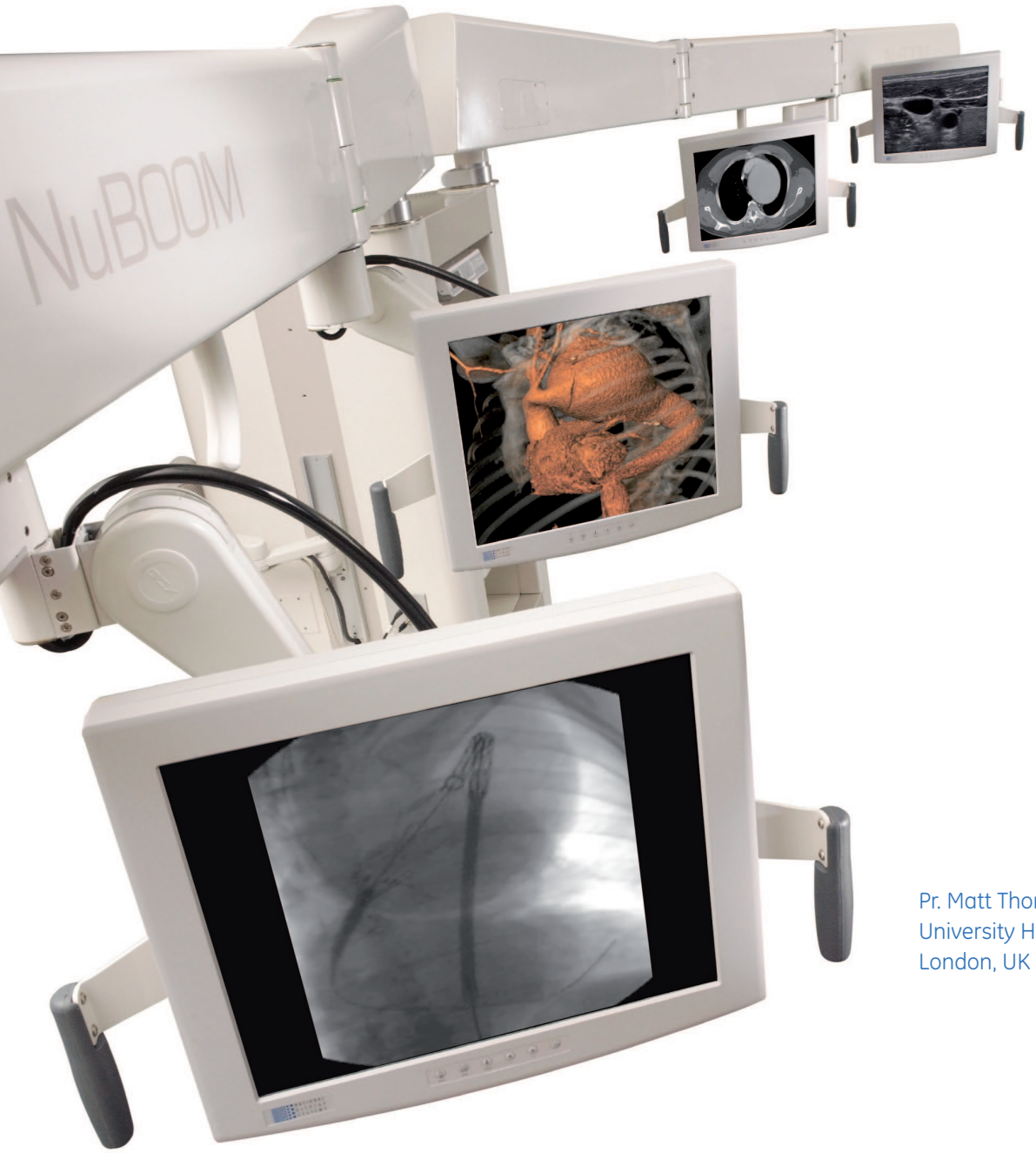
GE Healthcare

NuBOOM

Optimizing complex endovascular procedures in an integrated operating room.



Pr. Matt Thompson
University Hospital St George's
London, UK

Sleek.
Simple.
Smart.
Surgical solution.

Customize how you see your procedures. A fully articulating monitor docking system together with a specially designed integration software package. The future in operating room management and integration.

St George's is a large university teaching hospital in the southwest of London, serving a population of around four million people.
The hospital has over nine hundred beds, making it one of the countries principal teaching hospitals.
St George's provides services for many specialties including vascular surgery, cardiac surgery, neurosurgery and renal transplantation.

Professor Matt Thompson is the Professor of Vascular Surgery at St Georges Vascular Institute (SGVI).

His clinical interests are in the treatment of complex aortic disease and minimally invasive vascular surgery in which the SGVI has an international reputation. Research interests include health service outcome research, clinical trials and translational investigations into aortic disease. Professor Thompson is the editor of the Oxford Textbook of Vascular Surgery. He is the Secretary of the British Society for Endovascular Therapy and a Council Member of the Vascular Society.

GE imaging systems bring flexibility to OR facilities at St George's Vascular Institute

There is a growing trend towards minimally invasive endovascular aortic repair (EVAR), reflecting the clinical and cost benefits this technique brings. St George's Vascular Institute already carries out around 240 endovascular aortic procedures a year, and has recently installed a full GE OR suite solution combining articulating monitor docking system, an OEC* 9900 Elite MD motorized C-arm system and a Stille ImagiQ™ table into a vascular operating theatre to increase the flexibility of its facilities for aortic endovascular procedures. Matt Thompson, Professor of Vascular Surgery at St George's, describes the new set-up and discusses his initial impressions of this flexible approach to configuring operating rooms.

St George's is a large, busy university teaching hospital in the southwest of London with approximately a thousand beds, serving a population of around 1.3 million locally, plus an additional 3.5 million patients referred from the surrounding area. St George's Vascular Institute has an international reputation in the treatment of complex aortic disease, and has a special interest in minimally invasive procedures, especially endovascular procedures of the aorta.

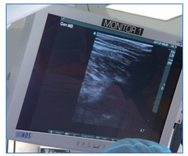
"The NuBOOM has integrated well into our existing theatre structure..."

"A flexible imaging solution allows the room to be completely reconfigured for open surgery or endovascular techniques."

"It is absolutely crucial to have more than one monitor so that every member of the team is able to look at the angiographic and ultrasound images simultaneously..."

There is no need to make structural changes because of the system's floor-mounted design. Retrofit your operating room in two days: eliminating downtime while still allowing for future improvements and expansions.

The software behind the touch screen interface allows surgeons and operating staff to view information and route images from various inputs on up to six system monitors as well as direct images to external archiving systems and printers.



The tower provides equipment storage to remove clutter and to get cables and carts off the crowded operating room floor — freeing up valuable space. The two articulating arms are easily maneuvered in and out of the surgical field as needed.

This medical imaging communication solution can be adapted for each procedure and for each surgeon and operating team, providing a customizable field-of-view for a comfortable surgical environment.

The decision was made to upgrade the imaging facilities of the vascular department's operating theatre. Changing to a flexible imaging management system and replacing an existing OEC 9800 system with an OEC 9900 Elite MD motorized C-arm would allow the room to be configured for open surgery or endovascular techniques. This also presented an ideal opportunity to improve monitoring options, giving surgeons the ability to integrate other imaging modalities, such as ultrasound and endoscopic images.

The complex endovascular procedures that are now undertaken at St George's often require two or more surgeons operating at the same time, not only on each side of the patient, but also using femoral and brachial access. It is absolutely crucial to have more than one monitor so that every member of the team is able to look at the angiographic images simultaneously to plan the progression through each case.

An imaging management system is ideal for this and the compact NuBOOM system has integrated well into the existing theatre structure at St George's, providing four screens. Importantly, theatre, anaesthetic and surgical staff were involved in defining the configuration of the system at installation, so that the pillar and screens were optimally positioned to give access to information to any member of the team.

One of the main advantages of the NuBOOM system is the extra space it provides; accessories for the C-arm can be placed on the system, removing clutter from around the operating table, and the monitors are suspended above, making it much easier and more comfortable for colleagues to follow the procedure.

The NuBOOM can relay different sources of video input to each of the monitors at the same time. The system is very flexible and monitors may be set up, with full or split screens. The usual preference at St George's is to have ultrasound images at the start of the procedure on two monitors and angiographic images on the other two. Midway through an endovascular procedure, there will generally be angiographic images with or without the CT on all four monitors.

St George's carries out a large number of complex endografts that require different projections and magnifications throughout the procedure. "Using the OEC 9900 Elite MD motorized C-arm, the surgeons can move both the arm and imagiQ table themselves, which has led to decreased operating times and also a slight reduction in radiation doses."

The ability to modify the imaging according to requirements by using the surgeon-controlled panel is essential. Regard to magnification, the surgeon can ensure that the low-dose function is on for the vast majority of the time and can also reduce dose using collimation features.

The OEC OR suite solution has now been operational at St George's for a year, and is used five days a week for the majority of the department's aortic endovascular procedures. This flexible mobile system has proven to be an excellent solution for performing endovascular procedures within an existing operating theatre.

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About GE Healthcare

GE Healthcare provides transformational medical technologies and services that are shaping a new age of patient care. Our broad expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, drug discovery, biopharmaceutical manufacturing technologies, performance improvement and performance solutions services help our customers to deliver better care to more people around the world at a lower cost. In addition, we partner with healthcare leaders, striving to leverage the global policy change necessary to implement a successful shift to sustainable healthcare systems.
Our “healthymagination” vision for the future invites the world to join us on our journey as we continuously develop innovations focused on reducing costs, increasing access and improving quality around the world. Headquartered in the United Kingdom, GE Healthcare is a unit of General Electric Company (NYSE: GE). Worldwide, GE Healthcare employees are committed to serving healthcare professionals and their patients in more than 100 countries. For more information about GE Healthcare, visit our website at www.gehealthcare.com.

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GE imagination at work