The purpose of the CV risk calculator is to estimate patients’ 10-year atherosclerotic cardiovascular disease (ASCVD) risk at their initial clinic visit to establish a reference point.

The information required to estimate ASCVD risk includes age, sex, race, total cholesterol, LDL cholesterol, HDL cholesterol, systolic blood pressure, use of lipid-lowering and blood pressure medications, diabetes status, smoking status and aspirin therapy.
The Recommended Patient Visit Workflow

1. Conduct a routine history and physical examination. Be sure to include:
   a. Health behavior assessments (for example eating pattern, physical activity and smoking)
   b. Assessment of physiological risk factors, including blood pressure, lipid levels and diabetes status

2. Use the calculator to determine 10-year ASCVD risk for individuals 40–75 years of age and lifetime ASCVD risk for those 20–59 years of age. The 10-year risk should be classified as:
   a. Low if <5%
   b. Borderline if 5% to <7.5%
   c. Intermediate if 7.5% to <20%
   d. High if ≥20%

3. Consider modifying the risk classification based on risk-enhancing factors. Examples include:
   a. Family history of premature ASCVD
   b. Metabolic syndrome
   c. Chronic kidney disease
   d. Chronic inflammatory conditions
   e. Primary hypercholesterolemia
   f. High-risk race/ethnicity
   g. Specific lipid/biomarkers associated with increased ASCVD risk
   h. History of premature menopause or pregnancy-associated conditions such as preeclampsia, which are known to increase future ASCVD risk

4. Discuss the 10-year and lifetime ASCVD risks with the patient. Be sure to cover:
   a. Why it is important to control risk factors and minimize risk
   b. How drug therapy can provide a net benefit
   c. Risk associated with drug therapy
   d. The patient’s therapy preferences

5. Based on the patient’s preferences, recommend specific lifestyle modifications. Examples include:
   a. Weight loss
   b. Dietary changes
   c. Smoking cessation
   d. Increased physical activity

6. If necessary, discuss how best to manage blood pressure and the goals of blood pressure therapy.
Algorithm of Clinical Approach

Consider obtaining a coronary artery calcium (CAC) measurement in patients with a 10-year risk that is borderline or intermediate if:

- The patient is unsure about initiating statin therapy.
- The net benefit regarding the initiation of statin therapy is unclear.

If a CAC is obtained, use Figure 1 to interpret the results.

Recommend statin therapy for all patients with high 10-year ASCVD risk.

For patients who are started on therapy, routinely monitor for indicators that they are responding. Key indicators are:

- LDL cholesterol levels (statin therapy)
- Blood pressure (antihypertensive therapy)

Figure 1: Algorithm of clinical approach to incorporate CAC measurement in risk assessment for borderline- and intermediate-risk patients. *Clinicians and patients may not wish to postpone therapy in patients with a CAC score of 0 and diabetes, heavy current cigarette smoking or strong family history of premature ASCVD. Blue shading indicates decision node.
Implementing the ASCVD Risk Calculator During Patient Visits

Some electronic medical record (EMR) systems have a feature that will automatically calculate a patient’s ASCVD risk. Providers who do not have access to an EMR with a score auto-calculation feature can either:

- **Download an app:** [ASCVD Risk Estimator Plus - American College of Cardiology (acc.org)]
- **Use this website:** [2018 Prevention Guidelines Tool CV Risk Calculator (heart.org)]

**Reference**


Content accurate as of November 2023.