PHILIPS

CT Newsletter

Discover more with the latest CT technology and techniques

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Philips IQon gives you the diagnostic certainty you need

Choosing between viewing anatomical structures and identifying material composition is now a thing of the past. With Philips IQon Spectral CT you can do both in a single, low-dose scan each and every time.

IQon is the world's first spectral detector-based CT that allows you to:

- Access spectral data from every scan – on demand
- Expand your clinical capabilities with enhanced tissue characterisation and visualisation
- Improve your low contrast detectability with Philips model based iterative reconstruction (IMR)
- Experience powerful advances using the same workflow
- Use the familiar patient-centred iPatient platform and DoseRight dose management tools

Now, your first exam is the right exam.
Unlike traditional CT images, IQon Spectral CT captures spectral information during every scan, without special planning or set-up. This means you can retrospectively analyse spectral data in any image — even in the most challenging of cases.

Why not take a closer look? Explore our IQon technology online at www.spectralctlearningcenter.philips.com.

Explore the latest in CTPA techniques

Learn how Barwon Medical Imaging and Singapore General Hospital are achieving incredible results

Pulmonary embolism (PE) is a common condition that has a significant associated morbidity and mortality. The advantage of computed tomography pulmonary angiography (CTPA) is its ability to simultaneously asses lung parenchyma, mediastinum, pleural spaces and chest wall.

When it comes to CTPA examinations there can be large variation in technique – and a large potential for failure. The top three reasons why a CTPA might fail include:

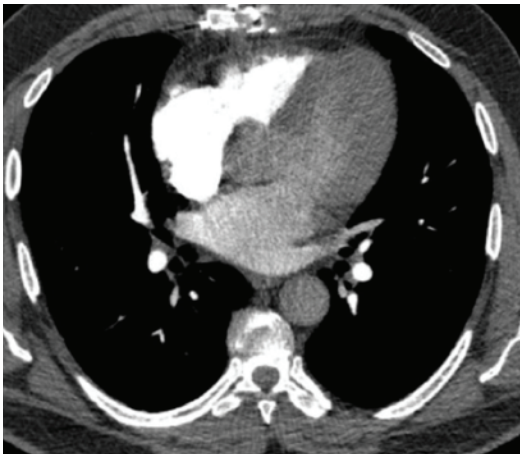
- Inability to identify the correct area to track
- Contrast extravasation
- Inaccurate flow rate

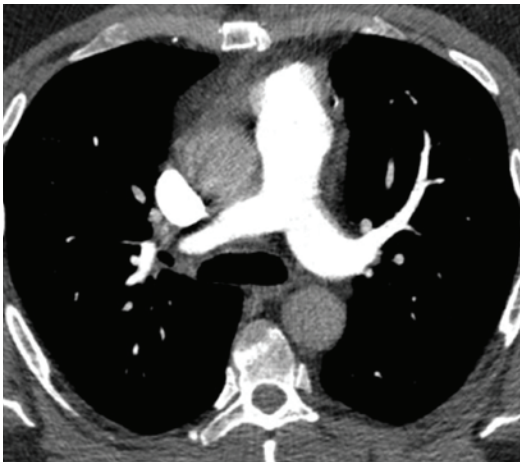
Two facilities have triumphed in the face of these difficult odds by changing up their CTPA techniques.

Local spotlight: Barwon Medical Imaging

The team at Barwon Medical Imaging has increased their percentage of successful CTPA scans to 98% with three distinct and impressive adjustments to their CTPA technique. Their changes were small, but they had a major positive impact on scan quality.

- Original technique: Originally triggered in the pulmonary artery and scanned top to bottom with lots of contrast.
- Adjustment #1: Changed to triggering in the right ventricle and scanning bottom to top and their results improved.
- Adjustment #2: Switched to iPatient and their contrast doses decreased.
- Adjustment #3: Finally they removed the automatic voice instructions from their scans and provide breathing instructions manually at the start of the contrast injection. This overcomes one of the biggest issues in poor CTPA quality – Valsalva.





"By the time the scan is ready to be acquired, the possibility of Valsalva affecting the scan has been overcome due to the length of time between breathing instruction and scan time."

— Sheena Hoffman, CT Supervisor

International spotlight: Singapore General Hospital

Against all odds, the team at Singapore General Hospital managed to perform a CTPA examination on a bariatric patient with just 50mls of contrast, injected via a vein in the foot. Previous examinations on the same patient were unsuccessful due to limitations with IV contrast administration and inaccurate scan timing.

It was through sheer determination and innovative thinking that Singapore General Hospital developed this unconventional - albeit successful - CTPA technique.

Clinical History

- Admitted for CTPA study with renal function impairment and clinical indications of shortness of breath and chest pain
- Initial clinical request for limited IV contrast study because the patient was too large for a Ventilation Perfusion (VQ) scan
- Emergency Department had difficulty accessing the patient's vein when trying to cannulate until access was possible via a vein in the patient's foot using a 21 g needle

Scan technique

Previous CTPA studies had failed to produce diagnostic results so technique and trigger mechanism was analysed in detail prior to the examination.

- The patient was cannulated with a 21g needle in the foot
- Limited IV contrast of 50mls plus 20mls of saline injecting at 2.5mls/sec
- The scan was set up to track the contrast as it appeared in the Right Atrium
- No breathing instructions were given as the patient was not capable of stopping breathing due to severe shortness of breath

Results

- Total scan time: 3.8 secs
- Dose summary: CTDIvol 15.7mGy, DLP 411.1 mGy.cm

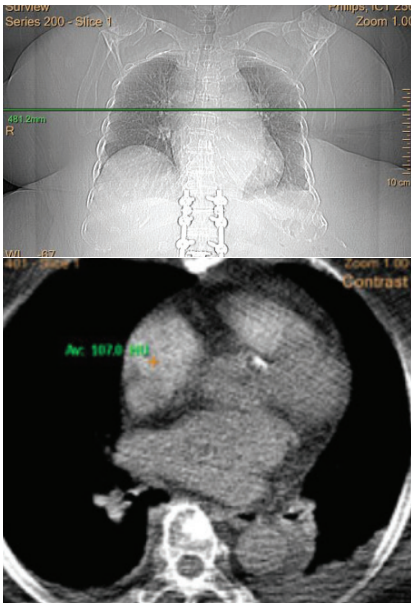


Figure 1: Localiser scan placed over the Right Atrium

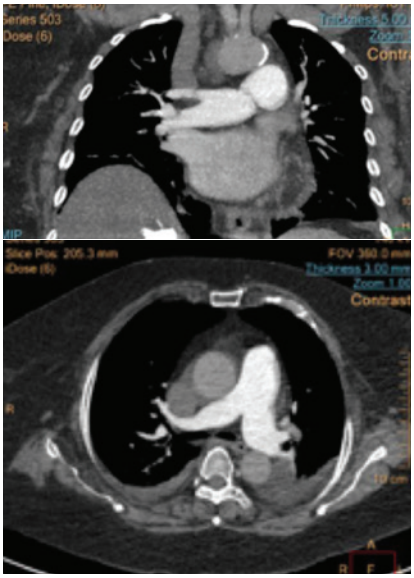


Figure 2: Scan results demonstrate opacification of the pulmonary trunk and associated arteries

ANZ Education Academy

In today's competitive and dynamic healthcare environment, it is critical to use your medical imaging systems to their fullest potential. At Philips, we believe clinical education is the key to achieving this.

We have designed a comprehensive range of clinical education programs to:

- Support clinical excellence
- Increase the use of advanced system features
- Enhance workflow and productivity
- Help you deliver an exceptional patient experience

Stay at the forefront of clinical procedures and technologies in CT with Philips ANZ Education Academy and choose from our comprehensive range of CT courses.

Require classroom training on-site at your institution? We can even tailor courses to your organisation's requirements. Send us an email at **CTApps@philips.com** or contact your local Philips representative to find out more.

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- 3 June - iPatient Essentials Course, Sydney
- 26 Aug - iPatient Cardiac CT Course, Sydney

Philips
65 Epping Road
North Ryde NSW 2113
Tel: 1800 251 400 (Australia)
Tel: 0800 251 400 (New Zealand)

www.philips.com.au/healthcare