Paris Vascular Insights Course

Nationwide observational study on the natural history of haemodialysis arteriovenous access and patient survival after thrombosis in France

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Statement of financial interest

Conflicts of interest:

- AM declared consulting fees for Medtronic, Laminate Medical, Sonosite / Shareholder, Avenu Medical and Contego Medical.
- CDG, MS, and OH have nothing to declare.
- EH, AS, and SB work for Heva, the company contracted by Boston Scientific to conduct the study.

Funding:

- This study was funded by Boston Scientific.

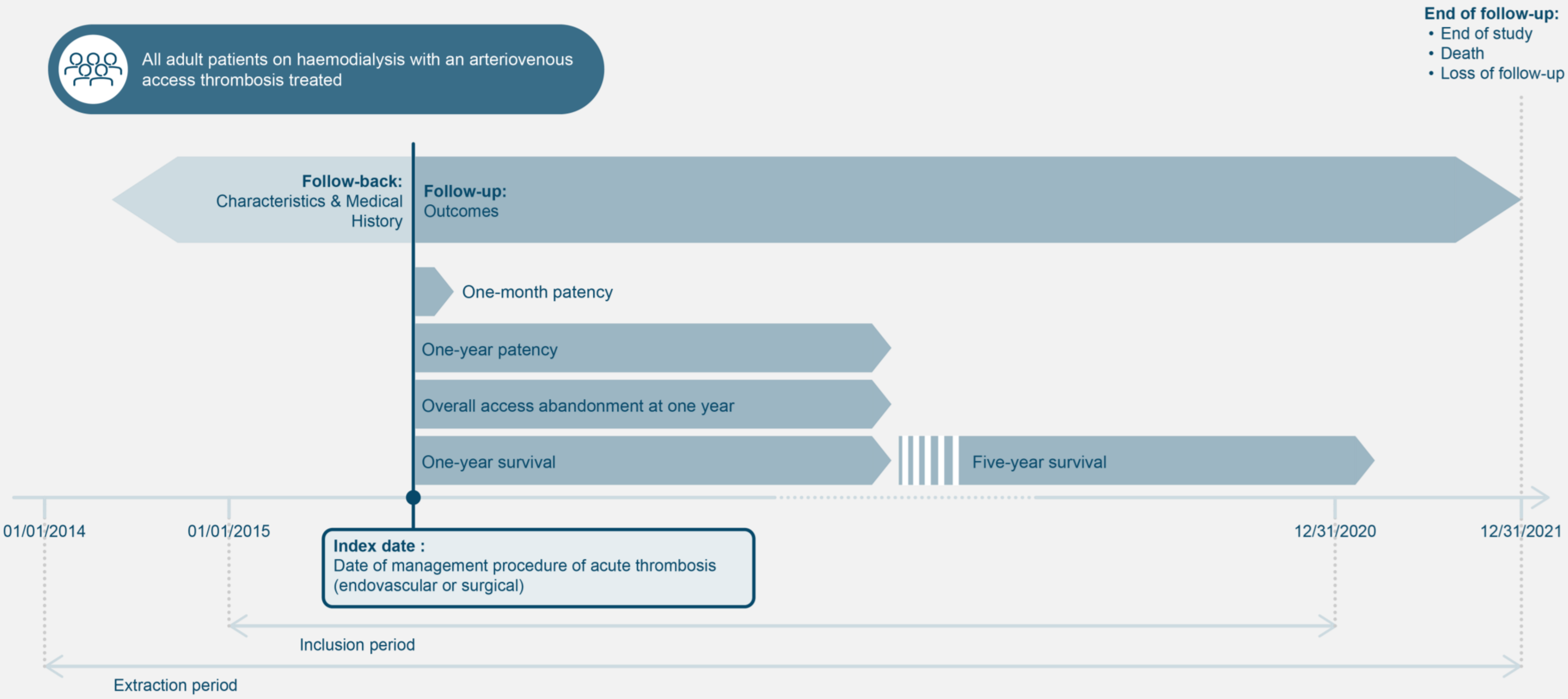
Aim - Objective

- To evaluate natural history of arteriovenous access and survival after access thrombosis in France

Study design

- Retrospective longitudinal observational prognostic cohort study on the French National Health Data System (SNDS)

Methods


All adult patients on haemodialysis with an arteriovenous access thrombosis treated
End of follow-up:
• End of study
• Death
• Loss of follow-up
Follow-back: Characteristics & Medical History
Follow-up: Outcomes
One-month patency
One-year patency
Overall access abandonment at one year
One-year survival
Five-year survival
01/01/2014
01/01/2015
12/31/2020
12/31/2021
Index date : Date of management procedure of acute thrombosis (endovascular or surgical)
Inclusion period
Extraction period

Population

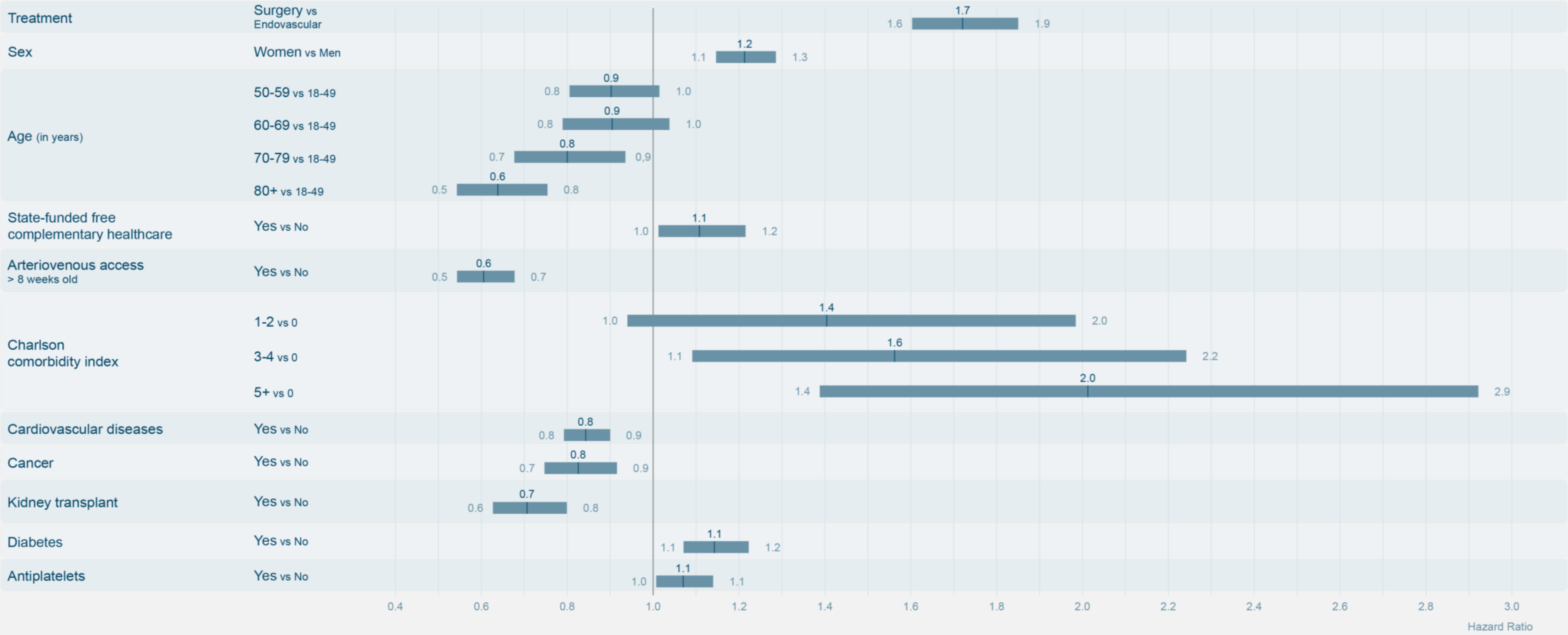
	Variable	Modality	Total (%)
Characteristics	Sex	Men / Women	59.6% / 40.4%
	Age (in years)	18-49	15.0%
		50-59	16.0%
		60-69	23.0%
		70-79	24.4%
		80+	21.7%
	State-funded free complementary healthcare		6.1%
Disease history	Arteriovenous access > 8 weeks old		94.5%
Comorbidities	Cardiovascular diseases		46.7%
	Diabetes		37.7%
	Kidney transplant		7.6%
	Cancer		10.5%
	Charlson comorbidity index	1-2	20.2%
		3-4	32.4%
		≥ 5	46.4%
	Anticoagulants		19.2%
	Antiplatelets		50.2%
	Statins		48.0%
	Agiotensin-converting-enzyme inhibitors		26.8%
	Anti-hypertensive treatments		81.6%

Natural history of arteriovenous access

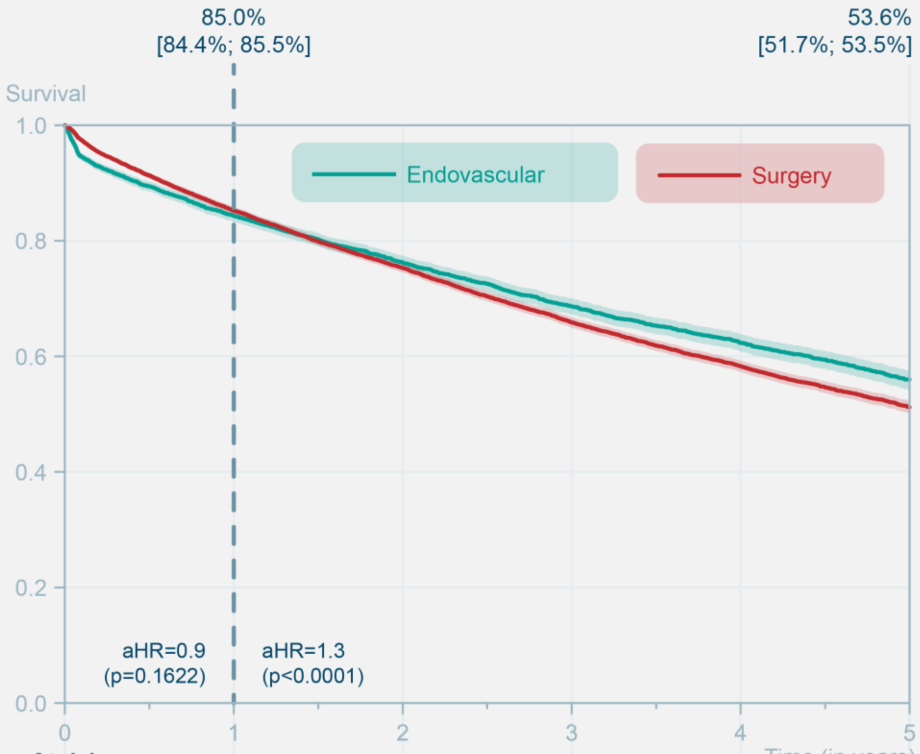
	1-month patency failure	1-year patency failure	Access abandonment at 1 year
Total 17,206 patients	18.5%	38.5%	28.1%
Surgical (including hybrid) 12,163 patients 71.3%	20.6%	42.9%	32.2%
Endovascular 4,943 patients 28.7%	13.1%	27.5%	18.0%
	aOR=1.7 [1.5; 1.8] p<0.0001	**aHR**=1.7 [1.6; 1.9] p<0.0001	**aHR**=1.8 [1.7; 2.0] p<0.0001

(**aOR**: adjusted Odds Ratio; **aHR**: adjusted Hazard Ratio)

1-year patency failure

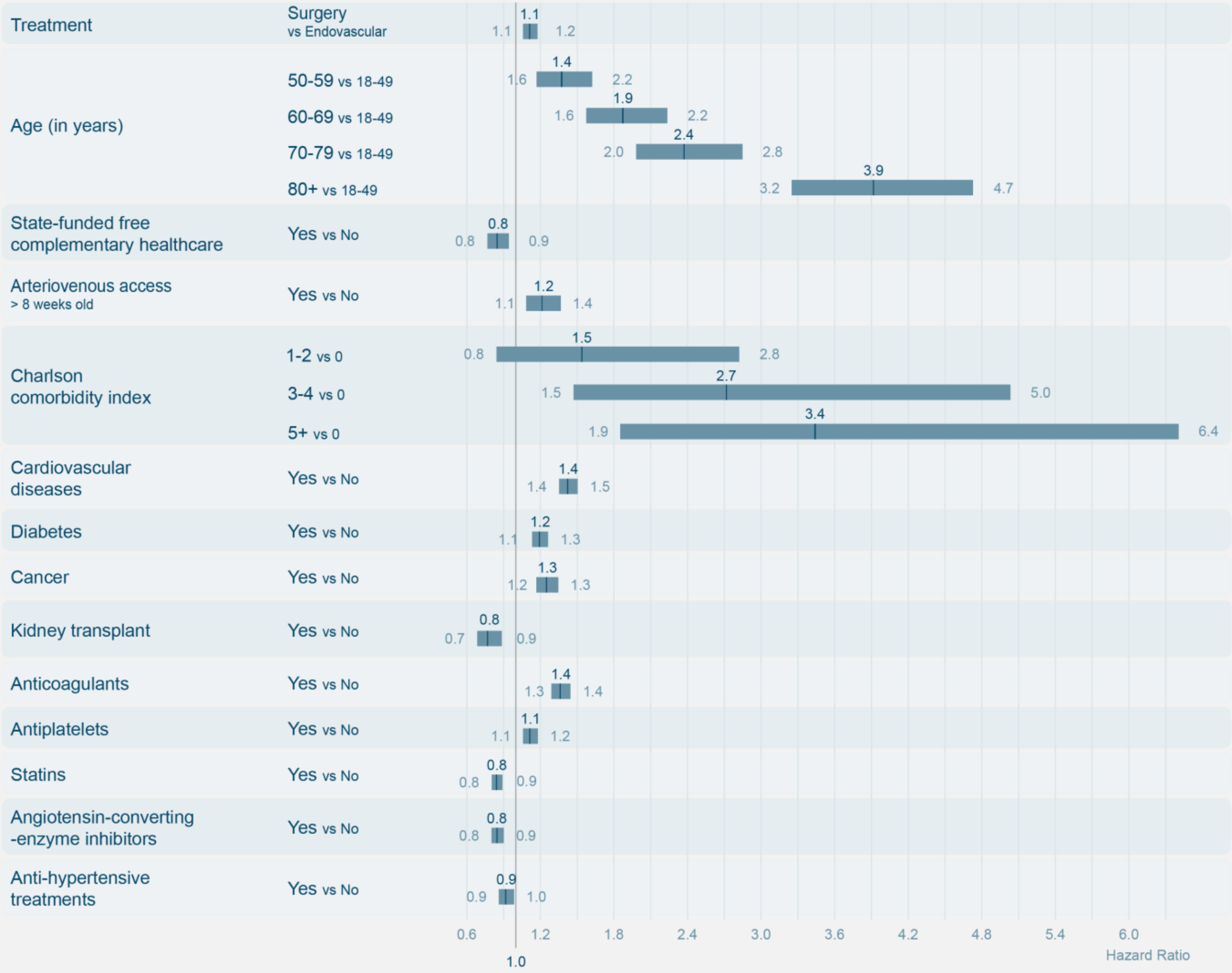


Survival



At risk

	0	1	2	3	4	5
Endovascular	4,943	4,142	3,258	2,464	1,785	1,091
Surgery	12,263	10,419	7,903	5,702	4,004	2,557



Conclusion

- Patency after treatment of arteriovenous access thrombosis is often not obtained and overall survival of patient is poor.
- The endovascular approach was associated with a higher 1-month and 1-year patency, lower rate of access abandonment at 1 year, and higher survival rate after 1 year (adjusted on severity data available in the SNDS).

Thank you
for your attention