



# HEART MATTERS

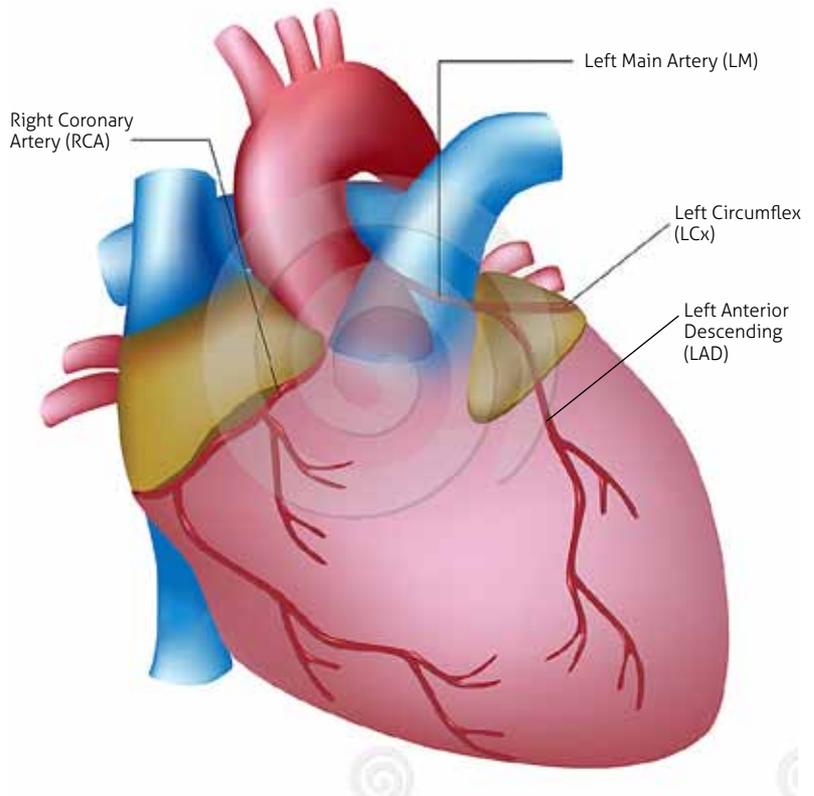
**OUR HEART IS A COMPLEX AND INTRICATE MACHINE** that affects vital functions in the body. It is the pump that drives blood to various parts of the body and sustains our life.

There are two main arteries supplying blood to the heart; the right coronary artery (RCA) and the Left Main (LM) artery. The Left Main is a short artery that measures from two to 23mm in length. It is further divided into two sub-arteries; the Left Anterior Descending (LAD) artery and the Left Circumflex (LCx) artery. The LM artery contributes about two third of the heart's blood supply while the RCA supplies the rest.

The Left Main Percutaneous Coronary intervention (PCI) procedure is the angioplasty of the left main artery. When a patient has significant blockage of the LM (approximately 50 percent), this procedure is carried out by a specialist to alleviate the condition. There is a 66 percent survival rate if a patient is diagnosed with 50 to 70 percent blockage of the LM. If the blockage or narrowing is more than 70 percent, the survival rate dropped to 40 percent. The PCI procedure is able to increase the survival rate up to 90 percent.

Heart bypass operation has been the conventional treatment for the past 10 years. There is a high risk for patients who have history of stroke and cognitive impairment. With technological advancements, the use of stent can now be carried out safely and yield greater results. In a recent study, PCI seems to be comparable to a normal bypass surgery.

As the LM is responsible for major supply of blood to the heart, any mishaps during the procedure is potentially life threatening. Furthermore, because the LM splits into the LAD and the LCx, stenting at junctions (bifurcation) can be challenging. This requires a surgeon with ample experience to select



the best stenting strategy as there are 10 different ways of treating bifurcation lesions.

The LM has a larger diameter and it is likely that the actual size may be underestimated. This can result in implanting a stent that is too small. To accurately assess the size of the artery, a small ultrasound probe has to be introduced into the artery. The interpretation of the ultrasound image is also dependent on the expertise of the specialist.

Dr. Tan Chong Hiok of Cardiac Specialist Centre has performed over 50 cases of PCI over the last five years. The success rate has been 100 percent. There are no record of complications necessitating emergency surgery, death or stroke. This shows the results are as good as bypass operations. Dr. Tan has also spent a year in Seoul, Korea in an institution which is a world leader in LM stenting. ■