

Imaging Considerations in PCI and Update on Mitral and Tricuspid Valve Interventions

Evidence for the benefit of intraprocedural intravascular ultrasound (IVUS) in percutaneous coronary intervention (PCI) continues to mount. Another randomized controlled trial, in a near all-comer population, builds on previous observational and randomized trial data, highlighting the benefit of this technology. In this issue of *Cardiac Interventions Today*, we expand imaging beyond IVUS and explore novel up-and-coming technologies that are likely to make a significant impact in clinical practice.

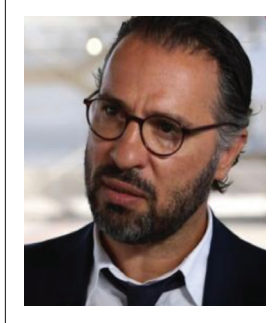
Kicking off our coverage of imaging for PCI, Kaneshka Masdjedi, MD, and Joost Daemen, MD, take a look at the advent of coronary angiography-based fractional flow reserve (FFR) and the results of initial validation studies. Evan Shlofmitz, DO, and Richard Shlofmitz, MD, then evaluate optical coherence tomographic imaging guidance and make the case for intravascular imaging-guided PCI being the new standard of care in everyday practice.

Despite the plethora of available noninvasive imaging modalities, none of the existing data have proved the superiority of any one modality. Omar Khaliq, MD, explores whether FFRCT is the holy grail of combined non-invasive coronary anatomic and physiologic evaluation.

We then shift our focus to an update on interventions for mitral and tricuspid valve regurgitation. This has been a rapidly expanding area of interest and innovation over the past few years, and one that we hope will offer better options to our patients with valvular disease. The intent of these articles is to bring readers up to speed on the various current and emerging technologies, techniques, and imaging modalities that are being applied to address these unique anatomic areas.

To begin our update on mitral and tricuspid valve interventions, Pavel Overtchouk, MD; Juan F. Granada, MD; and Dr. Modine consider if transcatheter mitral valve replacement is a better solution for mitral regurgitation than transcatheter repair techniques.

Osama Soliman, MD; Chun Chin Chang, MD; and Dr. Modine delve into the essential tips, challenges, and



future perspectives regarding echocardiographic imaging for transcatheter mitral and tricuspid therapies.

Michele Pighi, MD, and Nicolo Piazza, MD, then provide a presentation of multislice CT-derived fluoroscopic angulations to help guide practitioners when performing complex mitral and tricuspid valve repair and replacement procedures.

We conclude our coverage of catheter-based mitral and tricuspid interventions with a review of current leaflet, annular, and valve replacement device technologies by Abdellaziz Dahou, MD; Juan F. Granada, MD; and Rebecca T. Hahn, MD.

Elsewhere in this issue, Giulio Russo, MD; Maurizio Taramasso, MD; and Francesco Maisano, MD, deliver a step-by-step procedural guide on transseptal puncture, with a discussion on essential knowledge of interatrial septum anatomy, appropriate equipment, and proper technique.

Due to the lack of societal recognition of the interventional imaging field, physicians and trainees interested in pursuing a career in interventional imaging have little supporting documentation or guidance to justify their time spent on planning and leading these procedures. Edwin C. Ho, MD, engages established imagers Andrew D. Choi, MD; Jeffrey B. Geske, MD; Stephen H. Little, MD; and Dee Dee Wang, MD, in a roundtable interview on important issues in navigating a career in structural heart interventional imaging.

In our Coding & Reimbursement section, Keely Macmillan and Joel Sauer, MBA, review refinements to the Bundled Payment for Care Improvement program, as well as insights from enrolled groups and attributes of high-performing participants.

As the field of interventional cardiology expands, advancement in imaging will go hand-in-hand with advancements in technology. We are hopeful that this issue provides a glimpse into the future of that expansion. ■

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