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## The efficacy of 3D quantitative coronary angiography

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**Background:** More accurate characterization of coronary artery lesions is needed for evaluation of short and long term interventions in coronary disease. Recently, a method of coronary artery analysis has been done by quantitative coronary artery (QCA) and intravascular ultra sound imaging (IVUS). But three-dimensional (3D) QCA provides more accurate measurements by minimizing inherent limitations of two-dimensional (2D) QCA and IVUS. The aim of this study was to compare the measurements of stent length between 2D QCA, IVUS and 3D QCA.

**Methods:** A total of 50 patients with 55 coronary artery lesions were analyzed using QCA software (TOSHIBA CV-3D plus system). All cases were analyzed in matched projections between pre- and post-procedure. The 2D analysis was performed using one of two angiographic images used for 3D and IVUS was used as an auto pull back system to measure the length of target lesions.

**Result & Discussion:** The result of implanted stent length was shorter if 2D QCA was used using IVUS and 3D QCA. There were no differences between IVUS and 3D QCA. The 2D analysis was usually performed only on one image, so this reduces the accuracy of lesion length measurements compared to 3D QCA and IVUS.

**Conclusion:** For the accuracy of evaluating the length of lesions, 3D QCA was used as well as IVUS. In other words, when IVUS is not available or contraindicated, 3D QCA may assist the determination of the stent length to the target lesion.

### Biography

Taisuke Nakade graduated from Saitama Medical University at 24 years of age. After 4 years of study at University, now he is working at Kumamoto Chuo Hospital. He is specialized in cardiology, especially catheter intervention. Besides working in the clinic, he is also doing clinical research about cardiovascular disease.

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