

Coronary risk assessment at X-ray dose equivalent ungated chest CT: Results of a multi-reader study

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OBJECTIVES

To determine the value of ultra-low dose chest CT with tin filtration for ordinal coronary artery calcium (CAC) risk scoring.

METHODS

50 patients were prospectively included and underwent clinical standard dose chest CT (1.8 ± 0.7 mSv) and ultra-low dose CT (0.13 ± 0.01 mSv). Four radiologists estimated presence and extent of CAC.

RESULTS

Weighted kappa values for CAC were 0.76-0.97 in standard dose and 0.75-0.95 in ultra-low dose CT ($p < 0.001$). Good to excellent agreement was observed for CAC ordinal risk assessment, with readers reporting identical risk in 81% of cases.

CONCLUSION

CAC risk can be qualitatively assessed from X-ray dose equivalent ungated chest CT.

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