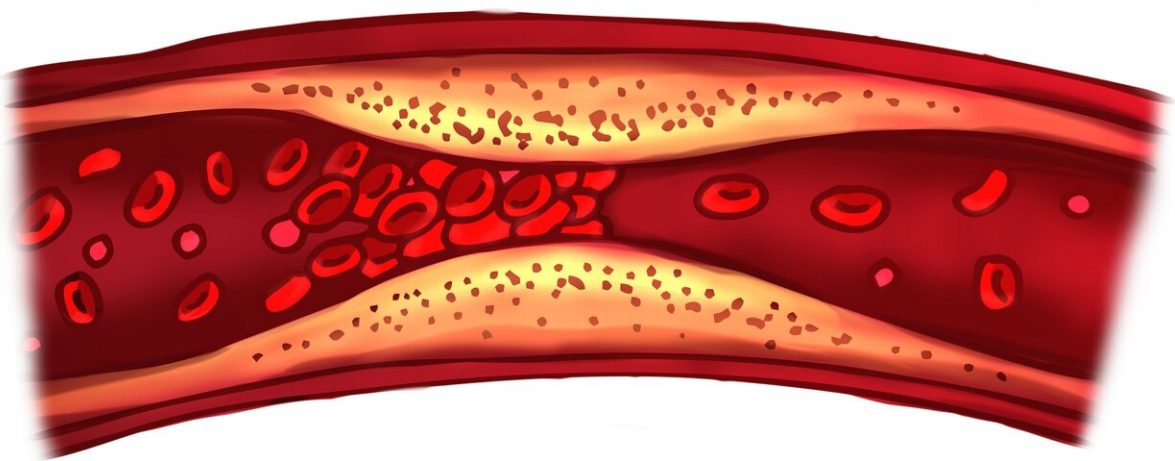


# Filter tip stent retrievers may allow neurointerventionalists to remove blood clots on first try during stroke treatment

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Research presented today at the [Society of NeuroInterventional Surgery's \(SNIS\) 20th Annual Meeting](#) shows that different types of stent retriever tips may result in improved patient outcomes when performing mechanical thrombectomy to treat stroke.

Ischemic [stroke](#), one of the most common types of strokes, happens when a brain artery becomes blocked, often by a blood clot, cutting off oxygen to the brain and causing damage. Using a minimally invasive

procedure called [mechanical thrombectomy](#), neurointerventionalists can restore blood flow to the brain by removing [blood clots](#) using tiny mesh tools called stent retrievers.

However, if a neurointerventionalist can't remove the entire blood clot on the first try due to clot fragmentation, multiple additional retrieval attempts may be required, which lead to longer procedural times and worse clinical outcomes.

In the study, "Impact of Stent Retriever Tip Design on Distal Embolization during Mechanical Thrombectomy—A Randomized In Vitro Evaluation," researchers in Spain created a model of the brain arterial system and used several types of stent retrievers (open tip, closed tip, and filter tip) to remove the blood clot simulants. They simulated 50 mechanical thrombectomies per each type of stent retriever, finding that the filter tip stent retriever allowed them to fully retrieve the clot simulant in one try 44% of the time, compared to 16% of the time for open tip retrievers and 20% of the time for closed tip retrievers.

"It's essential to continuously refine devices and techniques to improve stroke treatment," said Jiahui Li, Ph.D., [biomedical engineer](#) at the Vall d'Hebron Research Institute, research fellow at the Mayo Clinic, and lead author of this study. "Each clinical scenario demands specific tools and treatment approaches. Hopefully, this research will aid in evaluating the suitability of different devices for each stroke case, thus giving patients a better chance at recovery and functional independence."

Provided by Society of NeuroInterventional Surgery

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