

Suppl File 1 - MSCT protocol

CT imaging was performed using a 320-multidetector scanner (Aquilion One Vision Edition, Toshiba Medical Systems, Japan), using the following scanner settings: Gantry rotation time 350ms or 275ms, detector collimation 0.5×320. Tube voltage and current were chosen based on the participants' body mass index (BMI) ranging between 100 and 120kV, and mA between 280 and 500. A cardioselective beta-blocker (metoprolol 25-150mg) was administered orally approximately 1 hour before scanning in participants with a heart rate >60bpm and no contraindications. An intravenous line (18 gauge) was inserted in the antecubital vein. Nitroglycerin was given orally 2 minutes before the scan. Intravenous contrast media (Visipaque 78ml, 320 mg/ml) was infused with a flow rate of 5ml/s in three phases, first phase with 64 ml contrast, second phase with 14ml contrast and 6ml saline and third phase with 50ml of saline. Image acquisition triggering was set at an aortic attenuation density of 180 Hounsfield Units. In participants with known allergy to X-ray contrast no contrast was given. A fixed target protocol using one rotation acquisition with a prospective exposure window fixed at 350ms centered at the 75% phase of the RR-cycle was used to restrict radiation dose. A kernel FC3 back projection filter with boost 3D and QDS+ was used. An automatic raw data motion analysis tool (PhaseXact, Toshiba) was used to select the optimal motion free phase. Contrast phase was reconstructed in 0.5mm slice thickness with 0.25mm increment, non-contrast phase was reconstructed in 3.0mm slice thickness with 3.0mm increment.