Case Summary. This LAD CTO has special septal collateral vessels, which rarely served as wiring route for retrograde approach. This way would make a large curve that attenuate support. It is innovative that even septal branch could be tried for LAD CTO, and could bring success.

When the microcatheter could not retrogradely enter guiding catheter for regular rendezvous technique, several ways could be tried, including externalization with RG-3, or 2 ipsilateral guiding catheters for anchor. The first way makes more expense of patient in Taiwan, and the second way needs 1 more puncture wound. Careful in-situ rendezvous technique (within coronary artery), like in this case, would limit expense and harm.

TCTAP C-078
Successful Recanalization of Long Severe Calcified RCA CTO Lesion Using Retrograde Approach in a Hemodialysis Patient
Yoshihide Fujimoto,¹ Norimasa Tonoike²
¹Chiba University Graduate School of Medicine, Japan;²Kimitsu Central Hospital, Japan

[CLINICAL INFORMATION]
Patient initials or identifier number. 00-8626-15
Relevant clinical history and physical exam. A man who had a history of old myocardial infarction, started to feel chest pain on effort since February 2014. After that, his symptoms were getting worse. Therefore, he visited outpatient clinic and received further examinations.
Relevant test results prior to catheterization. Coronary CT demonstrated RCA CTO and mid LAD 90% stenosis.

Relevant catheterization findings. CAG results
RCA proximal-distal CTO with severe calcification
LAD proximal 90% with calcification
**Procedural step.** After deployment of stent to the proximal LAD, antegrade procedure to the RCA CTO started. Any stiff wires did not penetrate the entry of the RCA CTO. However, knuckle wire of Fielder XT could advance in the body of the CTO. Because the tip of Fielder XT was not sure inside vessel at mid RCA, we switched to retrograde approach. Tip injection showed epicardial channel from LAD to distal RCA via apex. Only SUOH wire could advance the epicardial tortuous channel. Only Sort apa advanced to the end of the RCA CTO. Antegrade and Retrograde of the knuckled GaiaSecond could make large subintimal space. Retrograde FielderXT could pass the CTO body and entered the antegrade guiding catheter. Externalization was accomplished. However, any microcatheters did not advance at the CTO body in spite of anchor balloon technique. Fortunately antegrade SION black passed to AV branch. Four drug eluting stents were deployed to th eRCA. Final angiogram showed the good results.
Case Summary. If any stiff wires could not penetrate severe calcified chronic total occlusion lesions, knuckle wire technique would be a useful option to cross the severe calcified lesions. Especially, the knuckled Gaia Second has strong penetration force.

TCTAP C-079
The Utility of the Guideliner Catheter in Coronary Intervention of a Chronic Total Occlusion

Maoto Habara¹
Toyohashi Heart Center, Japan

[Clinical Information]
Patient initials or identifier number. Two cases (335312 and 331056)

Relevant clinical history and physical exam. Case 1: The patient was a 62-years-old male who was previously performed coronary intervention for RCA. He presented with increased exertional angina symptoms. His coronary risk factors were hypertension, diabetes and smoking.

Case 2: The patient was a 66-years-old male who has post coronary intervention for RCA and LAD. He also presented with increased exertional angina symptoms. His coronary risk factors were hypertension, diabetes and hyperlipidemia.

Relevant test results prior to catheterization. Case 1: The echocardiography showed moderate LV dysfunction (LVEF 41%) and moderate hypokinesis of inferior wall.

Case 2: The echocardiography showed moderate LV dysfunction (LVEF 47%) and anterior and inferior wall were moderate hypokinesis.

Relevant catheterization findings. Case 1: Right coronary angiogram showed in stent occlusion at mid portion. And the angiogram also showed aberrant right coronary artery. There was no significant stenosis in left coronary artery. The distal RCA was filled through the poor collateral channels from the LAD and LCX.

Case 2: Right coronary angiogram showed the total occlusion at distal portion of RCA. There was not significant stenosis in left coronary artery. The distal RCA was well filled through the collateral channels from LAD.

[Interventional Management]
Procedural step. Case 1: At first we tried to engage the AL1.0 guiding catheter for RCA. However, it was failed due to the anomaly of RCA. Although anchor balloon technique was performed, the engagement was not so good. Therefore, we inserted GuideLiner catheter and IVUS examination was performed. After reverse-CART technique with 3.5mm balloon, retro-grade wire could reach proximal site and passed into the GuideLiner. Wire externalization was easily completed because of GuideLiner catheter and the RCA was subsequently stented with a good final angiographic result.

Case 2: Initially, retro-grade approach was attempted and sign wire was successfully reached the distal part of RCA CTO lesion. After that ante-grade and retro-grade wires were advanced to the CTO lesion and reverse-CART technique was performed. However, it was failed. Although we tried passing the IVUS, it could not cross at proximal site of RCA. Therefore, we inserted GuideLiner catheter and IVUS examination was performed. After reverse-CART technique with 3.5mm balloon, retro-grade wire could reach proximal site and passed into the GuideLiner. Wire externalization was easily completed because of GuideLiner catheter and the RCA was subsequently stented with a good final angiographic result.

GuideLiner insertion
After IVUS, R-CART Capture technique with GuideLiner