On-line Table 1: Detailed patient information

Baseline Data				Aneurysm and Treatment Characteristics						Sizing Metrics						Periprocedural Complications					Follow–Up		
Pt. No.	Center	Pt. Age (yr)	Sex	Aneurysm Position	Aneurysm Max Diameter (mm)	Ruptured Aneurysm	Acute Dissection	Multi-Device Construct	Additional Use of Coils	Diameter (mm) conv	Length (mm) conv	Diameter (mm) ss	Length (mm) ss	Absolute Difference Diameter (mm)	Absolute Difference Length (mm)	Peri-procedural Complication	Deployment Failure	Peri-procedural Ischemia	Peri-procedural Hemorrhage	Occlusion of Inadvertently Covered Branches	1-Yr FU	Residual Perfusion	Endoleak
1	A	75	F	Cavernous	16	N	N	N	N	4.25	14	4.00	25	0.25	11	N	N	N	N	N	N	–	–
2	A	46	F	Cervical	5	N	N	N	N	3.50	14	3.50	12	0	2	N	N	N	N	N	Y	N	N
3	A	61	M	Cervical	9	N	N	N	Y	4.25	18	3.75	20	0.5	2	N	N	N	N	N	Y	N	N
4	A	54	F	Communicating	20	N	Y	N	Y	4.00	18	4.75	18	0.75	0	N	N	N	N	N	Y	Y	N
5	A	33	F	Cavernous	8	N	N	N	N	4.75	20	4.75	20	0	0	N	N	N	N	N	Y	N	N
6	A	36	F	Cavernous	6	N	N	N	N	4.50	16	4.75	14	0.25	2	N	N	N	N	N	N	–	–
7	A	62	F	Petrous	10	N	N	N	Y	3.50	18	3.25	12	0.25	6	N	N	N	N	N	Y	N	N
8	A	60	F	Cervical	7	N	Y	N	N	3.75	20	4.25	10	0.5	10	Y	Y	N	N	N	Y	N	N
9	A	56	M	Cavernous	6	N	N	N	N	4.00	16	4.00	12	0	4	N	N	N	N	N	Y	N	N
10	A	37	F	Cavernous	5	N	N	N	N	4.25	16	4.00	12	0.25	4	Y	Y	N	N	N	Y	N	N
11	A	37	F	Cavernous	6	N	N	N	N	4.25	16	4.50	14	0.25	2	Y	N	N	Y	N	N	–	–
12	A	65	F	Petrous	6	N	N	N	N	4.25	16	4.25	12	0	4	Y	N	Y	N	N	Y	N	N
13	A	61	F	Cavernous	4	N	N	N	N	4.00	16	4.00	12	0	4	N	N	N	N	N	Y	N	N
14	A	71	F	Cervical	22	N	N	N	N	3.50	16	3.25	16	0.25	0	N	N	N	N	N	Y	N	N
15	A	65	F	Cervical	15	N	N	N	Y	5.00	20	3.75	25	1.25	5	N	N	N	N	N	N	–	–
16	A	61	M	Cavernous	6	N	N	N	N	4.75	18	5.00	20	0.25	2	N	N	N	N	N	Y	N	N
17	A	69	F	Vertebral	40	N	Y	Y	Y	5.00	35	4.50	35	0.5	0	N	N	N	N	N	N	–	–
18	A	50	M	Cavernous	11	N	N	N	Y	4.75	18	5.00	16	0.25	2	N	N	N	N	N	Y	N	N
19	A	56	F	ACA	7	N	N	N	N	2.50	14	3.00	10	0.5	4	N	N	N	N	N	Y	N	N
20	A	50	F	Cavernous	7	N	N	N	N	4.50	18	4.50	20	0	2	N	N	N	N	N	Y	N	N
21	A	30	F	Cavernous	3	N	N	N	N	4.00	18	4.00	16	0	2	N	N	N	N	N	Y	N	N
22	A	51	M	Cavernous	4	N	N	N	N	4.75	16	5.00	12	0.25	4	Y	Y	N	N	N	N	–	–
23	A	53	F	Petrous	8	N	N	N	N	4.50	16	4.75	18	0.25	2	N	N	N	N	N	Y	N	N
24	A	55	F	Cavernous	34	N	N	N	Y	4.50	25	4.00	25	0.5	0	N	N	N	N	N	Y	N	N
25	A	69	F	Cervical	2	N	Y	N	N	3.75	18	3.75	10	0	8	N	N	N	N	N	Y	Y	N
26	A	70	F	Cervical	19	N	N	N	N	4.50	25	4.25	25	0.25	0	N	N	N	N	N	N	–	–
27	A	81	F	Cervical	8	N	Y	N	N	4.00	18	5.00	30	1	12	N	N	N	N	N	Y	N	N
28	A	64	F	Cervical	3	Y	Y	N	N	4.75	14	4.50	10	0.25	4	N	N	N	N	N	Y	N	N
29	A	78	F	Petrous	7	Y	Y	N	N	4.00	25	4.00	20	0	5	N	N	N	N	N	N	–	–
30	A	38	F	Petrous	4	N	N	N	N	4.25	14	4.50	16	0.25	2	N	N	N	N	N	Y	N	N
31	A	39	F	Cavernous	4	N	N	N	N	3.75	14	4.25	12	0.5	2	N	N	N	N	N	Y	N	N
32	A	69	F	MCA	2	N	N	N	N	2.75	16	3.00	14	0.25	2	N	N	N	N	N	Y	N	N
33	A	65	F	Cavernous	8	N	N	N	N	4.25	16	4.75	16	0.5	0	N	N	N	N	N	Y	N	N
34	A	70	F	Vertebral	4	N	N	N	N	3.00	14	3.00	10	0	4	N	N	N	N	N	Y	N	N
35	A	37	F	Petrous	6	N	N	N	N	4.75	12	5.00	18	0.25	6	N	N	N	N	N	Y	N	N
36	A	48	F	Cavernous	11	N	N	N	Y	3.50	20	4.00	20	0.5	0	N	N	N	N	N	N	–	–
37	A	50	F	Cervical	8	N	N	N	N	3.25	14	3.00	12	0.25	2	N	N	N	N	N	Y	Y	N
38	A	39	F	Petrous	18	N	N	N	Y	3.75	14	4.25	12	0.5	2	N	N	N	N	N	Y	N	N
39	A	64	F	Cavernous	–	N	N	N	N	4.00	20	4.00	20	0	0	N	N	N	N	N	N	–	–
40	A	46	F	Cavernous	23	N	N	N	N	3.50	14	3.50	14	0	0	N	N	N	N	N	N	–	–
41	A	39	M	Cavernous	4	N	N	N	N	3.50	14	4.00	12	0.5	2	Y	N	Y	N	N	Y	N	N
42	A	50	F	ACA	4	N	N	N	N	2.50	14	2.75	10	0.25	4	N	N	N	N	N	Y	Y	N
43	A	63	F	Cavernous	4	N	N	N	N	4.75	14	5.00	12	0.25	2	N	N	N	N	N	N	–	–
44	A	82	F	Para-ophthalmic	8	N	N	N	N	3.25	20	4.25	16	1	4	N	N	N	N	N	Y	N	N
45	A	50	F	Petrous	15	N	N	N	Y	4.50	18	4.75	16	0.25	2	Y	N	Y	N	N	Y	N	N
46	A	73	F	Petrous	5	N	N	N	N	2.50	14	2.75	10	0.25	4	N	N	N	N	N	N	–	–
47	A	65	F	MCA	4	N	N	N	N	3.00	14	3.00	10	0	4	Y	Y	N	N	N	Y	N	N
48	A	57	F	Cavernous	4	N	N	N	N	3.75	14	3.75	16	0	2	N	N	N	N	N	N	–	–
49	A	47	F	MCA	9	N	Y	N	N	2.50	20	2.75	16	0.25	4	N	N	N	N	N	Y	N	N
50	A	67	F	Petrous	3	N	N	N	N	3.75	14	4.00	14	0.25	0	N	N	N	N	N	Y	N	N

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On-line Table 1: Continued

Baseline Data				Aneurysm and Treatment Characteristics						Sizing Metrics						Periprocedural Complications					Follow–Up		
Pt. No.	Center	Pt. Age (yr)	Sex	Aneurysm Position	Aneurysm Max Diameter (mm)	Ruptured Aneurysm	Acute Dissection	Multi-Device Construct	Additional Use of Coils	Diameter (mm) conv	Length (mm) conv	Diameter (mm) ss	Length (mm) ss	Absolute Difference Diameter (mm)	Absolute Difference Length (mm)	Peri-procedural Complication	Deployment Failure	Peri-procedural Ischemia	Peri-procedural Hemorrhage	Occlusion of Inadvertently Covered Branches	1-Yr FU	Residual Perfusion	Endoleak
51	A	76	F	Petrous	9	N	N	N	N	4.50	16	4.75	16	0.25	0	Y	Y	N	N	N	Y	N	N
52	A	61	M	Petrous	11	N	N	N	Y	4.00	14	4.00	20	0	6	N	N	N	N	N	Y	N	N
53	A	69	F	Cavernous	5	N	N	N	N	4.50	16	4.25	16	0.25	0	N	N	N	N	N	N	–	–
54	A	81	F	Cavernous	6	N	N	N	N	4.25	14	4.75	14	0.5	0	N	N	N	N	N	N	–	–
55	A	70	F	Petrous	7	N	N	N	N	3.25	14	4.00	12	0.75	2	N	N	N	N	N	Y	N	N
56	A	61	F	Cavernous	–	N	N	Y	N	4.75	16	4.50	12	0.25	4	N	N	N	N	N	N	–	–
57	A	61	F	Cavernous	3	N	N	N	N	4.75	16	4.75	16	0	0	N	N	N	N	N	N	–	–
58	A	55	F	MCA	6	N	N	N	N	3.25	14	3.00	16	0.25	2	Y	N	N	Y	N	Y	N	N
59	A	83	F	MCA	7	N	N	N	N	2.50	20	3.00	16	0.5	4	N	N	N	N	N	N	–	–
60	A	48	F	MCA	4	N	N	N	N	2.50	12	3.00	10	0.5	2	N	N	N	N	N	Y	N	N
61	A	49	M	ACA	20	N	Y	N	N	3.75	14	3.75	10	0	4	N	N	N	N	N	Y	N	N
62	A	83	F	Para-ophthalmic	26	N	N	Y	N	4.00	25	4.25	20	0.25	5	N	N	N	N	N	N	–	–
63	A	83	F	Para-ophthalmic	–	N	Y	N	N	4.25	18	4.25	25	0	7	N	N	N	N	N	N	–	–
64	B	64	F	Para-ophthalmic	6	N	N	N	N	3.75	12	3.50	10	0.25	2	Y	N	Y	N	N	Y	Y	N
65	B	53	M	Para-ophthalmic	4	Y	Y	Y	N	4.75	14	4.50	10	0.25	4	N	N	N	N	N	N	N	N
66	B	45	F	Para-ophthalmic	7	N	Y	Y	N	3.75	12	3.50	10	0.25	2	N	N	N	N	N	Y	N	N
67	B	73	F	Cavernous	14	N	N	N	N	3.50	16	3.25	14	0.25	2	N	N	N	N	N	Y	N	N
68	B	51	F	Para-ophthalmic	5	N	N	Y	N	3.50	10	3.50	10	0	0	N	N	N	N	N	Y	N	N
69	B	68	F	ACA	7	N	Y	N	N	2.50	10	2.50	10	0	0	N	N	N	N	N	Y	Y	N
70	B	59	F	Vertebral	6	Y	Y	N	N	3.25	18	3.25	18	0	0	N	N	N	N	N	N	–	–
71	B	63	M	Para-ophthalmic	4	Y	Y	Y	N	4.25	14	3.25	14	1	0	N	N	N	N	N	N	–	–
72	B	61	F	Choroidal	4	N	N	N	N	3.00	12	2.75	10	0.25	2	N	N	N	N	N	N	–	–
73	B	58	M	Para-ophthalmic	4	N	N	N	N	4.00	12	4.00	10	0	2	N	N	N	N	N	N	–	–
74	B	48	F	Para-ophthalmic	8	N	N	N	N	4.75	12	3.25	10	1.5	2	N	N	N	N	N	N	–	–

Note:—A indicates Hôpital Gui de Chauliac; B, Basel University Hospital; ACA, anterior cerebral artery; FU, follow-up; Pt., patient; max, maximum; conv, conventional manual measurements; ss, Sim&Size simulation based measurements; Y, yes; N, no; yr, years; –, not applicable.

On-line Table 2: Dimensions (diameter, length) of the manually determined presumed optimal and computed optimal PEDs for extradural aneurysms ($n = 52$) and intradural aneurysms ($n = 22$)

	Manually Determined	Computed Optimal
Extradural ($n = 52$)		
PED diameter		
Mean (SD)	4.10 mm (0.56)	4.16 mm (0.59)
Range	2.5–5 mm	2.75–5 mm
Median (IQR)	4.25 mm (3.75–4.5)	4.13 mm (3.81–4.75)
PED length		
Mean (SD)	16.92 mm (3.87)	16.17 mm (5.33)
Range	12–35 mm	10–35 mm
Median (IQR)	16 mm (14–18)	16 mm (12–20)
Intradural ($n = 22$)		
PED diameter		
Mean (SD)	3.41 mm (0.69)	3.43 mm (0.65)
Range	2.5–4.75 mm	2.5–4.75 mm
Median (IQR)	3.38 mm (2.50–4)	3.25 mm (3–4.06)
PED length		
Mean (SD)	14.67 mm (3.81)	12.96 mm (4.21)
Range	10–25 mm	10–25 mm
Median (IQR)	14 mm (12–18)	10 mm (10–16)

Note:—IQR indicates interquartile range; SD, standard deviation.

On-line Table 3: Dimensions (diameter, length) of the manually determined presumed optimal and computed optimal PEDs for dissecting aneurysms ($n = 15$) and nondissecting aneurysms ($n = 59$)

	Manually Determined	Computed Optimal
Dissecting ($n = 15$)		
PED diameter		
Mean (SD)	3.88 mm (0.75)	3.90 mm (0.74)
Range	2.5–5 mm	2.5–5 mm
Median (IQR)	4 mm (3.75–4.25)	4 mm (3.25–4.50)
PED length		
Mean (SD)	17.87 mm (6.03)	16.40 mm (8.09)
Range	10–35 mm	10–35 mm
Nondissecting ($n = 59$)		
PED diameter		
Mean (SD)	3.89 mm (0.70)	3.95 mm (0.68)
Range	2.5–5 mm	2.75–5 mm
Median (IQR)	4 mm (3.50–4.50)	4 mm (3.25–4.5)
PED length		
Mean (SD)	15.92 mm (3.16)	14.92 mm (4.23)
Range	10–25 mm	10–25 mm
Median (IQR)	16 mm (14–18)	14 mm (12–16)

Note:—IQR indicates interquartile range; SD, standard deviation.