

visions

MAGAZINE FOR UK HEALTH PROFESSIONALS // NO. 3 // NOVEMBER 2020



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Canon Medical Systems continue to support the NHS, our customers and partners throughout the Covid-19 climate. As part of a recovery plan, the team at Canon Medical have been delivering, installing, supporting apps and servicing 15 CT Scan Units across the UK. Photo taken at Stratford Hospital.

Canon Medical Systems Service Department
Opening hours Christmas and New Year 2020

21 st - 3 rd December 2020	08:00 - 20:00	Normal working hours
24 th December 2020	08:00 - 16:00	Office opening hours
25th December 2020		CLOSED
26th & 27th December 2020	09:00 - 17:00	Emergency weekend support only
28th December 2020	09:00 - 17:00	Bank Holiday telephone support only
29 th - 31 st December 2020	09:00 - 20:00	Office opening hours
1st January 2021	09:00 - 17:00	Bank Holiday telephone support only
2nd & 3rd January 2021	08:00 - 20:00	Emergency telephone support only
4 th January 2021	08:00 - 20:00	Normal working hours resume

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// EDITORIAL



As 2020 draws to a close, it is likely to be a time of reflection and shifting priorities for many people, and while some of us will have been hit hard by the impact of Covid-19, whether it be for personal or professional reasons, we continue to make the best of the situation.

Here at Canon Medical we've been working hard with our friends in the NHS, in order to provide the best possible support in what has been some very challenging environments. It's been a year of transformation for us and our customers, and of course for patients, as we all adapt to new ways of working.

You'll see in this issue some of the exciting projects underway that are helping all of you in the NHS, including one of the largest relocatable CT deployments ever in the UK which I'm proud to say was delivered without a hitch despite hugely challenging problems to solve.

Meanwhile, our Imaging Academy has shifted to mostly remote learning, and we're already delivering some excellent courses run by senior clinicians to help us all stay current. Plus, as incongruous as it may sound we've been working in remote locations such as the Falklands, and you'll see some of the breath-taking scenery as well as exploring some of the

logistics challenges involved with working in such a distant place.

Despite all the headwinds this year our work in the community continues, and the amazing Sheffield Sharks have shared how their work in local schools has changed dramatically in 2020. We are committed to continue to support this essential program for the long term as it is now seen by the authorities as a pilot program for national roll-out. No mean feat!

Internally here, our service team has coped admirably with the unexpected shift to remote working, and I'm delighted to see that support levels have not been negatively impacted, and our engineers, and clinical specialists, and project managers, have been able to be on site for the most part, with a great deal of adaption around PPE and social distancing. We're very proud of them all.

As we move towards Christmas, I'd like to extend all of our heartfelt best wishes to you, your colleagues and your families, and I think we are all hoping for a less eventful 2021.

MARK HITCHMAN
 Managing Director
 Canon Medical Systems UK

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A slam dunk 2020 success

Despite the changes and challenges of this year for both the Sheffield Sharks RESPECT programme and Canon Medical UK, there have been some brilliant highs and positive stories. The Sheffield Sharks RESPECT programme mini bus has been given a new lick of paint, as designed by the children from the programme, with the support of . The team and currently reviewing how best to utilise the mini bus and make it safe with social distancing. Take a look at the before and after below:



Find out more about the RESPECT programme here and our collaboration with the Sheffield Sharks:



MRI installs at Burnley General Teaching Hospital

Two new Vantage Orian 1.5T MRI scanners, with dockable tables and XGO Gradients, have been installed into a brand new bespoke modular build department that Canon Medical UK have provided, with a shared control room and back to back arrangement. These MRI scanners are a UK First, with AiCE systems and UK first Compressed Speeder systems. Keep an eye out for the next update, as we follow Burnley's story closely. //



Discover more about the Vantage Orian here



Canon Medical Systems thanks the NHS and key workers for their support during this difficult time.



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A huge thank you from all of us at CMSUK

We continue to stand by your side

We are all experiencing unprecedented and unsettling times as the Coronavirus pandemic reaches the second wave in the UK. This is undoubtedly one of the most challenging times our healthcare services have ever faced. The impact has taken its toll on across people's personal lives, as well as professional. We want you to know, that we are grateful and you are incredible. Canon Medical and all of our colleagues want to thank all our courageous NHS workers, healthcare sectors and keyworkers, for their exceptional contribution during this difficult time.

Over the current climate, Canon Medical remains agile and responsive in this fast-changing environment. Our team of experts have continued to install critical imaging equipment to our customers, as well as provide remote and onsite applications support. Together we stand. Together, we are stronger. //

We are committed to the delivery of first-class diagnostic imaging equipment service when you need it most. We are here to advise and guide you with some of the challenges you and your team are facing:

- 7-day UK service support centre for CT, X-ray, MRI and ultrasound
- Remote system monitoring to pre-empt and repair issues
- All necessary parts in stock and ready to ship if you need them
- Cleaning, disinfection and sterilization guides for our products
- 90-day licensing of CT lung imaging applications to support diagnostic needs
- Fast delivery of temporary CT scan units to increase capacity needs





Customers Take a Moment to Praise Canon Medical

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UK wide customer satisfaction survey finds excellence in professionalism, knowledge and quality of people and products as company continues its focus on great customer service

Canon Medical Systems UK has again been highly commended by its customers up and down the country in its recent half year service support survey. Achieving an average of 92% in the overall satisfaction score, respondents were asked to rate the company for its professionalism, knowledge, quality of solution, problem resolution and communications. In the month of July, following the early peak of the COVID-19 pandemic, Canon Medical achieved 100% across all survey categories.

The Service Operations Support Survey is a rolling monthly programme of research to continually monitor Canon Medical across key performance areas.

The feedback from UK customers including radiographers, sonographers, clinicians and healthcare business managers offers critical insights into areas of improvement. This helps to underpin the company's vision to become the best customer partner in the sector.

The survey findings have been of particular interest as they cover the period of the recent outbreak of Coronavirus. In that time, Canon Medical activated its 'fast response task force' to quickly adapt to the fast-changing environment and ensure business continuity in light of the pandemic. This aimed to ensure the continued delivery of first class, reliable imaging equipment

service to healthcare organisations through uninterrupted supply chain management, remote diagnostics and 7-day support.

Judith Sugden, CT Superintendent Radiographer at Northern General Hospital comments, "It's been a challenging year for all in healthcare, but Canon Medical has continued to be very supportive in keeping scanners operational and great at communications to keep us informed. They are always fast to respond and active to resolve."

Ginny Blake, Ultrasound Team Lead, Royal Cornwall Hospital states, "Canon Medical delivers a high level of service and has continued to do so this year despite everything that is going on. Its team have complied with all the coronavirus restrictions at our site and are reliable and responsive when we need them for a breakdown or emergency."

Paul Parsons, Director, Service and Technical Support at Canon Medical UK commented, "The results of this new customer satisfaction survey are positive news as they help us keep a check on our performance as we focus on being the best customer partner in the medical imaging sector. The purchase of medical equipment is just the start of a relationship with Canon Medical and our installation teams, application specialists, engineers and call centre staff ensure that customer needs are met at all times to the best standard possible."

"The service received was very professional"; "always had a very prompt and faultless service from Canon engineers"; "fast response to breakdown and active resolution of problem to get scanner operational again"; "always helpful, courteous and professional, and answer calls promptly"; "always receive quick and positive resolution to any reported problems"; "their systems are so user friendly, Canon colleagues are so approachable and flexible" were among the other comments received.

Canon Medical provides innovative CT, MRI, Ultrasound, X-ray and Interventional Imaging equipment to meet the challenges of modern medical imaging by improving clinical confidence, streamlining workflow and powering productivity. //



"Canon Medical has continued to be very supportive in keeping scanners operational and great at communications to keep us informed. They are always fast to respond and active to resolve."

Judith Sugden, CT Superintendent Radiographer at Northern General Hospital



A Canon Medical relocatable CT Scan Unit has been deployed to Stratford Hospital at South Warwickshire NHS Foundation Trust as part of NHS England's COVID-19 recovery plan.

Canon Medical Systems CT Relocatables Support NHS Through 2020 and Beyond

With the demand of diagnostic imaging increasing across the country, during the COVID-19 pandemic, Canon Medical UK are supporting NHS England with a new high-quality CT Scan Unit. Inside, you can find a spacious interior with either an Aquilion Prime SP, Aquilion ONE GENESIS Edition or Aquilion Lightning CT system. The Canon Medical team con-

tinue to work solidly throughout 2020, to create, deliver and install these units throughout the UK. From Stratford Hospital, Yeovil District Hospital, to Kettering and even over the Solent to St Mary's Hospital on the Isle of Wight, a total of 15 units have been placed across the UK this year. This article covers just a few of these incredible stories – read on to discover more...

South Warwickshire NHS Foundation Trust ramps up its CT imaging capacity as part of NHS England's COVID-19 recovery plan

West Midlands location allocated one of fifteen relocatable Canon Medical CT Scan Units in direct response to expanding patient access to diagnostic imaging

The impact of COVID-19 on diagnostic imaging at South Warwickshire NHS Foundation Trust has increased demand for chest CT scans, created a backlog of routine patient scans, and increased time for cleaning CT scan rooms between patients. It is estimated that an extra 62 hours of CT scanning time is required per week.

To meet imaging demand, NHS England has allocated Stratford Hospital, a community site at South

Warwickshire NHS Foundation Trust, with one of fifteen specially commissioned Canon Medical Systems relocatable CT Scan Units. The cost has been met by NHS England and NHS Improvement's COVID-19 recovery fund, with installation, staffing and maintenance picked up by the Trust for the 18-month period.

Helen Lancaster, Director of Operations at South Warwickshire NHS Foundation Trust states, "We are thrilled to be allocated this



capital resource by NHS England / Improvement. Year-on-year demand for CT scans has grown significantly and is unlikely to decrease given the changes required in cancer pathways and diagnostic techniques. With the added considerable impact that the COVID-19 pandemic has had on the Trust's capacity to perform many diagnostic procedures, the implementation of the CT scanner at Stratford Hospital is significant in ensuring our patients are seen and treated as soon as possible."

The CT Scan Unit is an easily transportable, temporary scanning facility featuring CT scanner, control room and patient changing area. Designed and made in the UK by Canon Medical Systems as a direct response to the Coronavirus crisis, the units can be easily deployed to hospital sites on the back of a lorry and sited in car parks to provide instant imaging capacity. Each unit features a best-of-breed Canon Medical Aquilion CT scanner and features correct clinical flooring, hospital grade heating, ventilation and air conditioning (HVAC) requirements plus datalink connectivity. The CT scanner also includes 'InnerVision™', a remote

"The implementation of the CT scanner at Stratford Hospital is significant in ensuring our patients are seen and treated as soon as possible."

Helen Lancaster, Director of Operations at South Warwickshire NHS Foundation Trust



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South Warwickshire NHS Foundation Trust has ramped up its CT imaging capacity, with a Canon Medical UK relocatable CT Scan Unit as part of NHS England's COVID-19 recovery plan.

diagnostics software solution that can predict, diagnose or fix system issues fast without the need for engineers to visit hospital sites.

Mark Hitchman, Managing Director of Canon Medical Systems UK states, "The relocatable CT scan unit was quickly designed and manufactured by our team and partners at the start of the Coronavirus crisis. It is a quick-to-deploy solution for hospitals needing additional imaging capacity for routine work, or a separate red / infectious zone to keep COVID-19 risk patients separate. It can be positioned without building works or hospital reconfiguration by simply being sited in a car park or land adjacent to a hospital. We are delighted to see the corona-concept now being rolled out to hospital locations such as South Warwickshire NHS Foundation Trust. We will continue to be on-call to deliver maintenance and swift resolutions to problems by our virtual remote service solution." //



Canon Medical UK CT Scan Units

Outpatients across UK hospitals given imaging productivity boost to catch-up on COVID-19 backlog and expand future diagnostic scanning capacity

The first NHS hospitals are receiving Canon Medical Systems relocatable CT scan units from NHS England under its COVID-19 recovery plan. It will help Trusts catch up on delayed outpatient CT scans from the spring / summer Coronavirus lockdown period, and boost imaging capacity to see greater number of patients into the future.

The impact of COVID-19 on diagnostic imaging at South Warwickshire NHS Foundation Trust has increased demand for chest CT scans, created a backlog of routine patient scans, and increased time for cleaning CT scan rooms between patients. It is estimated that an extra 62 hours of CT scanning time is required per week.

Helen Lancaster, Director of Operations at South Warwickshire NHS Foundation Trust states, "We are thrilled to be allocated this capital resource by NHS England / Improvement. Year-on-year demand for CT scans has grown significantly and is unlikely to decrease given the changes required in cancer pathways and diagnostic techniques. With the added considerable impact that the COVID-19 pandemic has had on the Trust's capacity to perform many diagnostic procedures, the implementation of the CT scanner at Stratford Hospital is significant in ensuring our patients are seen and treated as soon as possible."

Mark Kon, Consultant Thoracic Radiologist & Clinical Director of Radiology at Bradford Royal Infirmary

states, "The Relocatable CT Scanner allows us to keep 'Green' patients (without suspected COVID-19) separate from Red (suspected COVID-19 patients), mirroring the cohorting we have on the wards. Although our teams of radiographers were divided into red and green at the start of the COVID-19 pandemic, they shared a common CT control room. Having an entirely separate scan facility means there is much less risk of cross infection."

Alanna Marvin, Associate Director of Imaging at Ashford and St Peter's Hospital NHS Foundation Trust in Surrey states, "We are delighted to accept the relocatable CT scan unit on loan from NHS England. It is situated at our non-acute Ashford Hospital site, near to the imaging department. The additional CT will allow us to increase



The high-quality Canon Medical UK CT Scan units are spacious and designed with future proofing the NHS in mind. Our units come with either an Aquilion Prime SP, Aquilion Lightning or Aquilion ONE GENESIS Edition scanner, to increase CT scanning capacity.



Ashford and St Peter's Hospital NHS Foundation Trust welcomes the Canon Medical CT scan unit allocated as part of NHS England's COVID-19 recovery plan. (L to R: Alanna Marvin, Associate Director of Imaging at Ashford and St Peter's Hospitals NHS Foundation Trust and Iain Burley, Account Manager, Canon Medical Systems UK).

our CT capacity to greatly benefit patients. Our radiographers have transitioned smoothly onto the unit due to the fact we already have two Canon Medical Aquilion CT scanners at the Trust."

The CT Scan Unit features an Aquilion CT and includes a control room and small changing/storage area. It is

designed with the correct clinical flooring, hospital grade heating, ventilation and air conditioning (HVAC) requirements plus datalink connectivity.

"The relocatable CT scan unit was quickly designed and manufactured by our team and partners at the start of the Coronavirus crisis. It is a quick-to-deploy solution for hospitals needing

additional imaging capacity for routine work, or a separate red / infectious zone to keep COVID-19 risk patients separate. It can be positioned without building works or hospital reconfiguration by simply being sited in a car park or land adjacent to a hospital," concludes Mark Hitchman, Managing Director of Canon Medical. //



Canon Medical Aquilion ONE PRISM Edition CT Scanner, delivered to Dorset County Hospital. Pictured left to right: Gemma Ayles, Radiology Assistant, Dr Jozsef Illes, Consultant Radiologist, Dr Ajay Varghese, Consultant Radiologist, Gemma Larsen, Senior Radiographer, Simon Jones, Lead CT Radiographer and Megan Newberry, Account Manager, Canon Medical Systems



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Dorset County Hospital Installs Aquilion ONE / PRISM CT During COVID-19 Pandemic

UK sales momentum builds for new generation CT featuring Deep Learning Reconstruction

UK momentum of Canon Medical's new generation Aquilion ONE / PRISM CT system featuring Deep Learning Reconstruction technology via its Advanced intelligent Clear-IQ Engine (AiCE) is building with further sales and installations announced. Dorset County Hospital NHS Foundation Trust is the latest organisation to update its imaging facilities selecting Canon Medical Systems as its new CT imaging partner.

The Aquilion ONE / PRISM CT, launched in the UK this year, was selected by the Dorset County Hospital team for its high image quality and low dose. Despite the COVID-19 pandemic, the Hospital team in conjunction with Canon Medical and its turnkey builders worked seamlessly together to ensure installation of this vitally important equipment.

Simon Jones, Lead CT Radiographer at Dorset County Hospital states, "We entered a market evaluation process for a new CT scanner with open eyes and selected the PRISM for its amazing functionality, high quality images and low dose."

"The cardiac CT functionality of the PRISM is very impressive and fully meets our needs. Other clinical applications on the scanner will also help us achieve positive workflow. SURESubtraction Angiography will save us time in post processing by automatically removing bone, calcium and stents. Ortho Area Finder makes complex orthopaedic work much easier," he concludes.

The Aquilion ONE / PRISM maximises the ability to consistently obtain high-quality images across different patients. It features a 16cm wide area

detector and with just one rotation in a fraction of a second can acquire an entire heart. Its Advanced intelligent Clear-IQ Engine (AiCE) sees through noise delivering sharp, clear and low dose images at speed.

"The PRISM is an AI-assisted CT system built using Deep Learning reconstruction algorithms trained to reduce noise and boost signal to deliver sharp, clear and distinct images at speed. When combined with our range of clinical software applications it provides a powerful imaging tool to meet future radiology demands," states Mark Thomas, CT Modality Manager at Canon Medical Systems UK. "We have been pleased by the UK market response to this evolution in our Aquilion CT range and welcome Dorset County Hospital as a new CT customer." //



Sharon Boon XR Applications Specialist

We caught up with Sharon a few months ago to get an understanding of the pressures facing the Applications Specialist team in light of lockdown and the resulting measures, both generally and within the NHS.

As well as her featured article in this section, we got a bit more background from Sharon as part of our regular executive profile series.

Tell us a little about your background

I was a radiographer for 35 years in the NHS a role that I absolutely loved. This work took me to a wonderful variety of places both internationally and all over the UK. I'd been a user of Canon systems for about ten years and during that time became very familiar with the company and the applications specialist role.

I saw that they were recruiting and decided to apply, to be selected to work with Canon is a great privilege.

I have now been here a year (and what a year!), there's been a great deal of change with most of what we do being turned completely upside down, but I work with a great team and it's been extremely rewarding to see how everyone has risen to the challenge.

Tell us more about your role and the impact of Covid-19?

The biggest change by far is that it is very difficult to attend sites currently. NHS staff have been focused on dealing with a global pandemic and have not had the time or resources for us to be on site training. You'll see a patient experience in the adjacent article that I had recently which really drives home

the impact our role can have on our customers and the patients that they treat.

The fact that this installation went ahead and on schedule involved a massive effort from many teams within Canon. It was hugely important to the customer to get their service up and running which is why we do what we do.

For our team the primary drive and focus now is be able to deliver those personal and emotional connections in a virtual environment.

For many people in the NHS they have had to put their training on hold, so we have been focused on developing new ways to support our customers to enable them to get the most from their systems.

How can customers benefit from the application specialists remotely?

We're always on the end of the phone for support and help and as the situation recovers we will be back on site as safely as we can. The sort of training we do is very difficult to do remotely, and really does have to be hands-on, face to face, in order to delivery the most value.

To fill the gap in the short term, customers can access online resources on the Imaging Academy, such as video tutorials, how to guides etc.

How would you like to summarise what's coming next?

Currently behind the scenes the day to day work for some teams hasn't changed too much other than accommodating PPE and social distancing requirements so

are carrying on relatively normally, especially the Ultrasound and CT teams.

Office based teams have been largely working from home, conducting meetings and providing education online, including remote service support.

And there's plenty more happening in the background, including a large relocatables project that is helping NHS trusts increase imaging capacity up and down the country.

Our customers and their patients are at the heart of what we do, and to be a part of that is something special and is genuinely at the centre of the company focus.

We'll need to continue being as flexible as we can within the current regulations, and accept new challenges and ways of working together. //



A Day in the Life: What an Applications Specialist Experienced Working in the Field During Covid-19

On March 23 2020 everything changed for everyone when Boris announced that due to the Coronavirus we all were in "lockdown" and had to remain at home.

For myself, an applications specialist who spends the majority of my time on the road, on site in hospitals and living in hotels suddenly everything was on hold.

New equipment was still being installed and we were still receiving requests for applications support, so we had to adapt to a new way of working safely in the field.

In mid-May I spent a week at Lincoln County Hospital delivering initial applications training on their new Ultimax-I system. The installation had forged ahead to provide the team with a service that was vital to them during the Covid-19 pandemic.

The road from Dorset to Lincoln

Driving was a breeze, there was very little traffic on the roads. I have never seen the M1 so quiet, although having said that those middle lane hoppers were still out there, maybe practising their social distancing skills! The motorway service stations were open but eerily quiet. No food outlets were open, all the tables and chairs were

stacked up so no encouragement to linger. Some places had a coffee machine to get a hot drink and limited food available to purchase. Luckily I had gone prepared and sat in my car with my flask of tea! It reminded me of when I was a child on a long journey in my dad's old Morris Minor, pulling into a layby (pre motorways!) with a huge flask of tea and a picnic.

Travelling from rural Dorset to rural Lincoln I noticed that there were so many more dead deer, foxes and badgers on the roads perhaps coming to grief as traffic slowly increased.

With hotels closed an Air BnB flat was home for the week. The changes to the expense policy made it so much easier to self-cater. Being able to eat what you want when you want and not be limited to restaurant sittings and menu choices was so much easier and healthier! I hope that this will continue long after Covid-19 is a distant memory.

Onsite with PPE!

On site I felt very safe, far safer in fact than at my local supermarket. I think this was because strict regimes were in place and everyone understood the rationale and stuck to the rules. PPE was readily available on site as well as my supply from Canon which helped. Wearing masks all day when training is not pleasant at all. Talking all day in a mask really dries your throat out and with all the department's water fountains taken out of use a large bottle from the supermarket was hugely useful.

Another downside of wearing a mask- it wreaks havoc with the facial recognition on your laptop too which was quite amusing.

Attending site involved two lots of clothes each day (scrubs were in very short supply) one to wear to site and then another to change into at the end of the day to travel back to the accommodation.

Wearing gloves all day (essential when 3 pairs of hands are all touching button and controls on the system) makes your hands horribly sweaty and the constant washing and gelling makes them dry and sore.

I thought I was in danger of developing OCD with all the washing, gelling and wiping of surfaces and controls constantly all day long.

Taking a short rest in between training

Getting food was difficult on site as was finding somewhere to sit and eat.



Although I had permission to use the restaurant there were strict times for lunch and the queues long which was totally impractical when delivering training. The team directed me to an outdoor courtyard where social distancing was well thought out and adhered to. Thank heavens for good weather and my daily dose of vitamin D!



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Working with a stroke patient

Having said all this the following scenario put everything into perspective for me.

Our first list of patients included a stroke patient being examined by the speech and language team (SALT) for a crucial Barium Swallow. She was given a smorgasbord of different consistencies and textures of food with barium to assess her chewing and swallowing mechanism. This ensured she would not be liable to choke or if food went down the wrong way, aspirate into her lungs. The lady had suffered quite a severe stroke and was quite debilitated being in wheelchair (having only learnt to sit up again few days previously) and having lost the function of one arm and leg. She bravely and determinedly ploughed on with all she was tested with (it tastes pretty gross).

Happy outcome

At the end the SALT were ecstatic with the system and the results, They were so impressed with the flexibility of the system which enabled the lady to remain in her wheelchair for the whole examination, and the image quality (vastly improved from that of their previous system) had helped them assess that the lady's swallow was safe and that she could have her NG tube removed and begin to eat normal food. The smile that spread across her face on receiving this news said it all. I only wish that she could have seen the smiles on all our faces too, sharing her "good news" but that is another downside of wearing a mask, we lose that ability to connect with people through our facial expressions. She was overcome and in tears as she left, such was the massive impact of being able to have this test done and it's outcome on her road to recovery. She was asked what she was most looking forward to consuming. "A nice glass of red wine" she replied which made us all chuckle.

Making a difference

The impact of this really touched me. It's why we do what we do, making a difference to the lives of our customers we work with and their patients. Being able to offer support during these incredibly challenging times really did make a difference to the team at Lincoln and will do to all their patients moving forwards.

The fact that this installation and training went ahead during this pandemic is commendable and is purely down to the hard work and dedication to every single person involved in the project, whatever their role or input. We should all be very proud of what was achieved. //



"On site I felt very safe, far safer in fact than at my local supermarket. I think this was because strict regimes were in place and everyone understood the rationale and stuck to the rules. PPE was readily available on site as well as my supply from Canon so that was all OK."

Sharon Boon, XR Applications Specialist at Canon Medical Systems

George Eliot Hospital Gains Clinical Flexibility from Canon Medical's Ultimax-i

Multi-purpose digital C-arm that delivers on angiography, fluoroscopy & radiography

George Eliot Hospital has installed an Ultimax-i multi-purpose digital C-arm from Canon Medical Systems UK. The unit was selected for its small footprint to fit into a restricted space and also for the versatility of being able to undertake fluoroscopy, angiography and digital radiographs on a single system.

The Ultimax-i replaced an end of life

system and fulfils the need to expand services at the hospital. It features a ceiling mounted over-couch tube (OTC) and C-arm with extensive angulation and movement range, to help increase patient comfort and improve workflow. The system also includes a wireless flat panel detector (43cm x 35cm) to provide a wide range of DR examinations and deliver excellent image quality.

"The Ultimax-i has been a welcome addition to our imaging department. It offers exceptional versatility for our services which means the room never stands idle. When the system is not in use for fluoroscopy or angio work it can be used for radiography, meaning greater workflow efficiencies across the department," states Matthew Rayner, Lead Radiographer at George Eliot Hospital.



George Eliot Hospital has installed an Ultimax-i digital C-arm from Canon Medical Systems UK. Pictured left to right: Matthew Rayner, Lead Radiographer; Josh Saliba, Assistant Practitioner; Barnaby Harrison, Account Manager at Canon Medical Systems UK; Dan Parr, XR Modality Manager at Canon Medical Systems UK; Dr. Sinha, Consultant Radiologist; Lisa Buckton, Senior ODP; Sradha Kundalia, Senior Radiographer.

He continues, "It was the smallest footprint system we saw as part of our market evaluations and it also delivered many functionality benefits with high image quality and low dose. The service support from Canon Medical is one of the best we receive and was also a selection factor. If ever we have a system go down, Canon Medical immediately provides help over the phone or sends an engineer in quickly. This gives great confidence to keep our services running smoothly."

Daniel Parr, XR Modality Manager at Canon Medical Systems UK states, "We are delighted that George Eliot Hospital refreshed its partnership with Canon Medical by renewing its fluoroscopy system to the multi-purpose Ultimax-i. Now, it can extend its imaging capacity to ensure the room and system are working hard at all times to deliver fluoroscopy, radiography and angiography procedures. This delivers maximum return on investment and versatility."

George Eliot Hospital NHS Trust is located on the outskirts of Nuneaton serving a population of nearly 300,000 in north Warwickshire, south-west Leicestershire and north Coventry. //



Read more online by scanning here

"The Ultimax-i has been a welcome addition to our imaging department."

Matthew Rayner, Lead Radiographer at George Eliot Hospital



Our Premises Across the UK

Even during these uncertain times, we're still operating as usual to support you and your teams.

1. Headquarters

Canon Medical Systems Ltd
Boundary Court, Gatwick Road,
Crawley, West Sussex, RH10 9AX
01293 653710

2. Stirling Branch

Canon Medical Systems Ltd
2A Hillside House, Laurelhill Business Park,
Stirling, Scotland, FK7 9JQ

3. Northern Ireland Branch

Canon Medical Systems Ltd.
C/o Antrim & Newtownabbey Borough
Council, LG Floor, Carnmoney Road North,
Newtownabbey, Co.Antrim, BT36 5QA

4. Midlands Training and Distribution Centre

Training facility and storage
1, Redwood Court, Campbell Way, Dinnington,
Sheffield, S25 3NQ

5. Stevenage Training and Distribution Centre

4 & 5 Eastman Way, Pin Green,
Stevenage, SG1 4SZ



UK's Alphenix Sky + Makes a Big Impression at Leicester's Hospitals

Ceiling mounted, double C-arm helps expand patient services and deliver greater clinical confidence.

University Hospitals of Leicester NHS Trust was the first in the UK to install an Alphenix Sky + interventional imaging system from Canon Medical. It is one of the biggest and busiest NHS Trusts in the country serving one million residents in Leicester, Leicestershire and Rutland, and employing 15,000 people. The Trust comprises three hospitals: Leicester General, Glenfield and Leicester Royal Infirmary. It works under the motto 'Caring at its Best' putting patients' experience, treatments and services at the heart of everything.

The latest Interventional Radiology (IR) systems offer clinical, financial and operational benefits to hospitals. They enable medical procedures that are less invasive with lower risk and improve patient recovery times resulting in shorter hospital stays. Greater visualisation of anatomical details at lower dose improve clinical confidence, giving earlier diagnoses and swifter treatment planning.

The Alphenix Sky + is located at the Leicester General Hospital site and is already delivering immediate benefits to patients and clinicians.

Interventional Imaging for less invasive patient procedures

"We needed to future-proof our interventional imaging services with a new system that would give us greater reliability, better imaging resolution and further advances to expand our patient services. The Alphenix Sky + with 3D workstation ticked all the boxes," states Sarita Modi, Superintendent Radiographer at Leicester's Hospitals.

"The Alphenix Sky + impressed us

from the start. The clinical team was able to undertake a prostate embolization using cone beam CT in the first week of operation. This was a pioneering moment as we have been seeking to introduce the non-surgical procedure for some time. It will mean our patients have to travel less for the procedure."

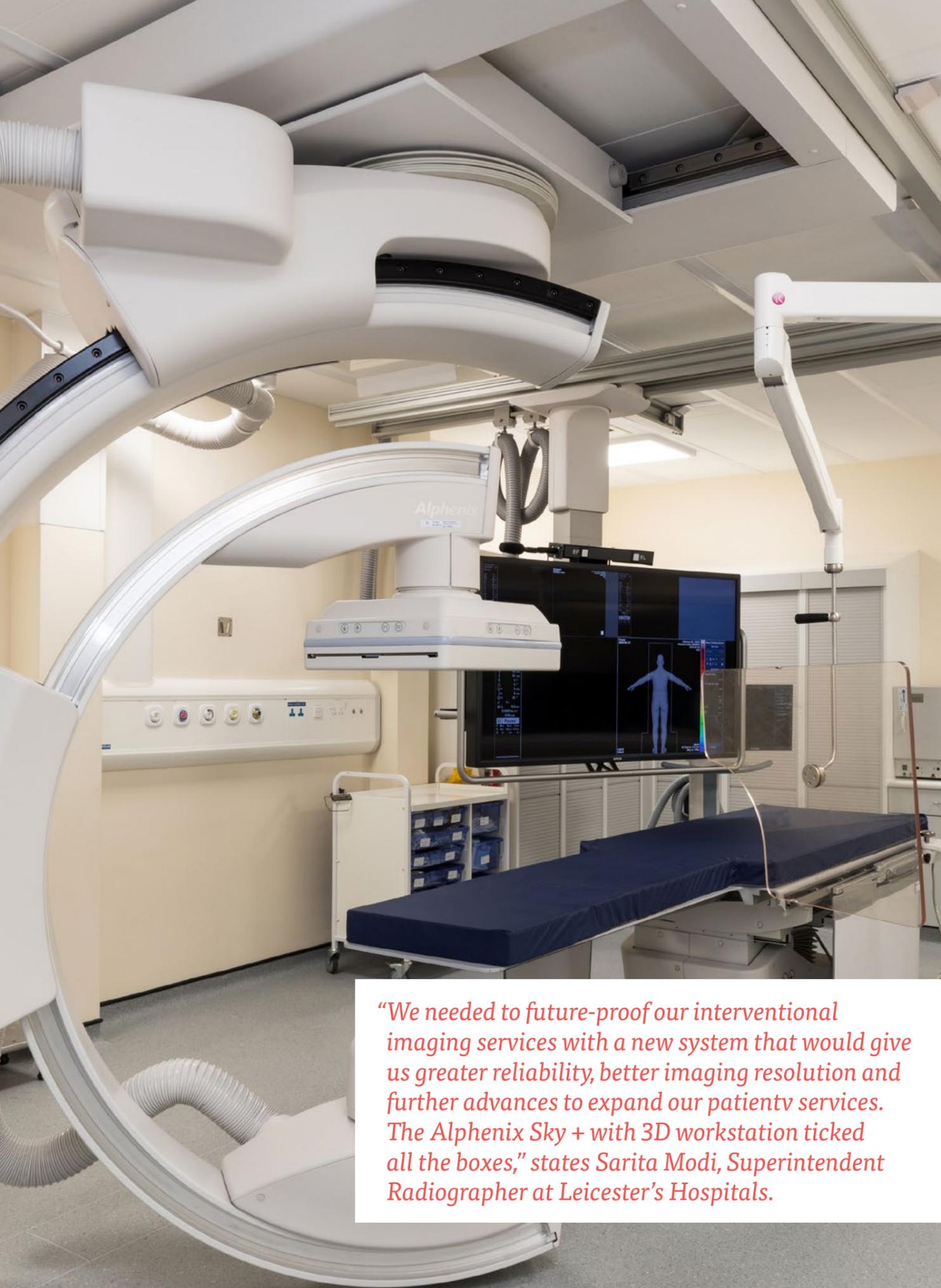
A system that works around you – you don't need to work around it

The design of the Alphenix Sky + reflects that every patient is different, and that unrestricted access is key for expanding clinical procedures. Its 270° C-arm rotation around the table gives the greatest flexibility for patient access and procedure planning.

"The double C-arm design of the Alphenix Sky + means that we can do a CT spin from the patient's side rather than from the head and enable prostate imaging on tall patients. This will increase our imaging flexibility for a range of different procedures, and also understands the individuality of every patient we see," continues Sarita Modi.



Sarita Modi, Superintendent Radiographer at Leicester's Hospitals praises the ceiling mounted Alphenix Sky + interventional imaging system from Canon Medical following its first six months of service.



“We needed to future-proof our interventional imaging services with a new system that would give us greater reliability, better imaging resolution and further advances to expand our patientv services. The Alphenix Sky + with 3D workstation ticked all the boxes,” states Sarita Modi, Superintendent Radiographer at Leicester’s Hospitals.

Unique dose tracking that makes the invisible, visible

The Alphenix system features a unique ‘Dose Tracking System (DTS)’ that tracks X-ray beam movement and provides real-time feedback on skin dose information, mapping it visually as a simple, colour coded visual on the system interface. This advanced warning system gives quick and easy to see alerts to operators to adjust C-arm angulation, frame rate settings and

collimation to reduce skin dose.

“Early UK evaluations following the launch of the Alphenix interventional imaging system suggest the potential for a 50% dose reduction to patients when compared with replaced systems and UK National Diagnostic Reference Levels (NDRLs),” states Daniel Parr, XR Modality Manager at Canon Medical Systems UK. “The dose display is unique to the Alphenix and a giant

leap for interventional radiology in managing ionizing radiation for both staff and patients.”

Positive outcomes:

- High image quality
- Unprecedented patient access
- Streamlined workflow
- Unique dose management
- Boosts productivity
- Improved reliability //



Read more online by scanning here



Falkland Islands. Stanley. View from the water.

Geographical Location no Challenge for Canon Medical

How COVID-19 has taught us that even when apart, we can still be part of close diagnostic imaging partnerships

Supporting diagnostic imaging systems remotely was put to the test in 2020 when the Coronavirus pandemic changed health protocols limiting visits to hospitals from external people. The service, support and training of radiologists and radiographers shifted swiftly, adapting to an online world where people could meet virtually to ask questions, share knowledge or exchange ideas. Tools to support hospitals with remote maintenance and upgrades of their imaging equipment were already in place; it just required a refreshed mindset to accept the new modus operandi to keep equipment running without physical visits from engineers and applications teams.

For hospital locations away from the UK mainland, the feeling of being remote and having fewer 'human'

interactions from the representatives of imaging equipment manufacturers has been a fact of life for a long time. Canon Medical Systems UK has many close relationships with customers located off the UK mainland in locations such as the Isle of Man, the Channel Islands, Gibraltar and the Falkland Islands. These islands and other British Overseas Territories have long had a 'resourceful' outlook on pre-empting what parts and training they might require.

Imaging support over 8000 miles away in the Falkland Islands

One such example is King Edward VII Memorial Hospital (KEMH) in Stanley, the capital of the Falklands Islands, an archipelago in the South Atlantic. Although located more than 8000 miles from the UK, it is a British territory and has a reciprocal agree-

ment with the NHS. KEMH is the only medical, dental and community health service facility serving the near 4000 inhabitants of the islands, and potentially triple that number of people in the summer period when tourist cruise boats visit.

The hospital comprises a total of 29 beds across acute care; a maternity ward; an isolation unit; a two-bed intensive care unit and a seven-bed long-stay nursing home. It is a modern facility for community and outpatients, and its diagnostic imaging provision includes X-ray, fluoroscopy, and ultrasound.

“Ultrasound is our frontline diagnostic tool and we use it as much as X-ray. We have had our two Xario ultrasound systems from Canon Medical for many years and are reliant on them for all general imaging work from obstetrics, general surgery and small parts. The Xario ultrasound is a battery powered unit and gives us a great mobile advantage to take to a patient on the ward or theatre,” states Nina Aldridge, Senior Radiographer at King Edward VII Memorial Hospital, Falkland Islands.

She continues, “We don’t have CT or MRI on the island so should a patient need further exploratory imaging they are either sent the 300 miles to a South American hospital, or to the UK. Although we only have a patient population of 4000 full time inhabitants, two tourist or expedition cruise boats a day can stop at Stanley Port in our summer period from October to March. This can uplift the number of people that the hospital may need to see from falls, heart attacks or pregnancy concerns. It means that our ultrasound systems are in regular use and need to be kept in good working order, just like in any hospital in the UK.”

“The Canon Medical experience is incredibly positive for us - they are so accessible and responsive to our needs. We are a very resilient and



“The unique year of 2020 has taught us all that even when we have to be physically apart, we can still communicate with and support our customers virtually using the technologies available.”

Tim Palarm, Regional Ultrasound Manager at Canon Medical Systems UK.

forward-thinking nation being in a remote location with only a once-a-month supply boat, so we’re used to not expecting things immediately. But we have instant responses whenever we need them from the Canon Medical team and this is very reassuring to keep our ultrasound imaging service running smoothly and ensuring the highest possible standard of care to our patients,” concludes Nina.

A virtual service and application support give reassurance and confidence

“Supporting our customers, wherever they are located is always a key objective,” states Tim Palarm, Regional Ultrasound Manager at Canon Medical Systems UK. “The unique year of 2020 has taught us all that even when we have to be physically apart, we can still communicate with and support

our customers virtually using the technologies available. For example, our InnerVision remote service and application support can action software updates or repairs by a Canon Service engineer without the need to visit the location. This means a quicker resolution of issues and ensures maximum equipment ‘up-time’. It can also facilitate screen sharing to talk clinicians through any training

or education topics to broaden their knowledge of the system, optimise image quality and, of course, maximise potential when in clinical use with patients.”

Richard Cheshire, Product Specialist for Ultrasound at Canon Medical states, “We feel strongly that although technology is an enabler of remote communications and service support, the personal connections we have with our customers are still vital. We visited King Edward VII Memorial Hospital in the Falklands last summer to set up the remote maintenance service and test it with colleagues in the UK. This all worked smoothly, and it is now in place should the hospital need our instant support moving forward. The Falklands example is real testimony to how geographical location, even 8000 miles away, is no barrier to close imaging partnership working.”

Tim Palarm, concludes, “The support of our valued customers in the Falkland Islands has always been a Canon Medical team effort, which involves collaboration and close working between service, applications, sales and contracts.” //

“We have had our two Xario ultrasound systems from Canon Medical for many years and are reliant on them for all general imaging work from obstetrics, general surgery and small parts.”

Nina Aldridge, Senior Radiographer at King Edward VII Memorial Hospital, Falkland Islands.



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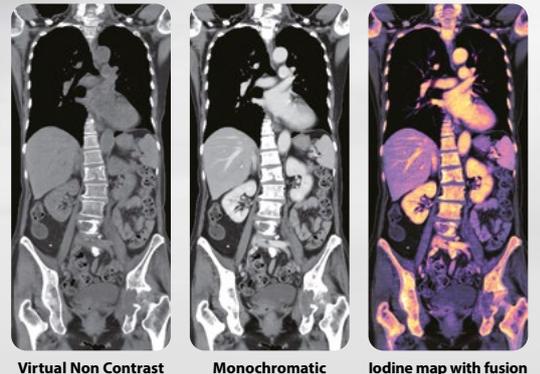
*King Edward VII Memorial Hospital
(KEMH) in Stanley, the capital of the
Falklands Islands*



Canon



Aquilion ONE PRISM Edition



Deep Intelligence Innovate. Illuminate. Initiate.

Introducing the all-new Aquilion ONE / PRISM Edition.

Combining the power of Deep Learning Spectral Reconstruction with our Advanced intelligent Clear-IQ Engine (AiCE), we have created a CT system that is designed for deep intelligence.

By seamlessly integrating AI technologies, you can now access all the tools you need to automate your workflows, while capturing vital diagnostic information that will help define your patient's medical care journey.

With Aquilion ONE / PRISM Edition, the possibilities are endless – for you, your patients and your business. It's time to innovate with technology, illuminate clinical insights and initiate new business opportunities for a brighter, smarter future.

<https://eu.medical.canon/prism>

CANON MEDICAL SYSTEMS

Phenomenal Dose Reduction of Canon Medical's AI Based CT Engine a Game Changer for Radiology

Patient dose up to 90% below UK National Diagnostic Reference Levels

A Deep Learning Reconstruction Artificial Intelligence (AI) innovation, built into an Aquilion ONE / GENESIS Edition CT scanner from Canon Medical Systems UK, is delivering a 'new era' of patient imaging at Mid Cheshire Hospitals NHS Foundation Trust.

Patient dose reductions of up to 90% below National Diagnostic Reference

Levels (NDRLs) have been achieved at Leighton Hospital in Crewe using the Advanced intelligent Clear-IQ Engine (AiCE), a Deep Learning Reconstruction AI algorithm integrated into its new Canon Medical CT scanner. The low doses have even been achieved when examining traditionally difficult to image patients such as severely ill patients with their arms by their sides, patients unable to hold their breath and bariatric patients.

Previously, with model-based iterative reconstruction, the images looked as if they had been painted with watercolours. This is a great improvement – once you see them you'll never look back. As a department we have always been very proactive when it comes to keeping patient dose down and our experiences of using the system every day for inpatients and outpatients has exceeded our expectations. AiCE is a game changer for radiology."



"Advanced Deep Learning Reconstruction of clinical images using AiCE heralds a new era in CT. It enables phenomenal patient dose reduction, up to 90% below the National Diagnostic Reference Levels, at the same time as providing extremely high-quality clinical images and all in a rapid timeframe suitable for everyday clinical use. This goes far beyond model-based iterative reconstruction on CT and as Canon Medical was first to innovate in this area, it offers the most mature system of this kind," states Dr Richard Hawkins, Consultant Radiologist at Mid Cheshire Hospitals NHS Foundation Trust.

"Advancements in Artificial Intelligence to further the capacity and capabilities of radiology are very exciting. It isn't theory or pilot studies, it is real and being used in the UK by busy NHS hospitals to power the improvement in patient care, speed-up processes and empower clinical confidence," states Mark Thomas, CT Modality Manager at Canon Medical. "AiCE is trained using a deep learning algorithm to differentiate 'noise' from true signal, reducing distortions, preserving edges and maintaining details in image outputs at the same time as achieving lower doses than ever seen before in routine CT imaging." //

He continues, "The clinical images generated using AiCE are much more natural and acceptable in appearance to radiologists reporting on cases."

Leighton Hospital, part of Mid Cheshire Hospitals NHS Foundation Trust, is one of the first NHS hospitals using Advanced intelligent Clear-IQ Engine (AiCE), a Deep Learning Reconstruction AI algorithm on its Aquilion ONE / GENESIS Edition CT scanner from Canon Medical Systems UK. [Picture taken pre-COVID-19]

Pictured L to R: (Rear) Tamzin Culverhouse, Medical Imaging Assistant; Alex Finnie, Senior Radiographer; Matt Simpson, Consultant Radiologist; Barnaby Harrison, Account Manager at Canon Medical Systems UK. (Front) Justin Edwards, Advanced Radiographer Practitioner; Sophie Vaux, Senior Radiographer; Dr Richard Hawkins, Consultant Radiologist; and Mark Thompson, Medical Imaging Assistant.

Read more online by scanning here



"It enables phenomenal patient dose reduction, up to 90% below the National Diagnostic Reference Levels."

Dr Richard Hawkins, Consultant Radiologist at Mid Cheshire Hospitals NHS Foundation Trust

Innovations Answering the Need for Speed in MR

Compressed SPEEDER technology and the world's first Deep Learning Reconstruction for MR

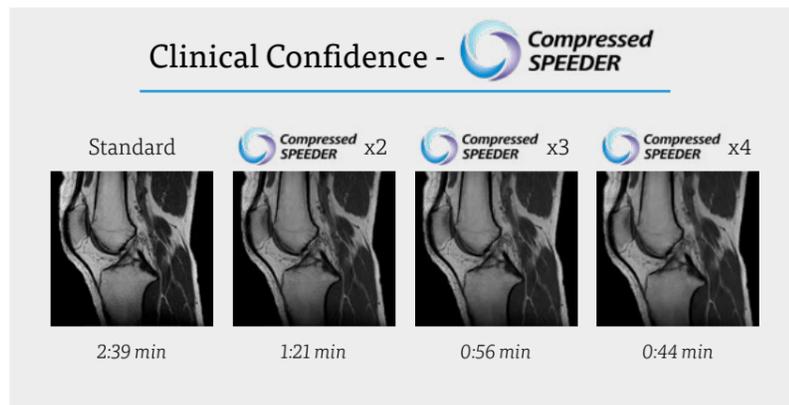


Faster MR scanning improves departmental workflow enabling more patients to be seen in a working day, helping to alleviate some of the pressures on today's radiology teams. In addition, patient comfort improves when a patient spends less time in an MR scanner, especially for individuals with claustrophobia or anxiety. Recent innovations in MRI to overcome the historical challenges of balancing acquisition times and image quality to deliver faster imaging procedures without compromising image quality have been welcomed across the globe.

Introducing the productivity power of Compressed SPEEDER

Available on the latest Canon Medical MRI systems – the Vantage Galan 3T, the Vantage Orian 1.5T and the Vantage Elan 1.5T - the unique Compressed SPEEDER technology supports high acceleration while maintaining resolution and Signal to Noise Ratio (SNR). Reconstruction of full resolution images from highly under-sampled data can speed up MRI scans by up to four times. Exceptional imaging quality and improved productivity offer great potential to meet the capacity challenges of UK imaging departments.

The reduction in scan time by Compressed SPEEDER not only improves the patient's experience, but also image quality as the likelihood of motion during lengthy scans is minimized. The result is a less anxious patient and a better quality scan: a win-win situation for the imaging department.



Then calculate all the time savings of shortened scan sequences from a 'normal' imaging day and the productivity potential of Compressed SPEEDER on MRI. Adding more patients to daily work lists in an imaging department helps to speed up referral to treatment (RTT) waiting times by providing the critical diagnostic scans for analysis and reporting by clinicians in a more timely manner.

A new era of clarity from Advanced intelligent Clear-IQ Engine (AiCE)

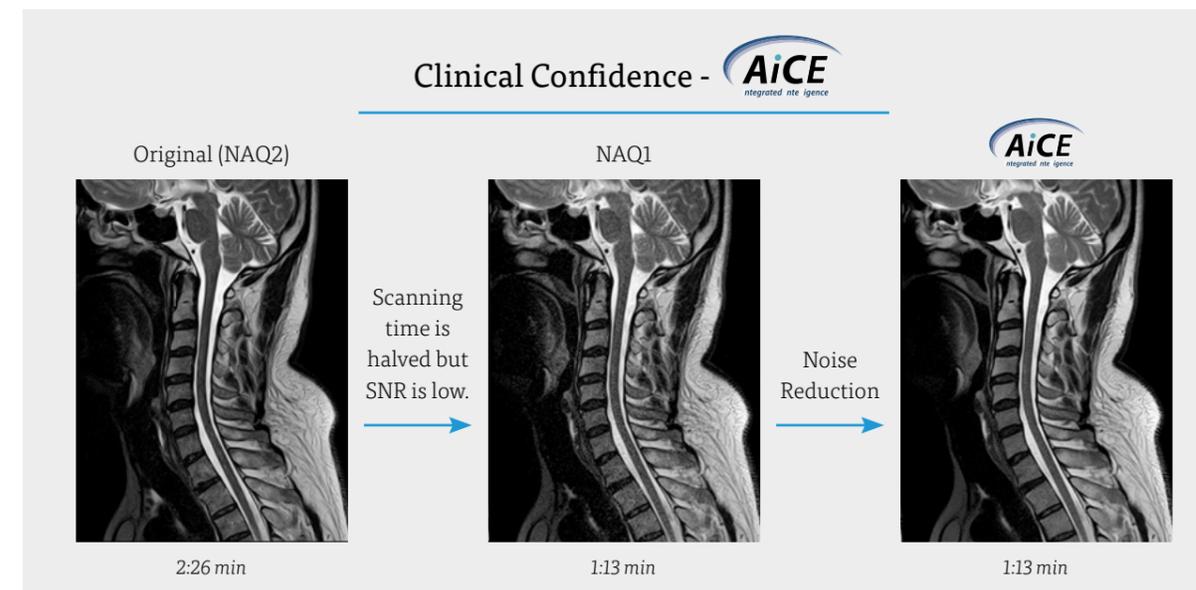
A further innovation born from the advances in medical Artificial Intelligence (AI) is Canon Medical's Advanced intelligent Clear-IQ Engine (AiCE). This is the world's first fully integrated MR Deep Learning Reconstruction (DLR) AI algorithm producing MR images that are exceptionally detailed and with the low-noise properties of a high SNR image. A clear benefit of AiCE is that it can be used in all areas of the body, regardless of which coil is used, and it can be utilised with almost all imaging sequences both 2D and 3D.

AiCE has been developed using vast quantities of high quality image data using a deep convolutional neural network to distinguish true signal from noise. This provides clearer imaging for interpretation and automatic correction of signal or spatial resolution. Enhanced spatial resolution gives greater sharpness and clarity of detail to positively enhance clinical confidence and give more detailed information for diagnosis and treatment planning.

Compressed SPEEDER + AiCE = new imaging opportunities

The powerful benefits of increased resolution, quicker examinations and removed noise can be fully realised when Compressed SPEEDER and Advanced intelligent Clear-IQ Engine (AiCE) are used together.

First user voices across Europe are expressing that the new MRI technologies are a step change in medical imaging. Indeed, citations include that using the deep learning reconstruction capabilities of Advanced intelligent Clear-IQ Engine (AiCE) on 3T MRI systems is giving imaging results that



can be comparable to that of high end 7 Tesla systems usually found in research or university facilities.

Positive potential across clinical specialities

The opportunities of MRI innovations via Advanced intelligent Clear-IQ Engine (AiCE) and Compressed SPEEDER are exciting for numerous clinical specialities. Already, areas such as neuroradiology, musculoskeletal (MSK) and cardiovascular imaging are praising the use of advanced imaging innovation for improving the accu-

racy of examinations, for seeing into anatomical regions that cannot be observed using conventional techniques, and providing much needed shorter scan times.

Patient comfort is already a highly promoted benefit on the latest generation of MRI scanners from Canon Medical. For example, the Pianissimo acoustic noise reduction technology helps make the examination experience less distressing. Now, with shorter procedures powered by the latest DLR advancements, a patient can be in and

out of the scanning environment even more swiftly.

The AI era is delivering great advancements for medical imaging. The historical compromise of MRI speed and image resolution is set to be resigned to the past, and the panacea to workflow pressures is on its way. This is the decade for imaging developments to move from concept and luminary anticipations to taking their place in the modern radiology arsenal. The need for speed in MRI has been answered. //



Artificial Intelligence to Boost MR Imaging Quality and Productivity

The power of AI is brought to routine MR imaging by Canon Medical's Deep Learning Reconstruction (DLR) technology: Advanced intelligent Clear-IQ Engine (AiCE). AiCE is the world's first fully integrated DLR technology for MRI.

One of the main challenges in MRI is finding the optimal balance between the signal-to-noise ratio (SNR) and image resolution. A higher spatial

resolution could improve visualization of structures, but when spatial resolution is increased, SNR drops. To regain SNR, typically scan times need to be increased, reducing patient comfort and decreasing throughput.

signal-to-noise MR images to detect noise and remove it from the MR images. By removing noise, AiCE enables spatial resolution to be increased or acquisition time to be reduced.

"AiCE changes the way we think about MRI."

Prof. Garry E. Gold.

Canon Medical found a solution in artificial intelligence: AiCE. AiCE is a deep-learning based solution trained on vast amounts of low and high

AiCE expands diagnostic capabilities, enriches radiologist's confidence and reduces examination times and thus improves patient comfort. With AiCE we enter a new era in MRI.



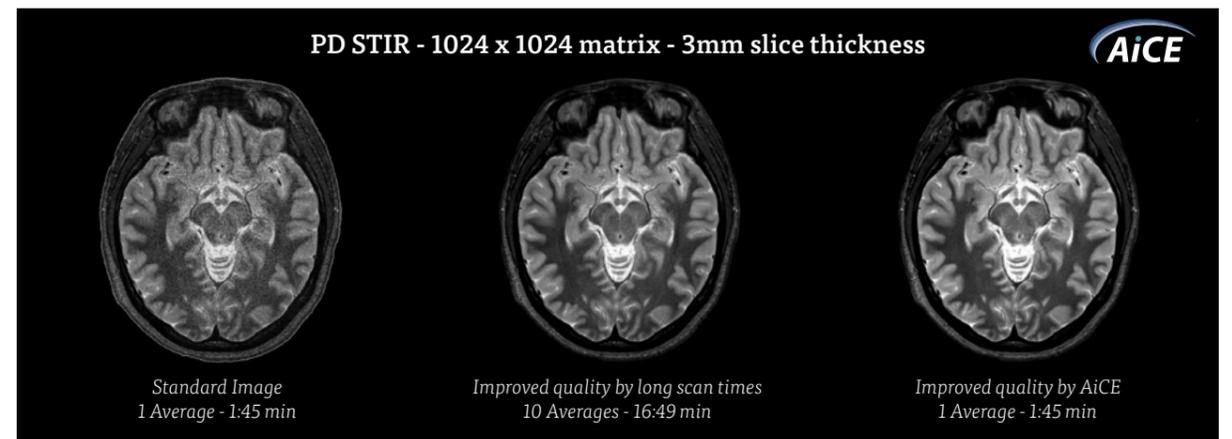
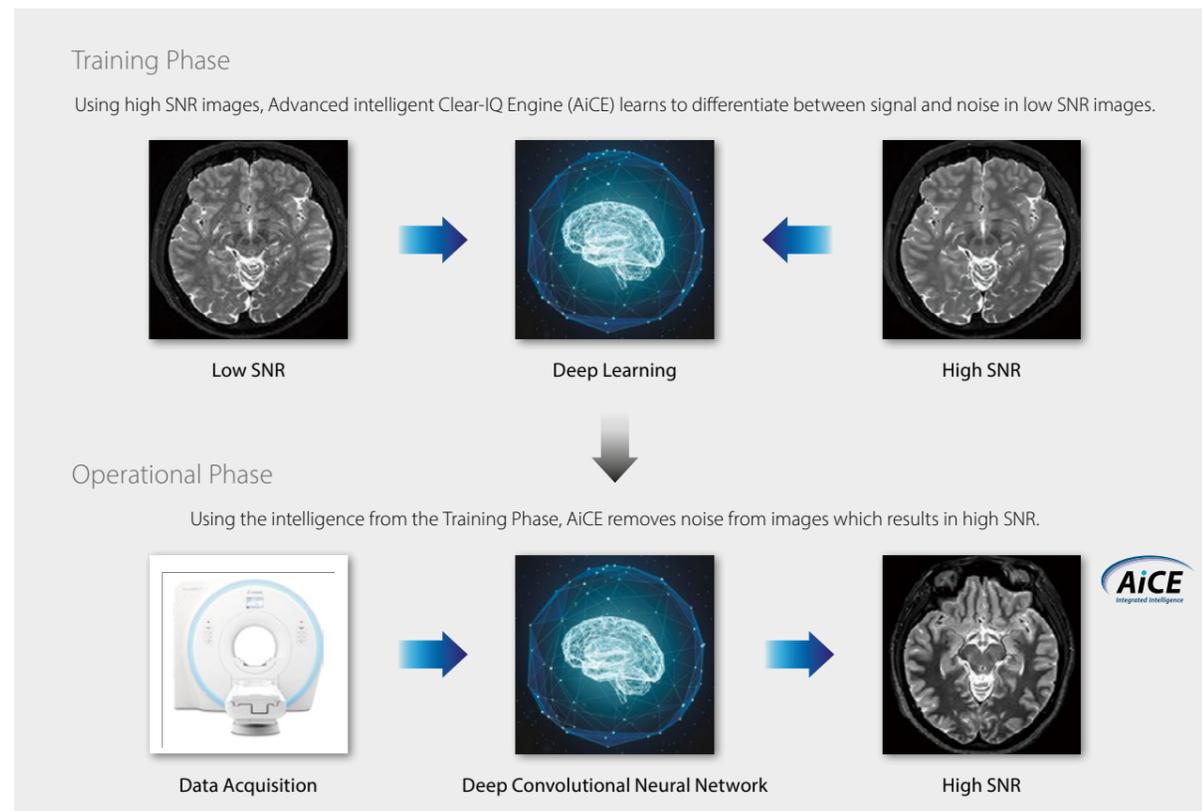
"With DLR we can achieve both high resolution images without losing time or signal and reduce the image acquisition time."

Prof. Vincent Dousset, Head of the diagnostic and therapeutic Neuro Radiology department at Bordeaux University Hospital.

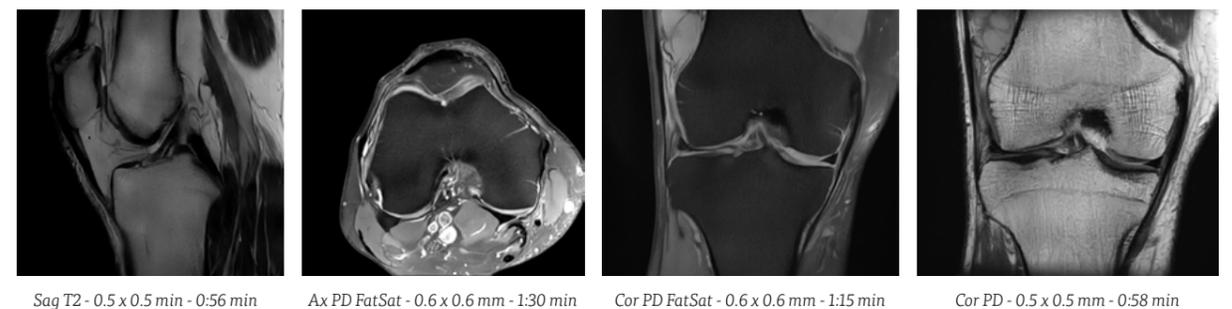


"I'm impressed by the ease-of-use, how it maintains image contrast and structural detail, while at the same time eliminating noise."

Prof. Garry E. Gold, Clinical radiologist and researcher, Past president of the International Society for Magnetic Resonance in Medicine (ISMRM) and the Society of Computed Body Tomography and Magnetic Resonance (SCBT/MR)



Fast knee protocol with AiCE on Vantage Oriion 1.5T





The Canon Respect Programme – Using Sport to Facilitate Social Change

Providing safe, educational spaces for participants to learn and grow

Supporting local communities in South Yorkshire, the Canon Respect Programme is delivered by the Sheffield Sharks Basketball Club in partnership with Canon Medical Systems with support from South Yorkshire Fire & Rescue. For hospital locations away from the UK mainland, the feeling of being remote and having fewer ‘human’ interactions from the representatives of imaging equipment manufacturers has been a fact of life for a long time. Canon Medical Systems UK has many close relationships with customers located off the UK mainland in locations such as the Isle of Man, the Channel Islands, Gibraltar and the Falkland Islands. These islands and other British Overseas Territories have

long had a ‘resourceful’ outlook on pre-empting what parts and training they might require. The programme works in primary schools and central to its premise is to use Shark’s professional players as role

models to encourage good citizenship and to take part in positive activities. Sport can be an effective tool to drive social change and helps empower young boys and girls that may be caught up in, or on the periphery of, gang activity in marginalised youth and young adult populations.

The programme is split into two types of activity, conducted weekly:

- Learning Topics**
- The dangers of drugs, alcohol and gang recruitment
 - Repatriation of gang members and diverting those at risk
 - Affecting social change through sport

- Basketball Coaching to encourage positive activities and team building
- Education to tackle issues affecting the local community

“We will send 6 pre-recorded basketball sessions, which can be played during PE lessons for the kids. These will be done by our first team players, with each player doing a different session for each week – meaning the participants are able to gain something from each player’s personal expertise.”

Mike Tuck, Captain of Sheffield Sharks and Sky Sports NBA Analyst.



The power of sport
The Respect programme brings together individuals from all backgrounds and social statuses in a relaxed and natural environment, focused on physical activity, that is ideal for exploring potentially difficult topics such as sensitive gang-related issues. Sport can instil a critical outlook on life that is vital to a young gang

members repatriation into mainstream or educational development, and to create lasting individual and social change to communities.

The programme culminates in a basketball tournament involving all participating schools, giving a tangible goal to the members of the programme.

Delivering life-changing education and help
The team of facilitators use their real-life experiences to challenge the attitudes of participants and use a variety of learning styles based around Cognitive Behavioural Therapy (CBT), specifically aimed at those at risk of, or already facing, school exclusions.



These workshops are designed to encourage an understanding of community values, such as online safety, and the importance of leading healthy and social lifestyles.

The impact of Covid and what's coming next

It will come as no surprise that the programme was hit heavily by lockdown and the closure of the primary schools. The programme is working hard to continue its work in helping young people, who may be at even higher risk during lockdown.

The programme remained in constant communication with older members, sending them weekly work activities and helping to support their parents/

carers. Due to safeguarding we the programme was unable to stay in contact with primary school members so sadly had to come to halt when the schools closed in March.

“Moving forward post lockdown, we are establishing an online system that will enable us to continue the RESPECT project, before having to be physically present in schools. This will be done through creating online workbooks that will be sent to schools, in addition to online work shops that can be pre-recorded as well as live. We will also send 6 pre-recorded basketball sessions, which can be played during PE lessons for the kids. These will be done by our first team players, with each player doing a different

session for each week – meaning the participants are able to gain something from each players personal expertise.” Mike Tuck, Captain of Sheffield Sharks and Sky Sports NBA Analyst.

The programme hopes to resume a physical presence in the new year.

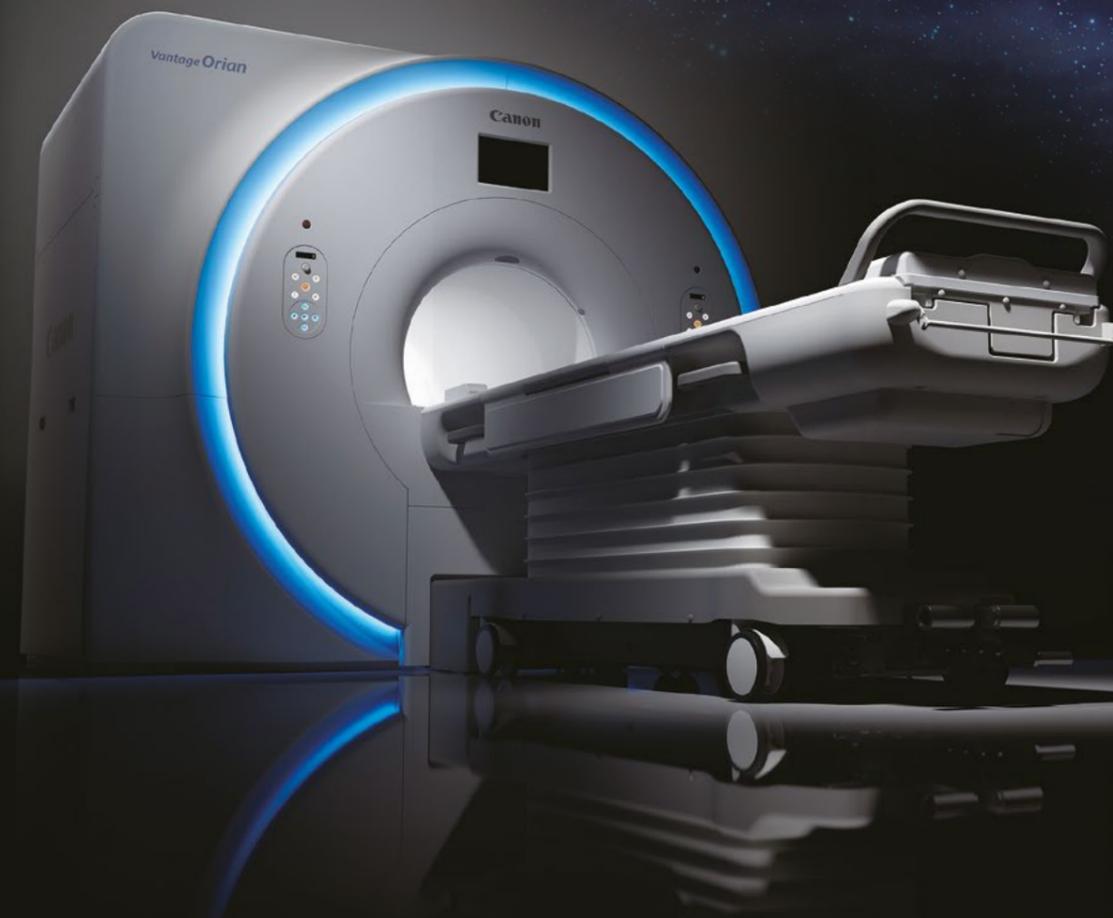
If you'd like to support or help the Sheffield Sharks, please contact our marketing team who will be happy to put you in touch. //

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Designed to increase productivity and lower running costs, ensure patient comfort and deliver uncompromised clinical confidence, Vantage Orian is the perfect answer to your 1.5 Tesla MRI business and clinical requirements.

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Clinical Confidence

- Consistent imaging performance with Saturn Technology
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* Indicates optional features



Berkshire NHS Limits COVID-19 Imaging Backlog due to Relocatable CT Installed in Winter Funding

Temporary scanner helped catch up with seasonal CT backlog and arrived in time to support imaging services during COVID-19

Royal Berkshire NHS Foundation Trust has successfully managed its CT imaging backlog during COVID-19 with the help of a Canon Medical relocatable with Aquilion Prime SP CT. The unit was installed as part of winter 2019/20 contingency funding, but also played a critical role in supporting imaging services during the pandemic.

Positioned on a disused ambulance and disabled parking bay, the relocatable unit's main objective was to help the imaging department to clear a backlog of outpatient scans from the winter period and ensure same day care for emergency patients. This was successfully achieved, and its

arrival just before the Coronavirus crisis ensured the Trust had a scanner separate from the main department for infection control purposes and defend against further backlogs in oncology referrals.

“This year has shown us the need to remain agile in healthcare and to expect the unexpected”

Joe Vincent, Commercial Solutions Manager at Canon Medical Systems UK

“We are a landlocked hospital with no room for further expansion of imaging facilities,” states Stuart Andrew, Lead Radiographer CT at Royal Berkshire NHS Foundation Trust. “Therefore, the option of a relocatable CT in the car park seemed the perfect solution to our needs to increase scanning capacity to clear a backlog of outpatient scans from the winter period, and plan for a future CT upgrade in the main building. It has also helped us defend our imaging services from the unexpected arrival of Coronavirus by providing an additional outpatient scanner that is not directly linked to the main building.”

He continues, “We have been able to maintain our two-week urgent cancer

referral targets during the COVID crisis by having the additional CT scanner and working longer hours and at week-ends. This would have been far more difficult without the extra scanner.”

The Canon Medical relocatable scan unit is designed to feel like a clinical part of the hospital estate. It is a ground floor level structure with no staircases featuring changing area, control and scanning room. The units include clinical flooring, hospital grade

heating, ventilation and air conditioning, plus data link connectivity to hospital systems.

“This year has shown us the need to remain agile in healthcare and to expect the unexpected,” states Joe Vincent, Commercial Solutions Manager at Canon Medical Systems UK. “Patient imaging demands, radiology workforce shortages, winter pressures and lack of space on hospital estates have long squeezed the

capacity of diagnostic imaging in the UK. Now we have the added pressures of infection control and a global virus pandemic. Keeping imaging solutions responsive with the supply of relocatable or mobile CT and MRI units, are one step, alongside flexibility in terms of finance or rental solutions. Keeping responsive is critical as a key supplier to the NHS.” //

Pictured L to R: Iain Burley, Account Manager at Canon Medical Systems UK; Sarah Guzvica, CT Clinical Lead Radiographer; Beverly Besana, Radiographer; and Stuart Andrew, Lead Radiographer CT at Royal Berkshire NHS Foundation Trust.



Read more online by scanning here



From left to right: Manchester United first team players, Juan Mata, Scott McTominay and Marcus Rashford at the Canon Medical Centre at the Aon Training Complex



Multi-Modality Imaging in Progressive Sports Medicine

Dr Steve McNally, Head of Football Medicine & Science at Manchester United Football Club explores the role of multi-modality imaging in sports medicine, its importance in unlocking an understanding of anatomical and physiological information, and how different diagnostic imaging solutions go towards protecting and rehabilitating elite athletes.

We often get asked what diagnostic imaging equipment best fits today's needs for sports science. Is there a particular system that gives the most accurate or broadest spectrum of information? How can player recruitment decisions, routine health surveillance, and the emerging needs of post-retirement health management be enhanced? What innovations in medical technology do people need to look out for to assist progressive sports science?

We recognise that we are in a fortunate position to have an ultra-modern medical imaging centre at Manchester United Football Club that includes a range of Canon Medical systems including MRI, CT and Ultrasound. This helps us to carefully manage the health of our most valuable assets, our players. This equipment is the same as what can be found at the frontline of many independent and NHS hospitals across the UK. However, this high level of access to multi-modality imaging

may not be the same for other sporting organisations. But what we do share is the need to treat athletes as people, from community-based sports groups to amateur, national and other premier leagues, and the careful management of their long-term sporting aspirations.

The use of multi-modality imaging today

To date, many football club doctors utilise ultrasound as a point of care imaging platform. It is an extension of our clinical examination and used as part of a normal routine. For example, in 2016/17, 80% of our imaging procedures were for ultrasound screening and diagnostics. This included musculoskeletal (MSK) injury assessment, the monitoring of soft tissue injury healing, guided interventions and player education and echocardiography, looking at the anatomical and functional aspects of the heart for cardiac profiling and surveillance.

The use of MRI for pre-signing medicals and injury assessment diagnostic

procedures followed at 16%; then CT (2%) for accurate diagnostics and guided interventions; and finally X-ray (1%), usually for fracture diagnosis. Clinical considerations such as indication, ionising vs non-ionising and cost effectiveness of what modality to use is always key in our decision pathways, though we do have to bear in mind a number of other unique factors such as asset value of the patient concerned.

Cascading imaging research and advancing techniques

We are learning a lot at Manchester United Football Club from having an ultra-advanced diagnostic imaging centre. Yet this research and knowledge are not ours alone. Knowledge has the potential to be cascaded into the wider sporting arena and public health community. In addition to the daily and routine health surveillance of our players to monitor and manage injury and rehabilitation, there are several research projects underway that will have far reaching benefits around the globe.

Innovation in medical imaging is moving at a great pace as health ecosystems in the UK and further afield look for solutions to overcome capacity pressures. We too benefit from these advancements. Recent developments in the innovation and access to fast acquisition, post-processing capabilities and clearer resolution via high-end 3T MRI means that the number of regular ultrasound imaging procedures is curving downwards.

MRI helps to identify very minute intra-articular joint injuries, muscle oedema changes or very small fibre tears which have the greatest of implications in elite sports. It is also highly useful for cardiac screening for proactive health surveillance and for exploratory work into diagnosing and monitoring for Chronic Traumatic Encephalopathy (CTE)². In contrast, the use of ultrasound as a physio-therapist's tool is on the increase, for example, to monitor tissue healing. Is this the future for football ultrasound? Time will tell, but it does offer increased research possibilities in muscle morphology, fascicle length assessment and potential associations with injury and performance.

Quick and low dose CT innovations are also very valuable in sports medicine. Motion CT is possible where we can get the athlete moving, and with 4D imaging we can see any indications



Fig. 2 Dynamic CT shows joint motion that is important for assessing functional stability in strains.

“Innovation in medical imaging is moving at a great pace as health ecosystems in the UK and further afield look for solutions to overcome capacity pressures.”

Dr. Steve McNally, Head of Sports Medicine and Science at Manchester United

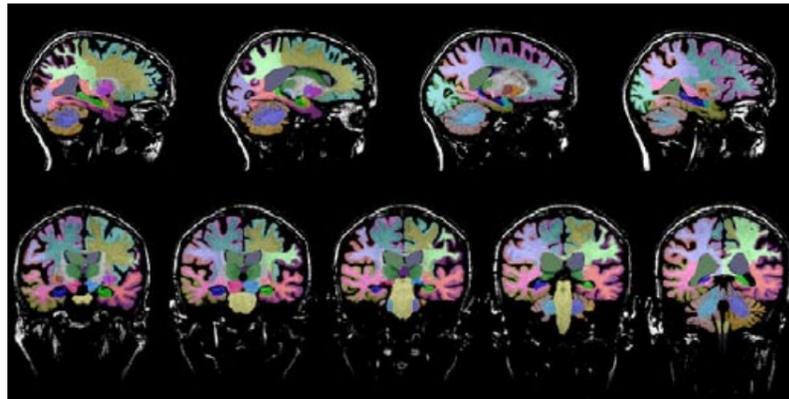


Fig.1 MRI has its place in sports health surveillance such as diagnosing and monitoring Chronic Traumatic Encephalopathy.

of instability, hypomobility, subluxations or maltracking in places such as the subtalar joint, the knee joint (patellofemoral), hip joints or acromioclavicular joints.

3D and 2D imaging also facilitates measurements of joints and we can get useful dynamics to see how joints move and how the bones work together (Fig. 2). This combination of imaging information is particularly important in a sprain to see if the ligaments are holding it together or if

surgery is required, or indeed, when there has been surgery to assess if it is all functionally stable before we put a player back out on the field.

Innovations in ultrasound are also creating benefits in the evolution of sports medicine. Superb Microvascular Imaging (SMI) is a recently developed vascular application that expands the range of visible blood flow and provides visualisation of low microvascular flow that has never before been seen in ultrasound. Compared to conventional Doppler technologies, the advantages of SMI are high frame rates, high resolution, high sensitivity and fewer motion artefacts. Muscle and tendon stiffness can also be examined in depth via compression and shear wave elastography technology on the latest diagnostic ultrasound systems (Fig 3 & 4).

Lastly, Virtual Reality (VR) and Artificial Intelligence (AI) will also have their parts to play moving forward as these innovations mature for application in sports medicine.



Fig 3. B-mode ultrasound image of the Achilles tendon

The future of yesterday's players

What more can we do? This is the question we are often asked. Further to the current attention on our youth and professional players, there is increasing focus on the retiring athlete and the issues experienced by our already

retired club players, with questions raised about our duty of care.

Osteoarthritis, mental health and lifestyle choices are all topics in debate. Perhaps it may be that we will see exit health examinations using imaging systems in the future. This could

“Wherever we go in the future with the expansion and progression of sports medicine, one thing we can depend on is the rapid pace of innovation in medical imaging to support us.”

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include monitoring cardiac de-training effects, coronary atheroma screening, articular cartilage mapping, brain morphology and prostate screening.

Wherever we go in the future with the expansion and progression of sports medicine, one thing we can depend on is the rapid pace of innovation in medical imaging to support us. //

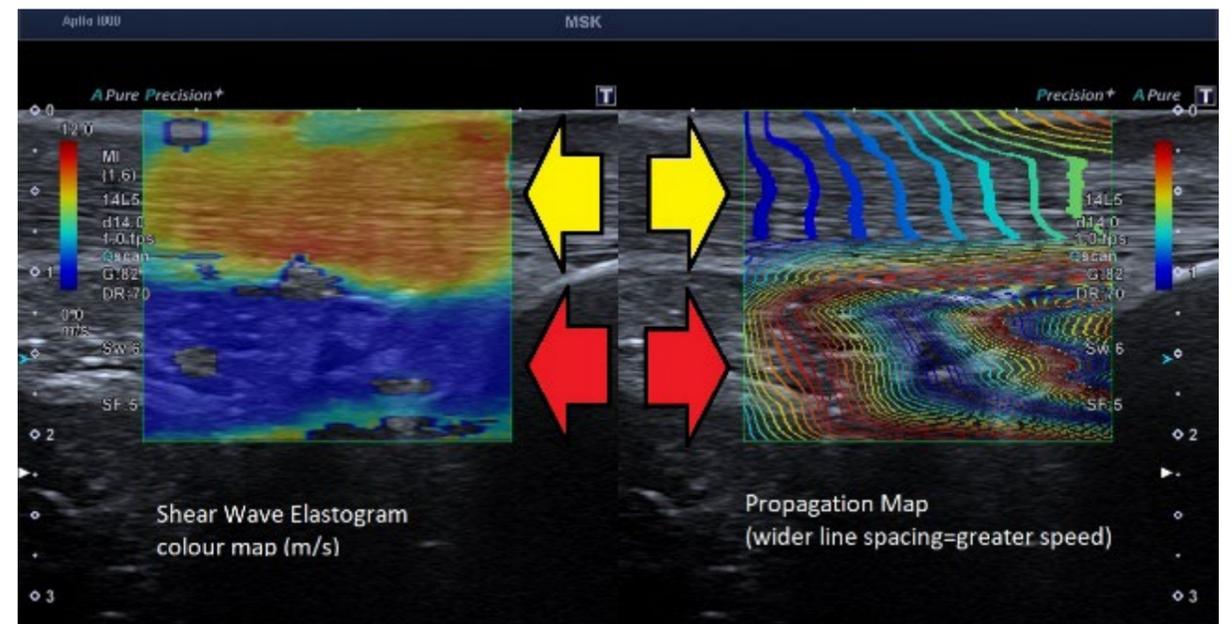


Fig 4. Ultrasound shear wave elastogram image of the Achilles tendon

Left side demonstrates colour mapping of the shear wave elastogram and the propagation map on the right. Wide spaces between the lines of the propagation map demonstrate a high velocity (fast propagation) shear wave (Yellow arrows). The red arrows depict tissues deep to the tendon (Kager fat pad), which have closer propagation lines and a corresponding lower velocity.

NHS Lothian Selects Canon Medical for CT



Aquilion ONE GENESIS Edition takes its place inside the new Department of Clinical Neurosciences

The Department of Clinical Neurosciences (DCN) and the Royal Hospital for Children and Young People (RHCYP) at NHS Lothian have both selected Canon Medical's Aquilion ONE GENESIS Edition CT scanner to support routine and research imaging services. Both systems were chosen to replace an incumbent CT supplier and support services inside the new £150 million hospital in Edinburgh, a project that involved the re-location of the both the DCN and the Royal Hospital Sick Children from other parts of the city to under one roof at the Little France site at the Royal Infirmary of Edinburgh.

The CT scanner is now operational at the Department of Clinical Neurosciences for neurology, general imaging, CT angiography and interventional procedures with the new

Royal Hospital for Children and Young People also set to bring into service its own Aquilion ONE GENESIS Edition CT when the hospital is fully open. The new building will adjoin the Royal Infirmary of Edinburgh via adult and children emergency departments.

Canon Medical was awarded the CT contract for balancing high-end medical imaging technology with value for money. It also offers low dose capabilities, excellent image quality and innovative CT reconstruction through its Advanced intelligent Clear-IQ Engine (AiCE). Together this will lead to enhanced clinical confidence and an improved patient experience.

Lesley McKinlay, Principal Radiographer at DCN/RHCYP at NHS Lothian states, "Despite the Coronavirus pandemic the CT instal-

lation has been completed by Canon Medical and we are operational. We are already seeing the benefits of its wide-ranging functionality in the delivery of routine clinical work and research projects. The staff have been extremely well supported by the Canon applications and support teams."

"We are delighted to have been awarded the CT partnership at NHS Lothian and welcome them to our stable of NHS customers across the UK. We hold great pride at Canon Medical that the end of a sale is just the start of a long term imaging partnership - we look forward to providing online and physical application and service support into the future," states Iain Gray, Account Manager at Canon Medical Systems UK. //



Photo caption: (L to R): Iain Gray Account Manager at Canon Medical Systems UK; Lesley McKinlay, Principal Radiographer at DCN/RHCYP; Lindsey Todd, Specialist Radiographer; and Chantelle Houston, Specialist Radiographer in DCN at NHS Lothian.

"The staff have been extremely well supported by the Canon applications and support teams."

Lesley McKinlay, Principal Radiographer at DCN/RHCYP at NHS Lothian



Online education

The Imaging Academy has been part of our commitment to supporting customers since 2015. Now, as we embrace new times in healthcare with fewer face-to-face interactions via events and courses, we promise and deliver continued high-quality educational support from a digital core.

We focus on three areas of the highest quality training and education; interactive, hands-on learning on all imaging modalities and clinical specialisms, as well as clinically focused personal and professional development courses and business management skills.



Courses Available

We have expanded our dedicated online platform with a focus on ensuring clinical know-how, answering questions and broadening horizons. Alongside our team of application & clinical specialists, access is available 24/7 to a vast library of education materials and online courses, as well as digital resources.

Our previous face-to-face course featured live scanning and presentation by experts - moving into the future with online digital events, we are looking to enhance the customer experience through the introduction of virtual booths as well as deep dives into clinical best practice and research findings from key opinion leaders.



Certificates

Complementing formal undergraduate and postgraduate training, the 'My Profile' area of the academy offers customers the freedom to easily access and maintain a thorough record of all the courses they have attended and completed with Canon Medical and their partners.

Online education content available through the Imaging Academy will also look to offer CPD accreditation wherever possible, providing certification for each individual course or workshop.



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The Imaging Academy provides the most up-to-date education and resources across all Canon Medical diagnostic imaging modalities. It helps imaging clinicians save time, achieve optimal performance of their systems and develop the deep user knowledge needed to provide the highest standards of care to patients.

Registration

At the Imaging Academy, we understand it is vitally important for our customers to be able to demonstrate their personal development and continuous learning throughout their career. In order to support this, the academy delivers new views, opinions and leadership via live webinars and specialised online courses, across all modalities. This will refresh, recap and reshape knowledge to support your needs now and into the future.

Now you have read about all the fantastic things the Imaging Academy can offer in terms of online support and education, don't delay - register today.



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Canon Medical offers a full range of diagnostic medical imaging solutions.

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