

LINC  
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2015

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AsiaWorld-Expo  
Hong Kong International Airport  
Lantau Island, Hong Kong  
March 9 – 11, 2015



Guide to Live Case  
Transmissions



## **Guide to Live Case Transmissions**

*During LINC Asia-Pacific 2015 28 interventional and surgical live cases are scheduled to be performed and transmitted to the auditorium. The aim of this booklet is to give you an overview about the live case schedule and to provide a practical guide through the procedures.*

*We hope for your understanding that with respect to the clinical needs of the patients changes of the schedule may occur. Furthermore, the anticipated procedural steps are just an outline of the procedure. Depending on the discretion of the operator the procedural strategy or the choice of material may vary.*

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Monday,  
March 9, 2015

Case 01 – CGH 01: male, 64 years (J-N-C)

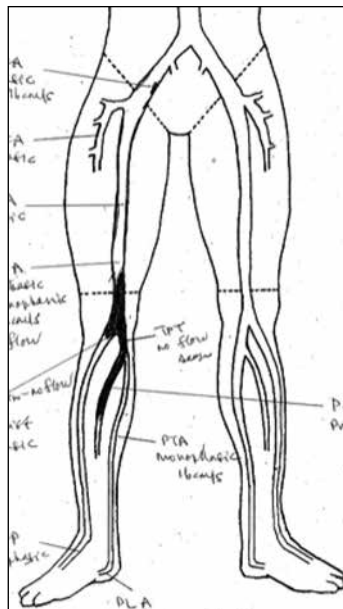
## Right popliteal occlusion

**Operators:** S. Kum, Tan Yih Kai, S. Bräunlich, T. Tang

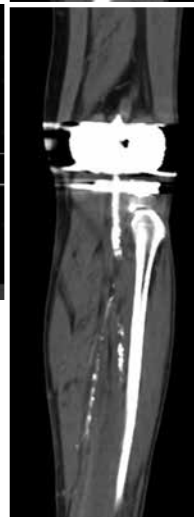
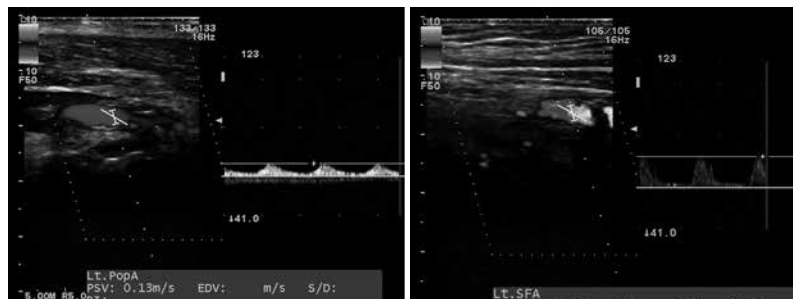
**Clinical data:** PAOD Rutherford 3  
Dm Hypertension Graves Disease  
AF EF 60% Cr normal

### Procedural steps

1. **Antegrade access via right groin**
  - 6F sheath (TERUMO)
2. **Passage of the lesion with hydrophilic wire**
  - 0.018" V-18 control wire, 300 cm (BOSTON SCIENTIFIC)
  - 4F Ber II catheter (CORDIS)
3. **Retrograde ATA access in event of antegrade failure**
  - 4F Micropuncture® Pedal Access Set (COOK)
  - 0.018" V-18 control wire, 300 cm (BOSTON SCIENTIFIC)
  - 2.6F CXI support catheter, 90 cm (COOK)
4. **Predilatation and lesion preparation**
  - 3.5 x 120 Chocolate balloon (QT VASCULAR)
5. **PTA with DEB**
  - In.Pact Pacific 4 or 5 x 120 mm DEB-balloon (MEDTRONIC)
6. **Stenting on indication**



Case 02 – TAO 01: female, 80 years (H-M-L)

**DEB for SFA/PopA stenosis****Operators:** I-Hao, Su ; Sung-Yu, Chu**Clinical data:** Rutherford 5, chronic minor wound at left big toe  
DM type 2, HTN, hepatitis C  
Bilateral PAD s/p right femoral-popliteal graft bypass  
s/p left knee replacement  
EF: 76%, Cr 0.79**CTA:** Skipped focal mild-severe stenosis in the LSFA  
Focal skipped mild stenosis in the P3 portion of LPopA  
Short CTO in the proximal LATA  
and skipped focal high grade stenosis**Duplex:** ABI: right 0.57, left 0.55  
Lt. distal CFA bifurcation mod stenosis;  
and lt. femoropopliteal difuse stenosis  
and multiple significant lesions;  
bil severe infrapopliteal diseased  
with multiple severe stenosis  
and segmental occluded lesions at bil ATA amd PTA**Procedural steps**

1. **Retrograde access (ultrasound guided puncture) via RCFA**
  - 5F Tempo Flush pigtail catheter (CORDIS)
  - 0.035" Radiofocus Terumo Angled Stiff guidewire (TERUMO)
  - 6F Balkin cross over sheath (COOK)
2. **Passage of the lesion with hydrophilic wire to TP**
  - 0.018" V18 control wire, 300 cm (BOSTON SCIENTIFIC)
3. **Predilatation and PTA with DEB for SFA/PopA**
  - Pacific Xtreme 4/40 (MEDTRONIC)
  - In-Pact Pacific DEB balloon 5/6 mm (MEDTRONIC)
4. **PTA for BTK**
  - 0.018" V18 control wire, 300 cm (BOSTON SCIENTIFIC)
  - Amphirion 2/2.5/3 (MEDTRONIC)

Case 03 – CGH 02: female, 65 years (R?)

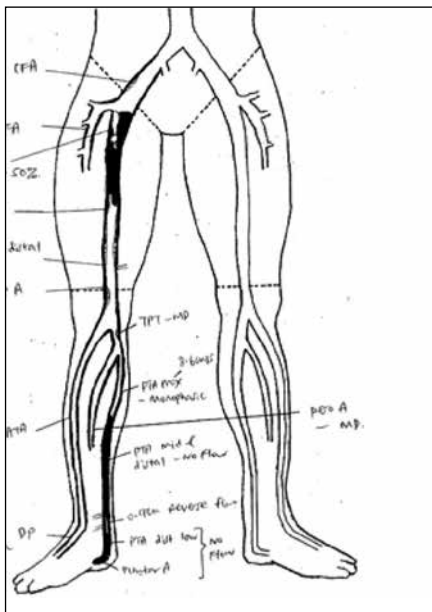
## Right SFA occlusion

**Operators:** S. Kum, Tan Yih Kai, S. Bräunlich

**Clinical data:** PAOD Rutherford 3  
Dm hypertension hyperlipidemia EF 60% Cr 140

**Procedural steps**

- 1. Contralateral cross-over access via left groin**
  - 0.035" Radiofocus Terumo angled soft guidewire, 260 cm (TERUMO)
  - 4F Ber II catheter (CORDIS)
  - 0.035" Supra Core guidewire, 300 cm (ABBOTT)
  - 6F 40 cm long Balkin sheath (COOK)
- 2. Passage of the lesion with hydrophilic wire and predilatation**
  - 0.018" V-18 Control Wire, 300 cm (BOSTON SCIENTIFIC)
  - 0.035" Radiofocus Terumo angled soft guidewire, 250 cm (TERUMO)
  - 4F Ber II catheter (CORDIS)
  - 0.018" Trailblazer support catheter (COVIDIEN)
- 3. Vessel preparation**
  - 4 or 5 x 120 mm 3.5 x 120 Chocolate balloon (QT VASCULAR)
- 4. Treatment with DEB**
  - In.Pact Pacific 5/6 x 120 mm DEB-balloon (MEDTRONIC)
- 5. Stenting on indication**
  - Spot-stenting with a COMPLETE SE stent (MEDTRONIC)



Case 04 – TAO 02: male, 85 years (T-H-Y)

## DEB for ISR in hemodialysis access

**Operators:** Su Ta-We, Chu Sung-Yu

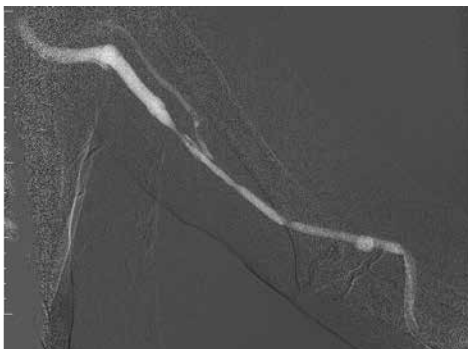
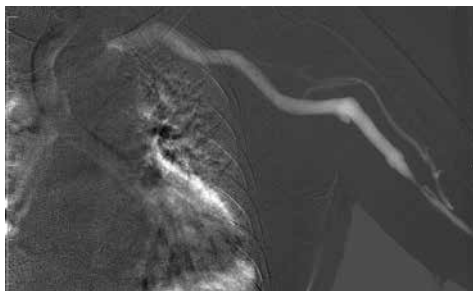
**Clinical data:** ESRD under regular hemodialysis, hearing impairment, EF 71%  
Left radio-graft-basilic fistula s/p Viabahn (6/150 mm)  
for venous anastomosis junction

**Risk factors:** Increased venous pressure during hemodialysis

**Venography:** Two skipped focal instent stenosis (about 30-50% stenosis)  
and short segmental 70% stenosis in the distal edge of Viabahn

### Procedural steps

1. **Antegrade puncture via proximal graft**
  - 6F sheath (TERUMO)
2. **Angiography to estimate lesions**
3. **PTA with DEB for instent restenosis**
  - InPact Admiral DEB balloon 6/120 mm (MEDTRONIC)



Case 05 – LEI 01: female, 60 years (C-K)

## High grade progressive stenosis right ICA

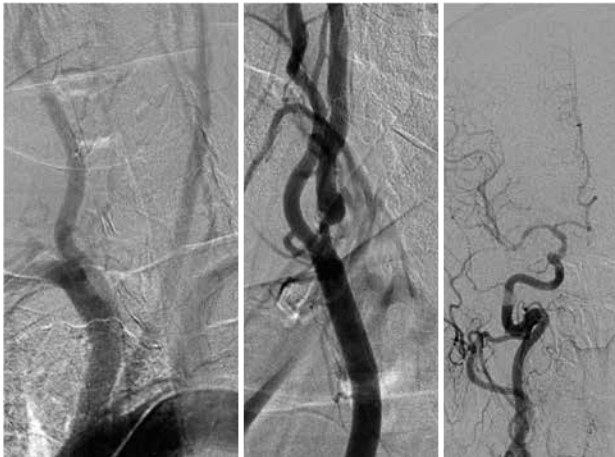
**Operators:** A. Schmidt, M. Ulrich

**Clinical data:** Progressive, asymptomatic stenosis right ICA  
PAOD, claudication both calves

**Risk-factors:** Art. hypertension, diabetes mellitus, former smoker

**Duplex:** 3.8m/sec.  
Cranial CT without pathological findings

**Angiography:** Calcified, 80% stenosis right ICA



### Procedural steps

- 1. 9F-sheath right groin**
  - 9F 25 cm (TERUMO)
- 2. Cannulation of the external carotid artery right**
  - 5F diagnostic Right Judkins catheter (CORDIS)
  - 0.035" angled soft guidewire (TERUMO)
- 3. Exchange to a stiff guidewire and positioning of the protection device**
  - 0.035" SupraCore 300 cm (ABBOTT)
  - 9F MOMA-system (MEDTRONIC)
  - Endovascular clamping of the external and common carotid artery
- 4. Cannulation of the stenosis and predilatation**
  - 0.014" Galeo Pro ES, 175 cm (BIOTRONIK)
  - 3.5/20 mm MiniTrek RX-balloon (ABBOTT)
- 5. Implantation of a stent and postdilatation**
  - Cristallo Ideale 7-10/30 mm (MEDTRONIC)
  - 5.0/20 mm Submarine Rapido balloon (MEDTRONIC)
- 6. Aspiration of potential debris and declamping**



Case 06 – LEI 02: male, 69 years (D-M)

## Occlusion mid SFA right

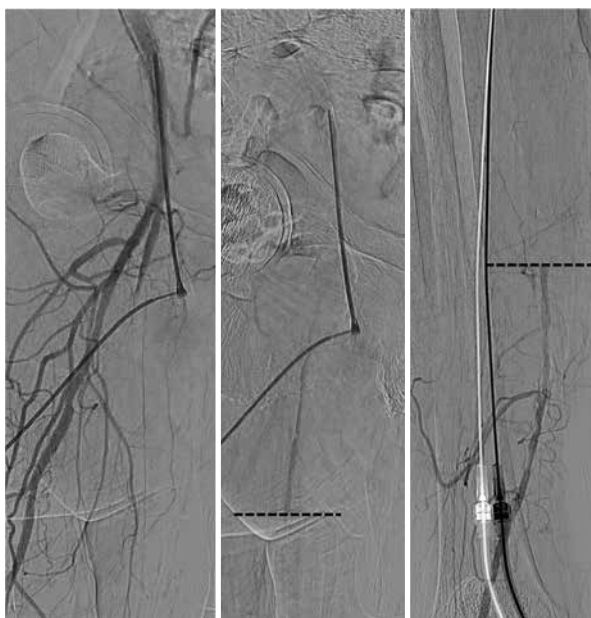
**Operators:** A. Schmidt, S. Steiner

**Clinical data:** Chronic ulcerations both calfs / feet  
PTA left SFA Feb. 2015  
CAD with PTCA 2010

**Risk factors:** Diabets mellitus, type 2  
Art. hypertension

**Angiography:** During PTA left leg: SFA-occlusion right

**ABI right:** Pressure not tolerated due to ulceration



### *Procedural steps*

1. **Access left groin and cross-over approach**
  - 5F IMA diagnostic catheter (CORDIS)
  - 0.035" angled soft guidewire (TERUMO)
2. **Passage of the occlusion right SFA and predilatation**
  - 0.018" Cruiser S 300 cm guidewire (BIOTRONIK)
  - 5.0/120 mm Passeo 18 balloon (BIOTRONIK)
3. **PTA with drug-releasing balloon**
  - Passeo-18 LUX 5/120 mm (BIOTRONIK)
4. **Stenting on indication**
  - Pulsar 18 selfexpanding stent (BIOTRONIK)

Case 07 – CGH 03: male, 83 years (C-S-L)

## Left SFA occlusion

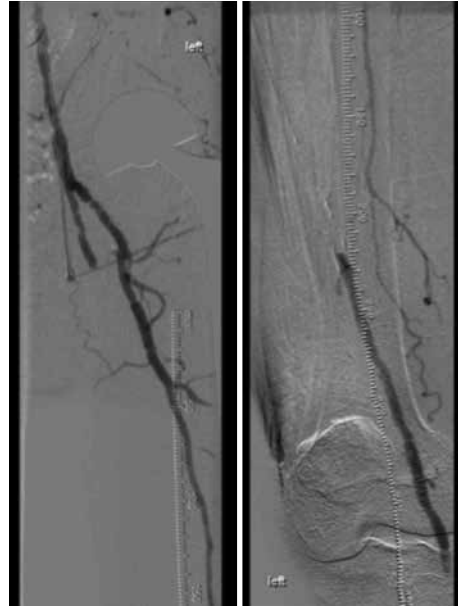
**Operators:** S. Bräunlich, S. Kum, T. Yih Kai

**Clinical data:** PAOD Rutherford 3  
COPD hypertension hyperlipidemia IHD EF 60% CKD Cr 200

**Present state:** Left hip replacement Ca prostate CO2 angiography done

### Procedural steps

- 1. Antegrade access via left groin**
  - 5F sheath (TERUMO)
  - CO2 angiography with Co2 angioset (OPTIMED)
- 2. Passage of the lesion with hydrophilic wire**
  - 0.018" V-18 control wire, 300 cm (BOSTON SCIENTIFIC)
  - 4F Ber II catheter (CORDIS)
- 3. Retrograde distal SFA access in event of antegrade failure**
  - Supine frog leg position
  - 0.018" V-18 control wire, 300 cm (BOSTON SCIENTIFIC)
  - 2.6F CXI support catheter, 90 cm (COOK)
- 4. Predilatation and lesion preparation**
  - Paseo 18 4/5 x 120 balloon (BIOTRONIK)
- 5. PTA with DEB**
  - Lux 5 x 120 mm DEB-balloon (BIOTRONIK)
- 6. Postdilatation and stenting on indication**
  - REEF 5 x 40 high pressure balloon (MEDTRONIC)
  - 4F Pulsar 18 stent (BIOTRONIK)



Case 08 – LEI 03: male, 62 years (W-T)

**Long, chronic SFA-occlusion right****Operators:** M. Ulrich, A. Schmidt**Clinical data:** Severe bilateral claudication intermittens  
Walking capacity 150 meters  
Failed recanalization attempt right SFA Feb. 2015  
CAD, PTCA 2012**Risk factors:** Diabetes mellitus type 2, art. hypertension,  
former smoker**Angiography:** bilateral long SFA-occlusions**ABI:** Right 0.54; left 0.60**Procedural steps****1. Access left groin and cross-over access**

- 5F IMA-catheter (CORDIS)
- 0.035" SupraCore guidewire 200 cm (ABBOTT)
- 6F 40 cm Balkin Up&Over sheath (COOK)

**2. Passage of the occlusion**

Second antegrade attempt:

- 0.035" CXI Support-Catheter 135 cm (COOK)
- 0.035" stiff angled guidewire, 300 cm (TERUMO)

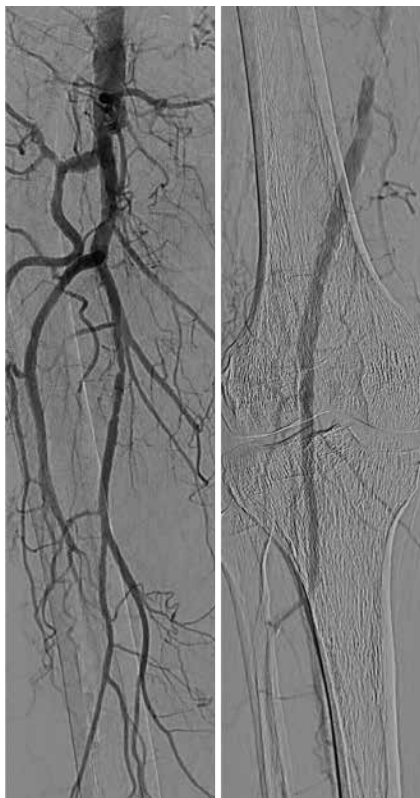
In case of failure to pass from antegrade:

**3. Retrograde puncture of the distal SFA**

- 21 Gauge 9 cm puncture-needle (COOK)
- 0.018" V-18 Control guidewire 300 cm (BOSTON SCIENTIFIC)
- 0.018" CXI support catheter 90 cm (COOK)
- Snaring of the retrograde guidewire from above

**4. PTA and stenting**

- 5/100 Advance 18 balloon (COOK)
- Zilver-PTX drug-eluting stent (COOK)



Case 09 – LEI 04: female, 78 years (T-T)

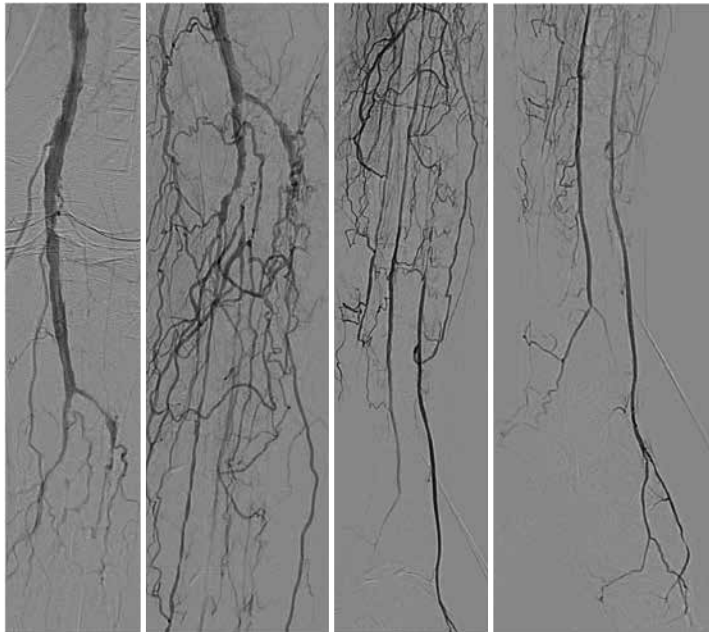
## Occlusion of all BTK-arteries left

**Operators:** A. Schmidt, J. Schuster

**Clinical data:** Restpain left foot, Rutherford class 4  
PTA / stent left SFA 2011,  
PTA of a restenosis left SFA Feb 2015,  
Failure to recanalize the ATA from antegrade Feb 2015  
CAD with CABG and PTCA 1999

**Risk factors:** Diabetes mellitus type 2  
Art. hypertension

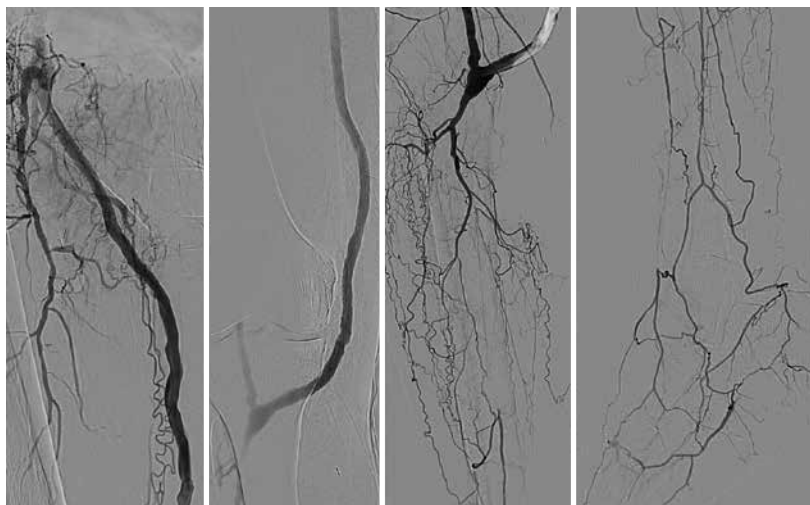
**ABI:** Left 0.4



### **Procedural steps**

- 1. Antegrade access left groin**
  - 5F 55 cm Ansel sheath (COOK)
- 2. Retrograde approach via the distal ATA**
  - Micro-puncture set (COOK)
    - 3F micropuncture sheath
    - 4 cm 21 Gauge needle
  - 0.018" Connect guidewire 300 cm (ABBOTT)
- 3. Retrograde guidewire passage and PTA**
  - 0.014" Hydro-ST guidewire 300 cm (COOK)
  - 2.5/120 mm Advance Micro balloon, 90 cm (COOK)

Case 10 – LEI 05: male, 71 years (D-F)

**Total occlusion all BTK-arteries right, CLI****Operators:** A. Schmidt, M. Ulrich**Clinical data:** Restpain right foot,  
Bypass fem-pop nd PTA iliac arteries right 1/2014  
Failed recanalization attempt BTK right Feb 2015  
Chronic venous insufficiency**Risk factors:** Diabetes mellitus type 2  
Art. hypertension**Angiography:** During recanalization attempt right Feb. 2015:  
Bypass patent, all 3 BTK-arteries occluded**Procedural steps**

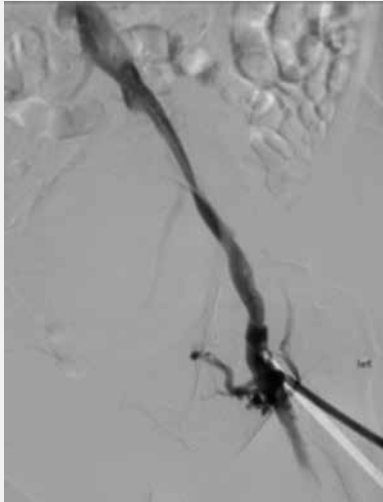
1. **Antegrade access right**
  - 5F 55 cm Ansel-sheath (COOK)
2. **Retrograde access via the distal peroneal artery**
  - 7 cm 21 Gauge needle (COOK)
  - 0.018" Connect guidewire 300 cm (ABBOTT)
  - 0.018" Seeker-support catheter 90 cm (BARD)
3. **Snaring of the retrograde guidewire from antegrade and antegrade PTA**
  - 2.0 120 mm Pacific balloon (MEDTRONIC)
  - 3.0/150 Lutonix DCB (BARD)

Case 11 – CGH 04: female (R)

## May Thurner syndrome

**Operators:** T. Yih Kai, S. Kum, S. Bräunlich, T. Tang

**Clinical data:** Left leg swelling previous DVT right Ca Breast  
CT venogram done  
Diagnostic angio and IVUS done



**Procedural steps**

1. **General anaesthesia**
2. **Left mid SFV access under ultrasound**
  - 5F sheath (TERUMO)
  - 12F Peel-away Safe-sheath (ANGIODYNAMICS)
3. **Passage of the lesion with hydrophilic wire and stiff wire**
  - 0.035" Radiofocus angled soft guidewire, 260 cm (TERUMO)
  - 4F Ber II catheter (CORDIS)
  - 0.035" Supra Core guidewire, 300 cm (ABBOTT)
4. **Venogram and IVUS**
  - 8.5F Visions® PV.035 (VOLCANO)
5. **Predilatation**
  - 12 x 40 Mustang balloon (BOSTON SCIENTIFIC)
  - 16/18 x 40 Atlas balloon (BARD)
6. **Iliac vein stenting**
  - Wallstent 18 x 90 (BOSTON SCIENTIFIC)
7. **Postdilatation**
  - 16/18 x 40 Atlas balloon (BARD)
8. **Postimplantation IVUS and sealing of puncture site**

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March 10, 2015

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Case 12 – CGH 05: male, 58 years (K-5-O)

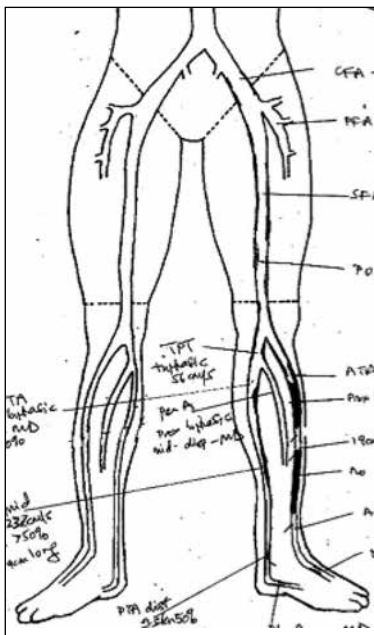
## Left ATA occlusion

**Operators:** S. Kum, T. Yih Kai, S. Bräunlich

**Clinical data:** CLI left 2nd toe gangrene  
PAOD Rutherford 5  
DM hypertension hyperlipidemia Cr 116

**Procedural steps**

1. **Antegrade access via left groin**
  - 5F sheath (TERUMO)
2. **Antegrade passage of the lesion with hydrophilic wire**
  - 0.014" COMMAND Extra support wire 300 cm (ABBOTT)
  - 2 x 80 Armada 14 (ABBOTT)
3. **Retrograde passage of lesion via ultrasound guided DP puncture**
  - 4F Micropuncture® transpedal set (COOK)
  - EDGE ultrasound high frequency probe (SONOSITE)
  - 0.018" V-18 control wire, 300 cm (BOSTON SCIENTIFIC)
  - 2.6F Angled CXI support catheter, 90 cm (COOK)
4. **Predilatation and lesion preparation**
  - 2.5 x 100 mm Vascutrak scoring PTA catheter (BARD)
5. **PTA with DEB**
  - 2.5 or 3 x 120 mm Lutonix drug-coated balloon (BARD)



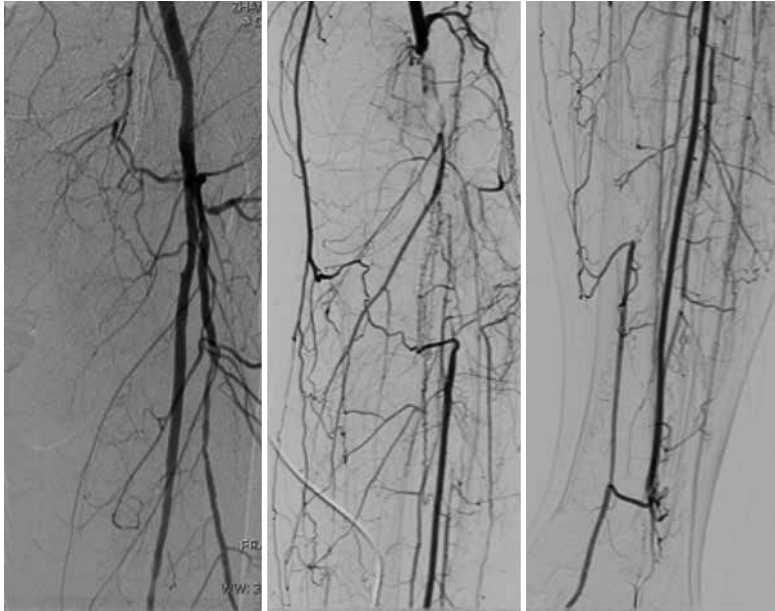


Case 13 – BMH 01: male, 72 years

## Occlusion of left popliteal and tibial arteries

**Operators:** Wei Guo, Xin Jia

**Clinical data:** PAOD Rutherford 4  
Rest pain at left foot  
Smoking for 30 years  
Coronary artery disease  
ABI left 0.5; right 0.7



### Procedural steps

1. **Antegrade access and placement of a long sheath**
  - 0.035" Radiofocus Terumo angled soft guidewire, 180 cm (TERUMO)
  - 6F Flexor Straight sheath, 55 cm (COOK)
2. **Passage of the lesion with hydrophilic wire and predilatation**
  - 0.018" V-18 control wire, 300 cm (BOSTON SCIENTIFIC)
  - 4/120 mm Pacific balloon dilatation catheter for POP, 130 cm (MEDTRONIC)
  - 2/120 mm DEEP balloon dilatation catheter for PA and PT, 130 cm (MEDTRONIC)
3. **Retrograde AT or PA puncture in case of antegrade failure**
  - 0.018" V-18 control wire, 300 cm (BOSTON SCIENTIFIC)
  - 2/80 mm DEEP balloon dilatation catheter, 130 cm (MEDTRONIC)

Case 14 – TAO 03: male, 76 years (K-H-C)

## PEVAR plus distal sandwich technique for infra-renal AAA with RCIA aneurysm

**Operators:** L. Kuo-Sheng, C. Sung-Yu

**Clinical data:** Herniated intervertebral disc with right leg numbness  
 Infra-renal AAA was incidentally found by CT  
 Hypertension, previous smoker, gout  
 Cr 1.32, EF: 70%

**CTA:** Infra-renal AAA (5.8 x 5.6 cm, od) and RCIA aneurysm (3.9 cm/id) with much mural thrombus

### Procedural steps

**1. Retrograde access (ultrasound guided puncture) via RCFA and LCFA**

- Preclose techniques: Proglide (ABBOTT)
- 8F and 10F sheaths for RCFA and LCFA (TERUMO)

**2. Angiography of AAA**

- 5F Tempo Flush pigtail catheter (CORDIS)
- 0.035" Radiofocus Terumo Angled soft guidewire (TERUMO)
- 0.038" Amplatz Stiff wire, 260 cm (BOSTON SCIENTIFIC)
- 5F sizing catheter (MERIT)

**3. Deployment of AAA stent graft**

- Endurant: mainbody left side up, contralateral limb: right side (METRONICS)
- 5F VanSchie catheter (COOK)
- 0.035" Radiofocus Terumo Angled soft guidewire (TERUMO)
- 0.038" Amplatz Stiff wire, 260 cm (BOSTON SCIENTIFIC)

**4. Post dilatation**

**5. Retrograde access (ultrasound guided puncture) via left brachial artery**

- 5F Tempo Flush pigtail catheter (CORDIS)
- 0.035" Radiofocus Terumo Angled soft guidewire (TERUMO)

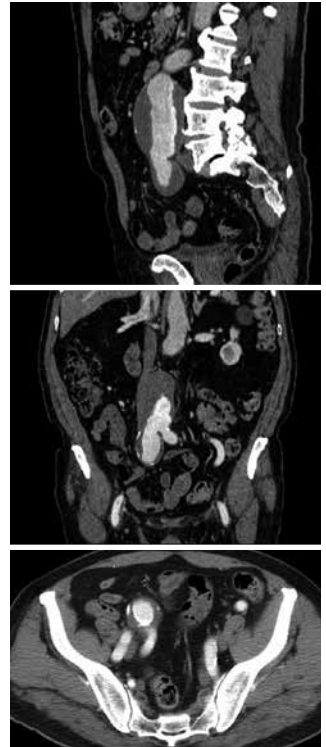
**6. Cannulation of RIIA**

- 5F Tempo Aqua Hydrophilic coating catheter (CORDIS)
- 0.035" Radiofocus Terumo Angled soft guidewire (TERUMO)

**7. Distal sandwich technique: Deployment of stent graft for REIA and RIIA**

- Viabahn stent graft 10/100-150 mm (GORE)

**8. Postdilatation**



Case 15 – CGH 06: male, 75 years (M-L)

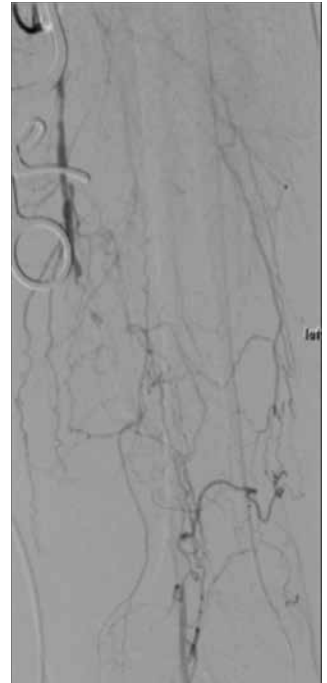
## Left SFA occlusion

**Operators:** S. Bräunlich, S. Kum, T. Yih Kai

**Clinical data:** Left leg claudication PAOD Rutherford 3  
DM hypertension left CFA  
Endarterectomy right SFA stent  
EF 60%  
CKD Cr 190

### Procedural steps

1. **Contralateral cross-over access via right groin**
  - 0.035" Radiofocus angled soft guidewire, 260 cm (TERUMO)
  - 4F Ber II catheter (CORDIS)
  - 0.035" Supra Core guidewire, 300 cm (ABBOTT)
  - 6F 40 cm long Balkin sheath (COOK)
  - CO2 angiography with Co2 AngioSet (OPTIMED)
2. **Passage of the lesion with CTO device and predilatation**
  - Truepath CTO device (BOSTON SCIENTIFIC)
  - 0.018" Rubicon catheter (BOSTON SCIENTIFIC)
  - 0.018" V-18 control wire, 300 cm (BOSTON SCIENTIFIC)
  - Sterling balloon 4 x 120 (BOSTON SCIENTIFIC)
3. **Treatment with DEB and postdilatation**
  - Ranger drug eluting balloon 5/6 x 120 (BOSTON SCIENTIFIC)
  - Mustang balloon 6 x 40 (BOSTON SCIENTIFIC)
4. **Stenting on indication**
  - Spot-stenting with Innova stent (BOSTON SCIENTIFIC)



**Case 16 – CGH 07: male, 55 years (B-P-T)**

**Left SFA in-stent occlusion**

**Operators:** S. Bräunlich, T. Yih Kai, S. Kum, T. Tang

**Clinical data:** Left leg claudication PAOD Rutherford 3  
DM hypertension hyperlipidemia PCI 2011 EF 55% Cr normal  
Left SFA stent in subintimal spot stent Taiwan late 2014

**Procedural steps**

- 1. Contralateral cross-over access via right groin**
  - 0.035" Radiofocus angled soft guidewire, 260 cm (TERUMO)
  - 4F Ber II catheter (CORDIS)
  - 0.035" Supra Core guidewire, 300 cm (ABBOTT)
  - 6/8F 40 cm long Balkin sheath (COOK)
- 2. Antegrade passage of the lesion with hydrophilic wire**
  - 0.018" V-18 control wire, 300 cm (BOSTON SCIENTIFIC)
  - 0.035" Radiofocus angled soft guidewire, 250 cm (TERUMO)
  - 4F Ber II catheter (CORDIS)
- 3. Retrograde puncture of occluded stent in event of antegrade failure**
  - 0.035" Radiofocus angled soft guidewire, 250 cm (TERUMO)
  - 4F CXI support catheter, 90 cm
- 4. Mechanical thrombectomy and debulking**
  - Predilatation with Powercross 3 x 120 balloon (COVIDIEN)
  - 6/8F Rotarex (STRAUB MEDICAL)
- 5. Postdebulking IVUS**
  - 0.014" Eagle Eye® Platinum IVUS catheter with virtual histology
- 6. Treatment with DEB and stenting on indication**
  - In.Pact Pacific 5/6 x 120 mm DEB-balloon (MEDTRONIC)
  - SUPERA stent (ABBOTT)



Case 17 – LEI 06: male, 56 years (T-N)

## Chronic SFA-occlusion left

**Operators:** M. Ulrich, A. Schmidt

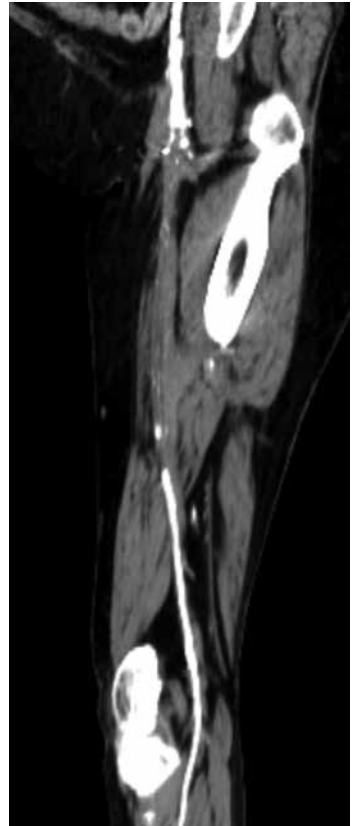
**Clinical data:** Severe claudication left calf  
Walking capacity 150 meters  
COPD

**CT:** Long SFA-occlusion left

**ABI:** 0.62 left

### Procedural steps

- 1. Access right groin and cross-over approach**
  - 5F IMA-catheter (CORDIS)
  - 0.035" SupraCore guidewire 200 cm (ABBOTT)
  - 6F-40 cm Balkin Up&Over sheath (COOK)
- 2. Passage of the occlusion and PTA**
  - 0.035" angled stiff glidewire, 260 cm (TERUMO)
  - 0.035" Seeker support catheter, 135 cm (BARD)
  - 5.0/250 mm Vascutrak balloon (BARD)
- 3. PTA with Drug-Coated balloons and stenting on indication**
  - 5/150 Lutonix DCB (BARD)
  - LifeStent (BARD)



Case 18 – CGH 08: male, 70 years (A-H-T)

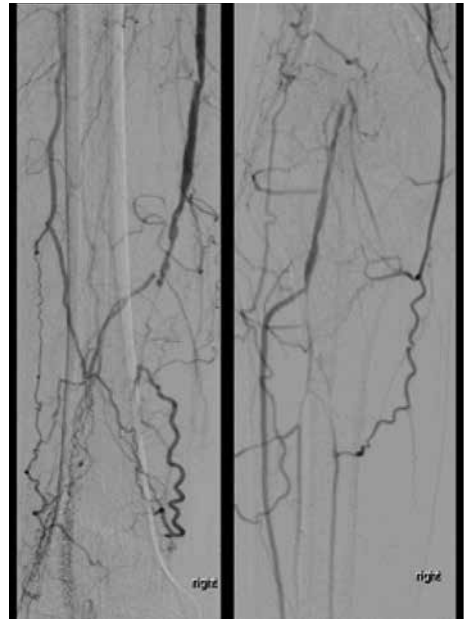
## Right SFA/popliteal occlusion

**Operators:** S. Kum, T. Yih Kai, S. Bräunlich

**Clinical data:** Right leg claudication PAOD Rutherford 3  
DM hypertension hyperlipidemia EF 69% Cr normal  
Right CFA endarterectomy and patch Oct 2014 failed antegrade attempt

**Procedural steps**

1. **Antegrade access via right groin**
  - 6F sheath (TERUMO)
2. **Passage of the lesion with hydrophilic wire**
  - 0.018" V-18 control wire, 300 cm (BOSTON SCIENTIFIC)
  - 4F Ber II catheter (CORDIS)
3. **Retrograde PT access in event of antegrade failure**
  - 4F Micropuncture® pedal access set (COOK)
  - 0.018" V-18 control wire, 300 cm (BOSTON SCIENTIFIC)
  - 2.6F CXI support catheter, 90 cm (COOK)
4. **Predilatation and lesion preparation**
  - 5/6 x 120 mm Fox SV (ABBOTT)
  - 5/6 x 40 mm Armada 35 (ABBOTT)
5. **Stent implantation and postdilatation**
  - SUPERA 5 mm x 150 stent (ABBOTT)
6. **Consider treatment of runoff**
  - 0.014" COMMAND extra support wire, 300 cm (ABBOTT)
  - 2.5 x 15 NC TREK balloon for PT lesion (ABBOTT)
7. **Implantation of bioabsorbable scaffold**
  - 2.5 x 28 ABSORB bioabsorbable vascular scaffold/BVS (ABBOTT) for TPT and PT lesion



Case 19 – CGH 09: female, 65 years (R)

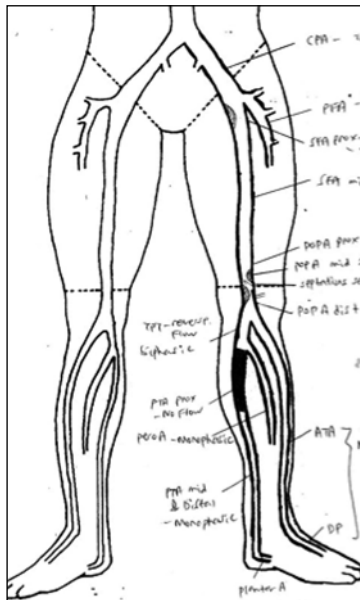
## Left popliteal stenosis

**Operators:** S. Bräunlich, S. Kum, T. Yih Kai

**Clinical data:** PAOD Rutherford 3  
Dm hypertension hyperlipidemia EF 60% Cr 140

**Procedural steps**

1. **Contralateral cross-over access via right groin**
  - 0.035" Radiofocus angled soft guidewire, 260 cm (TERUMO)
  - 4F Ber II catheter (CORDIS)
  - 0.035" Supra Core guidewire, 300 cm (ABBOTT)
  - 7F 40 cm long Balkin sheath (COOK)
2. **Passage of the lesion with hydrophilic wire and filter placement**
  - 0.014" PT2 MS 300 cm guidewire (BOSTON SCIENTIFIC)
  - 4F Ber II catheter (CORDIS)
  - 0.018" Trailblazer support catheter (COVIDIEN)
  - Spider FX 3 mm into ATA (COVIDIEN)
3. **Directional arterectomy**
  - Turbohawk (COVIDIEN)
4. **Treatment with DEB**
  - In.Pact Pacific 5/6 x 120 mm DEB-balloon (MEDTRONIC)
5. **Filter retrieval**



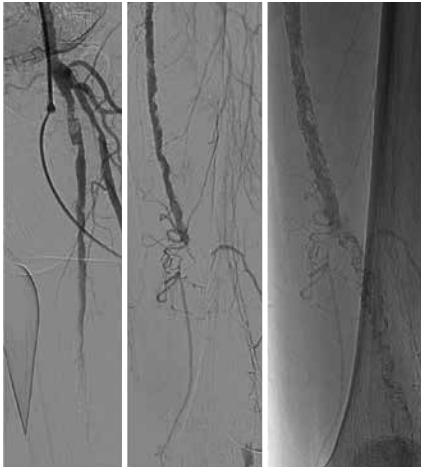
Case 20A – LEI 07A: male, 62 years (P-R)

## CLI minor gangrene forefoot left

**Operators:** A. Schmidt, M. Ulrich

**Clinical data:** CLI with ulcerations both feet,  
PTA right SFA and BTK-arteries Feb 2015  
CAD with PTCA 2013  
Renal insufficiency, GFR 64 ml/min

**Angiography:** During PTA right leg:  
severely calcified distal SFA- and Apop-occlusion left  
ABI: > 1.3



### Procedural steps

1. **Antegrade approach left groin**
  - 7F-55 cm Ansel sheath (COOK)
2. **Guidewire passage**
  - 0.035" stiff angled glidewire 260 cm (TERUMO)
  - 0.035" Seeker support catheter 90 cm (BARD)
3. **In case of antegrade failure retrograde approach via the severely diseased proximal ATA**
  - 7 cm 21 Gauge needle (COOK)
  - 0.018" Connect 300 cm guidewire (ABBOTT)
  - CXC 0.018" 90 cm support catheter (COOK)
4. **PTA of the lesion**
  - 5/40 and 6/40 Armada 35 (ABBOTT)
  - In case of residual stenosis high-pressure balloon:
    - 6/20 mm Conquest (BARD)
5. **Stenting**
  - Supera Interwoven nitinol stent (ABBOTT)



Case 20B – LEI 07B: male, 49 years (S-P)

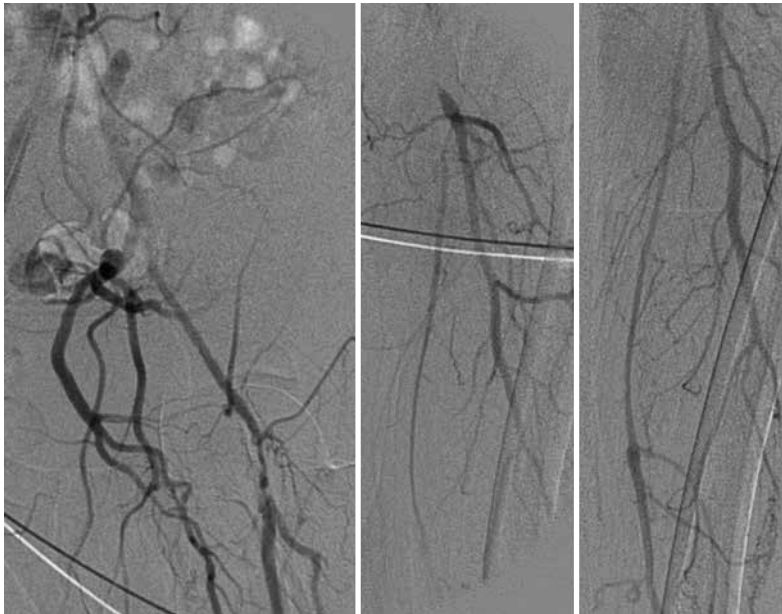
## Multi-level lesion left (EIA, CFA and SFA-stenosis)

**Operators:** A. Schmidt, S. Steiner

**Clinical data:** Severe claudication left, walking capacity 50 meters  
ABI left 0.4  
CAD with PTCA 2014

**Risk factors:** Smoker, art. hypertension

**Angiography:** Small external iliac artery left, high-grade stenosis left CFA, SFA diffusely diseased



### Procedural steps

1. **Access right groin and cross-over approach to left**
  - 5F IMA diagnostic catheter (CORDIS)
  - 8F 40 cm Balkin Up&Over sheath (COOK)
2. **Directional atherectomy of the CFA left**
  - Spider-Filter 6 mm distal SFA (COVIDIEN/MEDTRONIC)
  - TurboHawk LX-C (COVIDIEN/MEDTRONIC)
3. **PTA of the CFA and SFA**
  - In.Pact Pacific 6 mm and 5 mm (MEDTRONIC)



LINC  
ASIA-PACIFIC  
HONG KONG  
2015

LINC

Wednesday,  
March 11, 2015

Wednesday

Case 21 – BMH 02: male, 75 years

## Infra-renal abdominal aortic aneurysm

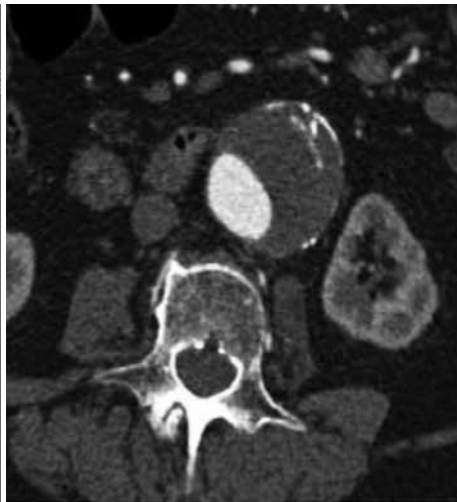
**Operators:** Wei Guo, Xin Jia

**Clinical data:** Documented abdominal aortic aneurysm in May 2012  
Coronary artery disease  
Hypertension

**Angiography:** CT angiography of abdominal aorta shows:  
Maximum aneurysm diameter 60/57 mm, short and angulated neck  
Right iliac: CIA 18 mm, EIA 9 mm  
Left iliac: CIA 14 mm, EIA 11 mm

**Procedural steps**

1. **Bilateral percutaneous femoral artery access**
  - Perclose preloaded (ABBOTT)
2. **Left brachial artery access for provisional chimney stent**
  - 6F 90 cm Flexor long sheath (COOK)
  - Chimney stent in left renal artery: Genesis 6-18 (CORDIS)
3. **Stent graft**
  - ENDURANT (MEDTRONIC)
  - Main body from left access: 28-16-170 mm
  - Right leg: 16-20-120 mm



Case 22 – SGH 01: male, 80 years (A-A-R)

## Infra renal AAA 6.6 cm with right CIA aneurysm

**Operators:** K. Hiong Tay, J. Wang, A. Patel, J. Ch'ng

**Clinical data:** Incidentally detected infra-renal abdominal aortic aneurysm (6.5 x 6.5 cm) extending into the right common iliac artery  
Clinical examination: Expansile pulsatile mass in abdomen

**Risk factors:** Hypertension, hyperlipidemia  
Mild Alzheimer dementia

**CT Aortogram:** 6.5 cm infra-renal AAA with anyersmal right CIA (2.7 cm)

**PLAN:** pEVAR with right iliac branch device



### Procedural steps

1. US guided percutaneous access of both CFAs followed by preclosing with 2 Proglide closure devices.
2. Aortogram and placement of Lunderquist wire from right side
3. Insertion of Zenith iliac branch device (COOK MEDICAL) from right side. Snaring of the through and through wire using Indi snare (COOK MEDICAL) from the left side. Insertion of 7F long sheath into the branch from left side. Selective cannulation of the right internal iliac artery and placement of stiff wire (ROSEN). Insertion of Atrium covered stent into the right IIA.
4. Placement of stiff wire (Lunderquist) from left side. Insertion of the COOK Zenith stent graft main body from the left side.
5. Cannulation of the contra-lateral limb from the right side and placement of bridging piece.
6. Completion of deployment of main body and extension of left ipsilateral limb.
7. Closure with preclose Proglide.

Case 23 – BMH 03: male, 65 years

## Occlusion of left superficial femoral artery

**Operators:** Wei Guo, Xin Jia

**Clinical data:** PAOD Rutherford 3  
Intermittent claudication of left leg  
Diabetes mellitus for 20 years  
ABI left 0.45, right 0.72



### *Procedural steps*

- 1. Retrograde access of right groin**
  - 0.035" Radiofocus Terumo angled soft guidewire, 180 cm (TERUMO)
  - 6F Flexor straight sheath, 50 cm (COOK)
- 2. Passage of the lesion**
  - 0.018" V-18 control wire, 300 cm (BOSTON SCIENTIFIC)
  - 4/120 mm Pacific dilatation catheter, 120 cm (MEDTRONIC)
- 3. Dilatation and provisional stent**
  - 4/120 mm Pacific dilatation catheter, 120 cm (MEDTRONIC)
  - 6/150 mm Complete SE Nitinol vascular stent, 120 cm (MEDTRONIC)
- 4. Retrograde SFA puncture in case of antegrade failure**
  - 0.018" V-18 control wire, 300 cm (BOSTON SCIENTIFIC)
  - 4/120 mm Pacific dilatation catheter, 120 cm (MEDTRONIC)

Case 24 – SGH 02: male, 70 years (T-C-H)

## Right SFA chronic total occlusion

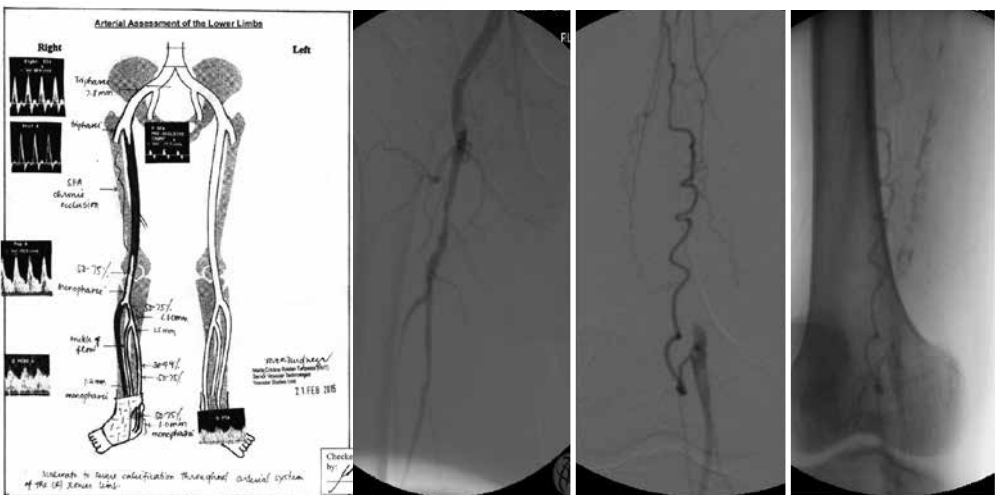
**Operators:** F. Gillan Irani, J. Wang, A. Patel

**Clinical data:** Right lateral foot wound, started as an abrasion and gotten progressively worse  
Left BKA

**Risk factors:** Poorly controlled diabetes mellitus  
Chronic hyponatremia

**Doppler study:** Long segment SFA occlusion with stenosis in the popliteal artery and ATA occlusion

**Angiogram:** Long segment calcified SFA occlusion



### Procedural steps

1. Antegrade right CFA access with US guidance and insertion of 6F Brite tip sheath (CORDIS)
2. Antegrade recanalisation of SFA
  - 4F Bernstein and 0.035" stiff terumo/ 0.018" V18
  - 2.7F COOK CXI with 0.014" Winn 200T wire (ABBOTT)
3. If antegrade approach fails for retrograde access via popliteal artery and SAFARI
  - 0.018" V18 and 2.7F Cook CXI catheter
4. Following crossing angioplasty with DEB +/- stent
5. Internal balloon tamponade of popliteal access site
6. Attempts at recanalisation of the ATA
7. Closure
  - 6F StarClose closure device (ABBOTT)

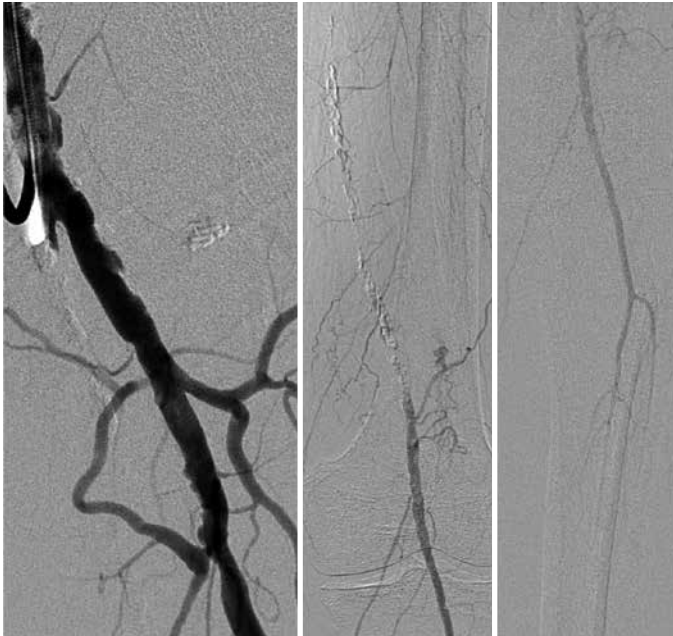
Case 25 – LEI 08: male, 72 years (G-W)

## Severely calcified SFA-occlusion left

**Operators:** A. Schmidt, M. Ulrich

**Clinical data:** CLI with toe-ulceration left since 1 month  
Severe claudication left calf  
CAD, PTCA 1998  
Chronic renal insufficiency, GFR 56 ml/ min

**Angiography:** During PTA of an iliac stenosis left:  
Long, highly calcified SFA-occlusion left



### Procedural steps

- 1. Right groin access and cross-over approach**
  - 7F 40 cm Cross-over Balkin Up&Over sheath (COOK)
- 2. Passage of the occlusion left SFA**
  - 0.035" stiff angled guidewire, 260 cm
  - CXC 0.035" support catheter 135 cm (COOK)
- 3. PTA**
  - Armada 5/120 mm balloon (ABBOTT)
  - In case of residual stenosis focal high-pressure PTA:
    - Conquest 6/20 mm non-compliant balloon (BARD)
- 4. Stenting**
  - Supera interwoven nitinol stents (ABBOTT)



Case 26 – SGH 03: female, 75 years (N-H-T)

## Chronic total occlusion left SFA

**Operators:** K. Hiong Tay, F. Gillan Irani

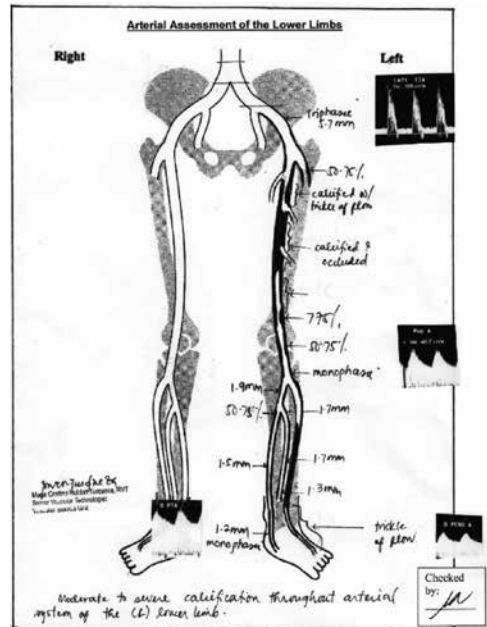
**Clinical data:** PAOD with non healing ulcer on lateral aspect of left first toe with sloughy base  
Non palpable left DP/PT /Popliteal

**Risk factors:** Smoker, hypertension, hyperlipidemia

**Doppler study:** Left leg: Chronic total occlusion of left SFA with stenosis in the popliteal artery and with long segment ATA occlusion  
Left Toe pressure 60

### Procedural steps

1. **US guided antegrade approach**
  - 6F 11 cm Brite tip sheath (CORDIS)
2. **Antegrade crossing of SFA CTO**
  - 4F Bernstein catheter and 0.035" stiff terumo (TERUMO)
  - 0.018" V18 wire (BOSTON SCIENTIFIC)
  - If fails then, retrograde approach via proximal ATA puncture using micropuncture set (COOK) and SAFARI technique 2.7F CXI catheter (COOK) and 0.018" V18 wire (BOSTON SCIENTIFIC)
3. **Angioplasty**
  - MUSTANG balloon (BOSTON SCIENTIFIC)
4. **Stenting**
  - SUPERA stent (ABBOTT)
5. **Proximal ATA access site controlled using internal balloon tamponade**
  - 3 mm STERLING balloon (BOSTON SCIENTIFIC)
6. **ATA occlusion recanalisation**
  - 0.018" V18 wire (BOSTON SCIENTIFIC) followed by plasty with 3 mm Sterling balloon
7. **Closure**
  - 6F StarClose closure device (ABBOTT) using fluoroscopic and US guidance



Case 27 – LEI 09: male, 73 years (H-G-T)

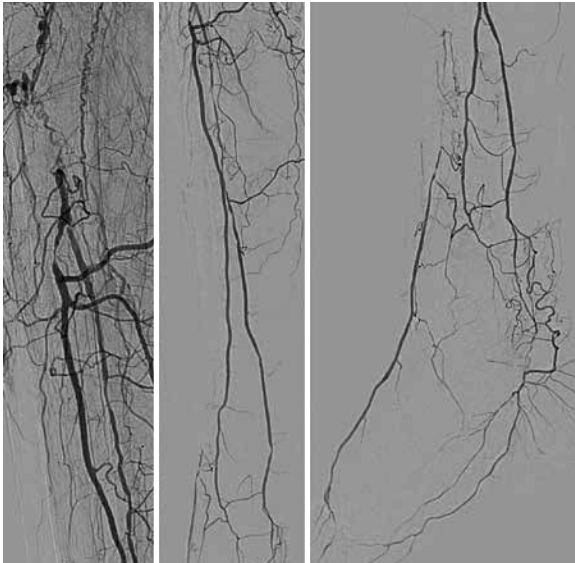
## CLI right with occlusion of the TPT and ATA

**Operators:** M. Ulrich, A. Schmidt

**Clinical data:** CLI with minor gangrene Dig 2 and rest-pain  
Failed antegrade recanalization attempt right Feb 2015  
CAD with PTC 2007  
Atrial fibrillation

**Angiography:** Occlusion right TPT and ATA

**ABI:** Right 0.32



### Procedural steps

- 1. Right antegrade access**
  - 6F 55 cm Ansel-sheath (COOK)
- 2. Retrograde passage of the ATA**

ADp-puncture with

  - 3F micropuncture set (COOK)
  - 4 cm 21 Gauge needle (COOK)
  - 3F sheath (COOK)
  - 0.018" Connect 300 cm guidewire (ABBOTT)
- 3. Passage of the lesion**
  - 0.014" Hydro-ST Guidewire 300 cm (COOK)
  - Advance Micro balloon 2.5/120 mm from retrograde (COOK)
  - Potentially PTA of the TPT and ATA bifurcation in kissing-technique from above and below
  - Xience Prime Everolimus-eluting stent (ABBOTT)

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