CELEBRATING A DECADE OF INNOVATION: ROADSAVER™ STENT (R)EVOLUTIONIZES CAROTID ARTERY STENTING

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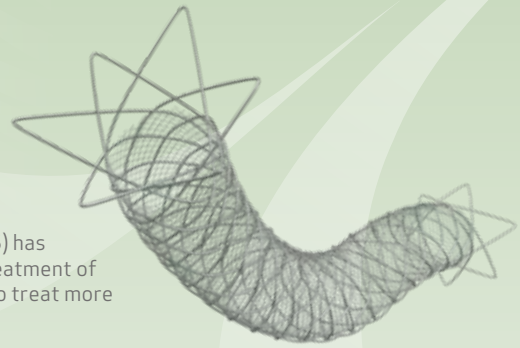


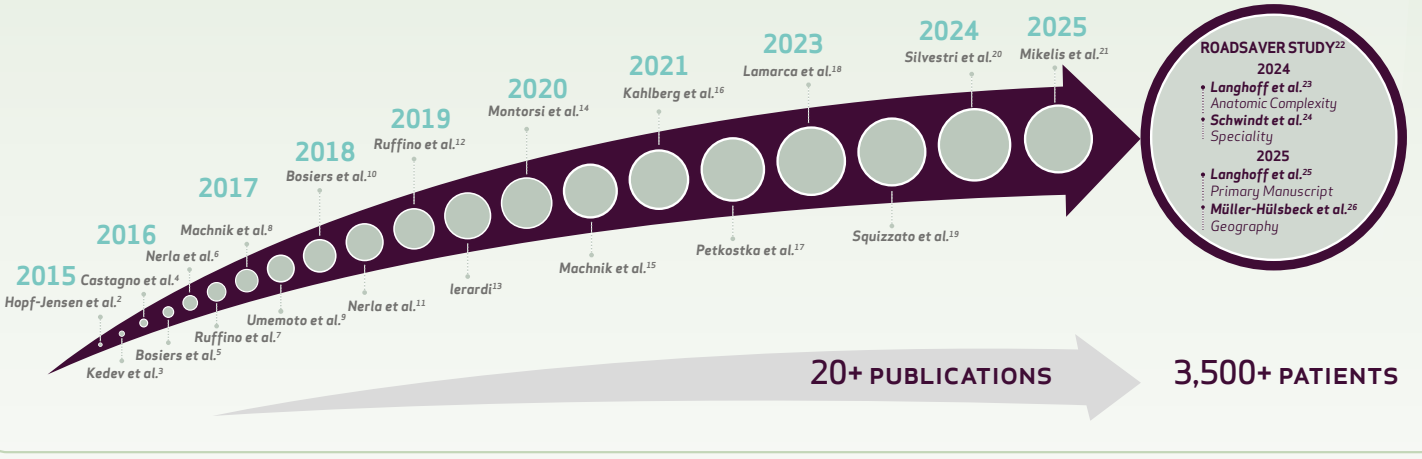
As we mark the 10-year anniversary of the Roadsaver™ carotid stent system, I find it a fitting moment to reflect on the remarkable journey and the transformative impact this Dual-Layer Micromesh Stent (DLMS) has had on Carotid Artery Stenting (CAS) practice. Over the past decade, it has not only revolutionized the treatment of carotid artery stenosis but has also set new standards in patient care and clinical outcomes, enabling us to treat more patients and engage evermore complex anatomical scenarios with confidence.

A Decade of Insights and Advancements

The Roadsaver™ carotid stent system was engineered with the vision of addressing the unmet clinical needs in CAS. Early randomized studies using single-layer stents highlighted higher 30-day stroke rates compared to Carotid Endarterectomy (CEA)[1], underscoring the need for better solutions. With its dual-layer micromesh design and flexible, 5 Fr low-crossing profile rapid exchange delivery catheter, Roadsaver™ carotid stent system emerged as a game-changer in the CAS arena.

Technical Features Now Evidence-Based

One of the standout features of the Roadsaver™ carotid stent system is its inner micromesh layer, with micron-sized cells. This innovative design offers excellent plaque coverage, effectively limiting plaque prolapse and embolic release, thereby providing sustained cerebral protection, during and after stent implantation. The braided nitinol design ensures that the stent conforms to the internal and common carotid artery segments, while maintaining flexibility and excellent vessel wall apposition in tortuous anatomy. Finally, highly flexible 5 Fr low-crossing profile delivery catheter allows for stent delivery in complex anatomies and supports primary stenting, when predilatation is not required. These technical advancements have been validated through extensive clinical research, including randomized trial and real-world data. The growing body of evidence from multiple European studies, with over 3500 patients, consistently shows low 30-day adverse event rates in both asymptomatic and symptomatic patients, falling below the most rigorous guideline-recommended thresholds (see the evidence arrow [2-26]).



Expanding Treatment Possibilities

With growing evidence that technical features of this second-generation DLMS translate into excellent clinical outcomes, we can now offer CAS to a broader range of patients, including those with complex anatomical scenarios. The device's excellent deliverability, even in challenging cases involving complex arches, tortuous vessels, and high-risk stenotic lesions, has made it a preferred choice for many interventionalists, including vascular surgeons, such as myself. Additionally, the option for radial access provides an alternative route, avoiding the aortic arch and further expanding treatment possibilities.

Looking Ahead

As we celebrate this milestone, it is crucial to acknowledge the continuous advancements in CAS technology and the ongoing dedication to improving patient outcomes. The ROADSAVER study[22], which enrolled close to 2000 patients, constitutes a vast repository of data. Through dedicated sub-analyses, this study will in the years to come provide invaluable insights into best practices and potential ways to achieve even greater patient safety and treatment efficacy.

Conclusions

The Roadsaver™ carotid stent system's success story is a testament to the power of innovation and collaboration in the medical field. With its proven track record and evidence-based technical features, this stent will undoubtedly continue to play a pivotal role in the future of CAS practice. It has not only changed the CAS landscape but has also set new benchmarks for patient care and clinical outcomes. As we look forward to the next decade, we remain committed to stroke prevention by advancing CAS technology and ensuring that more patients can benefit from this minimally invasive treatment with a state-of-the-art endovascular implant.

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