

Great step **forward** for heart patients

New technique eliminates the need for open-heart surgery among the elderly, prolonging life and saving money for the medical system

Most 93-year-olds aren't good candidates for the rigours of open-heart surgery. But when such an elderly patient was presented to Dr. Albert Chan and his surgical partner in the cardiology department at Royal Columbian Hospital, Dr. Daniel Wong, they weren't prepared to let her go home to await death from the stenosis that prevented the aortic valve to her heart from opening and closing properly.

Elderly, high-risk patients who might not be able to withstand major heart surgery are now able to get a new lease on life with Transcatheter Aortic Valve Implantation, a minimally invasive procedure that allows doctors to replace a diseased valve using a long catheter tube inserted through an artery in the groin. Being the regional tertiary cardiac centre, Royal Columbian Hospital (RCH) is the only hospital in the Fraser Health Region that does the procedure, treating about four patients a month.

Did you know?

- RCH's Cardiac Centre is among the best in Canada. Show them your support by purchasing a heart tile for the Cardiac Wall of Gratitude. Visit rchcares.com for more information.

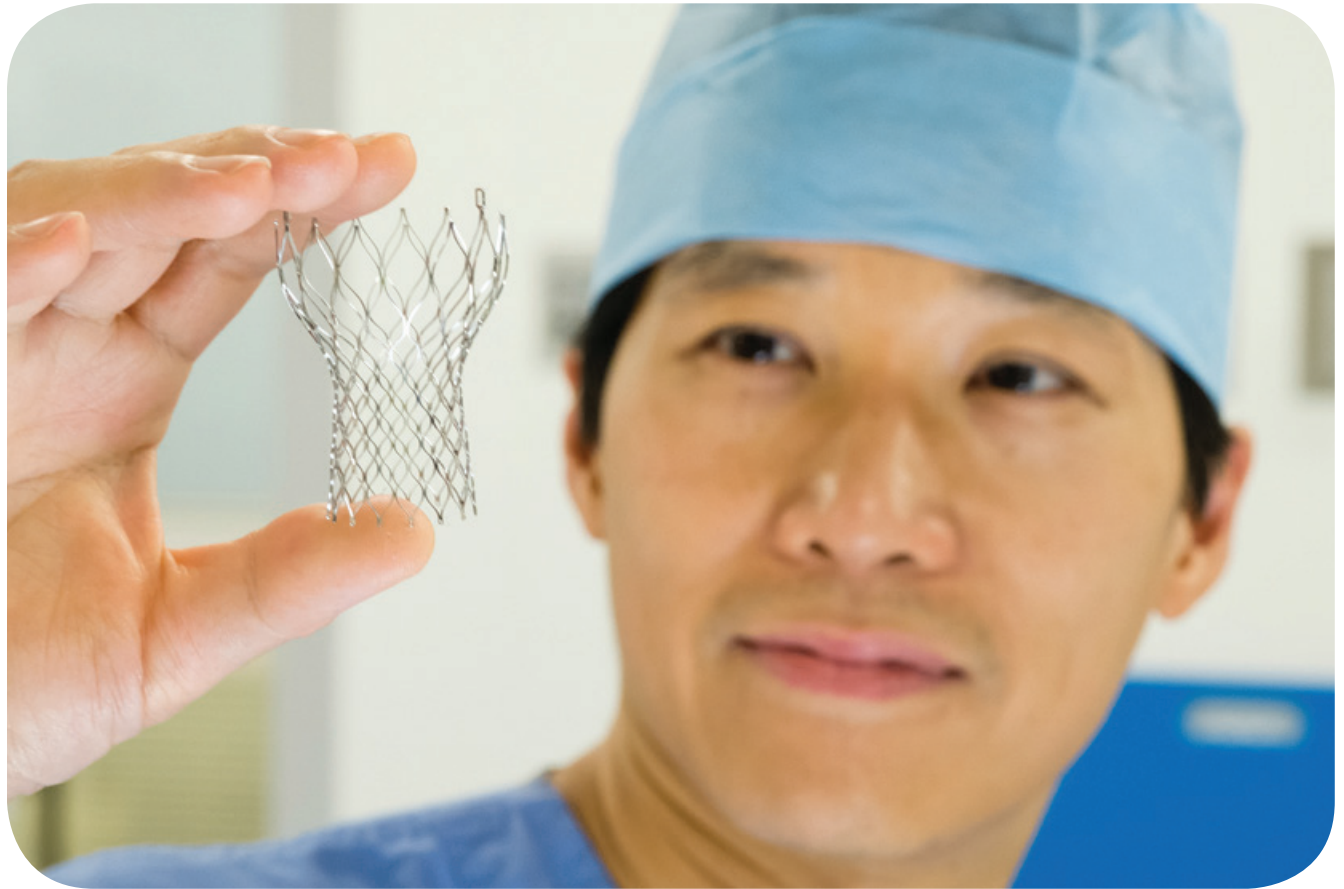
"It's much faster and easier for the patient," says Dr. Chan, who introduced the procedure at RCH in January 2012. "They recover much faster and there's less bleeding."

Developed about eight years ago and widely adopted by hospitals in Europe, use of the procedure in Canada is still largely limited to elderly patients who are at high risk for conventional surgery because it's so new and the longterm durability is still being established. Dr. Chan says RCH monitors all its patients who've gone through the procedure to establish longterm results. It is hoped that the new valve will last as long as the surgical valve, if not longer.

"In 10 years I expect the valve procedure will become a standard approach to treat degenerative aortic valve disease," he says.

That's good news for prospective patients with aortic stenosis, half of whom would otherwise be expected to die within a year of developing symptoms.

To save them, the team guides a six-mm catheter up through an artery to the patient's heart from an incision in the patient's groin. A new specially designed replacement valve that is attached to a flexible stainless steel mesh is then sent up the catheter where it is implanted over the existing



Dr. Albert Chan shows off a metal frame (shown here in fully expanded state) that acts as a self-expanding 'scaffold' for the natural tissue heart valve (obtained from the heart of a pig) to be put into place in replacement of the patient's diseased heart valve.



Dr. Daniel Wong tends to TAVI patient, Mr. Ronald Grimson at Royal Columbian Hospital.

valve in a beating heart. It starts working right away, and the patient can usually go home a few days after the 90-minute procedure.

This quick turnaround also eases the burden on the medical system, says Dr. Chan, adding, "When people recover faster, they can enjoy a better quality of life, lead more productive lives and the cost of hospitalization is markedly reduced."

While the procedure is also available at five hospitals around the province, Dr. Chan says being able to offer it to patients closer to their home, in the province's busiest cardiac program, is another benefit to the patients.

"For the elderly, traveling downtown is a big deal," says Dr. Chan. "It's better to have care closer to home, where everything is done under one roof."

That's something his 93-year old patient was thankful for, as she was able to walk out of the hospital three days after undergoing the procedure with complete recovery of her heart and valve functions.



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