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# Minimally invasive coronary arteries bypass grafting

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## Abstract

The invasiveness of coronary artery bypass grafting (CABG) surgery has not decreased since the operation was introduced over 40 years ago. Although the benefits of bilateral mammary artery use are well known, only 4 percent of CABG procedures utilize both mammary arteries. We have utilized two strategies to reduce the use of the sternotomy incision for multivessel coronary artery disease. The first is hybrid coronary revascularization (HCR) which combines a minimally invasive, sternal-sparing left internal mammary artery to left anterior descending coronary artery bypass (LIMA-LAD) with percutaneous coronary intervention (PCI) to non-LAD coronary lesions. We have utilized a robotic platform for mammary harvesting which facilitated the transition to a totally endoscopic (TECAB) approach for selected patients. The second is multivessel minimally invasive direct coronary artery bypass with utilization of bilateral mammary arteries and radial artery when appropriate. This approach has also been facilitated by the use of the Davinci Robot for bilateral mammary artery harvesting and the ability to reach the ascending aorta from the left thoracotomy for proximal anastomoses. We review our experience of the last 24 months with 182 patients and discuss how the procedures and the selection process have evolved during this time.

## Biography

Arthur T Martella graduated from Jefferson Medical College (Philadelphia, Pa) in 1989. He completed his general surgery training at Albert Einstein Medical Center in The Bronx, NY. He then went on to University of Rochester for his Cardiothoracic Surgical Training. He is currently the Chief of Cardiothoracic Surgery at Our Lady of Lourdes Medical Center and has interest in robotic coronary surgery and minimally invasive valve surgery.