

Speaker's Biosketch

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Kwan Yong Lee (The Catholic University of Korea, Republic of Korea)

Kwan Yong Lee studied medicine at the Catholic University of Korea. He graduated in February 2009. He completed 4 years of residency and 2 years of fellowship training at Seoul St. Mary's Hospital, Seoul, Korea. Dr. Lee worked as a clinical assistant professor at Incheon St. Mary's Hospital from 2017 to 2020. Since 2021, he has been working as an assistant professor at Seoul St. Mary's Hospital, Seoul, Korea. As an interventional cardiologist, his main interests in the clinical field are coronary intervention using intravascular imaging and physiology. In the research field, his group is investigating hemodynamic factors calculated by CFD (computational fluid dynamics) using medical image-based patient-specific 3D geometries (coronary artery, aortic valve, structural heart disease) with a special focus on the role of rapid plaque progression or thrombus formation and how this can be exploited for the treatment of cardiovascular disease. His recent research interests in the field of valve disease are the identification of hemodynamic causes of leaflet thrombosis after TAVI and the development of therapeutic agents for aortic valve stenosis. In the basic research field, His interest is to reveal the relationship between the cellular mechanism of myocardial infarction and to develop biological therapeutics (e.g., targeting TREM2 macrophage, TDCs). His research team specializes in making and experimenting with small animal myocardial infarction models. His research portfolio features over 70 publications in prestigious journals like Diabetes Care, and he has contributed as a co-author to journals such as the Lancet and the New England Journal of Medicine. He is an Editor of the Korean Circulation Journal and an academic director of the Biomedical Engineering Society for Circulation.