

Coronary CTA with Calcium Scoring

Patient Name: [REDACTED]	Date of Birth: [REDACTED]
Date of Study: [REDACTED]	Age: 68
MRN:	Sex: Male
Referring Physician: Parikh, MD	

Indication: [REDACTED]

Procedure: The CT Coronary Angiogram was performed on a Canon Aquilion One CT scanner with heart rate gating. A 20 gauge IV catheter was placed in the left antecubital fossa. A 40 level non-contrast study was performed. A CT study was performed in the transaxial axis using thin axial slices with an injection of 70-80cc of iodinated contrast at 5 cc/sec. Nitro tab 0.4 mg was given SL just prior to exam. The patient tolerated the procedure well. There were no complications. Three-dimensional images were reconstructed.

Findings: The coronary system is RIGHT dominant.
The left main coronary artery with disease, The LM artery trifurcates into the left anterior descending coronary artery, the circumflex artery, and the ramus.
The left anterior descending coronary artery and diagonal vessels with mild (<30%) stenosis in proximal and mid-vessel
The left circumflex coronary artery with 30-49% stenosis in proximal segment (calcific lesion) and <30% stenosis in obtuse marginal branches.
The right coronary artery is large and dominant with <30% stenosis proximally, acute marginal vessels, posterior descending and posterior lateral branches are without disease.

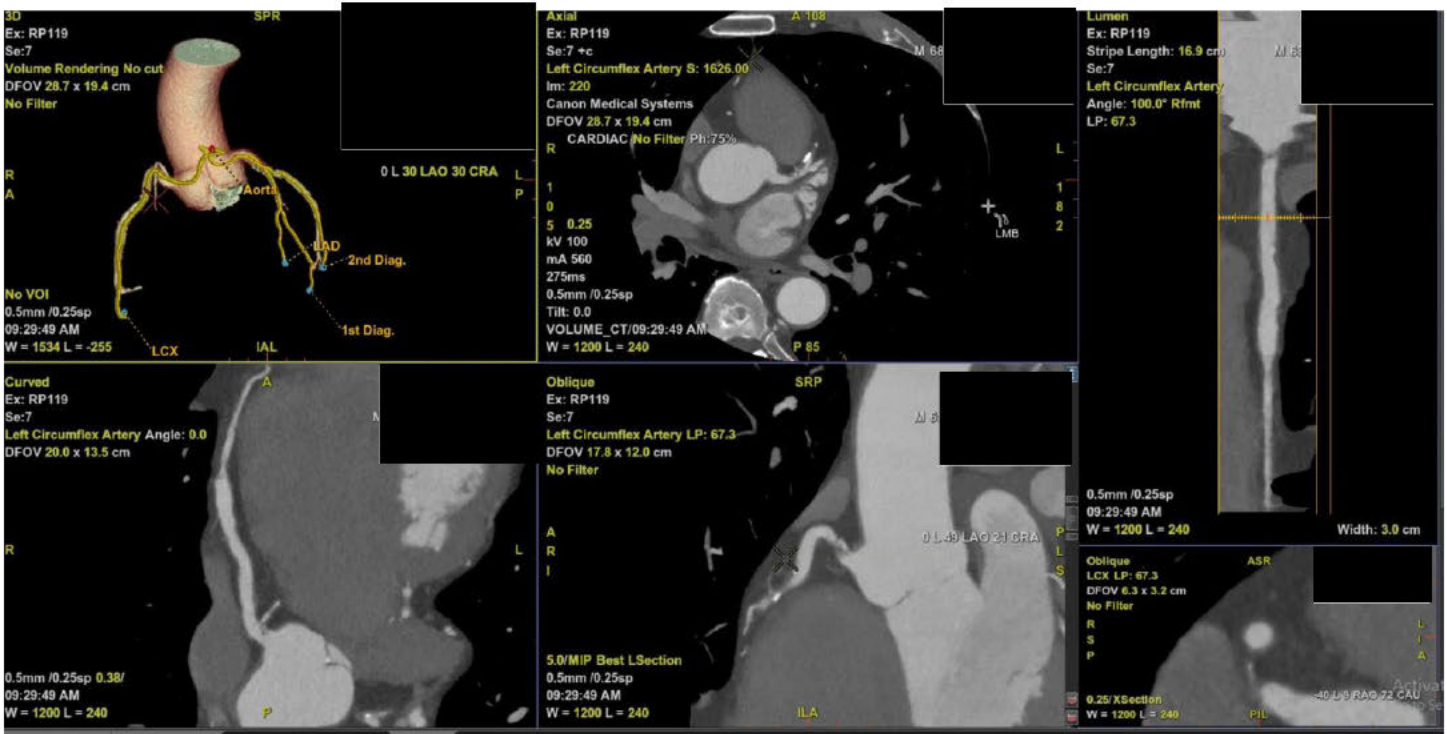
Impression: The left ventricle is of normal size, wall thickness. The left atrium, right ventricle and right atrium are normal. The pericardium, mediastinum and aorta are normal as are the remainder of the cardiac structures.

Conclusions and Recommendations:

1. Coronary arteries with mild calcific lesions in all three vessels resulting in mild non-obstructive disease.
2. Left atrial size - Normal. No thrombus.
3. Mitral valve – Normal. No calcification.
4. Aortic Valve – Trileaflet. Normal. No calcification.
5. Aortic Root and Ascending Aorta – Normal. No thoracic aorta calcification. No aneurysm or dissection.

**Matthew Budoff, M.D., FACC, FAHA**

Director, Cardiac CT at Los Angeles Biomedical Research Center
Professor of Medicine, Division of Cardiology



Coronary CTA with Calcium ScoringPatient Name: [REDACTED]
Date of Birth: [REDACTED] Gender: Male

Study Date: [REDACTED]

Referring Provider: .

PROCEDURE

Coronary Artery Scanning (CAC) -- CT of the chest was performed on a Canon Aquilion One scanner with at least 40 slices of 3mm thickness using high-resolution, volume mode scanning in order to visualize the coronary arteries.
CAC Series DLP: 24.00, CTDIvol: 1.70

FINDINGS

Location	Calcium Lesions	Calcium Score
Left Main Coronary Artery	2	14.30
Left Anterior Descending Coronary Artery	6	88.61
Circumflex Coronary Artery	8	78.39
Right Coronary Artery	6	48.30
Total	22	229.6

INTERPRETATION

As compared to other persons of your age and gender you are in the 50th percentile, with 100 percentile being the highest scores seen in this age category among over 30,000 persons scanned at Harbor-UCLA.

Using data from over 30,000 patients, scores are reported based on averages for age and gender. The calcium score suggests a degree of coronary disease which is:

Average. Your score is average among people of your age and gender.

A lower score is generally desirable, adherence to a healthy lifestyle is always recommended. This includes regular exercise, weight control, proper diet and avoidance of tobacco. Since atherosclerosis is present in your arteries, it is recommended, unless contraindicated, that aspirin in daily doses of 81 to 325mg be taken. In addition, the National Cholesterol Education Panel recommends that you treat your total cholesterol to a level <200mg/dl, HDL cholesterol >40 mg/dl, triglycerides <150 mg/dl and LDL cholesterol <100 mg/dl. Medical therapy is often needed to achieve these levels. It is recommended to repeat the scan at an interval of 12 - 18 months to determine if there has been a measurable increase in the coronary plaque disease.

All these measures, as well as those noted above, will slow the progression of coronary plaque, and lower your future risk of heart disease and stroke. Based on this score alone, we do not routinely recommend further testing. Your personal physician is in the best position to provide more specific advice and further testing based upon your clinical condition. The higher your score (especially if over 400), may require further testing (usually treadmill tests or stress tests combined with echocardiography or nuclear imaging). Of course, you should do all of these changes under the supervision of your regular physician.

Reported by:

Matthew Budoff, MD, FACC
Division of Cardiology

Patient	MRN	Cleerly ID	Study Date	Provider
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	Parikh Milind

Summary

Atherosclerosis | Stage 2 (617.4 mm³ Total Plaque: 2.9 mm³ Low-Density - Non-Calcified, 505.6 mm³ Non-Calcified, 108.9 mm³ Calcified)

Stenosis Dominance | 2 Moderate (pLAD, LCx); 3 Mild (pRCA, pCx, OM1); 4 Minimal (LM, D1, LCx, OM2); Right-Dominant

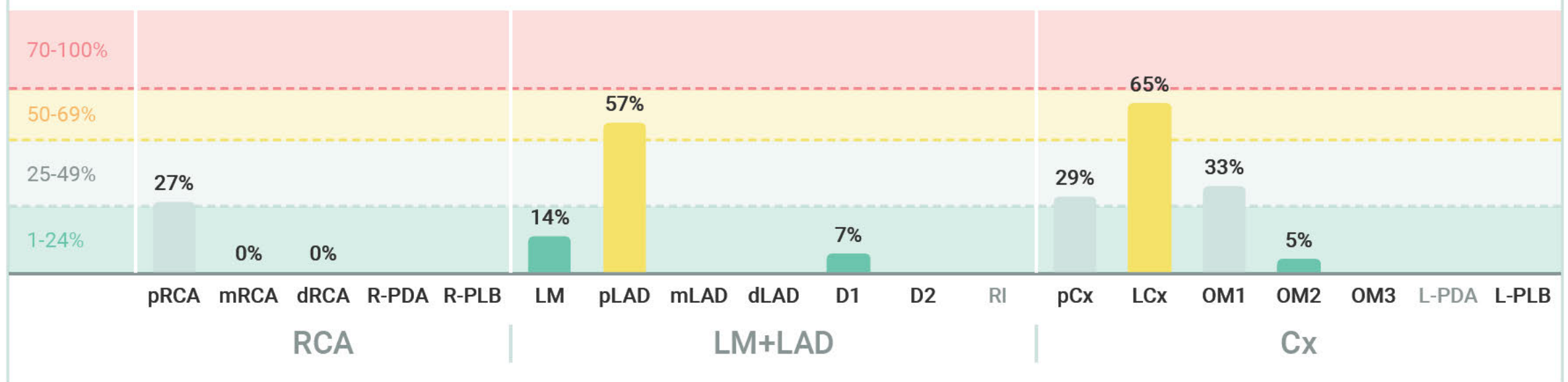
Atherosclerosis | Stage 2

Min JK et al., Coronary CTA plaque volume severity stages according to invasive coronary angiography and FFR [Journal of Cardiovascular Computed Tomography](#)

Territory	Plaque Volume (mm ³)				Percent Atheroma Volume	Plaque Stage		
	TOTAL	Low-Density - Non-Calcified	Non-Calcified	Calcified		Stage	mm ³	PAV
RCA	158.3	1	136.7	20.6	8.7%	0	0	0%
LM+LAD	318.2	1.8	266.8	49.6	21.7%	1	>0-250	>0-5%
Cx	140.9	0.1	102.1	38.7	14%	2	>250-750	>5-15%
TOTAL	617.4	2.9	505.6	108.9	14.4%	3	>750	>15%

Stenosis

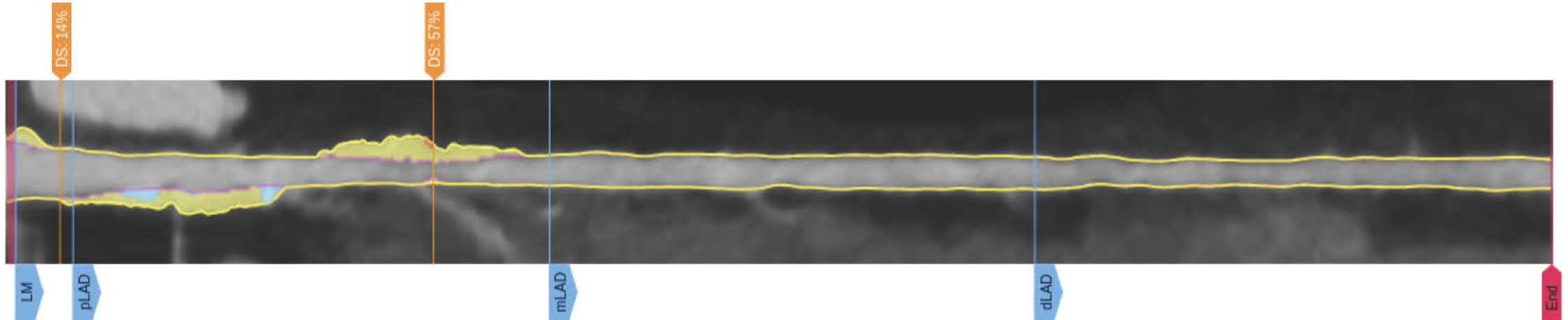
Severe $\geq 70\%$ or $\geq 50\%$ LM only **0** | Moderate 50-69% **2** | Mild 25-49% **3** | Minimal 1-24% **4**



Disclaimer: This report provided by Cleerly Labs does not provide data interpretation other than presence and extent of coronary plaques and degree of stenosis. This report should not be treated or used as a final diagnosis. Customer alone shall be responsible for evaluating the results, making any diagnosis, including but not limited to insertion of a CAD-RADS score to this report, and recommending any care or treatment to the patient, taking into account all relevant information, including customer independent review and interpretation of the source images. Certain views in this report may make use of interpolated data, which may give the appearance of healthy tissue in situations where pathology that is near or smaller than the screening resolution may be present. Cleerly shall not be liable for any decisions made for treatment recommended (or not recommended) by customer based on the report results, and customer agrees to indemnify and hold harmless Cleerly from any and all claims arising from or related to such decisions.

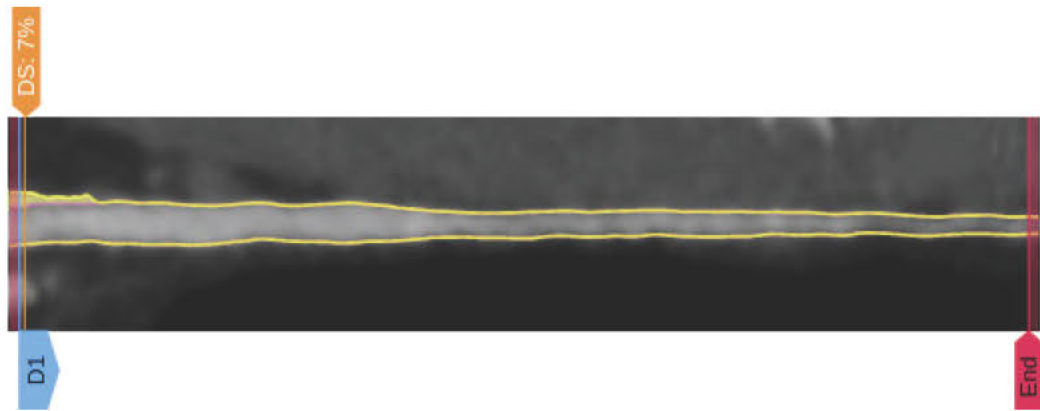
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[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	Parikh Milind

Left Main and Left Anterior Descending (LM+LAD)



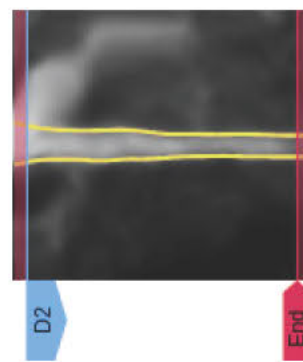
299 mm³ 26.9% PAV Total Plaque Volume	1.8 mm³ 0.2% PAV Low-Density - Non-Calcified Plaque Volume	253 mm³ 22.7% PAV Total Non-Calcified Plaque Volume	46 mm³ 4.1% PAV Total Calcified Plaque Volume
57% Greatest Diameter Stenosis	1.1 Highest Remodeling Index	ⓘ A lesion spans the LM, pLAD, D1, pCx, LCx, OM1 and OM2 with 14% in LM and 57% in pLAD and 7% in D1 and 29% in pCx and 65% in LCx and 33% in OM1 and 5% in OM2.	

First Diagonal Branch (D1)



19.2 mm³ 6% PAV Total Plaque Volume	0 mm³ 0% PAV Low-Density - Non-Calcified Plaque Volume
15.6 mm³ 4.9% PAV Total Non-Calcified Plaque Volume	3.6 mm³ 1.1% PAV Total Calcified Plaque Volume
7% Greatest Diameter Stenosis	ⓘ A lesion spans the LM, pLAD, D1, pCx, LCx, OM1 and OM2 with 14% in LM and 57% in pLAD and 7% in D1 and 29% in pCx and 65% in LCx and 33% in OM1 and 5% in OM2.
1.2 Highest Remodeling Index	

Second Diagonal Branch (D2)

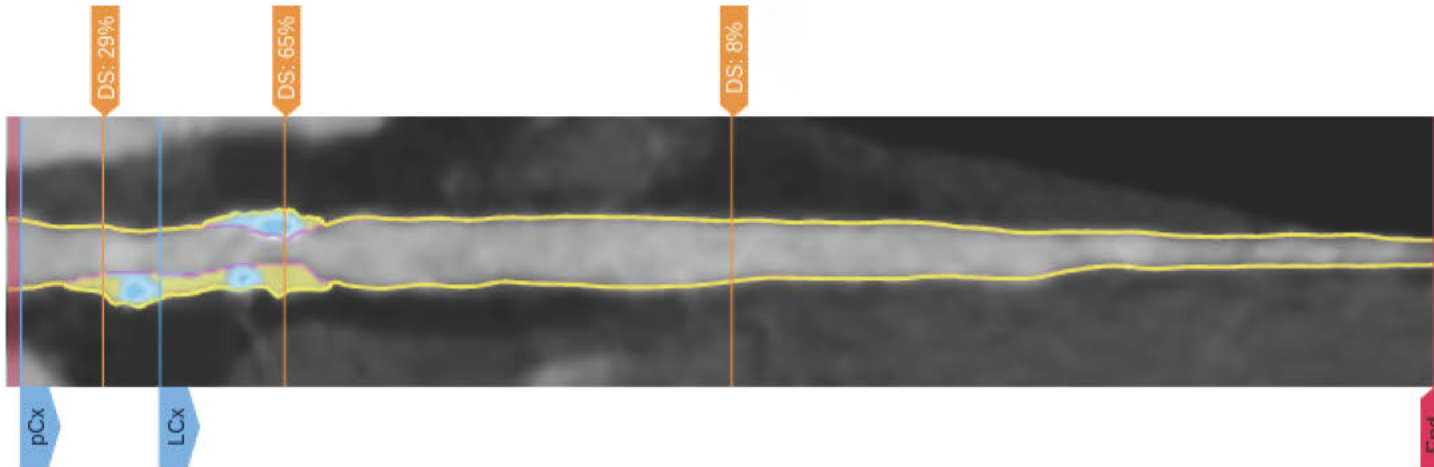


0 mm³ 0% PAV Total Plaque Volume	0 mm³ 0% PAV Low-Density - Non-Calcified Plaque Volume
0 mm³ 0% PAV Total Non-Calcified Plaque Volume	0 mm³ 0% PAV Total Calcified Plaque Volume
N/A Greatest Diameter Stenosis	
1 Highest Remodeling Index	

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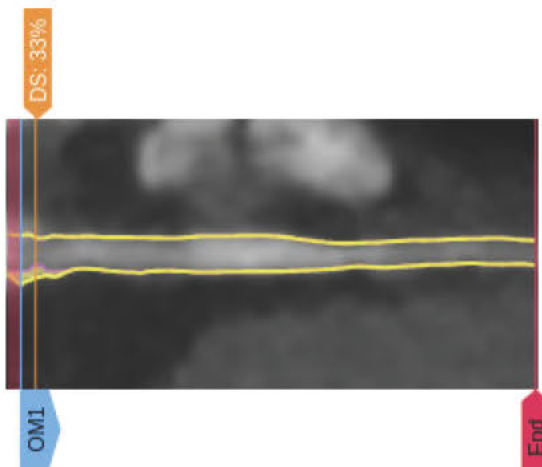
Circumflex (Cx)



130.4 mm³ 16.9% PAV Total Plaque Volume	0 mm³ 0% PAV Low-Density - Non-Calcified Plaque Volume	91.7 mm³ 11.9% PAV Total Non-Calcified Plaque Volume	38.7 mm³ 5% PAV Total Calcified Plaque Volume
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65% Greatest Diameter Stenosis	1.1 Highest Remodeling Index	ⓘ A lesion spans the LM, pLAD, D1, pCx, LCx, OM1 and OM2 with 14% in LM and 57% in pLAD and 7% in D1 and 29% in pCx and 65% in LCx and 33% in OM1 and 5% in OM2.
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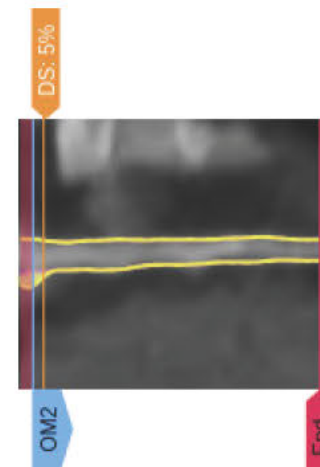
First Obtuse Marginal (OM1)



8.8 mm³ 10% PAV Total Plaque Volume	0.1 mm³ 0.1% PAV Low-Density - Non-Calcified Plaque Volume	1.7 mm³ 5% PAV Total Plaque Volume	0 mm³ 0% PAV Low-Density - Non-Calcified Plaque Volume
8.8 mm³ 10% PAV Total Non-Calcified Plaque Volume	0 mm³ 0% PAV Total Calcified Plaque Volume	1.7 mm³ 5% PAV Total Non-Calcified Plaque Volume	0 mm³ 0% PAV Total Calcified Plaque Volume

33% Greatest Diameter Stenosis	1.2 Highest Remodeling Index	ⓘ A lesion spans the LM, pLAD, D1, pCx, LCx, OM1 and OM2 with 14% in LM and 57% in pLAD and 7% in D1 and 29% in pCx and 65% in LCx and 33% in OM1 and 5% in OM2.
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Second Obtuse Marginal (OM2)



1.7 mm³ 5% PAV Total Plaque Volume	0 mm³ 0% PAV Low-Density - Non-Calcified Plaque Volume	1.7 mm³ 5% PAV Total Non-Calcified Plaque Volume	0 mm³ 0% PAV Total Calcified Plaque Volume
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5% Greatest Diameter Stenosis	1.2 Highest Remodeling Index	ⓘ A lesion spans the LM, pLAD, D1, pCx, LCx, OM1 and OM2 with 14% in LM and 57% in pLAD and 7% in D1 and 29% in pCx and 65% in LCx and 33% in OM1 and 5% in OM2.
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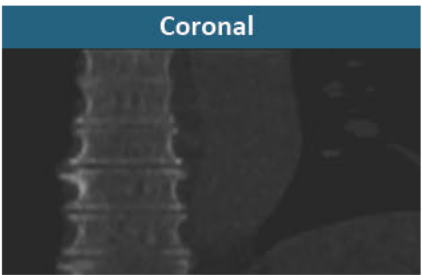
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Patient Name: [REDACTED]	ID: [REDACTED]
Date of Study: [REDACTED]	Age: 68
Date of Birth: [REDACTED]	Sex: Male
Referring Physician: Parikh, Milind	Indication: Male > 65 year's old

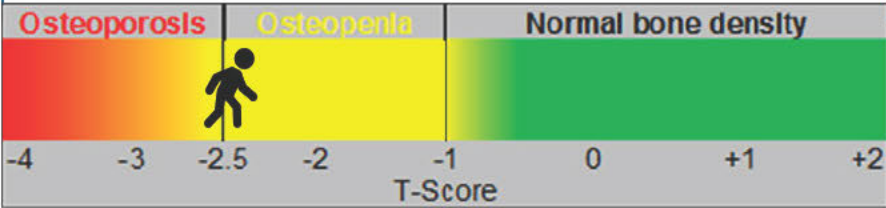
BMD Analysis

Osteoporotic -2.6
 TScore -2.5 to -1

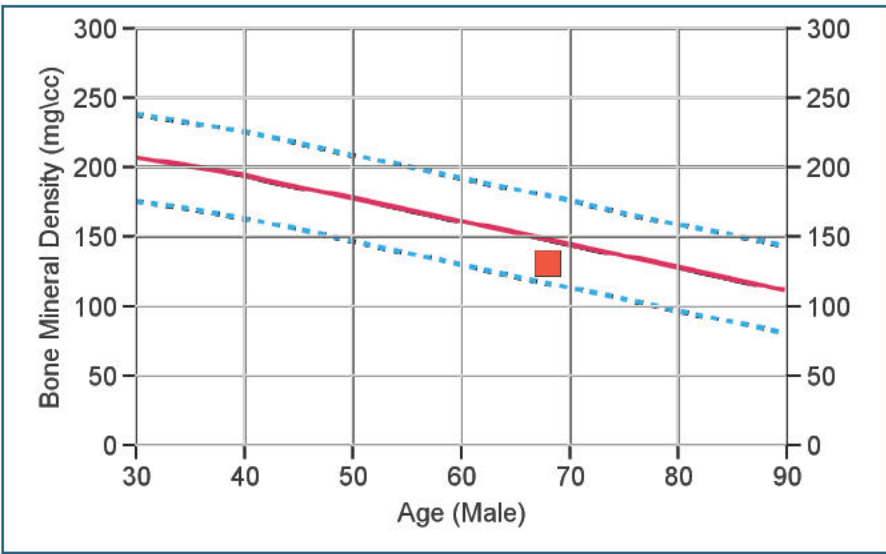
BMD (mg/cc)	
Mean BMD	130.3



T-Score: -2.6 **Vertebral Fracture: None**
 According to World Health Organization (WHO) guideline, your T-Score of -2.6 indicates you likely have osteoporosis.



Z-Score: -0.6



*For more information visit: http://www.niams.nih.gov/Health_Info/Bone/Bone_Health/bone_mass_measure.asp

Diagnosis

Z-Score: -.6 T-Score: -2.57
Vertebral Fracture: None

Recommendation

All patients should ensure an adequate intake of dietary calcium and vitamin D. The NOF recommends adults under age 50 need 1,000 mg of calcium and 400-800 IU of vitamin D daily. Adults 50 and over need 1,200 mg of calcium and 800-1,000 IU of vitamin D daily. Effective therapies for the prevention of osteoporosis include bisphosphonates (Fosamax and Actonel) and Evista. Hormone therapy may be an option based on review of risks and benefits of treatment.

Matthew Budoff
 Matthew J. Budoff, MD, FACC