Supplementary data

Supplementary Appendix 1. Exclusion criteria for the CAPTIS first-in-human trial.

History of stroke or transient ischemic attack; chronic and persistent atrial fibrillation; poor left ventricular function (EF<30%); renal failure (GFR<30 ml/min/1.73m^2); excessive tortuosity or calcification of the aorta and iliac arteries; prior carotid stenting or carotid endarterectomy within the previous 6 months, an innominate, carotid, or subclavian artery with significant stenosis, ostial calcification, ectasia, dissection, or aneurysm at its ostium; neurodegenerative or other progressive neurological disease or history of significant head trauma followed by persistent neurologic deficit or known structural brain abnormalities; hemodialysis shunt, graft, or arterio-venous fistula involving the lower extremity vasculature; Blood count abnormality including white blood cell count <5,000/microliter, hemoglobin <10.0 mg/dL, platelet count <100,000/microliter, history of bleeding diathesis, coagulopathy, or conditions associated with increased thrombogenicity; hemodynamic instability requiring pharmacological or mechanical circulatory support; patients in whom hemodynamic instability is expected or at increased risk; Any surgery or procedure (including endovascular) planned for the 30 days post TAVR; Echocardiographic evidence of intracardiac or aortic mass, thrombus, or vegetation; Active or recent bacterial endocarditis; Active peptic ulcer or upper GI bleeding within the prior 3 months; A known hypersensitivity or contraindication to aspirin, heparin, bivalirudin, clopidogrel, ticagrelor, or contrast media, which cannot be adequately pre-medicated or replaced by an alternative agent; Life expectancy < 12 months due to non-cardiac co-morbid conditions; patients who refuse blood transfusion; active major psychiatric disease that prevent a conscious consent; and patients who are not appropriate for the study as determined by the investigator or the Eligibility Committee.

Supplementary Table 1. Size and number of debris particles.

Patient number	Total number of particles	All particles ≥ 150 µm	Particles ≥ 150 and < 500 µm	Particles ≥ 500 and < 1000 µm	Particles ≥ 1000 and < 2000 µm	Particles ≥ 2000 µm
1	5898	672	574	72	16	10
2	1359	99	79	11	4	5
3	1400	77	68	8	1	0
4	1718	132	117	13	1	1
5	1037	57	52	5	0	0
6	1661	69	62	4	3	0
7	608	20	15	2	2	1
8	1679	99	87	9	1	2
9	370	14	13	1	0	0
10	1425	105	79	9	8	9
11	1712	137	123	11	2	1
12	611	42	25	8	8	1
13	782	41	30	7	1	3
14	2443	109	81	11	9	8
15	895	35	33	2	0	0
16	1199	86	79	5	2	0
17	525	74	52	10	10	2
18	1268	153	130	19	1	3
19	1069	103	85	10	8	0
20	1305	121	106	10	4	1
Average number	1448	112	95	11	4	2
Percentage of average number	-	100%	84.2%	10.1%	3.6%	2.1%
Median [1st-3rd quartile]	1287 [810-1675]	93 [46-118]	79 [38-101]	9 [5-11]	2 [1-8]	1 [0-3]