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873 The MUNICH registry: "normal" distribution of coronary artery calcium measured by 4-slice computed tomography in over 2000 asymptomatic individuals

S. Silber (Munich/Germany), A.**Schmermund** (Essen/Germany), R.**Erbel** (Essen/Germany) on behalf of the MUNICH registry.

Accurate quantification of coronary calcium, usually by means of the Agatston calcium score, is a prerequisite for assessing calcified atherosclerotic plaque burden. For this purpose, electron-beam computed tomography (EBCT) is currently being regarded as the "gold standard". Recently, four-slice (4-S)-CT has become an alternative, new modality. However, neither a standard image acquisition protocol nor the normal distribution pattern of the calcium score in asymptomatic individuals have been established for 4-S-CT. The MUNICH registry (MUltislice Normal Incidence of Coronary Health) consecutively collects these data using 4-S-CT and prospective ECG-triggering in analogy to the MESA protocol (4x2.5 mm).

Results: Calcium was detected in 990 (65%) men and 248 (48%) women ($p < 0.001$). Age, gender and all of the established causal risk factors (systemic hypertension, active smoking, hypercholesterolemia, diabetes but not BMI) were independently associated with the Agatston calcium score. Age and gender specific 10th, 25th, 50 th, 75 th and 90 th percentiles of the Agatston score distribution were established and will be presented. There was a good correlation to previously reported percentile values derived from studies using EBCT.

Conclusions: The current data from the MUNICH registry establish a data-base for the calcium scores determined by 4-S-CT and prospective ECG-triggering in apparently healthy subjects. The similarity with percentile values previously reported in EBCT-studies suggest that 4-S-CT provides useful information about the presence and extent of coronary atherosclerosis. Since the data acquisition of the current study is comparable to the method used for the MESA study currently performed in the USA, the data from the MUNICH registry will be comparable to the 4-S-CT data from the MESA-study. There was a surprisingly good agreement between the MUNICH "normal distribution" and the published EBT data.