



Results From A Multicenter Italian Study Of The C-Guard Micromesh Stent For CAS: Advantages And Complications

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Disclosures

Francesco Speziale is consultant for

- Medtronic
- Enologix
- Inspire MD

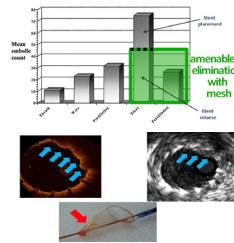
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CAS SHADOWS AND (LATE) EMBOLIZATION

CAS is associated with an increased incidence of post-procedural **brain DWI lesions**

This greater amount of ischemic burden may also reflect a higher rate of **cerebral events after CAS**

The majority of this events seems to be related to embolization through stent strut (**late embolization**)



2/3 of MACCEs occur post-procedure

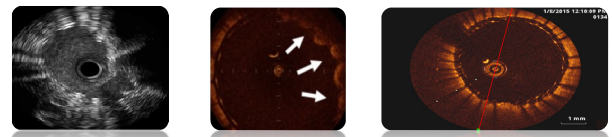
Al-Mubarsak et al. Circulation 2007
Suzuki et al. Eur Heart J 2009

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PLAQUE COVERAGE – DUAL LAYERED STENTS

Conventional Stents do not guarantee adequate plaque coverage leading to plaque rupture and prolapse and subsequent distal embolization.

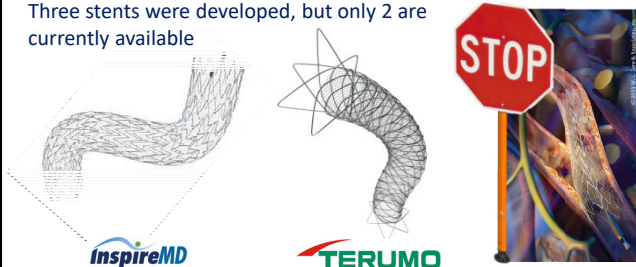
Using Dual-layer Stent, the mesh permanently cover thrombus, and the plaque preventing thrombus migration into cerebral arteries



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DUAL-LAYERED STENTS

Three stents were developed, but only 2 are currently available



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IRONGUARD 1&2 EXPERIENCE



The **IRONGUARD** project is a multi-centric, multi-specialties Italian Study started since April 2015

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IRONGUARD 2 STUDY



733 Patients

in 20 enrolling Italian Centers



The aim of the study was to evaluate periprocedural (**24h**), post-procedural (up to **30-day**), and **12-month outcomes** in a large, prospective, multicenter series of patients submitted for protected CAS with CGuard EPS dual layer stent.

Sirignano P, Speciale F et al. JACC Cardiovasc Interv. 2020
Sirignano P, Speciale F et al. JACC Cardiovasc Interv. 2022

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IRONGUARD 2 STUDY

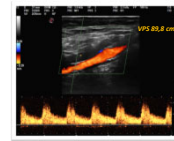
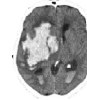
@24 hours

1 fatal haemorrhagic stroke

(urgent Patient treated for cTIA)

2 Minor Strokes, 6 TIAs

1 AMI, No Death



@30 days

1 Minor Stroke, 2 TIAs

3 AMIs, No Death

No stent thrombosis/occlusions

@12 months

1 Minor Strokes, 4 TIAs

2 IMAs (fatal)

6 stent restenosis

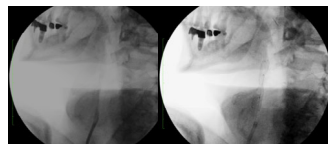
(2 stent-in-stent)

Sirignano P, Speciale F et al. JACC Cardiovasc Interv. 2020
Sirignano P, Speciale F et al. JACC Cardiovasc Interv. 2022

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IRONGUARD 2 RESULTS

	24 hours	30 days	1-year
Stroke	3; 0.41%	4; 0.54%	5; (0.68%)
Death	1; 0.13%	1; 0.13%	9; (1.22%)
Stroke & Death	4; 0.54%	5; 0.68%	14; (1.90%)
AMI	1; 0.13%	4; 0.54%	6; (0.81%)



Stroke rate 0.68%

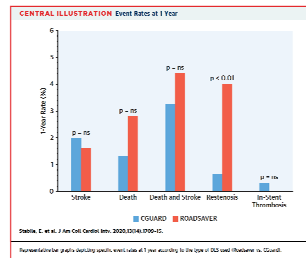
(4 Minor Strokes, 1 haemorrhagic)

To the date, **IRONGUARD 2** reports the **lowest stroke risk** for a prospective multicentric trial

Sirignano P, Speciale F et al. JACC Cardiovasc Interv. 2020
Sirignano P, Speciale F et al. JACC Cardiovasc Interv. 2021

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META-ANALYSIS



Between the two available dual-layer stents no differences were found in term of Stroke and/or Death.

But..

Roadrunner stent presented a significantly **higher restenosis rate** compared to CGuard



Trachten L, et al. J Am Coll Cardiol Intv. 2020;12(10):1799-811
Stabile E, Speciale F, et al. JACC Cardiovasc Interv. 2019
Stabile E, Speciale F, et al. JACC Cardiovasc Interv. 2020

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PERSONAL CONSIDERATIONS

Using dual-layer stent is not enough to achieve optimal results

My 6 technical suggestion:

- Plaque evaluation
- Common carotid engagement
- Embolic Protection Device
- Stent diameter selection
- Selective post dilatation
- Intraoperative quality check



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THANK YOU



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