Zeego pictures courtesy Geelong Independent

Robotic Zeego extends treatment options at Barwon Medical Imaging

SPECTRUM REPORT.

A Siemens Artis Zeego multi-axis system for interventional radiology commissioned in February this year at Barwon Medical Imaging (BMI) in Geelong Hospital is the first to be installed in Victoria and one of five in the country.

Now in use in the hospital's interventional suite, it replaced a conventional 10-year-old Toshiba angiographic C Arm machine that had reached the end of its working life.

The Artis Zeego is an impressive blend of state-of-the-art imaging quality and robotic positioning precision. Bruce MacDonald, Senior MIT says: "It can be positioned any way you want and controlled with far greater accuracy than a traditional floor or ceiling mounted system."

With its multiple axes, the machine enables complete head-to-toe coverage. Large volume cross-sectional images up to 47 cm diameter can be acquired. It features a variable isocentre, which allows the working height to be adjusted, thus reducing the fatigue associated with performing long procedures.

When not in use, it can be stowed in a variety of compact positions to give the clinical team clear access to the patient from the left and right sides and better access to the head for the anaesthetist. The monitor in BMI's system is mounted on a ceiling track and there's a smaller screen on the reverse so that staff in all points in the room can see the procedure as it progresses. In larger rooms, a pair of ceiling-hung monitors can be used.

In common with most parts of Australia, Geelong has its share of debilitating lifestyle-induced diseases including obesity and diabetes and this is reflected in the cases that are treated in the interventional suite.

"Limb salvage… treatment of leg and peripheral vascular disease is a major part of our week's work," says Vascular Radiologist Donald Robertson. Biliary and urological interventions come next, followed by first line treatment for gastro intestinal treatments and interventional oncology including embolisation of liver and renal tumours.

Transjugular Intrahepatic Portosystemic

Dr Donald Robertson

Shunt (TIPS) is a recently added capability for BMI made possible by the Artis Zeego. This treatment is used to treat portal hypertension and involves threading a needle through the jugular vein down to the liver where a shunt is created to connect the hepatic vein to the large portal vein, this is held open by a stent. The shunt lessens the pressure on the blood vessels in the intestine so that future internal bleeding is less likely to occur.

Donald Robertson said that hospital managements' acquisition brief to him and Bruce Harvey, Tutor MIT (AIR President), was to identify and recommend a radiology system that would future proof the hospital's interventional suite for the next five to 10 years.

He says: "There are ceiling mounted systems and other floor mounted systems that are capable of doing the job but all were coming towards the end of their 'model life' whereas the Artis Zeego is a the start of its cycle and will certainly be available for the required life span.

"Its principal asset is its flexibility, it allows us to do everything we need to do now and offers a possible path towards neurosurgery later."

Bruce Harvey adds: "This has been a great acquisition, we are able to treat more cases non-surgically; it's much easier to save limbs and extremities when you can see what's going on in great detail."

At present, the machine is in use Monday through Friday, treating five or more patients each day and is also used for out of hours trauma cases.

BMI, situated in the ground floor of the Geelong Hospital, has a staff compliment of 120 and operates a Siemens PET-CT, two MRI machines, two CT machines and has five ultrasound rooms.