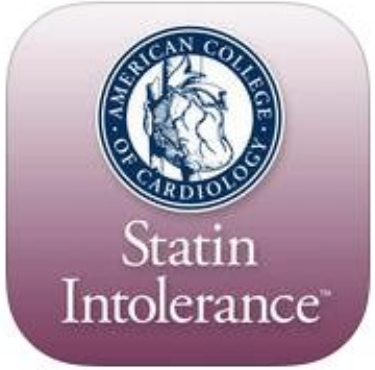
Patient Monitoring
- Monitor patient health
- Monitor patient location
- Monitor patient rehabilitation
- Collect clinical data
- Monitor heart function

Medical Education and Training
- Continuing medical education
- Knowledge assessment tests
- Board exam preparation
- Case studies
- E-learning and teaching
- Surgical simulation
- Skill assessment tests

Ventola CL *P&T* May 2014







http://www.acc.org/tools-and-practice-support/mobile-resources#Clinical

ACC's Clinical App Collection

Use these apps "on the go" to improve clinical knowledge and optimize patient care. To find the app you need, search by name in your app store, or visit ***ACC.org/Apps***.

Please Download Apps Now

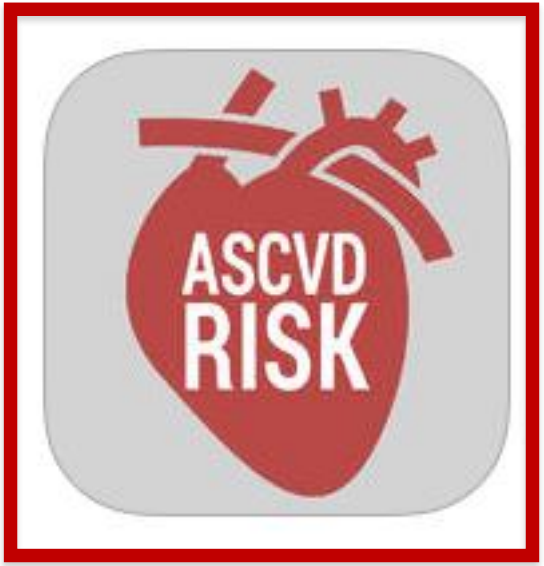
https://www.acc.org/tools-and-practice-support/mobile-resources

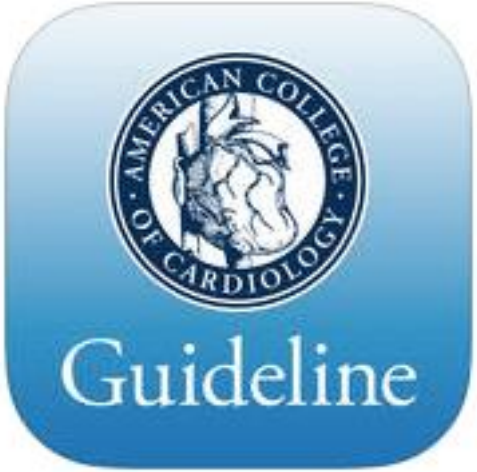
→ ASCVD Risk Estimator

→ Anticoag Evaluator

→ ACC Guideline App

ACC Point-of-Care Clinical Apps





2013 Prevention Guidelines ASCVD Risk Estimator

2013 Prevention Guidelines ASCVD Risk Estimator

The ACC and the American Heart Association (AHA), in collaboration with the National Heart, Lung, and Blood Institute and other specialty societies, have released four guidelines focused on the assessment of cardiovascular risk, lifestyle modifications to reduce cardiovascular risk and management of elevated blood cholesterol and body weight in adults.

In order to support the implementation of these guidelines the ACC and AHA have jointly published a new mobile application (app).

The ASCVD Risk Estimator application helps health care providers and patients estimate 10-year and lifetime risks for atherosclerotic cardiovascular disease (ASCVD) using the Pooled Cohort Equations and lifetime risk prediction tools. The ASCVD Risk Estimator provides easy access to recommendations specific to calculated risk estimates. Additionally, the app includes readily accessible guideline reference information for both providers and patients related to therapy, monitoring, and lifestyle.

The app is available on both iTunes (iPhones, iPads) and Google Play (Galaxy, Nexus, other Android devices). Use the links below from your mobile device to download the app.

- Click here to download the App From iTunes
- Click here to download the App From Google Play
- Click here to launch the Web Version

http://www.acc.org/tools-and-practice-support/mobile-resources/features/2013-prevention-guidelines-ascvd-risk-estimator

ASCVD RISK

What is it?

- A companion tool to the 2013 ACC/AHA Guideline on the Assessment of Cardiovascular Risk.
- Enables health care providers and patients to estimate 10-year and lifetime risks for atherosclerotic cardiovascular disease (ASCVD) using the Pooled Cohort Equations and lifetime risk prediction tools.
- Provides Clinician and Patient references

Named the **top iPhone medical app** for the month of February by iMedicalApps

Where can I find it?

- Available for smartphones, tablets, and computers
- Download from the iTunes or GooglePlay App stores by searching "**ascvd risk estimator**"
- Or go to http://tools.acc.org/ASCVD-Risk-Estimator/

Estimator | Clinicians | Patients | About

ASCVD Risk Estimator*

All fields are required to compute ASCVD risk.

Gender
Male | Female

Age
20-79

Race
White
African American
Other

HDL - Cholesterol (mg/dL)
20-100

Total Cholesterol (mg/dL)
130-320

Systolic Blood Pressure
90-200

Diabetes
Yes | No

Treatment for Hypertension
Yes | No

Smoker
Yes | No

Intended for use if there is not ASCVD and the LDL-cholesterol is <190 mg/dL

**Optimal risk factors include: Total cholesterol of 170 mg/dL, HDL-cholesterol of 50 mg/dL, Systolic BP of 110 mm Hg, Not taking medications for hypertension, Not a diabetic, Not a smoker*

AMERICAN COLLEGE of CARDIOLOGY | American Heart Association.
Published jointly by ACC and AHA | © 2014

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http://tools.acc.org/ASCVD-Risk-Estimator/

10-Year ASCVD Risk Estimates

- Estimates of 10-year risk for ASCVD are based on data from *multiple* community-based populations
- Applicable to:
  - African-American and non-Hispanic white men and
  - Women 40 through 79 years of age
- For other ethnic groups, we recommend use of the equations for non-Hispanic whites
  - these estimates may underestimate the risk for persons from some race/ethnic groups

Lifetime ASCVD Risk Estimates

- Estimates of lifetime ASCVD risk are provided for *adults 20 through 59 years of age*
  - Shown as the lifetime risk for ASCVD for a 50-year old without ASCVD who has the risk factor values entered into the Estimator.
- Some Key Points:
  - The estimates of lifetime risk are most directly applicable to non-Hispanic whites.
  - We recommend the use of these values for other race/ethnic groups, though these estimates may represent under- and over-estimates for persons of various ethnic groups.
- Primary use of these lifetime risk estimates is to facilitate the very important discussion regarding risk reduction through lifestyle change
  - Thus, the imprecision introduced is believed to be small enough to justify proceeding with lifestyle change counseling informed by these results

Estimator | Clinicians | Patients | About

ASCVD Risk Estimator*

10-Year ASCVD Risk

8.2% calculated risk

5.2% risk with optimal risk factors**

Lifetime ASCVD Risk

36% calculated risk

5% risk with optimal risk factors

Recommendation Based On Calculation

Gender

Male | **Female**

Age

59

Race

- (•) White
- ( ) African American
- ( ) Other

HDL - Cholesterol (mg/dL)

40

Total Cholesterol (mg/dL)

170

Diabetes

Yes | **No**

Treatment for Hypertension

Yes | **No**

Systolic Blood Pressure

130

Smoker

Yes | **No**

*Intended for use if there is not ASCVD and the LDL-cholesterol is <190 mg/dL

**Optimal risk factors include: Total cholesterol of 170 mg/dL, HDL-cholesterol of 50 mg/dL, Systolic BP of 110 mm Hg, Not taking medications for hypertension, Not a diabetic, Not a smoker

Based on the data entered (assuming no clinical ASCVD and LDL-C 70-189 mg/dL):

- Gender: Male
- Age: 59
- Race: White/Other
- Total Cholesterol: 170
- HDL-Cholesterol: 40
- Systolic Blood Pressure: 130
- Hypertension Treatment: No
- Diabetes: No
- Smoker: No

Moderate to High-Intensity Statin Recommended

Before initiating statin therapy, it is reasonable for clinicians and patients to engage in a discussion which considers the potential for ASCVD risk reduction benefits and for adverse effects, for drug-drug interactions, and patient preferences for treatment. (IIa C)

Adults 40 to 75 years of age with LDL-C 70 to 189 mg/dL with no diabetes and estimated 10-year ASCVD risk ≥7.5% should be treated with moderate to high-intensity statin therapy. (I A)

In individuals for whom after quantitative risk assessment a risk-based treatment decision is uncertain, additional factors may be considered to inform treatment decision making. These factors may include primary LDL-C ≥160 mg/dL or other evidence of genetic hyperlipidemias, family history of premature ASCVD with onset <55 years of age in a first degree male relative or <65 years of age in a first degree female relative, high-sensitivity C-reactive protein ≥2 mg/L, CAC score ≥300 Agatston units or ≥75 percentile for age, sex, and ethnicity, ankle-brachial index <0.9, or elevated lifetime risk of ASCVD. Additional factors may be identified in the future. (IIb C)

Reference

Clinician References

- Understanding Cardiovascular Risk
- Lifestyle Recommendations
- Groups that Benefit from Statin Therapy
- Blood Cholesterol Recommendation Summary
- Recommendations for Initiation of Statin Therapy
- Intensities of Statin Therapy
- Recommendations to Monitor Response to Statin Therapy
- Statin Safety Recommendations
- External Links to Full Guidelines & More Information

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Groups that Benefit from Statins

1. Secondary Prevention: Clinical ASCVD

2. Primary Prevention: LDL-C ≥190 mg/dL

3. Primary Prevention: Diabetes and aged 40 to 75 years with LDL-C between 70 - 189 mg/dL

4. Primary Prevention: No diabetes and estimated 10-year ASCVD risk of ≥7.5% who are between 40 to 75 years of age with LDL-C between 70 - 189 mg/dL

Additional Factors

These factors may include:

Statin benefit may be less clear in other groups; additional factors may be considered to inform treatment decision making.

1. 5 to <7.5% 10-year ASCVD risk
2. Primary LDL-C ≥160 mg/dL or other evidence of genetic hyperlipidemias
3. Family history of premature ASCVD
4. High sensitivity C-reactive protein ≥2 mg/L
5. Coronary artery calcium score ≥300 Agatston units or ≥75th percentile for age, sex, and ethnicity
6. Ankle-brachial index <0.9
7. Lifetime risk of ASCVD

Estimator | Clinicians | Patients | About

Reference

Patient References

- Understanding My Cardiovascular Risk
- Diet and Physical Activity Recommendations
- Weight Management Recommendations
- Blood Cholesterol Management Recommendations
- Groups that Benefit from Statin Therapy
- Common Cardiovascular Terms

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Blood Cholesterol Management Recommendations

The American College of Cardiology (ACC) and the American Heart Association (AHA) recently developed new standards for treating blood cholesterol. These recommendations are based on a thorough and careful review of the very latest, highest quality clinical trial research. They help care providers deliver the best care possible. This page provides some of the highlights from the new practice guidelines. The ultimate goal of the new cholesterol practice guidelines is to reduce a person's risk of heart attack, stroke and death. For this reason, the focus is not just on measuring and treating cholesterol, but identifying whether someone already has or is at risk for atherosclerotic cardiovascular disease (ASCVD) and could benefit from treatment.

What is ASCVD?

Heart attack and stroke are usually caused by atherosclerotic cardiovascular disease (ASCVD). ASCVD develops because of a build-up of sticky cholesterol-rich plaque. Over time, this plaque can harden and narrow the arteries.

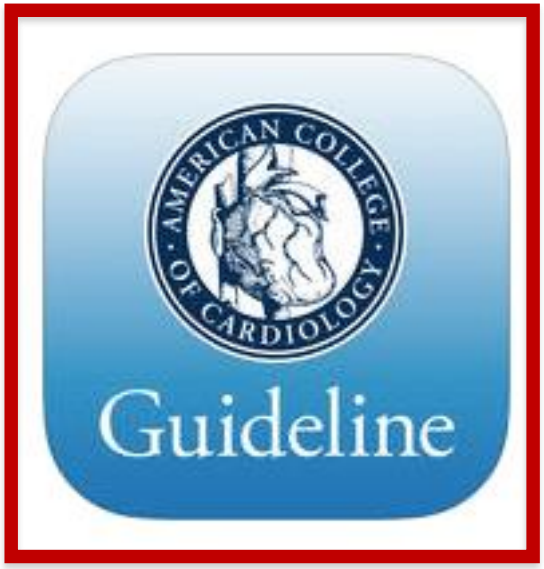
These practice guidelines outline the most effective treatments that lower blood cholesterol in those individuals most likely to benefit. Most importantly, they were selected as the best strategies to lower cholesterol to help reduce future heart attack or stroke risk. Share this information with your health care provider so that you can ask questions and work together to decide what is right for you.

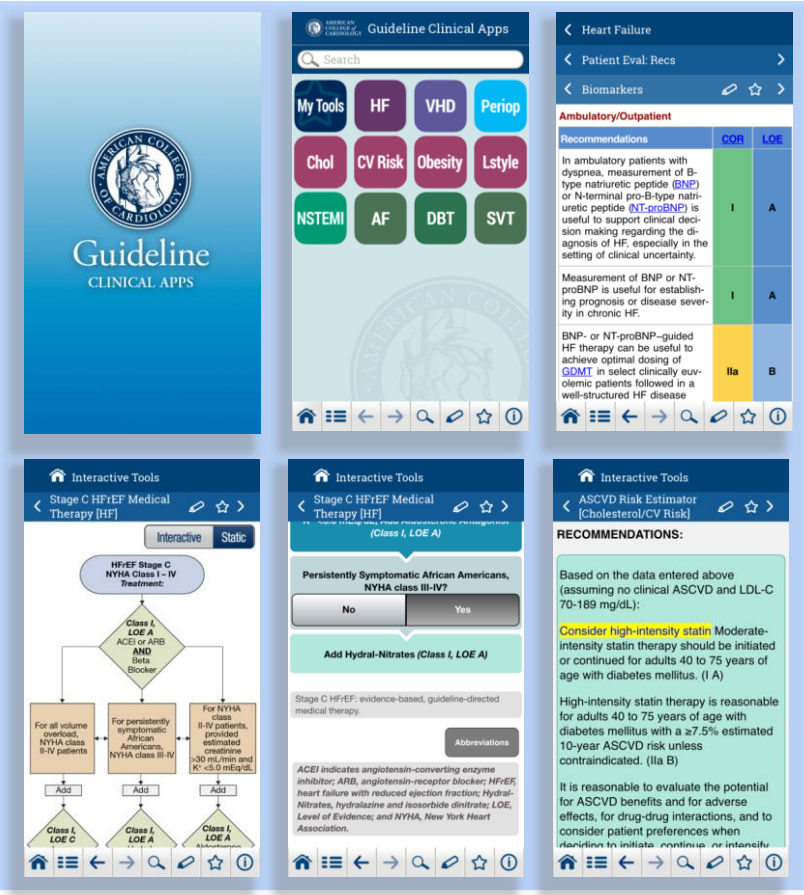
Key Points

Based on the most up-to-date and complete look at available clinical trial results:

- Health care providers should focus on identifying those people who are most likely to have a heart attack or stroke and make sure they are given effective treatment to reduce their risk.
- Cholesterol should be considered along with other factors known to make a heart attack or stroke more likely.
- Knowing your risk of heart attack and stroke can help you and your health care provider decide whether you may need to take a medication—most likely a statin—to lower that risk.
- If a medication is needed, statins are recommended as the first choice to lower heart attack and stroke risk among certain higher-risk patients based on an overwhelming amount of evidence. For those unable to take a statin, there are other cholesterol-lowering drugs; however, there is less research to support their use.

ACC Point-of-Care Clinical Apps





What is it?

- The App is the mobile home of ACC/AHA guideline content and tools for clinicians caring for patients with cardiovascular disease.
- Access guideline recommendations, “10 Points” summaries, and tools such as risk scores, calculators, and algorithms.
- Customize your App using the bookmark, note-taking and shareable PDF features.
- Currently includes Heart Failure, Afib, VHD, Cholesterol, CV Risk, Lifestyle, Obesity, NSTEMI, and Periop guidelines, with more slated for next year.

Where can I find it?

- Available for smartphones and tablets
- Download from the iTunes or GooglePlay App stores by searching “**acc guidelines**”
- More info at ACC.org/Guideline App

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For more information on ACC’s complete family of mobile apps: http://www.acc.org/tools-and-practice-support/mobile-resources

Guideline Clinical App

Guideline Clinical App
Frequently Asked Questions

The ACC's Guideline Clinical App is the mobile home of clinical guideline content and tools for clinicians caring for patients with cardiovascular disease. You can access guideline recommendations, "10 Points" summaries, and tools such as risk scores, calculators and algorithms. Customize your App by using the bookmark, note-taking, and shareable PDF features.

The App is available for free in the iTunes (iPhone, iPad) and Google Play (Galaxy, Nexus, other Android devices) app stores. Use the links below from your mobile device to download the App.

Download the App From iTunes **Download the App From Google Play**

The App currently offers content for the following guidelines:

- Atrial Fibrillation
- Cardiovascular Risk
- Coronary Artery Bypass Graft
- Cholesterol
- Device-Based Therapy
- Dual Antiplatelet Therapy Update
- Heart Failure
- Lifestyle
- Non–ST-Elevation Acute Coronary Syndromes
- Obesity
- Percutaneous Coronary Intervention
- Perioperative Management for Noncardiac Surgery
- Stable Ischemic Heart Disease
- ST-Elevated Myocardial Infarction
- Supraventricular Tachycardia
- Valvular Heart Disease

AMERICAN COLLEGE of CARDIOLOGY Guideline Clinical Apps

Search

My Tools | Chol | CV Risk | HF

AF | VHD | Lstyle | Obesity

NSTEMI | Periop | DBT | SVT

DAPT Update | PCI | STEMI | SIHD

CABG

Heart Failure (w/ 2016 Updt)

HF Patient Evaluation

Biomarkers

Ambulatory/Outpatient

Recommendations	COR	LOE
In ambulatory patients with dyspnea, measurement of B-type natriuretic peptide (BNP) or N-terminal pro-B-type natriuretic peptide (NT-proBNP) is useful to support clinical decision making regarding the diagnosis of HF, especially in the setting of clinical uncertainty.	I	A
Measurement of BNP or NT-proBNP is useful for establishing prognosis or disease severity in chronic HF	I	A

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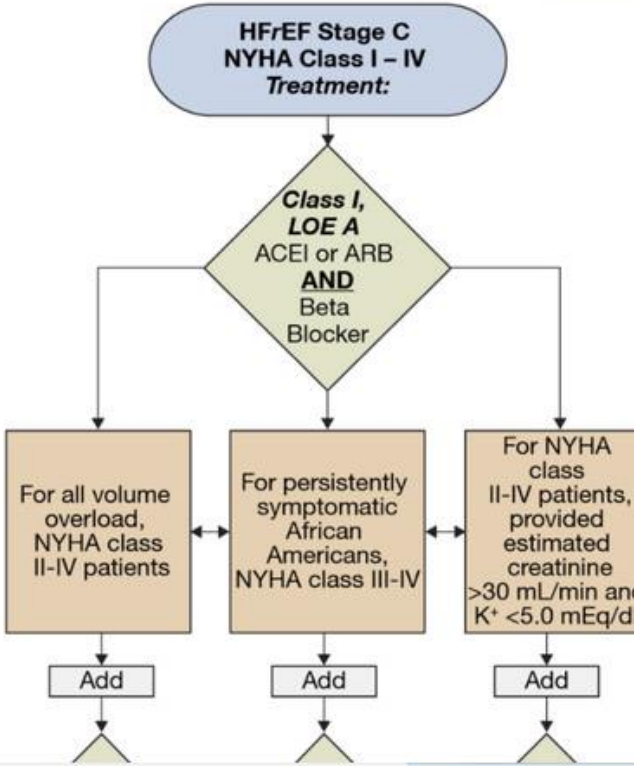
Interactive Tools

Stage C HFrEF Medical Therapy [HF]

Interactive | Static



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Interactive Tools

Stage C HFrEF Medical Therapy [HF]

Persistently Symptomatic African Americans, NYHA class III-IV?

No	Yes

Stage C HF*r*EF: evidence-based, guideline-directed medical therapy.

Abbreviations

ACEI = angiotensin-converting enzyme inhibitor; ARB = angiotensin-receptor blocker; HFrEF = heart failure with reduced ejection fraction; Hydral-Nitrates = hydralazine and isosorbide dinitrate; LOE = Level of Evidence; and NYHA = New York Heart Association.

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Interactive Tools

ASCVD Risk Estimator [Chol/CV Risk]

RECOMMENDATIONS:

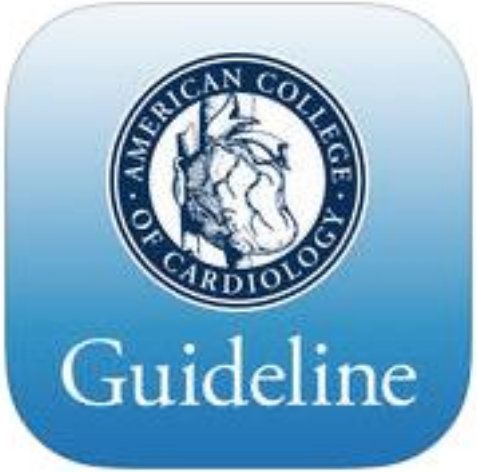
Based on the data entered above (assuming no clinical ASCVD and LDL-C 70-189 mg/dL):

Consider high-intensity statin Moderate-intensity statin therapy should be initiated or continued for adults 40 to 75 years of age with diabetes mellitus. (I A)

High-intensity statin therapy is reasonable for adults 40 to 75 years of age with diabetes mellitus with a ≥7.5% estimated 10-year ASCVD risk unless contraindicated. (IIa B)

It is reasonable to evaluate the potential for ASCVD benefits and for adverse effects, for drug-drug interactions, and to

ACC Point-of-Care Clinical Apps



AnticoagEvaluator App

AnticoagEvaluator App
FAQ

The updated AnticoagEvaluator helps clinicians make informed decisions on antithrombotic therapy for their non-valvular AF patients.

Use the app to:

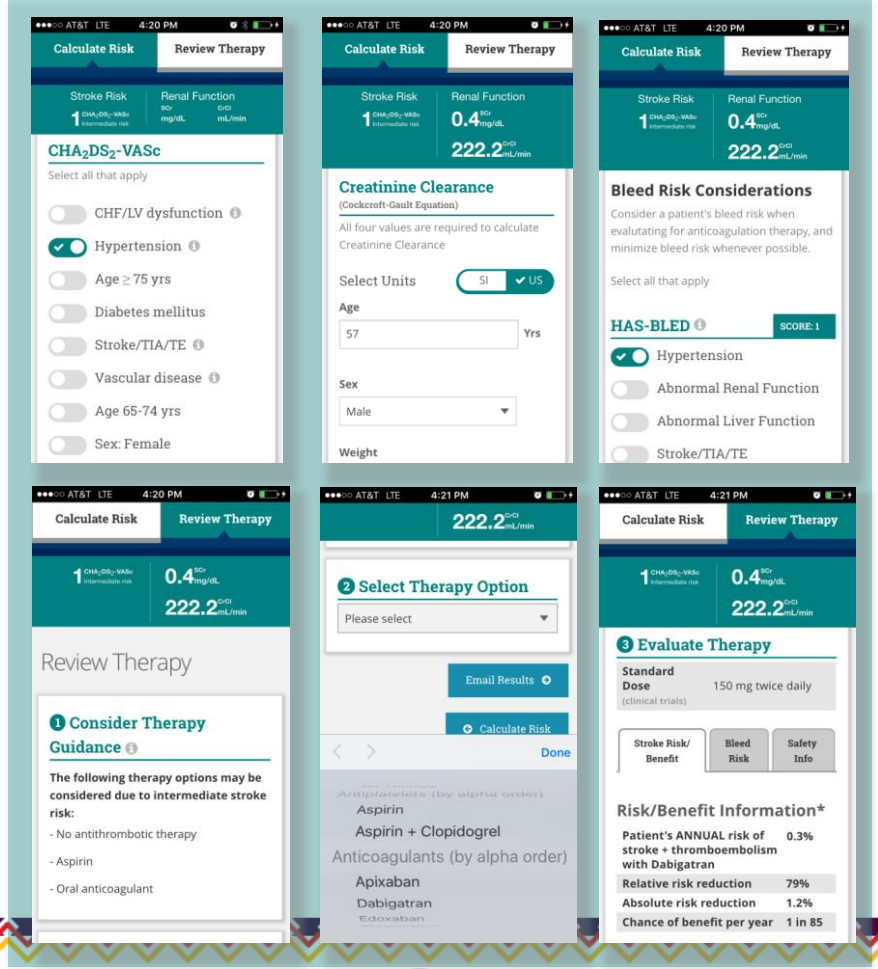
- Calculate a patient's stroke risk (CHA2DS2-Vasc), bleed risk (HAS-BLED and concomitant meds), and renal function (Cockroft-Gault Equation)
- Review stroke prevention therapy guidance based on ACC/AHA/HRS's 2014 Guidelines for the Management of Patients with Atrial Fibrillation
- Improve accurate use of DOACs with adjusted dosage based on prescribing information, fine-tuned for renal and other patient characteristics
- Determine appropriate therapy for a patient by reviewing
  - Synthesized individualized risk for antithrombotic therapy options based on clinical trials (e.g., ACTIVE-A, RE-LY, ROCKET-AF, ARISTOTLE, ENGAGE-AF)
  - Relevant safety information and full prescribing information for all therapy options

If you had downloaded the previous AnticoagEvaluator version on your iPhone or iPad before December 2015, simply update the app on your Apple device to access the updated version. For all other users, this update app is available for free on the web, and in the iTunes and Google Play app stores. Use the links below to access the app today.

Download the App From iTunes >>> | **Download the App From Google Play >>>** | **Launch the Web Version >>>**

http://www.acc.org/tools-and-practice-support/mobile-resources/features/anticoag-evaluator

This app was developed as part of ACC's Anticoagulation Initiative and is an update to the original AnticoagEvaluator App. Its content was adapted from a web tool created by Peter Loewen, ACPR, Pharm.D., FCSHP, which can be viewed at http://www.sparctool.com/.



What is it?

Helps clinicians assess the best antithrombotic therapy for their patient by:

- Calculating patient's stroke risk, bleed risk, and renal function
- Offering tailored ACC/AHA-guideline-based guidance
- Providing auxiliary information about each therapy, including
  -risk and benefit data
  -standard and renal-adjusted dosing
  -safety and prescribing information

Where can I find it?

- Available for smartphones, tablets, and computers
- Download from the iTunes or GooglePlay App stores by searching "**anticoagevaluator**"
- Or go to http://tools.acc.org/anticoag

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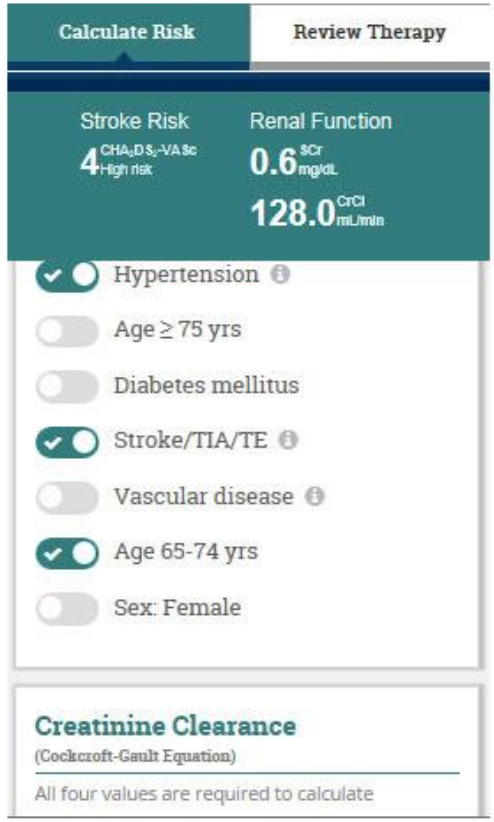
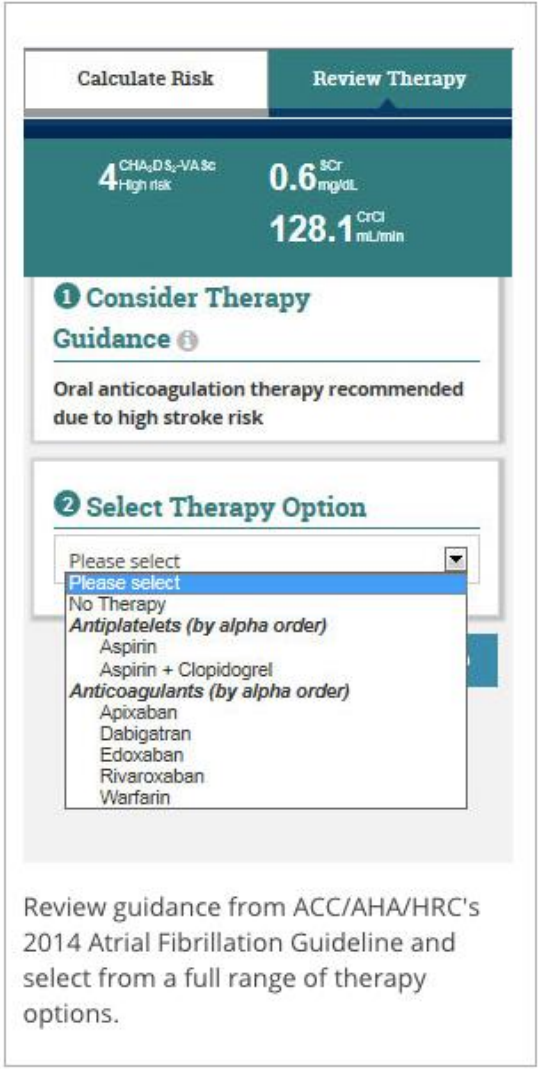
For more information on ACC's complete family of mobile apps: http://www.acc.org/tools-and-practice-support/mobile-resources

Anticoag Evaluator

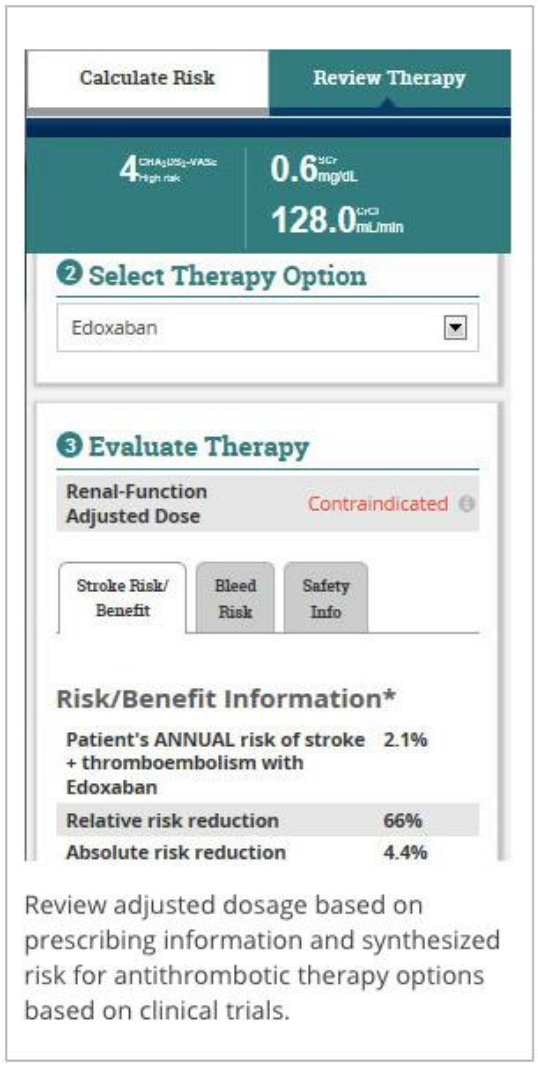
Make informed decisions on antithrombotic therapy for your non-valvular AF patients.



Calculate a patient's stroke risk, bleed risk, and renal function.

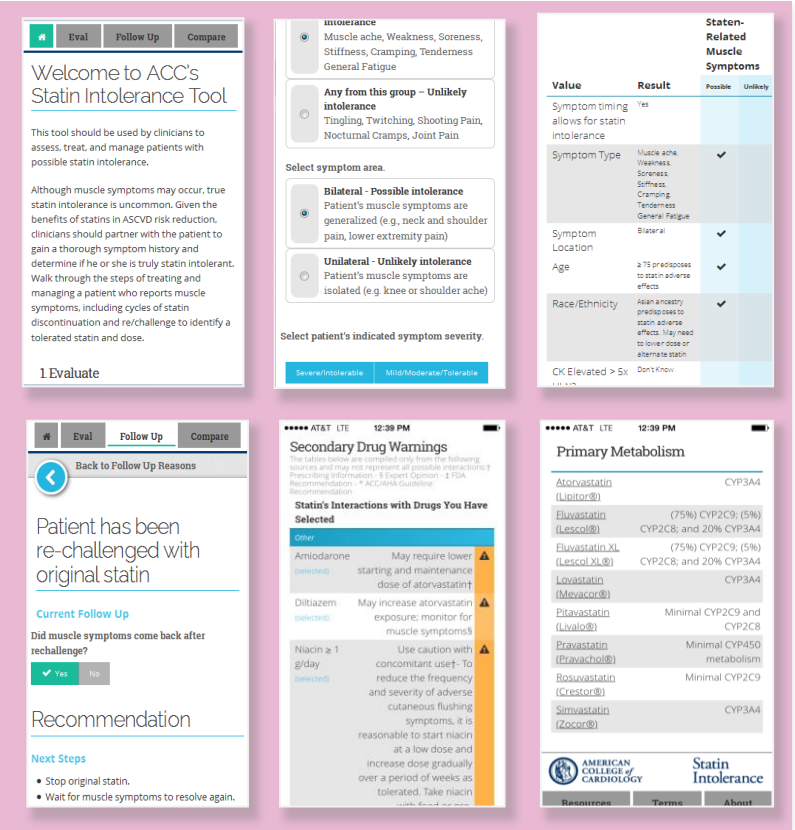


Review guidance from ACC/AHA/HRC's 2014 Atrial Fibrillation Guideline and select from a full range of therapy options.



Review adjusted dosage based on prescribing information and synthesized risk for antithrombotic therapy options based on clinical trials.

Statin Intolerance



What is it?

The ACC Statin Intolerance App guides clinicians through the process of managing and treating patients who report muscle symptoms while on statin therapy.

- Answer questions to evaluate possible intolerance to a patient's current statin prescription.
- Follow steps to manage and treat a patient who reports muscle symptoms on a statin.
- Compare statin characteristics and drug interactions to inform management of LDL-related risk.

Where can I find it?

- Available for smartphones, tablets, and computers
- Download from the iTunes or GooglePlay App stores by searching "**acc statin intolerance**"
- Or go to http://tools.acc.org/statinintolerance

This app was developed as part of the ACC's LDL: Address the Risk Initiative. Financial support for the LDL: Address the Risk Initiative was provided by Amgen Inc. All of the content was independently developed with no sponsor involvement.

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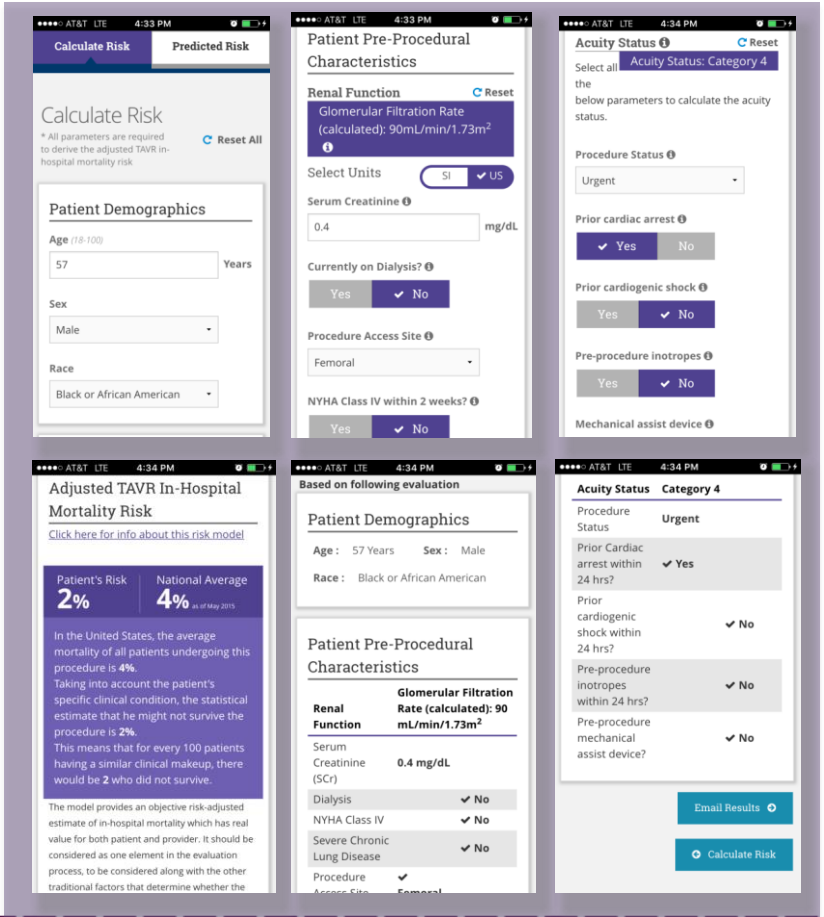
For more information on ACC's complete family of mobile apps: http://www.acc.org/tools-and-practice-support/mobile-resources



What is it?

- The STS/ACC TAVR In-Hospital Mortality Risk App informs physicians of the estimated risk of in-hospital mortality for patients considering transcatheter aortic valve replacement as a treatment option.

- Physicians can compare individual patient risk to the national average based on data from the STS/ACC TVT Registry™.

- The app facilitates consistent risk assessment and communication between a physician and patient about TAVR.

Where can I find it?

- Available for smartphones, tablets, and computers
- Download from the iTunes or GooglePlay App stores by searching "**acc tavr app**"
- Or go to http://tools.acc.org/tavrrisk

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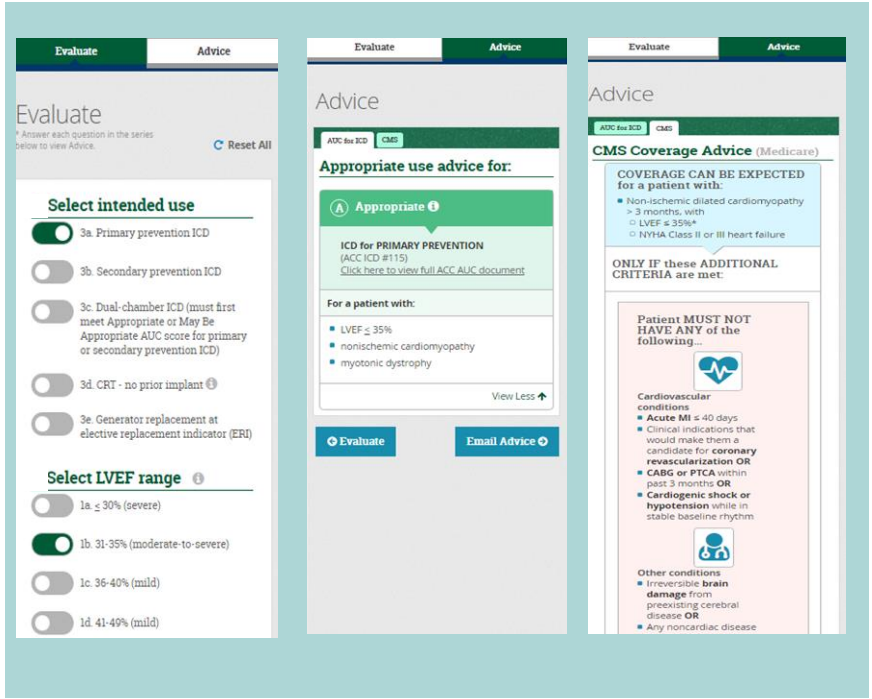
For more information on ACC's complete family of mobile apps: http://www.acc.org/tools-and-practice-support/mobile-resources.



What is it?

ICD-CRT Appropriate Use Criteria App provides decision and documentation support for clinicians assessing the appropriateness of device implantation for their patients.

- Record intended device and patient's clinical indications.
- Obtain procedure appropriate use rating according to ACC/HRS et al's 2013 Appropriate Use Criteria for ICD and CRT document.
- View suggested likelihood of CMS coverage for an ICD based on 2005 CMS Coverage Determination criteria.
- Email yourself a record of patient inputs and the corresponding AUC and CMS advice.

Where can I find it?

- Available for smartphones, tablets, and computers
- Download from the iTunes or GooglePlay App stores by searching "**acc icd appropriate use**"
- Or go to http://tools.acc.org/ICD_AUC

Help Us Help You

Provide Feedback

-Leave your comments in the iTunes or Google Play page for the app

-Fill out ACC's official feedback survey located in the "About the App" section within most of the apps

Become an App Tester

-Test out the apps as part of the development process by contacting Erin Schmieder

eschmieder@acc.org

Now the real fun begins …

Audience Response System

Case Presentation #1

A 52-year-old African American woman presents to establish cardiovascular care. She is active and asymptomatic. She has long-standing HTN on lisinopril 20 mg daily but no known history of DM or family history of premature CAD. She is a lifelong never smoker. VS: BP 135/85 HR 72. BMI 25. Recent lipid profile: Chol 202 TG 150 LDL 128 HDL 44.

Which of the following is the best next step in management?

A. Advise heart healthy diet and regular aerobic exercise
B. Consider adding atorvastatin 20 mg daily
C. Consider adding rosuvastatin 40 mg daily
D. A and B
E. A and C

Which of the following is the best next step in management?

A. Advise heart healthy diet and regular aerobic exercise
B. Consider adding atorvastatin 20 mg daily
C. Consider adding rosuvastatin 40 mg daily
D. A and B
E. A and C

Estimator | Clinicians | Patients | About

ASCVD Risk Estimator*

10-Year ASCVD Risk

6.4% calculated risk

1.3% risk with optimal risk factors**

Lifetime ASCVD Risk

39% calculated risk

8% risk with optimal risk factors

Recommendation Based On Calculation

Gender: **Male** | **Female**

Age: 52

Race: White | African American | Other

HDL - Cholesterol (mg/dL): 44

Total Cholesterol (mg/dL): 202

Systolic Blood Pressure: 135

Diabetes: Yes | No

Treatment for Hypertension: Yes | No

Smoker: Yes | No

*Intended for use if there is not ASCVD and the LDL-cholesterol is <190 mg/dL

**Optimal risk factors include: Total cholesterol of 170 mg/dL, HDL-cholesterol of 50 mg/dL, Systolic BP of 110 mm Hg, Not taking medications for hypertension, Not a diabetic, Not a smoker

- Race: African American
- Total Cholesterol: 202
- HDL-Cholesterol: 44
- Systolic Blood Pressure: 135
- Hypertension Treatment: Yes
- Diabetes: No
- Smoker: No

Consider Moderate-Intensity Statin

Before initiating statin therapy, it is reasonable for clinicians and patients to engage in a discussion which considers the potential for ASCVD risk reduction benefits and for adverse effects, for drug-drug interactions, and patient preferences for treatment. (IIa C)

It is reasonable to offer treatment with a moderate-intensity statin to adults 40 to 75 years of age with no diabetes and 10-year risk of of 5% to <7.5%. (IIa B)

In individuals for whom after quantitative risk assessment a risk-based treatment decision is uncertain, additional factors may be considered to inform treatment decision making. These factors may include primary LDL-C ≥160 mg/dL or other evidence of genetic hyperlipidemias, family history of premature ASCVD with onset <55 years of age in a first degree male relative or <65 years of age in a first degree female relative, high-sensitivity C-reactive protein ≥2 mg/L, CAC score ≥300 Agatston units or ≥75 percentile for age, sex, and ethnicity, ankle-brachial index <0.9, or elevated lifetime risk of ASCVD. Additional factors may be identified in the future. (IIb C)

Lifestyle Recommendations

AHA/ACC guidelines stress the importance of lifestyle modifications to lower cardiovascular disease risk. This includes eating a heart-healthy diet, regular aerobic exercises, maintenance of desirable body weight and avoidance of tobacco products.

Case Presentation #2

A 81-year-old woman with well-controlled HTN, DMII and Stage IV CKD (SCr 1.3 mg/dl) presents to your clinic 2 weeks after discharge for new onset paroxysmal atrial fibrillation. Her rate is well-controlled with metoprolol tartrate 25 mg twice daily. VS: BP 100/60 HR 62. Weight 120 lbs. Her meds include ASA 81 mg daily and Ibuprofen 400 mg BID prn knee pain. She seeks your input regarding anticoagulation.

Which of the following is the best next step in management?

A. Aspirin 325 mg daily
B. Aspirin 81 mg daily + Clopidogrel 75 mg daily
C. Apixaban 2.5 mg twice daily
D. No antiplatelet or anticoagulant therapy

Which of the following is the best next step in management?

A. Aspirin 325 mg daily
B. Aspirin 81 mg daily + Clopidogrel 75 mg daily
C. Apixaban 2.5 mg twice daily
D. No antiplatelet or anticoagulant therapy

Stroke Risk 5 CHA_2DS_2-VASc High risk | **Renal Function** 1.3 SCr mg/dL 29.2 CrCl mL/min

CHA_2DS_2-VASc

Select all that apply

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

Creatinine Clearance (Cockcroft-Gault Equation)

All four values are required to calculate Creatinine Clearance

Select Units: SI | ✔ US

Age: 81 Yrs

Sex: Female

Stroke Risk
5 CHA_2DS_2-VASc
High risk

Renal Function
1.3 SCr mg/dL
29.2 CrCl mL/min

Bleed Risk Considerations

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

Select all that apply

HAS-BLED

SCORE: 4

- [x] Hypertension
- [x] Abnormal Renal Function
- [ ] Abnormal Liver Function
- [ ] Stroke/TIA/TE
- [ ] History of Major Bleeding
- [ ] History of Labile INR
- [x] Age > 65 yrs
- [ ] Current "excess" of Alcohol
- [x] Currently taking antiplatelet drugs or NSAIDs

Concomitant Medications

- [x] Aspirin (any dose)
- [ ] P2Y12 Inhibitors
- [x] NSAIDs
- [ ] Other antiplatelets

5 CHA_2DS_2-VASc High risk | 1.3 SCr mg/dL | 29.2 CrCl mL/min

❶ Consider Therapy Guidance

Oral anticoagulation therapy recommended due to high stroke risk

❷ Select Therapy Option

No Therapy

❸ Evaluate Therapy

Standard Dose (clinical trials)	Not applicable

Stroke Risk/Benefit | **Bleed Risk** | **Safety Info**

Risk/Benefit Information*

Patient's ANNUAL risk of stroke + thromboembolism with No Therapy	**10.0%**

5 CHA_2DS_2-VASc High risk | 1.3 SCr mg/dL | 29.2 CrCl mL/min

3 Evaluate Therapy

Renal-Function Adjusted Dose	2.5 mg twice daily

Stroke Risk/Benefit | Bleed Risk | Safety Info

Risk/Benefit Information*

Patient's ANNUAL risk of stroke + thromboembolism with Apixaban	**2.6%**
Relative risk reduction	**74%**
Absolute risk reduction	**7.4%**
Chance of benefit per year	**1 in 14**

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

*This table refers to Apixaban (5 mg twice daily) and calculates individualized annual risk of ischemic stroke and thromboembolism using relative risk reduction from the clinical trials in combination with individual risk factors. This data is not the result of head-to-head trials.

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Questions?

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