



**AORTIC  
LIVE 5**

**2018**

29–30 October 2018  
Congress Center Essen, Germany

## LIVE CASE GUIDE



Newest developments demonstrated by world experts – transmitted in 3D

# WELCOME

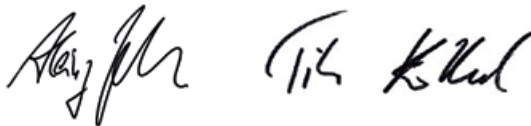
**Dear Colleagues,**

*During the 5th Aortic Live Symposium 20 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.*

Sincerely yours,

The image shows two handwritten signatures in black ink. The first signature on the left is 'Heinz Jakob' and the second signature on the right is 'Tilo Kölbel'. Both are written in a cursive, professional style.

*Prof. Heinz Jakob and Prof. Tilo Kölbel*

*Also on behalf of the co-directors*



Monday, October 29, 2018

# LIVE CASES, Monday, October 29, 2018

## CASE 01 | AORTIC VALVE REPAIR

**Live from Essen | Session 1 | 09:30-10:30**

**Patient data:** Male, 58 years

**Operators:** G. El Khoury, K. Tsagakis, F. Mourad

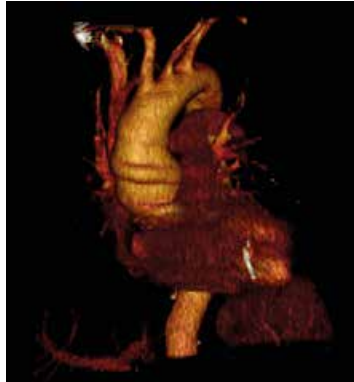
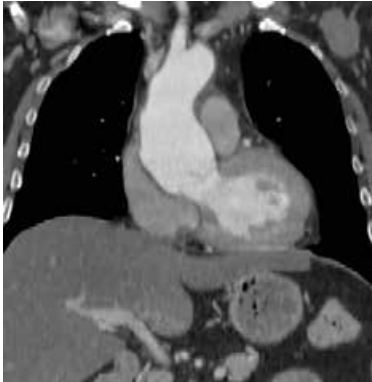
### **Medical**

**background:** St.p. PCI

**TEE:** Bicuspid AV  
Root Aneurysm

**Treatment:** AV-Reimplantation  
Root replacement

**Materials:** Cardioroot (Getinge)



# LIVE CASES, Monday, October 29, 2018

## CASE 02 | MINIMAL INVASIVE AORTIC VALVE REPLACEMENT

**Live from Essen | Session 1 | 09:30-10:30**

**Patient data:** Male, 78 years

**Operators:** M. Borger, A. Hoyer, M. Thielmann

### Medical

**background:** NYHA III,

Good LV function

60% stenosis of RD1

aFib

stenosis of coeliac trunk

Log. ES-I: 5.1%

**Treatment:** Minimal-invasive AVR

- Materials:**
1. RAM Device (LSI Solutions)
  2. Cor-Knot (LSI Solutions)
  3. Perimount AV (Edwards)



## CASE 03 | ZONE 2 TEVAR IN PSEUDOCOARCTATION

**Live from Hamburg | Session 1 | 11:00-12:00**

**Patient data:** Female, 71 years, L. K.

**Operators:** G. Panuccio, M. Scheerbaum

**Clinical data:** 1. Asymptomatic aneurysm of left subclavian artery  
2. Status post left carotid-subclavian bypass one week prior to TEVAR

**Risk factors:** DDD-pacemaker, paroxysmal atrial fibrillation, diabetes Type II, left heart failure (NYHA II), chronic gastritis, biliary cirrhosis

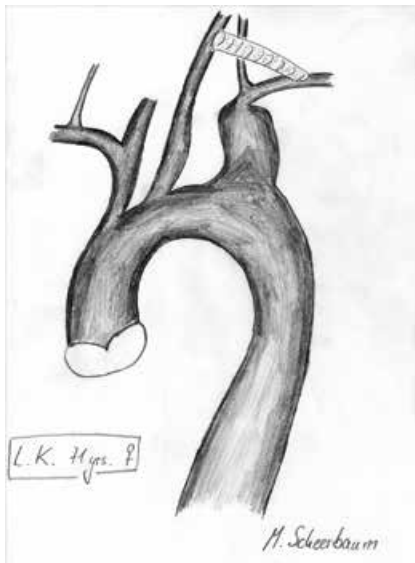
### **Procedural**

#### **steps:**

1. Percutaneous access, transfemoral + transbrachial (left)
2. LAO angulation and angiogram
3. Stentgraft deployment
4. Plug + coil occlusion of LSA as needed

#### **Materials:**

1. Boston Relay Pro Stentgraft (low profile) (TerumoAortic)
2. Proglide (ABBOTT)
3. CERA Plug (Lifetech)



## CASE 04 | TRANSAPICAL TAVI AND TMVR

**Live from Essen | Session 1 | 11:00-12:00**

**Patient data:** Female, 83 years

**Operators:** D. Wendt, M. Thielmann, A. Lind

### Medical

**background:** NYHA III, CHD

COPD II

Prior AVR+V-RCA 2005 (Hancock II 23)

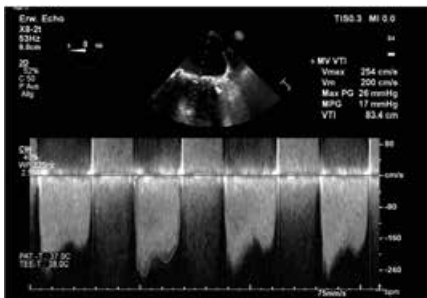
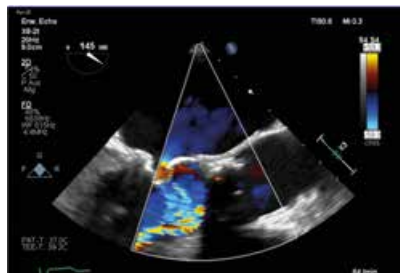
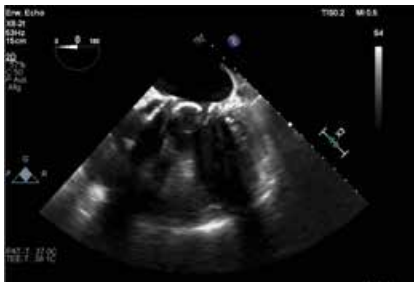
redo-AVR+MVR 2011 (Perimount 23 & Perimount Magna MV 29mm)

Now: degenerated MV (Pmean 17mmHg and AR III°)

Log. ES-I: 30.4%

**Treatment:** TA-VinV mitral and aortic

- Materials:**
1. THV Sapien 3 (Edwards)
  2. Certitude Delivery System (Edwards)



# LIVE CASES, Monday, October 29, 2018

## CASE 05 | TRANSFEMORAL TAVI

**Live from Berlin | Session 1 | 11:00-12:00**

**Patient data:** Female, 69 years, A. M.

**Operators:** J. Kempfert, C. Klein

**Clinical data:** Severe aortic stenosis (mean Gradient 59 mmHg)

**Risk factors:** Alcoholic toxicomania, live cirrhosis, chronic renal failure stage IIIb, pulmonary hypertension, carotid occlusive disease (right 70%)

### Procedural

#### steps:

1. Percutaneous femoral access
2. Valvuloplasty with BARD TRUE® Flow catheter
3. Evolut Pro THV implantation
4. Access closure

### Materials:

1. Proglide (ABBOTT)
2. BARD TRUE® Flow catheter (Bard)
3. EvolutPro (Medtronic)





## CASE 06 | BRANCHED THORACOABDOMINAL EVAR

**Live from Hamburg | Session 2 | 15:00-16:00**

**Patient data:** Female, 65 years, S. O.

**Operators:** N. Tsilimparis, F. Heidemann

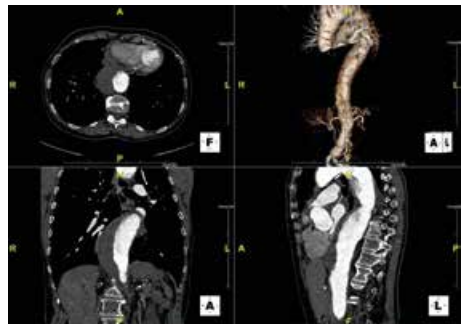
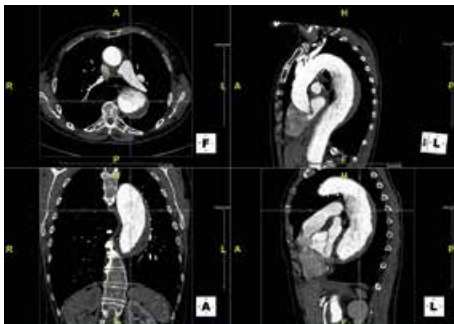
**Clinical data:** Type II thoracoabdominal aortic aneurysm (68mm)

**Risk factors:** **Prior procedure:** fenestrated TEVAR (scallop for LCCA, fenestration for LSA) on 9.10.18  
Right-sided renal artery stenosis, PAD

**Procedural steps:**

1. Cutdown right CFA (22F), cutdown left CFA (16F), potentially cutdown right brachial artery (12F)
2. Deployment of branched main body, bifurcated graft and right iliac stentgraft, suture of CFA to restore leg perfusion
3. Use of a transfemoral steerable sheath to access branches.
4. Catheterization and bridging stent grafts for all four visceral vessels
5. Deployment of left iliac stentgraft for CIA

- Materials:**
1. Custom made branched thoracoabdominal stent-graft (COOK Medical)
  2. Viabahn and VBX (Gore)
  3. Fluency and Covera (Bard)
  4. Fustar Sheath (Lamed/Lifetech)
  5. LiquoGard (Möller Medical)
  6. Protege Everflex (Medtronic)



## CASE 07 | PRELOADED FENESTRATED THORACOABDOMINAL EVAR

**Live from Paris | Session 2 | 15:00-16:00**

**Patient data:** Male, 60 years, D. L.

**Operators:** S. Haulon, D. Fabre

**Clinical data:** Back pain related – inflammatory aneurysm

**Risk factors:** **Past medical history:** myelodysplasia, cervical disc hernia, lower limbs paraparesis, left kidney hydronephrosis

**Angio CT:** 50mm juxtarenal aneurysm, 35 mm left common artery aneurysm

**PET-CT:** inflammatory aneurysms

Corticosteroid treatment

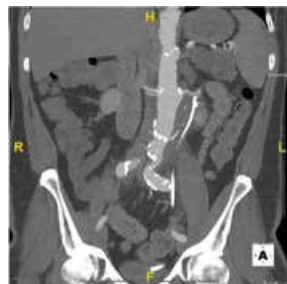
### Procedural

#### steps:

1. Percutaneous femoral access, bilateral 16 Fr sheath, Fusion registration (Discovery IGS 740, GE Healthcare)
2. 4 fenestrations bifurcated endograft with 2 preloaded catheters for the renal arteries
3. Iliac branched graft
4. Ipsilateral leg extension and 2 bridging leg extensions with iliac branched graft

#### Materials:

1. Proglide x4 (ABBOTT)
2. Custom made fenestrated and bifurcated thoraco-abdominal device with 2 preloaded catheters (COOK Medical)
3. ZBIS Iliac branched endograft (COOK Medical)
4. Amplatzer Plug N°4 (ABBOTT)
5. Covered bridging stents: BeGraft (BENTLEY)
6. Ipsilateral and bridging leg extensions (COOK Medical)
7. Coda compliant balloon



# LIVE CASES, Monday, October 29, 2018

## CASE 08 | ZONE 2 BRANCHED ARCH TEVAR

**Live from Philadelphia | Session 2 | 15:00-16:00**

**Operators:** N. Desai, J. Bavaria

## CASE 09 | ZONE 3 TEVAR

**Live from Essen | Session 2 | 16:30-17:30**

**Patient data:** Female, 68 years

**Operators:** R. A. Jánosi, K. Tsagakis

**Medical**

**background:** St.p. emergency BioBentall (Bio-Integral) + E-vita open for retrograde acute Type I AD and explantation of multilayer stents from the proximal aorta after endovascular acute Type B AD treatment

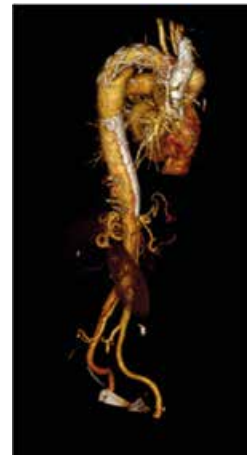
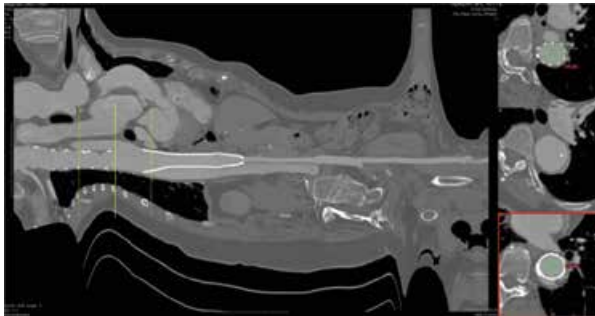
St.p. traumatic SAB

**CTA:** Type II endoleak, progressive aneurysm

**Treatment:** TEVAR (Medtronic)

**Materials:**

1. Valiant Thoracic Stentgraft (Medtronic)
2. Captivia Delivery System (Medtronic)



## CASE 10 | OPEN REPAIR TAAA

**Live from Essen | Session 2 | 16:30-17:30**

**Patient data:** Female, 74 years

**Operators:** R. Chiesa, L. Bertoglio, E. Rinaldi, M. Lainka

### **Medical**

**background:** NYHA II

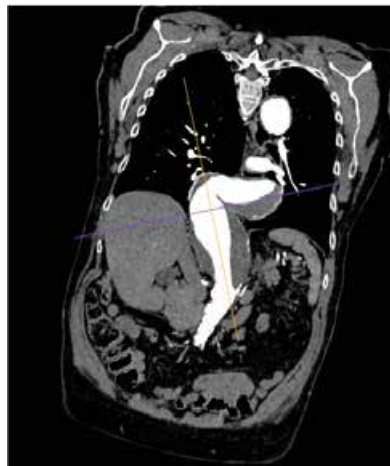
COPD II

**CTA:** TAAA Type III

Diameter 60mm

**Treatment:** TAAA replacement

- Materials:**
1. Thoracoabdominal aortic graft  
Hemashield Platinum Woven (Getinge)
  2. CSF Drainage LiquoGuard (Möller Medical)



## CASE 11 | ZONE 2 TEVAR AND CANDY-PLUG

**Live from Hamburg | Session 2 | 16:30-17:30**

**Patient data:** Male, 62 years, A. W.

**Operators:** F. Rohlffs, M. Scheerbaum

**Clinical data:** 1. Stent graft-induced new entry with persistent false lumen perfusion  
2. St. p. acute Type B-dissection, left Carotid-Subclavian Bypass, TEVAR 12/2017

**Risk factors:** Arterial hypertension, Hashimoto disease

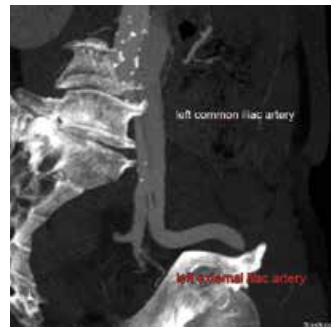
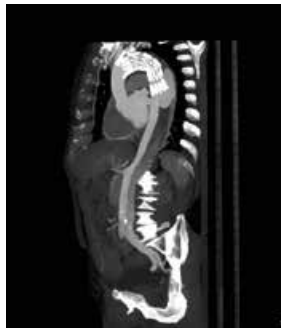
**Procedural**

**steps:**

1. Femoral cut-down or percutaneous access
2. LAO angulation and angiogram
3. True lumen stent-graft extension landing above celiac trunk
4. Catheterisation of the false lumen and Candy-Plug deployment

**Materials:**

1. Zenith ZTEG/ZDEG stent-graft (COOK Medical)
2. Custom-made Candy-Plug (COOK Medical)





Tuesday, October 30, 2018

## CASE 12 | FROZEN ELEPHANT TRUNK AND CERVICAL DEBRANCHING

**Live from Essen | Session 3 | 09:30-10:30**

**Patient data:** Female, 63 years

**Operators:** K. Tsagakis, W. Weißenberger, F. Mourad

**Medical**

**background:** St.p. proximal repair, acute Type I AD with severe cerebral malperfusion

Residual minor hemiparesis

Vertigo

TTE: AV regurgitation II-III

**CTA:** Progressive residual AD

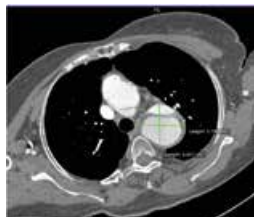
LCCA occlusion

Aberrant left vertebral artery

**Treatment:** FET (E-vita open), LCCA+LVA+LSA debranching

AV replacement

- Materials:**
1. E-vita open plus (CryoLife/JOTEC)
  2. Hemashield Platinum Woven (Getinge)
  3. Flowweave Bioseal (CryoLife/JOTEC)
  4. Trifecta AV (ABBOTT)





## CASE 13 | BRANCHED FROZEN ELEPHANT TRUNK

**Live from Essen | Session 3 | 09:30-10:30**

**Patient data:** Female, 71 years

**Operators:** Y. Okita, K. Minatoya, D. Wendt

### Medical

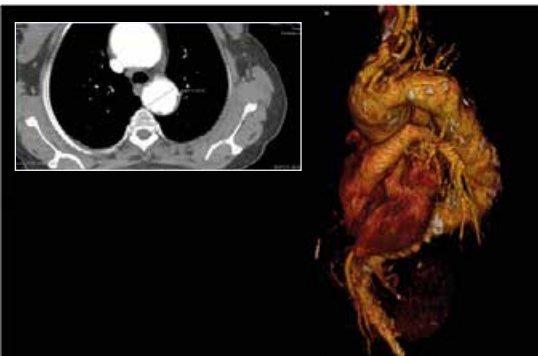
**background:** Progressive Mega-aorta  
AV regurgitation II

**CTA:** Aneurysm 5.7cm  
Atherosclerosis

**Treatment:** FET (Frosenix), arch replacement with branched graft

**Materials:**

1. Frosenix (Japan Lifeline)
2. Gelweave Plexus (Terumo)



## CASE 14 | CERVICAL DEBRANCHING FOR ZONE 1 TEVAR

**Live from Essen | Session 3 | 11:00-12:15**

**Patient data:** Female, 59 years

**Operators:** S. Debus, S. Wipper, M. Lainka

### Medical

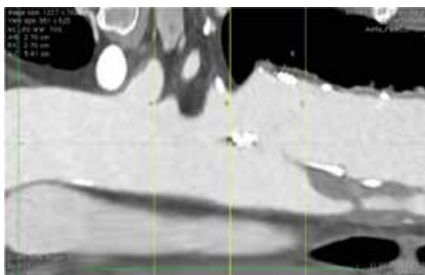
**background:** St.p. emergency TEVAR for complicated acute Type B AD  
St.p. paraplegia  
Renal insufficiency

**CTA:** New Type Ia endoleak

**Treatment:** Debranching for TEVAR in Zone 1

**Materials:**

1. Hemashield (Getinge)
2. MiraQ (Medistim)



## CASE 15 | ZONE 2 TEVAR

**Live from Regensburg | Session 3 | 11:00-12:15**

**Patient data:** Male, 48 years, H. R.

**Operators:** K. Oikonomou, K. Pfister

**Clinical data:** Collapsed thoracic endograft st.p. TEVAR due to traumatic rupture, Endoanchor fixation and Palmaz Stent

**Risk factors:** COPD, Hypertension

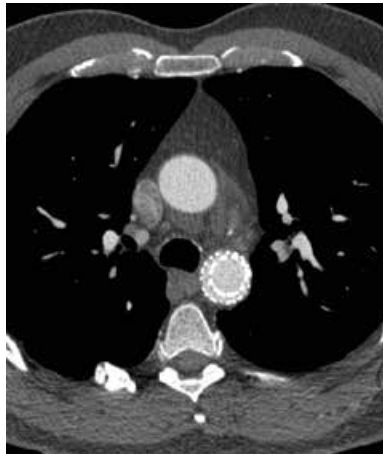
**Procedural**

**steps:**

1. Cut down unilateral femoral access
2. Palmaz stent dilation
3. Stent graft advancement and angiography
4. Deployment and dilation

**Materials:**

1. 20F DrySeal Sheath (Gore)
2. Coda Balloon 32 mm (COOK Medical)
3. Gore TAG Active Control 282810 (Gore)



## CASE 16 | FENESTRATED ARCH TEVAR

**Live from Hamburg | Session 3 | 11:00-12:15**

**Patient data:** Female, 73 years, B. H.

**Operators:** N. Tsilimparis, F. Heidemann

**Clinical data:** Type II thoracoabdominal aortic aneurysm (53mm)

**Risk factors:** *Staged repair:*

1. fTEVAR (scallop for innominate artery/bovine arch, fenestration LSA)
2. bEVAR (4-vessel branched) aneurysm of ascending aorta (45mm)
- Lung resection for lung cancer 2017, colon resection for adenom 1998

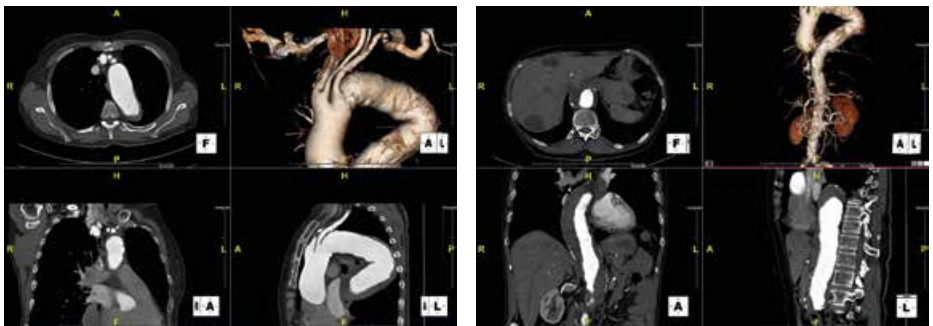
**Procedural**

**steps:**

1. Percutaneous access right CFA (22F), percutaneous access left CFA (5F), percutaneous access left brachial artery (7F)
2. Insertation of fenestrated main body and snaring of the preloaded guidewire for LSA
3. Angiography and deployment of fenestrated main body
4. Bridging stent LSA

**Materials:**

1. Proglide (ABBOTT)
2. Fenestrated arch device (COOK Medical)
3. V12 Advanta (Getinge)
4. Protege Everflex (Medtronic)



## CASE 17 | EVAR + ILIAC SIDEBRANCH WITH CT-OVERLAY

**Live from Hamburg | Session 4 | 14:30-15:30**

**Patient data:** Male, 74 years, T. H.

**Operators:** T. Mastracci, F. Rohlffs

**Clinical data:** 1. Asymptomatic abdominal aortic aneurysm  
2. Asymptomatic right common iliac aneurysm

**Risk factors:** Arterial hypertension, former smoker

**Procedural**

**steps:**

1. Access via bilateral femoral cut-down and CT-overlay (Cydar)
2. Implantation of iliac side branch device (right common iliac artery), 12F sheath from contralateral for establishing through-and-through femoro-femoral wire, partial deployment, catheterization of right IIA via side branch, bridging stent for IIA and complete deployment of ZBIS
3. Implantation of aortic main body (EVAR)
4. Connection of aortic main body and iliac side branch device

**Materials:**

1. Zenith Alpha and ZBIS stent-graft system (COOK Medical)
2. Advanta V12 (Getinge)
3. Cloud-based CT-overlay (Cydar Ltd)



# LIVE CASES, Tuesday, October 30, 2018

## CASE 18 | EVAR WITH PREVENTIVE IMA PLUG EMBOLIZATION

**Live from Regensburg | Session 4 | 14:30-15:30**

**Patient data:** Male, 75 years, G. A.

**Operators:** K. Oikonomou, K. Pfister

**Clinical data:** Patient with 5.5cm infrarenal AAA and prominent IMA

**Risk factors:** KHK, hypertension, COPD, renal insuff., (no candidate for open surgery)

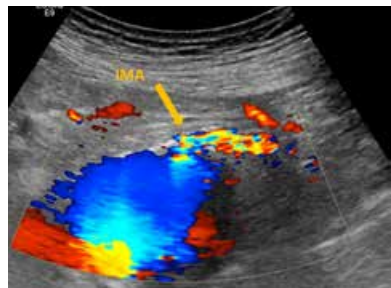
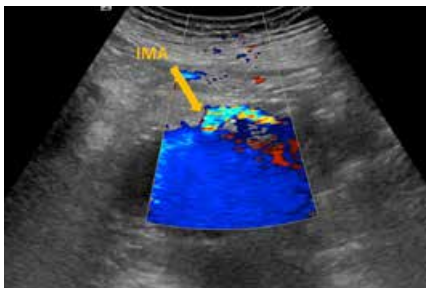
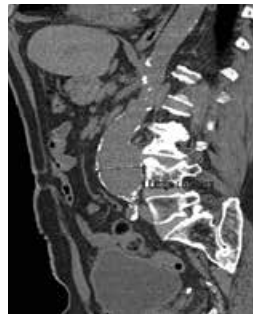
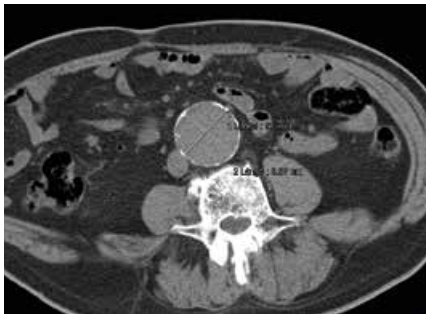
**Procedural**

**steps:**

1. Bilateral femoral cut-down access
2. Catheterization and plug embolization of the IMA
3. EVAR
4. Intraoperative CEUS and endoanchor fixation

**Materials:**

1. Amplatzer vascular plug 6mm (ABBOTT)
2. C3 Excluder RLT 311416; PLC 141200 (Gore)
3. Coda balloon 32mm (COOK Medical)
4. Heli-Fx endoanchor system (Medtronic)



## CASE 19 | OPEN REPAIR FOR COMPLEX ILIAC ANEURYSM

**Live from Essen | Session 4 | 14:30-15:30**

**Patient data:** Male, 54 years

**Operators:** J. Schmidli, V. Makaloski, M. Lainka

**Medical**

**background:** Aneurysm left int. iliac artery

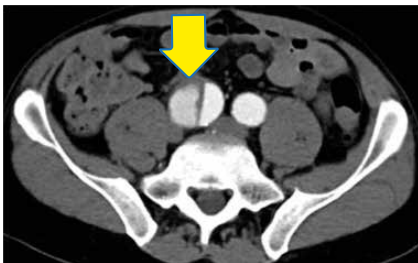
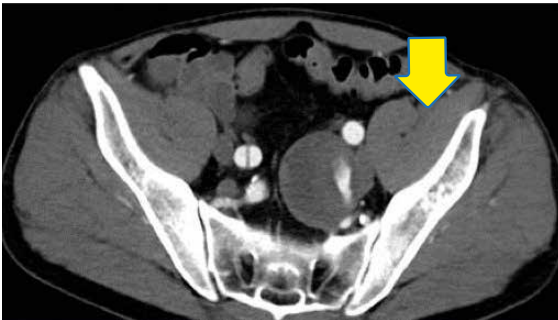
Chronic Type B aortic dissection

St.p. Bentall + FET (E-vita open) for acute Type I AD

**CTA:** Aneurysm of both Iliac arteries

**Treatment:** Open repair of infrarenal aorta and iliac arteries

**Materials:** 1. Hemashield (Getinge)



## CASE 20 | TRANSCAVAL ENDOLEAK EMBOLIZATION

**Live from Hamburg | Session 4 | 14:30-15:30**

**Patient data:** Male, 78 years, P. S.

**Operators:** F. Rohlfs, M. Scheerbaum

**Clinical data:** 1. Progression of aneurysm sac with Type II endoleak  
2. St.p. EVAR 2/2016

**Risk factors:** Arterial hypertension, prostatectomy with radiotherapy 2011, multiple groin surgeries

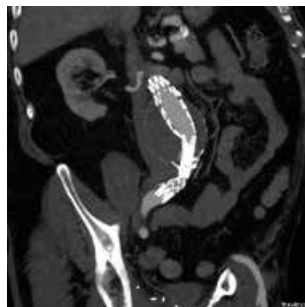
**Procedural**

**steps:**

1. Percutaneous venous and arterial femoral access
2. CT fusion, puncture of the aneurysm sac via inferior caval vein
3. Angiogram of the endoleak
4. Coilembolisation; liquid embolization with glue

**Materials:**

1. Nester Coils (COOK Medical)
2. Brockenbrough needle (COOK Medical)







# LIVE CASE TRANSMISSION CENTERS

## BERLIN | DEUTSCHES HERZZENTRUM BERLIN

---

Jörg Kempfert  
Axel Unbehaun

## ESSEN | UNIVERSITÄTSKLINIKUM ESSEN

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Ender Demircioglu  
Daniel Dirkman  
Mohamed El Gabry  
Guido Herbon  
Lisa Himpel  
Rolf Alexander Jánosi  
Clemens Kehren  
Stefanie Klenke  
Tim Knüfermann  
Tomas Kozmik  
Martin Lainka

Alexander Lind  
Fanar Mourad  
Jürgen Peters  
Tienush Rassaf  
Bernd Schönfelder  
Sharaf-Eldin Shehada  
Matthias Thielmann  
Konstantinos Tsagakis  
Wilko Weißenberger  
Daniel Wendt  
Wolf-Ingo Wiese

## HAMBURG | UNIVERSITÄRES HERZZENTRUM HAMBURG

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Stephan Diedrichs  
Franziska Heidemann  
Jens Kubitz  
Giuseppe Panuccio  
Fiona Rohlffs  
Martin Scheerbaum  
Leonie Schulte-Uentrop

# LIVE CASE TRANSMISSION CENTERS

## PARIS | L'HÔPITAL MARIE LANNELONGUE

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Stephan Haulon  
Dominique Fabre

## PHILADELPHIA | PENN HEART AND VASCULAR CENTER

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Joe Bavaria  
Nimesh Desai

## REGENSBURG | UNIVERSITÄTSKLINIKUM REGENSBURG

---

Kyriakos Oikonomou  
Karin Pfister

## GUEST OPERATORS

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Luca Bertoglio, *Milan, Italy*  
Michael Borger, *Leipzig, Germany*  
Roberto Chiesa, *Milan, Italy*  
Sebastian Debus, *Hamburg, Germany*  
Gebrine El Khoury, *Brussels, Belgium*  
Alexandro Hoyer, *Leipzig, Germany*  
Vladimir Makaloski, *Bern, Switzerland*  
Tara Mastracci, *London, United Kingdom*  
Kenji Minatoya, *Kyoto, Japan*  
Yutaka Okita, *Kobe, Japan*  
Enrico Rinaldi, *Milan, Italy*  
Jürg Schmidli, *Bern, Switzerland*  
Nikolaos Tsilimparis, *Munich, Germany*  
Sabine Wipper, *Hamburg, Germany*



# AORTIC LIVE 5

# 2018

29–30 October 2018  
Congress Center Essen, Germany



Photo: Mike Henning

## VENUE

**MESSE ESSEN GmbH**  
Congress Center Ost  
Messeplatz 1  
45131 Essen

## CONGRESS ORGANISATION

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