Drug-eluting stents (DES) have provided patients with reduced restenosis rates and steadily improved platforms. Stent thrombosis rates after percutaneous coronary intervention have also improved. There remains room for further improvement in these devices, so DES platforms are being enhanced to further improve patient outcomes. In this issue, we review new stent platforms, drug-eluting balloons, and next-generation stents.

Our line-up includes Dean J. Kereiakes, MD, FACC, who presents an overview of the DES that are currently in the pipeline and the trial data that are moving them closer to approval in the United States.

Barbara Huibregtse, DVM, and Juan F. Granada, MD, provide insight into how novel metal alloys are improving the overall technical capabilities of DES, including deliverability, strength, visibility, and conformability.

Raffaella Marzullo, MD; Alessandro Aprile, MD; Giuseppe Biondi-Zoccai, MD; Luigi Politi, MD; Chiara Leuzzi, MD; and Giuseppe M. Sangiorgi, MD, FESC, FSCAI, explore the new developments in drug-eluting balloon technology. The term drug-eluting balloon is commonplace in Europe, but for many, the preferred term in the United States is drug-coated balloon. We invited this review to give our United States readers an understanding of the experience in Europe.

The mechanisms involved in DES in-stent restenosis (ISR) can be biological, mechanical, or technical, but once ISR occurs, where do we go from there? Vineet Bhatia, MD, DM, DNB, MNAMS, and Upendra Kaul, MD, DM, FCSI, FSCAI, FACC, FAMS, explain the factors that perpetuate DES ISR, as well as the various treatment modalities available and the situations in which it is appropriate to use them.

Ashwani Sastry, MD, and Mitchell W. Krucoff, MD, FACC, FSCAI, FAHA, report on whether different DES designs, including varying elements of platform, polymer, and drug, are leading to improved safety and efficacy as demonstrated in clinical trials.

This month, our Ask the OCT Imaging Expert article by Sammy Elmariah, MD, MPH, and Ik-Kyung Jang, MD, PhD, focuses on the use of optical coherence tomography for imaging intravascular thrombus. Also, we have a Today’s Practice interview with Mark A. Turco, MD, FACC, in which he discusses the current DES market and the ways that it could potentially affect hospitals, patients, industry, and health care in the United States.

In our FDA Insights department, Martyn Thomas, MD, FRCP, shares his perspective as a European physician who attended the US Food and Drug Administration Circulatory System Devices Panel meeting, which reviewed the evidence for the Edwards Sapien transcatheter heart valve (Edwards Lifesciences, Irvine, CA) for transcatheter aortic valve implantation. Further commentary on the meeting is provided by United States physicians Jeffrey S. Borer, MD; Issam D. Moussa, MD; Christopher J. White, MD, FSCAI, FACC, FAHA, FESC; and Jason H. Rogers, MD, FACC, FSCAI.

Finally, Frederick St. Goar, MD, discusses the latest trial data regarding mitral regurgitation, the new mitral valve devices that are on the horizon, and much more in our featured interview this month.

As always, we hope to synthesize the large body of new information coming across our desks with every week’s new deluge of journals. Our field continues to rapidly develop, and we hope that these reviews make it possible for you to keep up.