

Coronary Calcium Report

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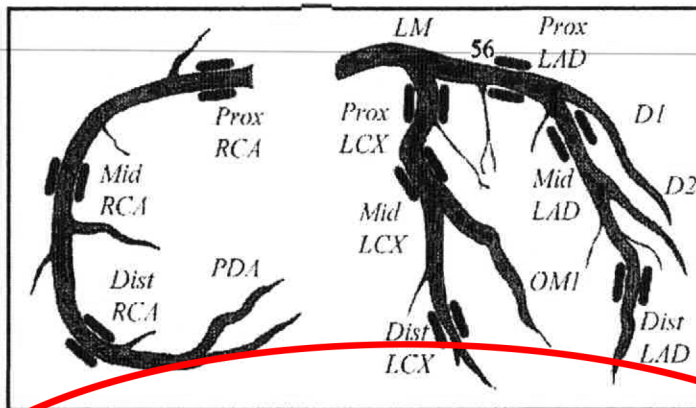


Patient Name:	WOODS^MIKE		
Patient Age:	56	Referring MD:	
Patient Gender:	M	Scan Date:	03/19/2019
Date of Birth:		Patient ID:	

Procedure:

High-resolution Computed Tomographic imaging of the chest was performed on 03/19/2019, with particular attention paid to the coronary arteries. Images from the examination were analyzed for the presence and extent of coronary artery calcification, using coronary calcium quantification software. The patient tolerated the procedure well and there were no complications. The results of the coronary calcification analysis are provided below, along with representative cross-sectional images from the examination and a schematic illustration of the coronary arteries and the location of any detected calcification. The patient's score is compared with published data relating to scores for people of a similar age and the same gender.

Findings:



The diagram to the left is a schematic of the coronary artery system. The coronary arteries are segmented into Proximal, Mid, and Distal sections, which may be annotated with black markings to illustrate the approximate location of any calcified regions detected in the examination. However please note that the markings do not imply the presence, absence, location or extent of arterial stenosis or any other condition other than the presence of coronary calcification.

Coronary Artery	Score
Left Main (LM)	0
Left Anterior Descending (LAD)	0.474
Left Circumflex (LCX)	20.5
Right Coronary Artery (RCA)	35.3
Total Agatston Score	56.2

The Agatston Score as reported in this table provides a measure for comparison with published studies (see "Percentile Ranking" below). The Volume Score can be useful for comparison with follow-up examinations, and is reported here: 133 mm³

The Percentile Ranking compares this score with scores for people in a group with the same gender and similar age, as reported in the literature.

**Percentile Ranking
 between 50% and 75%**

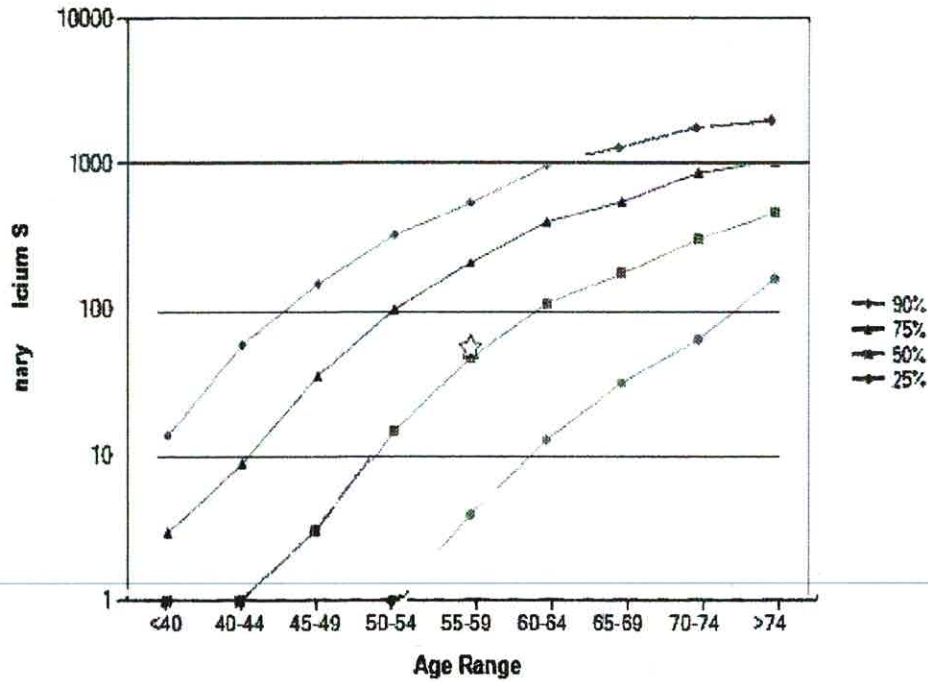
A rank below 50% indicates a score better than most in that group.
 A rank above 50% indicates a score worse than most in that group.

In a published study, between 50% and 75% of people of the same gender and similar age had the same or lower scores.

(J Hoff et al., American Journal of Cardiology, 2001 87:1335-1339).

The following graph shows the distribution of total calcium scores for each age group between 40 and 75 by percentiles (the star indicates the patient's total calcium score).

Coronary Calcium Scores in Asymptomatic Men



The total calcium score (56.2) is between the 50th and 75th percentile for men between the ages of 55 and 59. (Exact percentile calculated to be 51%; this means 50% of the population has lower calcium score and 49% of the population has a higher calcium score than you.)

Coronary Calcium Scoring:

It has been established that calcification of the coronary arteries, which can be detected by the scanner used in this examination, is a marker for the presence of Atherosclerosis (hardening of the arteries)¹. If calcification of a coronary artery is detected by the scanner, this indicates the presence of atherosclerotic plaque in the blood vessel. Such calcifications often appear many years before symptomatic heart disease develops, and as such they can represent an early indication of the presence of developing coronary artery disease.

If calcification is detected in the coronary artery system by the scanner, the Calcium Score¹, is computed for each of the coronary arteries based upon the size and density of the regions identified to contain calcium. While this Calcium Score does not correspond directly to narrowing in the artery due to atherosclerosis, it does have correlation with the severity of coronary atherosclerosis present. The Calcium Score is used to compare the patient's result with results from people of the same gender and a similar age, from published tables of Calcium Scores². This process is referred to as "Percentile Ranking". A second score, the Volume Score³ is also calculated and recorded in this report. The Volume Score is sensitive to the size of the lesion and helpful when performing comparison with a follow-up examination. The Mass Score is reported consistent with the published work,⁴ using McCollough's described calibration factor. A change in patient size causes an increased calibration factor error (~5%) compared to the scanner model variation (~1%).

The scores and percentile ranking reported here are intended to enable your physician to better evaluate your risk of developing symptomatic coronary artery disease. They can also be helpful to track the progression or regression of disease and effectiveness of treatment administered.

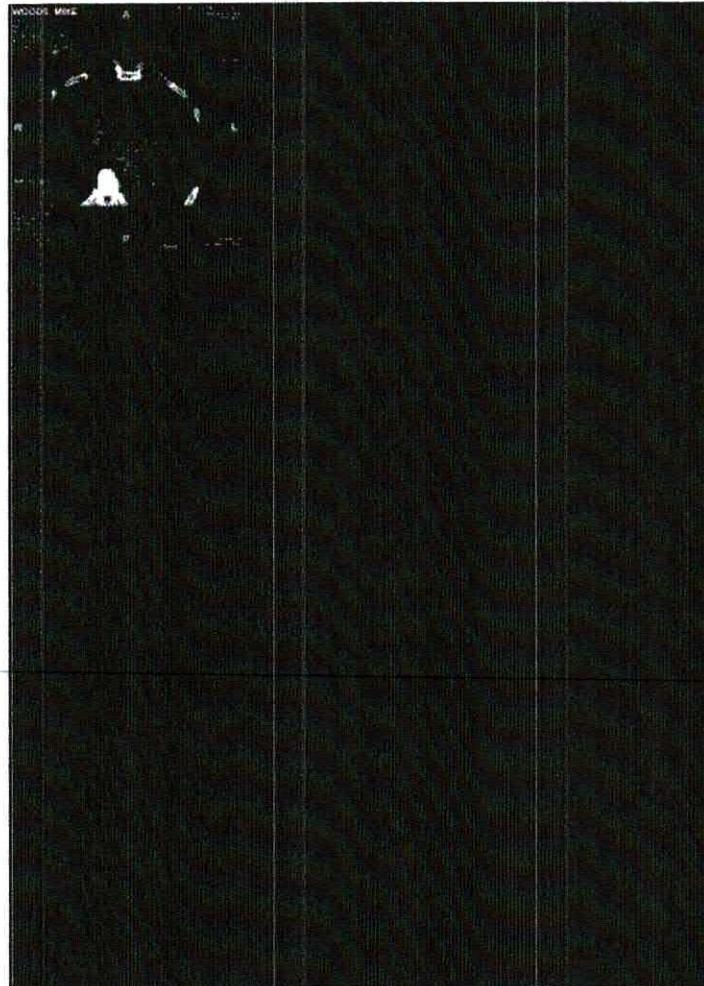
A full evaluation of cardiac risk should include an assessment of all conventional risk factors, and the scores and percentile rankings reported herein should be evaluated in this context. The following table provides guidelines for the interpretation of the results⁵.

0	No identifiable atherosclerotic plaque. Very low cardiovascular disease risk. Less than 5% chance of presence of coronary artery disease. A Negative Examination
1-10	Minimal plaque burden. Significant coronary artery disease very unlikely.
11-100	Mild plaque burden. Likely mild or minimal coronary stenosis.
101-400	Moderate plaque burden. Moderate non-obstructive coronary artery disease highly likely.
Over 400	Extensive plaque burden. High likelihood of at least one significant coronary stenosis (>50% diameter).

Recommendation

Adoption and maintenance of a healthy lifestyle is recommended for all people. This should include regular, appropriate exercise and observance of a proper diet, to ensure balanced nutrition and weight control. Tobacco use should be avoided. Cholesterol has been linked to coronary atherosclerosis, and we strongly encourage adhering to the recommendations of the National Cholesterol Education Panel (NCEP) in this regard. For primary prevention, these include a target goal for total cholesterol of less than 200 mg/dl, HDL cholesterol of greater than 40 mg/dl, triglycerides of less than 200 mg/dl, and LDL cholesterol of less than 100 mg/dl. Secondary prevention involves more stringent goals. However note that these are general recommendations only, and as with all such matters, the personal physician should be consulted regarding recommendations appropriate for the individual.

Selected images from the examination



References

1. A. S. Agnston, W. R. Janowitz et al., *Journal of the American College of Cardiology*, 1990; 15: 827-832
2. J Hoff et al., *American Journal of Cardiology*, 2001 87 1335-1339
3. T. Q. Callister, B. C'ooil et al., *Radiology*, 1998; 208: 807-814.
4. Cynthia H McCollough, et al., *Radiology*, 2007; May: 243: 527-38
5. J. A. Rumberger, B. H. Brundage et al., *Mayo Clinic Proceedings*, 1999; 74: 243-252.

Summary

Patient Name	WOODS^MIKE		
Patient Age	56	Referring MD	
Patient Gender	M	Scan Date	03/19/2019
Date of Birth	08/21/1962	Patient ID	35819

Reported patient background information	
Reported medical history	
Reported family history	
Referring physician	
Coronary Calcium Score	56.2
Coronary Calcium Volume (mm ³)	133
Coronary Calcium Mass (mg)	17.5
Percentile Ranking	between 50% and 75%
Interpretation	
Score Type	Agatston Equivalent
Threshold:	130HU (111.02mg/cm ³ CaHA)
Mass calibration factor	0.854

Artery	Number of Lesions	Calcium Volume (mm ³)	Equiv. Mass (mg)	Calcium Score
LM	0	0	0	0
LAD	1	0.780	0.0930	0.474
LCX	17	60.3	7.93	20.5
RCA	7	72.1	9.45	35.3
Total	25	133	17.5	56.2

Artery	Lesion No.	Calcium Volume (mm ³)	Equiv. Mass (mg)	Calcium Score
LAD	1	0.780	0.0930	0.474
LCX	1	3.95	0.539	2.18
LCX	2	2.17	0.270	0.379
LCX	3	4.43	0.560	1.23
LCX	4	3.63	0.429	0.759
LCX	5	3.59	0.451	0.664
LCX	6	5.25	0.672	1.52
LCX	7	2.57	0.330	0.474
LCX	8	1.07	0.141	0.379
LCX	9	0.393	0.0454	0.379
LCX	10	2.53	0.333	0.949
LCX	11	6.34	0.867	2.66
LCX	12	5.03	0.640	1.71
LCX	13	7.72	1.15	4.36
LCX	14	1.46	0.187	0.379
LCX	15	1.54	0.193	0.474
LCX	16	4.16	0.503	0.664
LCX	17	4.51	0.623	1.33
RCA	1	11.7	1.46	3.79
RCA	2	34.2	4.46	21.2
RCA	3	8.79	1.33	4.93
RCA	4	4.69	0.568	1.23
RCA	5	7.48	0.941	2.94
RCA	6	3.39	0.449	0.474

RCA	7	1.86	0.231	0.664
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This examination is not to be considered a substitute for a clinical examination by a physician. Coronary calcium scoring is intended to be a risk assessment test for coronary artery disease only, and the results of this examination should be taken into careful consideration by the patient's own physician in the context of other factors such as relevant history, physical examination, and any other indicated investigations. All reference calcium scores contained in this report were generated from Electron Beam Tomography scans, and hence comparison with these reference scores carries an implicit assumption that the scanning technology used to generate the individual's score in this case is Electron Beam Tomography, or an equivalent technology. Please bear this proviso in mind when reviewing this report.

**Difficulty in breathing or any kind of chest pain or discomfort may be due to a serious condition.
Should you experience these now or ever, seek medical care promptly.**



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