

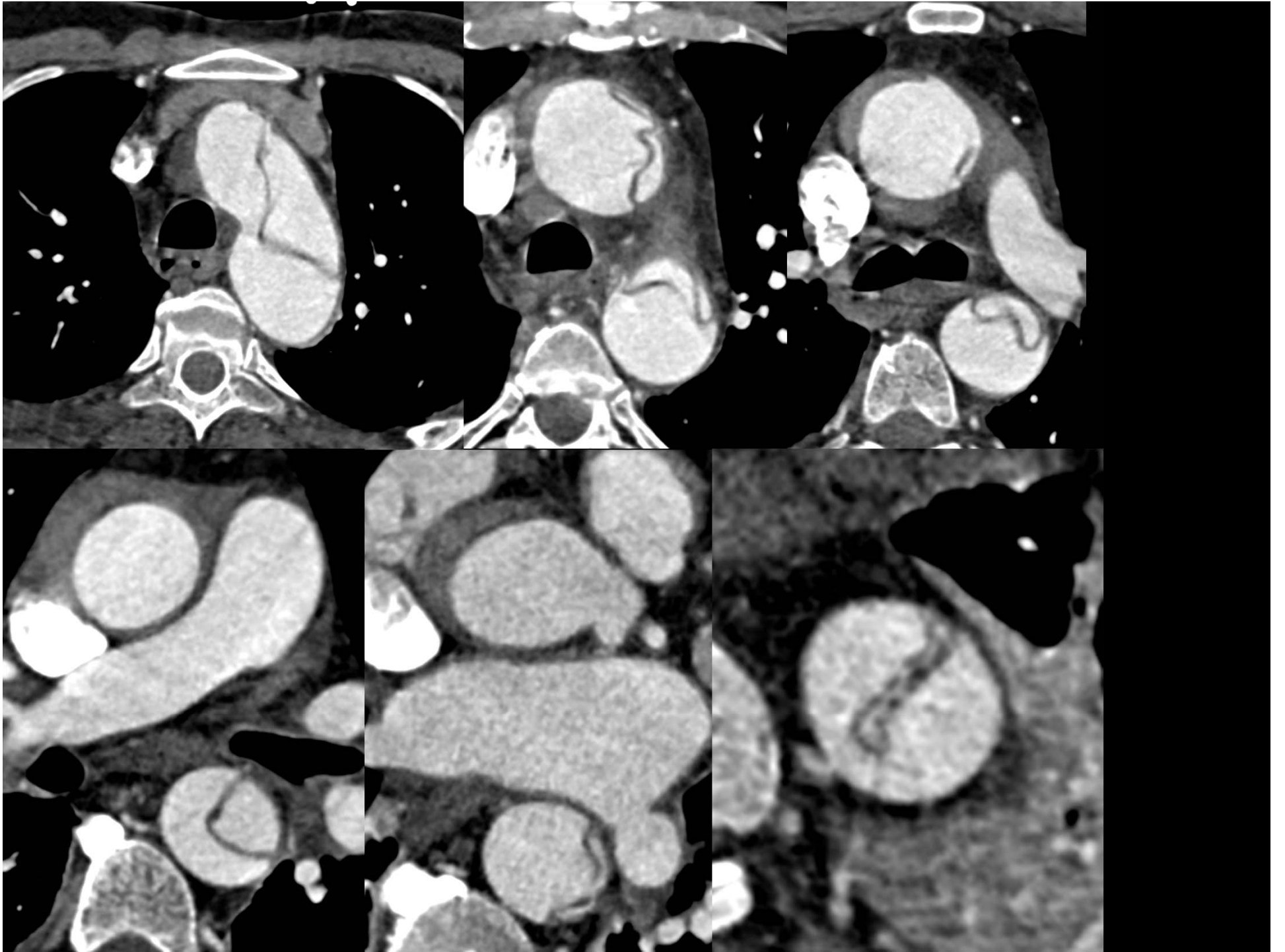
CIRA Case of the Week

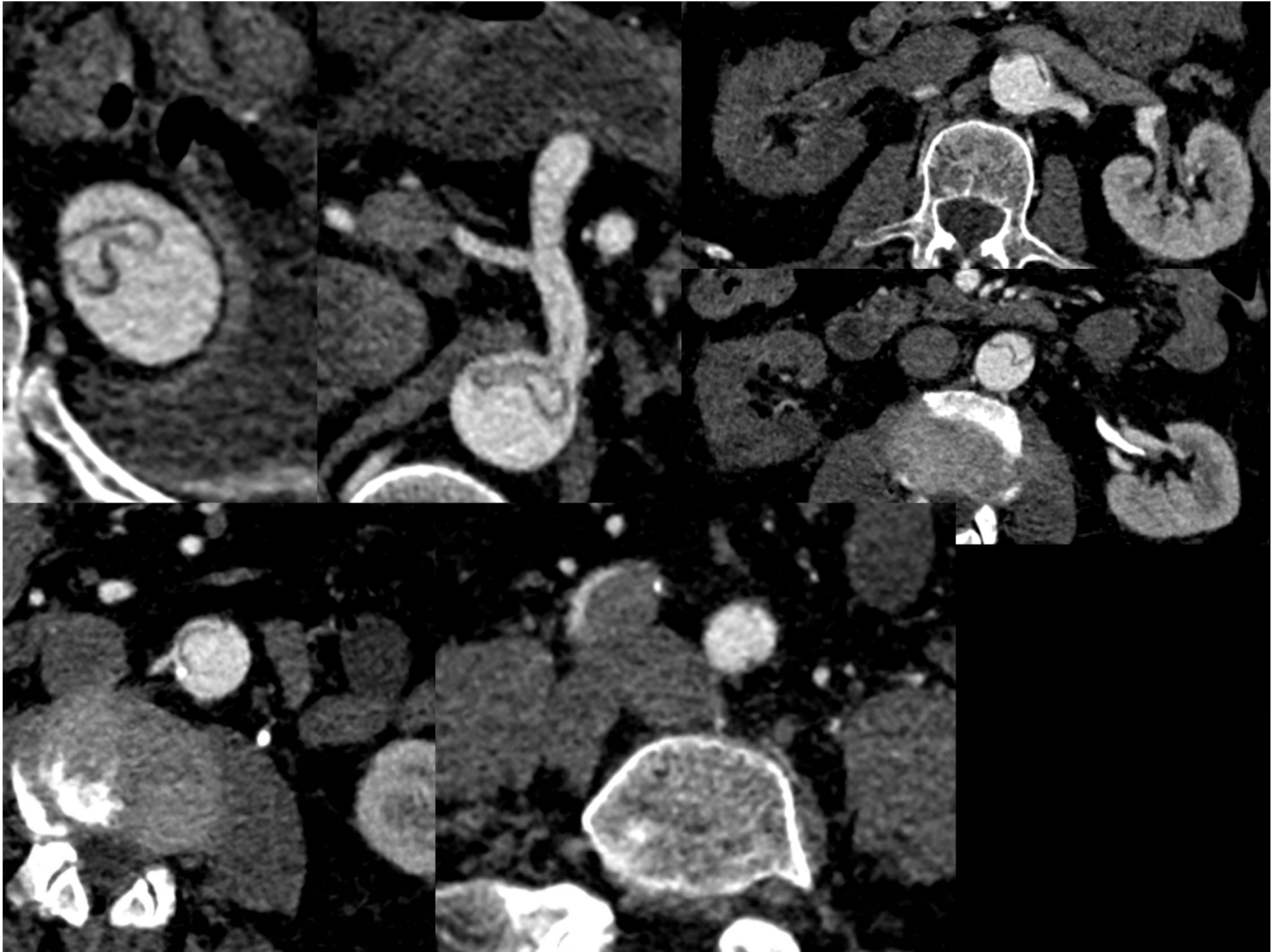
May 2017

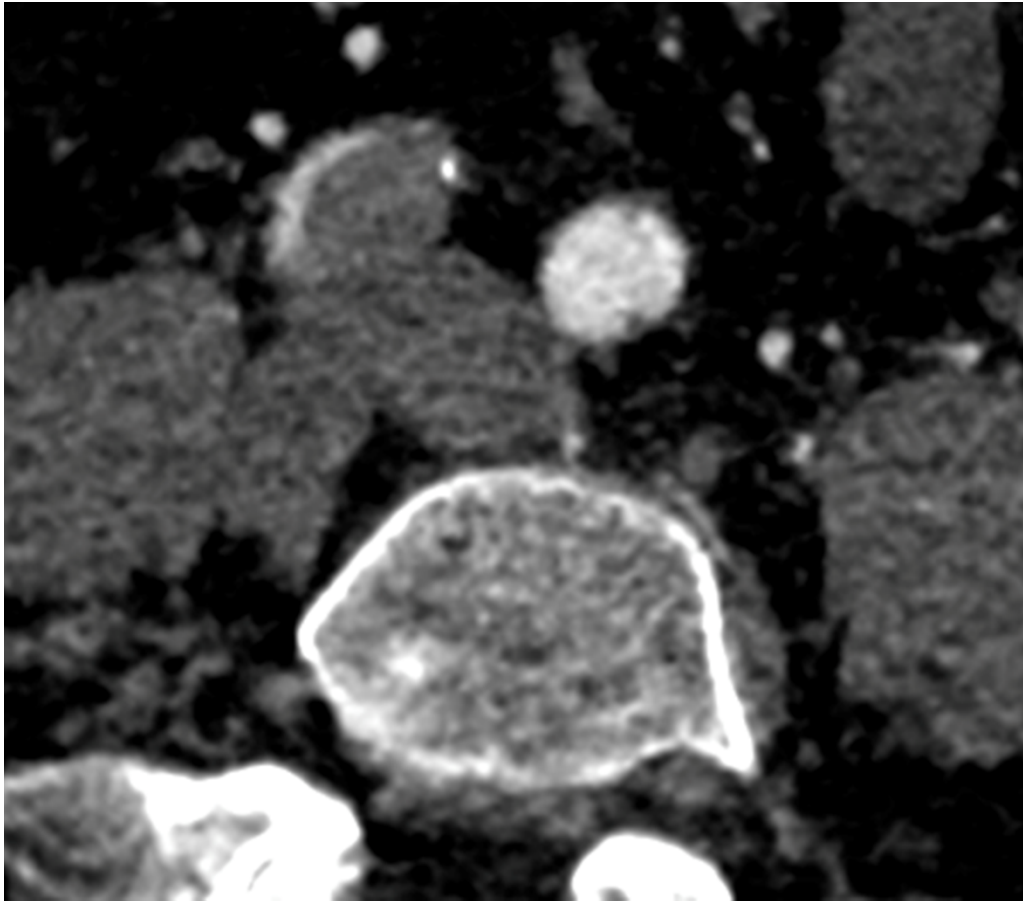
Case courtesy of Dr. Nevin de
Korompay
UBC

Clinical History

- 68 year old male
- Severe chest and back pain
- Hypertension
- Jehovah's Witness
 - Refuses any blood or blood products
 - No cell saver







Treatment Options

- Surgery >90% mortality
- Leave alone >90% 30 day mortality
- Ascending graft?

Ascending Aortic Stents

“Endovascular management of ascending aortic pathology.” Kolvenbach, et al. Journal of Vascular Surgery, May 2011

“The first endovascular repair of an acute type A dissection using an endograft designed for the ascending aorta”. Thompson, et al. Journal of Vascular Surgery, Jan 2012

Ascending Aortic Stents

Author	Patients	Device
1. Dake et al 1999	4 patients	2.5 cm long Z-shaped stent elements (Cook Medical) interconnected with 2-0 polypropylene sutures to form a stent of the appropriate length. This metallic framework was covered with woven polyester graft material (Cooley Veri-Soft, Meadox Medicals, Oakland, N.J.)
2. Kato et al 2001	10 patients	Diameter 30-36 mm length 5-7.5 cm - Z-stents (Cook Medical) covered with thin-wall expanded polytetrafluoroethylene (Impra, Tempe, Ariz)
3. Wang et al 2003	1 patient	No info in abstract
4. Ihnken et al 2004	1 patient	Excluder 40 X10 mm (Gore)
5. Zhang et al 2004	1 patient	38 mm in diameter; silk supported by a series of stainless steel Gianturco Z-stents
6. Imoto et al 2005	1 patient	a self-expanding, 50 mm long, 40 mm diameter, Dacron-covered, Z-stent; Cook Incorporated
7. Zimpfer et al 2006	1 patient	Custom stent graft (Jotec, Germany)
8. Senay et al 2007	1 patient	Medtronic stent graft TC4646B100X; 46 mm
9. Ye et al 2011	45 patients (10 patients DeBakey type 1)	10 pt: Aortic cuff diameter 32-42 length 60-90 cm
10. Metcalfe et al 2012	1 patient	34 mm diameter Zenith Ascending Endovascular Graft (Cook Medical)
11. Pontes et al 2013	1 patient	40 mm diameter stent graft, containing an 8 cm covered segment and a 2 cm uncovered free flow segment
12. Ronchey et al 2013	4 patients	Zenith TX2 (Cook Medical) was used in one case, in three cases a custom made Zenith ascending device
13. Lu et al 2013	41 patients	Zenith TX2 Pro-Form Endografts (Cook Medical)
14. Shabaneh et al 2013	1 patient	40 mm diameter, 81 mm long Zenith TX2 TAA Endovascular Graft (Cook Medical)

- Dedicated Ascending Aortic Graft
- Nitinol and polyester
- 38 x 68 mm
- Not previously used in North America
- Rushed from TGH

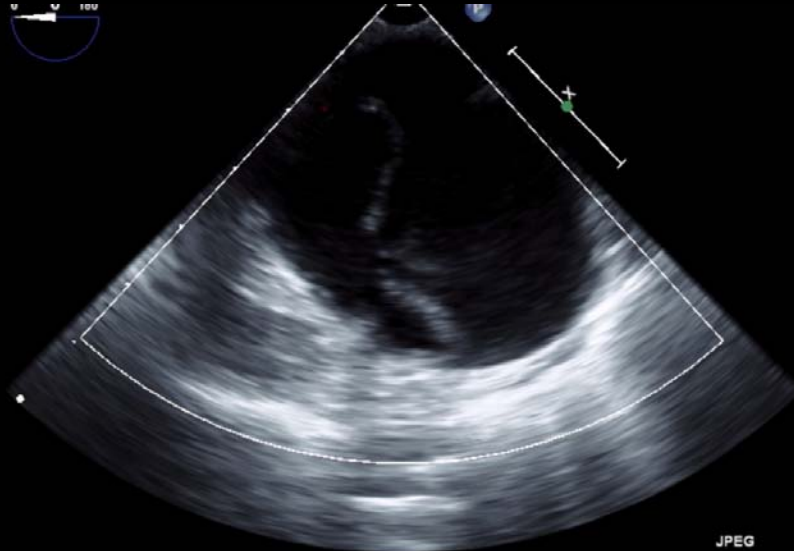




LT

65%
C 50
P Off
Res

CF
59%
4.4MHz
WF High
Med

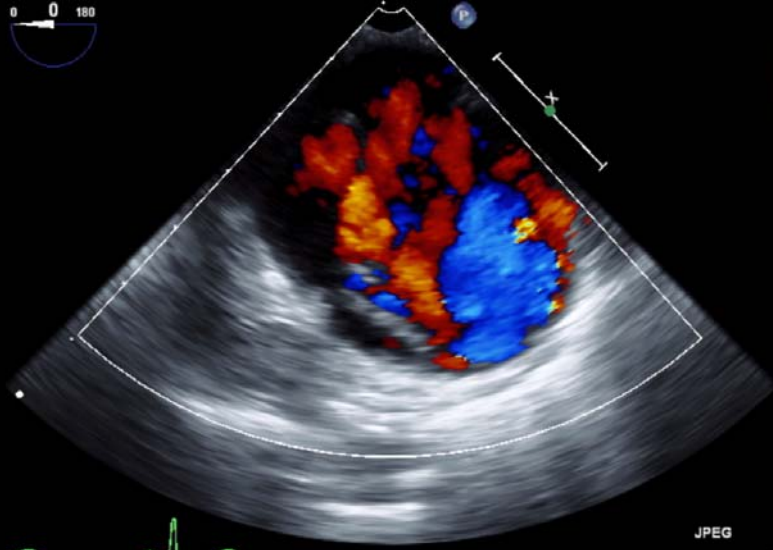


Zoom: 136%
Im: 2/24 PAT T: 37.0C

JPEG
2015-10-08, 53 bpm

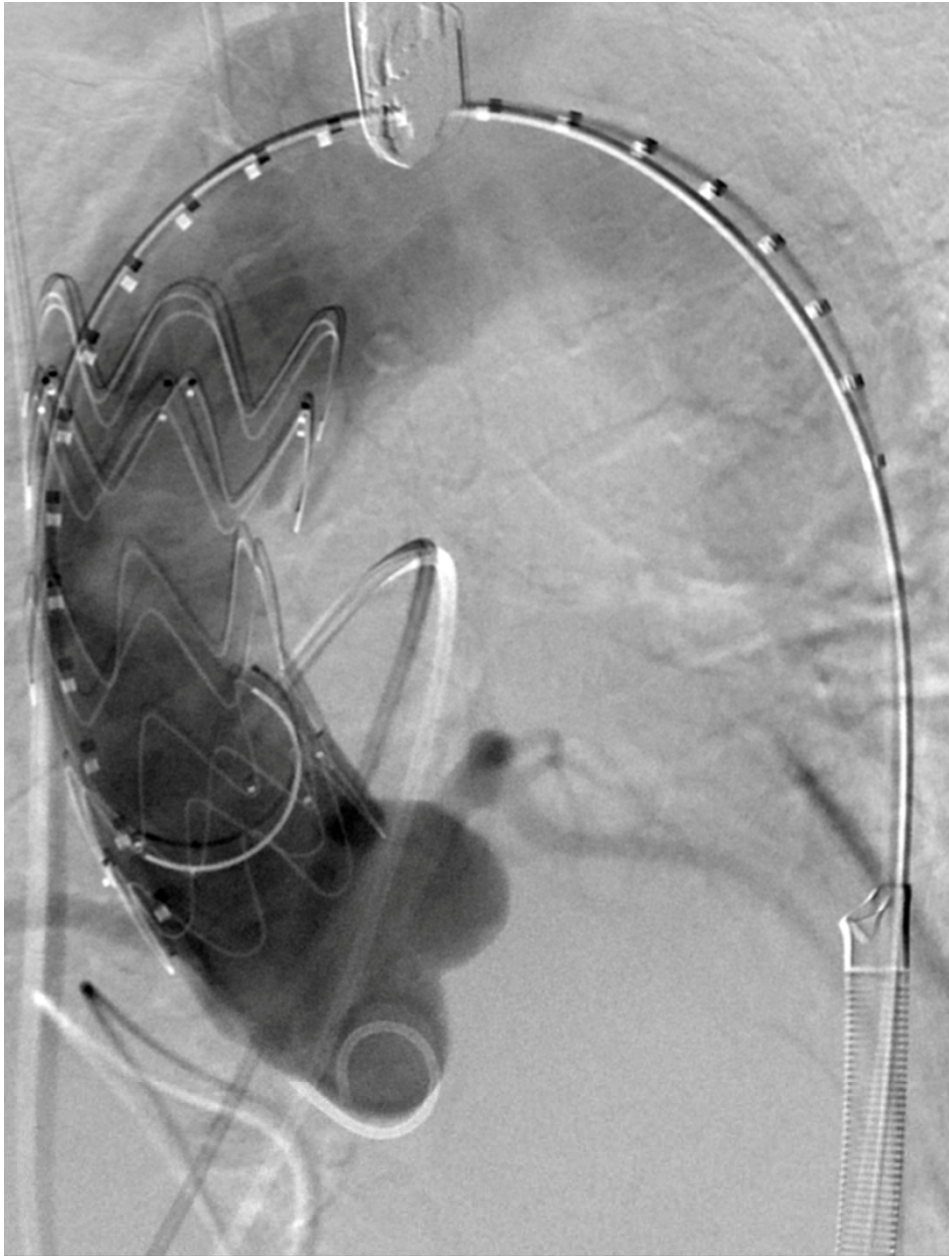
2D
65%
C 50
P Off
Res

CF
59%
4.4MHz
WF High
Med



Zoom: 136%
Im: 17/24 PAT T: 37.0C

JPEG
2015-10-08, 53 bpm





LT

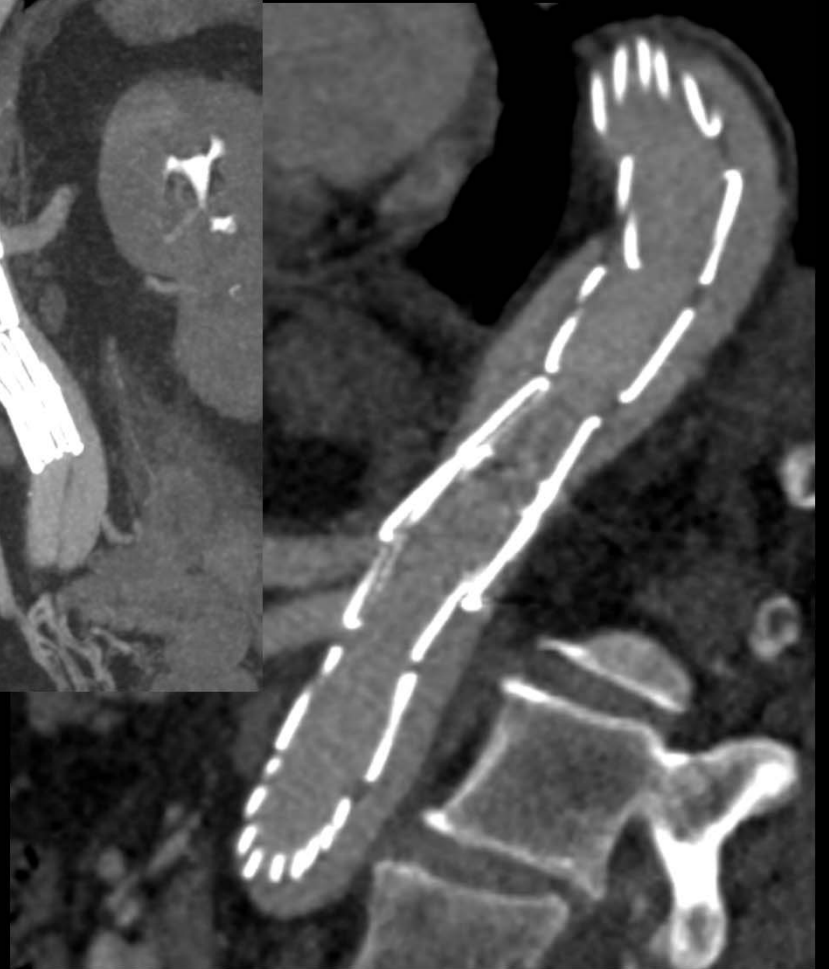
Procedural Details

- Procedure performed by multi-disciplinary team including cardiac surgery, vascular surgery and IR
- Ascending graft oversized by 15%
- Uncovered dissection stents x 3
- 24:10 fluoroscopy time
- 27105.2 uGym2
- No intraoperative complications



Post-Procedure

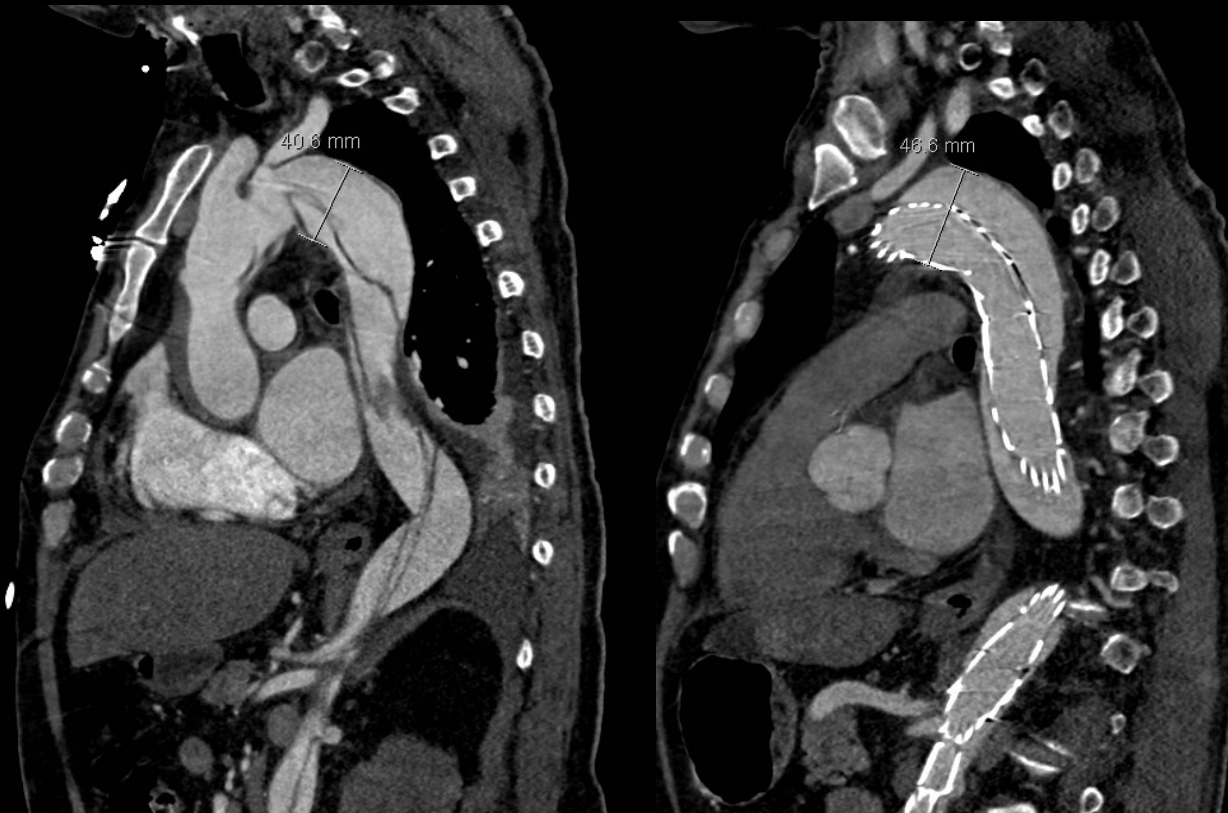
- Admitted to ICU
- Monitored
- Creatinine normalizing
- eGFR >30 on day 5



14 day follow-up

Follow-up CT

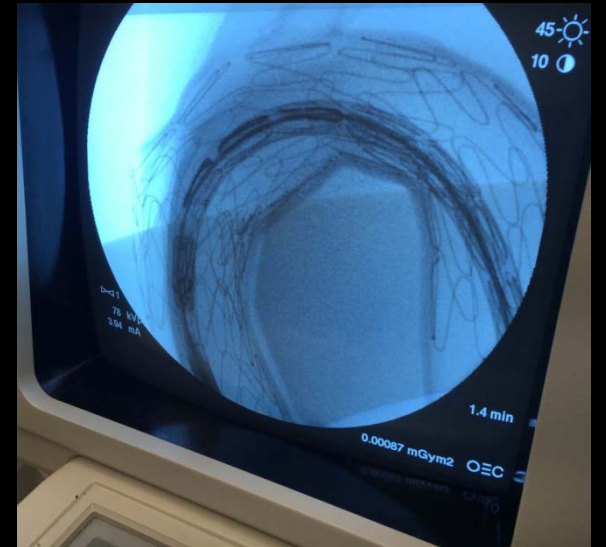
- Distal arch increased from 41mm to 47mm in 1 week
 - Unchanged on F/U CT



Treatment Options

- Covered stent from distal arch
- LSA (In situ fenestration)
- Arch branched graft





Future Treatment Plan

- Arch branch graft
- Plan is for July 2016
- Will utilize the same multi-disciplinary team
- Hybrid OR