

The Sydney Adventist Hospital

Launch of the

Dual Source CT Scanner

What it means for patients.

Doctors comments:

Dr Peter Illes, Interventional Cardiologist from the San says:

“As a cardiologist I need clear images of the heart and arteries to determine if I need to intervene and do a procedure that could prevent a heart attack or stroke or actually save a life. Previous CT scans were too slow to get accurate images of the moving heart. Patients had to undergo a far more invasive procedure to see if there was cardiac disease. We now get clearer images because this new technology scans faster than a beating heart – anyone whose doctor thinks they might be at risk can have a 9 second scan and find out if they need a life saving stent or a bypass.”

“Heart disease kills more people in Australia each year than car accidents and all the cancers combined – this new technology at the San Hospital means I’ll be able to save so many more lives. Cardiovascular disease caused 39% deaths in 2000 while coronary heart disease is the single largest cause of death in Australia each year. This new technology at the San Hospital means we will be able to identify people who despite showing no symptoms are at risk of heart attack.”

“One of the truly revolutionary benefits of this new technology is that the images are now so clear, for the first time, I can see early plaques in arteries which can be treated before causing heart attacks. It will help rule out disease so that expensive and invasive procedures can be avoided freeing us to divert our energies at the San Hospital to saving the lives of those other patients who the new technology now easily identifies do have cardiac disease.”

Dr Sebastian Heintze, Head of CT and MRI at the San says:

“This translates into me being able to provide my clinical colleagues with a highly accurate, non-invasive tool for the investigation of cardiovascular disease instead of or before embarking upon more invasive techniques such as catheter angiography. This is important as 5-10% of patients attending the SAN emergency department will present with chest pain usually requiring some investigation beyond clinical assessment.

In addition to acute chest pain assessment, we are now able to more accurately identify the extent of the “hardening of the arteries” in asymptomatic patients, particularly when they are clinically deemed to be at increased risk. This will allow their doctors to implement and tailor early preventative treatment”.

Dr Ross Walker, consultant Cardiologist says:

“ The biggest killer in society is cardiovascular disease. The major clinical manifestation is atherosclerotic coronary artery disease. Heart attack alone will kill around one quarter of the population.

Whether it be heart attack, angina or sudden cardiac death, the underlying factor in almost all cases is atherosclerosis. This is the progressive build up of fat, smooth muscle cells and inflammation tissue in the wall of the arterial system.

Atherosclerosis occurs in two major phases. The first is plaque growth – this occurs over decades from birth. The usual causes of a clinical event such as a heart attack or sudden death is sudden rupture or erosion of this established plaque and as we all know, this process is instantaneous.

When CT scanning of the coronaries was introduced into Australia in 1999, we were able to image the coronary arteries measuring coronary calcium with a 4 slice machine. The images were adequate and gave very good prognostic information about the amount and severity of coronary atherosclerosis.

The last seven years has seen rapid development in the technology which is why we are here today to celebrate this exciting advancement. A machine offering 128 slices per rotation now enables us to not only quantitatively view the first phase of atherosclerosis ie plaque growth by utilising calcium scoring and assessment of non calcific plaque but now the second phase – plaque rupture (which before was only possible using the well established technique of invasive coronary angiography) through the use of intravenous CT coronary angiography with the exciting addition of 3D imaging.

I see this new 128 slice CT scanner as a truly one stop shop for cardiology.

I would like to make the vital point that the best treatment for heart disease is not to get it in the first place ie prevention. This machine is a valuable tool for not only established heart disease, but also for the increasingly emphasised world of prevention.”