



## Branch for IMA in branched EVAR

- when and why?



P M Kasprzak, K. Pfister  
Department of Vascular Surgery  
Endovascular Surgery  
University Hospital Regensburg, Germany

Disclosures Dr. Kasprzak (grants, speaker fee, development)  
Cook, Gore, Vascutek, Bard, Medtronic, Maquet, UCB, Bentley

# Adverse consequences of internal iliac artery occlusion during endovascular repair of abdominal aortic aneurysms

Laura A. Karch, MD, Kim J. Hodgson, MD, Mark A. Mattos, MD, William T. Bohannon, MD, Don E. Ramsey, MD, and Robert B. McLafferty, MD,

## Incidence of symptomatic colon ischemia after endovascular AAA repair

---

	<i>Symptomatic colon ischemia</i>
Entire series (N = 96)	3/96 (3.1%)
<u>Unilateral IIA occlusion (N = 20)</u>	<u>1/20 (5.0%)</u>
<u>Bilateral IIA occlusion (N = 2)</u>	<u>2/2 (100%)</u>

---

# Overt ischemic colitis after endovascular repair of aortoiliac aneurysms

Patrick J. Geraghty, MD, Luis A. Sanchez, MD, Brian G. Rubin, MD, Eric T. Choi, MD, M. Wayne Flye, MD, John A. Curci, MD, Robert W. Thompson, MD, and Gregorio A. Sicard, MD, *St Louis, Mo*

*JVS 2004*

- 233 Pt
- CI 1.7% (4 Pts)
- 50% Mortality

# Colon ischemia following abdominal aortic aneurysm repair in the era of endovascular abdominal aortic repair

Jean-Pierre Becquemin, MD, Marek Majewski, MD, Nicoletta Fermani, MD, Jean Marzelle, MD, Pascal Desgrandes, MD, Eric Allaire, MD, and Françoise Roudot-Thoraval, MD, *Creteil, Paris*

*JVS 2008*

- 1174 Pt (492 EVAR)
- Low rate of CI (2.9%) *...but...*
- 53% 30-day Mortality
- Independent factors for CI:  
Rupture/ OR Duration / Crea >200  $\mu\text{mol/l}$



# Possible Indication for IMA Branch

- High-grade stenosis / occlusion of the Celiac Trunk
- High-grade stenosis / occlusion / dissection of the SMA
- Bilateral occlusion of the Hypogastric Artery
- IMA  $\geq$  4mm

# IMA / Lumbar Branch

- High-grade stenosis / occlusion of the Celiac Trunk
- High-grade stenosis / occlusion dissection of the SMA
- Bilateral occlusion of the Hypogastric Artery
- IMA  $\geq$  4mm

2 TAAA

1 Perirenal AAA

1 Infrarenal AAA

# Preserving patent IMA

- Igari K et al.

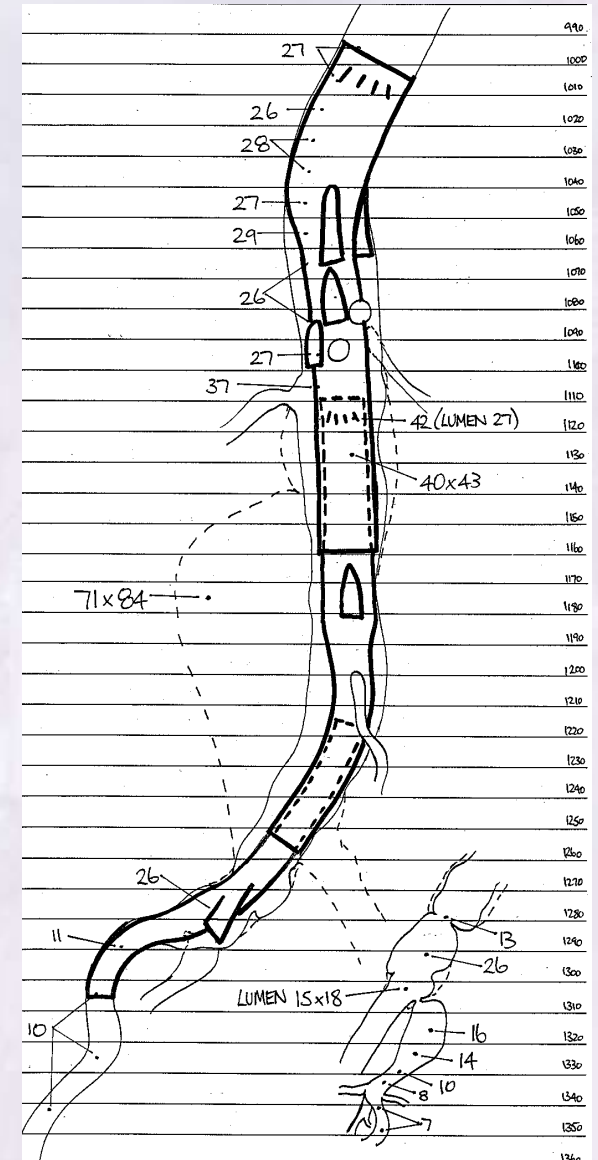
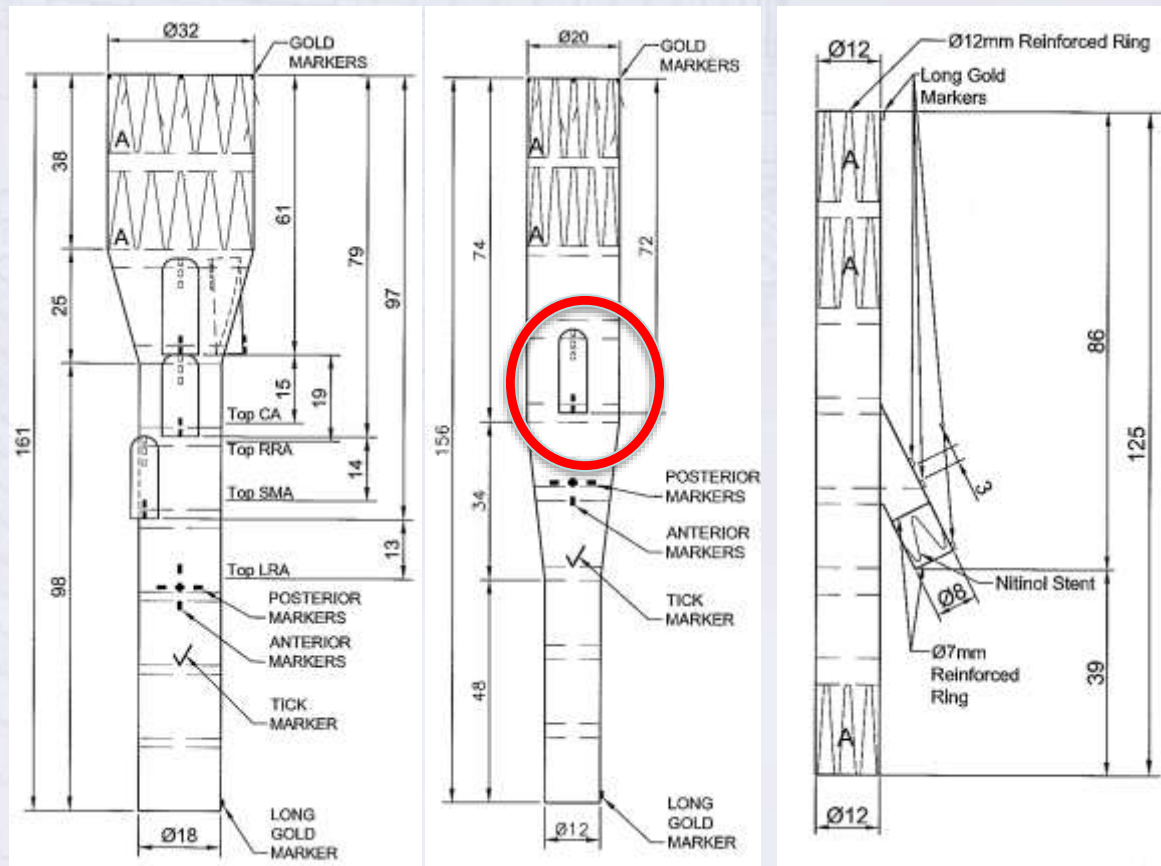
Two cases of successful inferior mesenteric artery preservation with bare metal stent in endovascular iliac artery aneurysm repair  
Ann Vasc Dis 2013; 6: 674-7

- Donas KP et al.

Novel indication for chimney graft placement in the inferior mesenteric artery in AAA patient with coexistent bilateral internal iliac artery occlusion  
J Endovasc Ther 2014; 21:548-52

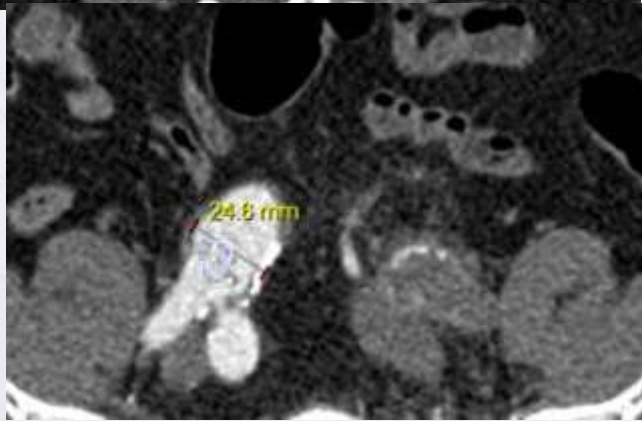
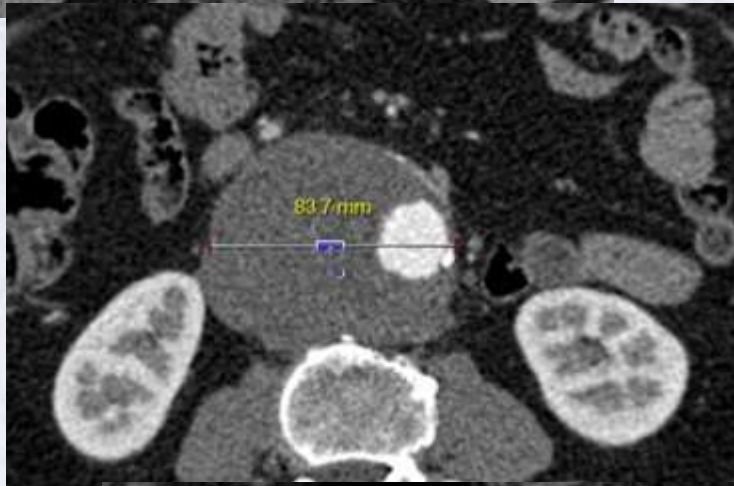
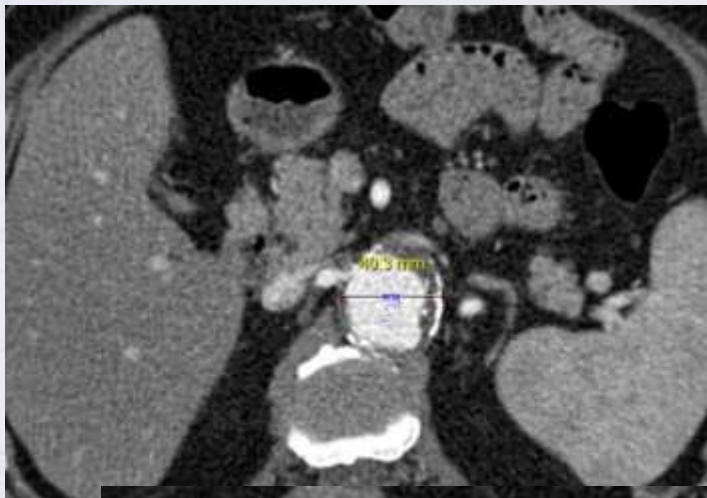
Open after 12 mth's

# Downward 6mm branch (first implantation 2009)



Bridging Stent Fluency Plus® / BeGraft Plus®



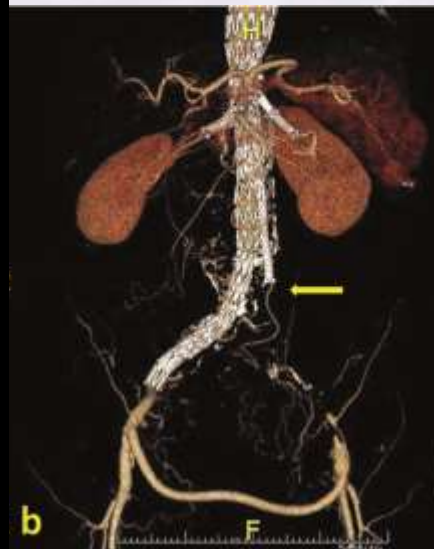


M., 57 y.

Occlusion  
left iliac axis

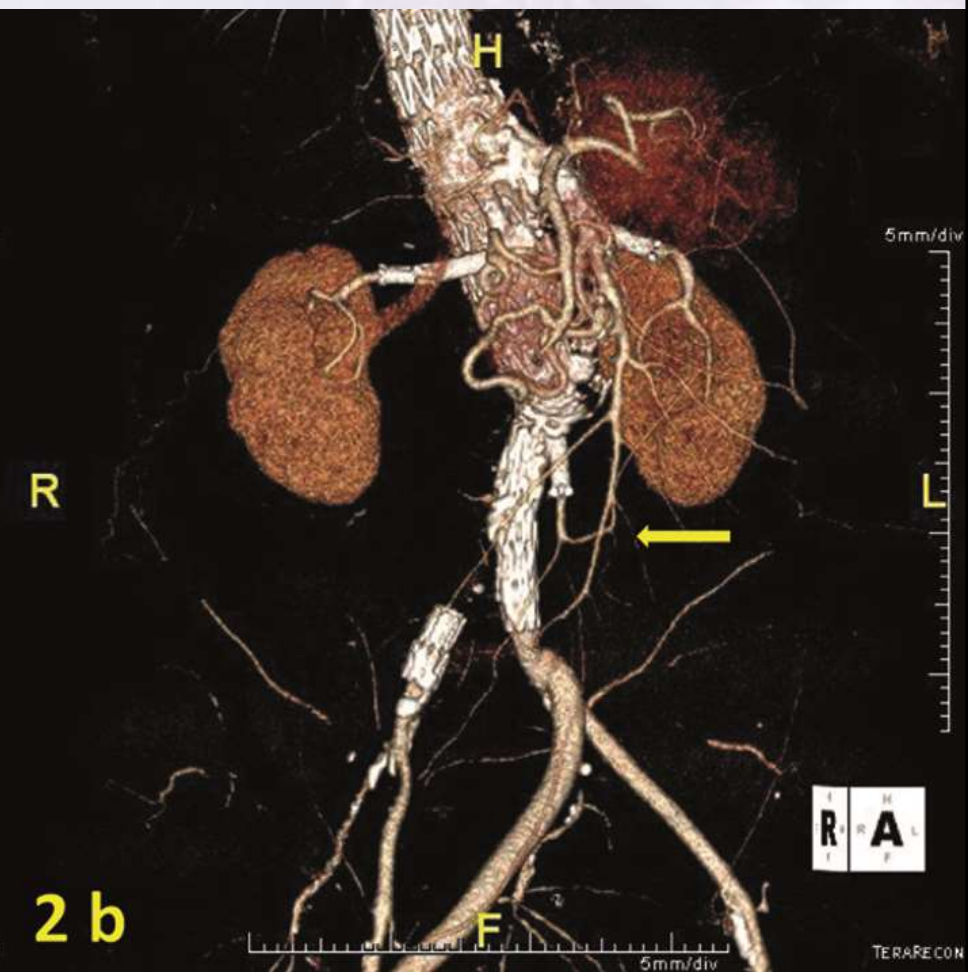
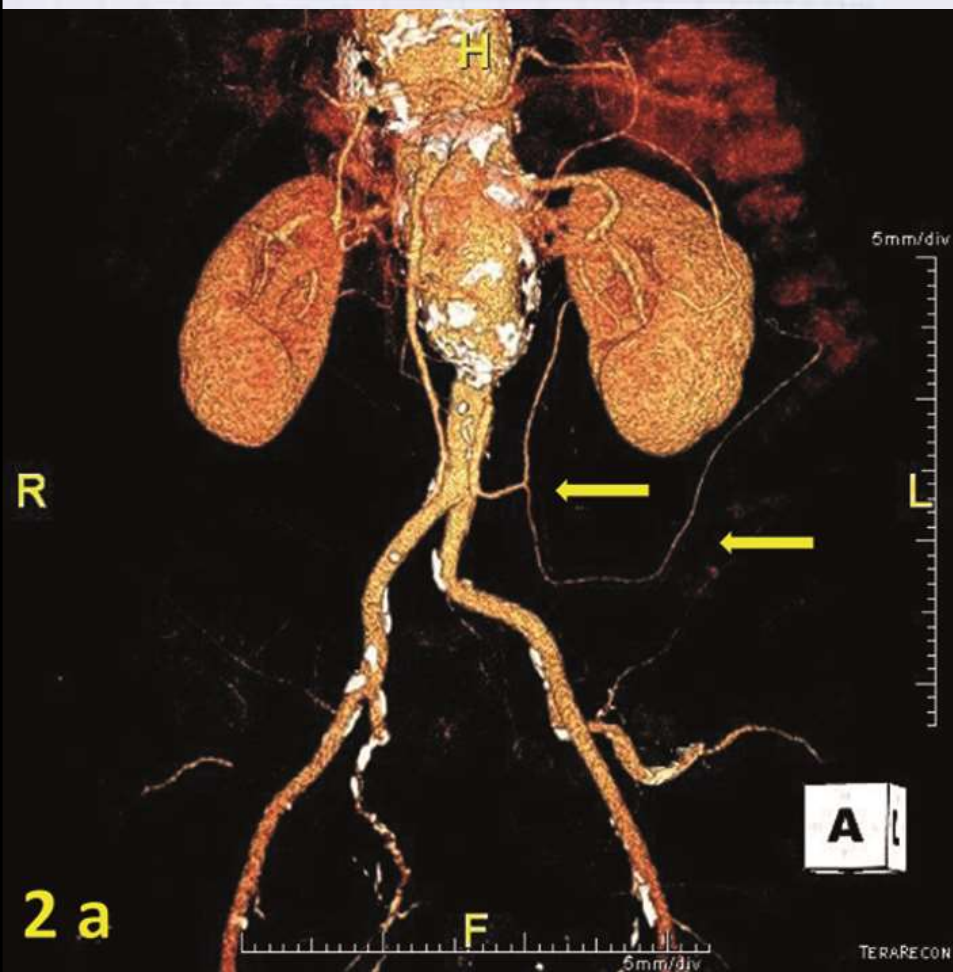
Stenosis  
right hypogastric

IMA 4,5mm

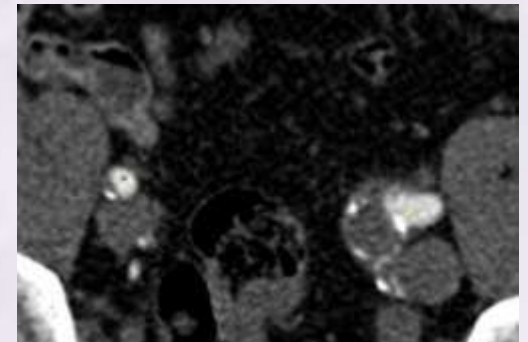
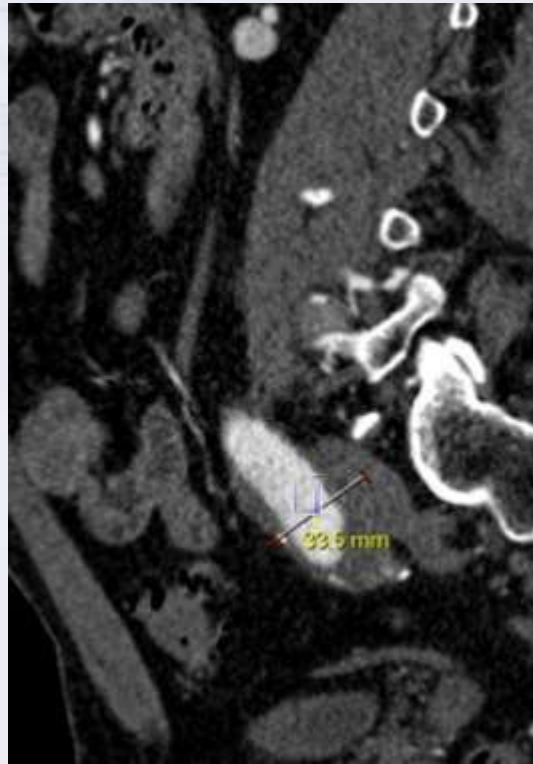


M, 64 y., TAAA 6,6cm

Occlusion CT  
Stenosis SMA  
Stenosis Hypogastric  
IMA 4mm



M, 60 y., Aorto-iliac Aneurysm 5cm  
with bilat. occluded Internal Iliac Artery,  
Collaterals over IMA and Lumbar Artery







Brummer, Georg  
4/10/1949  
01264414  
Series: 7

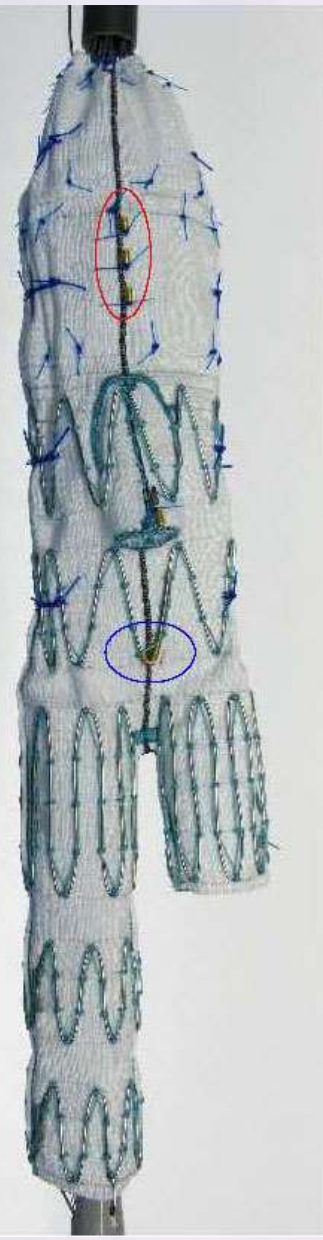
Slices: 1-632  
Slice Thickness: 1.0 mm



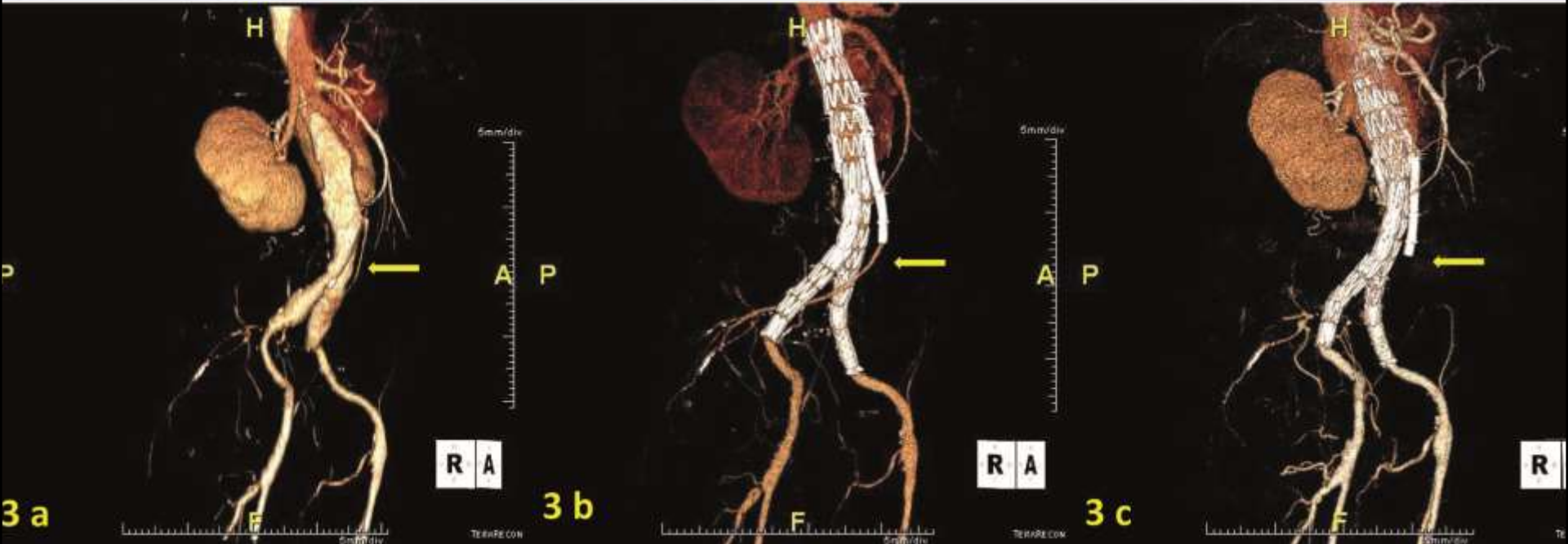
Volume Rendering

3

Aorta abd CD 1.0 B30f  
10/14/2009  
10:24 AM



Asymptomatic  
IMA occlusion  
after 2 years





# IMA Branch in BEVAR

Prof. Dr. P.M. Kasprzak  
PD Dr. W. Schierling  
Prof. Dr. K. Pfister  
Department of Vascular  
Endovascular Surgery  
University Hospital  
Regensburg



Products used: Cook, Bentley, Gore, Maquet, Angiodynamics, Cordis, Vascutek, Abbott, Philips

# Results IMA Branch

- Perioperative: no mortality, no complications
  - FU 36 mth's (3-96)
    - 1 IMA Bridging Stent – asymptomatic occlusion after 24 mth's
- No aneurysm related mortality
- 2 Patients deceased after two and five years

## Additional IMA-Branch

- rarely indicated (<1%)

# Additional IMA-Branch

- rarely indicated (<1%)
- promising early and mid-term results





## Additional IMA-Branch

- rarely indicated (<1%)
- promising early and mid-term results
- additional benefit preventing Type II endoleak in dominant IMA



# Inferior Mesenteric Artery Embolization Before Endovascular Aortic Aneurysm Repair Using Amplatzer Vascular Plug Type 4

René Müller-Wille · Wibke Uller · Holger Gößmann · Peter Heiss ·  
Philipp Wiggermann · Marco Dollinger · Piotr Kasprzak · Karin Pfister ·  
Christian Stroszczynski · Walter A. Wohlgemuth

- 72 Pt
- Significantly reduced Type II EL  
0/31 vs 11/43;  $p=0.002$