**NEXT GENERATION INTRAVASCULAR COMPOSITIONAL IMAGING ASSESSMENT OF THE HIGH-RISK PLAQUE**

**J.W. Kim**

Korea University Guro Hospital, Seoul, Republic of Korea

There is a growing interest for the assessment of the high-risk plaque and stent behavior in the field of coronary intervention. High resolution OCT provides a valuable information regarding thin-cap fibroatheroma and optimal apposition of the stent in coronary artery including strut integrity, and endothelial coverage. Considering plaque inflammation remains a major concern causing fatal thrombotic complications, the imaging of molecular pathways such as macrophage activity and fibrin deposition in the plaque could have important applications. To address this unmet need, we advanced novel technology, a fully integrated dual-modal OCT-molecular imaging with near-infrared fluorescence, which offers new avenue for estimating vulnerable plaque and developing pharmacotherapies to attenuate inflammation. Moreover, color-coded 3 dimensional volume rendering with a flythrough imaging of the OCT-NIRF could be utilizable for the comprehensive assessment for the coronary high risk plaque.