

## **IVUS guided DCA**

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Why do we need IVUS for DCA?

For Safety...

DCA is an irreplaceable device to debulk tissue from coronary stenosis. On the other hand, DCA has more risk for coronary perforation than other non-debulking devices. For safety DCA, IVUS guidance is necessary.

For More Effective...

DCA is directional atherectomy tool, but how do we decide the correct direction and distribution of plaque burden? Angiogram can show only rough image of plaque distribution, however, IVUS show accurate plaque distribution. IVUS also detect the accurate amount, direction and distribution of residual plaque burden during DCA procedure, and we can debulk more tissue with IVUS guidance than Angiogram guidance.

How do we use IVUS during DCA?

Combine IVUS image and Angiogram

The cutting by DCA is actually performed with angiogram and fluoroscopy. Therefore, we have to combine IVUS image and angiogram image to know accurate direction and distribution of plaque burden on angiogram image. I will show the two potent methods (1:branch method and 2:catheter method) to combine the two images. The branch method uses the direction of branches to combine the two images. This method is useful especially for LAD lesion. The catheter method uses the position of IVUS catheter in lumen of coronary or lumen of guide catheter. This method is useful for the lesions without adequate side branch.

In this course...

I will show the basic concept of two potent method, branch guidance and catheter guidance, and some case of IVUS guided DCA procedure which include non-bended ostial LAD case, bended ostial LAD case, RCA case and LMCA case.