CGuard MicroNET-covered Stent in Primary and Secondary Stroke Prevention

Cumulative Evidence

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John Paul II Hospital, Kraków, Poland
Disclosure

Speaker name:
Piotr Musialek

I have the following potential conflicts of interest to report:

- [x] Consulting: Abbott, InspireMD, Medtronic
- [ ] Employment in industry
- [ ] Stockholder of a healthcare company
- [ ] Owner of a healthcare company
- [x] Other(s): Research support: InspireMD, Abbott
  Proctoring: InspireMD, Abbott, Medtronic
- [ ] I do not have any potential conflict of interest
Pharmacotherapy may reduce or delay – but it does not abolish carotid disease-associated stroke risk.

- The disease is in the wall, luminal are its manifestations...
- Lumen stenosis severity, once it exceeds \( \approx 50\% \), is a poor index of the disease severity and stroke risk (see eg, Derdeyn CP. Stroke 2007 Pooled ACAS and ACST Trials data)
- Most strokes, including major, occur without any warning
- ‘Waiting for clinical symptoms’ harms stroke-affected patients

\[ \text{HR}=5.1; \chi^2=9.49, P=0.002 \]

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Note several other imaging techniques including eg, NIRS for lipid-rich content and non-invasive modalities as MRA or CT that have the advantage of ability to screen larger populations on an out-patient basis and without vessel interrogation – but have a significantly lower resolution that is critical in determining the thin fibrous cap.
Device Safety and Minimized Procedure Risks play a fundamental role in decisions on carotid revascularization to prevent stroke.

Contemporary decision making in clinically “asymptomatic” carotid artery stenosis

NB. 80% strokes give NO clinical warning
The MOST ‘open’ amongst open-cell stents (metallic FRAME) & the MOST ‘close’ amongst close-cell stents (MicroNET mesh).

UNIQUE mechanical properties
RESPECT of anatomy
FULL apposition

CGuard MicroNET – covered 2nd generation carotid stent

NORMAL healing
Wissgott JEV T 2016
90 days
<table>
<thead>
<tr>
<th>STUDY</th>
<th>HIGHLIGHTS</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015 CARENET</td>
<td>Safety &amp; Efficacy, Minimized Intra-CAS embolism, Abolished Post-CAS embolism</td>
<td>30d / 5y</td>
</tr>
<tr>
<td>2016 PARADIGM</td>
<td>Excellent Clinical Results in unselected All-comer population incl. very High-risk patients</td>
<td>30d / 1y</td>
</tr>
<tr>
<td>2017 CASANA</td>
<td>Large surgical center - Clinical results superior to conventional stents</td>
<td>30d</td>
</tr>
<tr>
<td>2017 UMEMOTO - OCT</td>
<td>CGuard superior to Casper / RoadSaver in preventing plaque protrusion (+ cf R Nerla et al)</td>
<td>30d</td>
</tr>
<tr>
<td>2017 WISSGOTT - Mechanical</td>
<td>Clinical &amp; mechanical assessment; Mechanical advantages vs Casper/RoadSaver</td>
<td>30d</td>
</tr>
<tr>
<td>2017 IRON-GUARD-1</td>
<td>Real world multi-specialty operators; Excellent clinical results in multicentric setting</td>
<td>30d</td>
</tr>
<tr>
<td>2017 PARADIGM-12mo</td>
<td>Confirmation of normal healing and lack of thrombosis/ISR concern over 12 months</td>
<td>1y</td>
</tr>
<tr>
<td>2018 CAPOCCIA</td>
<td>CGuard favourable cerebral and clinical outcomes in moderate-risk population</td>
<td>30d</td>
</tr>
<tr>
<td>2018 WISSGOTT-SmartFIT</td>
<td>CGuard SmartFit: “One-Size-Fits-All” (OSFA); CGuard OSFA excellent safety and efficacy</td>
<td>30d</td>
</tr>
<tr>
<td>2019 IRON-GUARD-1</td>
<td>Real-world multicentric 1y results; Excellent long-term outcomes, normal healing</td>
<td>1y</td>
</tr>
<tr>
<td>2020 PARADIGM-Extend</td>
<td>Multi-centric, multi-specialty large-scale validation of the PARADIGM excellent outcomes</td>
<td>5y</td>
</tr>
<tr>
<td>2020 IRON-GUARD-2</td>
<td>Routine Real world large-scale multi-specialty practice: Excellent 30-day outcomes</td>
<td>30d</td>
</tr>
<tr>
<td>2020 SIBERIA RCT</td>
<td>CGuard DWI superior to 1st gen workhorse: ↓DW-MRI peri-CAS and 30d brain embolism</td>
<td>30d</td>
</tr>
<tr>
<td>2021 IRON-GUARD-2</td>
<td>12-month optimal multi-centric results in 733 pts establish a new standard of treatment</td>
<td>1y</td>
</tr>
<tr>
<td>2021 Meta-Analysis vs. CEA</td>
<td>CGuard 30-day safety &amp; efficacy = CEA at 30 days</td>
<td>30d</td>
</tr>
<tr>
<td>2021 Meta-Analysis</td>
<td>CGuard clinically superior to CEA at 1y FU</td>
<td>1y</td>
</tr>
<tr>
<td>2021 CARMEN Meta-Analysis</td>
<td>CGuard clinically superior to ALL First-Gen carotid stents (open- and closed-cell) at 30 days</td>
<td>30d</td>
</tr>
<tr>
<td>2021 CARMEN Meta-Analysis</td>
<td>CGuard clinically superior to ALL other (1st and 2nd generation) Carotid Stents at 1y FU</td>
<td>1y</td>
</tr>
</tbody>
</table>

- 12 multi-specialty clinical studies
- 7 multi-centric
- superiority in ↓brain embolism: Randomized Controlled Trial vs 1st Gen workhorse
- superiority vs 1st Gen, vs other 2nd Gen, and vs CEA in 2 Meta-analyses
- clinical and imaging follow-up extending to 5 years
CGuard MicroNET-covered Stent in Primary and Secondary Stroke Prevention

2020 / 2021

5 min

• 5 research highlights
• 5 clinical cases

now routine – but not feasible/safe with single-layer stents

Plaque insulation
Prolapse prevention

MicroNET – covered 2nd generation stent
Randomized Controlled Trial of conventional versus Micronet-covered stent use in percutaneous neuroprotected carotid artery revascularization: Peri-procedural and 30-day \textit{diffusion-weighted magnetic resonance (DWI) imaging} and clinical outcomes

<table>
<thead>
<tr>
<th>HEAD-TO-HEAD</th>
<th>100 consecutive increased-risk patients (25% symptomatic)</th>
<th>RANDOMIZED 1 : 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distal EPD (Emboshield) in all</td>
<td>MicroNET-Covered open-cell nitinol frame 2nd generation stent</td>
<td>vs. Conventional (workhorse) open-cell nitinol 1st generation stent</td>
</tr>
</tbody>
</table>

**Acute ipsilateral cerebral DWI lesions (raw data)**

```
Lesion number

- Acculink
- CGuard
```

**External CoreLab blinded analysis**

- **Total lesion volume** (per affected patient)
  - p=0.007
- **Average lesion volume** (per lesion)
  - p=0.038
- **PERMANENT Lesions (FLAIR, 30d)**
  - raw data

**NEW DWI lesions @30d**
- 6 vs. 0 (p=0.03)

**Stroke @30d**
- 2 vs. 0

**Level-1 Evidence**

for the MicroNET prevention of plaque prolapse embolism, translating into cerebral protection with MicroNET extending by 30 days

S. Bugurov – LINC January 27, 2021
MicroNET-covered stents for embolic prevention in patients undergoing carotid revascularisation: twelve-month outcomes from the PARADIGM study

- Normal healing
- No restenosis/thrombosis concern

Prior to CAS, 6/106 (5.6%) external carotid arteries (ECAs) were occluded on the target lesion side, whereas 3/100 (3.0%); severe ECA stenosis prior to CAS in all) occluded at CAS. No ECA occlusion occurred between CAS and 30 days and there was no ECA occlusion at 12 months (post-procedural ECA occlusion rate 0%).

Conclusion
Clinical and DUS data from this symptomatic and increased-stroke-risk consecutive patient series are consistent with the MicroNET-covered carotid stent providing effective protection against cerebral events which extends post-procedurally and with the normal healing profile of the device.
**MicroNET-covered stent: clinical and duplex 5-year outcomes**

### PARADIGM-Extend Study

**Study**

<table>
<thead>
<tr>
<th>12 mo</th>
<th>24 mo</th>
<th>36 mo</th>
<th>48 mo</th>
<th>60 mo</th>
</tr>
</thead>
<tbody>
<tr>
<td>n = 354</td>
<td>n = 248</td>
<td>n = 173</td>
<td>n = 106</td>
<td>n = 46</td>
</tr>
</tbody>
</table>

#### Ipsilateral stroke

- **1** (device unrelated)
- **0**
- **0**
- **0**
- **1** (device unrelated)

#### Any stroke

- **1** (cerebellum)
- **2** (brain stem)
- **1** (contralateral)
- **1**
- **1**

#### Stroke related death

- **0**
- **0**
- **0**
- **0**
- **1**

#### MI or other non-cerebral VA

- **1** (after RTH)
- **3** (DEB treated)
- **2**
- **2**
- **0**

#### Restenosis

- **13** (CHF - 4, Ca - 3, PE - 1, Urosepsis - 1, MI - 2, COPD - 1, surg - 1)
- **10** (CHF - 3, Ca - 2, MI - 2, intracranial bleed - 1, surg - 2)
- **7** (Ca - 2, CHF - 3, MI - 1, pneumonia/ sepsis - 1)
- **6** (CHF - 2, MI - 2, Ca - 2)
- **1** (stroke)

#### Any death

- **30-day TOTAL death/stroke 0.83%**

**in-stent PSV / EDV (m/s)**

- **0.78±0.50/0.20±0.10**
- **0.75±0.41/0.20±0.08**
- **0.75±0.34/0.20±0.09**
- **0.76±0.36/0.20±0.09**
- **0.78±0.40/0.21±0.11**

---

*M normal-healed stent on duplex Doppler. Š de novo Atrial Fibrillation. "n" indicates patients who crossed the follow-up window.

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**ESC Congress 2020**

**The Digital Experience**

**Carotid Disease: Essential Update 2020**

Mazurek A et al. ESC 2020 BEST POSTER
Cumulative 1-year Results
733 Patients / 20 Centers

<table>
<thead>
<tr>
<th></th>
<th>24 hours</th>
<th>30 days</th>
<th>1-year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stroke</td>
<td>0.41%</td>
<td>0.54%</td>
<td>0.68%</td>
</tr>
<tr>
<td>Death</td>
<td>0.13%</td>
<td>0.13%</td>
<td>1.22%</td>
</tr>
<tr>
<td>Stroke &amp; Death</td>
<td>0.54%</td>
<td>0.68%</td>
<td>1.90%</td>
</tr>
<tr>
<td>MI</td>
<td>0.13%</td>
<td>0.54%</td>
<td>0.81%</td>
</tr>
</tbody>
</table>

12-mo Stroke rate 0.68%
(4 Minor + 1 haemorrhagic)

Kaplan-Meier Survival by group
Freedom from major adverse events

Vascular and Endovascular Surgery Division - “Sapienza” University of Rome

P. Sirignano – LINC January 27, 2021
CGuard MicroNET in Trans-cervical CAS using Flow Reversal in High-Risk Lesions

Transient flow reversal combined with sustained embolic prevention in trans-cervical revascularization of symptomatic and highly-emboligenic carotid stenoses for optimized endovascular lumen reconstruction and improved peri- and post-procedural outcomes.

See also R. Kolvenbach – LINC Wednesday January 29, 2021

Records identified through search for 12-month study outcome updates in November 2020

Records not meeting criteria (CADIMA), n=2572

Records remaining after initial screen, n=736


Identification

Screening

CARMEN Systematic review and meta-analysis flowchart (PRISMA)
Eligible studies, n = 112

Records remaining after initial screen, n = 736

Record exclusion and study data integration

Evaluated studies, n = 133

Quality evaluation

Eligible studies, n = 112

1. Lack of data on endpoint(s) of interest (n = 587)
2. Data integration: merging same-study data from different publications (n = 16)

Rejected n = 21 (15.8%)

30-day outcomes, n = 112

1-year outcomes, n = 21

FGS – first generation stents

SGS – second generation stents (mesh/dual-layer)

A. Mazurek – LINC January 27, 2021
### 30-day Stroke: FGS vs SGS

<table>
<thead>
<tr>
<th>Stent Type</th>
<th>Events</th>
<th>Patients</th>
<th>Risk</th>
<th>95% CI</th>
<th>Risk Ratio [95% CI]</th>
</tr>
</thead>
<tbody>
<tr>
<td>FGS</td>
<td>2270</td>
<td>63374</td>
<td>0.0301</td>
<td>[0.0263; 0.0338]</td>
<td>1</td>
</tr>
<tr>
<td>SGS</td>
<td>25</td>
<td>2152</td>
<td></td>
<td></td>
<td>* 0.0070 [0.0032; 0.0107] 0.23 [0.11-0.35]</td>
</tr>
<tr>
<td>Casper/RoadSaver</td>
<td>5</td>
<td>585</td>
<td></td>
<td></td>
<td>* 0.0050 [0.0000; 0.0115] 0.16 [0.22-0.31]</td>
</tr>
<tr>
<td>Gore Mesh Stent</td>
<td>9</td>
<td>311</td>
<td>0.0289</td>
<td>[0.0103; 0.0476]</td>
<td>0.96 [0.75-1.17]</td>
</tr>
<tr>
<td>CGuard MicroNET Stent</td>
<td>11</td>
<td>1256</td>
<td></td>
<td></td>
<td>* 0.0066 [0.0018; 0.0113] 0.22 [0.09-0.35]</td>
</tr>
</tbody>
</table>

*Better than FGS*  
*Worse than FGS*  

A. Mazurek – LINC January 27, 2021
12-month Ipsilateral Stroke: FGS vs SGS

<table>
<thead>
<tr>
<th>Device Type</th>
<th>Events</th>
<th>Patients</th>
<th>Risk</th>
<th>95% CI</th>
<th>Risk Ratio [95% CI]</th>
</tr>
</thead>
<tbody>
<tr>
<td>FGS</td>
<td>237</td>
<td>8117</td>
<td>0.0298</td>
<td>[0.0211; 0.0385]</td>
<td>1</td>
</tr>
<tr>
<td>SGS</td>
<td>8</td>
<td>938</td>
<td>* 0.0031</td>
<td>[0.0000; 0.0091]</td>
<td>0.10 [0.00-0.27]</td>
</tr>
<tr>
<td>Casper/RoadSaver</td>
<td>3</td>
<td>348</td>
<td>* 0.0026</td>
<td>[0.0000; 0.0127]</td>
<td>0.09 [0.00-0.28]</td>
</tr>
<tr>
<td>Gore Mesh Stent</td>
<td>5</td>
<td>290</td>
<td>0.0172</td>
<td>[0.0023; 0.0322]</td>
<td>0.58 [0.36-0.79]</td>
</tr>
<tr>
<td>CGuard MicroNET Stent</td>
<td>0</td>
<td>300</td>
<td>* 0.0000</td>
<td>[0.0000; 0.0062]</td>
<td>0.00 [0.00-0.17]</td>
</tr>
</tbody>
</table>

A. Mazurek – LINC January 27, 2021

**Better than FGS**

**Worse than FGS**
### 12-month Ipsilateral Stroke/ISR: FGS vs SGS

<table>
<thead>
<tr>
<th></th>
<th>Events</th>
<th>Patients</th>
<th>Risk</th>
<th>95% CI</th>
<th>Risk Ratio [95% CI]</th>
</tr>
</thead>
<tbody>
<tr>
<td>FGS</td>
<td>497</td>
<td>7626</td>
<td>0.0826</td>
<td>[0.0634; 0.1017]</td>
<td>1</td>
</tr>
<tr>
<td>SGS</td>
<td>50</td>
<td>938</td>
<td>0.0479</td>
<td>[0.0181; 0.0777]</td>
<td>0.58 [0.27-0.89]</td>
</tr>
<tr>
<td>Casper/RoadSaver</td>
<td>29</td>
<td>348</td>
<td>0.0786</td>
<td>[0.0504; 0.1068]</td>
<td>0.95 [0.65-1.26]</td>
</tr>
<tr>
<td>Gore Mesh Stent</td>
<td>19</td>
<td>290</td>
<td>0.0655</td>
<td>[0.0370; 0.0940]</td>
<td>0.79 [0.49-1.10]</td>
</tr>
<tr>
<td>CGuard MicroNET Stent</td>
<td>2</td>
<td>300</td>
<td>* 0.0060</td>
<td>[0.0000; 0.0148]</td>
<td>0.07 [0.00-0.31]</td>
</tr>
</tbody>
</table>

- **Better than FGS**: CGuard MicroNET Stent
- **Worse than FGS**: SGS, Casper/RoadSaver

A. Mazurek – LINC January 27, 2021
CEA vs SGS meta-analysis

1. CEA pooled data
   - Major RCTs Involving CEA
     - SAPPHIRE
     - EVA 3S
     - SPACE-1
     - ICSS
     - CREST
     - ACST-1
     - ACT-1
     - Manhaim
     - SPACE-2

2. CEA in Vascular Quality Initiative (VQI) database*


A. Mazurek – LINC January 27, 2021

CARMEN Collaborators @ LINC 2021
30-day Stroke: RCT CEA vs SGS

<table>
<thead>
<tr>
<th></th>
<th>Events</th>
<th>Patients</th>
<th>Risk</th>
<th>95% CI</th>
<th>Risk Ratio [95% CI]</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCT CEA</td>
<td>143</td>
<td>5335</td>
<td>0.0252</td>
<td>[0.0185; 0.0320]</td>
<td>1</td>
</tr>
<tr>
<td>SGS</td>
<td>25</td>
<td>2152</td>
<td>*0.0070</td>
<td>[0.0032; 0.0107]</td>
<td>0.28 [0.13-0.42]</td>
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<td>Casper/RoadSaver</td>
<td>5</td>
<td>585</td>
<td>*0.0050</td>
<td>[0.0000; 0.0115]</td>
<td>0.20 [0.03-0.36]</td>
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<tr>
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<td>9</td>
<td>311</td>
<td>0.0289</td>
<td>[0.0103; 0.0476]</td>
<td>1.15 [0.92-1.37]</td>
</tr>
<tr>
<td>CGuard MicroNET Stent</td>
<td>11</td>
<td>1256</td>
<td>*0.0066</td>
<td>[0.0018; 0.0113]</td>
<td>0.27 [0.11-0.41]</td>
</tr>
</tbody>
</table>

*Better than CEA*

*Worse than CEA*

A. Mazurek – LINC January 27, 2021
## 30-day Stroke: VQI CEA vs SGS

<table>
<thead>
<tr>
<th></th>
<th>Events</th>
<th>Patients</th>
<th>Proportion</th>
<th>95%-CI</th>
<th>Risk Ratio [95% CI]</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQI CEA</td>
<td>1088</td>
<td>95776</td>
<td>0.0114</td>
<td>[0.0107; 0.0120]</td>
<td>1</td>
</tr>
<tr>
<td>SGS</td>
<td>25</td>
<td>2152</td>
<td>* 0.0070</td>
<td>[0.0032; 0.0107]</td>
<td>0.61 [0.52-0.71]</td>
</tr>
<tr>
<td>Casper/RoadSaver</td>
<td>5</td>
<td>585</td>
<td>0.0050</td>
<td>[0.0000; 0.0115]</td>
<td>0.44 [0.32-0.56]</td>
</tr>
<tr>
<td>Gore Mesh Stent</td>
<td>9</td>
<td>311</td>
<td>0.0289</td>
<td>[0.0103; 0.0476]</td>
<td>2.55 [2.35-2.74]</td>
</tr>
<tr>
<td>CGuard MicroNET Stent</td>
<td>11</td>
<td>1256</td>
<td>* 0.0066</td>
<td>[0.0018; 0.0113]</td>
<td>0.58 [0.47-0.68]</td>
</tr>
</tbody>
</table>

A. Mazurek – LINC January 27, 2021
# 12-mo Ipsilateral Stroke/Restenosis: RCT CEA vs SGS

<table>
<thead>
<tr>
<th></th>
<th>Events</th>
<th>Patients</th>
<th>Risk</th>
<th>95% CI</th>
<th>Risk Ratio [95% CI]</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCT CEA</td>
<td>141</td>
<td>3971</td>
<td>0.0409</td>
<td>[0.0248; 0.0571]</td>
<td>1</td>
</tr>
<tr>
<td>SGS</td>
<td>50</td>
<td>938</td>
<td>0.0479</td>
<td>[0.0181; 0.0777]</td>
<td>1.17 [0.87-1.47]</td>
</tr>
<tr>
<td>Casper/RoadSaver</td>
<td>29</td>
<td>348</td>
<td>* 0.0786</td>
<td>[0.0504; 0.1068]</td>
<td>1.92 [1.63-2.22]</td>
</tr>
<tr>
<td>Gore Mesh Stent</td>
<td>19</td>
<td>290</td>
<td>0.0655</td>
<td>[0.0370; 0.0940]</td>
<td>1.60 [1.31-1.90]</td>
</tr>
<tr>
<td>CGuard MicroNET Stent</td>
<td>2</td>
<td>300</td>
<td>* 0.0060</td>
<td>[0.0000; 0.0148]</td>
<td>0.15 [-0.07-0.37]</td>
</tr>
</tbody>
</table>

* Better than CEA

* Worse than CEA

A. Mazurek – LINC January 27, 2021
# 12-mo Ipsilateral Stroke/Restenosis: VQI CEA vs SGS

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Events</th>
<th>Patients</th>
<th>Risk</th>
<th>95% CI</th>
<th>Risk Ratio [95% CI]</th>
<th>Better than CEA</th>
<th>Worse than CEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQI CEA</td>
<td>1717</td>
<td>65319</td>
<td>0.0263</td>
<td>[0.0251; 0.0275]</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SGS</td>
<td>50</td>
<td>938</td>
<td>0.0479</td>
<td>[0.0181; 0.0777]</td>
<td>1.82 [1.58-2.07]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casper/RoadSaver</td>
<td>29</td>
<td>348</td>
<td>* 0.0786</td>
<td>[0.0504; 0.1068]</td>
<td>2.99 [2.75-3.23]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gore Mesh Stent</td>
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<td>290</td>
<td>* 0.0655</td>
<td>[0.0370; 0.0940]</td>
<td>2.49 [2.25-2.73]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CGuard MicroNET Stent</td>
<td>2</td>
<td>300</td>
<td>* 0.0060</td>
<td>[0.0000; 0.0148]</td>
<td>0.23 [0.09-0.37]</td>
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</tbody>
</table>

A. Mazurek – LINC January 27, 2021

CARMEN Collaborators @ LINC 2021
RICA Highly Thrombotic lesion

CRESCENDO STROKE in-evolution (haemodynamic and embolic)

CCA - balloon MOMA Flow Reversal

SAFE & uncomplicated, with optimal angiographic and clinical outcome
Clinically not-yet-symptomatic lesion - but evidence of cerebral embolism

SAFE & uncomplicated, with optimal angiographic and clinical outcome
CGuard Endovascular Reconstruction of NORMAL anatomy

SAFE & uncomplicated, with OPTIMAL angiographic/clinical outcome
CGuard MicroNET Stent for 1st-Gen stent Symptomatic in-stent plaque growth

CGuard index procedure (I 2016)

5-year follow-up (January 2021)

SAFE & uncomplicated, with optimal angiographic and clinical outcome

Cured √
CGuard MicroNET Stent to treat acute ischaemic stroke

Haemodynamically critical, floating thrombotic lesion

- R-limbs hemiparesis
- TOTAL motoric aphasia
- Severe sensoric aphasia

IMMEDIATE Regression of symptoms

Final result

NB. COMPLETE Effective Lesion Exclusion confirmed on IVUS (normal lumen)

SAFE & uncomplicated, with optimal angiographic and clinical outcome
CARMEN Collaborators

CArotid REvascularization systematic review and META-Nalysis

Adam MAZUREK
Krzysztof MALINOWSKI
Max AMOR
Alberto CREMONESI
Gianmarco deDONATO
Waclaw KUCZMIK
Andrey KARPENKO
Ivo PETROV
Piotr PIENIAZEK
Kenneth ROSENFIELD
Francesco SETACCI
Adnan SIDDQUI
Francesco SPEZIALE
Eugenio STABILE
Christian WISSGOTT
Andrej SCHMIDT
Piotr MUSIALEK

7 Countries
4 Specialties: vascular medicine/angiology, cardiology, vascular surgery, interv. radiology
CGuard MicroNET-covered Stent
expanding the clinical evidence further

<table>
<thead>
<tr>
<th>Study ID</th>
<th>Title</th>
<th>Description</th>
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<tr>
<td>NCT04547387</td>
<td>TOP-GUARD</td>
<td>CGuard in transcerebral Flow reversal CAS</td>
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<tr>
<td>NCT04434456</td>
<td>C-HEAL</td>
<td>Flow-diverter aneurysm exclusion and healing</td>
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<td>NCT04234854</td>
<td>OPTIMA</td>
<td>Intravascular evaluation of sympt. plaque exclusion</td>
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<td>NCT04271033</td>
<td>PARADIGM-EXTEND</td>
<td>Multi-centric All-comers with indication, No exclusions</td>
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<td>NCT04461717</td>
<td>FLOW-GUARD</td>
<td>MicroNET stent in high-risk lesions beyond carotid bif.</td>
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