U.S. Preventive Services Task Force – Guideline Update on Statin Use for the Primary Prevention of Cardiovascular Disease in Adults: Preventive Medication

- On November 13, 2016, the U.S. Preventive Services Task Force (USPSTF) released the *2016 Final Recommendation Statement on Statin Use for the Primary Prevention of Cardiovascular Disease in Adults: Preventive Medication*.

- **Main recommendations:**

  - Adults without a history of cardiovascular disease (CVD) (ie, symptomatic coronary artery disease or ischemic stroke) should use a low- to moderate-dose statin for the prevention of CVD events and mortality when all of the following criteria are met:

    - Age 40 to 75 years
    - ≥ 1 CVD risk factors (ie, dyslipidemia, diabetes, hypertension, or smoking)
    - Calculated 10-year risk of a CV event ≥ 10%

  - Although statin use may be beneficial for the primary prevention of CVD events in some adults with a 10-year CVD event risk < 10%, the likelihood of benefit is smaller, because of a lower probability of disease and uncertainty in individual risk prediction.

    - Clinicians may choose to offer a low- to moderate-dose statin to certain adults without a history of CVD when all of the following criteria are met: age 40 to 75 years; ≥ 1 CVD risk factor; calculated 10-year risk of a CV event of 7.5% to 10%.

  - The current evidence is insufficient to assess the balance of benefits and harms of initiating statin use for the primary prevention of CVD events and mortality in adults ≥ 76 years of age without a history of heart attack or stroke.

- **Considerations for implementation:**

  - The likelihood that a patient will benefit from statin use depends on his or her absolute baseline risk of having a future CVD event, a risk estimation that is imprecise based on the risk estimation tool, the 10-year atherosclerotic CVD risk calculator from the 2013 American College of Cardiology/American Heart Association (ACC/AHA) guidelines.

    - Clinicians should discuss with patients the potential risk of having a CVD event and the expected benefits and harms of statin use.
    - The USPSTF found evidence that use of low-to moderate dose statins reduces the probability of CVD events and mortality in certain patient populations (see Main Recommendations).
    - Evidence concerning the association between statin use and diabetes mellitus is mixed, with one prevention trial suggesting that there may be a small increased risk of developing diabetes with the use of high-dose statins.
    - The USPSTF found no clear evidence of reduced cognitive function associated with statin use.

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- **Patient population under consideration:**
  - The 2016 USPSTF recommendations apply to adults ≥ 40 years of age without a history of CVD who do not have current signs and symptoms of CVD.
  - Some individuals in this group may have undetected, asymptomatic atherosclerotic changes; for the purposes of this recommendation statement, the USPSTF considers these persons to be candidates for primary prevention interventions.
  - These recommendations do not apply to adults with a low-density lipoprotein cholesterol (LDL-C) level > 190 mg/dL or known familial hypercholesterolemia; these persons are considered to have very high cholesterol levels and may require statin use.
- **Statin regimens:**

Statin	Dose, mg*		
	Low	Moderate	High
Lipitor® (atorvastatin)	--	10 - 20	40 - 80
Lescol® (fluvastatin)	20 - 40	40 twice daily	--
Lescol® XL (fluvastatin extended-release)	--	80	--
Mevacor® (lovastatin)	20	40	--
Livalo® (pitavastatin)	1	2 - 4	--
Crestor® (rosuvastatin)	--	5 - 10	20 - 40
Zocor® (simvastatin)	10	20 - 40	--

**Dose categories are from the ACC/AHA 2013 guidelines on the treatment of blood cholesterol to reduce atherosclerotic CV risk in adults*

- This recommendation replaces the USPSTF 2008 recommendation on screening for lipid disorders in adults. Per USPSTF, screening for elevated lipid levels is a necessary (but not sufficient) step in the overall assessment of CVD risk to help identify persons who may benefit from statin therapy.
  - The 2016 update is based on the accumulating evidence on the role of statins in preventing CVD events across different populations.
- Refer to the USPSTF recommendation published in the *Journal of the American Medical Association* for further details.