Sustained Embolic Protection

Investor Presentation I May 2023

INSPIREMD

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Investment Highlights : Transformational Market Drivers

CGuard EPS Stent Platform utilizing Proprietary MicroNet™ Technology

Highly differentiated platform for treatment of carotid artery disease and stroke prevention

Unmatched Clinical Outcomes Data (both Short- and Long-Term)

CGuard™ EPS – (**9**) clinical trials completed >**1,850** patients

CGuard results **1.12%** vs. Conventional Stents **5.2%** and Surgery **4.5%** (30 Day Death, Stroke, Myocardial Infarction)

Market Potential

Current treated market: **$1.3 billion** **(Dx & Treated with CEA + CAS)**

Total untreated market: **$8 billion** **(Dx with HGCS not treated)**

Standard risk reimbursement (US) increases CAS potential

Expanding Commercial Footprint

Double-digit market share in **30** served countries (34% in Italy)

Over **40,000** stents sold to date

CMS Consideration of Standard Risk Reimbursement

Decision, Expected October 2023

- **Opens entirety of Carotid Revascularization segment to stenting**
- **Enables Trans Femoral stenting to broader patient cohort (155,000)**

US IDE Trial Advancing toward US approval

FDA decision on approval of CGuard EPS anticipated in **Q1 2025**

*milestones and study design noted in U.S. Market / Regulatory Pathway

Deep Pipeline and Strategic Roadmap

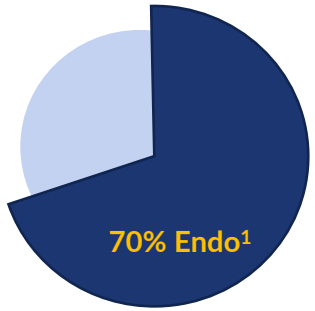
MicroNet™ technology pipeline advancing into multi generational development plans including: SwitchGuard for TCAR; Acute Stroke with tandem lesions

Experienced management team and directors with extensive healthcare expertise

Endovascular Procedures: Landscape and InspireMD Potential

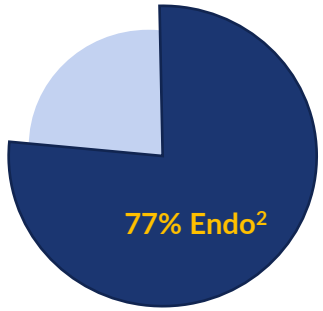
CEREBRAL ANEURYSMS

30% Surgical[1]



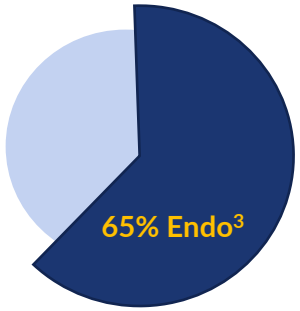
CORONARY ARTERY DISEASE

23% Surgical[2]



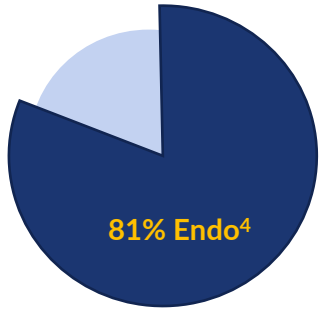
THORACIC/ABDOMINAL AORTIC ANEURYSMS

35% Surgical[3]

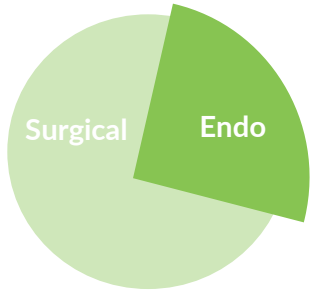


PERIPHERAL ARTERIAL DISEASE

19% Surgical[4]



CAROTID ARTERY DISEASE[5]



Already have been converted to endovascular procedures

Awaiting conversion to endovascular

[1] Bekelis K, Gottlieb DJ, Su Y, et al. Comparison of clipping and coiling in elderly patients with unruptured cerebral aneurysms. J Neurosurg. 2017;126(3):811–818
[2] Culler SD, Kugelmass AD, Brown PP, , et al. Trends in Coronary Revascularization Procedures Among Medicare Beneficiaries Between 2008 and 2012. Circulation. 2015;131(4):362-70
[3] Beck AW, Sedrakyan A, Mao J, et al. Variations in Abdominal Aortic Aneurysm Care: A Report From the International Consortium of Vascular Registries. Circulation. 2016;134(24):1948-1958
[4] Guez, D., Hansberry, D. R., Gonsalves, C. F., Eschelman, D. J., Parker, L., Rao, V. M., & Levin, D. C. Recent Trends in Endovascular and Surgical Treatment of Peripheral Arterial Disease in the Medicare Population. AJR Am J Roentgenol. 2020 May;214(5):962-966.
[5] Procedures For Selected Nations, 2017 – 2025 presented to InspireMD, Inc. by Health Research International Personal Medical Systems, Inc. Sept. 13, 2021

Approaches to Treating Carotid Artery Disease

155,000 Procedures Annually

Surgical Approach

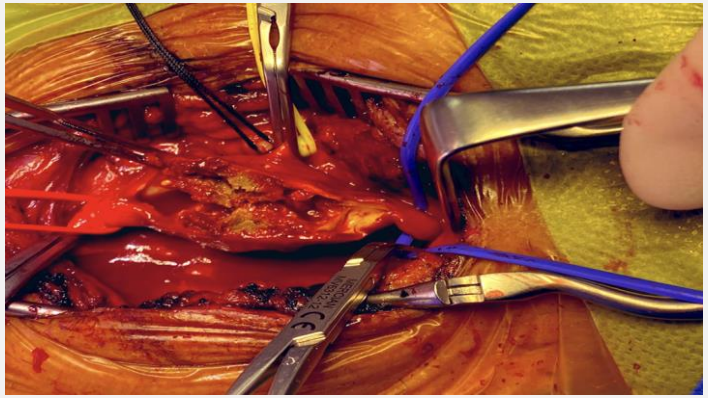
Carotid Endarterectomy (CEA) (70%)
TCAR *(10%)*

Risk of complications:

Myocardial infarction risk[1] (heart attack)

Cranial nerve injury risk[1] (vertigo, hearing loss, paralysis, etc)

Aesthetic concern



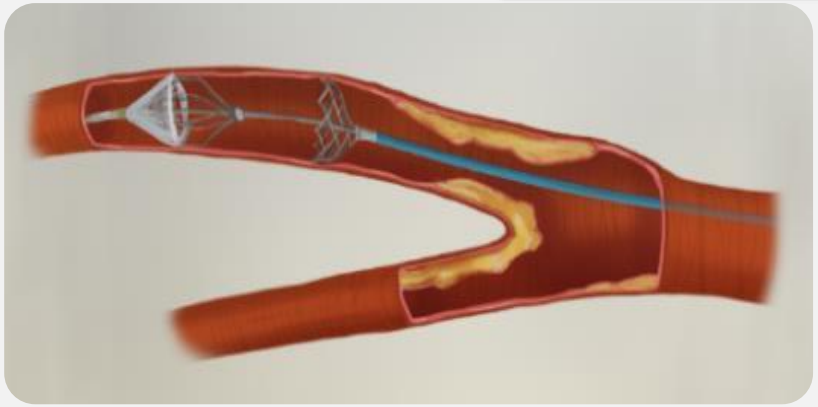
Carotid Artery Stenting (CAS) *(20%)*

Conventional Approach (Bare Stent) 1st generation

Risk of complications:

Procedural and post-procedural increase minor stroke risk[1]

Bare stent deployment

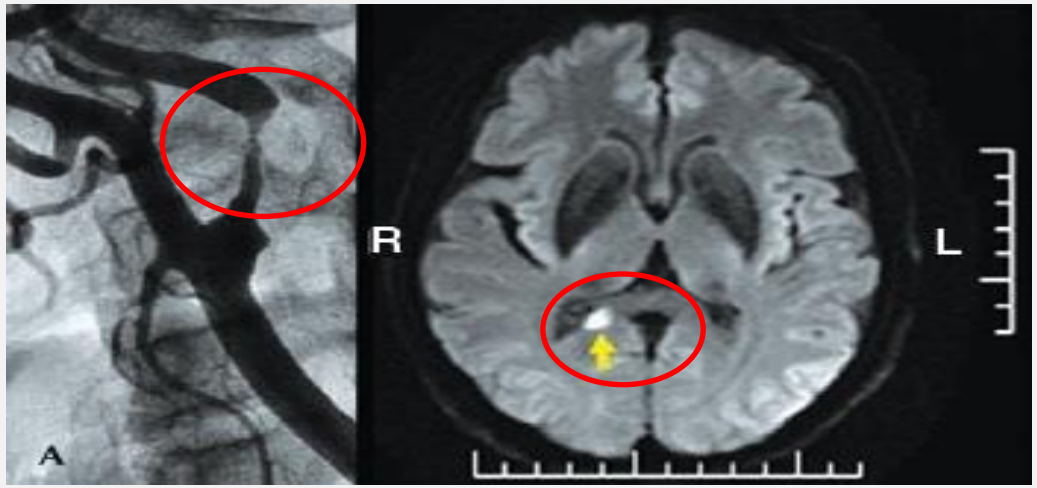


[1] Based on the **CREST** clinical trial data, in which only **conventional carotid stents** were used vs.**surgery,** CREST Trial: N Engl J Med 2010;363:11-23

THE PROBLEM: Risk of Embolism Following Conventional Carotid Stenting (1st generation stents)

Approximately 2/3 of neurovascular events (stroke, TIA) occur after the procedure takes place.[2]

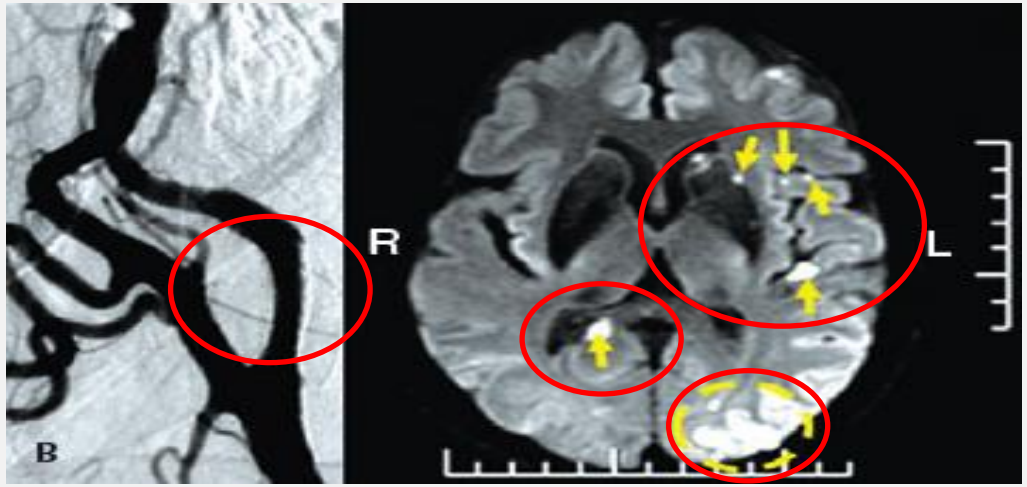
Pre-Procedure



90% occlusion of the carotid artery

MRI of a pre-existing white matter infarction (obstruction)

Post-Procedure
with Conventional Stent



Successful opening of the carotid artery

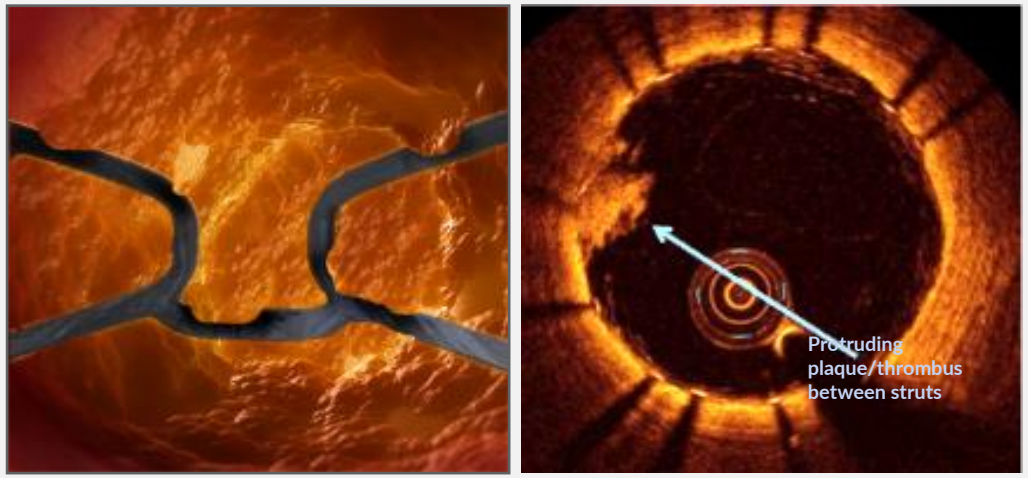
MRI reveals new multiple micro-infarcts (obstructions) due to liberation of embolic particles[1]

MRI reveals post-procedural cerebral embolization

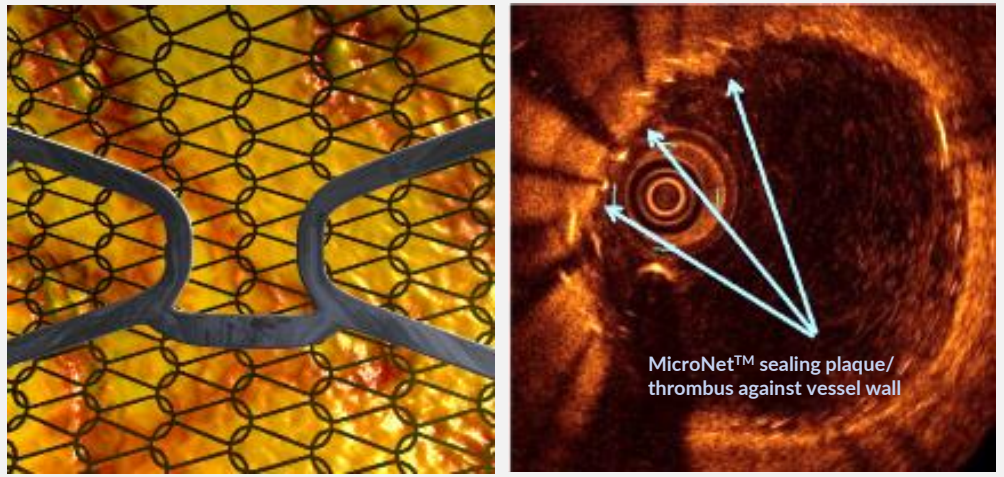
2. Bosiers et al. Eur J Vasc Endovasc Surg Vol 33, Feb 2007.,

OUR SOLUTION: Proprietary MicroNet™ Technology[1]

New mesh covered stent offers superior plaque coverage when compared to conventional stent approaches



VS.



Conventional Open Cell Stent (1St GEN):

Bare or dual layer approach, with plaque protrusion risk

CGuard Stent System (3rd GEN):

Stents are covered in MicroNet

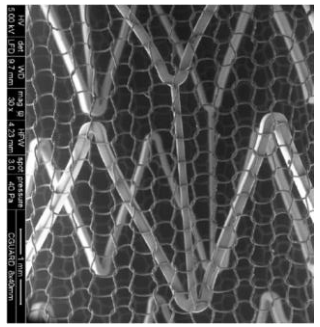
An Embolic Prevention System (EPS) for Ultimate Thrombus Protection

MicroNet captures and locks thrombus & plaque materials against the arterial wall, deterring debris from entering the bloodstream while also acting as a mechanical barrier to prevent plaque protrusion

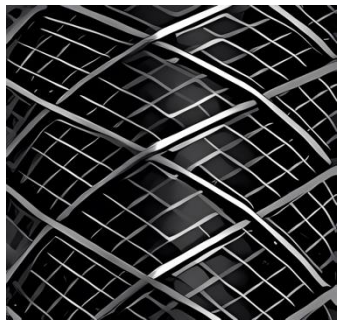
[1] Tomoyuki Umemoto, MD. Optical coherence tomography assessment of new generation mesh-covered stents after carotid stenting. Eurointerventional 2017;1348-1355 (published online)

Image: Prof. Valdés Chávarri

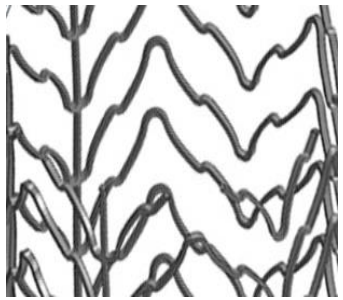
Scaffolding- Stent Cell Diameters



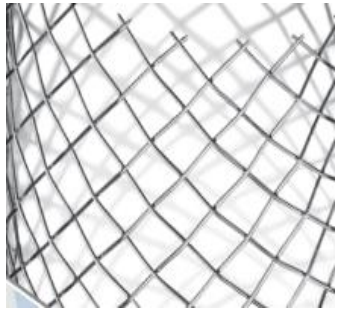
CGUARD™



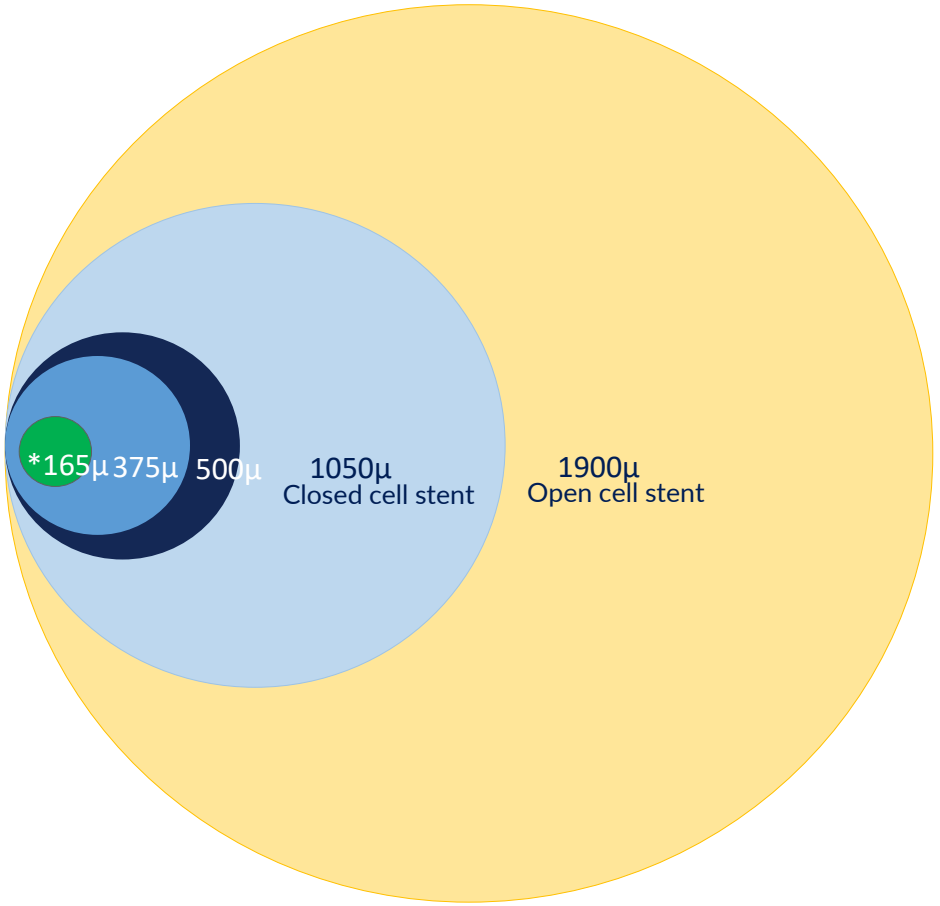
Competitor A



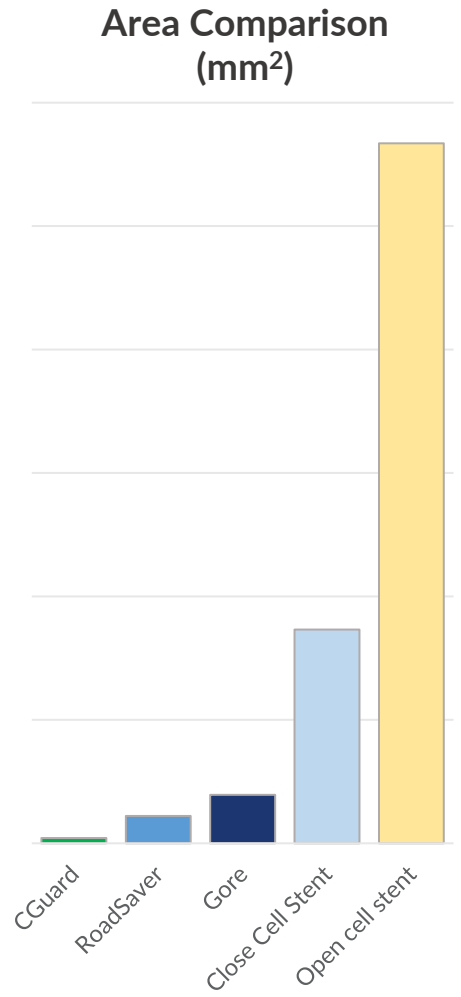
Competitor B



Competitor C

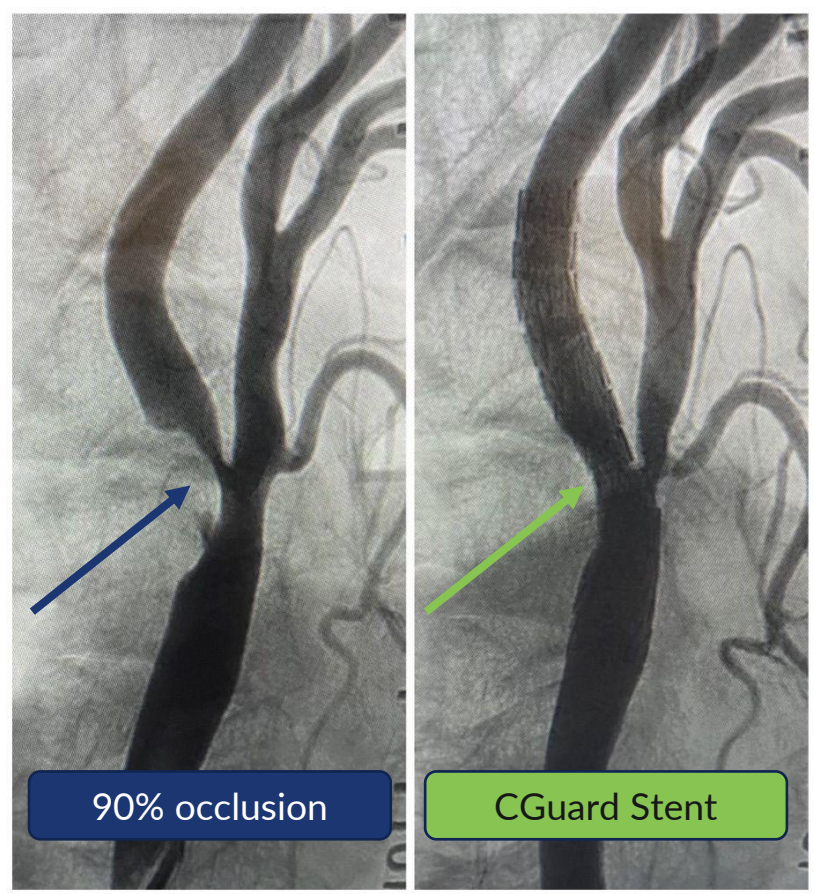


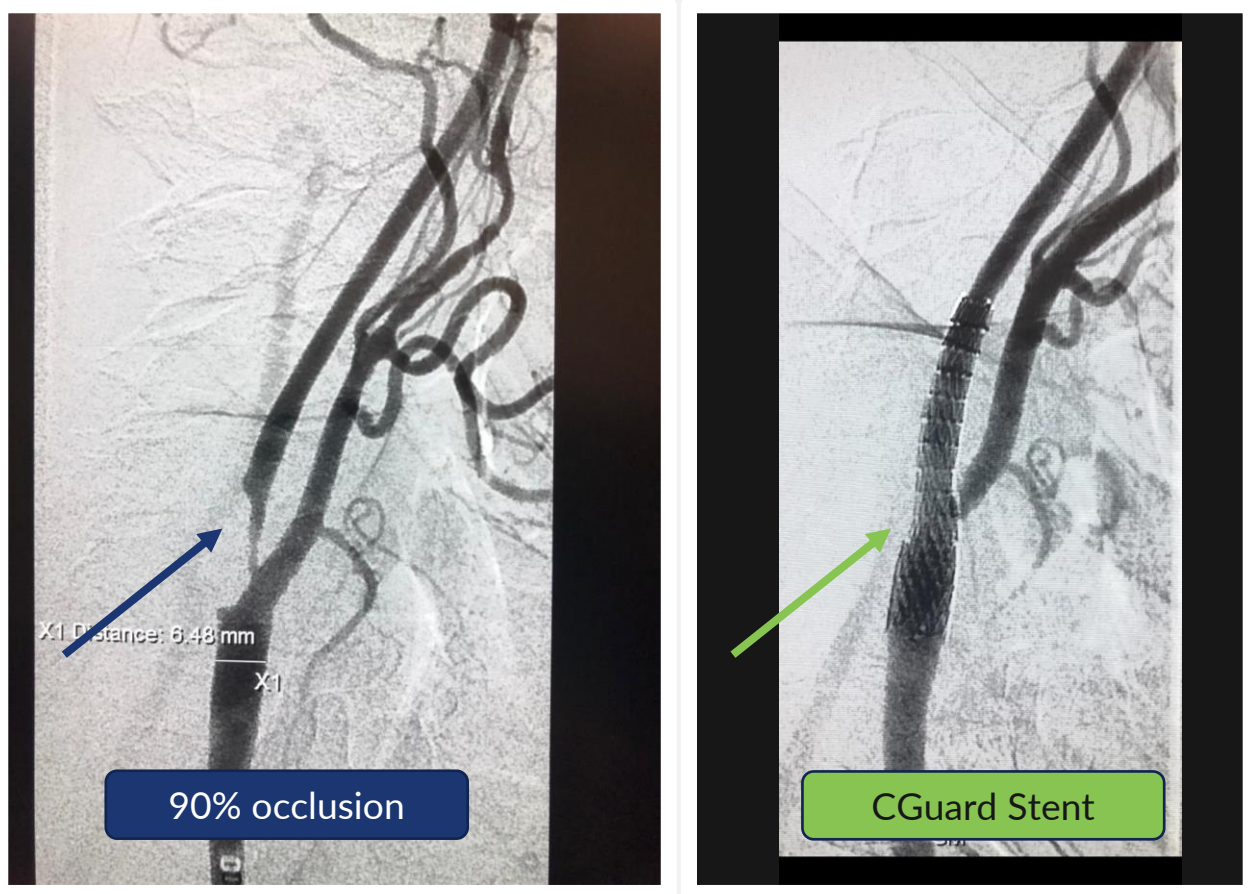
* *Average in lesion at expanded state*



* Bench test results may not necessarily be indicative of clinical performance.
Stent images approximately at scale but not exact

A picture is worth a thousand words …

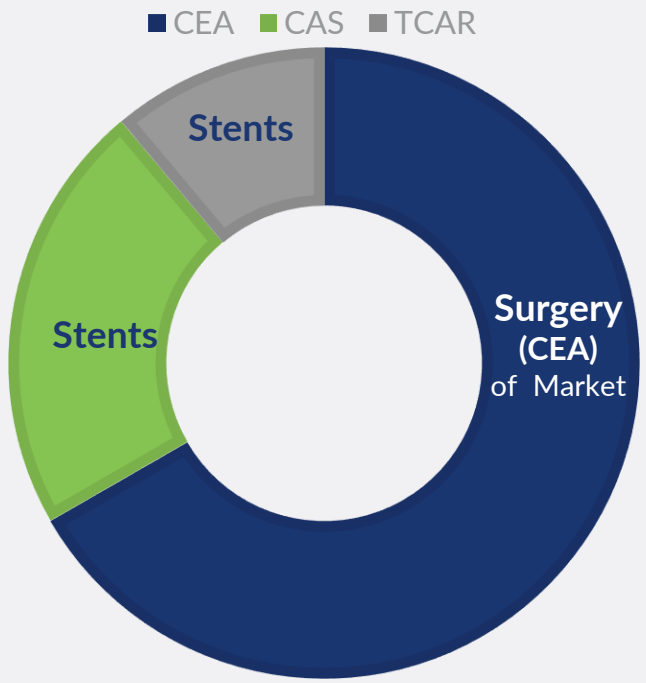




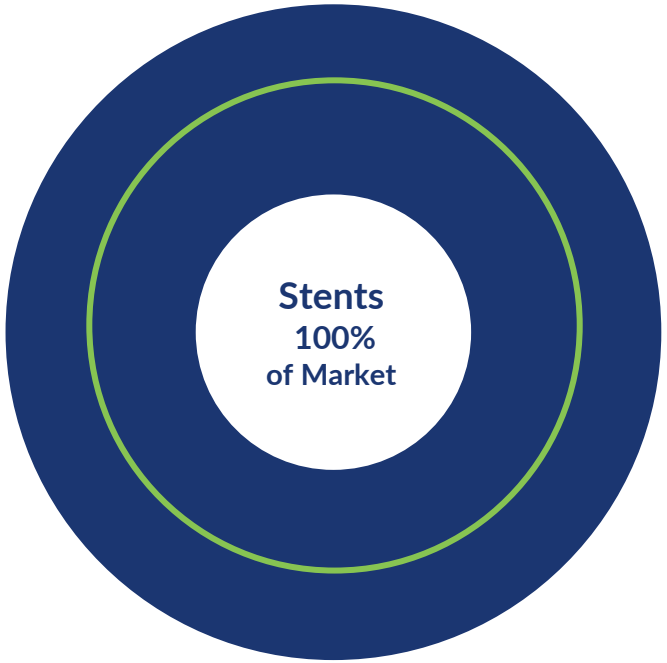
Potential Multi-Billion Dollar Market Opportunity

MicroNet™ covered CGuard™ stent platform could become the new gold standard

WW carotid procedures today are primarily surgical



Carotid procedures tomorrow could be mostly minimally invasive with CGuard™



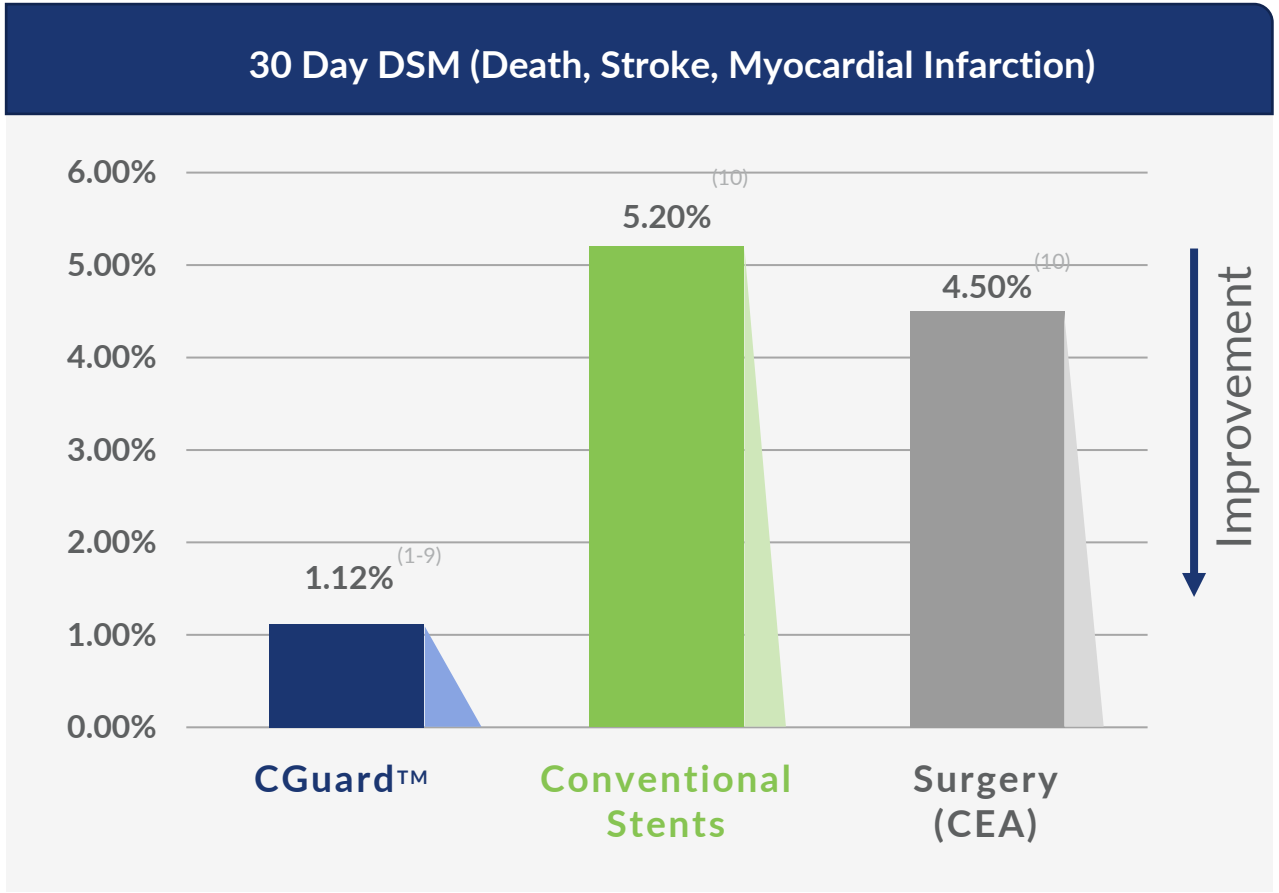
- **Current Treated Global Market:**
  → $1.3 billion (1)
  407K Global procedures (CEA/CAS/TCAR) to treat HGCS (High Grade Carotid Stenosis)
- **Current Treated U.S. Market:**
  → $809 million
  155K procedures to treat HGCS
- **Current Untreated Global Market:**
  → $8 billion
  ~2.8 million people diagnosed with HGCS (Untreated)
- **Standard Risk Reimbursement (US) increases CAS potential**

1. 2021 Health Research International Market Report; internal estimates

Unmatched Foundational Data

CGuard™ EPS Yields Superior Clinical Outcomes

When compared with Conventional Stents and Surgery (CEA), CGuard trends Superior



- No stent-related major strokes and 11 minor strokes to date with CGuard in 1,873 patients in 9 studies (0.6%)
- CGuard is a next-generation stent supported by a strong clinical data

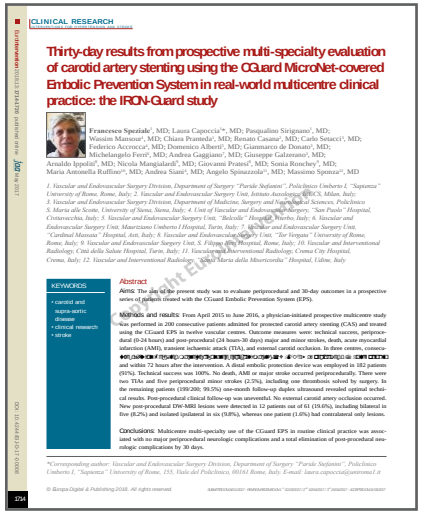
1. IRONGUARD I EuroIntervention 2018 Nov 20. 14:1150-1152. 2. IRONGUARD II, LINC 2020 3. CASANA Eur J Vasc Endovasc Surg 2017 Dec. 54:681-687. 4. WISSGOTT I J Endovasc Ther 2019 08. 26:578-582. 5. WISSGOTT II J Endovasc Ther 2017 02. 24:130-137. 6. PARADIGM Extend, EuroIntervention 2016 Aug 05. 12:e658-70. Updated LINC 2020. 7. CARENET JACC Cardiovasc Interv 2015 Aug 17. 8:1229-1234. 8. Randomize Clinical Trial EuroPCR e-Course, June 25, 2020. 9. Tigkiropoulos J Endovasc Therapy Volume 28 Issue 4, Aug 2021 10. CREST N Engl J of Med 2010 July 1. 11-23.

Carotid Solution: Our Well Studied Mesh-Covered Technology

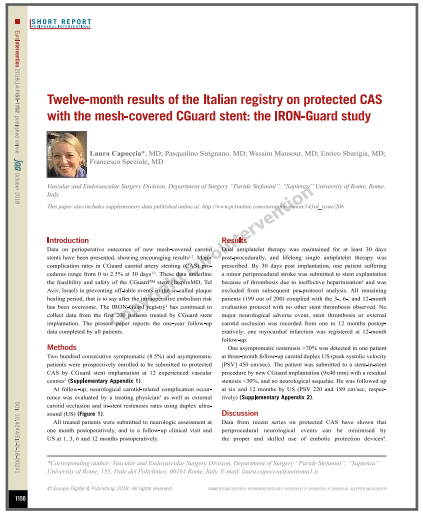
More than

1,850

patients in Clinical Publications & Studies


CLINICAL RESEARCH

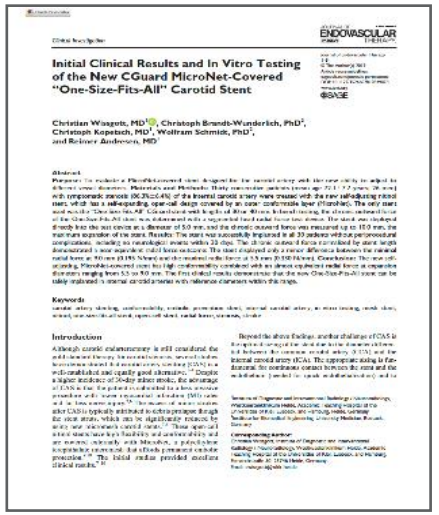
Thirty-day results from prospective multi-specialty evaluation of carotid artery stenting using the CGuard MicroNet-covered Embolic Prevention System in real-world multicentre clinical practice: the IRON-Guard study


SHORT REPORT

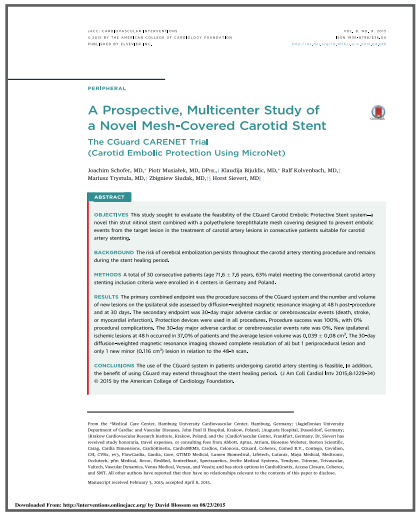
Twelve-month results of the Italian registry on protected CAS with the mesh-covered CGuard stent: the IRON-Guard study


CLINICAL RESEARCH

Novel PARADIGM in carotid revascularisation: Prospective evaluation of All-comer peRcutaneous cArotiD revascularisation in symptomatic and Increased-risk asymptomatic carotid artery stenosis using CGuard™ MicroNet-covered embolic prevention stent system

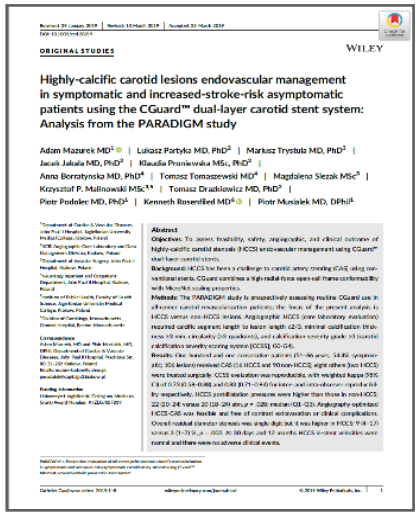

ORIGINAL RESEARCH ARTICLE

Initial Clinical Results and In Vitro Testing of the New CGuard MicroNet-Covered "One-Size-Fits-All" Carotid Stent


PERIPHERAL

A Prospective, Multicenter Study of a Novel Mesh-Covered Carotid Stent

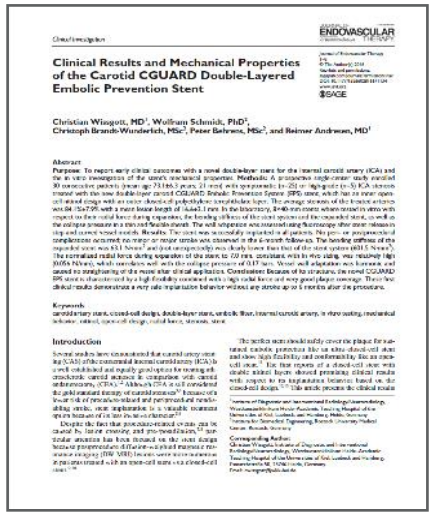
The CGuard CARENET Trial (Carotid Embolic Protection Using MicroNet)


ORIGINAL STUDIES

Highly-calcific carotid lesions endovascular management in symptomatic and increased-stroke-risk asymptomatic patients using the CGuard™ dual-layer carotid stent system: Analysis from the PARADIGM study


ARTICLE IN PRESS

Safety and Efficacy of the New Micromesh-Covered Stent CGuard in Patients Undergoing Carotid Artery Stenting: Early Experience From a Single Centre


Clinical Results and Mechanical Properties of the Carotid CGUARD Double-Layered Embolic Prevention Stent


Clinical Results and Mechanical Properties of the Carotid CGUARD Double-Layered Embolic Prevention Stent

Clinical Data Foundation: Evolution to Standard of Care

YEAR	STUDY	PUBLICATION HIGHLIGHTS	CGUARD'S STANDING (known & anticipated)	Journal
2015	CARENET	Safety, Efficacy & Neuroprotection over other stents data	CGuard evaluated as new approach 'to CAS	JACC
2016	PARADIGM	All comers population; Excellent clinical results		Eurointervention, LINC
2017	CASANA	Large surgical center, Clinical results over conventional stents historical data		Eur J Endovasc Surg
2017	WISSGOTT	Clinical & mechanical assessment; Mechanical advantages vs competitive stents	CGuard demonstrates best performance in field	J Endovasc Ther
2017	IRON-GUARD 1	Real world multicentric 30d results; Excellent clinical results in multicentric		Eurointervention
2018	WISSGOTT 10MM	"One-Size-Fit-Ail" (OSFA); 10 mm CGuard OSFA demonstrates safety and efficacy		J Endovasc Ther
2019	IRON-GUARD 1	Real world multicentric 1y results; Excellent long-term results in multicentric		Eurointervention
2020	IRON-GUARD 2	Large real world multicentric; Large Multicentric Best-In-Class clinical results	CGuard demonstrates superiority to other stents	Cardiovasc Interv
2021	CGuard-TCAS	CGuard Trans-Cervical excellent results		Adv Interv Cardiol
2021	IRON-GUARD 2	12-month 733 pts clinical results		JACC
2021	Randomized Control Trial	Randomized Trial; CGuard demonstrates Neuroprotection vs Conventional stents		JACC, LINC
2021	ONE SIZE-FIT-ALL	CGuard 150 pts 12m-FU		CIRSE
2021	Greek Registry	CGuard in Real live at 30d		J Endovasc Ther
2021	Meta-Analysis	CGuard superior to Other Stents at 1y-FU		J Clin Med
2021-24	PARADIGM Extend	CGuard in all-comers 550 pts 30d / 5y FU		LINC, DEKRA PMCF
2021	Meta-Analysis	CGuard superior to CEA at 1y-FU	CGuard demonstrates superiority to surgery	Writing
2021	OCTOPVS	OCT comparison CGuard vs CEA; CGuard superior post-intervention OCT than CEA		Writing
2022	OPTIMA	IVUS assessnnent after CGuard: Anticipated Plaque exclusion detnonstrated		Writing
2022	FLOW-GUARD	Use of CGuard as flow diverter in very high-risk patients beyond carotids; Potential new CGuard indications		Writing

* Peer reviewed publication

Clinical Support Highlights / Call out

2015-2022

CARENET Trial

First in Man Study- Demonstrated Safety, Efficacy, & Neuroprotection over other stents data

Reduction of embolization

(50% fewer lesions / 80% less volume with 0 events @ 30 days)

PARADIGM + Extend

Opened CARENET study inclusion criteria all comers.

Concluded the safety and clinical outcomes were applicable to all.

500 patients followed 5 years. Defines standard for measured sustained protection and long-term outcomes

Randomized Control Trial

CGuard vs. Conventional Stent (Abbott Acculink)

CGuard superiority in Randomized study format

Confirms CARENET results with statistical significance

CGuard™ EPS: Nine clinical trials completed with >1,850 patients followed

CARMEN Meta-Analysis (112 Studies, 68K Patients)

- Improvements from second-generation stents (SGS) relative to first-generation stents (FGS), but important differences exist amongst the SGS:
  - Roadsaver limits 30-day events but shows restenosis similar to FGS
  - Gore performs similarly to FGS
  - **CGuard's MicroNet drives improvement both in event reduction (due to improved scaffolding) and restenosis reduction (due to less metal burden)**
- **SGS plaque sealing might improve TCAR outcomes in symptomatic patients**

Table 2A. 30-day and 12-month event rates by stent type (random-effect model).

	FGS	SGS	Road-Saver	Gore	CGuard
30-day Stroke [%] (95% CI)	**3.01** (2.63-3.38)	**0.60** (0.28-0.92)	**0.50** (0-1.15)	**2.89** (1.03-4.76)	**0.54** (0.17-0.92)
30-day Death/Stroke/MI [%] (95% CI)	**4.11** (3.65-4.56)	**1.30** (0.64-1.96)	**1.33** (0-2.66)	**4.82** (2.44-7.2)	**1.08** (0.55-1.60)
12-mo Ipsilateral Stroke [%] (95% CI)	**3.51** (2.52-4.50)	**0.7** (0-1.47)	**0.26** (0-1.27)	**3.1** (1.11-5.1)	**0.38** (0-0.9)
12-mo Restenosis [%] (95% CI)	**3.97** (0.28-5.14)	**3.38** (1.39-5.37)	**7.16** (4.45-9.86)	**4.83** (2.36-7.29)	**0.34** (0-0.82)
12-mo Ipsilateral Stroke/Restenosis [%] (95% CI)	**8.15** (6.34-9.96)	**5.12** (2.14-8.10)	**7.86** (5.04-10.68)	**7.93** (4.82-11.04)	**0.73** (0-1.44)

1. Clinical Outcomes of Second- versus First-Generation Carotid Stents: A Systematic Review and Meta-Analysis, J. Clin. Med. 2022, 11

US IDE Trial

PMA Trial Design

FDA Trial Performance Goal – 11.6% vs European Clinical Trials' Performance 1.32% (w/ 1 Yr)

- **Pivotal study objective** evaluate the safety and efficacy of the CGuard™ Carotid Stent System in the treatment of carotid artery stenosis
  - **Intent to Treat Protocol**
  - **Primary Endpoint:** Symptomatic and asymptomatic patients undergoing carotid artery stenting (CAS) to a performance goal of **<11.6%** developed from published CAS literature. Calculation will be the composite of the following: incidence of the following major adverse events: death (all- cause mortality), all stroke, and myocardial infarction (DSMI) through 30-days post-index procedure, based on the Clinical Events Committee (CEC) adjudication or ipsilateral stroke from 31-365-day follow-up, based on CEC adjudication. The performance goal will consider to be met if the upper bound of the two-sided 95% confidence interval, calculated from the observed primary endpoint rate is <11.6% and the p-value is < 0.025.
  - In European clinical studies, CGuard data of **1,485 patients** followed for one year - **1.32%*****
- **Chris Metzger, M.D.** (Ballad Health) : Primary Investigator
- **315 Patients – Enrollment completion anticipated end of Q2 '23**
- **25 Centers** (20 in the United States and 5 in Europe)
- **HCC (Hart Clinical Consultants)** CRO specializing in Carotid trial execution
- **Christina Brennan, M.D.** and **Gary Roubin, M.D.,PhD. :** Supporting advisory experts

*** 1. IRONGUARD I EuroIntervention 2018 Nov 20. 14:1150-1152 2. IRONGUARD II 1-Year Results From a Prospective Experience on CAS Using the CGuard Stent System JACC: Cardiovascular Interventions Vol. 14, No. 17, 2021. 3. Academic Data Registry PARADIGM-EXTENDED Monitored 30 days and 12 Months Outcomes Report, Oct 24, 2022 (Prospective evaluation of All-comer percutaneous carotid revascularisation in symptomatic and increased risk asymptomatic carotid artery stenosis using CGuard MicroNet –covered embolic prevention stent system) 4. 5 Year Clinical Ultrasound Outcomes in CARENET Prospective Multicenter Trial of CGuard MicroNET Covered Stent JACC: Cardiovascular Interventions Vol. 15, No. 18, 2022 September 26, 2022:1183-1891

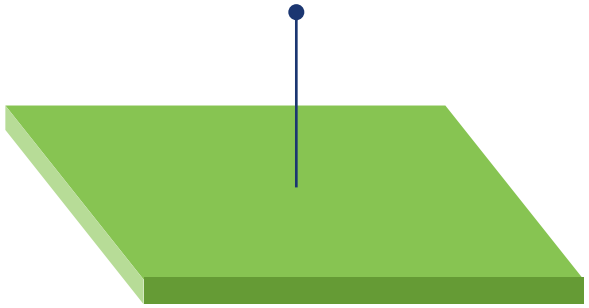
* 2021 Health Research International Market Report; internal estimates

Roadmap + Milestones

Our Advancement Roadmap / Milestones

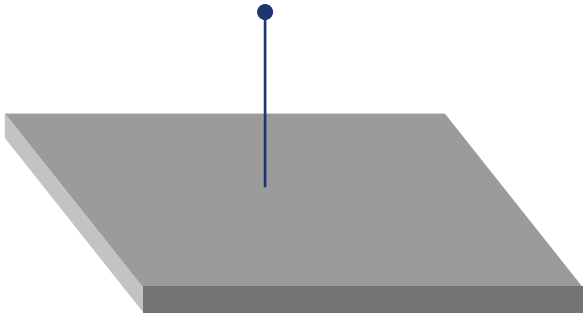
Our Expected Key Value Drivers and Strategic Pathways

- **USA Trial** Enrollment Complete
  - Inclusion of CGuard Prime
- **SwitchGuard** 510K clinical
- **Acute Stroke (NGuard)** EFS (early feasibility study)
- **U.S. Standard Risk Reimbursement**
- **CGuard Prime** Commercial Launch (EU)



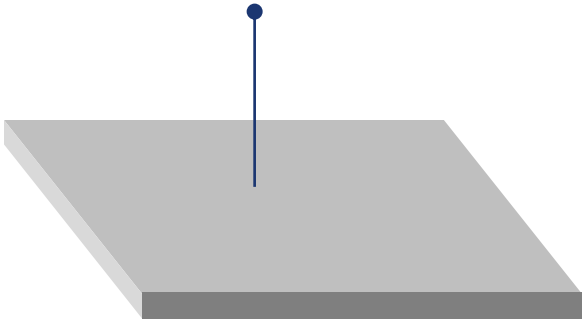
2023

- **FDA PMA** Submission
- **Acute Stroke (NGuard) Pivotal**
- **China** Regulatory Submission
- **NCD** Standard Risk Reimbursement
- **SwitchGuard** Clinical Submission



2024

- FDA PMA **Approval**
- **SwitchGuard (TCAR)** Launch (U.S. + EU)
- **U.S. Commercial** Launch
- **China Commercial** Launch

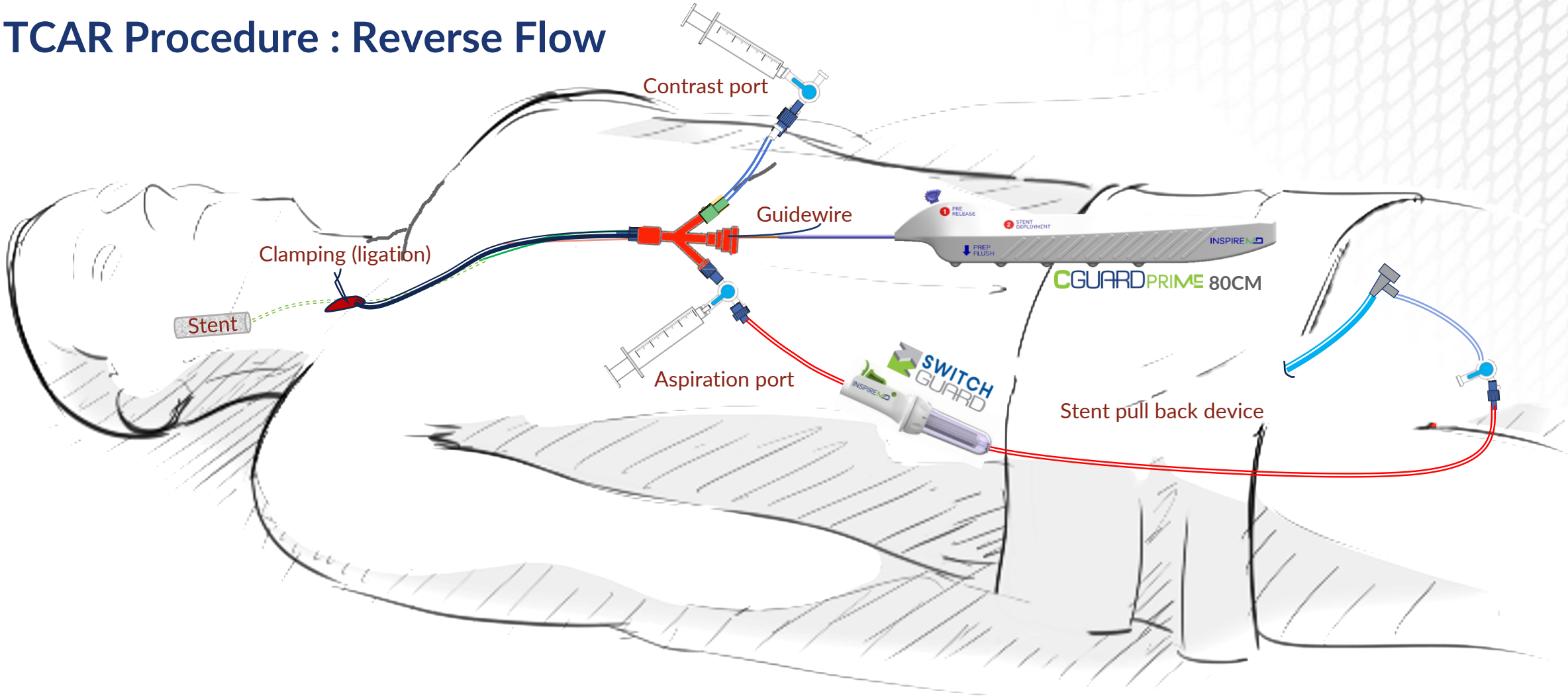


2025

CGUARDPRIME 80

TCAR

TCAR Procedure : Reverse Flow



Reverse flow through surgical CCA clamping and use of CGuard Prime +SwitchGuard

Corporate

Our Board of Directors

Marvin L. Slosman President and CEO	Mr. Slosman has over 30 years of experience in the medical device industry with focused leadership in commercialization and international market development in both public and privately held companies. He has had senior management roles in a variety of public and privately held companies.
Paul Stuka Chairman	Mr. Stuka was named to the Board of Directors in August of 2011 and serves as Chairman of the Board of Directors. Mr. Stuka is a Managing Member of Osiris Partners and a 30-year investment industry veteran.
Michael Berman Director	Mr. Berman is a successful entrepreneur within the medical device industry. He joined Scimed in 1986, leading its marketing activities until its merger with Boston Scientific in 1995. From 1995-2000, he served as President of Boston Scientific/Scimed. Venture partner in RiverVest Ventures
Thomas Kester Director	Mr. Kester is CFO of Kester Search Group, Inc., a private executive search firm specializing in sales force placement for medical, dental and diagnostic device companies. He spent 28 years at KPMG LLP.
Gary Roubin, M.D.,Ph.D. Director	Dr. Roubin was named to the board of Directors in October 2020. Dr. Roubin has co-authored more than 280 clinical publications and has contributed to 20 textbooks in the fields of Interventional Cardiology and Vascular Surgery. He was a key contributor in the CREST trial which has validated the use of carotid stents for the treatment of carotid artery stenosis.
Katie Arnold Director	Ms. Arnold was named to the Board of Directors in May 2021. Ms. Arnold founded and leads SPRIG Consulting, providing the entire spectrum of strategic marketing services to medical companies. Ms. Arnold is currently an adjunct professor at Northwestern University's Kellogg School of Business, where she teaches medical product commercialization and financing.

Scientific Advisory Board (Multidisciplinary KOLs)

Kenneth Rosenfield, M.D.

Interventional

Cardiologist

Mass General Brigham

Adnan H. Siddiqui, M.D. Ph.D

Professor, Vice Chairman of the

Department of Neurosurgery

UBNS Neurosurgery
UNIVERSITY AT BUFFALO

Chris Metzger , M.D.

Medical Director

Cardiologist

BalladHealth

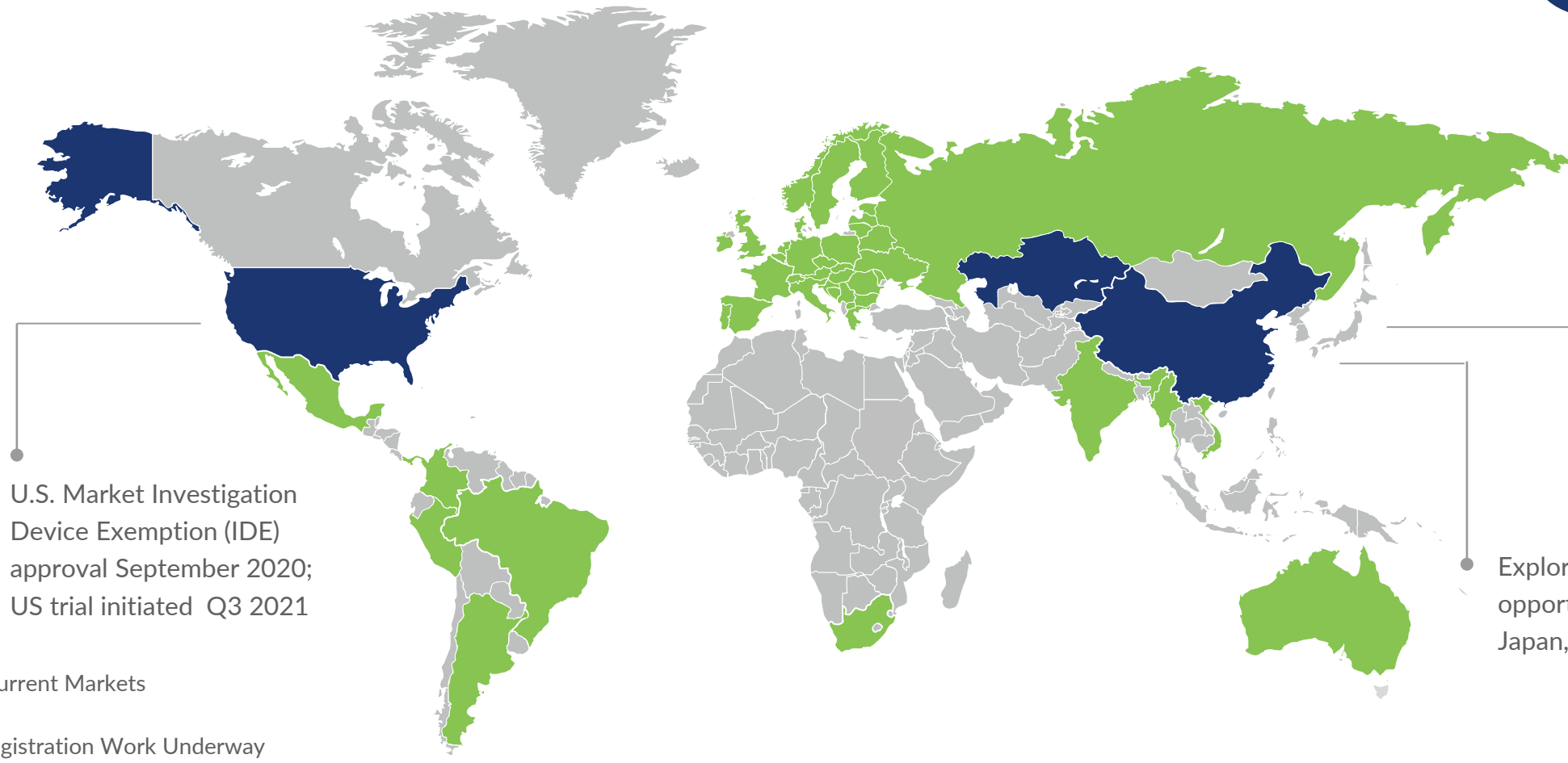
Sean Lyden, M.D.

Vascular Surgeon

Cleveland Clinic

Commercial CGuard Footprint

- Active selling CGuard in more than 30 countries
- Over 40K stents sold to date



U.S. Market Investigation Device Exemption (IDE) approval September 2020; US trial initiated Q3 2021

Signed agreement with Chinese distributor. Working toward distribution

Exploring expansion opportunities Taiwan, Japan, and Korea

Current Markets

Registration Work Underway

Our Robust Intellectual Property Portfolio

Proprietary platform technology supported by IP

Patent Rights	Issued	Pending
USA	16	6
Rest of World	42	11

InspireMD will continue to strengthen and broaden its patent protection globally to enable future pipeline products

IP Counsel: Kligler and Associates, P.A.

Summary Financials

May 22, 2023

NASDAQ Capital Markets	NSPR
Stock Price	**$1.90**
Average 3 Month Volume	**83.5K**
Shares Outstanding	**18.6M**
Shares Outstanding with Prefunded Warrants	**34.2M**
Market Capitalization with Prefunded Warrants	**$65M**
Cash Balance - March 31, 2023*	**$12.9M**
Debt	**$0M**

* Post financing May 2023 cash balance as of May 21, 2023 is approximately $48.2 million

INSPIREMD

NASDAQ = NSPR