



Endovascular Treatment of Malperfusion Syndrome in Aortic Dissection

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Cardiology

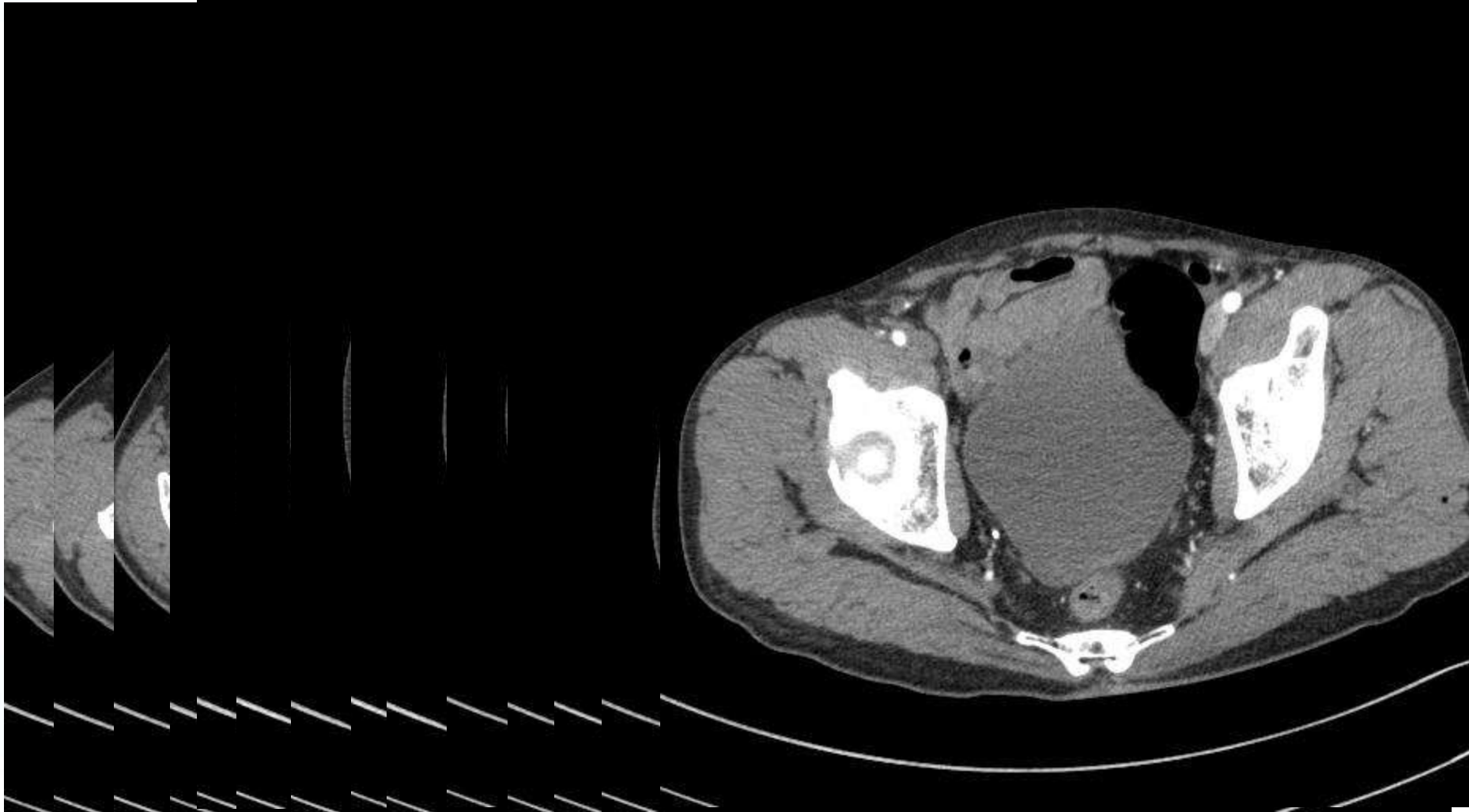
Pusan National University Hospital

Endovascular Treatment of Malperfusion : Aortic Stent Graft Cases

변O M/58

- Chief Complaint : back pain, left chest pain, right leg pain
- 3 days ago
- Past History : HT(+), DM(+)
Hyperlipidemia(-), CVA(-)
- Social History : Smoking (+)
- ABI : 0.2 / 0.9
- Hb : 9.8

CT



CT



Assessment



1. Aortic Dissection with Malperfusion syndrome

Plan ?

1. Aortic stent graft
2. Fenestration
3. Femoral – femoral bypass operation

Endovascular Treatment Indication of Type B Aortic Dissection



- Acute, Complicated AD
 1. Rupture
 2. Branch vessel ischemia
(Carotid, Celiac, SMA, Renal, Distal aorta, CIA)

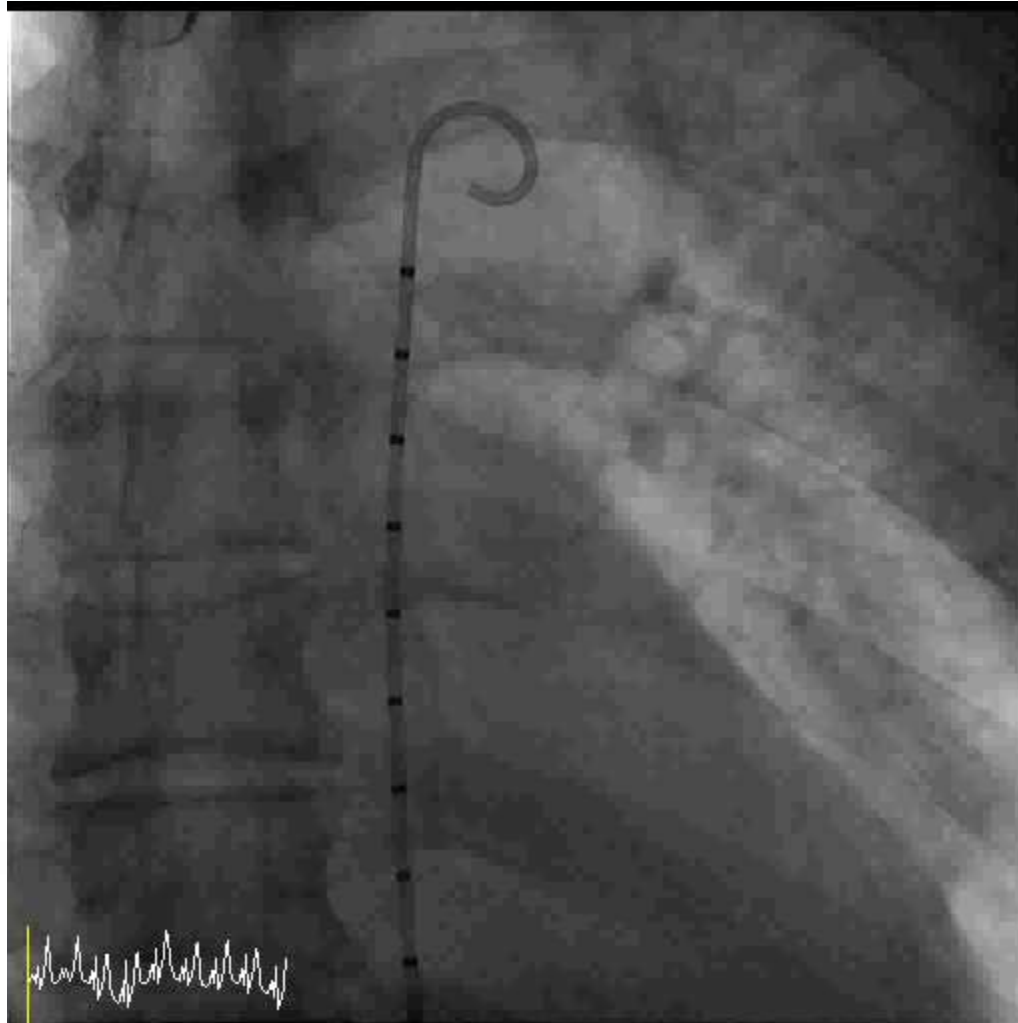
- Chronic AD, with Aneurysm formation

Endovascular Technique of Type B Aortic Dissection

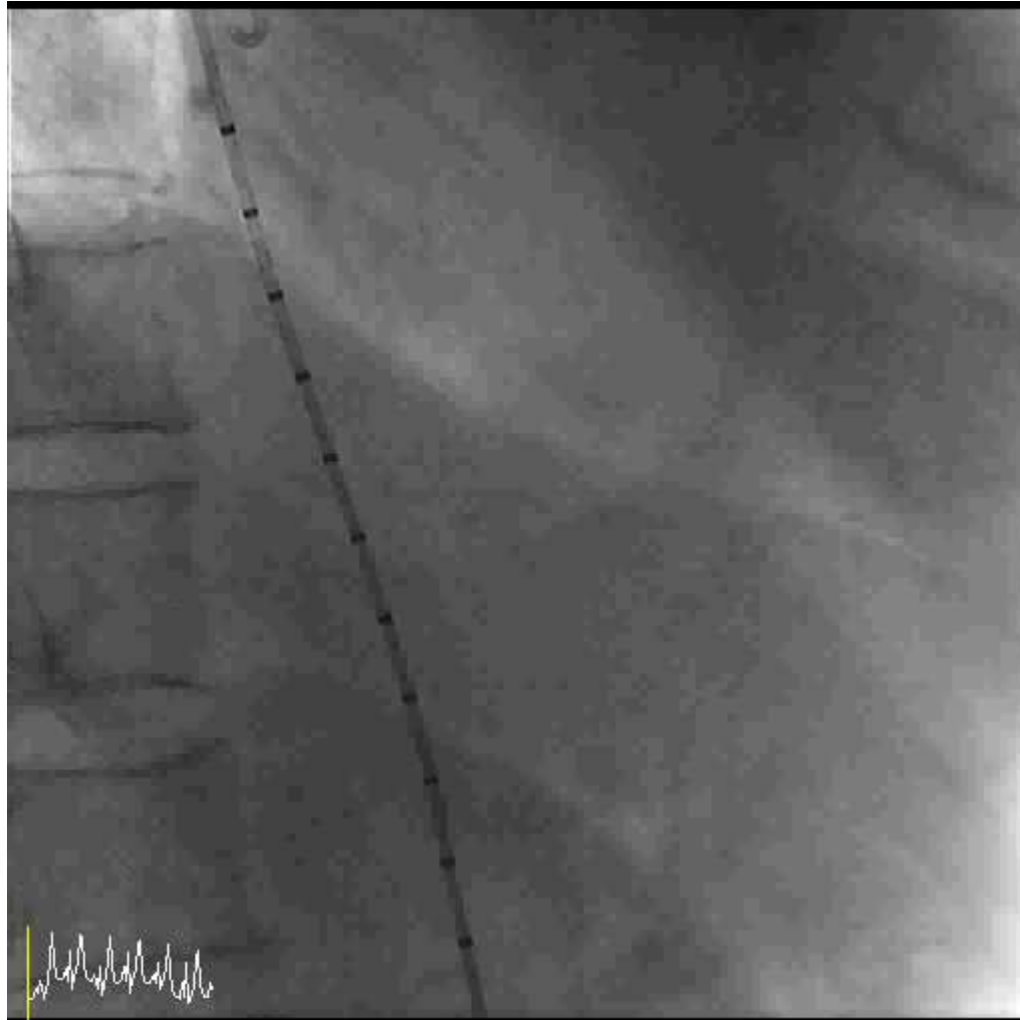


- Aortic Stent Graft
- Selective Stenting
- Fenestration

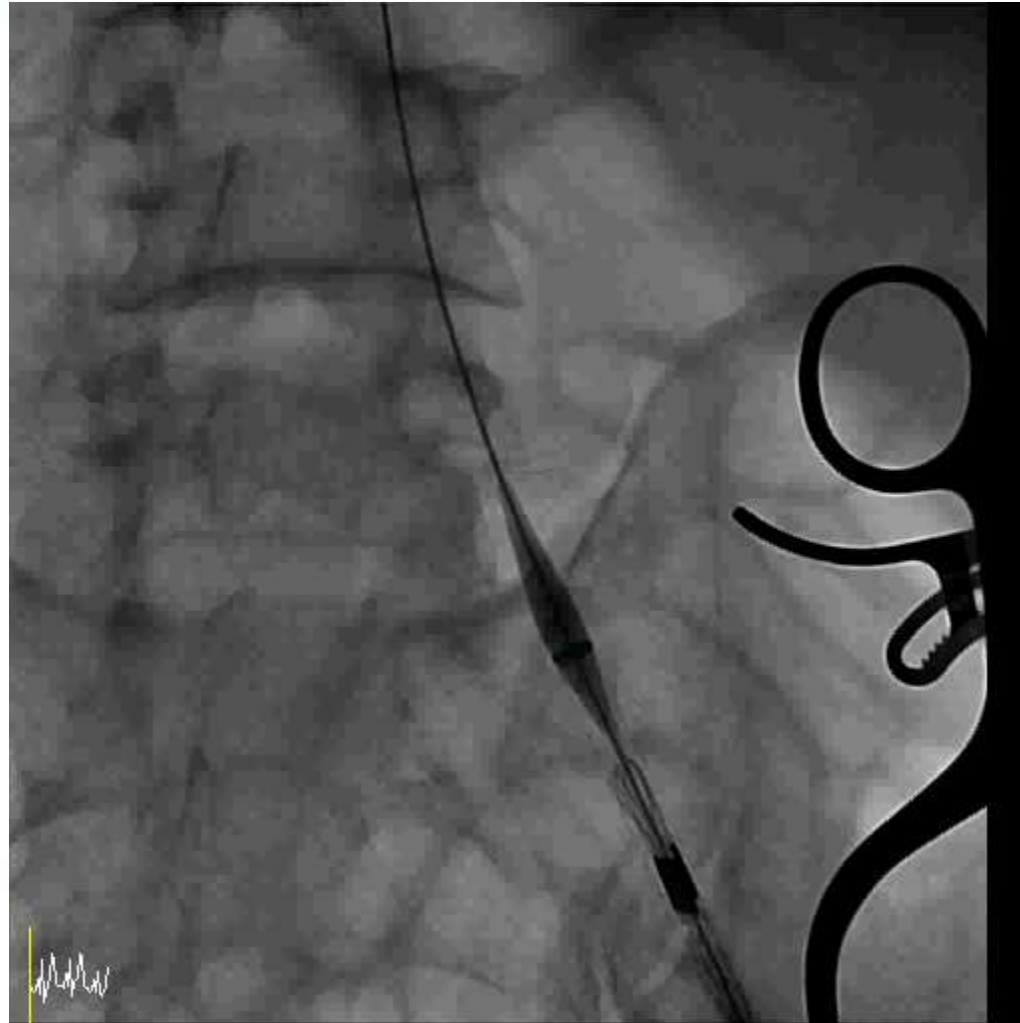
Aortic Stent Graft



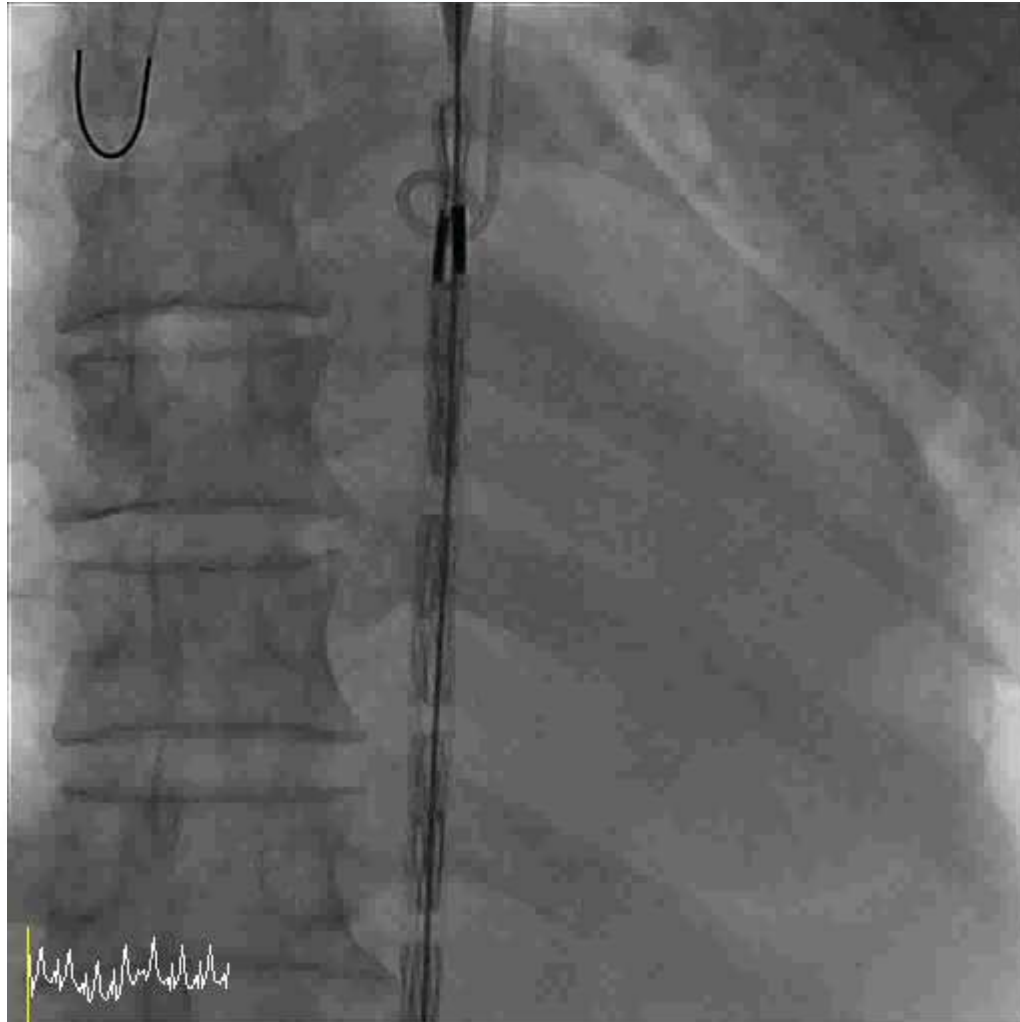
Aortic Stent Graft



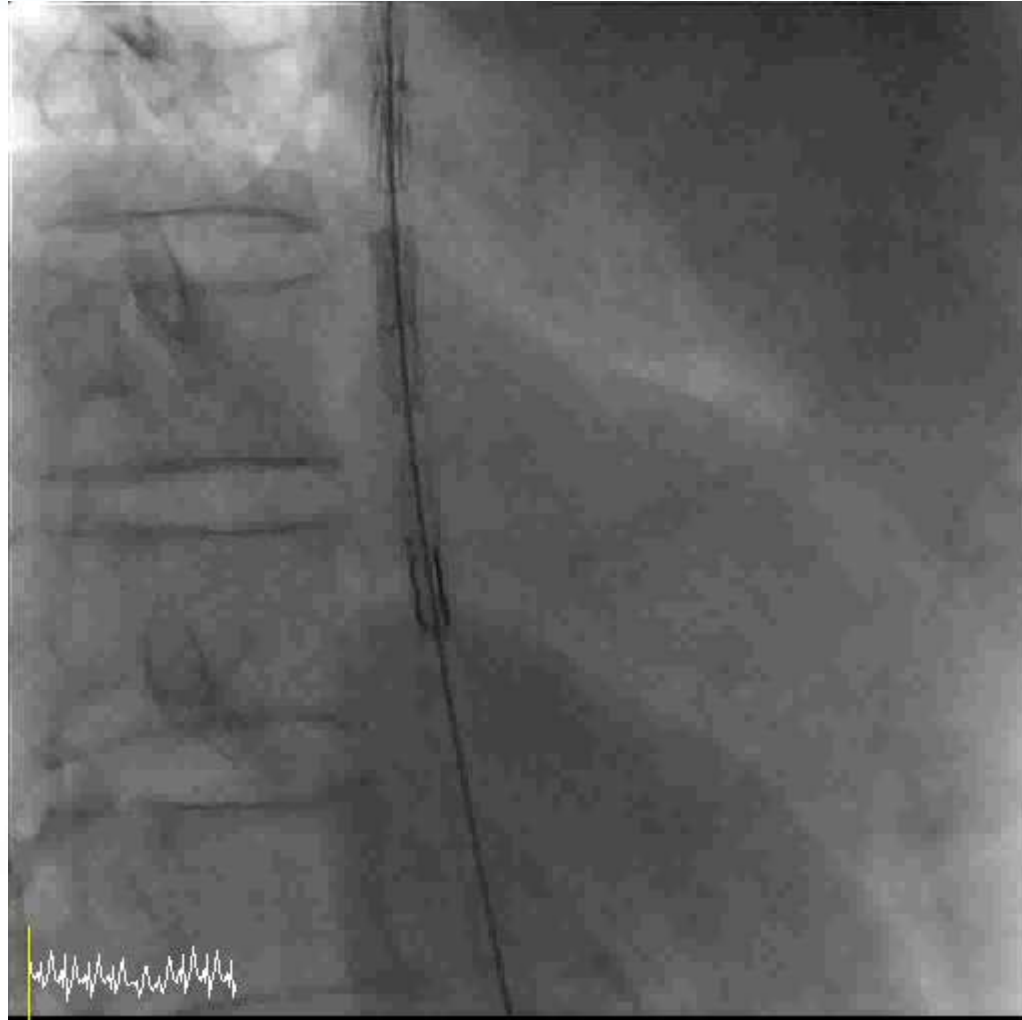
Aortic Stent Graft



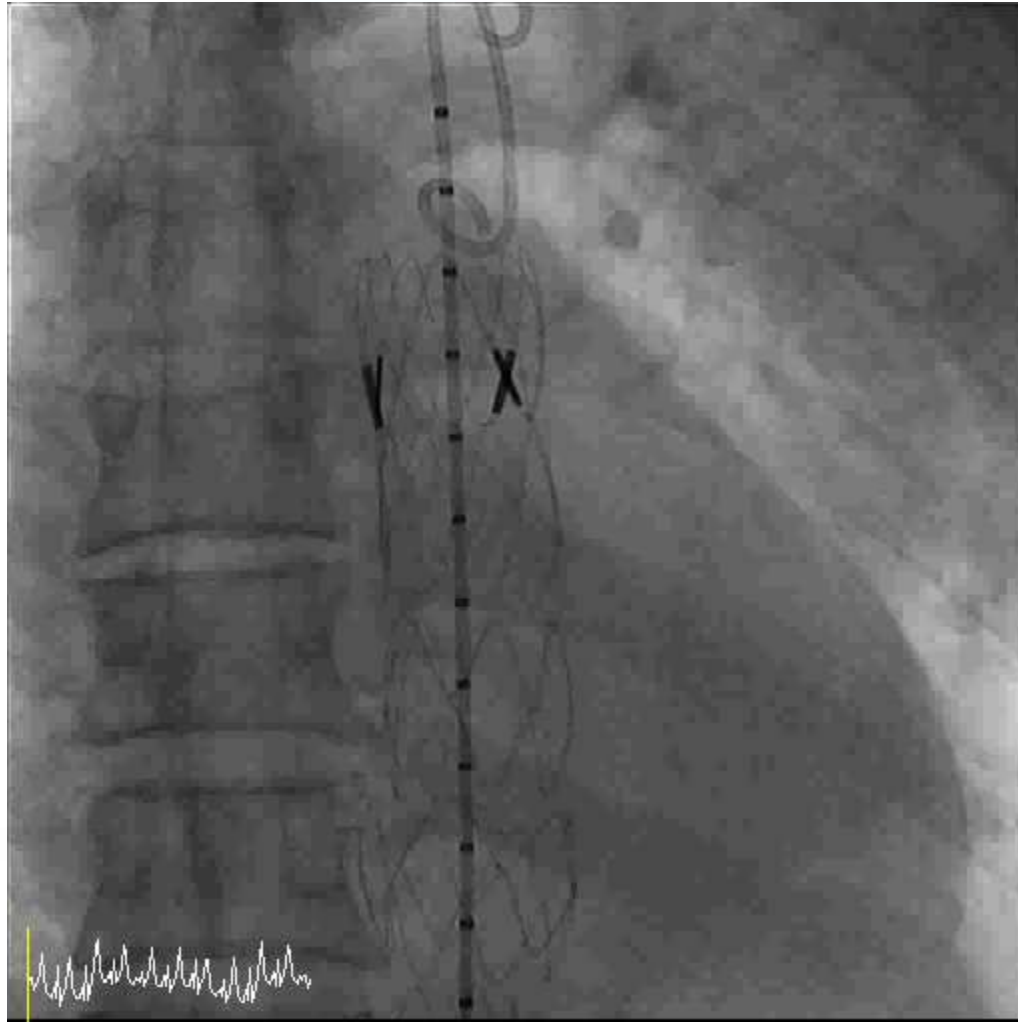
Aortic Stent Graft



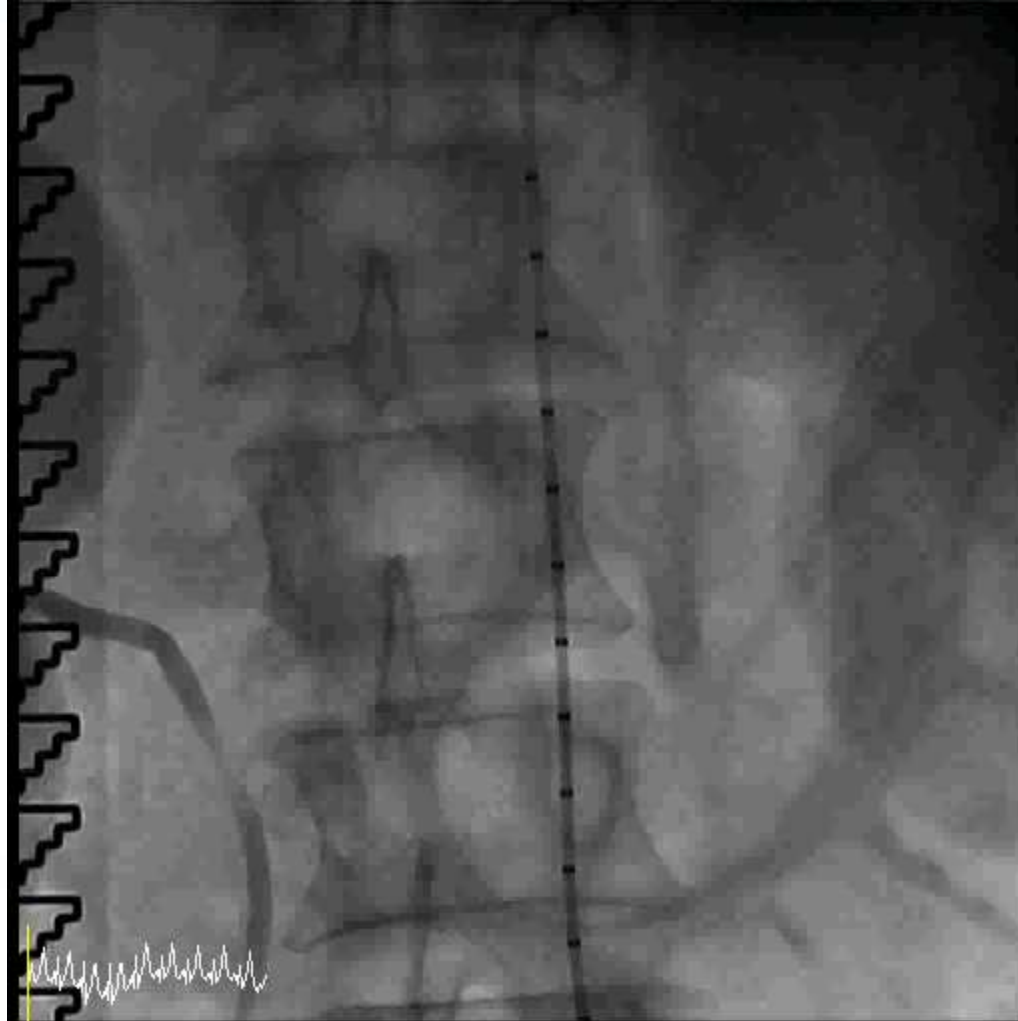
Aortic Stent Graft



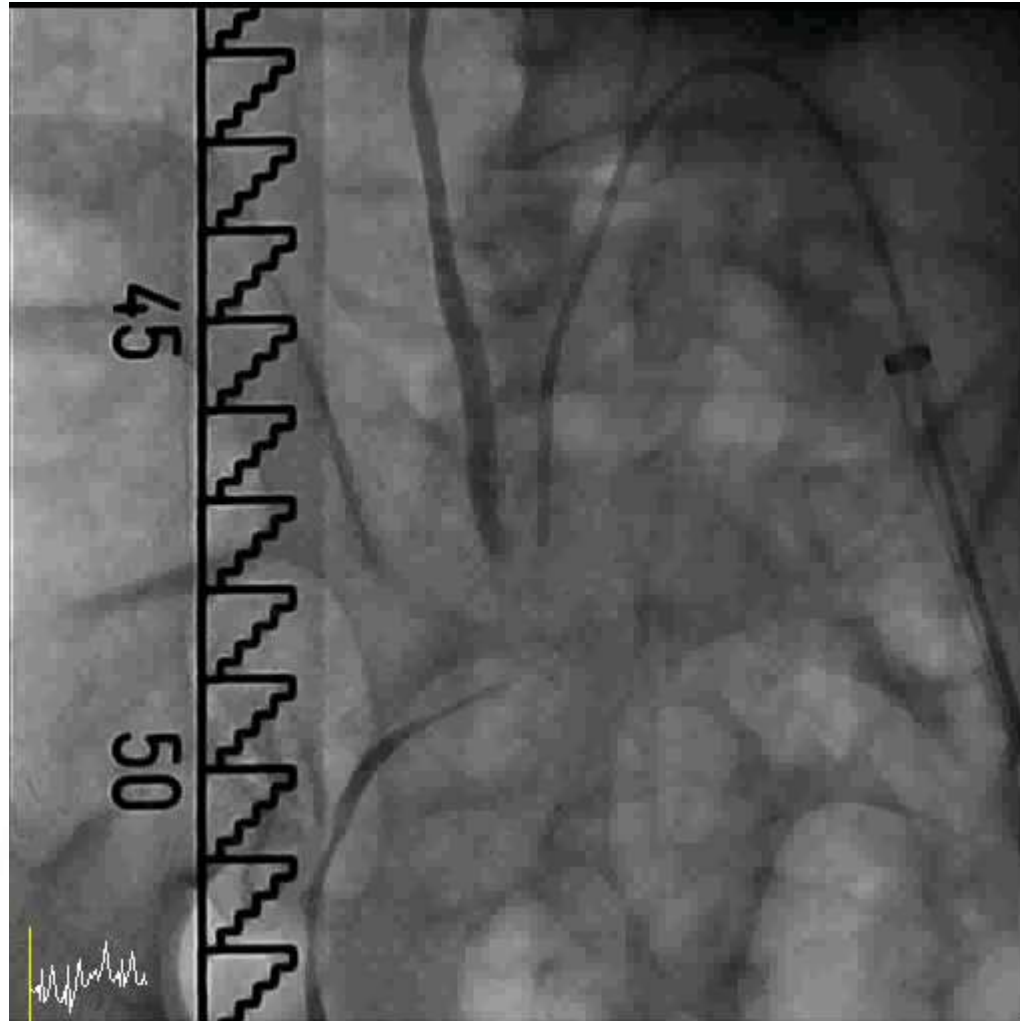
Aortic Stent Graft



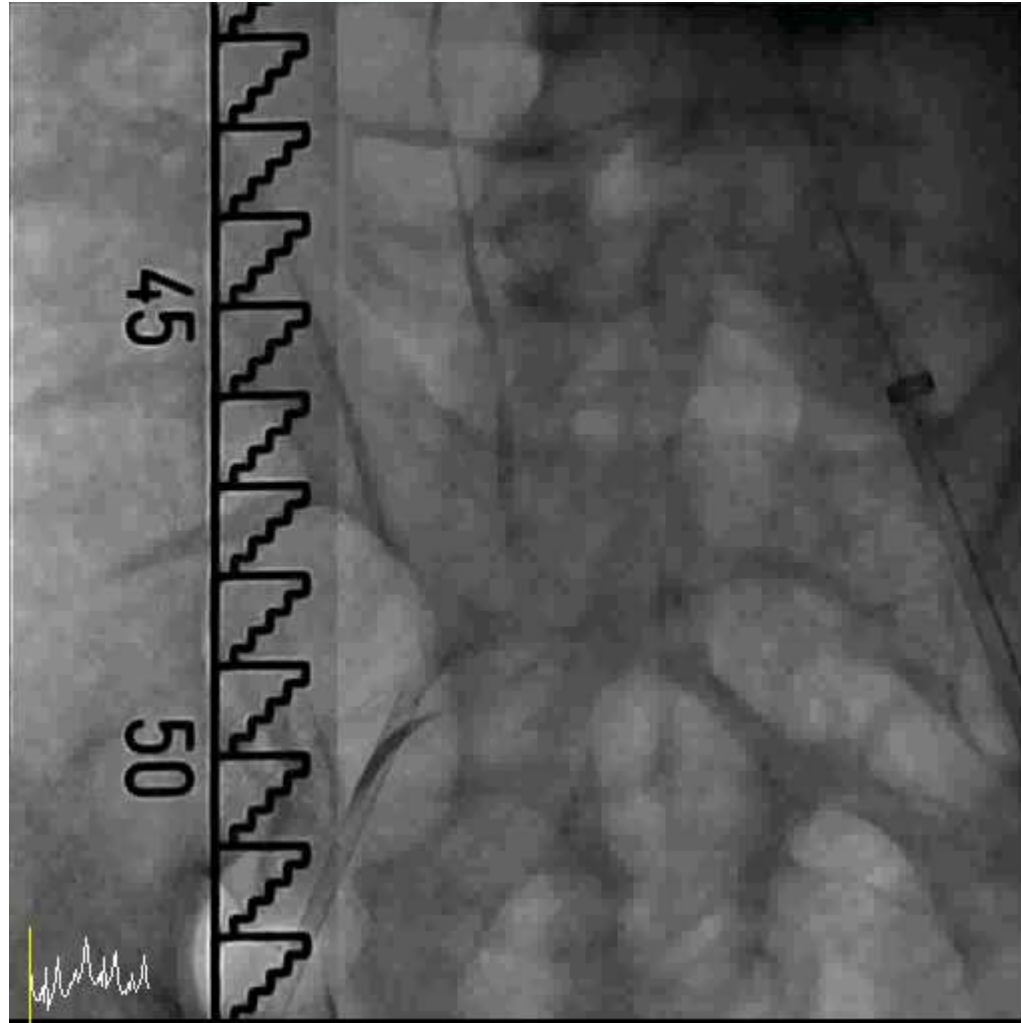
Aortic Stent Graft



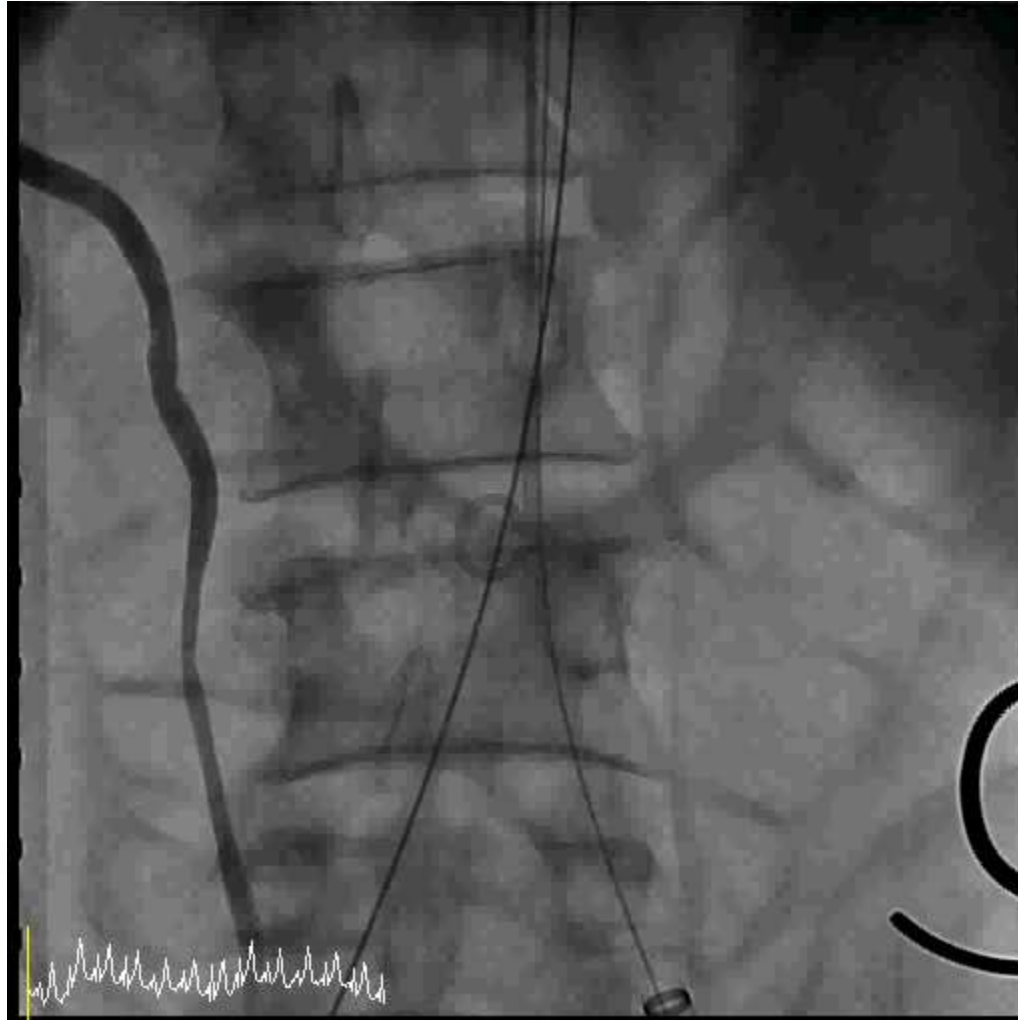
Aortic Stent Graft



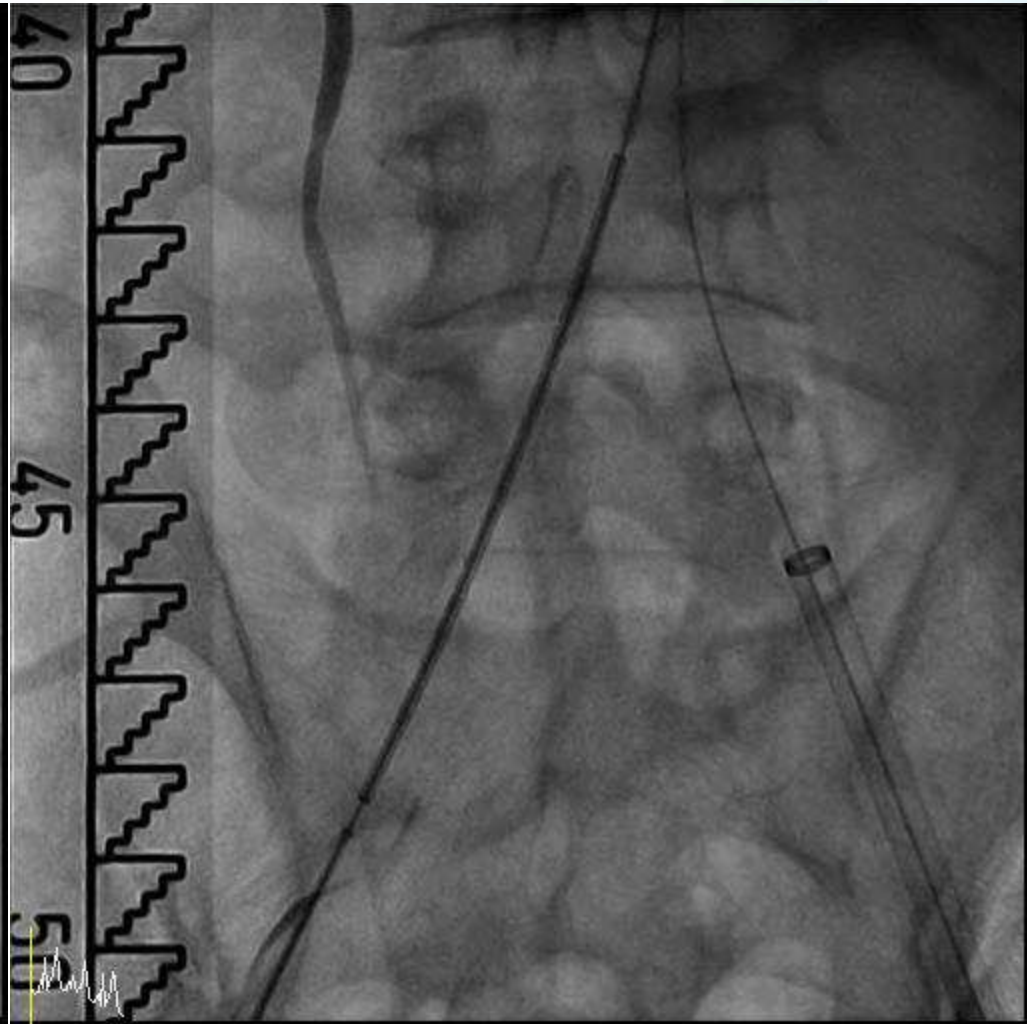
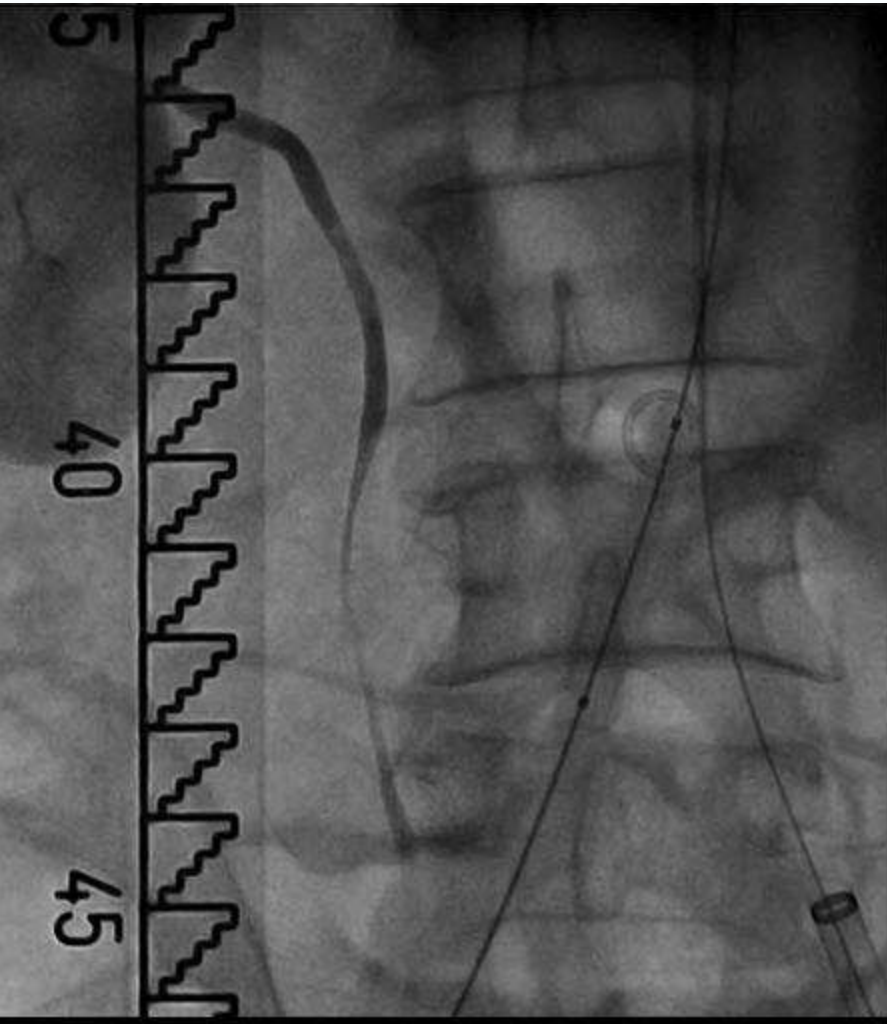
Aortic Stent Graft



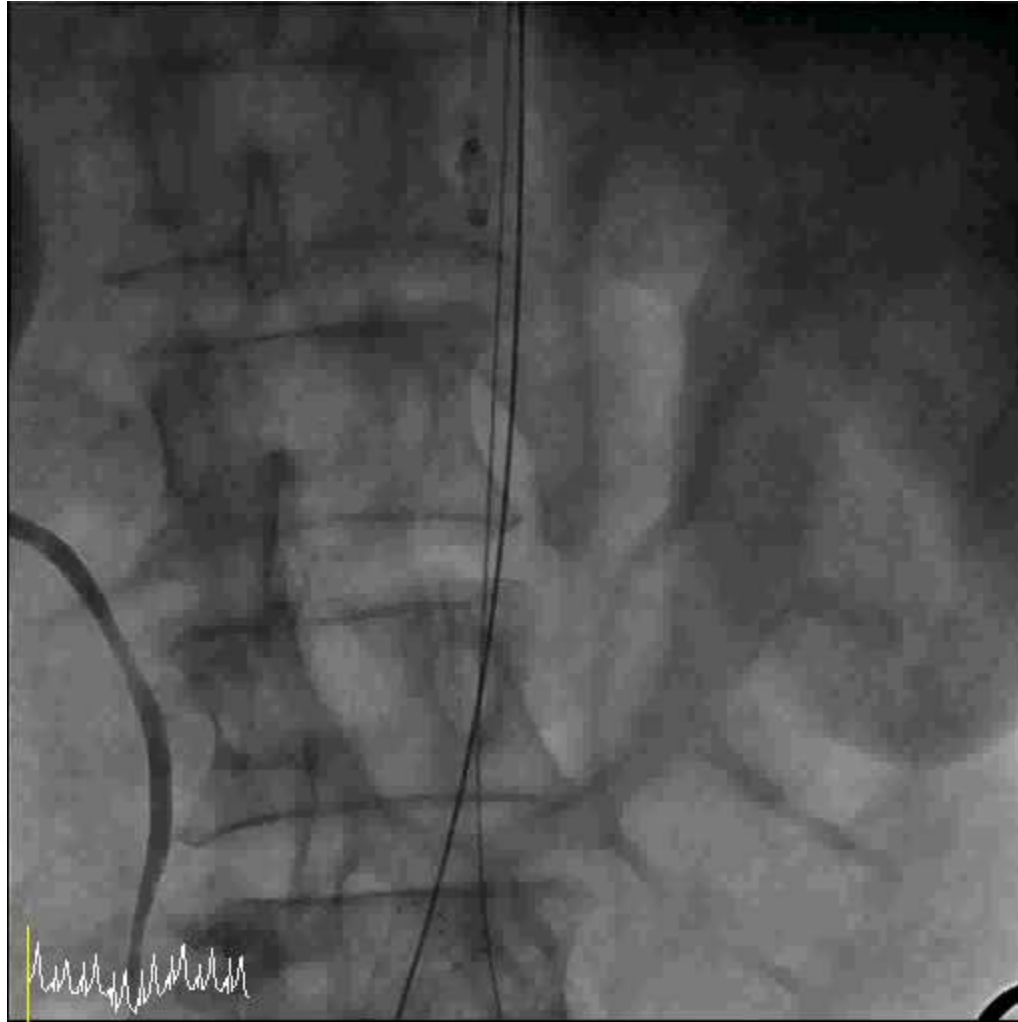
Aortic Stent Graft



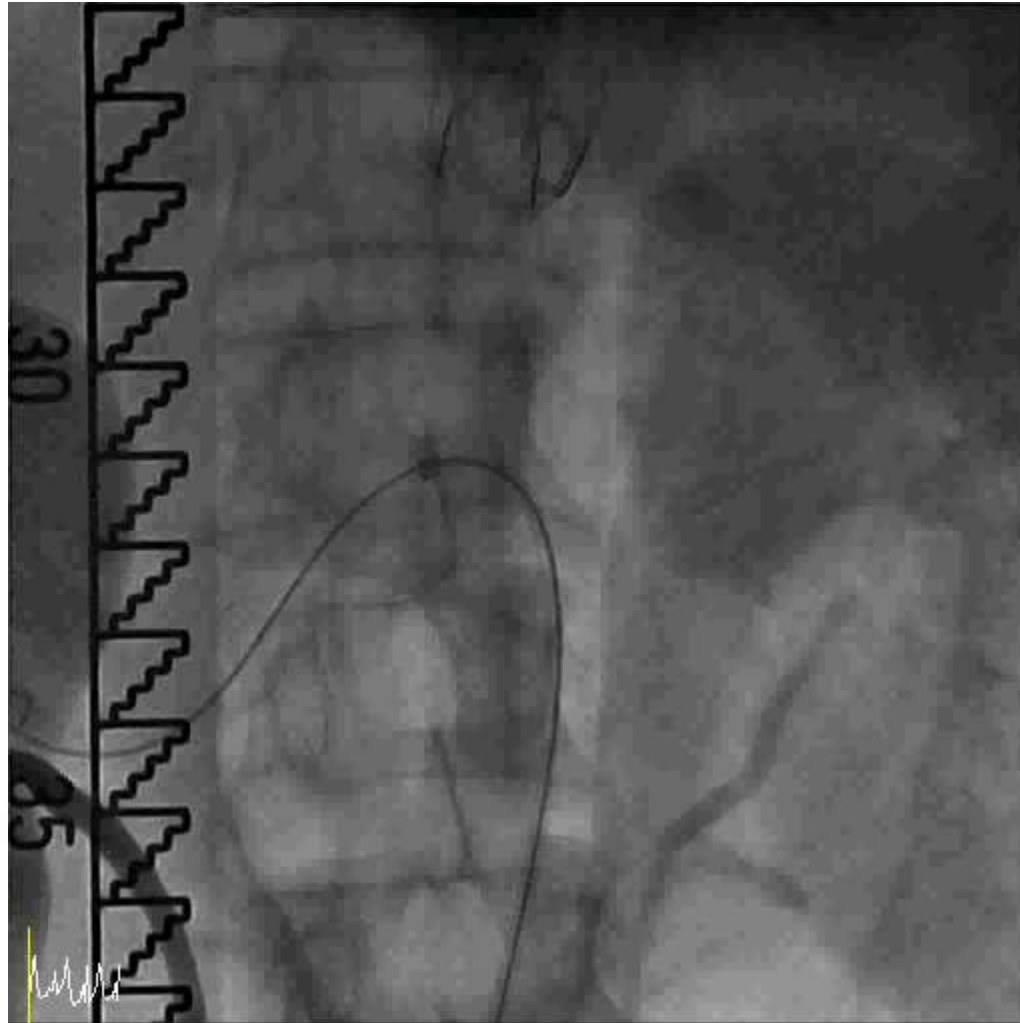
Aortic Stent Graft



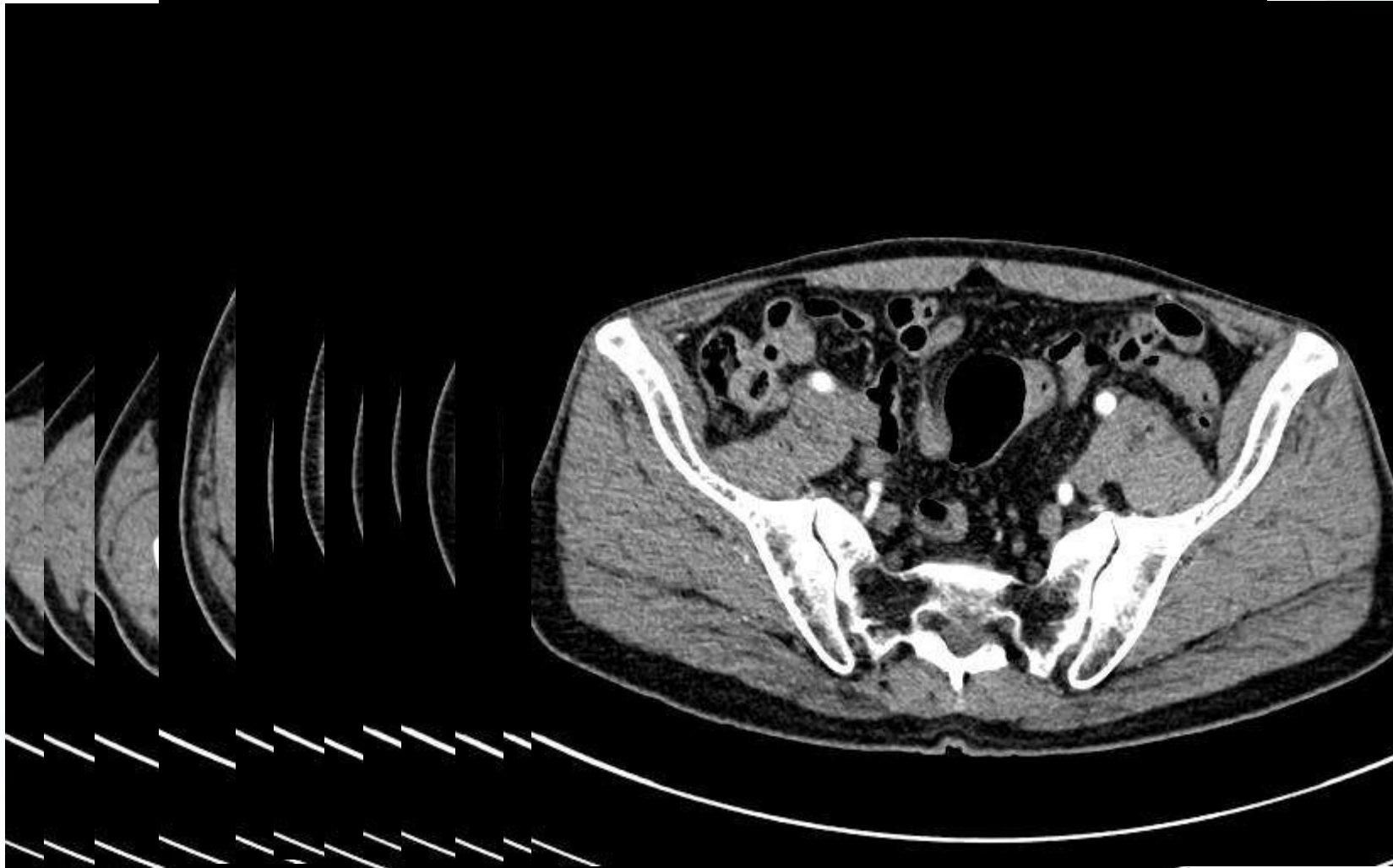
Aortic Stent Graft



Aortic Stent Graft



Follow up CT after 1 year

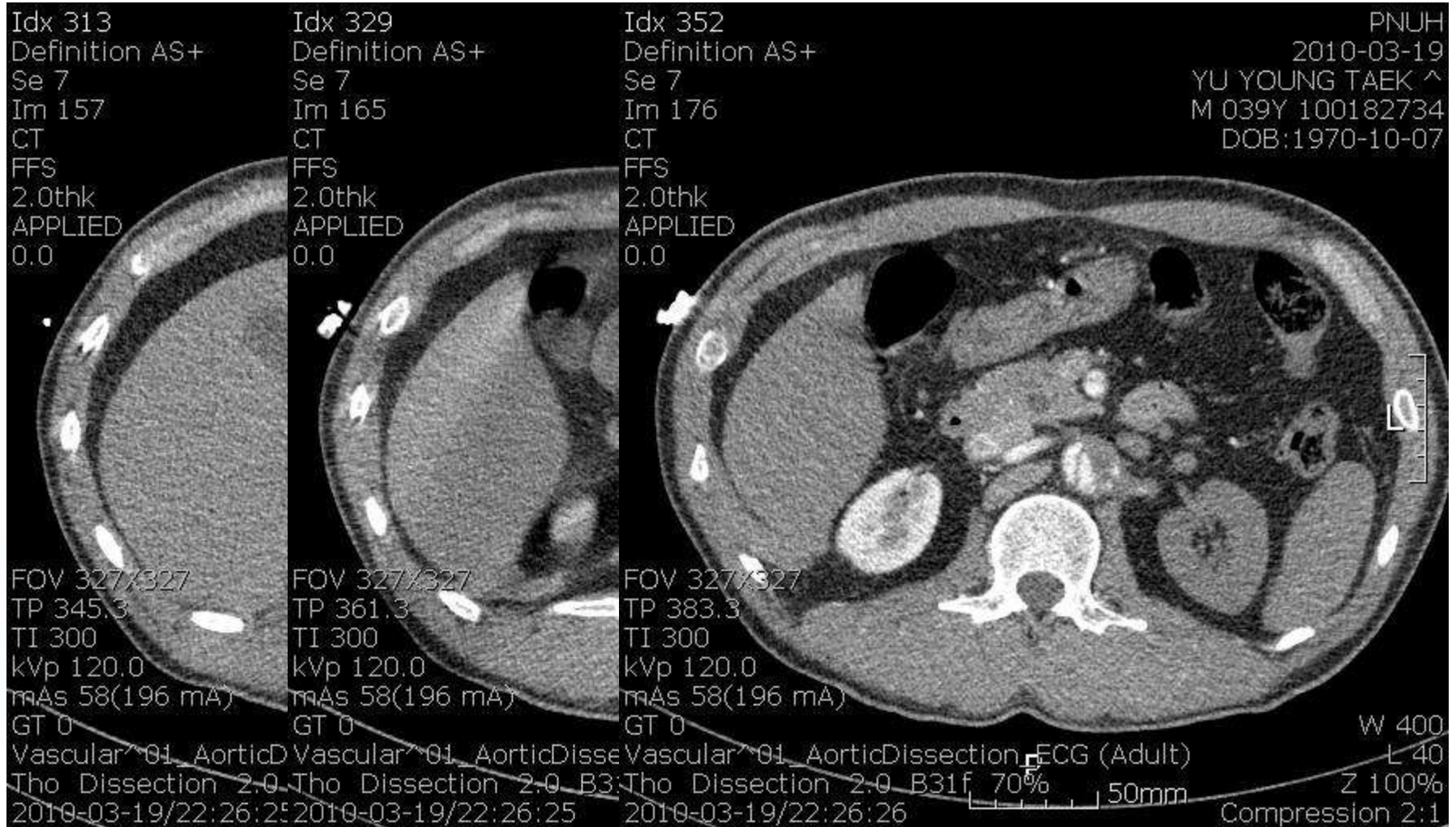


Follow up CT after 1 year

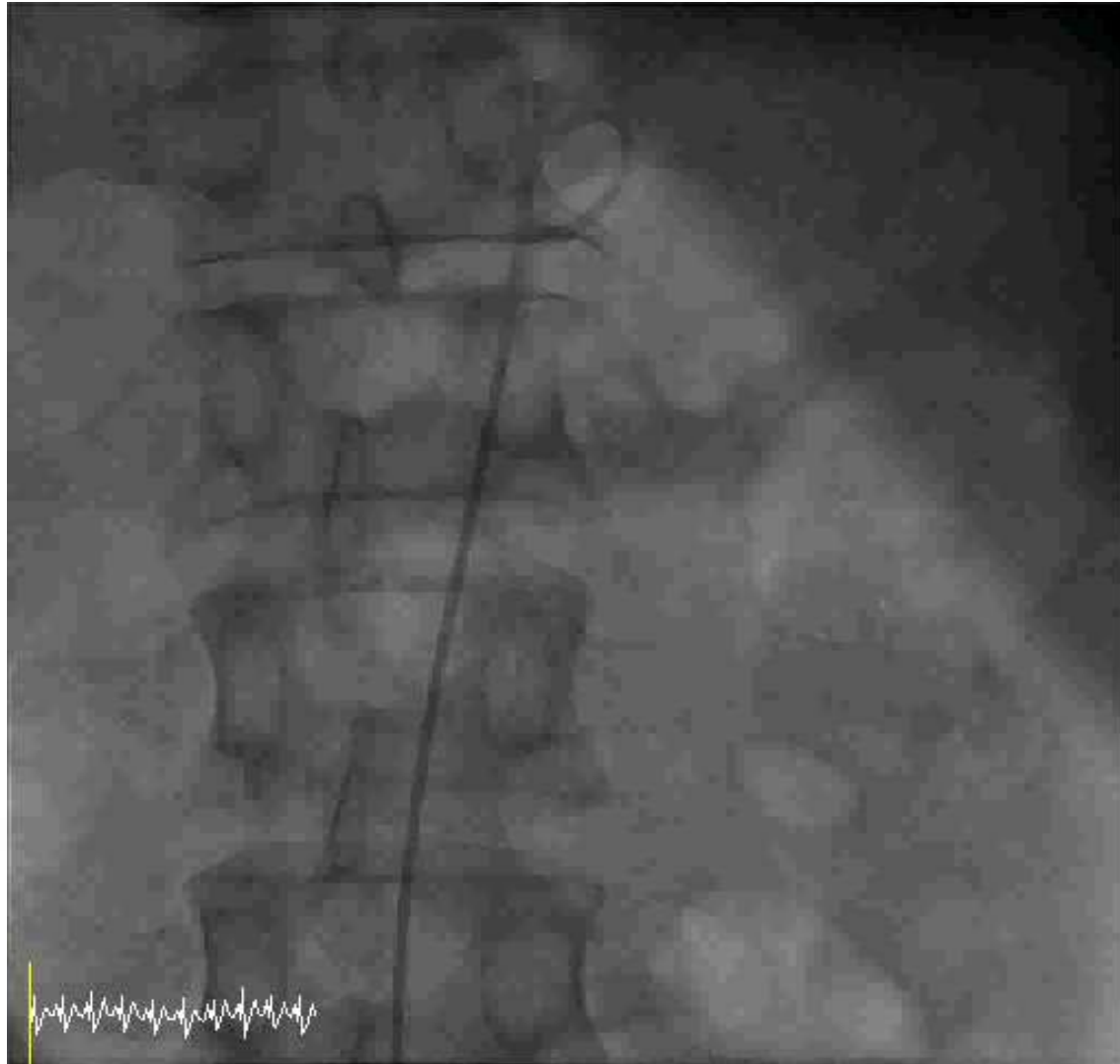


Endovascular Treatment of Malperfusion

: Selective Stents Cases 유 O (M/39)



Endovascular Treatment of Malperfusion : Selective Stents Cases



Endovascular Treatment of Malperfusion : Selective Stents Cases

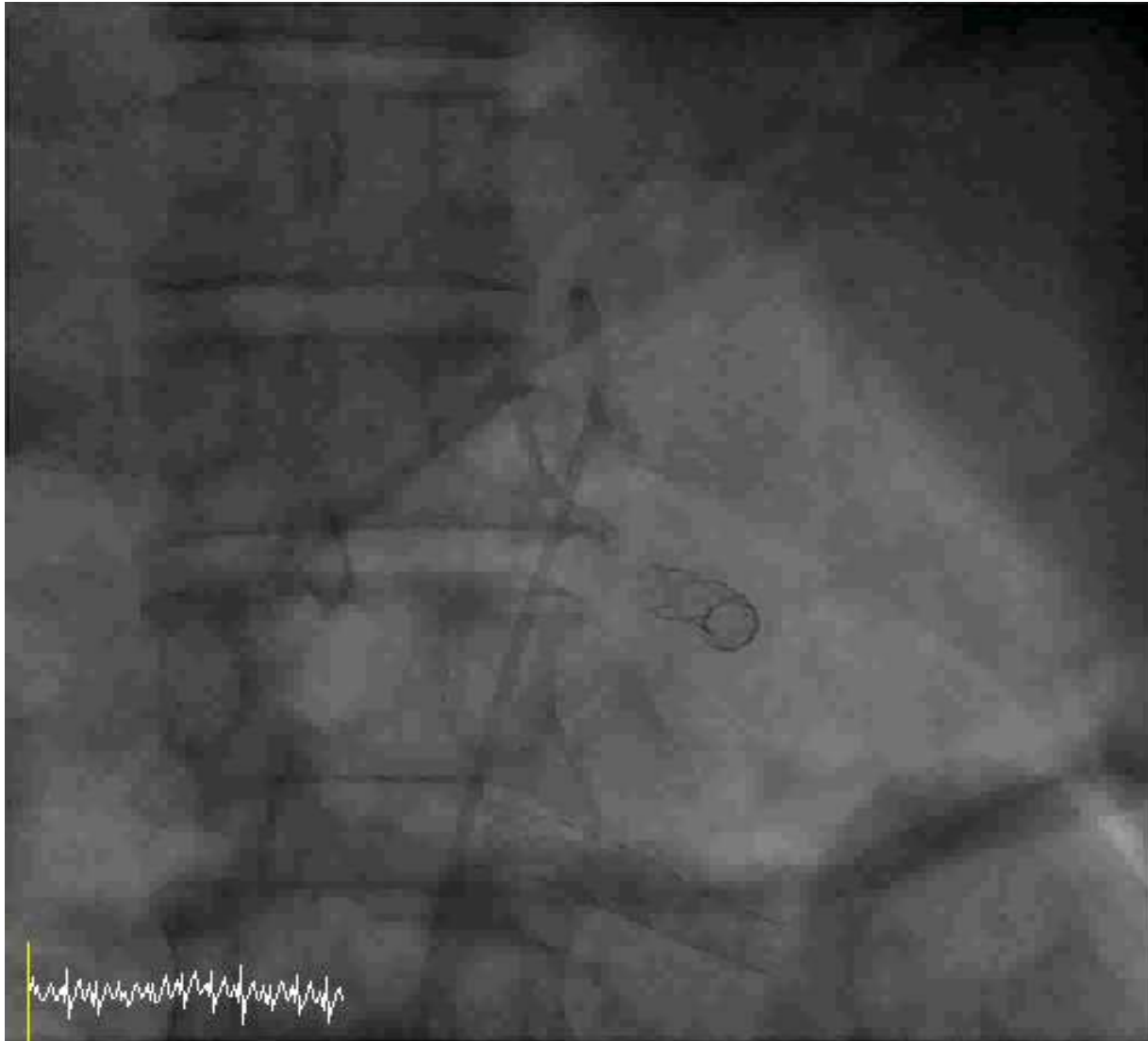


Endovascular Treatment of Malperfusion : Selective Stents Cases



Idx 35 INTEGRIS Allura Se 18 Im 18 XA	Idx 35 INTEGRIS Allura Se 18 Im 18 XA	Idx 41 INTEGRIS Allura Se 21 Im 21 XA	Idx 45 INTEGRIS Allura Flat Detector Se 23 Im 23 XA	Pusan National University Hospital 2010-03-20 YOU YEONG TAEK M 100182734 DOB:1970-10-07
Left Coronary	Left Coronary 15	Left Coronary	Left Coronary 15frs	(10.0 f/s) 33 / 108 50pt
2010-03-20/01:24:07	2010-03-20/01:24:07	2010-03-20/01:24:07	2010-03-20/01:24:07	W 232 L 129 Z 100% Compression 10:1

Endovascular Treatment of Malperfusion : Selective Stents Cases



Endovascular Treatment of Malperfusion : Selecive Stents Cases

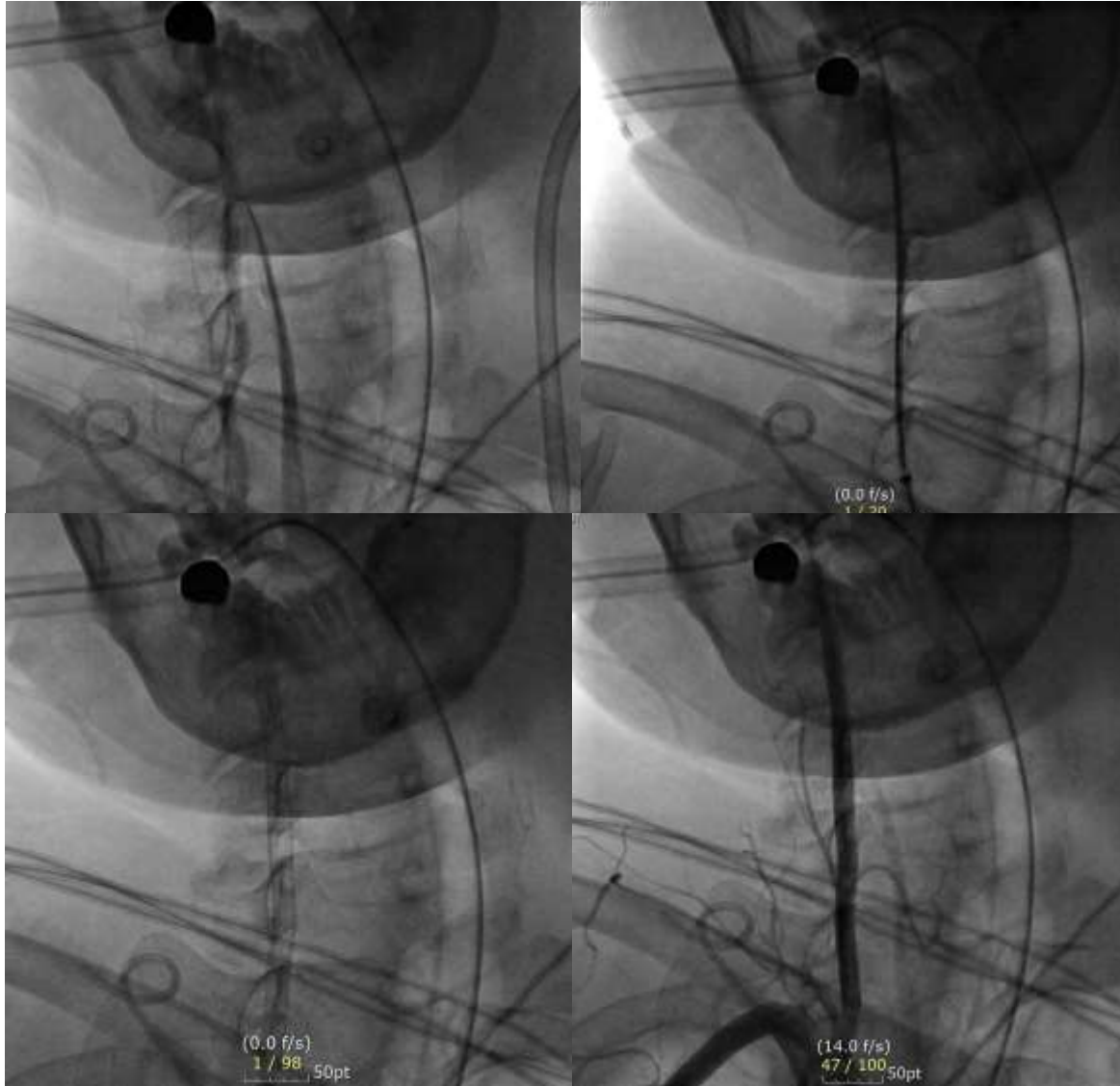


Malperfusion : Common Iliac Artery



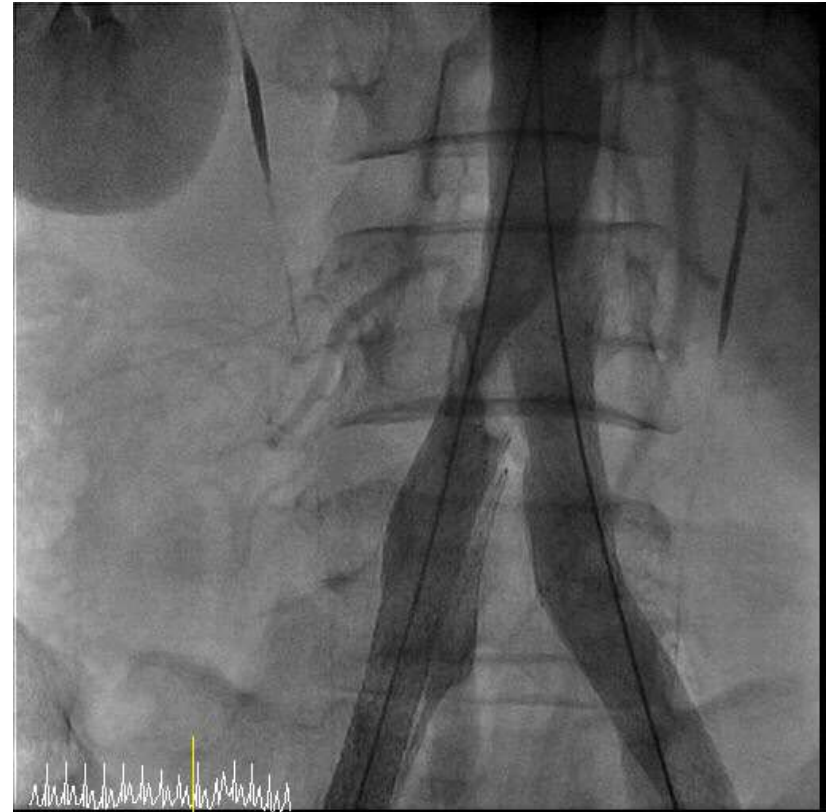
M/46

Malperfusion : Left Carotid Artery

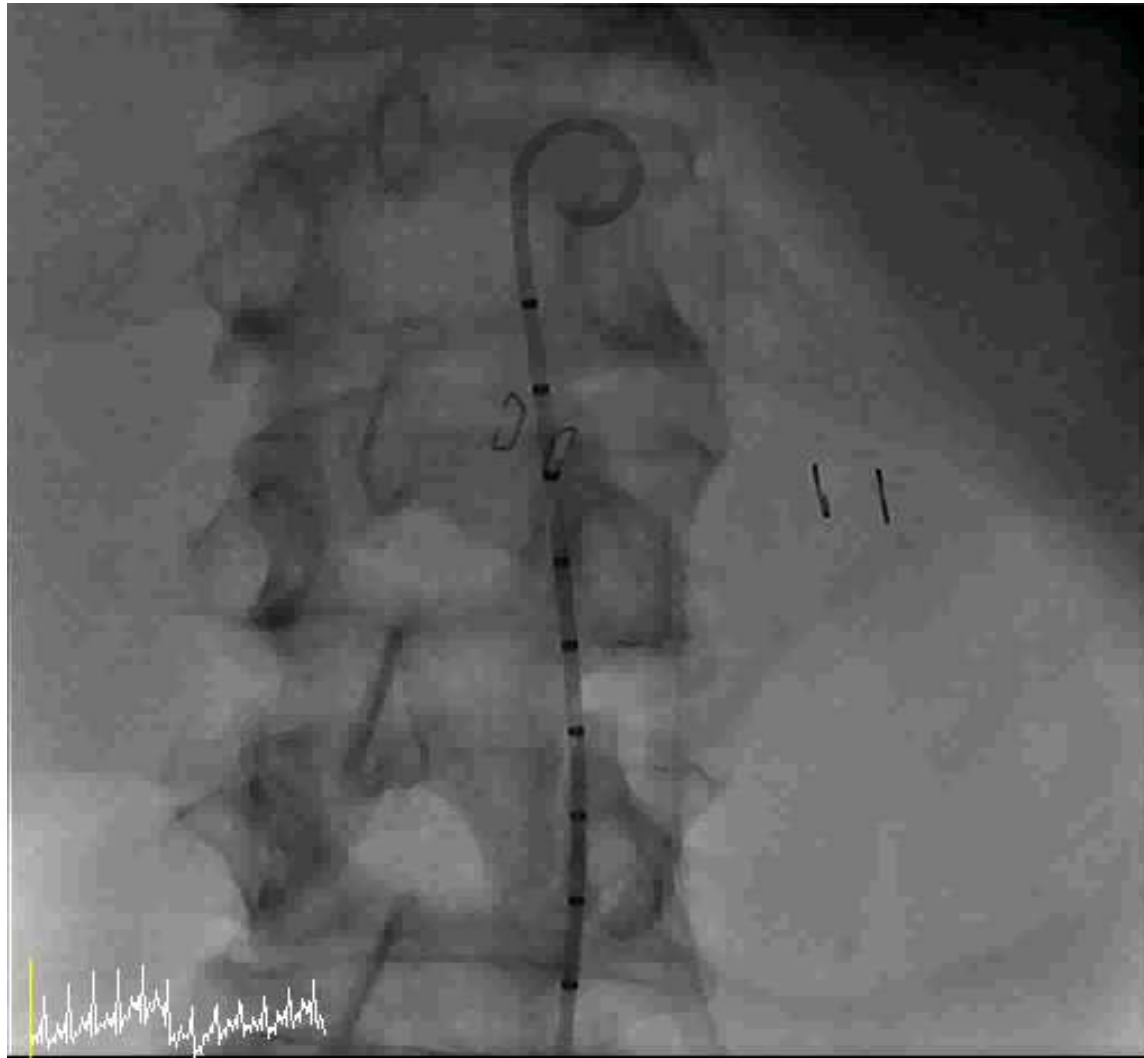


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Malperfusion : Distal aorta, both CIA



Endovascular Treatment of Malperfusion : Fenestration Cases



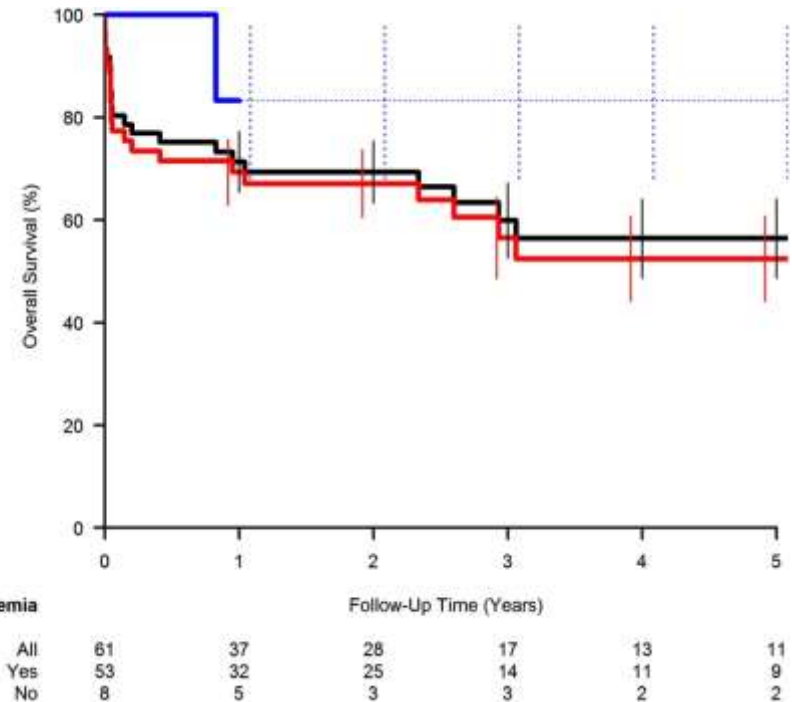
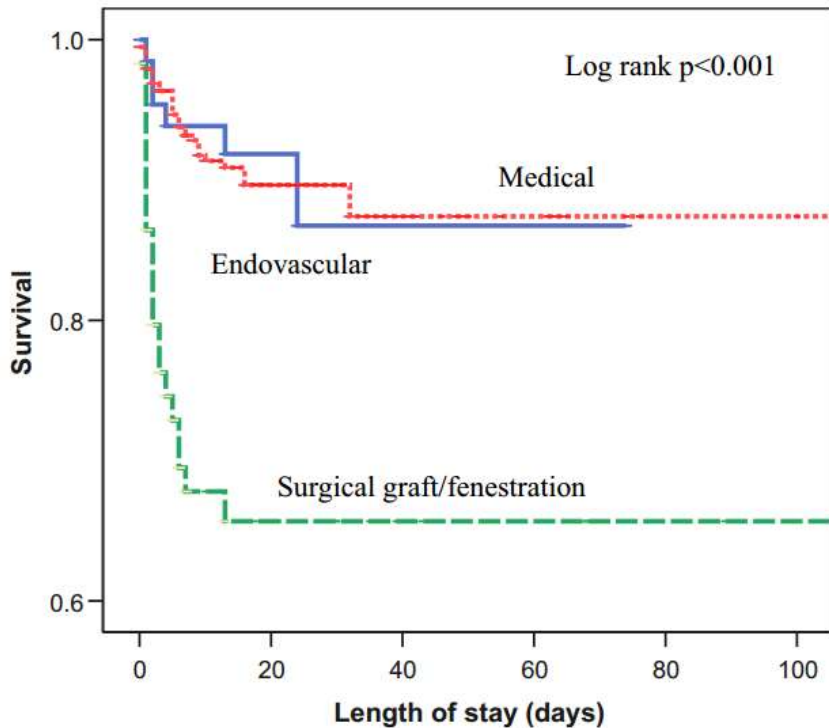
Endovascular Treatment of Malperfusion : Fenestration Cases





Endovascular Treatment in Patients with Complicated Type B Aortic Dissection and Malperfusion Syndrome: Mid Term Results from PNUH

Background



**Endovascular Treatment for
Complicated ABAD**

**Endovascular Treatment for
Malperfusion Syndrome**

Objectives



- **Effect and Safety** of **Endovascular Treatment** in patients with **Complicated Type B Aortic Dissection with malperfusion syndrome** from single center registry.

Methods



Observational retrospective analysis

Patients with Aortic Dissection with Malperfusion Syndrome
(Dec. 2009 to Mar. 2013), **n=15** at our hospital

Aortic Dissection Type A, **n=3**
Aortic Dissection Type B, **n=11**
Intramural hematoma, Type B, **n=1**

Stent graft insertion

Treating lesion, **n=7**

Selective stenting

Treating lesion, **n=19**

Fenestration

Treating lesion, **n=1**



Results

Baseline characteristics

N=15 (%)

Age (year)	54.3
Follow up period (month)	17.2
Male	13 (86.7%)
Diabetes Mellitus	0
Hypertension	12 (80%)
History of Smoking	7 (46.7%)
Dyslipidemia	0
Previous CHD	1 (6.7%)
Previous PAD	0
Family history of CHD	0
Other medical condition	8 (53.3%)

Procedure outcomes



	N=15 (%)
Approach (Perclose)	10 (66.6%)
Deployment of stent graft	7 (46.6%)
Selective Stenting	Treating lesion, n=19
Celiac artery stenting	3 (15.8%)
Renal artery stenting	6 (31.6%)
Iliac artery stenting	6 (31.6%)
Common carotid artery stenting	2 (10.5%)
Left subclavian artery stenting	1 (5.2%)
Distal abdominal aorta stenting	1 (5.2%)
Fenestration technique	1 (5.2%)

Clinical outcomes



	N=15 (%)
Technical success (%)	86.7%
Mortality index period	1 (6.6%)
Periprocedure Event	
Ancillary proc.	1 (6.6%)
Contrast induced nephropathy	4 (26.6%)
Anemia need transfusion	3 (20%)
Neurologic Complication	
Paraparesis/paraplegia	0
TIA	1 (6.6%)
Cumulative Events	
All cause death	1 (6.6%)
2 nd endoleak	1 (6.6%)

Conclusion



- **Endovascular Treatment** for complicated Type B aortic dissection and malperfusion syndrome was a **Safe** procedure with **Good mid-term Clinical Outcome.**



Thank you from my heart



INSTEAD Trial : *Nienaber CA et al. : Circulation.* 2009;2519-2528.



Table 1. Outcomes at 2 Years

	Medical Therapy Alone (n = 68)	TEVAR (n = 72)	P Value
Survival	95.6 ± 2.5%	88.9 ± 3.7%	0.15
Freedom from Aorta-Related Mortality	97.0 ± 2.0%	94.4 ± 2.7%	0.44
Freedom from Progressive Aortic Disease	72.5 ± 5.5%	77.2 ± 5.0%	0.65

Table 2. Cumulative Events at 2 Years

	Medical Therapy Alone (n = 68)	TEVAR (n = 72)	P Value
Secondary Interventions	22.1%	18.1%	0.74
Adverse Events			
Persistent Paraplegia/ Paraperesis	1.4%	2.8%	0.90
Major Stroke	0	2.8%	0.53

Safety of SCA sacrifice : Check Brain MRI & A

