

**Abstract: 2485**

**Evidence and incidence of atherosclerosis in 4,000 persons without history of coronary heart disease**

**Authors:**

S. Silber, A. Schmermund<sup>1</sup>, Dr. Mueller Hospital - Munich - Germany, <sup>1</sup>University Hospital - Essen - Germany,

**On behalf:** Heart Diagnostic Center Munich

**Topic(s):**

Coronary heart disease  
Ischaemia, experimental studies  
Electron beam CT  
Intracoronary ultrasound / imaging

Measuring the extent and severity of calcified coronary plaques has increasingly served as a risk marker for the appearance of future coronary events, one that is independent of the classical risk factors. Whereas scientific investigations have employed electron-beam computerized tomography (EBCT) almost exclusively, Europe primarily uses the multislice CT (MSCT) to determine the Agatston Score (= Aga). The accuracy of an Aga prognosis can be enhanced even more by considering the age and sex percentile incidence instead of the absolute values. Although it is not clear whether the EBCT percentiles are readily transferable to the MSCT, lack of data has nonetheless led to this practice.

The aim of the MUNICH register (Multi-slice Normal Incidence of Coronary Health) is to generate a larger database in order to distribute the plaque-score percentile for people with no angina pectoris, ischemia or history of coronary heart disease. The Philips Mx 8000 MSCT using prospective triggering was employed at 60% of the heart rate interval and with a 4 x 2.5 mm slice thickness at 120 kV. The following table shows our findings for 4,000 people.

**Summary:** The MUNICH registry is the largest single center database for percentile incidence of atherosclerosis in people without known coronary heart disease. MSCT percentile incidence, using prospective triggering and 4 x 2.5 sections, is within the limits of EBCT and can therefore serve as a basis for individually determining the risk of myocardial infarction.

Age Groups (Years) Percentile	40-44	45-49	50-54	55-59	60-64
50th MSCT	0	1	12	35	73
50th EBCT	0	3	16	41	118
90th MSCT	62	215	292	779	814
90th EBCT	64	176	320	502	804