Hydrogel Coils

HydroCoil™ Embolic System (HES)

TERUMO NEURO

RAGE - Ruptured Aneurysms Treated with HydroGEl Coils

Fiorella D., Toth G., White T.G. et al. Final results of the Ruptured Aneurysms Treated with HydroGEl Coils (RAGE) study: a multicenter study of 771 patients. J NeuroIntervent Surg 2026; published online 2 April 2026; DOI: 10.1136/jnis-2026-025097

Superior rate of adequate occlusion[6] compared to bare platinum

86.0% Adequate Occlusion RROC I or II

Statistically better than 80.4% CLARITY[1] based performance goal (p=0.0004)

Very low rebleeding rate[6]

0.5% Aneurysm Rebleeding

Rebleeding rate in bare platinum coil studies: 1% per year in CARAT[6] , and 2.4% early rebleeding in ISAT[2-5]

Favorable functional independence[6]

88.0% mRS ≤ 2, at 18-month follow up

Compared to 76.7% at 6 months in CLARITY[1], and 76.3% at 1 year in ISAT[2-5]

45 North American sites

771 Patients

100% ruptured aneurysms

A proven solution for ruptured aneurysms, as demonstrated in RAGE

Study Overview

The largest prospective, core lab adjudicated study on ruptured aneurysms in North America.

Final results	Population & Methods
Adequate occlusion at 18±6 months: 86%; superior to 80.4% CLARITY benchmark (p=0.0004)	100% ruptured saccular aneurysms 2–15 mm; Hunt–Hess I–III.
Functional independence (mRS 0–2): 75.6% at 30 days; 87.5% at 18 months	99.9% 2nd generation hydrogel coil usage by length
Target aneurysm rebleed: 0.3% within 30 days; 0.2% from 31 days to 18 months	99.6% of patients had a single coiling procedure
30 day procedure or disease related death: 2.6% (procedure related 0.3%)	48.4% adjunctive balloon usage and 2.7% stent assisted coiling
30 day major stroke: 4.2%	Number of coils per subject: 3.7 ± 2.4 (Mean ± SD)
Major ipsilateral stroke within 18 months: 2.5%	Follow up: clinical at 30 days & 18±6 months
Neurological death within 18 months: 2.8%	Core lab angiography adjudicated at 18±6 months

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Legal Manufacturer: MicroVention, Inc.
EU Authorized Representative: MicroVention Europe S.A.R.L.

INDICATIONS FOR USE / INTENDED PURPOSE:

The HydroCoil™ Embolic System (HES) is intended for the endovascular embolization of intracranial aneurysms and other neurovascular abnormalities such as arteriovenous malformations and arteriovenous fistulae. The HES is also intended for vascular occlusion of blood vessels within the neurovascular system to permanently obstruct blood flow to an aneurysm or other vascular malformation and for arterial and venous embolizations in the peripheral vasculature. The device should only be used by physicians who have undergone pre-clinical training in all aspects of HES procedures as prescribed by Terumo Neuro.

RX Only: Federal (USA) law restricts this device to sale by or on the order of a physician.

For Healthcare Professional Use Only. Please refer to IFU for the full list of risks, contraindications, warnings, and precautions.

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