

Personalised CT scan protocols for the detection of pulmonary embolism

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1. Personalising CTPA is a crucial step to enhance image quality, reduce dose and decrease the incidence of non-diagnostic scans.
2. Optimising CTPA image quality is a complex process due to the interactions between various technical, operator- and patient- related factors.
3. Simultaneously optimising contrast media injections and kV settings to the individual patient using the 10-to-10-rule, results in diagnostic images with lower radiation and contrast dose.
4. An individual, optimised scan length for pregnant patients can reduce CTPA radiation dose by ~25% for patients and by ~80% for the foetus.
5. Factory settings are never good enough; it's our job to keep optimizing the latest technology in our departments.
6. Artificial intelligence is exactly what we need to cope with the ever increasing demand on imaging departments everywhere.
7. The treatment of (sub)massive pulmonary embolism by mechanical thrombectomy will soon become standard of care.
8. This thesis contains several readily applicable tips and tricks for optimising CTPA, including the 10-to-10-rule, a simple method for scan length optimisation and pointers for re-scanning when necessary.
9. 'Interventional radiology is transforming the way patients are managed in modern medicine and I am proud to be an interventional radiologist'
Dr Raman Uberoi
10. 'If a plumber can do it to pipes, we can do it to blood vessels.'
Dr. Charles Dotter
11. 'Do or do not. There is no try'
Yoda, Star Wars