

2019年3月16日
第7回大動脈解離シンポジウム

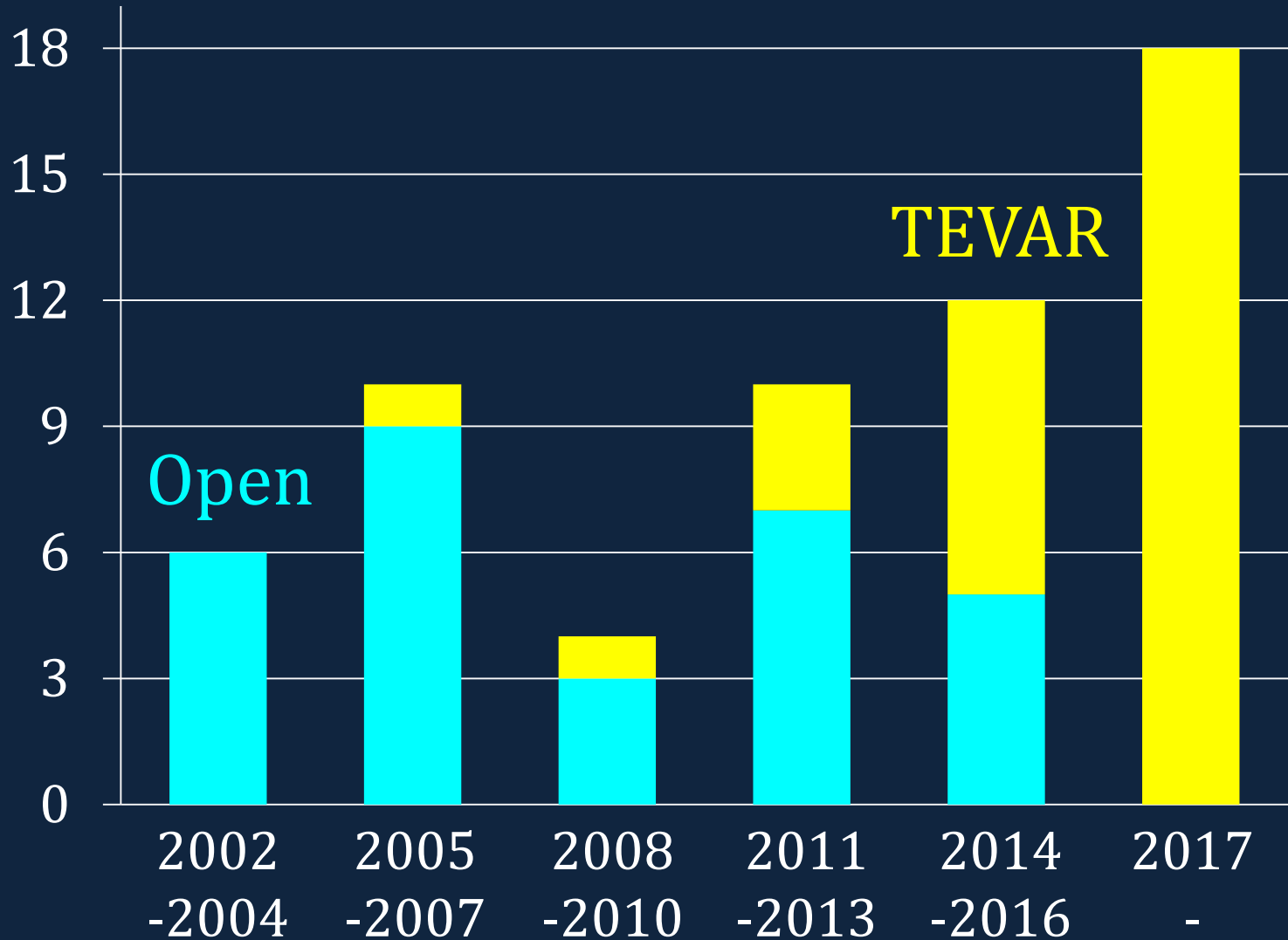
急性大動脈解離に対するTEVAR + JRAD report


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Open & TEVAR for Complicated BAAD



A nighttime aerial view of San Diego, California, showing the city lights and the San Diego Bay. The skyline is illuminated with various colors, and the lights reflect on the water. The foreground shows a dense residential or commercial area with many lit-up buildings.

Multicenter analysis of early outcomes of acute type A aortic dissection

Reports from Japan Registry of Aortic Dissection

The Society of Thoracic Surgeons

55TH ANNUAL MEETING & EXHIBITION

San Diego Convention Center • January 27-29, 2019

Japan Registry of Aortic Dissection (JRAD)

16 major (High Quality) aortic centers

Jan 2011 – Dec 2016 (6 years)

1805 patients

67.8 \pm 13.0 year-old

998 (55%) male

Type A Acute Aortic Dissection (AAAD)

1217 patients

67.9 \pm 13.1 year-old

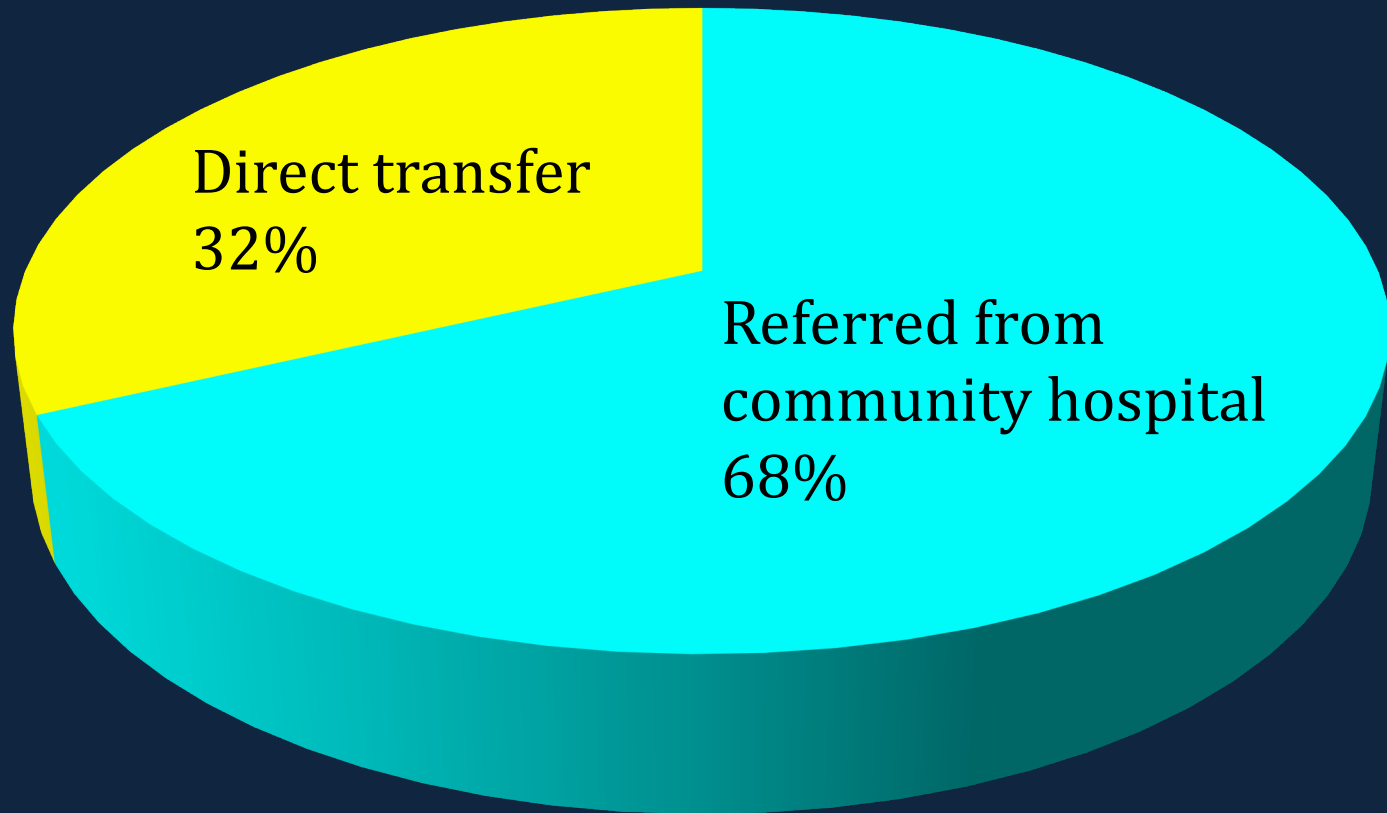
>80 year-old: 241 (20%)

584 (52%) male

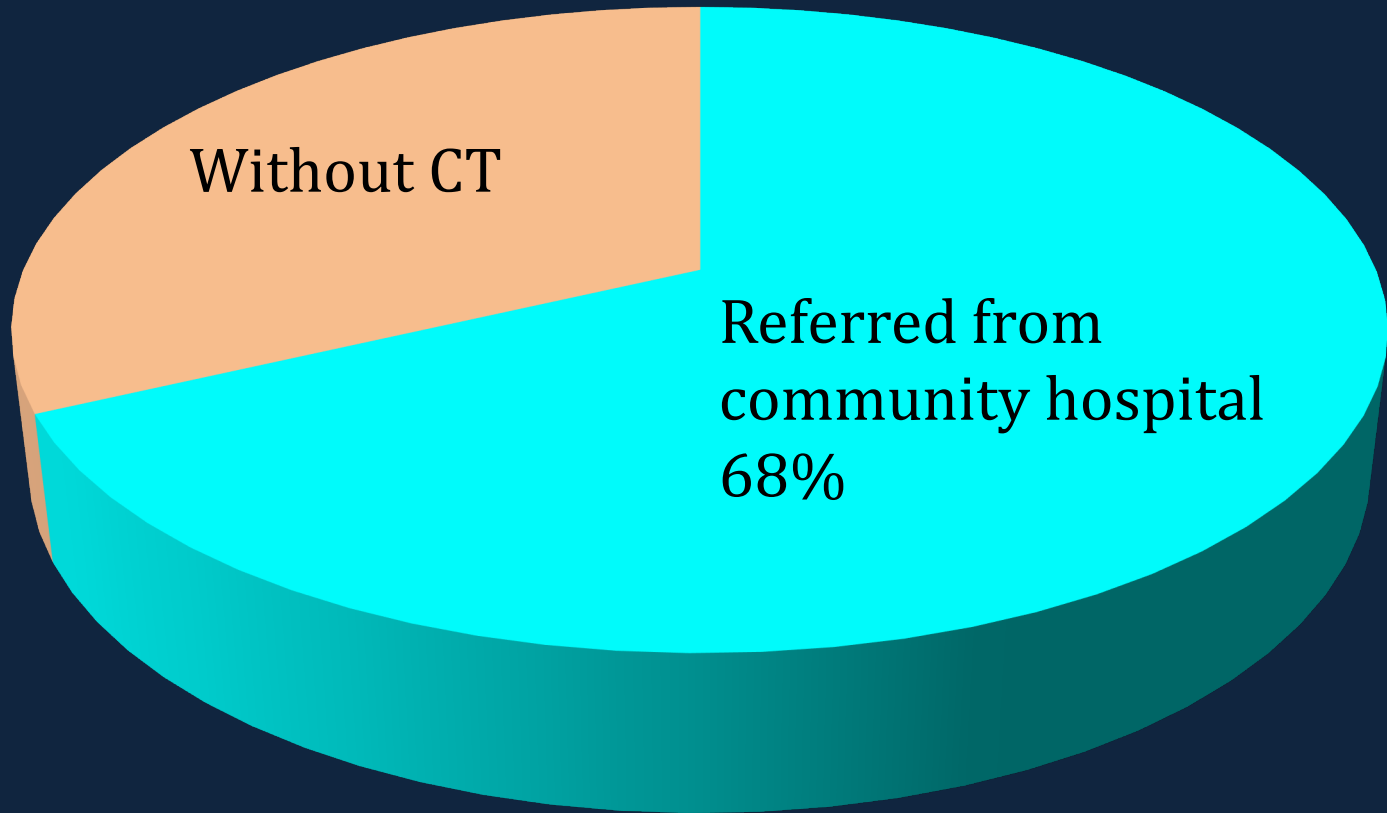
Follow up 14 \pm 11 months

90.8% (1106/1217)

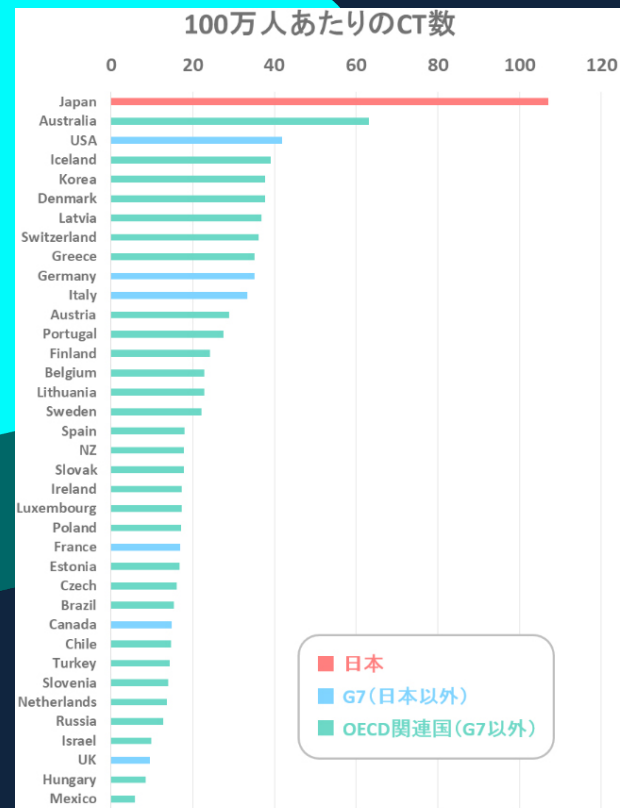
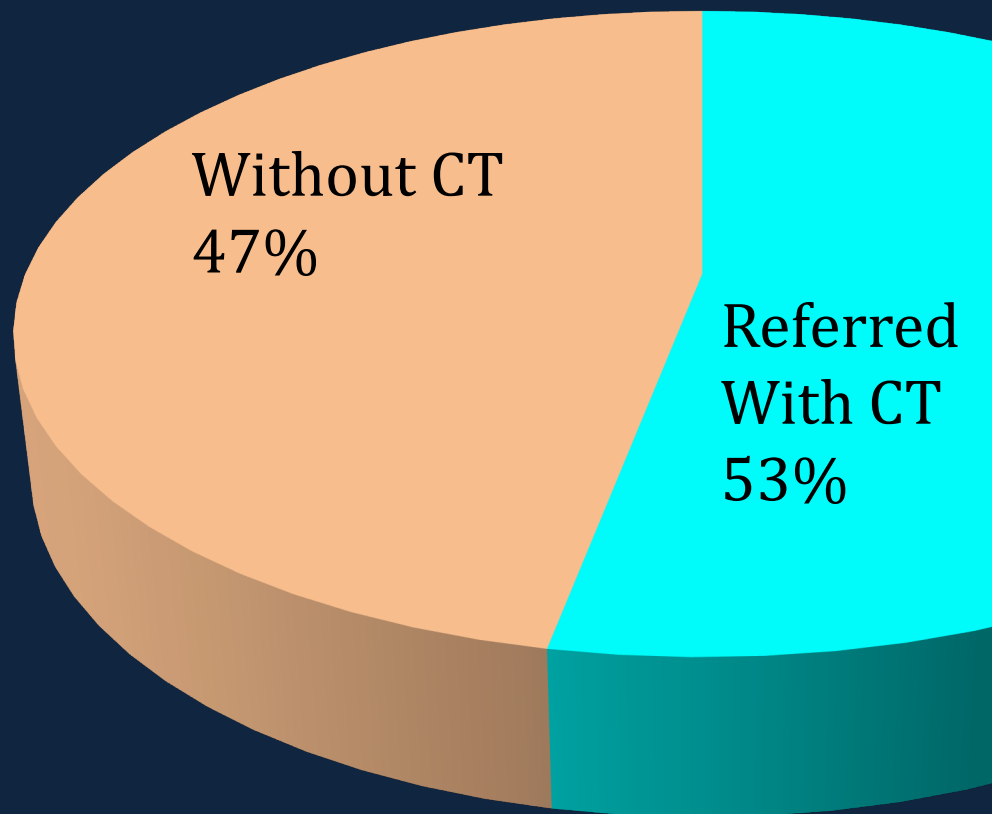
Referral to JRAD hospitals



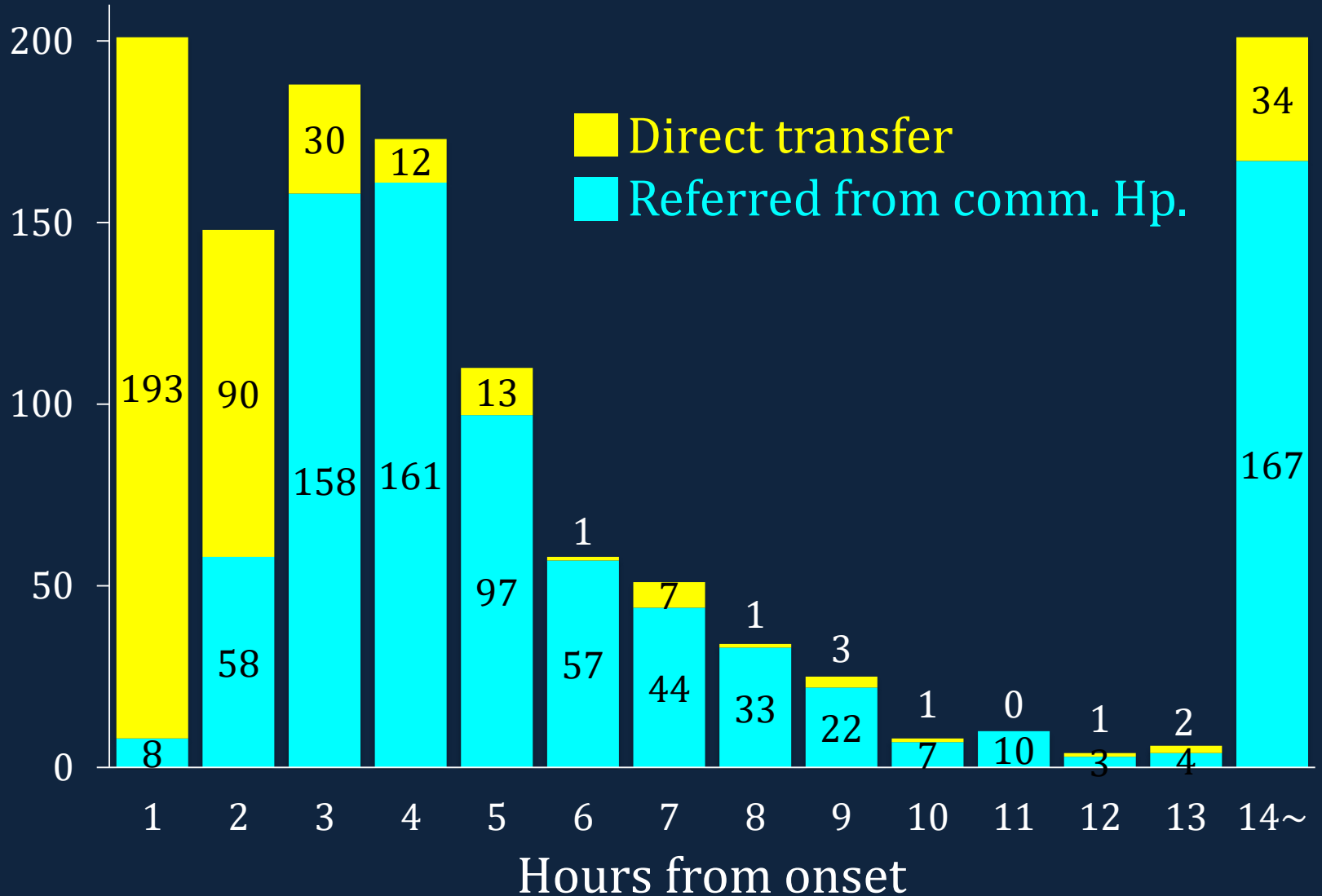
Referral to JRAD hospitals



Referral to JRAD hospitals

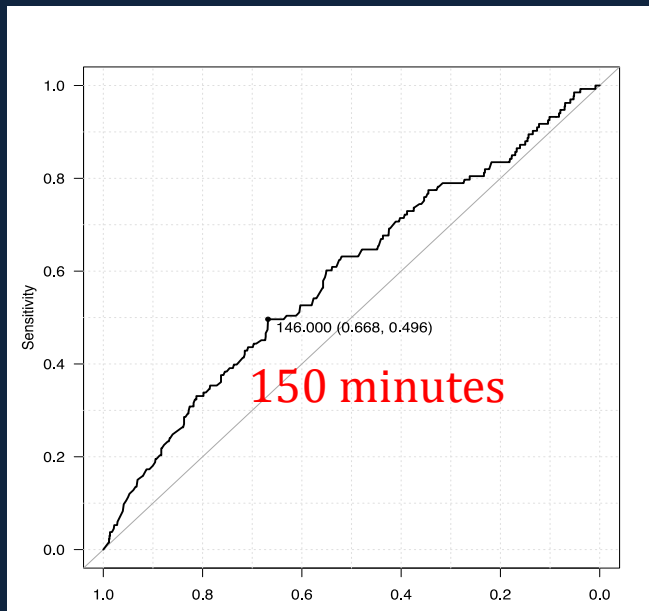


Transfer : Onset to JRAD hospitals

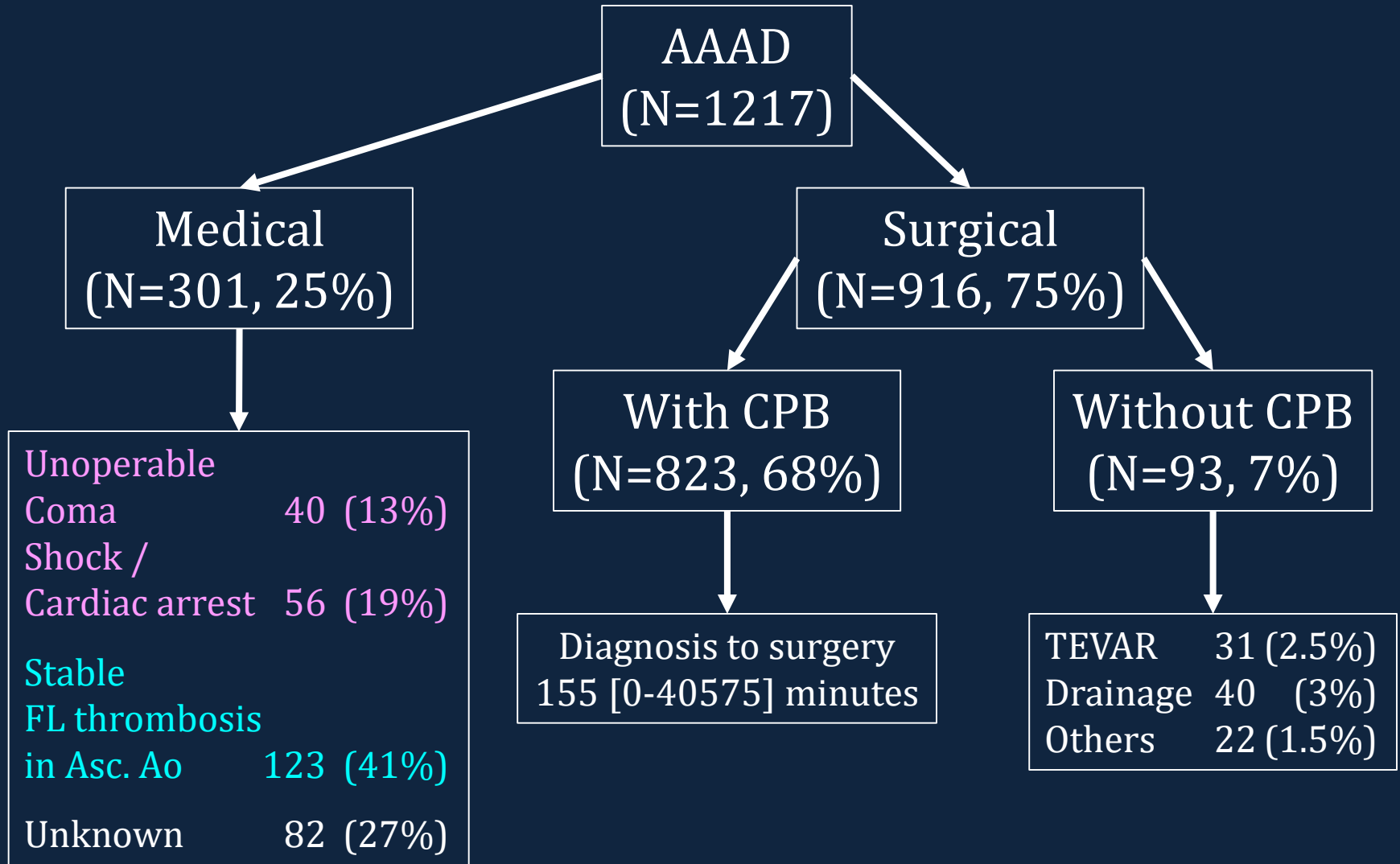


Transfer : Onset to JRAD hospitals

Onset to JRAD hospitals	<150min (N=458)	≥150min (N=759)	
In-hospital mortality	74 (16%)	67 (9%)	
Disturb. of consciousness	95 (21%)	87 (11%)	$P<0.001$
Shock	103 (22%)	96 (12%)	$P<0.001$
CPR	27 (6%)	12 (2%)	$P<0.001$



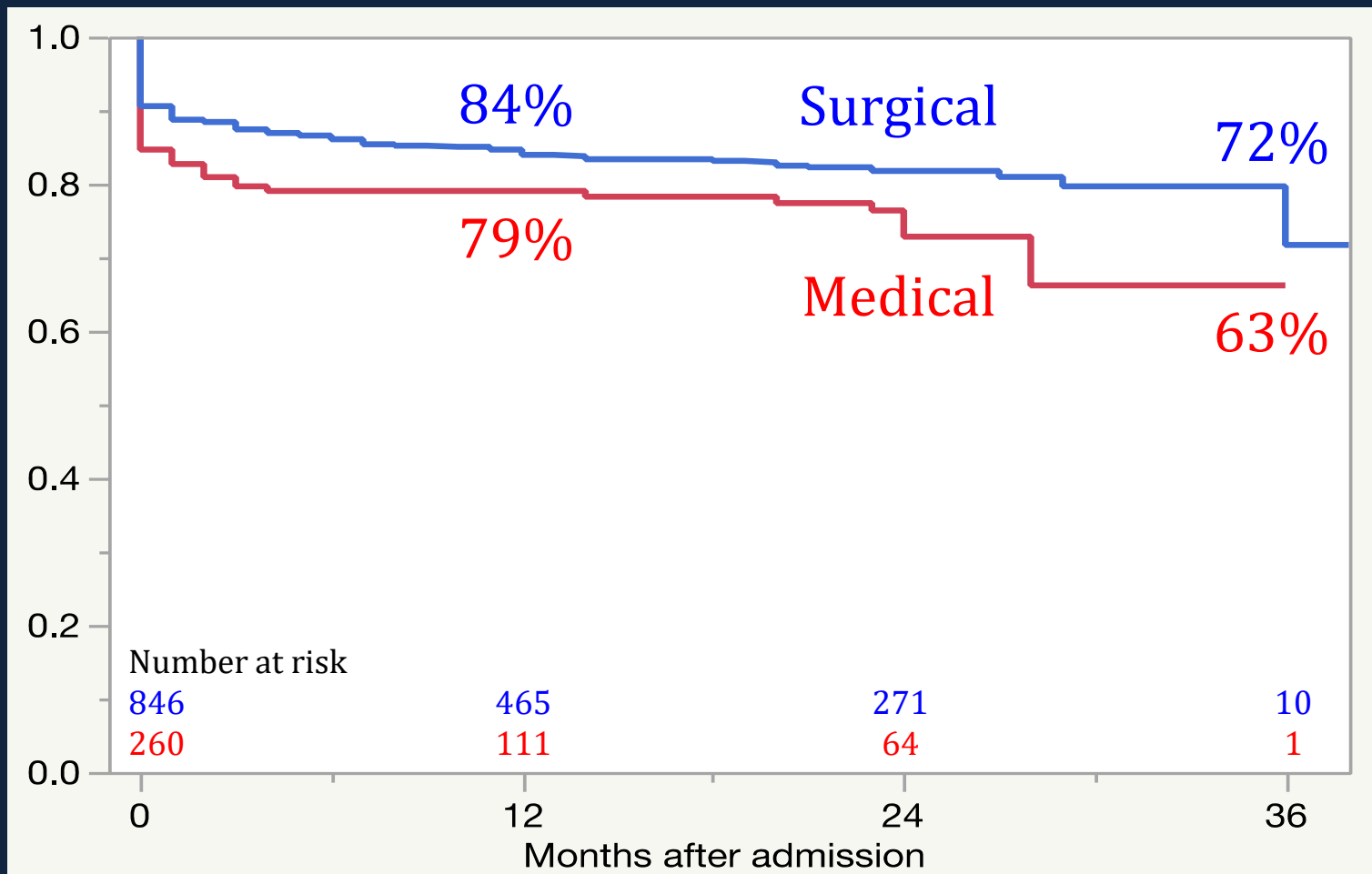
Management



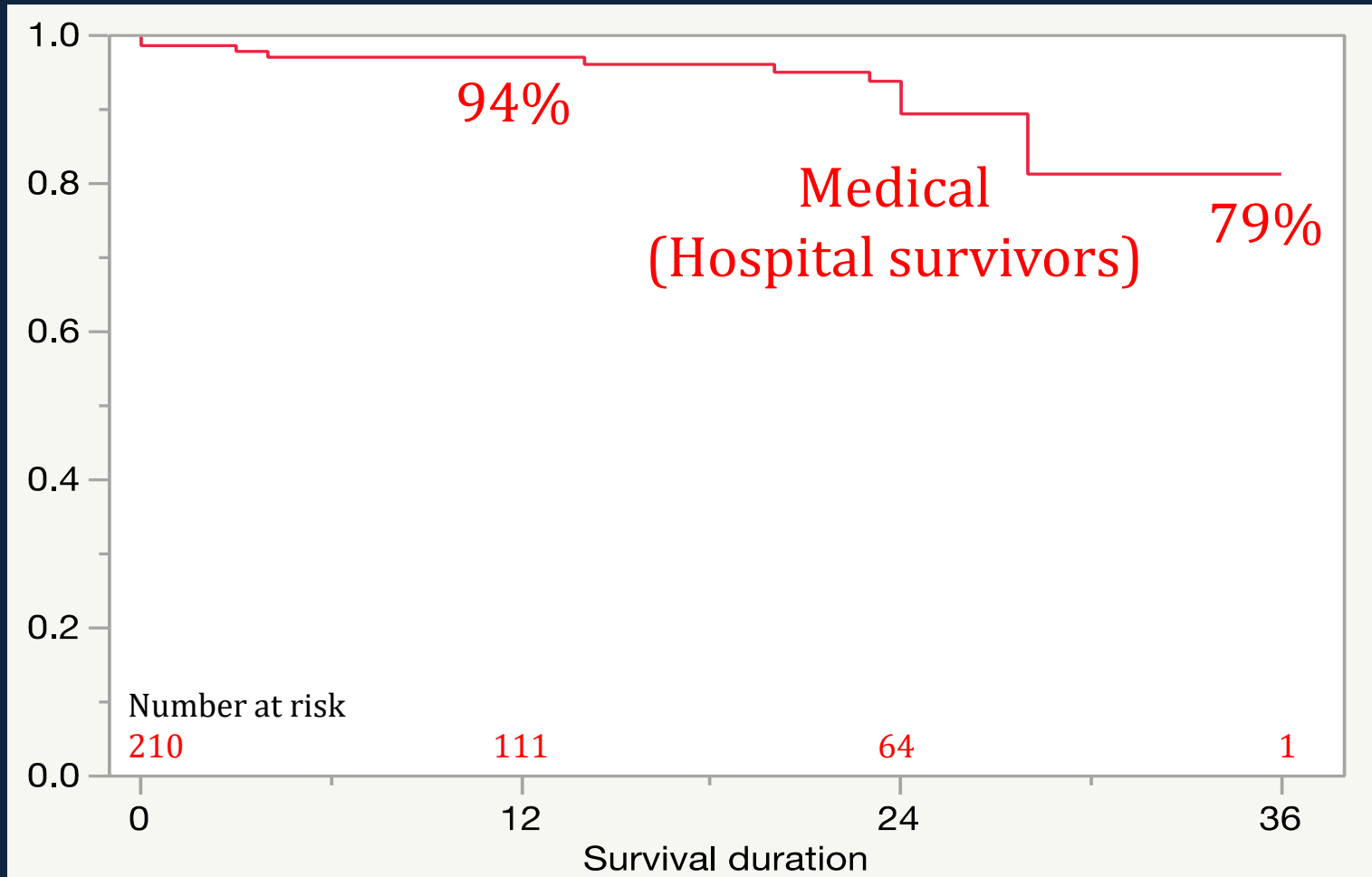
Risk for in-hospital mortality

	Univariable		Multivariable	
	P value	OR (95%CI)	P value	OR (95%CI)
Age \geq 80	<.01	2.45 (1.63–3.63)	<.01	2.37 (1.57–3.58)
Male	.46	0.88 (0.63–1.22)		
Shock	<.01	3.68 (2.45–5.50)	.01	1.89 (1.12–3.18)
Preop. CPR	<.01	12.8 (6.29–26.7)	<.01	4.86 (2.30–10.3)
Disturb. cons.	<.01	5.15 (3.43–7.70)	<.01	3.32 (2.12–5.18)
Pericardial eff.	<.01	2.33 (1.51–3.54)	.66	0.88 (0.52–1.50)
CTD	.36	0.28 (0.01–1.79)		
DB type I	.69	1.09 (0.73–1.69)		
CKD	.03	2.19 (0.99–4.48)	.15	1.74 (0.61–17.3)
COPD	1	0.88 (0.16–1.92)		

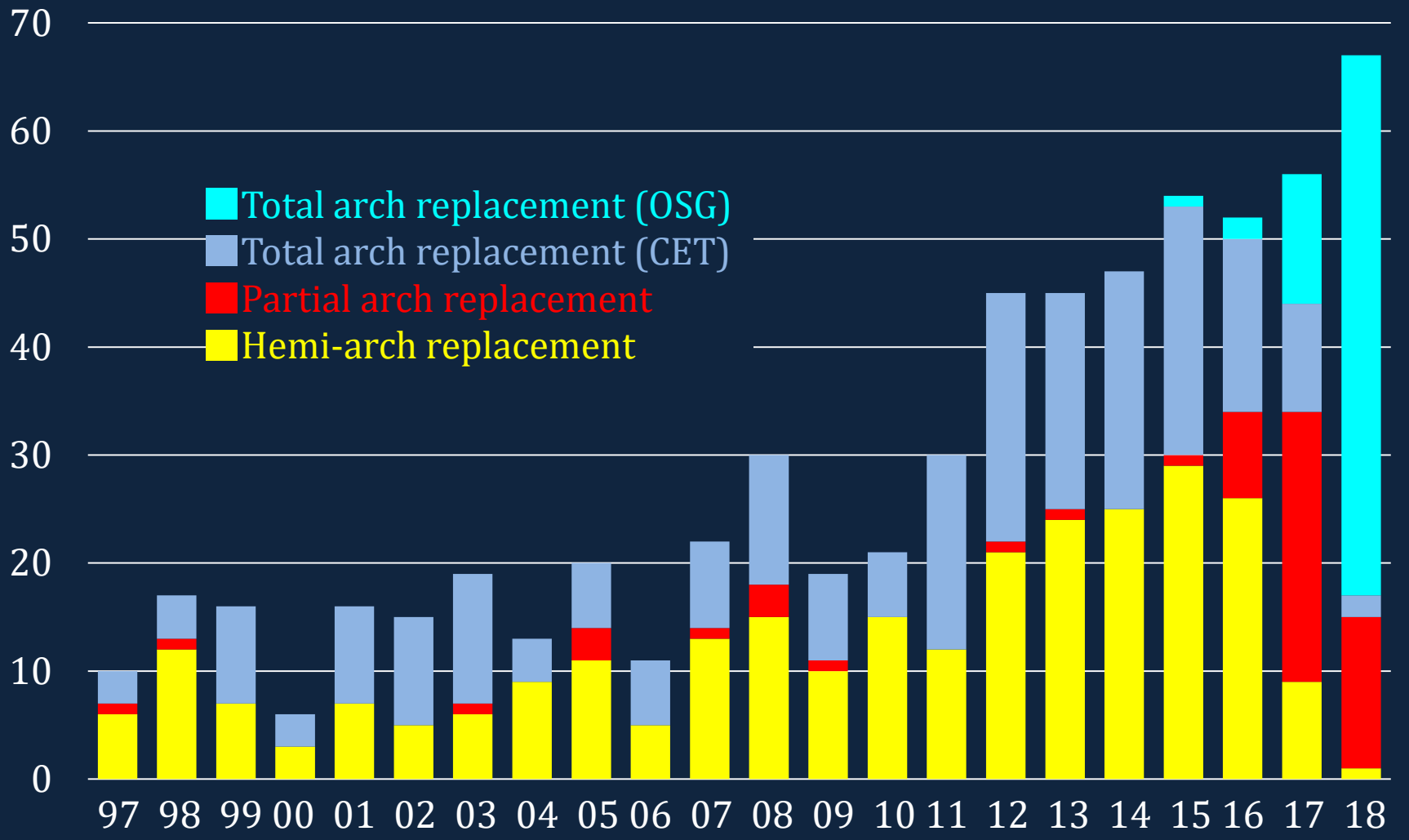
Survival



Survival



Replacement for type A acute aortic dissection



TEVAR for retrograde type A aortic dissection

2016.1 ~ 2018.11.21.

AAAD 158 : Replacement 147, TEVAR 8, Medical 3

Patient	Onset to TEVAR	FL patency at Ascending	PE	Malperfusion	Comorbidity
85/F	7 days	Thrombosed	No	No	AS, Frailty 5
81/F	6 days	Thrombosed	No	Bl. kidney	ARF
79/F	2 days	Thrombosed	No	No	Recovery from coma
73/M	8 days	Thrombosed	No	Lower body	CABG, HD, Low EF
63/F	5 days	Thrombosed	No	No	<i>symptomatic ULP</i>
80/M	4 hours	Patent	Yes	No	HD, SCD, Frailty 7
92/F	20 hours	Patent	Yes	No	AR, Low EF, Frailty 7
54/M	24 hours	Patent	No	No	Obesity (120kg)

SCD : spinocerebellar degeneration

Omura A, Matsuda H, et al. Outcomes of thoracic endovascular repair for retrograde acute type A aortic dissection as an alternative surgical intervention. Under review

Endovascular repair of thrombosed-type acute Type A aortic dissection with critical renal artery malperfusion
Omura A, Matsuda H, et al. EJCTS in press

81 year-old Female, 6 days after onset, Creatinine 10.9mg/dl



Discharge home 1 month after TEVAR, Creatinine 0.8mg/dl

80 year-old Male

ESRD on HD

Spinocerebellar degeneration

Frailty Score 7 (Severely Frail)

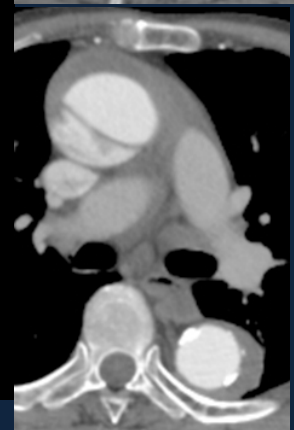
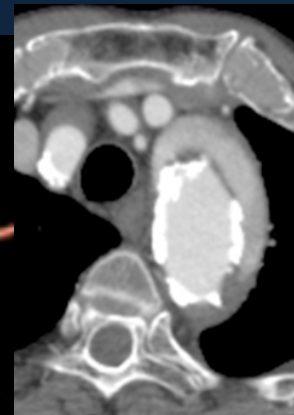
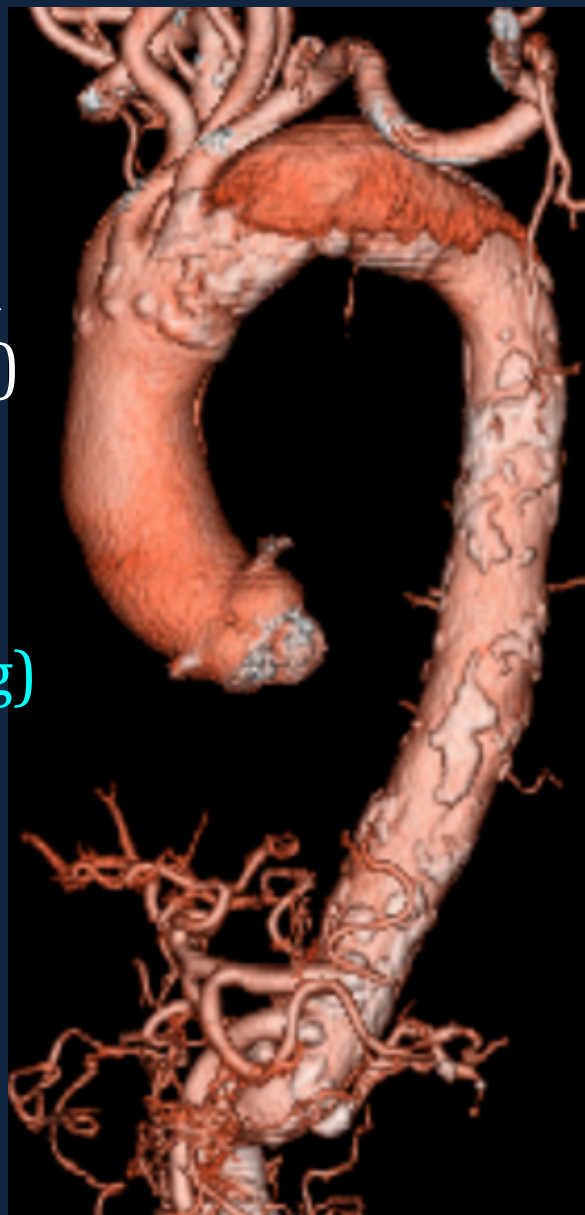
Retrograde type A dissection

Patent false lumen (ascending)

Severe calcification

#1 Inoperable – Medical

#2 TEVAR

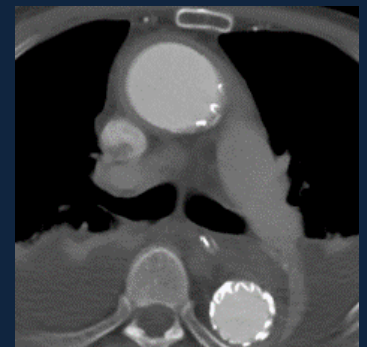
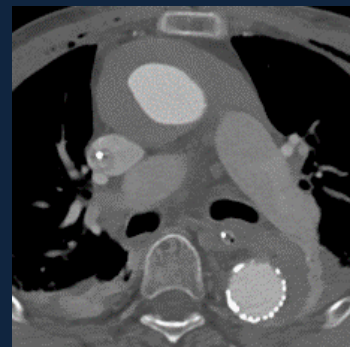
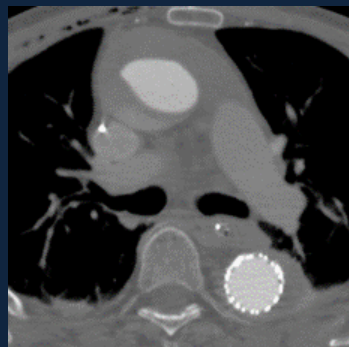
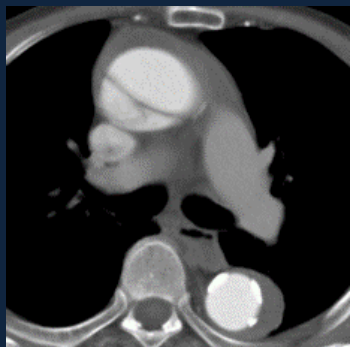
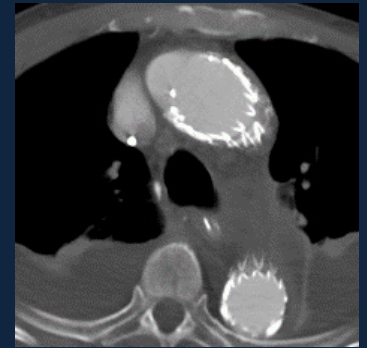
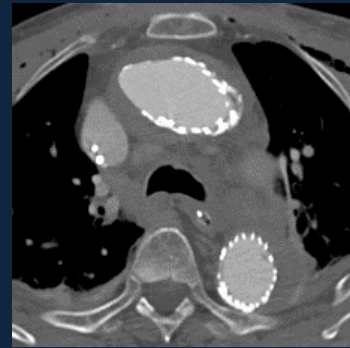
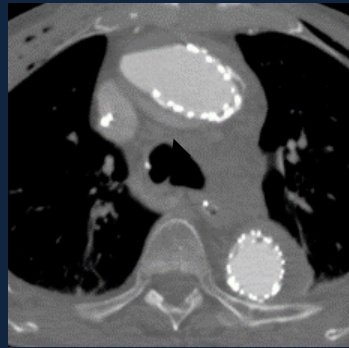
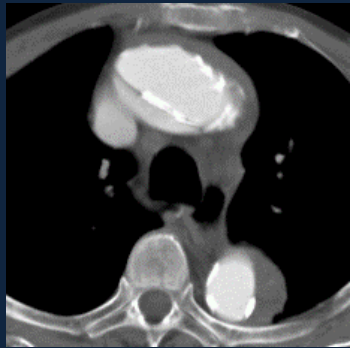
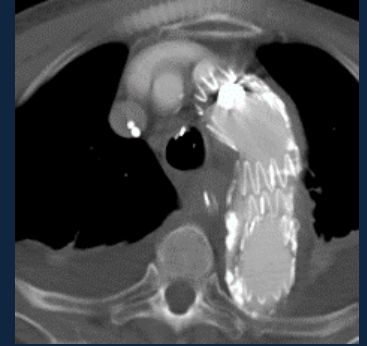
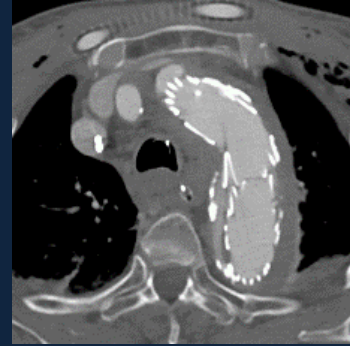
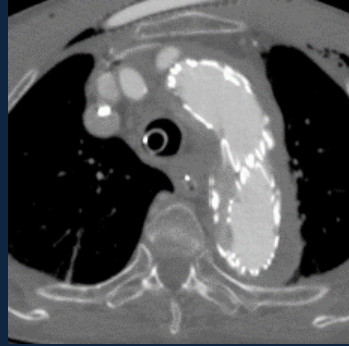
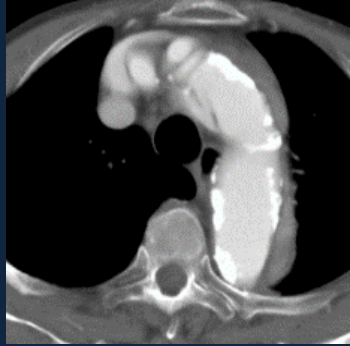


Pre-TEVAR

Immediately after

12 hours

3 days



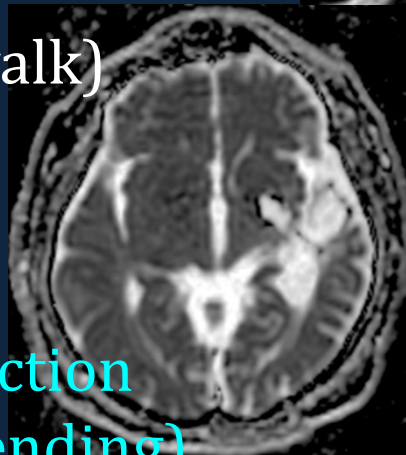
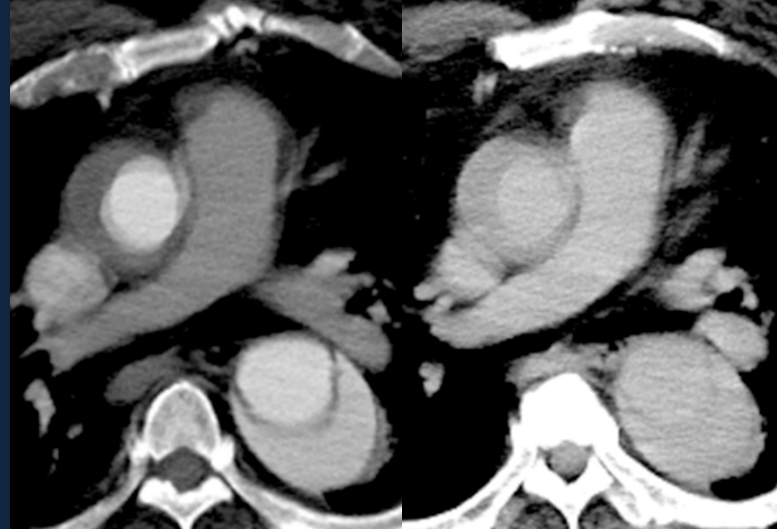
54 year-old Male

Nov 13 15:50 Back Pain
CT: Type A dissection

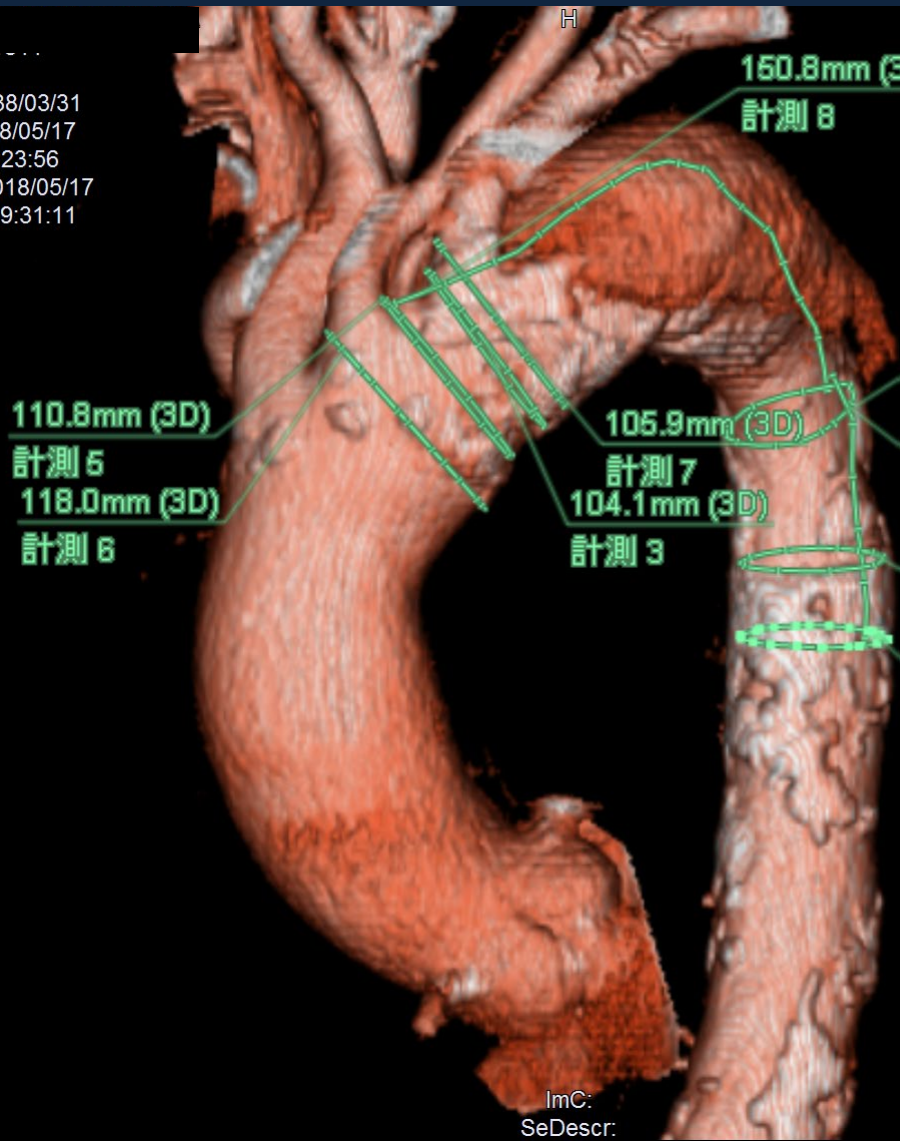
s/p Cerebral bleeding
Hemiplegia (cane walk)
Obesity 120kg

Nov 13 19:30 NCVC
Retrograde type A dissection
Patent false lumen (ascending)

Nov 14 15:10 TEVAR



Sizing



Proximal landing zone

>2cm proximal from entry tear

Stentgraft diameter

Circumference / π x 105~110%

Distal landing zone

>15cm distal

Straight portion

Tapered stentgraft

TEVAR for retrograde type A aortic dissection

Patient	Proximal Landing zone	Landing distance	Landing diameter	Distal LZ diameter	Stentgraft	Op time
85/F	3	20	32	30	TX-D	99
81/F	3	20	32	28	TX-D	102
79/F	2	20	34	26	cTAG	149
63/F	4	>60	26	26	TX-D	74
73/M	3	20	31	26	cTAG	88
80/M	1	25	40	30	TX-D	253
92/F	1	30	40	32	TX-D	181
54/M	3	50	32	22	TX-D	107

Hospital mortality 0

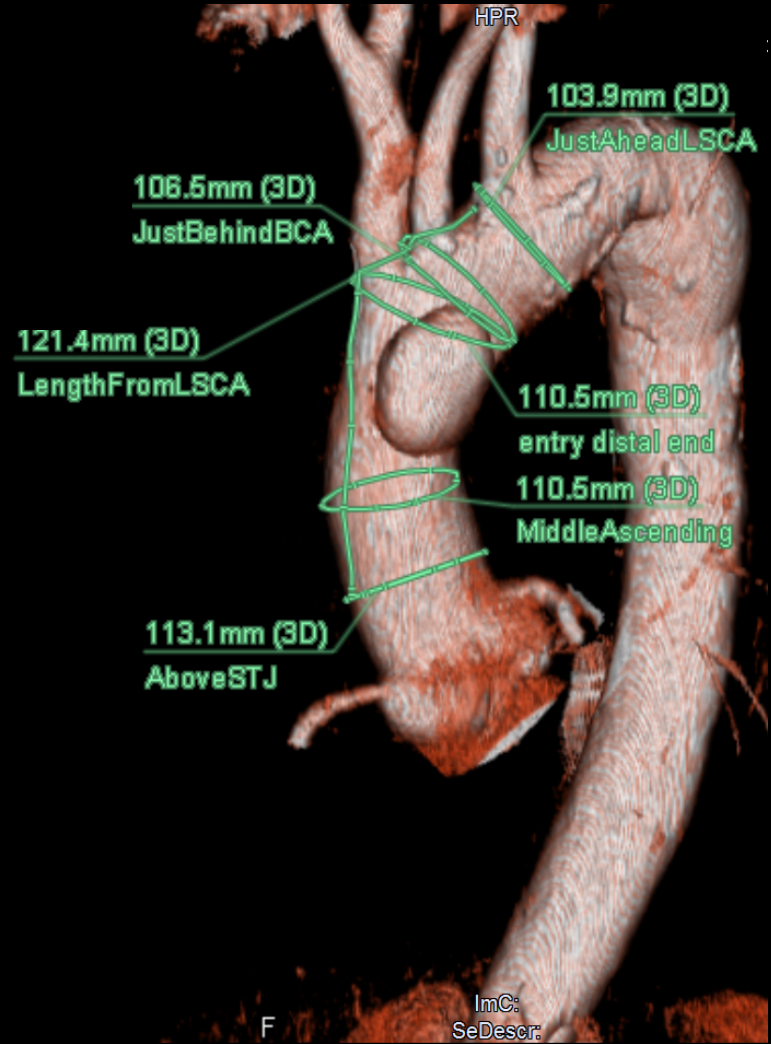
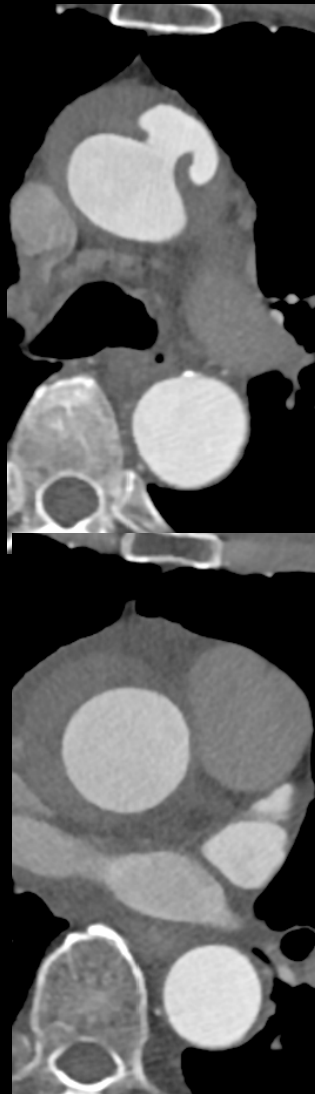
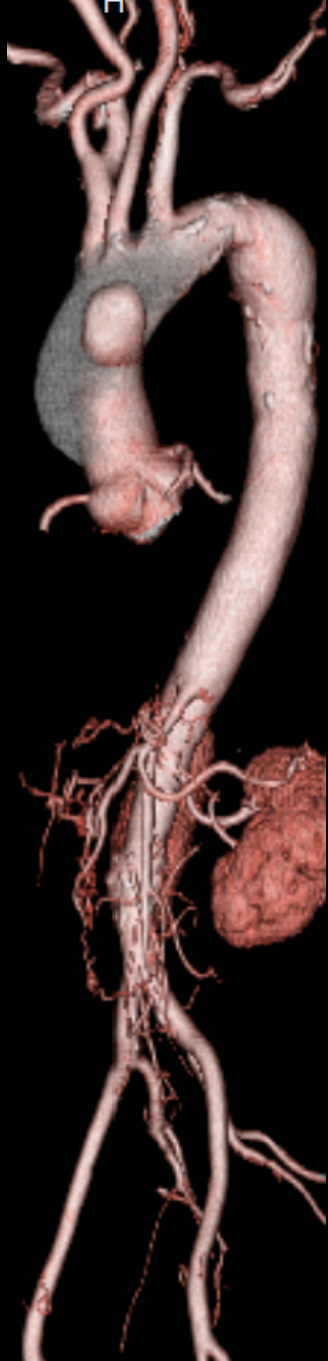
Cerebral infarction 0

Spinal cord ischemia 0

Mechanical ventilation >72hrs 0

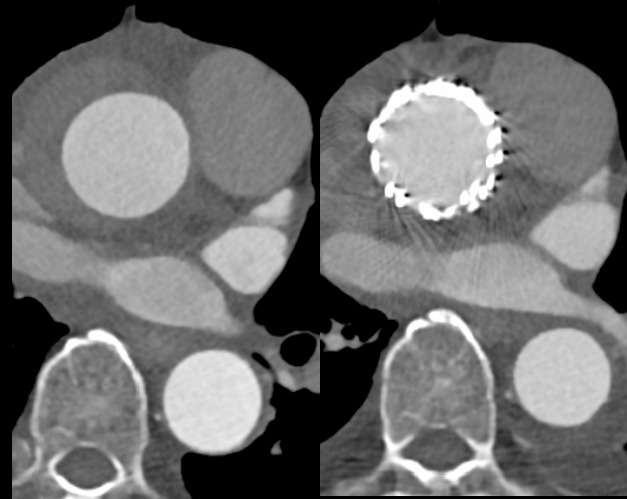
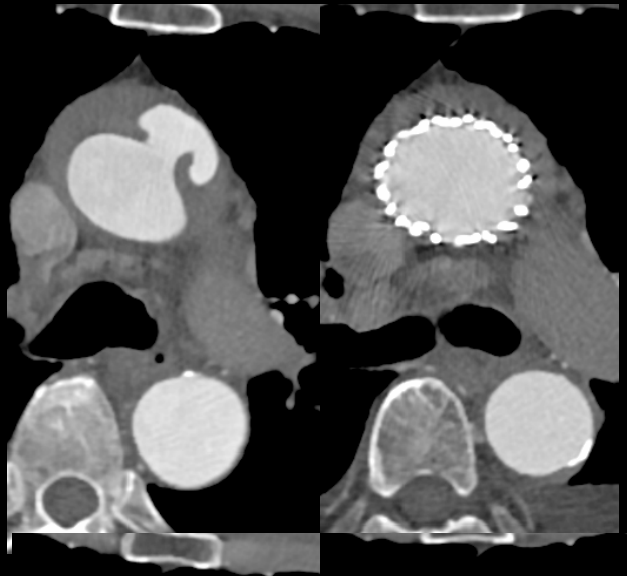
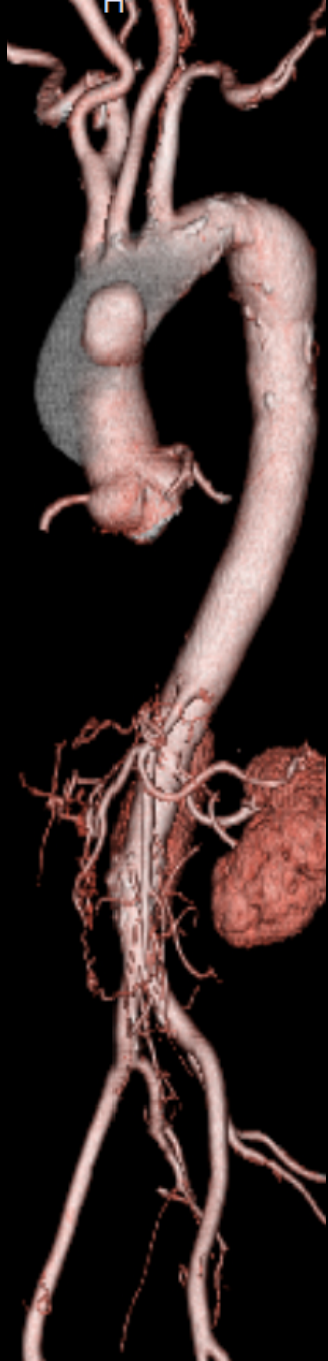
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86 y.o. Male COPD on HOT



F

86 y.o. Male COPD on HQT



Conclusions

In the management of acute aortic dissection;

- 1) Obviously good result after TEVAR for complicated type B was confirmed.
- 2) In JRAD, reasonable management of type A was revealed.
- 3) In selected patients with acute type A, utility of TEVAR was suggested.