

# STENT EXPLANTATION DEVICE: A NOVEL SOLUTION FOR SAFE ENDOVASCULAR GRAFT REMOVAL

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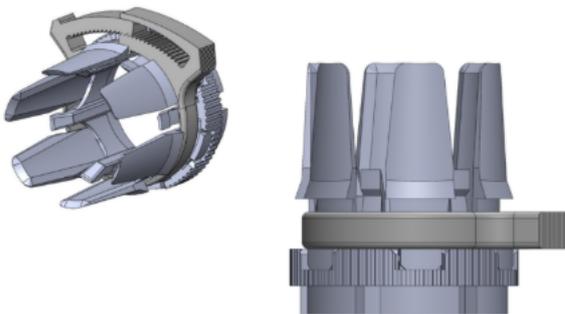
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**Value Proposition:** *New medical device that allows for safe stent graft removal without damaging surround tissues.*

## Technology Description

Researchers at Washington University in St. Louis have developed an innovative medical device specifically designed to facilitate the safe and effective removal of endovascular aortic stent grafts during open surgery. There is currently a lack of dedicated devices for stent graft removal, which complicates the process, leading to prolonged operative times and increased surgical risks during already high-risk procedures.

This novel device incorporates mechanisms for securely grasping, collapsing, and extracting stent grafts while minimizing damage to surrounding tissues. By improving procedural precision, it aims to decrease operative time and enhance patient outcomes, reducing procedural complexity, operative time, and surgical risks.



## Stage of Research

Currently in the prototype stage, with designs printed and tested on Gore aortic simulators. Ongoing development is focused on refining the ergonomics and functionality based on feedback from vascular surgeons.

## Publications

Li RL, Zayed MA, Ohman JW. Novel Device for Safe Endovascular Aortic Endograft Explantation. *Surg Innov.* 2026 Jan 3;15533506251414955. doi: 10.1177/15533506251414955. Epub ahead of print. PMID: 41482853.

## Applications

- Endovascular graft removal

## Key Advantages

- Securely grasps and extracts stent grafts, reducing surgical risks
- Tapered and articulated arms minimize damage to surrounding tissues
- Compatible with a range of stent graft sizes and configurations
- Ergonomic and intuitive design simplifies the procedure, reducing operative time

## Patents

Patent application filed

**Related Web Links** – [Mohamed Zayed Profile](#); [Zayed Lab](#)