

Successful implant of next-generation heart device marks Canadian first

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A surgical team at the Peter Munk Cardiac Centre led by internationally-acclaimed cardiovascular surgeon, Dr. Vivek Rao, has successfully implanted a novel mechanical device, the HeartMate III™, into a patient with advanced heart failure.

Performed on October 31, 2014, the surgery is part of a first-in-Canada clinical trial of the HeartMate III™ Left Ventricular Assist Device (LVAD), the most advanced technology currently available in [mechanical circulatory support](#).

"We are honoured to be the first and only site in Canada to take part in this clinical trial," says Dr. Rao, Chief of Cardiovascular Surgery at the Peter Munk Cardiac Centre, and a global expert in mechanical assist devices that support heart failure [patients](#) awaiting transplant. "The options for this patient were rapidly running out and given the increasingly weak state of his health, a transplant was simply not an option. Having this type of assist device available to support the pumping of blood to his heart was really this patient's only lifeline."

Known as a 'heart pump', the HeartMate III LVAD is implanted near the heart and is specifically designed to replicate the pumping action of a heart that is too fragile to pump on its own. The LVAD replaces the failing heart's left ventricle which circulates oxygen-rich blood throughout the body. The device is attached to the aorta and is able to pump up to 10 litres of blood per minute - the same amount as a healthy heart.

"End-stage [heart failure](#) affects tens of thousands of Canadians, millions more worldwide, and those numbers are expected to rise with only a limited number of donor hearts available when transplant is necessary," says Dr. Barry Rubin, Medical Director, Peter Munk Cardiac Centre. "As a global leader in cardiac care treating among the most seriously ill [heart](#) patients, we are fuelled by a strong commitment to assess new technologies and employ innovative therapies and techniques to improve both survival and the quality of life of our patients," he says.

Developed by Thoratec Corporation, the HeartMate III includes enhanced design features to enable less invasive surgical implantation, reduced blood trauma and better portability for patients with an active lifestyle.

Provided by University Health Network

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