

Supplementary material

The following CT settings were used:

In Belgium, a LightSpeed VCT scanner (GE Healthcare, Milwaukee, Wisconsin) was used with the following settings. A full helical scan was taken with a rotation time of 0.4s for FRC and 0.6s for TLC, detector coverage of 40mm, helical thickness of 0.625mm, pitch and speed of 1.375:1 and 55mm/s. Tube voltage was 120kV and tube current was modulated using smartmA using a noise factor of 45 in the interval of [10 mAs, 200 mAs]. Images were reconstructed at 0.3mm interval (TLC) and 0.6 mm interval using a lung filter.

For the scans in the Netherlands, a Dual Source CT scanner (Siemens, Forchheim, Germany) was used with the following settings: A full helical scan was taken with a rotation time of 0.5s, detector coverage of 19.2 mm, helical thickness of 0.6 mm, pitch 1.4. Tube voltage was between 100 (< 80 kg) and 120 kV (80-110 kg) so depending on weight. Tube current was set on 75 mAs. Images were reconstructed at 0.3mm interval (TLC) and 0.6 mm interval (FRC) using a lung convolution filter (B75f).

In Italy, a Siemens Sensation 64 (Siemens, Forchheim, Germany) was used with the following settings: A full helical scan was taken with a rotation time of 0.37s for FRC and 0.5s for TLC, detector coverage of 38.4 mm, helical thickness of 0.6 mm, pitch 1.35. Tube voltage was 120 kV and tube current was determined by CARE Dose4D using a reference mAs of 120. Images were reconstructed at 0.3mm interval (TLC) and 0.6 mm interval (FRC) using a lung convolution filter (B75f).