

CERENOVUS

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Achieving first pass effect in mechanical thrombectomy demonstrates **improved patient outcomes and cost-savings** for treating acute ischemic stroke



Patients who achieve FPE have better patient outcomes which reduces healthcare spending significantly.¹

The *Health Economic Impact of First Pass Success among Patients with Acute Ischemic Stroke Treated with Mechanical Thrombectomy (MT) – A United States and European Perspective* published in JNIS, report based on a post-hoc analysis of data from ARISE II is the **first analysis to highlight the economic impact of improved clinical outcomes provided by first pass recanalization** in stroke management.

First Pass Effect (FPE) restoring complete or near complete reperfusion (modified Thrombolysis in Cerebral Infarction) in a single pass, is an independent predictor of good functional outcome.¹

The **greatest benefits to patients** are observed when **MT achieves substantial and excellent reperfusion from the first pass**, avoiding the risk of endothelial vessel injury and irritation, increased rate of complication and prolonged procedure time.

Using a revascularization device that is designed to **maximize the first pass** provides clinicians with the greatest opportunity to achieve complete or near complete recanalization with a single thrombectomy pass.

Analysis from the **ARISE II** study showed that:



EMBOTRAP® II
Revascularization Device
accounted for
9 in 10
successful reperfusions.²

51.5%
of patients treated
with the EMBOTRAP® II
Revascularization Device
achieved
substantial flow
restoration after
one pass.²



Stroke is a
leading cause of
mortality and
disability globally.⁷



It is estimated that of the 13.7 million people³ globally who will have a stroke, 85% are acute ischemic.⁴



Patients who achieve FPE have a **reduced length of stay in hospital** (6.1 days vs 9.5 days compared to patients who do not achieve FPE).¹

Direct and indirect costs of stroke in the EU were estimated at **€45 billion** in 2015⁵ and **\$105 billion** in the US in 2012.⁶

If 60% of the 11.6 million ischemic stroke patients successfully achieved FPE it could, on average, **create an estimated worldwide acute care saving of approximately**.^{1, 3, 4}

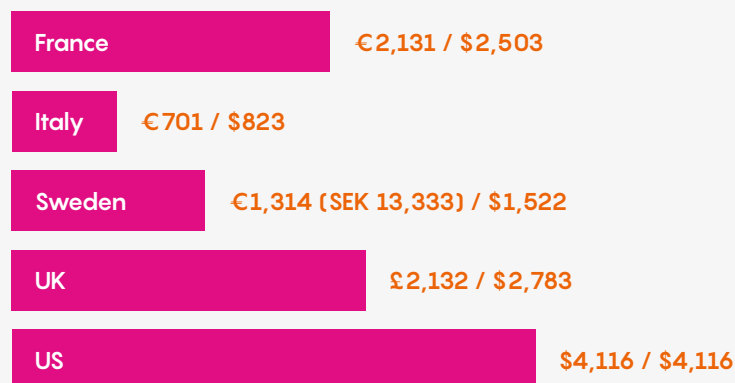
EU
€21b*

US
\$25b*

Utilizing **EMBOTRAP®** with MT **reduces acute healthcare spending within the first year** when complete or near complete is achieved at first pass.¹

Ultimately achieving FPE creates a per-person acute costs saving of **€1,560–€4,542 (European country dependent) and \$6,575 in the US**. Additional cost savings, up to one year following the acute care phase, range from **€701–€2,131 in Europe to \$4,116 in the US**.^{1**}

Per patient annual cost savings (up to one year after stroke) in Euro and US Dollar equivalent^{1}**



*Calculation based on taking the average savings (\$3,628) against 85% of the ischemic strokes (11.6m out of the 13.7m annual stroke number), assuming 60% achieve FPE to calculate what could be saved globally. The EUR conversion is based on Dollars to Euro exchange rate of €1= \$1.17 on August 3, 2020 16:00 UTC.

**based on exchange rates for 03, August 2020 16:00 UTC were used. The exchange rates were as follows: 1.00 EUR: 1.17 USD, 1.00 SEK: 0.11 USD and 1.00 GBP: 1.31 USD.

Abbreviations: FPE = first pass effect; GBP = Great British Pound; mRS = modified Rankin Scale; UK = United Kingdom; USD = United States Dollar; UTC = Coordinated Universal Time

References

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