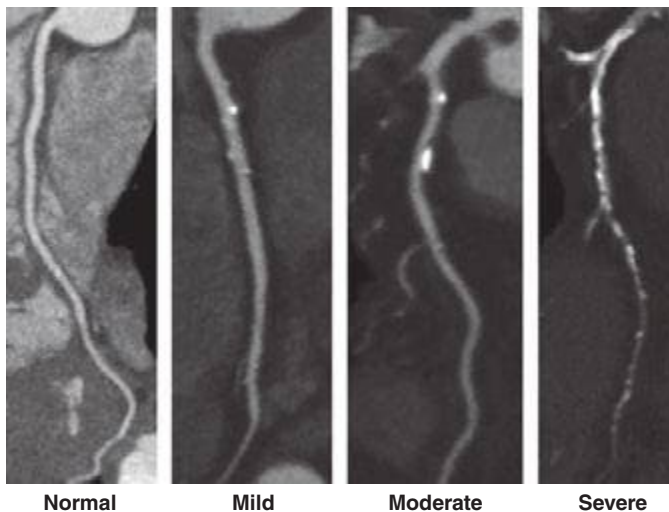
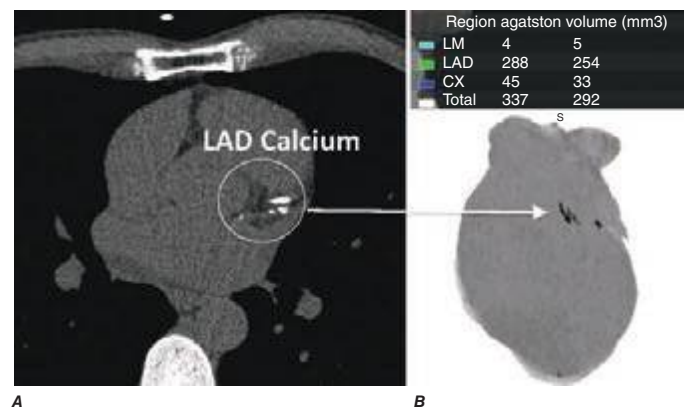


**FIGURE 271e-3** Exercise single-photon emission computed tomography (SPECT) myocardial perfusion technetium-99m ( $^{99m}\text{Tc}$ ) sestamibi scan in a 54-year-old male with a history of coronary artery disease and a prior coronary stent. The stress images (left and middle) show a large defect involving the apex, all apical segments, mid-inferior, mid-inferoseptum, and mid-anteroseptum (arrowheads), which is completely reversible at rest (right), reflecting a large area of exercise-induced myocardial ischemia throughout the left anterior descending coronary territory. The bull's eye displays on the right panel depict the semiquantitative extent of ischemia (light yellow and blue areas represent the extent and severity of ischemia).



**FIGURE 271e-4** Coronary computed tomography angiography (CTA). Curved multiplanar reformations demonstrating coronary artery disease severity, defined as normal (no plaque or stenosis), mild (<40%), moderate (40–69%), and severe (>70%) luminal narrowing. By guidelines for CTA reporting, alternative classification provides for stenosis grading as normal, minimal (1–24%), mild (25–49%), moderate (50–69%), severe (70–99%), and occluded (100%). (From GL Raff et al: SCCT guidelines for the interpretation and reporting of coronary computed tomographic angiography. *J Cardiovasc Comput Tomogr* 3:122, 2009; with permission.)



- CAC score 271e = 96th percentile for age, race and ethnicity<sup>1</sup>  
 - 10-year hard CHD risk is 6% (observed age) vs 30% (arterial age)<sup>2#</sup>

**FIGURE 271e-5** Coronary artery calcium (CAC) scan on a 51-year-old white male without clinical cardiovascular disease or treated diabetes, referred for CAC for risk stratification to guide preventive therapies. **A.** Gated, noncontrast cardiac computed tomography (CT; 3-mm slice thickness), axial view, demonstrating calcified left anterior descending (LAD) artery atherosclerosis. **B.** Whole-heart three-dimensional image reconstruction, inverted maximum-intensity projection, demonstrating overall burden of CAC with predominant LAD distribution (arrow). **Top right.** CAC scores for each coronary artery with calcified plaque involvement, scored by Agatston method and total volume. #For white male with observed age 51 years, total cholesterol 220 mg/dL, high-density lipoprotein 45 mg/dL, nonsmoker, no hypertension, and systolic blood pressure 120 mmHg. Calculated arterial age is 81 years. CHD, coronary heart disease; CX, left circumflex artery; LM, left main artery. <sup>1</sup>Data from RL McClelland et al: *Circulation* 113:30-37, 2006. <sup>2</sup>Data from RL McClelland et al: *Am J Cardiol* 103: 59-63, 2009.