

Lesion Assessment and Interventional Heart Failure



This issue of *Cardiac Interventions Today* has two areas of focus—the assessment of coronary lesions to predict future cardiovascular events and the interventional management of heart

failure. Several recent studies have examined the similarities and differences in coronary stenosis/plaque characteristics in chronic and acute coronary syndromes. We therefore explore the use of three different modalities to predict risk on a per-lesion level: cardiac CT, near-infrared spectroscopy–intravascular ultrasound (NIRS-IVUS), and coronary physiology.

We begin with Venkat S. Manubolu, MD, and Matthew J. Budoff, MD, who provide an overview of the current data and applications when it comes to the role of coronary CT in determining lesion-specific ischemia and coronary plaque vulnerability.

Next, Selcuk Kucukseymen, MD; Francesca Ciatti, MD; Niccolò Ciardetti, MD; Alessio Mattesini, MD; and Carlo Di Mario, MD, provide an update on the fundamental aspects and current clinical roles of NIRS-IVUS.

We end our lesion assessment coverage with an update on coronary physiology by Nicola Ryan, MD, who details pressure wire–based assessment of epicardial stenosis and the integration of multimodal assessment to assess the prognostic implications of epicardial coronary plaque.

Moving on to interventional heart failure, although recent advances in management and treatment of patients with heart failure improved the existing stan-

dard of care, their clinical outcomes and quality of life remain inadequate and associated with increasing health care burden.

Simone Fezzi, MD; Mattia Lunardi, MD; and Faisal Sharif, MD, provide an update on the currently available technologies for implantable sensors for hemodynamic monitoring, their mechanism of action, advantages and pitfalls, and supporting clinical evidence.

Next, Felix Gotzinger, MD; Lucas Lauder, MD; and Felix Mahfoud, MD, take us through a summary of the pathophysiologic rationale and the latest clinical evidence for the role of interventional neuromodulating therapies in treating heart failure.

Our Today's Practice article by Joel Sauer, MBA, explores how the pandemic exacerbated already-challenging cath lab staffing and reviews the current state of cardiology services across the country, the effects of staffing constrictions, and what programs can do about it.

We end this issue with an interview with J. Dawn Abbott, MD, who shares her leadership goals and values, insights into the National Cardiovascular Data Registry CathPCI registry, research needs for percutaneous coronary intervention, and more.

We hope that you find the content in this issue to be of value. As always, please let us know of any feedback or suggestions that you want to pass along. ■

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