

Supplementary table 1. Endoluminal flow diverters

	Device	Regulation	Composition	Deployment	Size	MC & porosity	Delivery catheter	Clinical evidence
Pipeline (Medtronic)	PED	CE 2008 FDA 2011	48 wires Cobalt-chromium/ platinum-tungsten	Push & unsheathe Non-resheatable	Diameter 2.5-5 mm Length 10-35 mm	MC 30-35% P 65-70%	0.027"	1. Nelson:[22] (PITA) Mostly unruptured ICA aneurysms, FU 6-mo, CAO 93.3%, MB 6.5%, MT 0 2. Beckske:[23] (PUFS) Unruptured large/giant ICA aneurysms, FU 6-mo, 12-mo, 3-yr, 5-yr, CAO 73.6% (6-mo), 86.8% (12-mo), 93.4% (3-yr), 95.2% (5-yr), MB 5.6% (6-mo), MT 2.8 (6-mo) 3. Kallmes:[25] (IntrePED) Mostly unruptured ICA aneurysms, FU median 19.3-mo, MB 7.4%, MT 3.8% 4. Kallmes:[26] (ASPIRe) Mostly unruptured ICA aneurysms, FU median 7.8-mo, CAO: 74.8%, MB 5.2%, MT 1.6%
	Pipeline Flex	CE 2014 FDA 2015	48 wires Cobalt-chromium/ platinum-tungsten	Push & unsheathe Resheathable	Diameter 2.5-5 mm Length 10-35 mm	MC 30-35% P 65-70%	0.027"	1. Brasiliense:[27] Mostly unruptured ICA aneurysms, FU mean 4.8-mo, CAO 52.1%, MB 1.9% (30-d), MT 0.5% (30-d) 3. Hanel:[28] (PREMIER) Mostly unruptured ICA aneurysms, FU 1-yr, CAO 81.9%, MB 2.1%, MT 0.7%
	Pipeline Shield	CE 2015	48 wires Cobalt-chromium/ platinum-tungsten PC coat	Push & unsheathe Resheathable	Diameter 2.5-5 mm Length 10-35 mm	MC 30-35% P 65-70%	0.027"	1. Rice:[30] Mostly unruptured ICA aneurysms, FU 1-yr, CAO 77.2%, MB 2.0%, MB 6.4%, MT 1.0% 2. Trivelato:[31] Mostly unruptured ICA aneurysms, FU 1-yr, CAO 85.3%, MB 6%, MT 0.7% 3. Manning:[58] Acutely ruptured mostly anterior aneurysms with SAPT. Mostly anterior circulation, FU 7-d after SAH, complete/near-complete aneurysm occlusion 85.7%, MB 7.1%, MT 7.1%
Surpass (Stryker)	Surpass Streamline	CE 2010 FDA 2018	48, 72, and 96 wires Cobalt-chromium/ platinum-tungsten	Pusher Resheathable	Diameter 2-5 mm Length 12-50 mm	MC 30% P 70%	0.040"	1. Meyers:[34] (SCENT) Mostly unruptured ICA aneurysms, FU 12-mo, CAO 66.1%, MB 8.3%, MT 2.8%
	Surpass Evolve	CE 2019 FDA 2020	48 and 64 wires Cobalt-chromium/ platinum-tungsten	Pusher Resheathable	Diameter 2.5-5 mm Length 12-40 mm	MC 30% P 70%	0.027"	1. Orru:[35] Mostly unruptured ICA aneurysms, FU median 4-mo, CAO 57%, MB 4%, MT 0

CAO, complete aneurysm occlusion; CE, Conformité Européenne (European Conformity); FDA, Food and Drug Administration; FU, follow-up; ICA, internal carotid artery; MB, morbidity; MC, metal coverage; MT, mortality; PC, phosphorylcholine; PED, Pipeline Embolization Device; SAPT, single antiplatelet therapy

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FRED (Micro-Ventio)	FRED	CE 2012 FDA 2019	48 wires (inner layer) 16 wires (outer layer) Nitinol	Push & pull Resheatable	Diameter 3.5-5 mm Length 13-45 mm	MC 35-40%	0.027"	1. Killer-Oberpfalzer:[36] (EuFRED) Mostly unruptured anterior circulation aneurysms, FU>1-yr, CAO 95.3%, MB 0.8%, MT 1.5% 2. Pierot:[37] (SAFE) Mostly unruptured ICA aneurysms, FU 1-yr, CAO 73.3%, MB 2.9%, MT 1.9%
	FRED Jr	CE Mark	36 wires (inner layer) 16 wires (outer layer) Nitinol	Push & pull Resheathable	Diameter 2.5-3 mm Length 13-41 mm	MC 30%	0.021"	1. Mohlenbruch:[38] Small vessel aneurysms, FU 12-mo, CAO 73%, MB 2.4%, MT 0%
Silk (Balt Extrusion)	Silk	CE 2008	48 wires Nitinol/ platinum	Push & pull Resheathable	Diameter 2-5 mm Length 15-40 mm	MC 35-55% P 45-60%	0.021"	1. Pumar:[39] Mostly unruptured ICA aneurysms, FU 1-yr, CAO 78.1%, MB 9.6% (6-mo), MT 3.2% (6-mo) 2. Foa Torres:[41] Mostly unruptured ICA aneurysms, FU 1-yr, CAO 93.9%, MB 4.2%, MT 2.1%
	Silk+	CE 2012	48 wires Nitinol/ platinum	Push & pull Resheathable	Diameter 2-6 mm Length 10-40 mm	MC 35-55% P 45-60%	0.021 and 0.025"	1. Lubicz:[42] (Mixed Silk and Silk+) Mostly small anterior circulation aneurysms, FU mean 22-mo, CAO 73%, MB 5.5%, MT 0
	Silk Vista Baby	CE 2018	48 wires Nitinol/ platinum DFT tech	Push & pull Resheathable	Diameter 2-3 mm Length 10.5-26.5 mm	-	0.017"	1. Martinez-Galdamez:[43] Small vessel aneurysms, FU none, CAO 18.6% (intraoperative), 5 intraprocedural complications, MT 0 2. Schob:[44] Aneurysms beyond Circle of Willis, FU 2.7-mo, CAO 68%, MB 0, MT 0
p64 p48MW (Phenox)	p64	CE 2012	64 wires Nitinol	Mechanical detachment Resheathable	Diameter 2.5-5 mm Length 12-36 mm	MC 35-49% P 51-60%	0.027"	1. Briganti:[45] Mostly unruptured ICA aneurysms, FU median 16-mo, CAO 88%, MB 2.5%, MT 0 2. Morais:[46] Mostly unruptured anterior circulation aneurysms, FU 12-mo, CAO 85.7%, MB 0, MT 0
	p48MW	CE Mark	48 wires Nitinol/ platinum Movable wire (MW) for vessel protection DFT tech	Push & pull Resheathable	Diameter 2-3 mm Length 9-25 mm	-	0.021" (p48,0.017")	1. Bhogal:[47] Mostly unruptured anterior circulation aneurysms, FU mean 13.1-mo, CAO 70%, MB 4%, MT 4%

CAO, complete aneurysm occlusion; CE, Conformité Européenne (European Conformity); DFT, drawn filled tubing; FDA, Food and Drug Administration; FRED, Flow Re-Direction Endoluminal Device; FU, follow-up; ICA, internal carotid artery; MB, morbidity; MC, metal coverage; MT, mortality

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p48_HPC	CE Mark	48 wires Nitinol/ platinum HPC coating	Push & pull Resheatable	Diameter 2-3 mm Length 9-25 mm	-	0.021"	1. Bhogal:[49] Unruptured mostly anterior circulation aneurysms with SAPT, FU 3-mo, CAO 50%, 1 patient with postprocedural rupture of aneurysm, MT 0 2. Aguilar-Perez:[59] Acutely ruptured anterior and posterior circulation aneurysms with SAPT, FU mean 6-mo, CAO 83%, 3 patients with postprocedural thromboembolic events, 2 deaths
Derivo (Acandis GmbH)	Derivo (2 nd generation) CE Mark	48 wires Nitinol/ platinum BlueXide coating	Mechanical detachment Resheathable	Diameter 3.5-6 mm Length 15-50 mm	MC 35-38% P 62-65%	0.027"	1. Trivelato:[51] (BRAIDED) Mostly unruptured anterior circulation aneurysms, FU 1-yr, CAO 89.2%, MB 5.5%, MT 1.4% 2. Goertz:[50] Acutely ruptured mostly ICA aneurysms, FU median 223-d, CAO 90%, MB 10%, MT 0
Tubridge (MicroPort Medical Company)	Tubridge NMPA 2018	48 and 64 wires Nitinol	Push & pull Resheathable	Diameter 2.5-5 mm Length 10-45 mm	MC 30-35% P 65-70%	0.029"	1. Zhou:[52] Unruptured large/giant ICA aneurysms, FU 9.9-mo, CAO 72%, MB 0, MT 0

CAO, complete aneurysm occlusion; CE, Conformité Européenne (European Conformity); FU, follow-up; HPC, hydrophilic polymer coating; ICA, internal carotid artery; MB, morbidity; MC, metal coverage; MT, mortality; NMPA, National Medical Products Administration; SAPT, single antiplatelet therapy