



**Third Annual Analyst and Investor Day  
November 19, 2018**

**NASDAQ: [AXGN](#)**

It's time to rethink nerve repair.™



# Safe Harbor Statement

This Presentation contains "forward-looking" statements as defined in the Private Securities Litigation Reform Act of 1995. These statements are based on management's current expectations or predictions of future conditions, events, or results based on various assumptions and management's estimates of trends and economic factors in the markets in which we are active, as well as our business plans. Words such as "expects," "anticipates," "intends," "plans," "believes," "seeks," "estimates," "projects," "forecasts," "continue," "may," "should," "will," and variations of such words and similar expressions are intended to identify such forward-looking statements. The forward-looking statements may include, without limitation, statements regarding our assessment on our internal control over financial reporting, our growth, our 2018 and 2019 guidance, product development, product potential, financial performance, sales growth, product adoption, market awareness of our products, data validation, our visibility at and sponsorship of conferences and educational events.

The forward-looking statements are subject to risks and uncertainties, which may cause results to differ materially from those set forth in the statements. Forward-looking statements in this release should be evaluated together with the many uncertainties that affect AxoGen's business and its market, particularly those discussed in the risk factors and cautionary statements in AxoGen's filings with the Securities and Exchange Commission. Forward-looking statements are not guarantees of future performance, and actual results may differ materially from those projected. The forward-looking statements are representative only as of the date they are made and, except as required by law, AxoGen assumes no responsibility to update any forward-looking statements, whether as a result of new information, future events, or otherwise.

# Event Agenda

Introduction - Kaila Krum, Vice President Investor Relations and Corporate Development

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Company Overview and Update - Karen Zaderej, Chairman, CEO, and President

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Clinical Review - Erick DeVinney, Vice President of Clinical and Translational Science

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Surgeon Panel - Ivica Ducic, MD, PhD - Medical Director, AxoGen Inc. (Washington Nerve Institute)

- Upper Extremity - Brendan MacKay, MD (University Medical Center, Lubbock, TX)
  - Surgical Treatment of Pain - Robert Hagan, MD (Neuropax Clinic, St. Louis, MO)
  - Breast Neurotization - Suhail Kanchwala, MD (Penn Medicine, Philadelphia, PA)
  - OMF - Ramzey Tursun, DDS, FACS (University of Miami, Miami, FL)
- 

Guidance & Closing Comments – Pete Mariani, Chief Financial Officer

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Panel Q&A and Discussion

# The AxoGen Platform for Nerve Repair



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# AxoGen is the Preeminent Nerve Repair Company

- ✓ Exclusive focus on peripheral nerve repair and protection solutions
- ✓ Comprehensive product portfolio addresses large and untapped market opportunity
- ✓ “Five Pillar” Market Development Strategy delivered 31 consecutive quarters of YOY double-digit growth

**Q3 2018 Revenue**

**\$22.7M, 41% growth vs Q3 2017**

**2017 Revenue**

**\$60.4M, 47% growth vs 2016**

**High Gross Margins**

**84.7% as of September 30, 2018**

**Cash, Cash Equivalents, and Investments  
as of September 30, 2018**

**\$126.4M**

- ✓ Solid balance sheet provides resources to execute business plan
- ✓ Significant barriers to competitive entry including a growing body of clinical data
- ✓ Management team with deep expertise and strong track record of success
- ✓ Expansion opportunities beyond current markets

# Building for Long-term Sustainable Growth

# Breadth and Depth of Talent



**Karen Zaderej, MBA**  
Chairman, CEO,  
& President  
J&J (Ethicon)



**Peter Mariani**  
Chief Financial Officer  
Lensar, Hansen, Guidant



**Greg Freitag, JD, CPA**  
General Counsel  
Pfizer, Guidant



**Jon Gingrich**  
Chief Commercial Officer  
Hologic, Boston Scientific



**Maria Martinez**  
Chief Human Resources Officer  
HSNi, Bausch + Lomb



**Isabelle Billet**  
Chief Strategy & Business  
Development Officer  
J&J, C.R. Bard, Cardinal



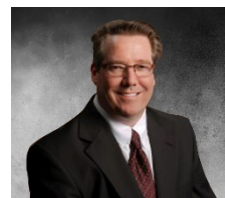
**Stacy Arnold**  
VP, Program Management  
CryoLife



**Gregory Davault**  
VP of Marketing  
Ekso Bionics,  
Given Imaging



**Erick DeVinney**  
VP, Clinical &  
Translational Sciences  
Angiotech, PRA Intl



**Mike Donovan**  
VP, Operations  
Zimmer



**Ivica Ducic, M.D., Ph.D.**  
Medical Director  
Washington Nerve Institute



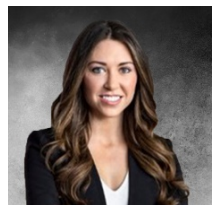
**Mark Friedman, Ph.D.**  
VP, Regulatory &  
Quality Assurance  
AtriCure, Enable Medical



**John Glueck, JD**  
Chief Compliance Officer  
Medtronic, Covidien



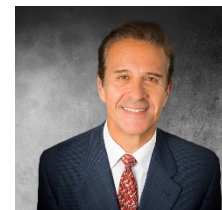
**David Hansen**  
VP, Finance and Treasurer  
Perma-Fix, Kraft  
™



**Kaila Krum**  
VP, Investor Relations &  
Corporate Development  
William Blair



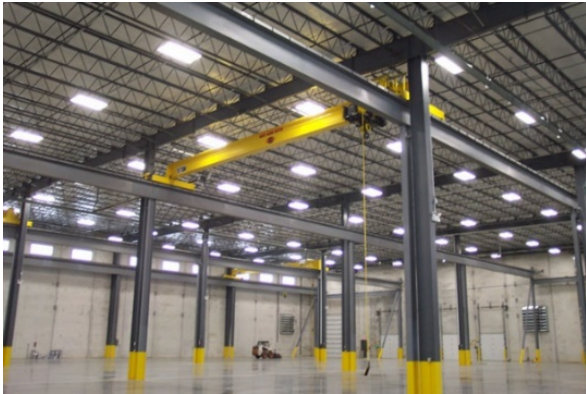
**Shawn McCarrey**  
SVP, Sales  
Bayer, Medrad, Possis



**Angelo Scopelianos, Ph.D.**  
VP, Research &  
Development  
J&J

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# Infrastructure to Support Long-term Scale



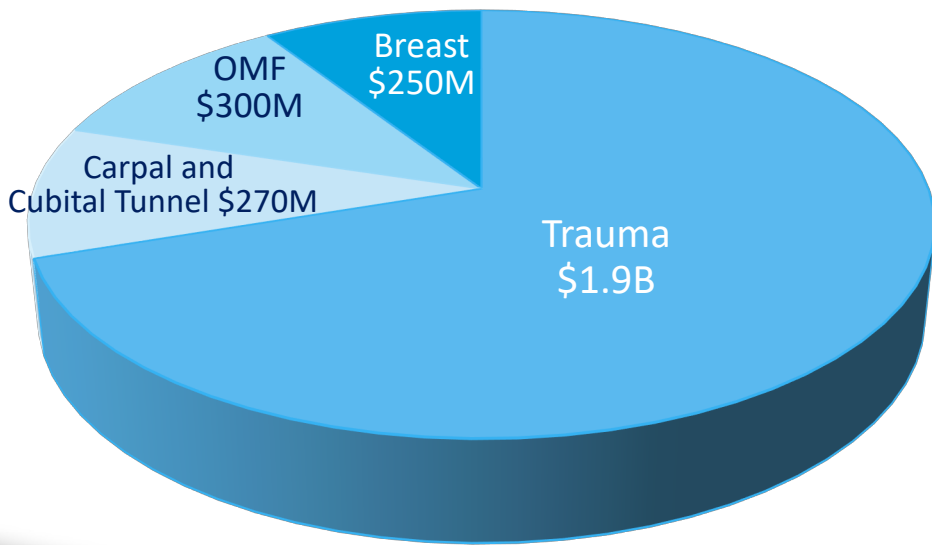
**AxoGen  
Processing  
Center**  
*Dayton, OH*



**AxoGen Second Corporate Campus**  
*Tampa, FL*

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# Updating Value of Market Opportunity in Existing Applications from \$2.2B to \$2.7B

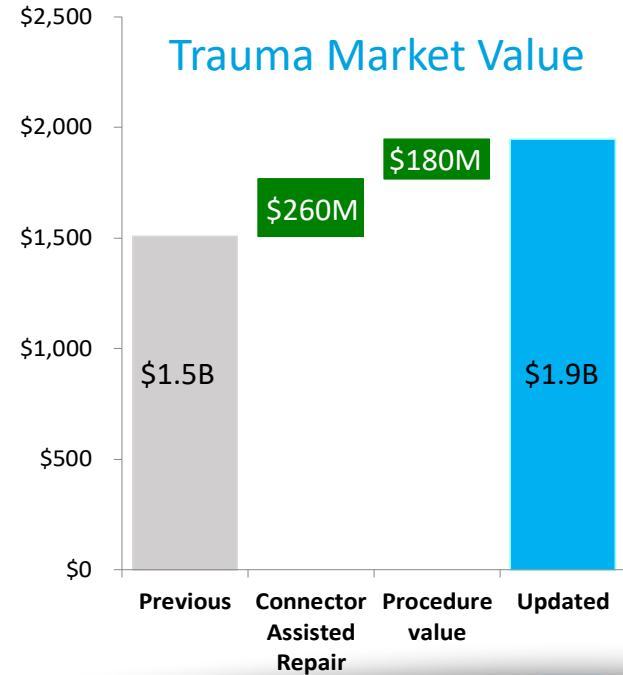
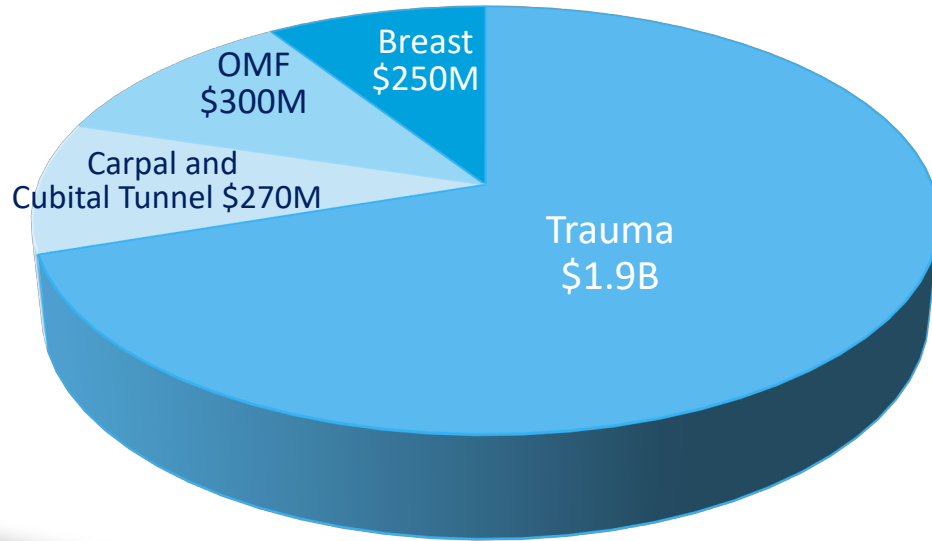


US procedural estimates remain >900,000

- Trauma: > 700,000 <sup>(1,2,3,4)</sup>
- Carpal Tunnel Revisions and Cubital Tunnel: 130,000 <sup>(5)</sup>
- OMF: >55,000 <sup>(6,7,8)</sup>
- Breast Neurotization Procedures: 15,000 <sup>(9)</sup>

\$2.7B estimate does not include pain

# Our Trauma Market Increase is Driven by Multiple Product Usage and Price





## OMF

*Building momentum toward middle adopters*

# Trauma

*Driving deeper awareness and penetration by sub-segment*

## Surgical Treatment of Pain

*Establishing the foundation with clinical and market development initiatives*

## Breast Neurotization

*Driving market development and clinical efforts*

# Transforming Peripheral Nerve Repair to Create a New Standard of Care



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# Focus on Building Awareness Among Surgeons, Patients, and Investors

Participate in Clinical Conferences

- ❑ Exhibits, Podium presentations, KOL panels

Promote Awareness Among Patients

- ❑ AxoGen Patient Ambassador Program

Garner Positive Media Attention

- ❑ National, Regional and Local Broadcast, Print and Online



Build Market  
Awareness



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# Emphasis on Education

**2017: 15 National Programs**

**2018: 18 National Programs**

**2019: 25 National Programs Expected**

*Expect to train three-quarters of hand and microsurgery Fellows in 2019*



Educate Surgeons  
Develop Advocates

# Strong Commitment to Developing Clinical Evidence

**66**

Portfolio Peer-Reviewed Clinical Papers\*

**5**

**RANGER®**

**57**

**Avance®**  
Nerve Graft

**7**

Oral and Maxillofacial

**28**

**AxoGuard®**

Grow Body of  
Clinical Evidence

\*Total number for the portfolio of surgical implant products.  
Certain publications contain data on multiple products.  
As of November 19, 2018



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# Strong Commitment to Developing Clinical Evidence

## RANGER® Registry Study: Enrollment Ongoing

- ❑ The largest multi-center clinical study in peripheral nerve repair, over 1,600 Avance® nerve repairs enrolled to date
- ❑ Overall meaningful recovery rates of 84-87%; comparable to autograft outcomes without associated donor site comorbidities

## MATCH Registry Study: Enrollment Ongoing

- ❑ Autograft and Synthetic Conduit outcomes

## RECON Study: Enrollment Ongoing

- ❑ Prospective, randomized study of Avance® Nerve Graft controlled vs Synthetic conduits in digital injuries 5 to 25mm
- ❑ IND Pivotal Study to support BLA Submission

## SENSATION-NOW Registry Study: Enrollment Ongoing

- ❑ Multi-center clinical study in breast neurotization

## REPOSE: Initiated

- ❑ AxoGuard® Nerve Cap RCT



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# Focused Sales Execution, Increasing Market Penetration



## Sales Execution Focused on Driving Results

- ❑ Continue expansion thru driving penetration in active accounts and adding new active accounts
- ❑ 5,100 potential U.S. accounts performing nerve repair
- ❑ 679 Active accounts as of September 30, 2018

## Expanded Sales Reach

- ❑ U.S. direct sales team
  - ❑ 60 direct sales professionals at end of 2017
  - ❑ 80+ direct sales professionals by end of 2018
  - ❑ 115+ direct sales professionals by end of 2019
- ❑ Supplemented by independent agencies

Execute Sales Plan



# Expand the Opportunity in Nerve Repair



**Market  
Expansion**

**Future Market  
Development**

**Core  
Business**

**Product  
Pipeline**

**International  
Expansion**

**Expand Product  
Pipeline & Applications**

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# We Remain Focused on Driving Deeper Penetration in Trauma

## Initiatives

### Generate and publish clinical evidence

- Continue to enroll patients in RANGER registry and optimize publications
- Complete MATCH enrollment to provide approximately 100 autograft comparative outcomes
- Continue RECON study and follow up
- Initiate mixed/motor randomized controlled trial (RCT)
- Initiate Avive® soft tissue membrane registry in trauma

### Build Market awareness

- Amplify clinical results through podium presentations at clinical conferences and publications
- Targeted PR around patient stories

### Emphasize education

- Professional education programs
- Train three quarters of the fellows
- Nerve Matters® forum

### Sales force execution

- Grow direct sales team
- Drive penetration in existing active accounts and expand to new active accounts



# We Expect Continued Momentum in OMF

## Initiatives

### Build Market awareness

- Build the referral channel and patient awareness of iatrogenic injuries
- Grow awareness of the issues and solutions through PR efforts
- Presentations at clinical conferences

### Emphasize education

- Professional education programs
- Webinar Watch Events
- Nerve Matters® Forum

### Sales force execution

- Target 200-300 surgeons in the U.S.
- 5 clinical specialists focused on market development today; expect to add 3 additional specialists in 2019

### Generate and publish clinical evidence

- Investigator initiated clinical study expanding to malignant tumor mandible reconstruction



The 90-Day Window: Trigeminal Nerve Injuries and the Importance of Prompt Referral

© 25 Oct 2018 Daniel Petrisor, DMD, MD, FACS Today's Dental News

1213 times

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# We Will Continue to Develop the Breast Neurotization Market

## Initiatives

Generate and publish clinical evidence

- Sensation-NOW™ (Sensation Neurotization Outcomes for Women) Registry
- Single vs Dual Neurotization – randomized prospective study
- Breast-Q clinical endpoint

Build Market awareness

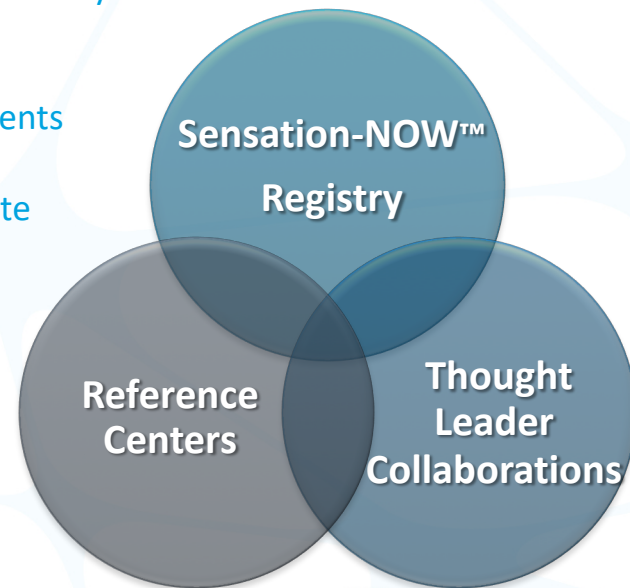
- Grow awareness of the issues and solutions with patients and referral channel
- Patient-facing tools, including social media and website
- Physician locator
- Partner with advocacy groups

Emphasize education

- Train residents and fellows in specialty centers
- Nerve Matters® Forum
- Referral pathways education

Sales force execution

- 25 ReSensation™ centers now trained on techniques
- 5 clinical specialists focused on market development



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paige\_previvor • Follow

Last night I was waiting at the bar for our table to be ready for dinner. As the waitress called our name - I quickly turned and my right boob legit hit a tray of drinks causing them to all crash on the floor. I'm talking broken glass and mai tais EVERYWHERE - it was a hot mess! 🤔😭

Anyone else struggle with spacial awareness and lack of feeling due to their implants?! 🤖👉 I recently heard about @resensation and I feel like having feeling in my boobs would make it so these



905 likes

OCTOBER 15

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People

HEALTH

## The Bachelor's Lesley Murphy Gets Candid About Intimacy Following Double Mastectomy



ReSensation™

# Growing Awareness Through Social Media and PR Efforts



lesleyannemurphy • Follow

I've had implants inside my chest for over a year now and have zero regrets. The upside to all of this: I now have a 1% chance of being diagnosed with breast cancer. The downside? I lost all feeling in my breasts and, well, let's just say they aren't the most natural looking things all the time.

I wrote about it all today on Breast Reconstruction Awareness Day :) I also wrote about what no one talks about - what it's really like to be intimate after a double mastectomy. Lastly - I discuss a new technique designed to restore sensation in breasts after surgery (mine are completely numb). Science is so cool. Link in bio. @resensation #resensation #breastreconstructionawarenessday #breastcancerawareness #mastectomy #partner



11,436 likes

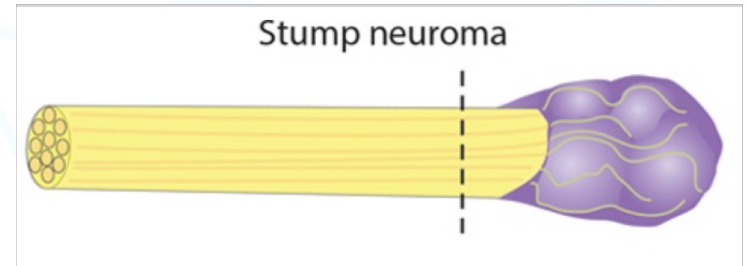
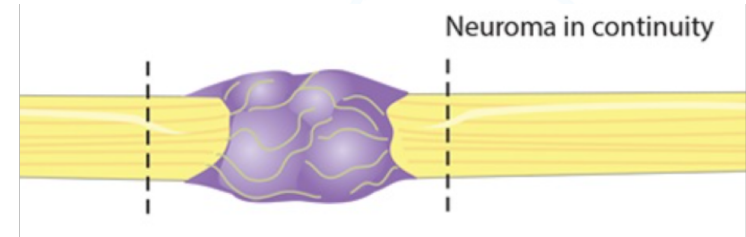
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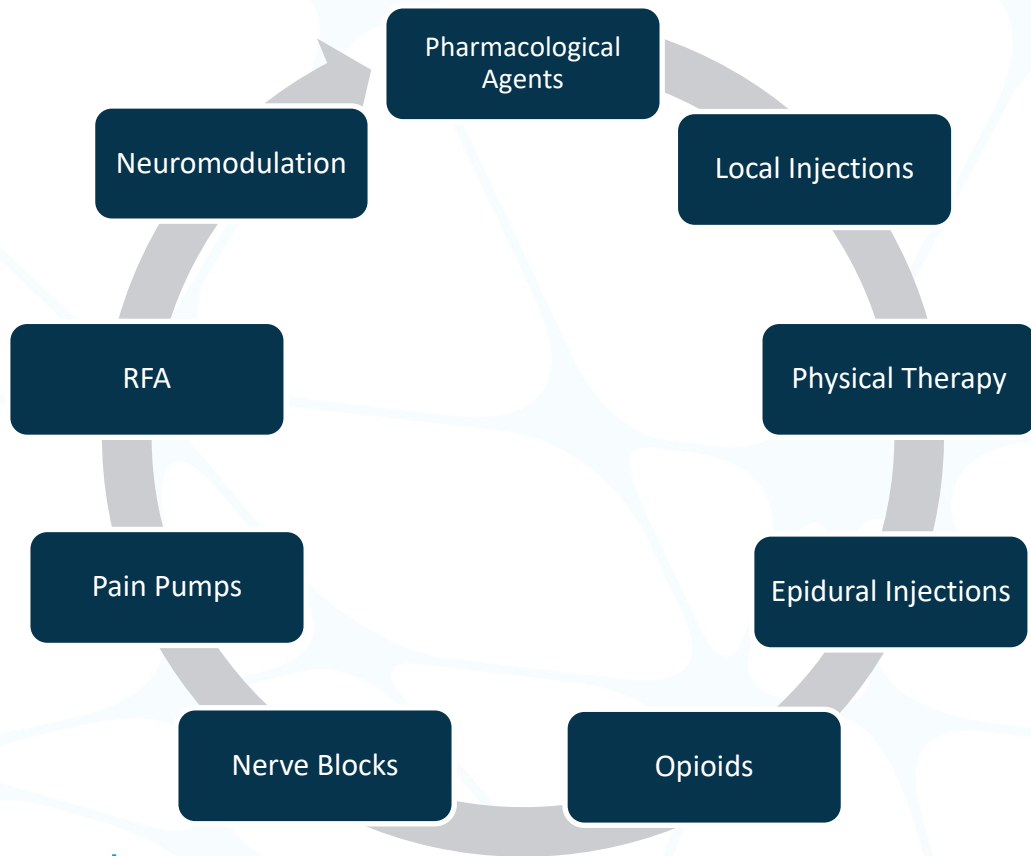
# **We Will Establish a Strong Foundation to Expand into the Surgical Treatment of Pain**

# Focus on Neuroma Pain

- A neuroma is a tangled mass of disorganized nerve and fibrous tissue
- If not properly diagnosed and addressed, the management of these injuries may require long term pharmacologic treatment and pain management



# Historical Management Options for Chronic Neuropathic Pain



# Drugs are Not the Answer for Neuropathic Pain

HEALTH NEWS

SEPT. 25, 2018 / 9:48 AM

## **Lyrica ineffective for chronic pain from traumatic nerve injury**

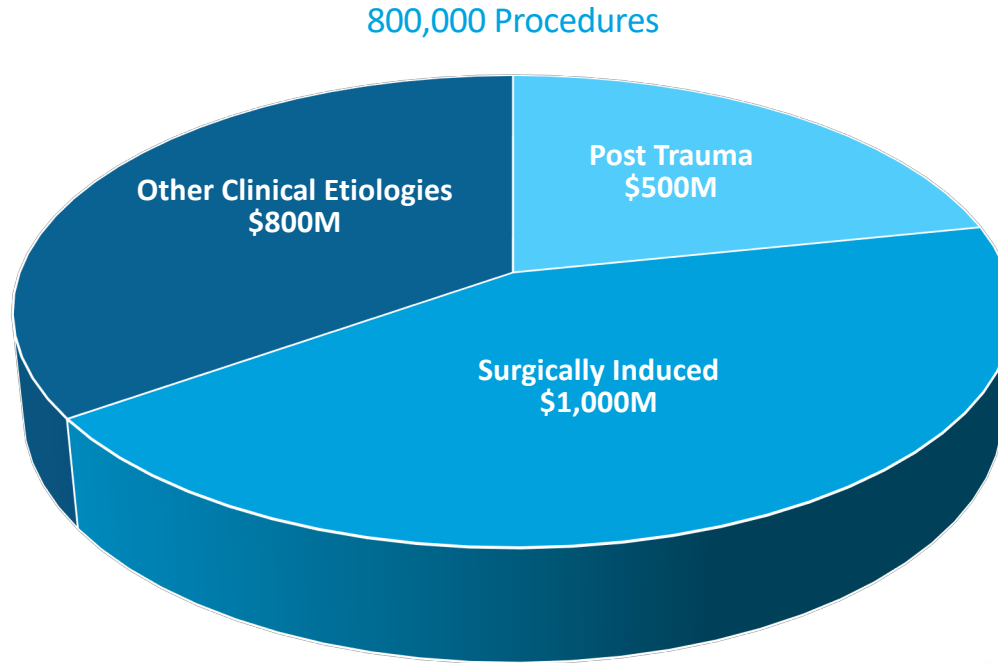
The drug effectively curbs pain immediately after surgery, and works against other forms of chronic pain, but researchers found it is no better than a placebo for traumatic nerve injury patients.

Roughly one-third of patients with chronic pain after surgery are believed to have neuropathic pain, or ongoing pain related to nerve injury, the study's writers noted.

groundwork for future studies in these post-surgical syndromes where there is so much need for non-opioid treatments," Markman said.

- Many modalities manage pain symptoms without addressing the anatomical cause
- Recent study<sup>10</sup> shows Lyrica ineffective for chronic pain from traumatic nerve injury
- Study highlights high prevalence of post-surgical neuropathic pain
- Acknowledges significant need for non-opioid treatments in post-surgical syndromes

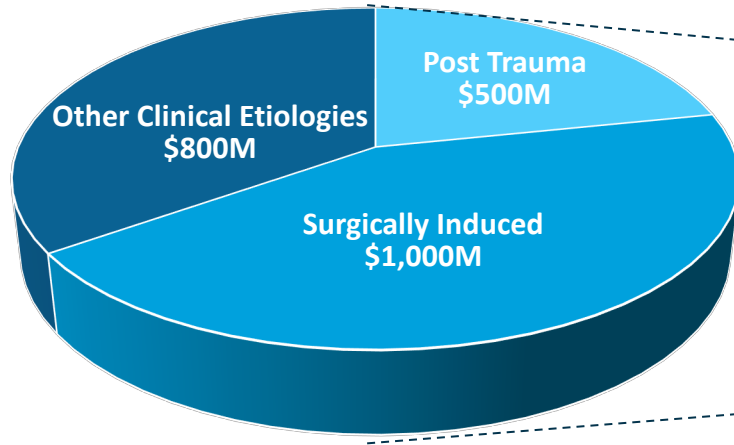
# We Estimate There are 20+ Potential Applications in Chronic Neuropathic Pain, with an Addressable Opportunity of \$2.3B+



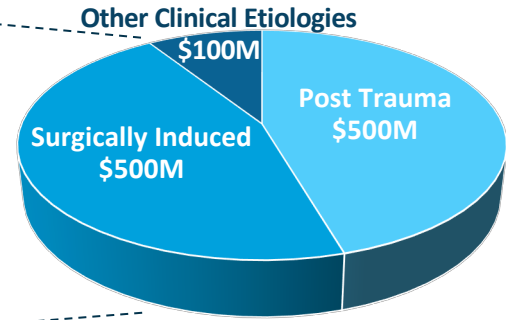


# Our Initial Focus Will be in Orthopedic and Trauma Applications

Addressable Opportunity: \$2.3B  
800,000 procedures



Initial focused applications: \$1.1B  
370,000 procedures



## Nerve reconstruction applications:

- Trauma, orthopedic procedures, hernia, hysterectomy, C-section, laparoscopic procedures, meralgia paresthetica, CABG donor site, nerve tumor excision

## Nerve Termination applications

- Amputation, mastectomy, hernia, laparoscopic procedures, TKA, knee arthroscopy, Morton neuroma, wrist arthroscopy, CABG donor site

## Nerve decompression applications

- Post trauma compressions, occipital neuralgia, meralgia paresthetica

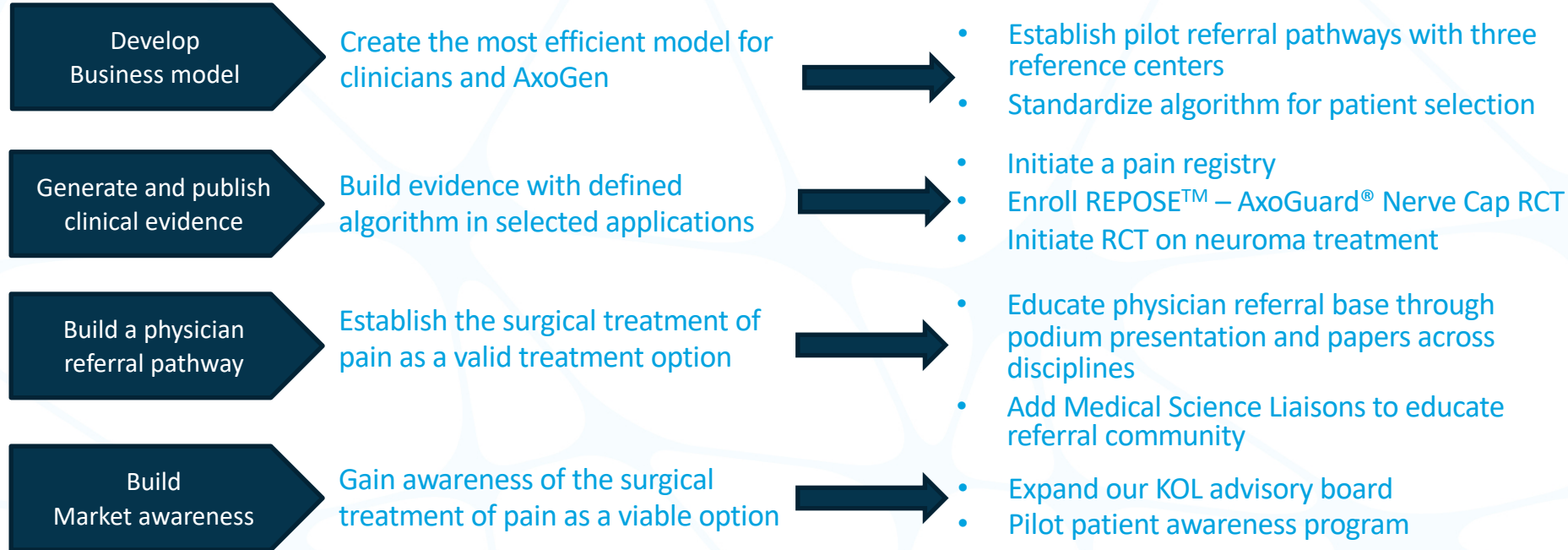
- Orthopedic procedures including THA, TKA, Knee arthroscopy, Morton neuroma, Foot and Ankle procedures, wrist arthroscopy, nerve tumors
- Post traumatic pain including amputation



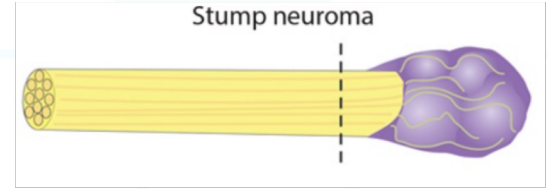
# Creating Surgical Solutions for Chronic Neuropathic Pain

## Objectives

## Examples of initiatives



# AxoGuard® Nerve Cap for Neuroma Pain



- Completed clinical evaluation and user preference study
- Initiated a randomized controlled study of neuroma revision
- Commercial launch in 2<sup>nd</sup> half of 2019

- US FDA Clearance – K163446
  - Indicated to protect a peripheral nerve end and separate the nerve from the surrounding environment to reduce the development of symptomatic or painful neuroma

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# Foundation for Long-term Sustainable Growth

- Exclusively focused in nerve repair across an expanding set of applications
- Differentiated platform for nerve repair, anchored with Avance® Nerve Graft, a biologically active nerve therapy
- 10+ years of demonstrated clinical consistency and meaningful recovery outcomes
- Avance® RMAT designation highlights strength of clinical evidence and the unmet medical need for improved therapies to treat nerve injuries
- Converting experienced surgeons while training the next generation on best practices
- Leadership team with depth and breadth of expertise



**NASDAQ: AXGN**

Deloitte Technology Fast 500 : 2014, 2015, 2016, 2017, 2018  
Russell 2000 Index : June 2016

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# Footnotes

- (1) National Hospital Ambulatory Medical Care Survey: 2015 Emergency Department Summary Tables – Table 18
- (2) Noble, et al: J Trauma, Volume 45(1).July 1998.116-122
- (3) Uzun, et al: J Clin Neuromusc Dis 2006;7:97–103
- (4) Portincasa et al: Microsurgery 27:455–462, 2007
- (5) Medicare\_National\_HCPS\_Aggregate\_Summary\_Table\_CY2016.xls
- (6) Shih-Yun Wu et al: Systematic Review and Meta-Analysis on Incidence of Altered Sensation of Mandibular Implant Surgery - PLoS ONE 11(4): e0154082
- (7) Souheil Hussaini, Procedure frequency in the jaws related to implant location, Dent Oral Craniofac Res, 2016 Volume 2(2): 230-233
- (8) Nguyen. Et al: Risk Factors for Permanent Injury of Inferior Alveolar and Lingual Nerves During Third Molar Surgery; J Oral Maxillofac Surg. 2014 Dec;72(12)
- (9) ASPS statistics – Annual comprehensive report 2017 – [www.plasticsurgery.org/documents/News/Statistics/2017/plastic-surgery-statistics-full-report-2017.pdf](http://www.plasticsurgery.org/documents/News/Statistics/2017/plastic-surgery-statistics-full-report-2017.pdf)
- (10) [www.upi.com/Lyrica-ineffective-for-chronic-pain-from-traumatic-nerve-injury/5131537877458/](http://www.upi.com/Lyrica-ineffective-for-chronic-pain-from-traumatic-nerve-injury/5131537877458/)

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