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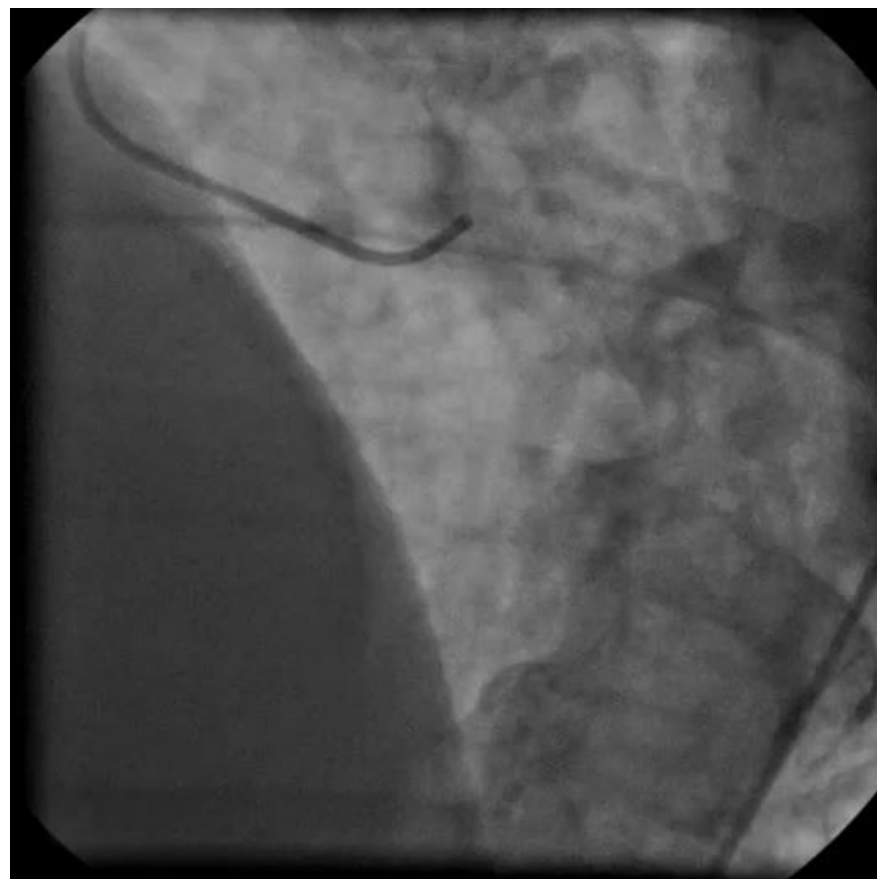
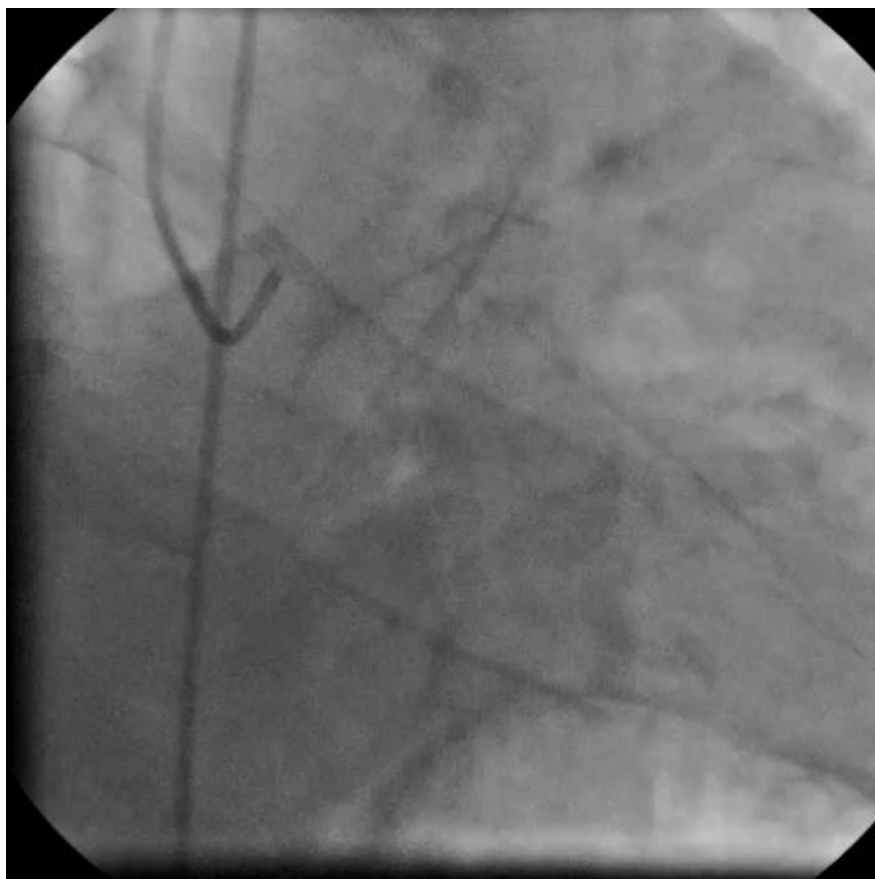
# Conventional Coronary Angiography – Conduct and Minimal Standards

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# Coronary Angiography

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# Angiographic Procedure Instructions

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- Image Acquisition
- Catheters
- Vasodilatation
- Projections

# Angiographic Procedure Instructions

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- Image Acquisition

Digital recording

At least 15 frames/sec

Magnification mode of 15-20 cm (6-8 inches)

# Angiographic Procedure Instructions

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- Catheters

For calibration and absolute measurement

At least 5 French catheters (size noted)

Contrast filled catheters

Distal 2-3 cm portion visualized on each run

Main portion of coronary segments centered within the imaging

# Angiographic Procedure Instructions

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- Vasodilatation

100-300  $\mu\text{g}$  of nitroglycerin intracoronary injection in both the LCA and RCA

# Angiographic Procedure Instructions

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- Projections

Multiple orthogonal views

4 projections for the LCA

2 projections for the RCA

Minimal foreshortening and overlap

Deep inspiration

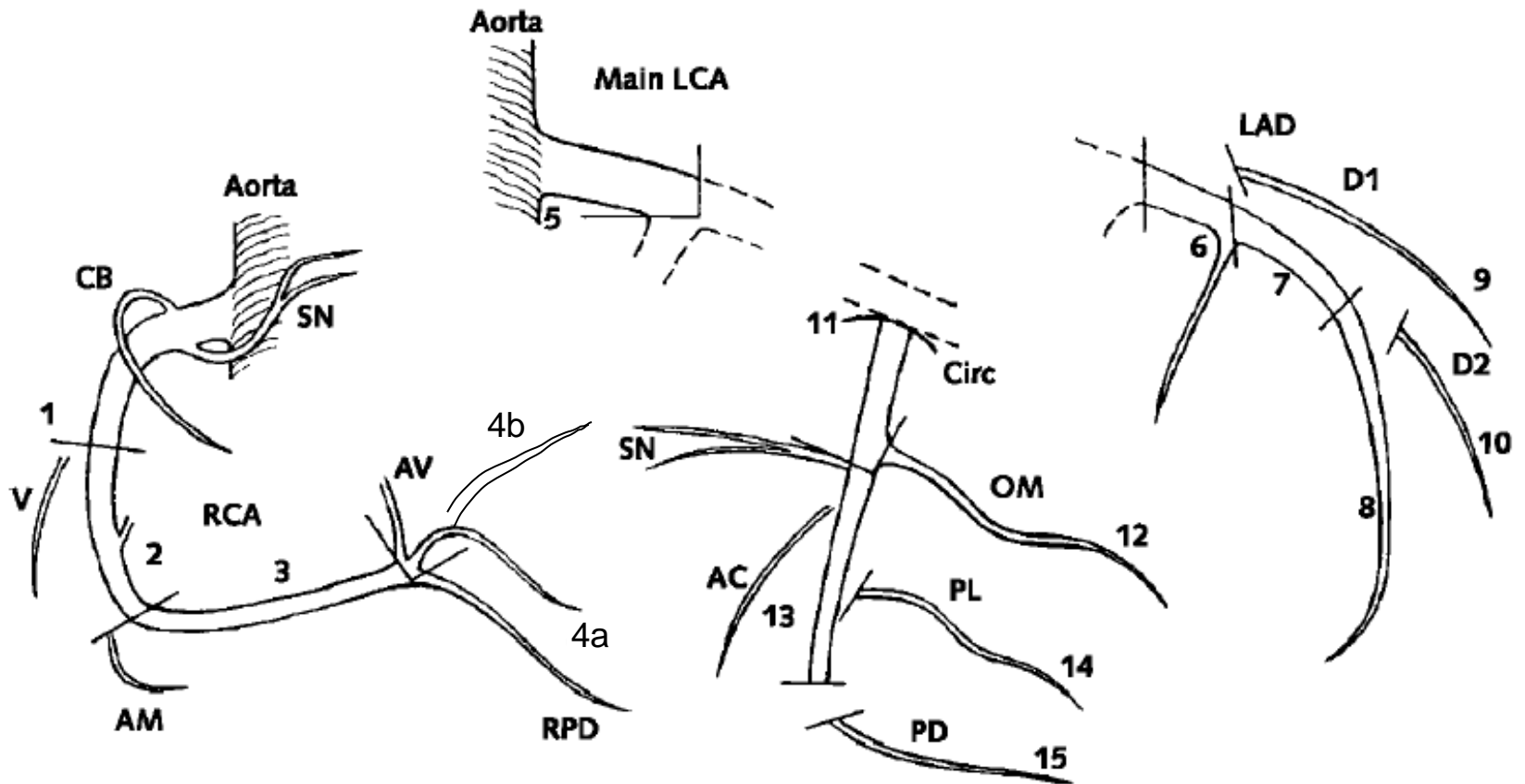
# Angiographic Procedure Instructions

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- AHA 17 Segment model (or SCCT?)
- Worst view projection
- Diameter stenosis: QCA or visual?
- DICOM image



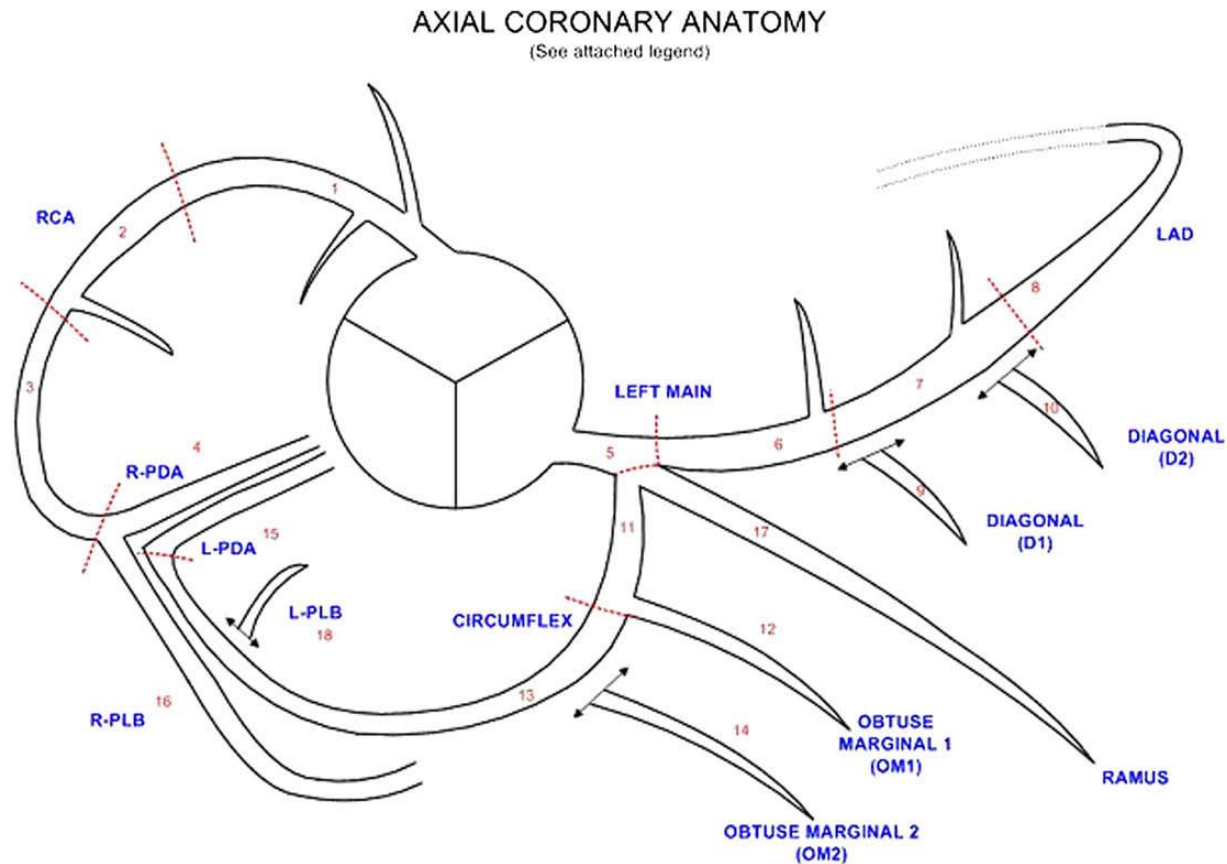
# Coronary Artery AHA Segments



# Quantitative Stenosis Grading - How?

Segment	Vessel	Grade, %
1	Proximal RCA	
2	Mid RCA	
3	Distal RCA	
4a	Posterior descending artery	
4b	Right posterolateral branch	
5	Left Main	
6	Proximal LAD	
7	Mid LAD	
8	Distal LAD	
9	Diagonal 1	
10	Diagonal 2	
11	Proximal LCx	
12	OM1	
13	Mid LCx	
14	OM2	
15	Distal LCx	
16	Intermediate branch	

# Coronary Artery SCCT Segments



**Figure 1** SCCT Coronary Segmentation Diagram. Axial coronary anatomy definitions derived, adopted, and adjusted from WG Austen, JE Edwards, RL Frye, GG Gensini, VL Gott, LS Griffith, DC McGoon, ML Murphy, BB Roe: A reporting system on patients evaluated for coronary artery disease. Report of the Ad Hoc Committee for Grading of Coronary Artery Disease, Council on Cardiovascular Surgery, American Heart Association. *Circulation*. 1975;51:5–40.

# Summary

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- Optimize image quality  
(deep breath, contrast-filled catheter, 5/6F)
- Nitro
- Best view for stenosed segments  
(avoid foreshortening and overlap)
- 4/2 projections
- 17/19 segment model
- Stenosis grading  
(Visual / QCA)