

ESC Congress 2020

The Digital Experience



♥ Usefulness of the coronary artery calcium (CAC) score for statin prescription in primary prevention: results in over 16.000 assessments

ON DEMAND

🗣️ Speaker: Miriam Keller (Muenchen, Germany)

🔗 Session title: Risk Prediction - Still Trying To Get It Right

📄 Topic: Prevention - Cardiovascular Risk Assessment: Scores

📖 Session type: Rapid Fire Abstracts

🔒 Available from: Saturday 29 August 2020

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Abstract

Citation: N/A

Background:

The latest AHA/ACC cholesterol guidelines on primary prevention of coronary artery disease (CAD) recommend the use of the CAC-score to help in decision making for not using or using statins: If the CAC-score is 0, it is reasonable to withhold statin therapy (as long as higher conditions are absent). If CAC-score is 1 - 99, it is reasonable to initiate statin therapy for patients ≥ 55 years of age. If the CAC-score is ≥ 100, it is reasonable to initiate statin therapy. Therefore, in the present analysis, we assessed the impact of these guidelines in everyday cardiology practice.

Methods:

We analysed our data base with 16083 assessments of the CAC-score in persons with no known coronary or other cardiovascular disease and no exercise-dependent chest pain or shortness of breath. The CAC-score was determined with a multi-slice CT. Using the "step-and-shoot" acquisition protocol, the average dose was around 1 mSv.

Results:

In the total group, a CAC-score of 0 was found in 35%, a CAC-score of > 0 up to < 100 in 36% and ≥ 100 in 29%. The percentage of the above mentioned 3 CAC-score groups depending on age and gender are listed in table 1.

Conclusion:

With the support of the CAC-score, a prescription of statins can be avoided in up to appr. 60% of middle-aged male and up to appr. 80% of middle-aged female persons. On the other hand, the use of statin is reasonable in appr. two thirds of higher-aged male and one third of higher-aged female persons for primary prevention.

	Age Groups:						
	40 - 44 y	45 - 49 y	50 - 54 y	55 - 59 y	60 - 64 y	65 - 69 y	70-75 y
CAC-score: Male Assessments (n = 11271)							
0	59%	46%	34%	24%	16%	11%	4%
> 0 - < 100	34%	40%	44%	43%	40%	35%	29%
≥ 100	7%	14%	22%	33%	44%	54%	67%
Female Assessments (n = 4812)							
0	81%	79%	67%	58%	49%	35%	24%
> 0 - < 100	17%	17%	25%	33%	35%	42%	40%
≥ 100	2%	4%	8%	9%	16%	23%	36%

CAC-score depending on age and gender in 16.083 assessments