

## CORONARY CT ANGIOGRAPHY AS A RELIABLE DIAGNOSTIC METHOD FOR EXCLUDING CORONARY DISEASE

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**Introduction.** The development of multidetector CT technology in recent years has resulted in the introduction of coronary CT angiography (CTA) into everyday clinical practice as a reliable diagnostic tool for excluding or confirming the presence of a coronary disease.

**Aim.** To present the authors' experiences in performing and analyzing coronary CTA within the last 2 years with reference to multicenter trials as reported in medical literature.

**Materials and methods.** Between 2009 and 2010, 340 coronary CTAs were performed with the use of a single-source 64-detector CT system (Siemens SENSATION scanner). The followed CT protocol included: slice thickness (0.6 mm), pitch ratio (0.2), rotation speed (0.333 s). Routinely, the examinations were preceded with a coronary artery calcium score analysis in order to exclude patients with a high score proving the presence of a coronary disease. The main CT scan was performed after intravenous administration of contrast medium.

**Conclusions.** 1. Coronary CTA is a reliable and valuable diagnostic tool with a high rate of sensitivity and specificity ( $\geq 90\%$ ) in excluding or confirming a coronary disease proved in multicenter studies. 2. This method proves to be of great diagnostic value due to its high negative predictive value factor (NPV), estimated between 96% and 100%, allowing a physician to exclude reliably the presence of a coronary disease on the basis of a negative (normal) CTA result. 3. Coronary CTA is a valuable diagnostic tool for the visualization of coronary anatomy and for finding potential anomalies of both coronary arteries and myocardium. 4. This method is valuable in assessing the patency of vascular grafts in patients who underwent coronary artery bypass graft (CABG) surgeries.