The purpose of the ASCVD Risk Calculator is to estimate a patient’s 10-year ASCVD risk at an initial visit to establish a reference point. The information required to estimate ASCVD risk includes age, sex, race, total cholesterol, HDL cholesterol, systolic blood pressure, blood-pressure-lowering medication use, diabetes status and smoking status.
The Patient-Visiting Workflow

1. Conduct a routine history and physical examination. Be sure to include:
   a. Health behavior assessments (for example diet, physical activity and smoking).
   b. Measurement of physiological risk factors like blood pressure, lipid panel and diabetes screening.

2. Determine risks for ASCVD for 10-year (10-y) (patient age between 40–75 years old) and lifetime (patient age between 20–59 years old). The 10-y 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/ethnicities
   g. Specific lipid/biomarkers associated with increased ASCVD risk
   h. History of premature menopause and of pregnancy-associated conditions like preeclampsia known to later increase ASCVD risk

4. Have a conversation with the patient regarding his or her 10-y and lifetime ASCVD risk. Be sure to include the following in the discussion:
   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. His or her therapy preferences

5. Based on patient preferences, recommend specific lifestyle modifications. Examples include:
   a. Losing weight
   b. Making dietary changes
   c. Cessation of smoking
   d. More physical activity

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

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 mellitus, heavy current cigarette smoking or strong family history of premature ASCVD. Blue shading indicates decision node. %ile indicates percentile; ASCVD, atherosclerotic cardiovascular disease; and CAC, coronary artery calcium.
Implementing the ASCVD Risk Calculator During Patient Visits

Some EMR/EHR 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]

References