Guideline Summary and Secondary Prevention Recommendations – Page 1

The 2018 AHA/ACC Cholesterol Treatment Guideline was endorsed by the NLA and nine other societies who made key contributions. Overall, it offers an evidence-based and patient-centered approach to the assessment and treatment of ASCVD risk: It recommends intensive LDL lowering for ‘very high risk’ ASCVD patients, supports statin therapy in primary prevention when 10-Year ASCVD Risk is 5% to <7.5% if LDL-C is 160-189 mg/dl and ‘risk enhancing factors’ are present, and endorses the use of CAC scoring for reclassifying risk when indecision exists. Key points and algorithms with color-coded Classes of Recommendation are shown below and on Page 2.

- **Diet and lifestyle remain the foundation of risk reduction** – Patients should be counseled to follow an anti-atherogenic diet of fruits and vegetables, whole grains, legumes, nuts, lean proteins, and liquid vegetable oils, that is low in added sugars and sodium, and to avoid tobacco and engage in regular exercise.

- **In Secondary prevention, very high risk ASCVD patients are treated intensively - See Algorithm + Table**
  - **In ASCVD With Very High Risk** [when >1 Major ASCVD Event OR 1 Major ASCVD Event + Multiple High Risk Conditions are present, as per Table], a high-intensity statin to lower LDL-C by >50% is recommended. If LDL remains >70 mg/dl, ezetimibe and, if needed, a PCSK9 inhibitor, should be considered.
  - **In ASCVD Without High Risk features**, recommendations are for a high intensity statin to lower LDL-C by >50% in those <75 years, and for either a high or moderate intensity statin in those over age 75.

**Figure 1. Secondary Prevention**

ACS indicates acute coronary syndrome; ASCVD, atherosclerotic cardiovascular disease; HDL-C, high-density lipoprotein cholesterol; LDL-C, low-density lipoprotein cholesterol; MI, myocardial infarction; and PCSK9, PCSK9 inhibitor. *Very high risk includes a history of multiple major ASCVD events or 1 major ASCVD event and multiple high-risk conditions.

**Definition of Very High Risk ASCVD**

>1 Major ASCVD Event

- Recent ACS (within past 12 months)
- History of MI (other than recent ACS above)
- History of ischemic stroke
- Symptomatic PAD (claudication with ABI < 0.85 or previous revascularization or amputation)

Or

1 Major Event + >1 High Risk Conditions

- Age > 65 years
- Familial hypercholesterolemia
- Prior CABG or PCI outside of the major ASCVD event
- Diabetes mellitus
- Hypertension
- CKD (eGFR 30-59 ml/min/1.73 m2)
- Current smoking
- Persistently elevated LDL-C >100 mg/dl (>2.6 mmol/L) despite maximally tolerated statin therapy and ezetimibe
- History of congestive HF


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Primary Prevention Recommendations – Page 2

- In Primary Prevention, personalized risk assessment and risk reduction are recommended – See Algorithm
- In Adults with primary LDL-C $\geq$190 mg/dl, a high-intensity statin is recommended to lower LDL-C by $\geq$50%. If LDL-C remains $\geq$100 mg/dl after maximizing the statin dose, addition of ezetimibe is reasonable. If LDL-C is still $\geq$100 mg/dl and criteria for FH are present, addition of a PCSK9 inhibitor may be considered.
- In Adults with DM and Age 40-75, a moderate-intensity statin is recommended regardless of risk, and a high-intensity statin is reasonable for those with multiple ASCVD risk factors.
- In Children-Adolescents Age 0-19 years with a clinical diagnosis of FH, a statin can be safely started at age 10.
- In Adults Age 20-39, estimate lifetime risk via the ASCVD Plus Risk Estimator, and consider a statin if LDL-C is persistently $\geq$160-189 mg/dl with elevated lifetime risk, family history of early ASCVD, or risk enhancing factors.
- In Adults Age 40-75 + LDL 70-189 mg/dl, calculate 10-year ASCVD Risk via the ASCVD Plus Risk Estimator
  - If 10-Year ASCVD Risk is 5% to <7.5%, consider a statin if ‘risk enhancing’ factors are present [=LDL-C 160-189 mg/dl, South Asian ancestry, inflammatory diseases like HIV or RA, CKD, metabolic syndrome, history of early menopause or pre-eclampsia, FHx of early CAD, TGs $>175$ mg/dl, or elevated Apo-B, hsCRP or Lipoprotein-A.
  - If 10-Year ASCVD Risk is 7.5% to <20%, a moderate intensity statin is recommended after a clinician-patient risk discussion to reduce LDL-C by 30%-49%. If the decision about statin use remains uncertain, consider a CAC score. If score is 0, a statin can be deferred unless the patient is a smoker or has DM or FHx ASCVD. A statin is reasonable if CAC score is 1 to 99 AU, and recommended if CAC score is $\geq$100 AU.
- If 10-Year risk is $\geq$20%, a high intensity statin is recommended to lower LDL-C by $\geq$50%.
- Always engage patients in a discussion of benefits and risks before prescribing a statin for primary prevention.

Figure 2. Primary Prevention

See Table of ASCVD Risk Enhancers in the left lower algorithm