PHILIPS

CT Newsletter

Philips IQon Spectral CT is taking over the globe – one innovative hospital at a time

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Discover what installing IQon Spectral CT will do for thousands of patients in Northern New Zealand

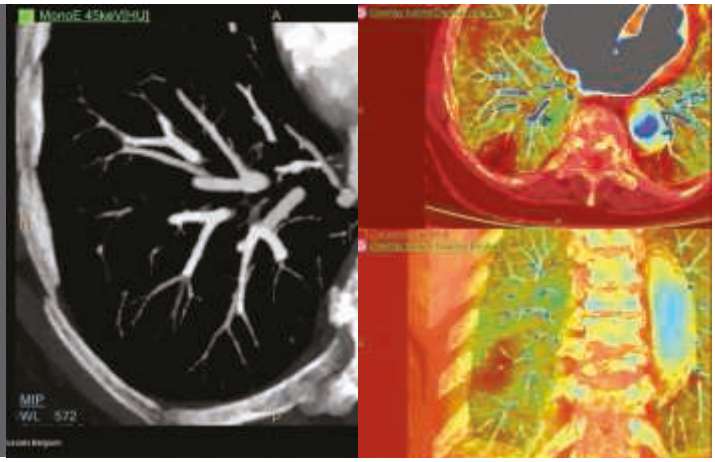
Waikato District Health Board (WDHB) employs more than 6000 people. They also plan, fund and provide hospital and health services to more than 372,865 people in a region covering eight per cent of New Zealand.

Waikato Hospital (WH) in Hamilton, New Zealand, is one WDHB's major regional hospitals. It provides all hospital services (with the exception of organ transplants), plus clinical diagnostic and support services including radiology, laboratory and pharmacy to the Midlands and Waikato area.

WDHB's radiology service is led from WH and oversees radiology in Thames Hospital and the three rural hospitals at Tokoroa, Te Kuiti and Taumarunui.
The hospital's latest radiology investment is the IQon Spectral CT – the world's first spectral detector-based CT.

Real-life IQon Spectral CT example:

Thoracic imaging with Philips IQon Spectral CT



WH will be the first institution in the Southern Hemisphere to install this ground-breaking technology. With it, WH will gain instant access to multiple layers of retrospective data in a single, low-dose scan. This will empower the hospital to improve their clinical confidence and make the right diagnosis in the first scan.

The clinical team at WH decided on the IQon Spectral CT after an exhaustive evaluation process regarding patient outcomes and the ability to analyse spectral data retrospectively on any image even in the most challenging of cases.

Elderly patient complaining of shortness of breath was admitted to the emergency department and scanned on the The IQon Spectral CT. A small PE was not identified until spectral results were examined and fused with the Z Effective image.

Philips and Waikato Hospital will install IQon Spectral CT in January 2018.

View the power of Philips IQon Spectral CT online now.

Learn how first time right imaging is giving Mount Elizabeth Hospital the diagnostic certainty they need and the confidence their patients want

Further north in Singapore, Ruth Kresina, Philips' newest APAC CT Clinical Marketing manager, recently worked on installing a new IQon Spectral CT scanner at Mount Elizabeth Hospital (MEH).
Mount Elizabeth is a private hospital with highly professional staff members who serve as key opinion leaders for the surrounding area. The site runs a well known cardiac clinic, as well as a large oncology clinic and uses CT scanners to treat and plan for all levels of patients to achieve the best possible outcomes.

The clinic scans between 40-60 patients per day for a variety of procedures. The new Philips IQon Spectral CT will play a vital role in helping the radiologists and referring clinicians to assess and diagnose CT images faster and with more diagnostic confidence.

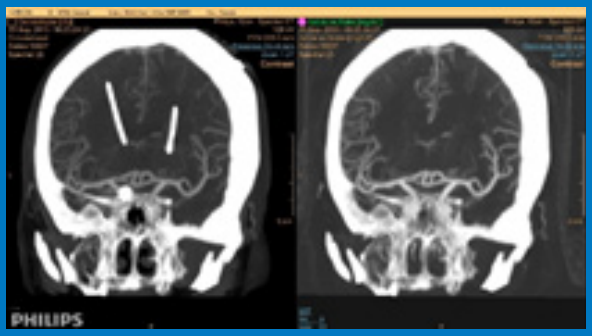
The first exam is the right exam

Philip's unique spectral detector technology makes use of spectral data possible with each scan. This means that instant diagnosis without having to rescan a patient is now possible for MEH and has proved to be a major advantage of the system.
First time right imaging prevents repeat scans and has significantly improved the hospital's productivity. IQon Spectral CT is also fully integrated with MEH's workflow giving their team excellent diagnostic quality with spectral results 100% of the time, all in a single routine scan.

Initial results

After taking a variety of CT scans, including a head to ankle CTA followed by a delayed CAP, the MEH radiologists were impressed with the monoE imaging enabling the visualisation of more distal vessels in the legs. The team also scanned three cardiac CTA patients, two with high heart rates and arrhythmias, all with excellent results.

In the image (left) an incidental finding of a PE was discovered from a routine CAP study.



The Circle of Willis study was performed on a patient with a balloon stent of dense material. The enhanced ability of the Spectral Analysis Workspace to remove the dense material allowed the technician to visualise the vessels.

Looking to the future

IQon Spectral CT has further encouraged MEH's interest in the possibility of research into stent restenosis. They are also planning to enhance their CT diagnostic capabilities for detecting Iodine contrast in liver tumours post embolisation with Lipidol content in the tumour.

iCT with IMR

Illawarra Medical Imaging (IMI) recently upgraded their state of the art Brilliance iCT Scanner to include IMR – Philips' model based reconstruction method.

CTCA scans are just one IMI's patient offerings. They are non-invasive scans that evaluate the health of the coronary arteries and chambers of the heart with the aid of a contrast injection. These scans enable radiologists to assess the coronary arteries in minutes and replace the need for lengthy invasive procedures.

In June 2017, IMI performed a prospectively gated CTCA scan on an overweight (150kg) 57 year old male patient with a history of high cholesterol, high blood pressure. He presented with chest pain.

Evaluation method

Images were reconstructed using iDose statistics-based iterative reconstruction, and IMR. Both these data sets were reviewed on Philips Intellispace Portal advanced visualisation software.

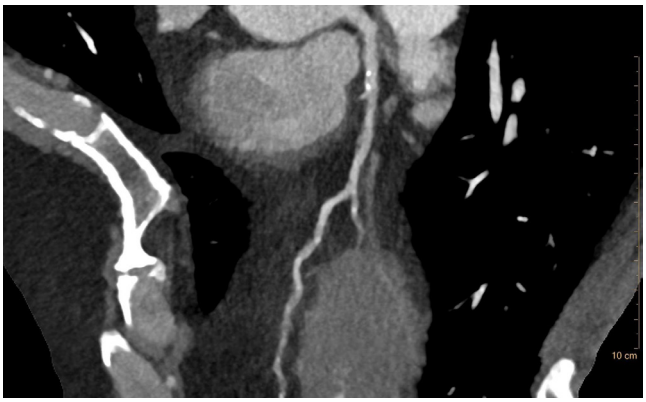
Scan protocols:
Scan - Step and Shoot Cardiac at 75% with Calcium score.
Ca Score - 120 kVp, DoseRight Index 6
Cardiac CT - 100kVp, DoseRight index 12, 3% phase tolerance
Biphasic Injection - 75ml @5ml per second Omnipaque 300, with 50ml Saline bolus.

Summary of findings and results

The use of IMR showed a mixed plaque causing stenosis in the right coronary artery. The IMI team could also see that stenosis was not as restrictive to the artery as compared to the iDose images.

There was a small non-calcified plaque, which was not confidently reported on the iDose images but that IMR could delineate. In the left anterior descending artery, a plaque was again seen. By reviewing the iDose and IMR images, the amount of stenosis was considered to be worse on IMR.

In short, IMR allows a greater assessment of finer structures such as coronary arteries. By almost eliminating noise from scans, the ability to discern finer structures and small pathology features was greatly improved along with diagnostic confidence.



Philips Case Study Showcase Program

Do you have an interesting case study, technique or research project you are working on? Share it with your peers by letting us know and we will help you showcase your success.

Send us an email at **CTApps@philips.com** or contact your local Philips representative today.

ANZ education academy

CT User Group Meeting

27th July 2017 over 20 Philips customers from Australia and NZ attended our latest CT event in the Gold Coast. The event was a huge success and our attendees were brought up to date on four pivotal areas influencing CT today, including:

IQon Spectral CT

Ari Wood, from Philips showcased how Spectral Data can provide more information to clinicians and provide benefits to all patients.

TAVR (Trans Aortic Valve Replacement) procedures

Dr Charles Chao from Queensland Cardiovascular Group demonstrated how the CT requirements for this procedure are changing as the population is getting older. As this area of cardiology and radiology grows, new and minimally invasive surgical procedures are becoming common as they cause less stress on the patient and require shorter hospital stays.

DoseWise Portal

Dr Chris Martels from Boston, USA explained how this new system can be used to great effect in implementing CT dose management programs.

High Definition CT imaging

Adam Metcalfe from Philips spoke on the value of HD mode across the Ingenuity and iCT range of Phlips CT systems.

Philips on-site training

Innovation and increasing competition is constantly changing the CT space. That's why knowing how to use your medical imaging systems to their fullest potential is crucial. At Philips, we believe clinical education is the key to achieving this. Stay at the forefront of clinical procedures and technologies in CT with Philips ANZ Education Academy.

Book an on-site and tailored classroom training session at your institution today by emailing us at **CTApps@philips.com**. You can also contact your local Philips representative to find out more.

Philips Remote Services

What if together, we could decrease unplanned equipment downtime, held reduce costs and allows for continuous patient care? There are three key reasons why Remote Service Support is a smart investment for your practice:

1. Faster case resolution

Depending on the system, Remote Service Engineers (RSE) are currently resolving on average 40% of cases that they receive. In the event your case requires an onsite visit, your RSE will brief a Field Service Engineer (FSE) as to the situation and order any parts required to arrive with the FSE and help speed up the resolution process.

2. Access to deep technical experience

RSE's are exposed to up to 15 calls per day across Australia and New Zealand in their dedicated area of expertise. This experience provides our RSE's with deep knowledge of our systems and ability to recognise trends locally and globally.

3. Proactive monitoring

Ensures planned activities instead of reactive for maximum system availability. Trust us to identify errors, diagnose, trouble shoot and potentially resolve issues remotely. Take advantage of our proactive monitoring to stop issues before they start.

What does Remote Service cover?

- Technical and application support
- Remote assistance using look over the shoulder
- Network changes
- System log maintenance
- Proactive monitoring of site/system performance (RADAR)
- Predictive monitoring: data analytics reducing potential failures before they become known to operators

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