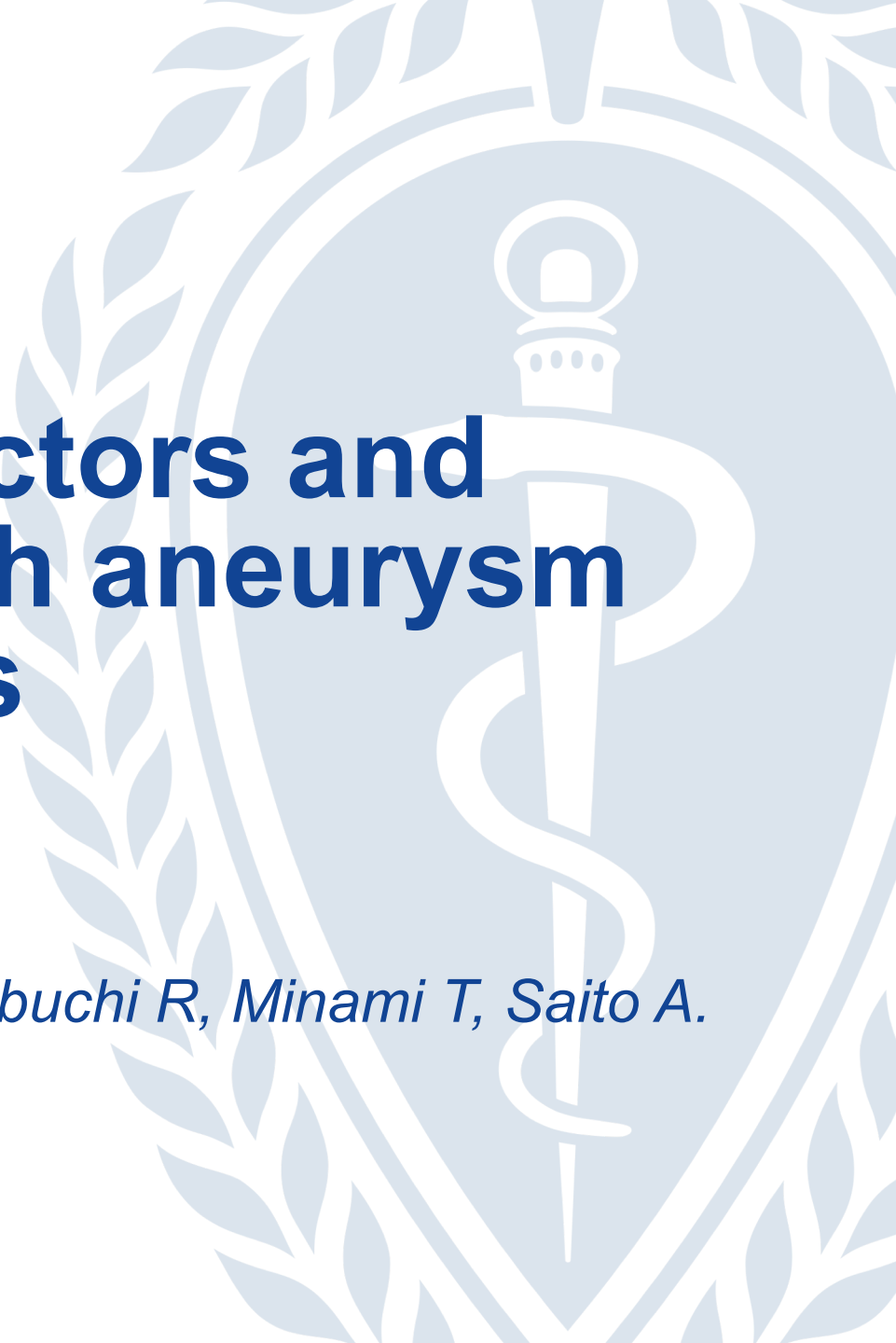


Investigation of risk factors and outcomes of aortic arch aneurysm repair in octogenarians

Yokohama city university medical center

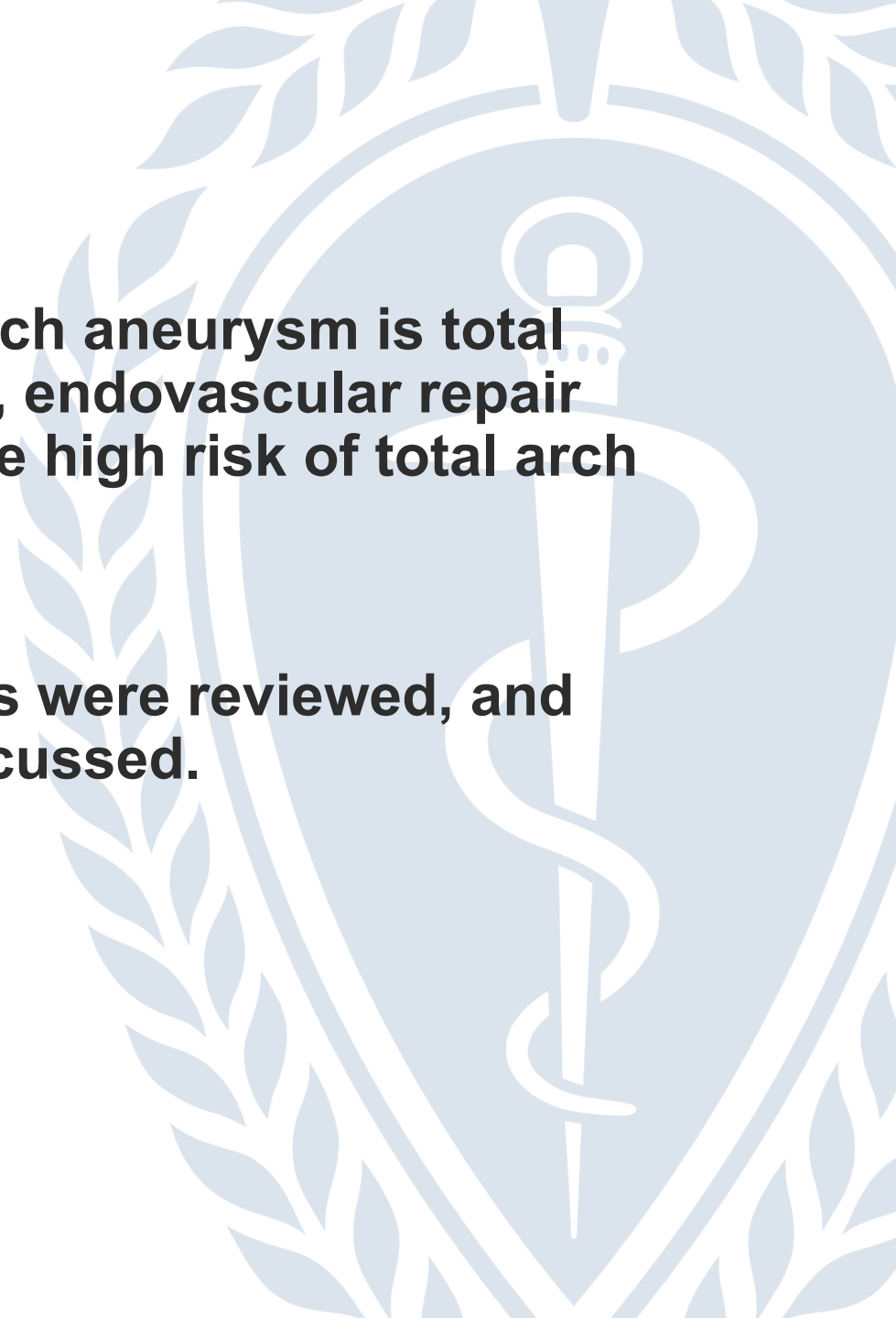
Department of cardiovascular center

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Introduction & Aim

- **The first choice of treatment for aortic arch aneurysm is total arch replacement, but in elderly patients, endovascular repair may be the treatment of choice due to the high risk of total arch replacement.**
- **The results of treatment in octogenarians were reviewed, and risk factors for each procedure were discussed.**



Criteria

Criteria	
year	2000-2021
Inclusion criteria	Octogenarians
	True aneurysm
	TEVAR above Zone 2 (Fenestrated or Debranching)
Exclusion criteria	Dissected aneurysm
	Emergent cases(rupture etc.)
	TEVAR below Zone 3

Methods

- **Total arch replacement vs Endovascular repair**
- **Variables:**
 - Early results
 - Mid-term results
 - Risk factors of all-cause death
- **Our treatment Policy:**
 - First choice ⇒ total arch replacement
 - High risk due to comorbidities and ADL(Frailty)
⇒ Endovascular repair



Patient characteristics

	Overall(N=63)	TAR(N=26)	TEVAR(N=37)	P-value
Age	82[81-84]	82[81-84]	82[81-83]	0.929
Male	47(75)	20(77)	27(73)	0.722
Aneurysm size	63[59-71]	65[60-72]	62[57-71]	0.708
Ischemic heart disease	15(24)	7(27)	8(22)	0.628
Neurologic dysfunction	8(13)	2(8)	6(16)	0.304
COPD	13(21)	4(15)	9(24)	0.382
Malignancy	17(27)	3(12)	14(38)	0.016
Previous Cardiac & thoracic aortic surgery	4(6)	2(8)	2(5)	0.716

	CFS	TAR	TEVAR
2		10%	0%
3		55%	27%
4		30%	59%
5		5%	14%

P=0.049

CFS; Clinical Frailty Scale

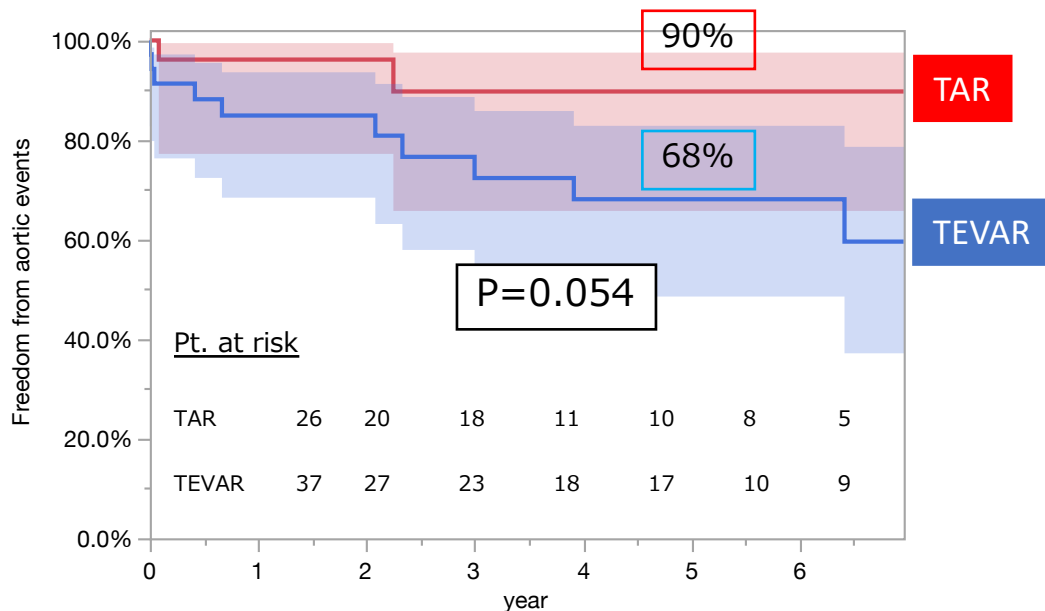
Early results

	Overall N=63	TAR N=26	TEVAR N=37	P-value
30day mortality	2 (3.2)	0 (0)	2 (5.4)	0.140
Hospital death	5 (7.9)	2 (7.7)	3 (8.1)	0.952
Stroke	4 (6.3)	2 (7.7)	2 (5.4)	0.716
Spinal cord ischemia	2 (3.2)	0 (0)	2 (5.4)	0.140

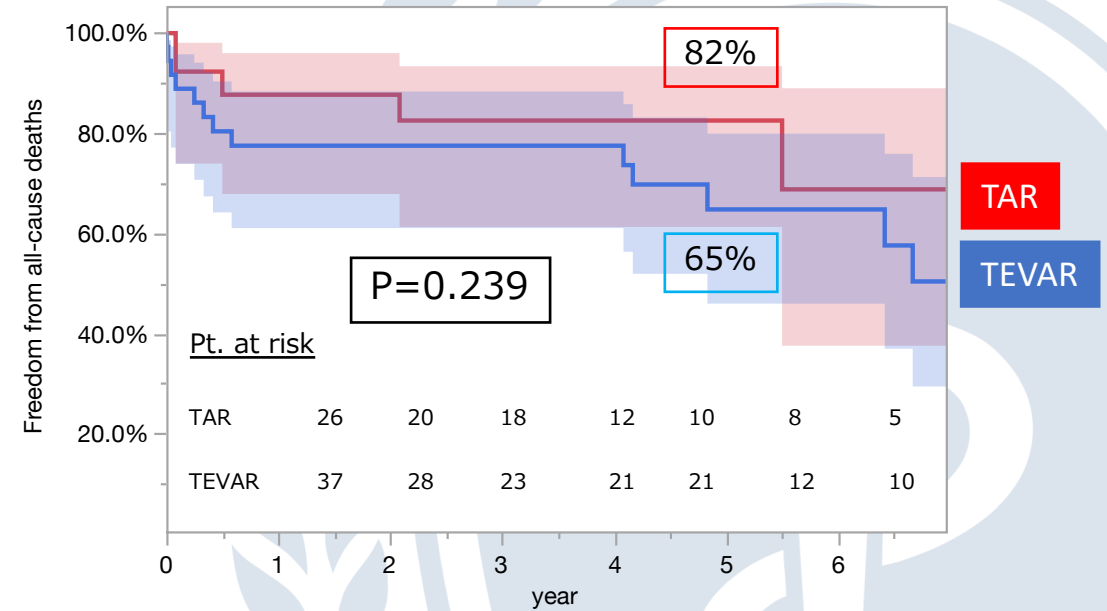
Mid-term results

- No significant differences were found for all-cause mortality, aorta-related mortality, and aortic events.

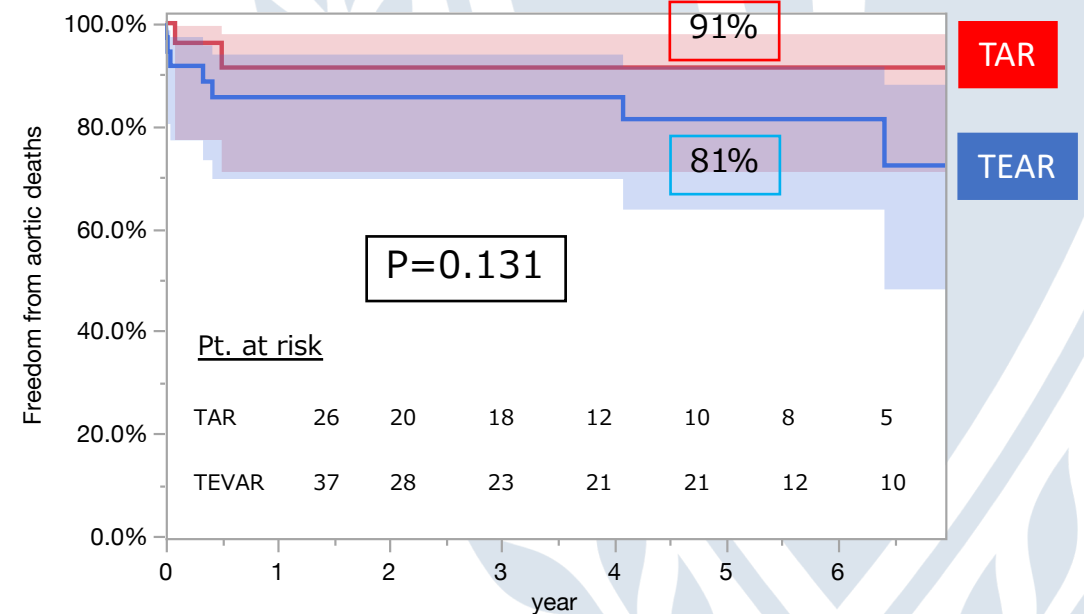
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Risk factors for all-cause mortality by each procedures

Group	Covariate	HR	95% CI	P-value
TAR	Male	1.59	0.26-9.57	0.613
	Ischemic heart disease	16.28	1.19-221	0.036
	Malignancy	1.61	0.11-22.8	0.723
	COPD	2.31	0.08-65.0	0.622
	Previous Cardiac & thoracic aortic surgery	2.23	0.10-47.7	0.608
TEVAR	Ischemic heart disease	2.13	0.08-51.5	0.640
	Postoperative SCI	61.1	0.37-1017	0.115
	Previous intervention on AAA	320.3	1.00-1021	0.05
	COPD	23.6	0.24-2284	0.175

Conclusion

- **The choice of procedure was reasonable considering the frailty of our patients.**
- **In the TAR group, history of ischemic heart disease was a significant risk factor for all-cause death.**
- **In patients with a history of ischemic heart disease, endovascular repair should be selected even if frailty is not high.**

