PHILIPS

Computed tomography

A clear vision for Royal Victoria Hospital, East Grinstead

Philips' Ingenuity Elite CT Scanner enables Queen Victoria Hospital, East Grinstead to bring its CT scanning in-house

The Queen Victoria Hospital in East Grinstead is a small specialist hospital that has traditionally always outsourced its CT scanning to providers in the area. There has been a desire for some time to develop an in-house capability. The hospital had a requirement around patient safety for on-site scanning from the ITU or Burns Unit, so there was undoubtedly a clinical need to start acquiring studies on-site. In addition, the hospital's catchment area covers Surrey, Sussex and Kent, and the acquisition of the new scanner will mean patients will be able to have their scan on the same day as their appointment with the clinician.

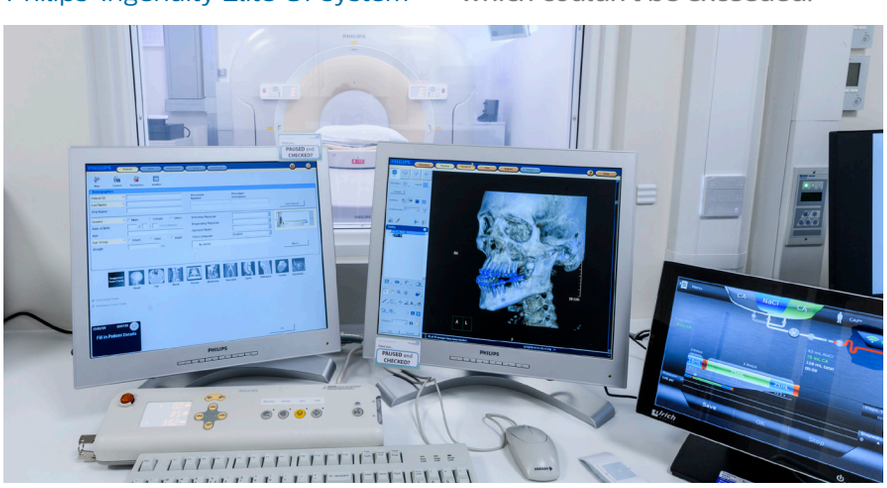
The challenge

A CT scanner within budget that would be 'future proof' for the next five to ten years

The finances for the CT scanner were coming from the League of Friends and using charitable money meant there was a limited pot available, so the hospital needed to get value for money and absolutely had a budget which couldn't be exceeded.

The solution

Philips' Ingenuity Elite CT system



Dr. Ian Francis, Consultant Radiologist says,

"We were looking for value for money, but that aside, we obviously wanted a scanner that could not only address our current needs, but also our future requirements. In other words, we wanted a platform that gave us some confidence that we could run software updates and also address evolutions as they occur over the next five to ten years. In purchasing the Philips system, I think we can take ourselves forward and not look for capital investment again for a while."

"Besides our specialist work, we've seen an increase in demand around direct access work, and having a CT on-site could allow us to do community-based CT services, given the national vision around early cancer diagnosis. We wanted to work with someone who could help us address those things as well."

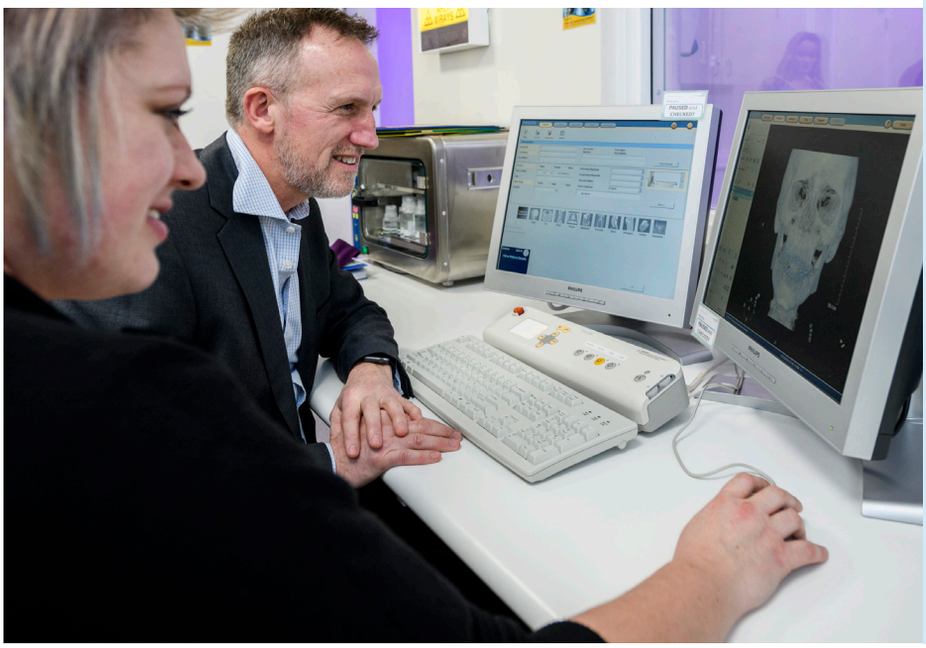
As a specialist hospital Queen Victoria's general work is quite small. Most of the work is oncology-related and so there is head and neck, and skin melanoma work. In addition, breast reconstruction is undertaken and for this group there is a requirement for pre-operative planning.

Helen Joy, CT Superintendent Radiographer says, "We do a lot of DIEPs because we are one of the specialist centres for plastic and reconstructive surgery, particularly for breast reconstruction. Head and neck scans are also important as we are a head & neck cancer centre, and being a plastic surgery specialist hospital we also cover a lot of melanoma removals. Patients will come to have them removed and clinicians will follow the patient through that journey, so we will be scanning patients regularly for monitoring and staging of their disease to help plan surgery. We also do a lot of sinus scans; anything around the head neck and ears, as well as trauma work, facial bones and mandibles."

Shorter journeys and waiting times for patients

"We've had lots of really good feedback from patients and you know they're thrilled at the short waiting times for their appointments including the fact that they don't need to travel a long way. Some of our patients are literally round the corner, so they can walk here, have their scan and be finished within about fifteen minutes; they absolutely love it!

The Philips Ingenuity Elite is an intuitive, user-friendly machine. Staff are really interested in it and I have had a few people stop me and ask if they can come and have a look, so there is quite a buzz about it. Everyone is really impressed when they see it and everyone loves the lighting as well. We receive comments from patients about the Ambient Lighting Experience, which they say is very relaxing."



Shown here, left to right: Helen Joy, CT Superintendent Radiographer and Dr. Ian Francis, Consultant Radiologist

Keeping you ahead

Until now, CT scanning has too often been about trade-offs. You are forced to choose between high image quality and low dose; between an iterative reconstruction technique and speed. With the Ingenuity family this is no longer the case. The Ingenuity Elite offers solutions that deliver high performance with virtually no trade-offs, with advances such as the iDose4 Premium Package and iPatient, which puts you in control of innovative workflow solutions. Philips continues to lead in CT detector design with the NanoPanel Elite – our latest tile-detector technology that has been re-engineered for low-noise, high-fidelity imaging. And, with the IMR option, Ingenuity offers industry-leading low-contrast resolution and virtually noise-free image quality. The fully upgradeable Ingenuity family allows for customisation now and the flexibility to grow with you.

Teamwork

Dr. Francis says, “I think we all feel that same in terms of the turnkey project, which went very, very smoothly. It came in on time and came in on budget, which obviously everyone likes! When questions were raised they were answered. The project management was done very, very well throughout, with minimal disturbance to the department. Subsequently, applications worked well. We’ve gone through some changes, including a few last-minute changes, to the way that we are doing our acquisition, again, looking at workflow and I think it is the responsiveness that I have been impressed with. I have been impressed with the way the team responded to our needs.”

Helen Joy says, “It has been very positive. The Applications Specialist from Philips was here and we had a very busy first week when there was a lot of stuff happening and obviously with a brand new service and new machine it was very full on. We were so busy that we didn’t necessarily feel we were quire ready to be cut loose and the Applications Specialist stayed on until we felt more comfortable. In addition, help was always there at the end of an email or the phone if we needed something.”

Shown here, left to right, standing: Dr. Ian Francis, Consultant Radiologist; Derren Whitworth Project Manager and Barry Heathcote, Imaging Systems Account Manager, both of Philips UKI; Sheila Black, former Radiology Services Manager, StJohn Brown, Chairman, League of Friends; Steve Jenkins, Chief Executive, Queen Victoria Hospital; Gary Needle, Non-Executive Director, Queen Victoria Hospital, (standing in front of Steve Jenkins), and Linda Skinner from the League of Friends. Seated in front on the left is Helen Joy, CT Superintendent Radiographer and on the right, Hannah Timbrell, CT Business Marketing Manager, Philips UKI

New Features

iPatient for scan-to-scan consistency

Philips iPatient is an advanced platform that puts you in control of enhancing your CT system today, while getting you ready for the challenges of tomorrow. This allows you to plan the results, not the acquisition. It also gives confidence and consistency 24/7.

iDose4 Premium Package with reduced artefacts

iDose4 improves image quality* through artefact prevention and increased spatial resolution at low dose. O-MAR reduces artefacts caused by large orthopaedic implants; together they product high image quality with reduced artefacts.

IMR industry-leading low-contrast resolution

With Philips’ IMR you can simultaneously achieve sixty to eighty percent improved low-contrast detectability and seventy to eighty percent noise.** IMR gives you confidence through enhanced visualisation of fine details.

NanoPanel Elite detector technology reduces image noise at low energy and low dose

The NanoPanel Elite detector uses direct integration technology to reduce image noise at low energy and low dose. Its miniaturisation and integration capabilities provide a low-noise, high-fidelity signal which results in a marked image-noise improvement.

Improved Capacity

Dr. Francis says, “Because the workflow is efficient, the acquisition is efficient, and we therefore have got capacity in the system to do more work. Just doing more of what we currently do is good. We have already been approached by two of the other providers that we used to send work to, asking if we could undertake some of their work. There is an opportunity for us to play into the wider health economy. I think having an efficient system is the biggest gain and how we can use this particular scanner to feed into the requirements of a population rather than just our requirements.”

Helen Joy says,”We definitely have got a lot of capacity. We have plenty of space where we can fit in those scans from our hospitals that need our help. We have relied on them for a long while, so now it’s time for us to give back and return the favour. It really improves the patient experience and smoothes out their pathway and hopefully prevents backlogging as well. Over time, what we will do is identify how we can set-up the service to make it what the hospital needs. We want to make it the best we can to really support our patients and the needs of the hospital. And I think there is a lot of capacity and potential for that. Alongside the pathways, our patients will obviously have a better experience and we will have capacity for fit-ins for those patients who have arrived and it is suddenly decided at the clinic that they need a scan.”

“I think Philips was the only one that brought something different to the table”

“Amazing benefits, we have just raised our profile in radiology so much by having CT on site.”

“Everyone is really pleased with how the service is running so far.”

“It’s all been very positive!”

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The Philips Centre,
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*Improved image quality as defined by improvements in spatial resolution and/or noise reduction as measured in phantom studies

**In clinical practice, the use of IMR may reduce CT patient dose; depending on the clinical task, patient size, anatomical location, and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task. Low-contrast detectability and noise were assessed using Reference Factory Protocol comparing IMR to FBP; measured on 0.8 mm slices, tested on the MITA CT IQ Phantom (CCT183, The Phantom Laboratory), using human observers