



Endotrash or Endotreasure: Embolisation of the False Lumen, Does it work?

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CRITICAL ISSUES

in aortic endografting 2016

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Disclosures



- * Research-grants, travelling, proctoring speaking-fees, IP with Cook.
- * Discussion of investigational devices, which are not FDA-approved.

FL-Aneurysm in Chronic AD



Long-Term Predictors of Descending Aorta Aneurysm Change in Patients With Aortic Dissection

Jong-Min Song, MD, PhD,* Sung-Doo Kim, MD

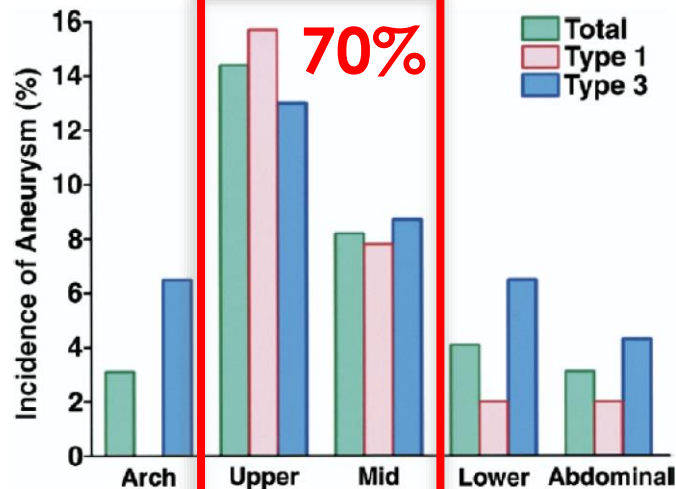
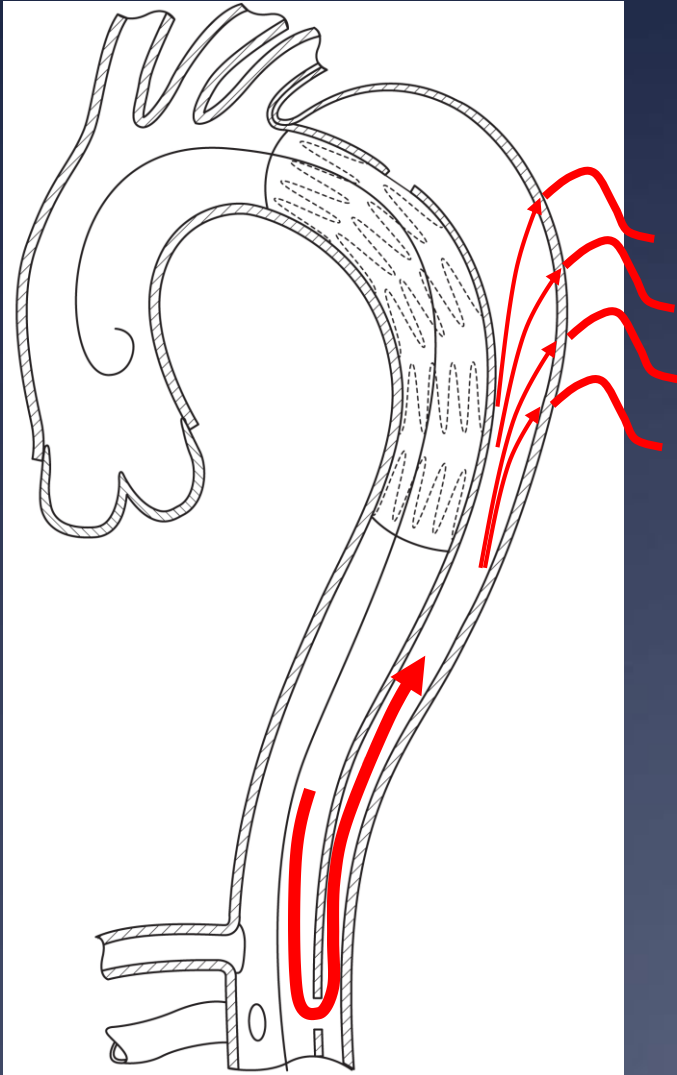


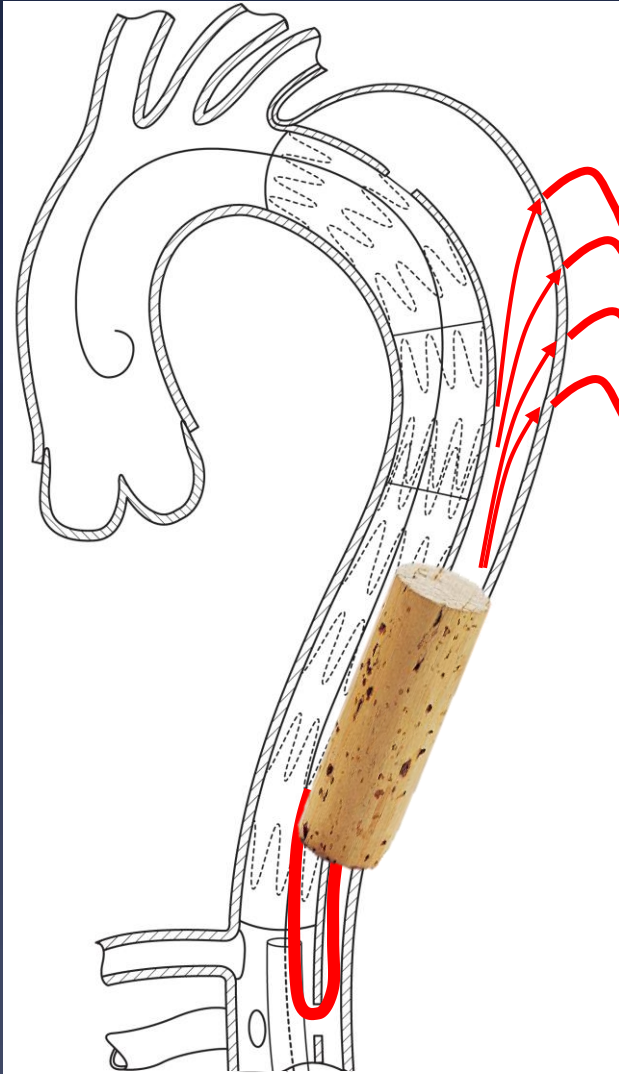
Figure 1 Incidence of Distal Aorta Aneurysm

Incidences of aneurysm at the aortic arch; upper, mid, and lower descending thoracic aorta; and abdominal aorta in patients with type 1 and type 3 aortic dissection.

Direct False Lumen Occlusion



Direct False Lumen Occlusion

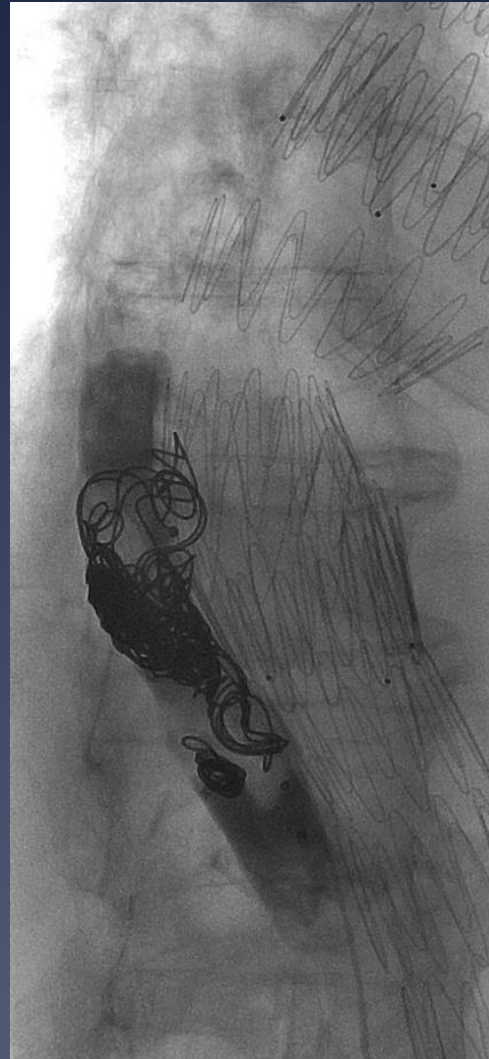


- * TEVAR-extension to CA
- * Embolisation or Knickerbocker
- * Separates aortic FL-compartments!
- * Does not restrict further distal techniques like fenestrated EVAR

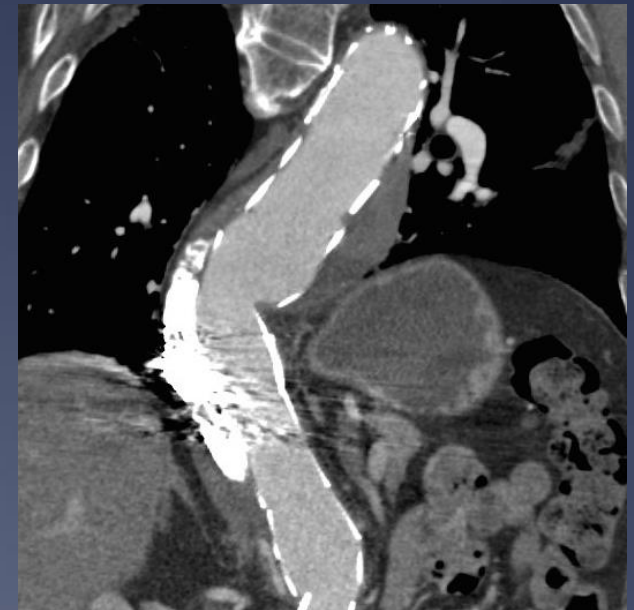
Coils, Plugs, Glue



Preop. CT



Intervention



Postop. CT

Iliac Occluder



Outcomes after false lumen embolization with covered stent devices in chronic dissection

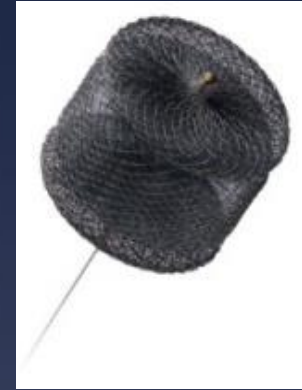
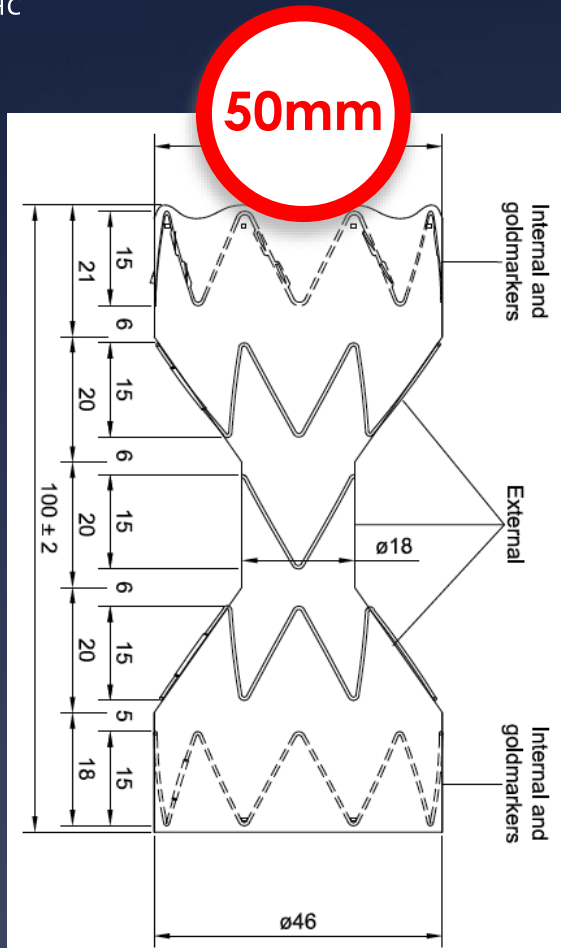
Jahanzaib Idrees, MD, Eric E. Roselli, MD, Susan Shafiq, MD, Bruce W. Lytle, MD, Cleveland, Ohio

Maximum Diameter: 24mm!



	Outcome ^a (N = 21)
30-day mortality	1 (4.7)
Follow-up, median months	26 (2-42)
Aortic rupture	0
Complete thrombosis after index embolization	15 (71)
Partial thrombosis	6 (29)
Endovascular reintervention (re-embolization)	4 (19)
Complete thrombosis after further embolization	19 (90)
Failure of thrombosis	0
Reduction in postoperative max descending diameter	13 (62)
Shrinkage, median mm	4.6 (0.2-27)

Candy-Plug



22mm Amplatzer plug II



22mm ZIP iliac-occluder





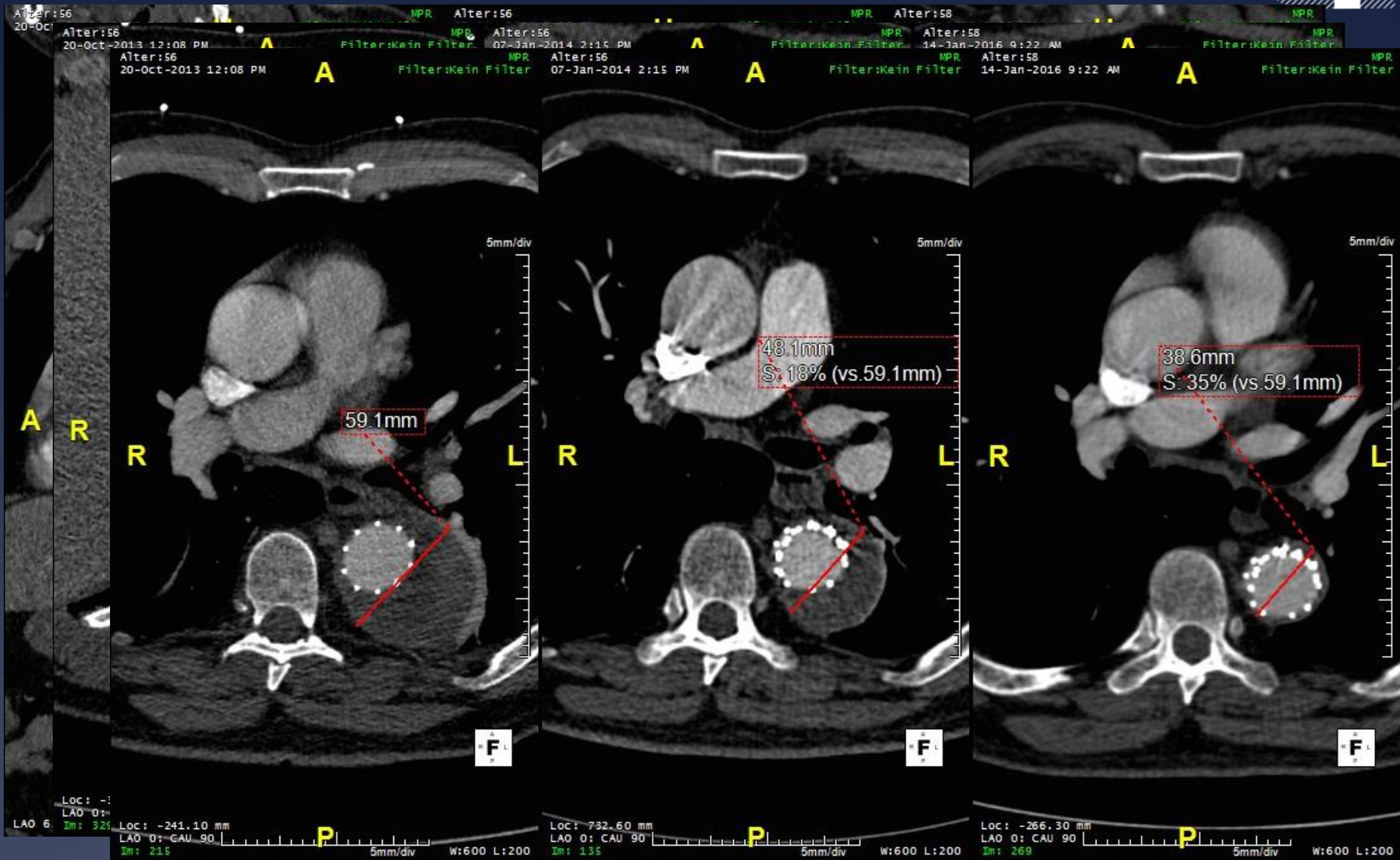
UNIVERSITY HEART CENTER
UNIVERSITY OF CALIFORNIA



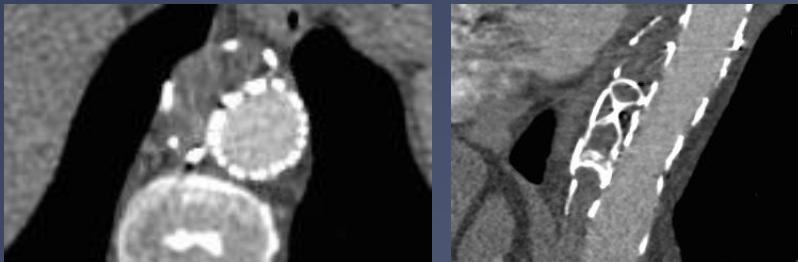
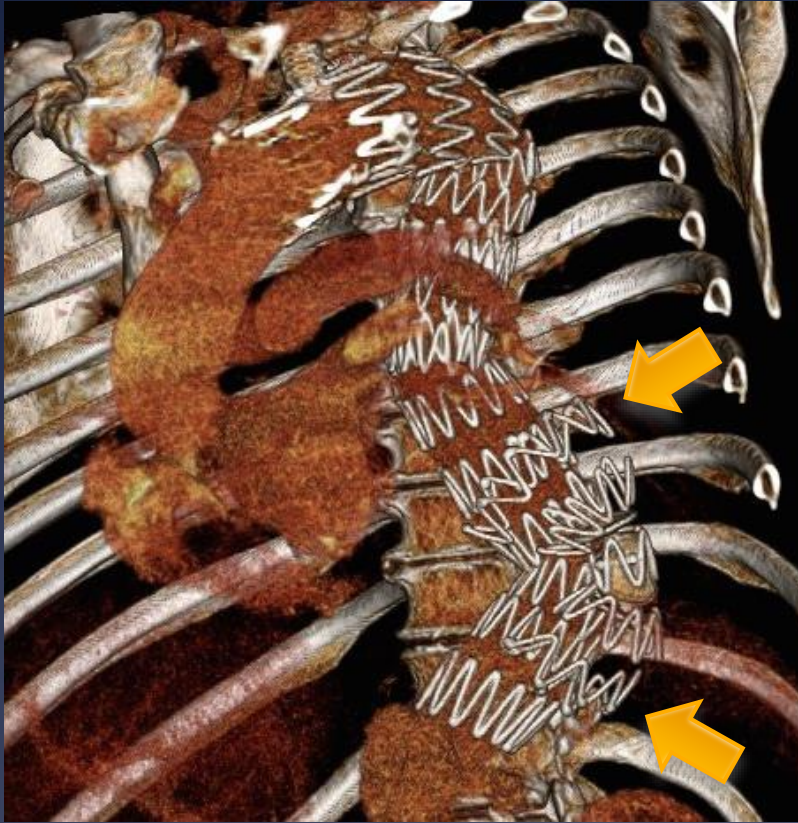
Transcatheter Aortic Valve Replacement
TAVI

Transcatheter Aortic Valve Replacement
TAVI

Candy-Plug



Candy-Plug Multicenter



- * N=21
- * Technical success 21/21
- * No rupture
- * No SCI
- * No early mortality
- * 3 reinterventions for continuous perfusion
- * Secondary FL-thrombosis 20/21 patients

Candy Plug Hamburg Results



- * October 2013 – March 2016: 16 patients
- * Pathology: 9 Type B, 7 Type A
- * 12 elective, 2 urgent, 2 ruptured
- * Technical success: 16/16
- * Complications: 3/16
 - * 2 groin-hematoma; 1 temp. SCI



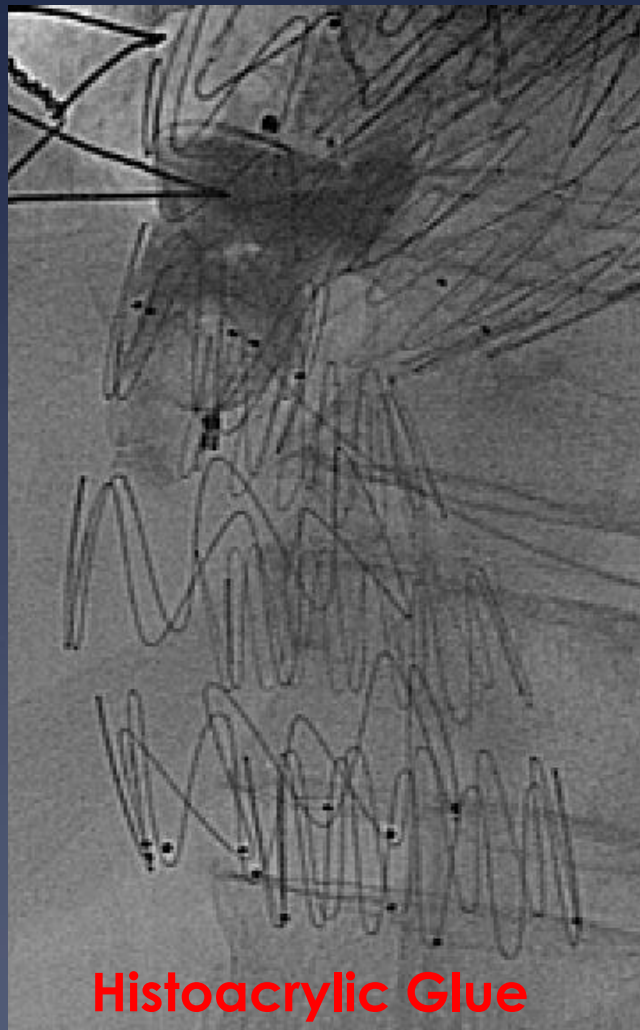
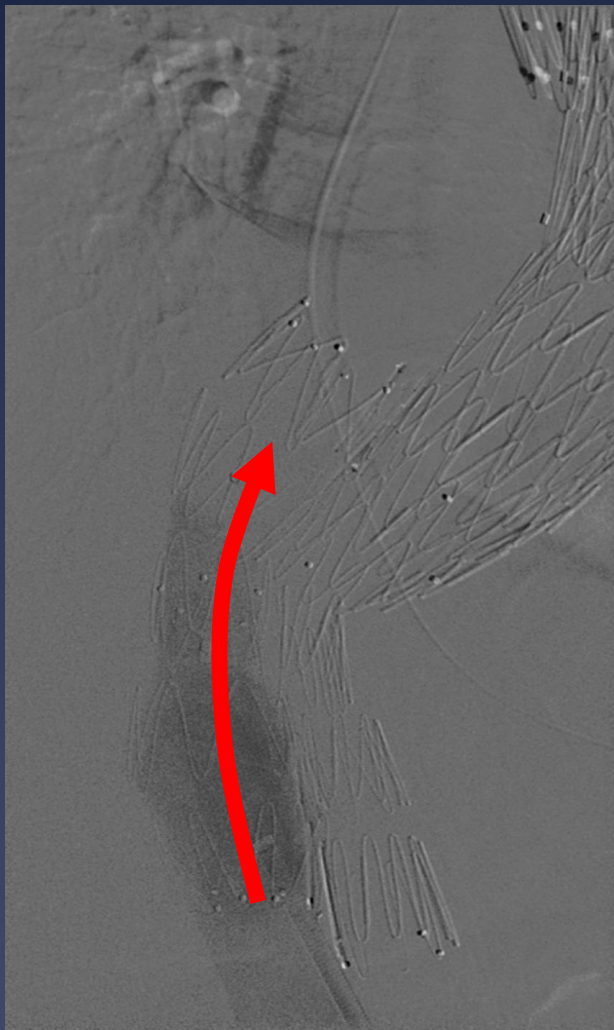
Candy Plug Hamburg Results



- * Lost to FU: 1/16
- * FU < 6m: 6/16
- * 30d mortality: 1/16: rTAAD with FET
- * Complete FL-Thrombosis: 13/16
- * Persistent FL-perfusion on FU: 3/16
- * Reinterventions : 2/16



Candy Plug 2 Reinterventions



Histoacrylic Glue



22mm AVP II



22mm ZIP-occluder

Candy Plug Hamburg Results



- * 1y all cause mortality: 2/10
- * Mean FU (6m and more, 9/16): 13.6m
- * Complete FL-thrombosis: 9/9
- * Diameter reduction (3mm and more): 5/9

patient	Pre-op diameter	Diameter at last FU	development
CP4	70	72	unchanged
CP5	67	38	remodeling
CP6	62	60	unchanged
CP7	64	55	remodeling
CP9	111	91	remodeling
CP10	72	72	unchanged
CP11	64	59	remodeling
CP2	95	81	remodelling
CP8	76	75	unchanged

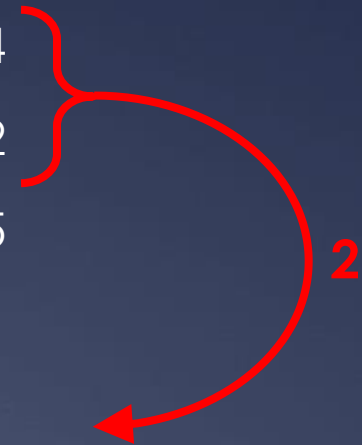


Role of FL-Occlusion:

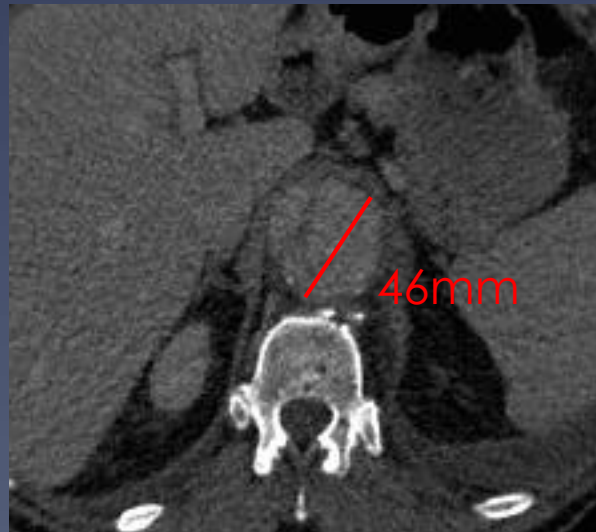
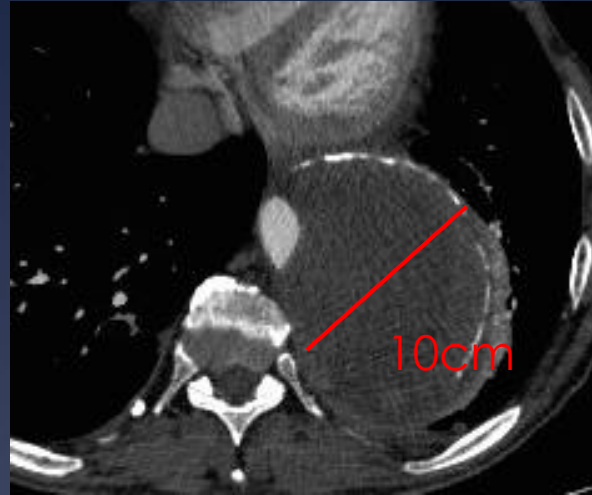


Hamburg 2013-2015:

- * Chronic aortic dissection/failing TEVAR: 39
- * False Lumen Occlusion techniques: 31
 - * Candy-plug 14
 - * Knickerbocker 12
 - * Other (plugs, coils, glue) 5
- * Primary F/B EVAR 8
- * Secondary F/B EVAR 2



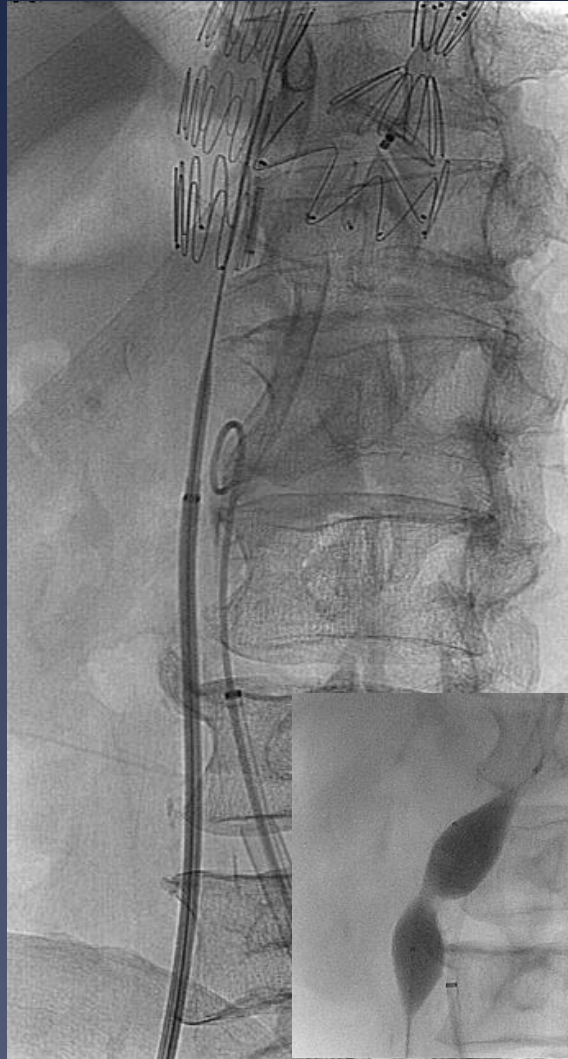
Secondary F/B EVAR



Secondary F/B EVAR



FET, TEVAR+Candyplug

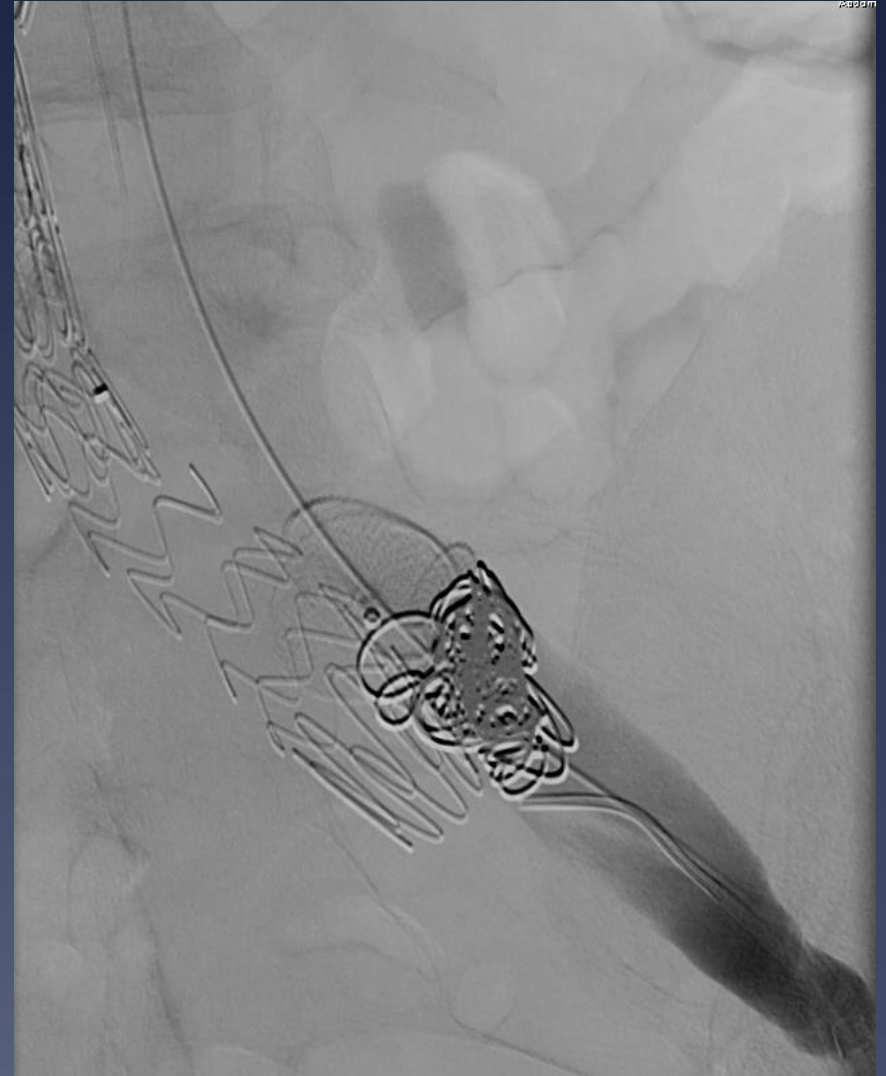


+ Fenestration



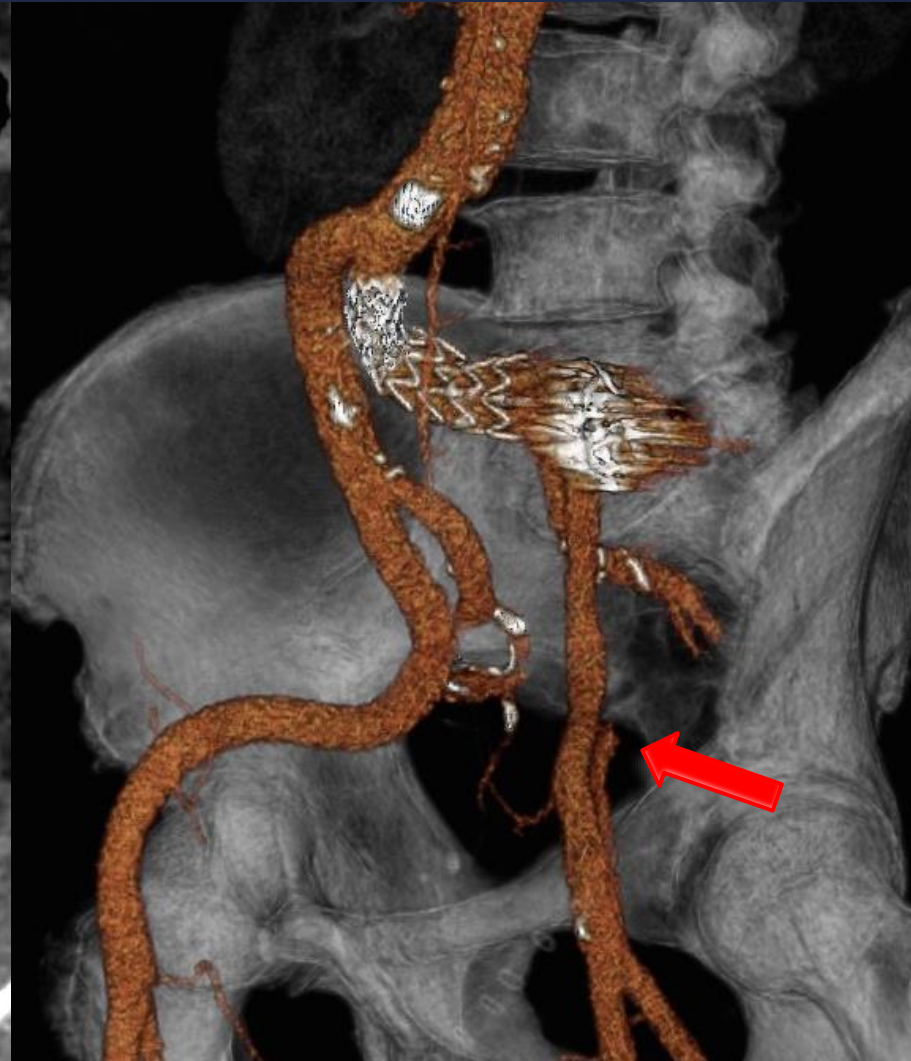
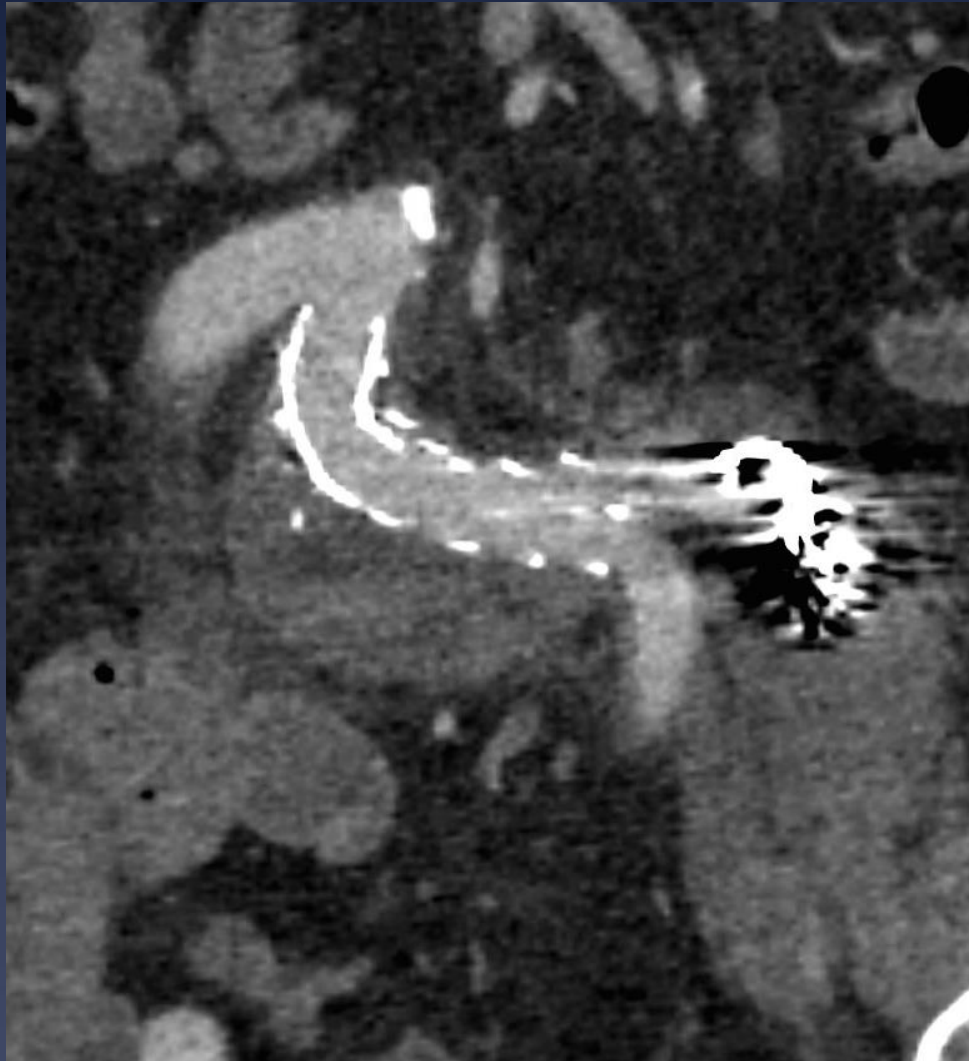
F/B EVAR

Iliac False Lumen Embolisation



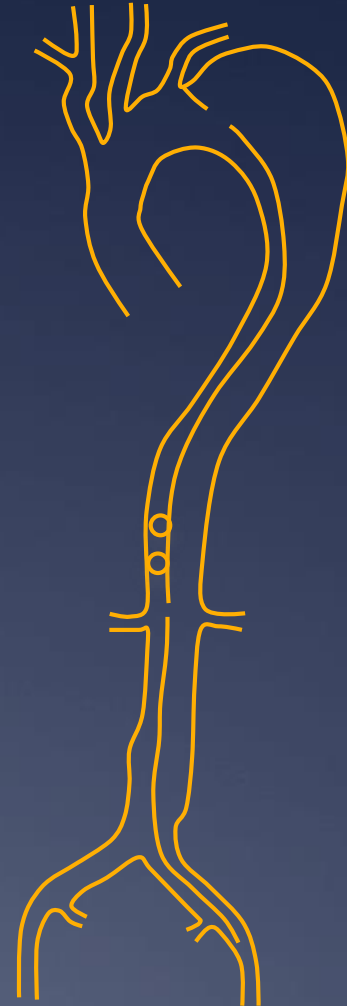
Ballon-occlusion to prevent plug-embolisation

Isolated Iliac Dissection





FL-Aneurysm in CAD



Chronic Dissection Strategy



FL-Aneurysm in CAD



TEVAR to the Celiac



Chronic Dissection Strategy



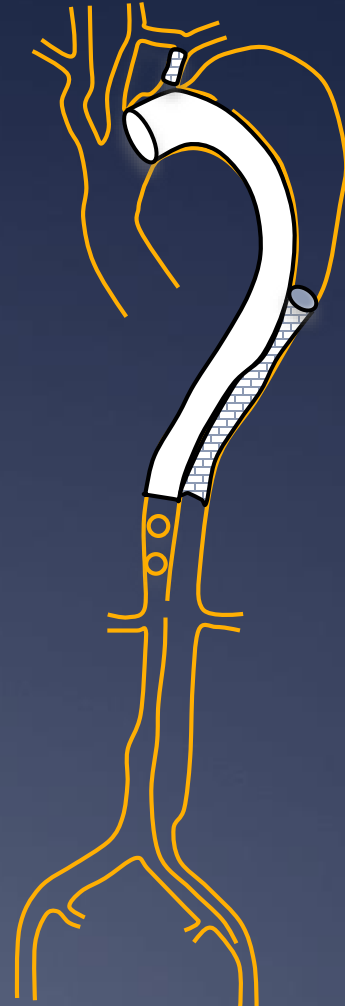
FL-Aneurysm in CAD



TEVAR to the Celiac



+ FL-Occlusion



Chronic Dissection Strategy



FL-Aneurysm in CAD



TEVAR to the Celiac



+ FL-Occlusion



Chronic Dissection Strategy



FL-Aneurysm in CAD



TEVAR to the Celiac



+ FL-Occlusion



Fen/Branch EVAR



Chronic Dissection Strategy



FL-Aneurysm in CAD



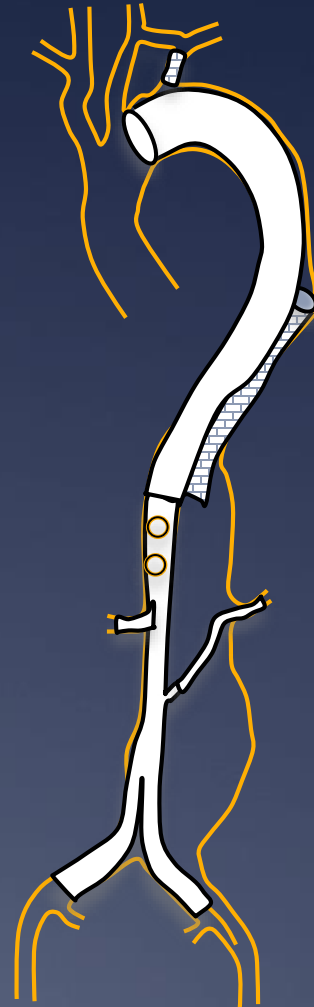
TEVAR to the Celiac



+ FL-Occlusion



Fen/Branch EVAR



Chronic Dissection Strategy



FL-Aneurysm in CAD



TEVAR to the Celiac



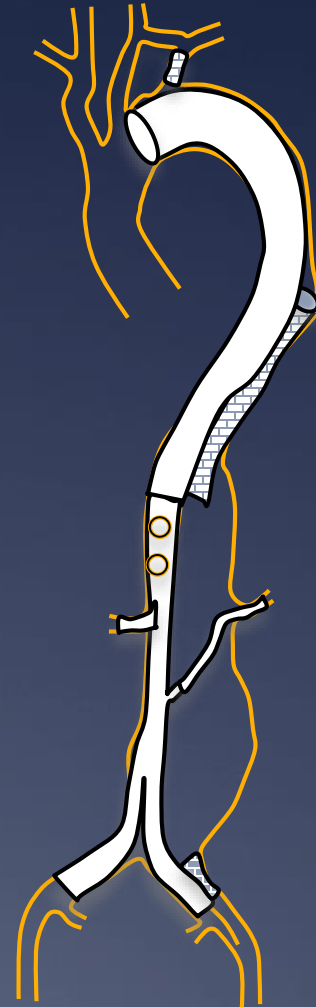
+ FL-Occlusion



Fen/Branch EVAR



+ FL-Occlusion



Conclusion



Does it work ?

* Yes.....

*and it is

- Faster,
- Easier,
- Cheaper,
- Less invasive
- Less radiation
- Fewer complications.