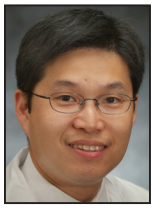
AHEAD OF THE CURVE

By Wilson Y. Szeto, MD



Early efforts in addressing endovascular solutions for the thoracic aorta focused on fundamentals learned from endovascular aneurism repair that included access, exclusion of the aneurysm, and durability. Through the evolution of thoacic endovascular aortic repair (TEVAR), physicians and industry have been focused on improving device deliverability and conformability, while reducing the risk of endoleak. The Relay®Plus thoracic stent-graft system (Bolton Medical) was a later entrant into the TEVAR market, but this system embodies features that will help us address the challenges we face when treating our patients with thoracic aneurysms. The precurved dual-sheath delivery system is designed for access vessel stabilization, accurate deployment in the arch, and optimal conformance of the stent-graft upon deployment. The device is available in multiple diameters, lengths, and tapers to allow for a patient-specific treatment plan. I am convinced that the flexibility of this graft has the potential to allow us to treat patients with arch curvatures who would not have been candidates for treatment in the past because their anatomy was too challenging.

In the following supplement to *Endovascular Today*, a group of esteemed endovascular aortic specialists have shared their experiences with the RelayPlus system, highlighting the many benefits of this technology. To begin, Grayson H. Wheatley III, MD, FACS, discusses the combination of anatomic and hemodynamic challenges in the distal aortic arch and how device selection is critical to optimizing repair outcomes. Antonio Polanco, MD; Kyle W. Eudailey, MD; Michael Borger, MD; and Isaac George, MD, focus on challenging access conditions, and how the RelayPlus stabilizes access vessels in order to prevent the excessive manipulation that can lead to rupture, dissection, or pseudoaneurysm. Venkatesh G. Ramaiah, MD, FACS, provides a challenging case in which the RelayPlus made it possible to navigate a type III aortic arch with severe tortuosity. Finally, Matthew Eagleton, MD, provides background and forward-looking insights on future developments in the Bolton family of stent-grafts.

RelayPlus has established itself as a workhorse device capable of treating patients with a wide range of thoracic anatomy. Bolton Medical continues to innovate with their next-generation RelayPro thoracic stent-graft system. This next-generation device builds upon the foundational technology of RelayPlus while reducing the profile of the delivery system. RelayPro has entered into pivotal trials in the United States with expected approvals in the coming years. ■

Wilson Y. Szeto, MD
Professor of Surgery
Chief, Cardiovascular Surgery
Penn Presbyterian
Surgical Director
Transcatheter Cardio Aortic Therapies
Associate Director
Thoracic Aortic Surgery
Division of Cardiovascular Surgery
University of Pennsylvania Medical Center
Philadelphia, Pennsylvania
wilson.szeto@uphs.upenn.edu
Disclosures: Clinical trial investigator for Bolton Medical, Gore & Associates, and Medtronic.