



Ticker: MRIC

Investor Presentation

October 1, 2015



Transforming minimally invasive neurosurgery by enabling real-time visualization with MRI

Forward Looking Statements



Certain statements in this presentation may constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements often can be identified by words such as "anticipates," "believes," "could," "estimates," "expects," "intends," "may," "plans," "potential," "predicts," "projects," "should," "will," "would," or the negative of these words or other words of similar meaning. Forward-looking statements by their nature address matters that, to different degrees, are uncertain and involve risk. Uncertainties and risks may cause MRI Interventions' actual results and the timing of events to differ materially from those expressed in or implied by MRI Interventions' forward-looking statements. Particular uncertainties and risks include, among others: demand and market acceptance of our products; our ability to successfully expand, and achieve full productivity from, our sales, clinical support and marketing capabilities; availability and adequacy of reimbursement from third party payors for procedures utilizing our products; the sufficiency of our cash resources to maintain planned commercialization efforts and research and development programs; future actions of the FDA or any other regulatory body that could impact product development, manufacturing or sale; our ability to protect and enforce our intellectual property rights; our dependence on collaboration partners; the impact of competitive products and pricing; the impact of the commercial and credit environment on us and our customers and suppliers; and our ability to successfully complete the development of, and to obtain regulatory clearance or approval for, our ClearTrace system. More detailed information on these and additional factors that could affect MRI Interventions' actual results and the timing of events are described in our filings with the Securities and Exchange Commission, including, without limitation, the quarterly report on Form 10-Q filed on August 10, 2015. Except as required by law, MRI Interventions undertakes no obligation to publicly update or revise any forward-looking statements made in this presentation to reflect any change in MRI Interventions' expectations or any change in events, conditions or circumstances on which any such statements are based.

Large Market

- Market is large and growing
 - 55,000 potential ClearPoint procedures across multiple therapies

Navigation System for Multiple Therapies

- ***Electrode placement*** for Deep Brain Stimulation
- ***Laser Ablation*** for ablation of epileptic foci or Brain Tumors
- ***Brain Tumor Biopsy*** for deep seated tumors
- ***Precise Drug Delivery*** to target lesions

Large Opportunity Attracting Multiple Players

- Area of interest to large medical device companies
 - Medtronic, St. Jude and Boston Scientific investing in neuro market
 - MRI Scanner Companies embracing MRI-guided therapies
 - Drug Companies pursuing direct delivery

Uniquely Positioned

- Focused commercial effort; FDA/CE approved products
 - Delivery platform for multiple therapies
 - Strong, proprietary position
 - Recent restructuring complete

MRI Interventions:

Real Time MRI Guided Surgery



First-to-market technology platform enabling real-time MRI guided surgery; FDA-cleared, CE-marked and 40+ ClearPoint sites

Focused commercialization of neuro platform underway, gaining traction; recent restructuring complete

Attractive razor/razorblade business model with strong margins

Compatible with all major MRI manufacturers; Interoperability w/ Medtronic, Monteris, neuro products

Strong intellectual property portfolio

Strong management team with extensive medical device commercialization experience: Intuitive, Medtronic, Kyphon, Boston Scientific, Edwards Lifescience, Cordis

Leadership – Significant Med Device Experience



Key Management

<i>Executive</i>	<i>Title</i>	<i>Prior Experience</i>
Frank Grillo	President, CEO	INTUITIVE SURGICAL® KYPHON® BOSTON SCIENTIFIC
Peter Piferi	COO	Edwards HeartWare Cordis
Wendelin Maners	VP Marketing	Boston Scientific CSA MEDICAL
Robert Korn	VP Sales	Medtronic Codman
Hal Hurwitz	CFO	pwc ev3

Board of Directors

Kimble Jenkins,
Exec Chair



Maria Sainz



Dr. Phillip Pizzo



Pascal Girin



Timothy
Richards



Frank Grillo,
CEO



Jack Spencer



Charles Koob



Andrew Rooke



Navigation System consisting of Integrated Devices and Software for Real-Time, MRI Guided, Minimally Invasive Neurosurgical Procedures

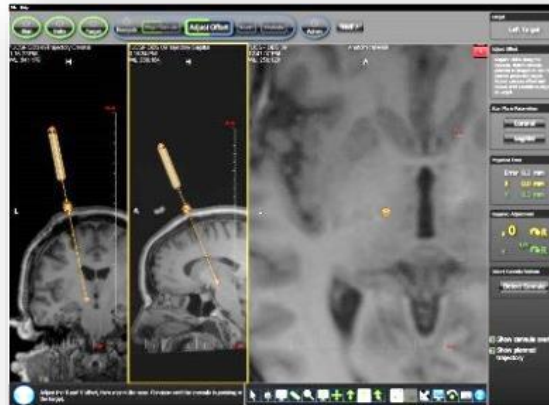
Visualize

- Identify target



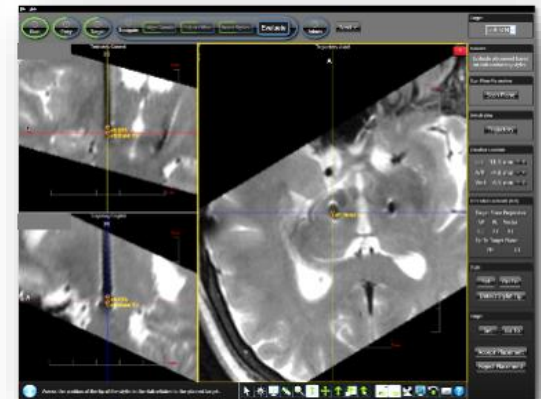
Verify

- Observe progress to target



Confirm

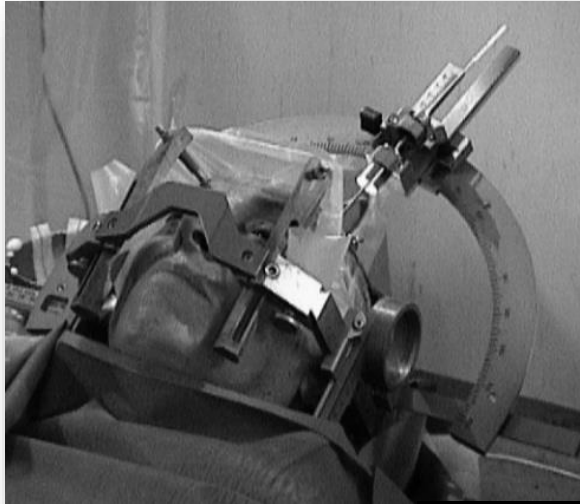
- Confirm precise placement at target



Without ClearPoint, minimally invasive neuro procedures are performed “blind”

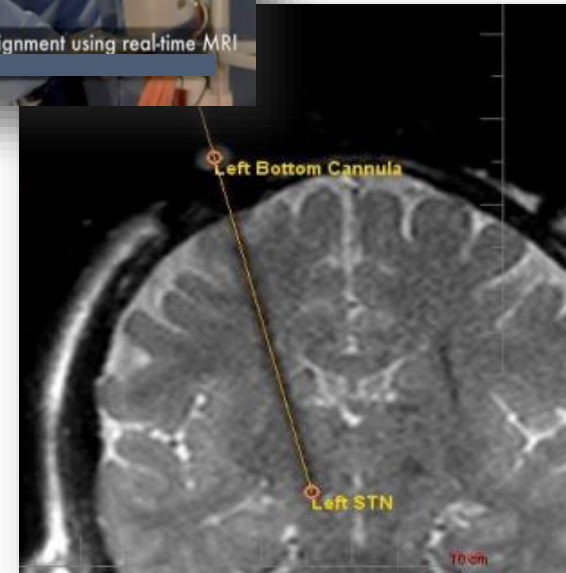


Conventional Stereotactic Procedure



No real-time
visualization

ClearPoint Neuro Procedure



Next generation platform enabling real-time, MRI-guided, minimally invasive brain surgery

ClearPoint® Neuro Navigation System

1.5T or 3T MR Scanners, also works in intraop MRI Suites



MRI Safe Disposable Components:

SmartGrid® and SmartFrame® –
Integrated ClearPoint Targeting and
Trajectory Precision

ClearPoint® Drape provides sterile
procedural field in any diagnostic or
intraoperative MRI scanner



Emory University Hospital



UCSF Medical Center



University of Pittsburgh
Medical Center



Brigham and Women's
Hospital*

** Image courtesy of IMRIS*

Integrates with All Major Scanner Platforms

SIEMENS

PHILIPS

GE Healthcare

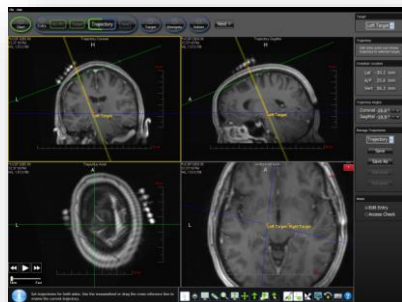
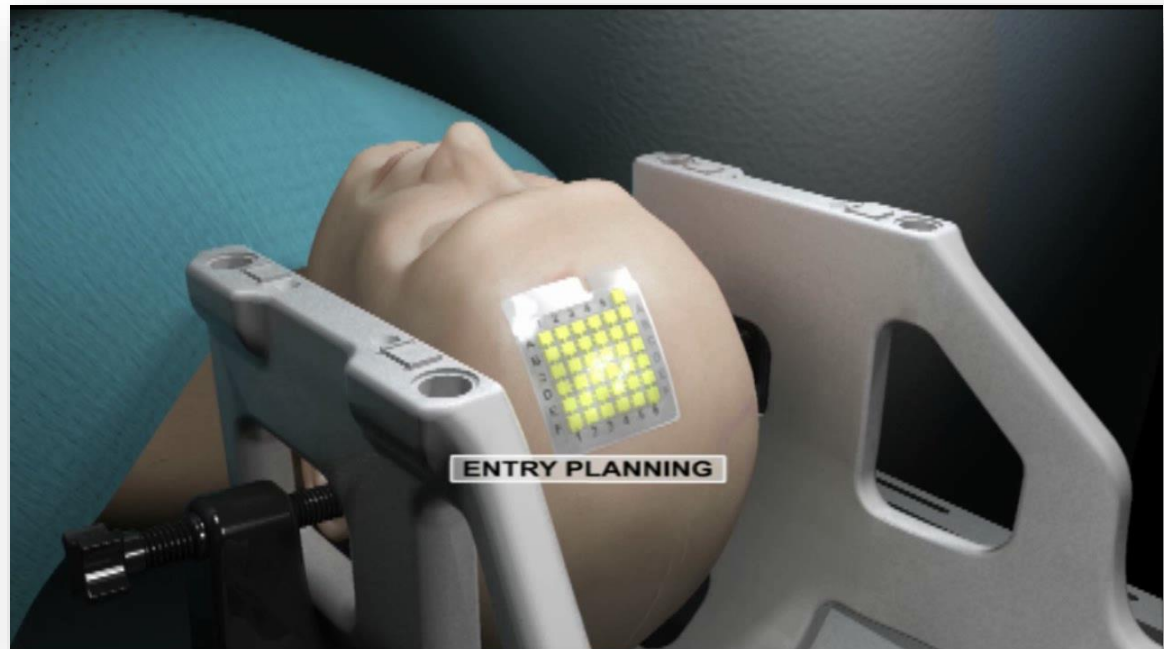
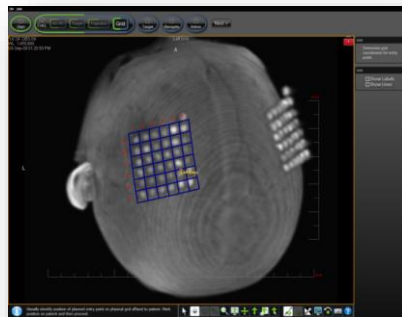
IMRIS

BrainSUITE

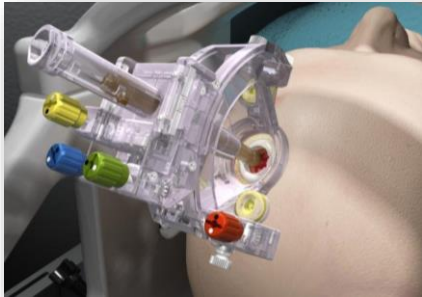
ClearPoint Procedure Overview



Target Selection & Entry Planning



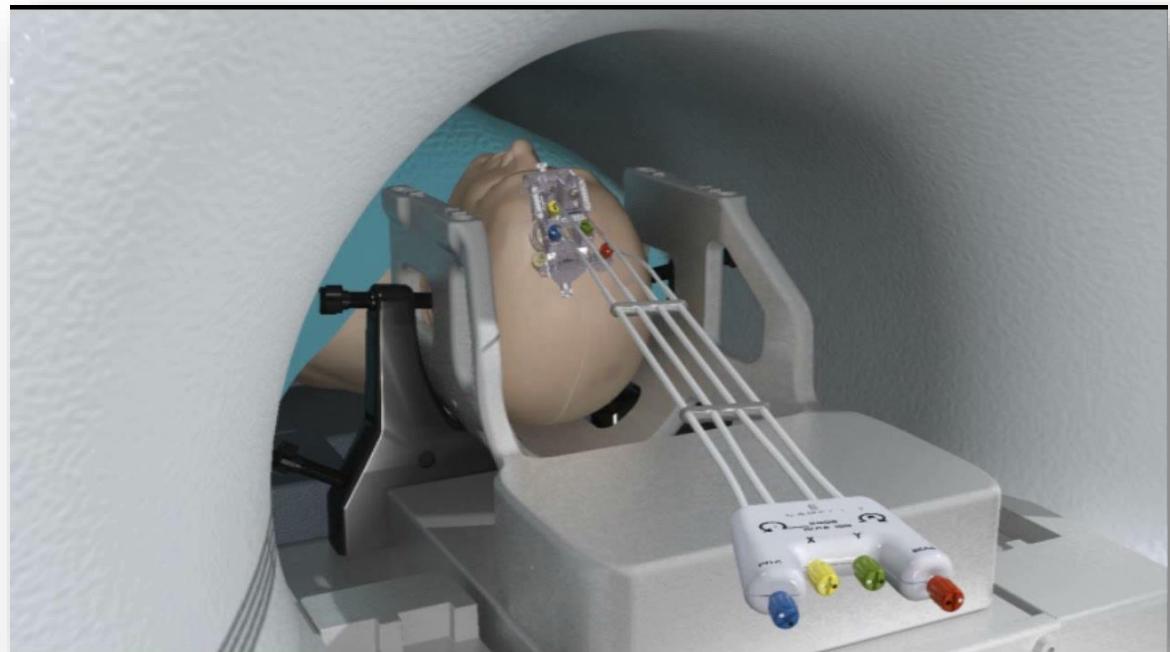
SmartFrame® Trajectory Guide



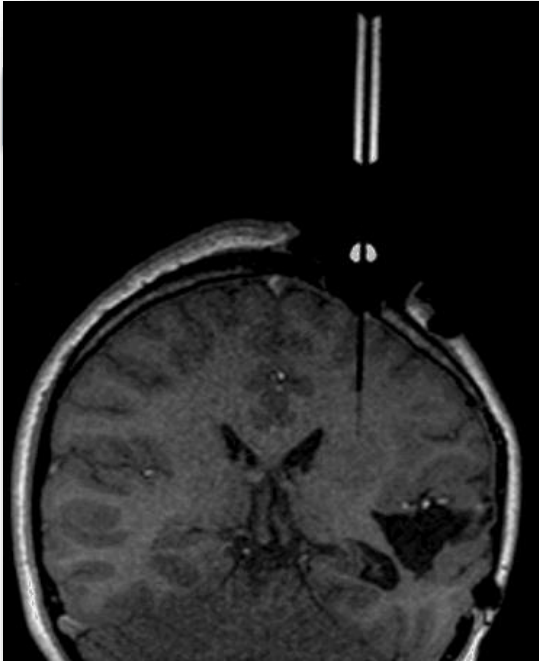
SmartFrame® Hand Controller



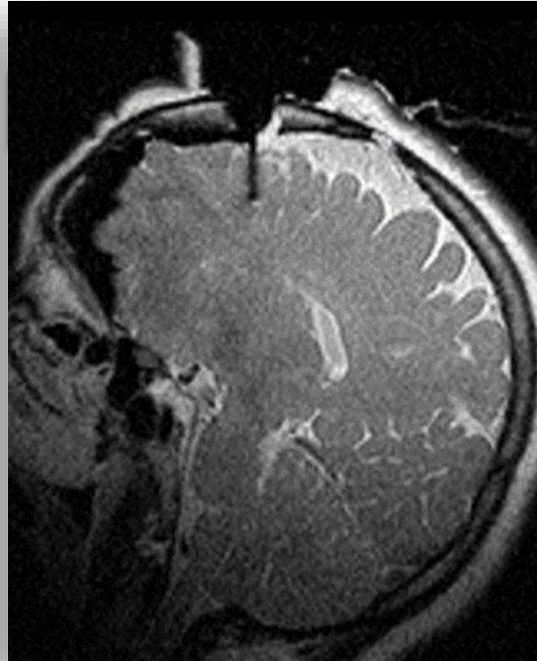
Trajectory Alignment & Device Insertion



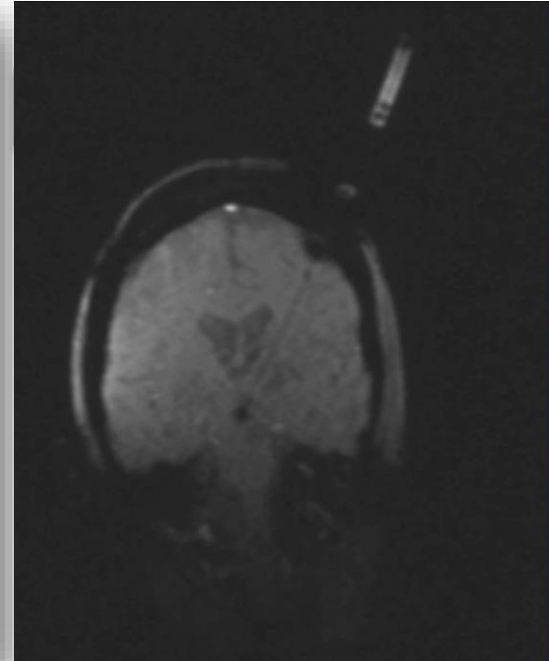
Delivery of Neurological Therapy



Drug Delivery¹



Electrode Placement



Laser Ablation²

- (1) Drug Delivery - The SmartFlow® cannula received 510(k) clearance for injection of cytarabine, a chemotherapy drug, to the ventricles or removal of CSF from the ventricles during intracranial procedures. Delivery of other therapeutic agents, and delivery of agents to other areas of the brain, using the SmartFlow cannula is investigational.
- (2) Laser Ablation - MR Thermometry is an MRI-based functionality available on most MR scanner platforms and it is a feature built into products from several third party vendors. The ClearPoint system enables MRI-guided procedures and allows physicians to use this inherent MR capability during a procedure.

Increase Patients

- Better patient experience provides hospitals the opportunity to reach additional patient populations that may otherwise forego surgery
- 65% of eligible DBS patients refuse treatment, due to fear of surgery⁽¹⁾

Established, Attractive Reimbursement

- Move procedures from the more expensive OR to the less expensive MR suite, with equivalent reimbursement

Improved Utilization of Existing MRI's

- 1 hour of MR Scanner time used for diagnostic imaging could generate \$1,200⁽²⁾
- 1 hour of MR scanner time used for a ClearPoint procedure could generate \$5,275⁽³⁾
- Utilizes existing MRI's already in hospital



(1) Medtronic Investor Presentation, June, 2014

(2) Estimated average US hospital-based MRI suite revenue per hour for outpatient diagnostic scans, based on data gathered by MRI Interventions. Excludes professional fees. Actual revenues will vary by hospital, procedure and payor.

(3) Based on a weighted average payment to MRI Interventions' customers (as of September 2014) for an electrode placement procedure for Medicare and private insurance patients, calculated by MRI Interventions using a payor mix weighted 67% to average Medicare reimbursement and 33% to average private insurance reimbursement. Average Medicare reimbursement calculated as the weighted average Medicare payment for MRI Interventions' customers (as of September 2014) for an electrode placement procedure under MS-DRGs 025, 026 and 027. Average private insurance reimbursement calculated as 1.5x Medicare reimbursement, based on published data. Hourly amount assumes 4.5 hour procedure duration. Excludes professional fees. Actual revenues will vary by hospital, procedure and payor.

Multi-Therapy MRI-Guided Navigational System



Leading Neurosurgeon Supporters



Dr. Philip Starr
ASSFN Past President



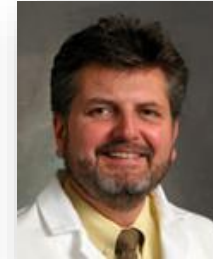
Dr. Paul Larson
UCSF & VA



Dr. Robert Gross
Emory University



Dr. Robert Wharen, Jr.
Mayo Clinic -
Jacksonville

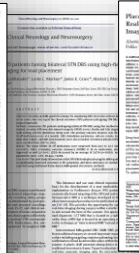
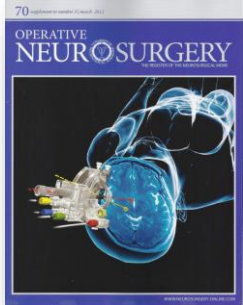


Dr. Krys Bankiewicz
Bankiewicz Lab, UCSF

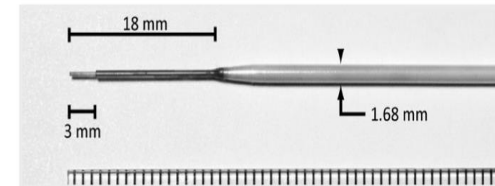
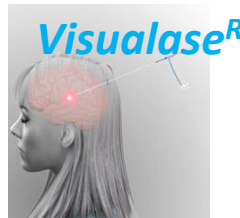


Dr. Russ Lonser
OSU - NIH

Strong Peer-Reviewed Journal Support



Compatible With Multiple Therapies



SmartFlow™ cannula for
local drug delivery

Strong Intellectual Property

Close to 100 issued patents around the world

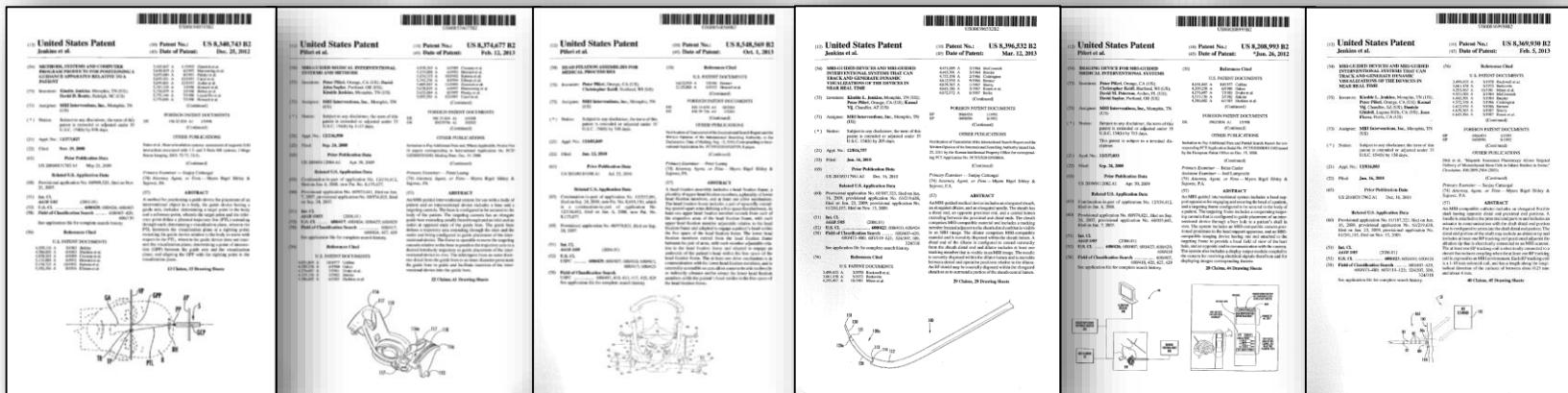


50+ U.S. Patents

45+ OUS Patents

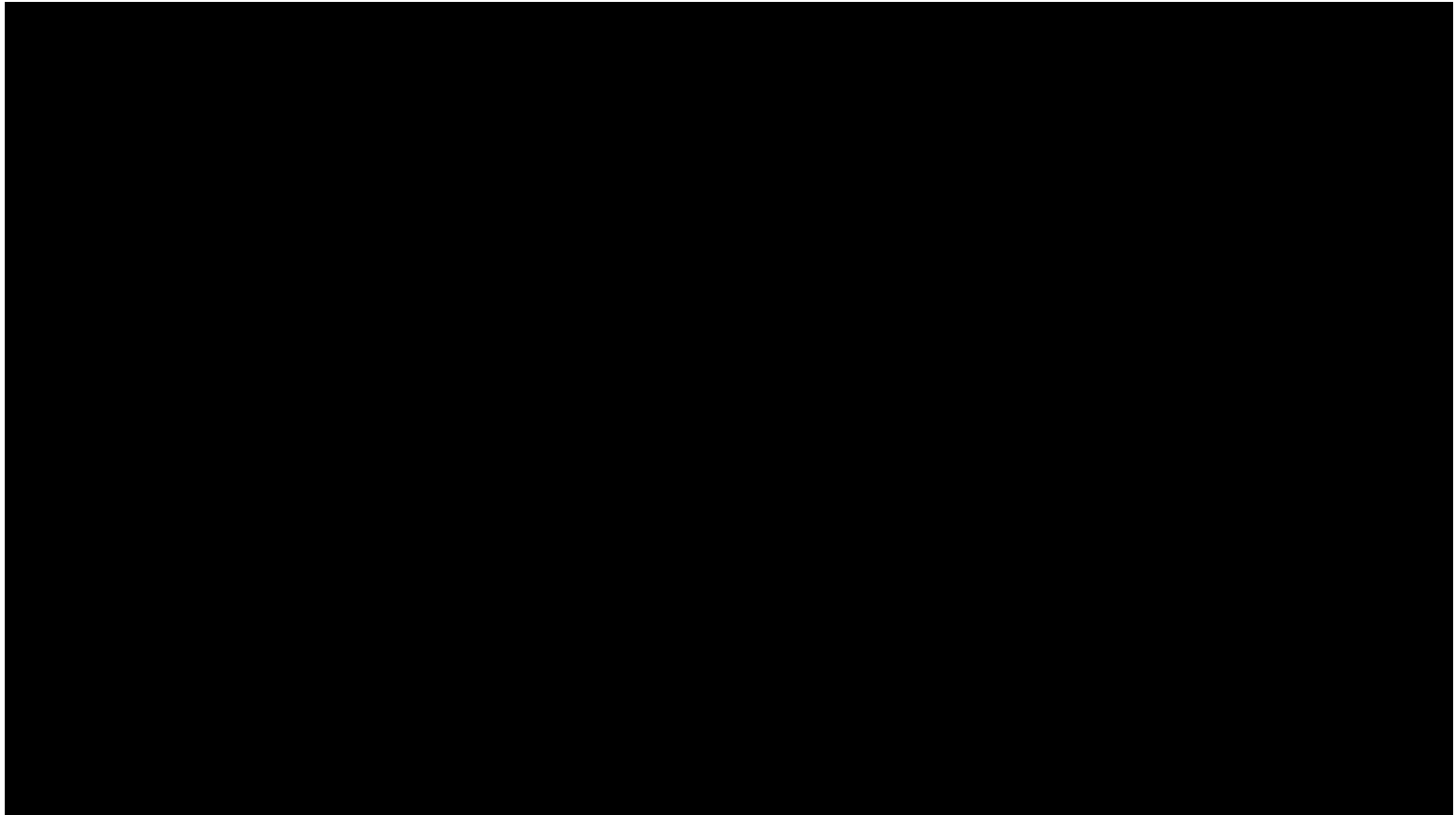
40+ U.S.
Patent Applications

50+ OUS
Patent Applications



- **Issued patents cover areas such as:** MRI-guided surgical systems that include software and devices; the SmartFrame® trajectory guide; other ClearPoint® disposable components; active intracranial probes; MRI-compatible catheters; MRI-safety technology
- Key ClearPoint-related patents do not begin to expire until 2027

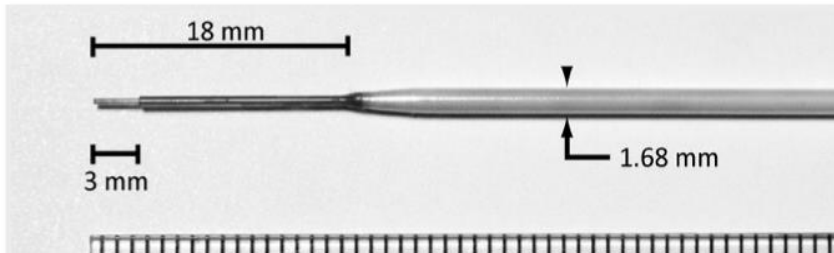
Martin's Story ClearPoint-Enabled Electrode Placement



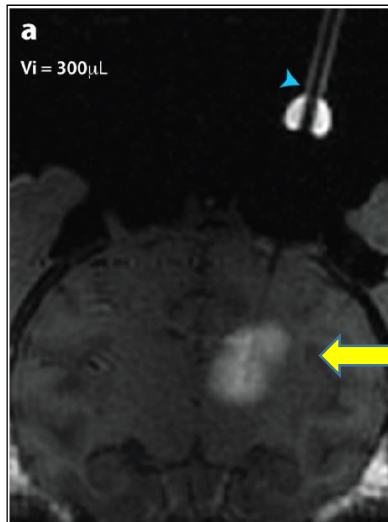
7 days after ClearPoint procedure – Arrow Indicates Surgery Site



- MR visualization of neuro target
- MR-guided placement of catheter
- Therapeutic agent delivered under MR-guidance*



Specialized drug delivery cannula's / catheters



Drug infusion is visible real time under MRI

**Stereotactic
Functional
Neurosurgery**

Novel Platform for MRI-Guided Convection-Enhanced Delivery of Therapeutics: Preclinical Validation in Nonhuman Primate Brain

R. Mark Richardson^a, Adrian P. Kells¹, Philip A. Starr^a, Peter G. P. Krystof S. Bankiewicz^a, Kathryn H. Rosenbluth^a

Departments of ^aNeurological Surgery and ^bSurgVision Inc., Irvine, Calif., USA

Key Words
Convection-enhanced delivery, therapy, Drug delivery

Abstract
Background/Aims: Integrated software-guided neurosurgical planning and real-time convection-enhanced delivery (CED) of this delivery system were validated in a custom-designed cannula. The cannula was used to deliver infusions of gadolinium (Gd) into the putamen and the thalamus. The cannula placement was confirmed by analyzing gadolinium-enhanced MRI of tissue damage targets (n = 11). The results showed that the volume of Gd distribution increased as a linear function (R² = 0.95, average slope = 3.30, 95% CI = 2.5-4.1) and that the volume of Gd distribution was similar to that in the thalamus, where larger infusions were achieved. Modeling the placement of adjacent 150 and 300 μl thalamic infusions into the three-dimensional space of the human putamen demonstrated coverage of the postcommissural putamen, containment within the striatum and expected anterograde transport to globus pallidus and substantia nigra pars reticulata. The results elucidate the necessary parameters for achieving widespread GDNF expression in the putamen motor area and afferent substantia nigra of PD patients.

KARGER
Fax: +41 (0) 300 12 34
E-Mail: karger@karger.com
www.karger.com

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Laboratory Investigation

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Interventional MRI-guided Putaminal Delivery of AAV2-GDNF for a Planned Clinical Trial in Parkinson's Disease

R. Mark Richardson¹, Adrian P. Kells¹, Kathryn H. Rosenbluth¹, Ernesto Aguilar Salegio¹, Massimo S. Flandaca¹, Paul S. Larson¹, Philip A. Starr¹, Alastair J. Martin¹, Russell R. Lonser², John R. Forsythe¹ and Krystof S. Bankiewicz¹

Conclusion: The ClearPoint system allows Real-time Convection-enhanced Delivery to be performed with a high level of precision, predictability, and safety.

INTRODUCTION
Despite the efficacy of deep brain stimulation for treating multiple symptoms of Parkinson's disease (PD), this therapy does not slow disease progression. In contrast, gene therapy offers an

DISCUSSION
The efficacy associated with clinical intracerebroventricular (ICV) protein delivery are an illustration of the effects of poor target delivery and resultant dissemination within the cerebrospinal fluid system. In the phase 2 trial of direct intraputamenal GDNF infusion, poor delivery was more than likely responsible for elevated cerebrospinal fluid levels of GDNF and low putamenal concentrations, resulting in a lack of therapeutic benefit in the phase 2 trial, despite initial positive results in phase 1 trials.^{10,11} The formation of antibodies to GDNF in over half of these patients¹² reinforces the concept that protein leakage into the cerebrospinal fluid space and resultant venous system must be avoided in an effort to prevent systemic inoculation and antibody formation, as intrastriatal adeno-associated virus serotype 2 (AAV2)-GDNF delivery does not result in detectable GDNF protein or GDNF antibodies in the cerebrospinal fluid of NHPs.¹³ Inadequate delivery and gene expression are also suspected to be responsible for a lack of clinical benefit in patients recently treated in a phase 2 clinical trial of AAV2-neurturin.

Previous work has shown that AAV2-GDNF delivered via convection-enhanced delivery (CED) to the putamen in

Provides MRIC with “biotech-like upside” without “all or nothing downside”

Major Challenges in Delivering Drugs to the Brain




- Blood brain barrier blocks systemic delivery of almost all drugs – 98% of small molecules
- Direct injection without ClearPoint is blind, so target is frequently missed
 - *Neopharm Trial - 51% of 572 catheters failed to meet all positioning criteria*



Major Benefits of Drug Delivery with ClearPoint

- Neurosurgeon sees that target is reached
- Eliminates the blood brain barrier issue; Reduces/eliminates unwanted systemic side effects; Reduces dosage levels (as little as 1/300th of systemic volumes)

Business Model – MRIC Partners with Drug Companies and Researchers

- MRIC provides ClearPoint; Drug company provides drug candidate
- Drug company/sponsor pays for trial
- If drug is approved, MRIC gets device revs (~\$7000/case); Drug co gets drug revs

	IL13 for Brain Tumor – Phase 1 study at NIH <ul style="list-style-type: none">- Sponsored by NIH
	Radio Immunotherapy for Brain Tumor – Phase 1 Study at MSK <ul style="list-style-type: none">- Sponsored by the Memorial Sloan-Kettering Cancer Center
	Nanoliposomal Irinotecan for Brain Tumor – Phase 1 Study at UCSF <ul style="list-style-type: none">- Merrimack Pharmaceutical

	AAV2-hAADC for Parkinson's disease - Phase 1 study at UCSF <ul style="list-style-type: none">- Sanofi – Genzyme; Michael J. Fox Foundation
	AAV2-GDNF for Parkinson's disease - Phase 1 study at the NIH <ul style="list-style-type: none">- uniQure, B.V.

The ClearPoint Difference



Without ClearPoint (Stereotactic)

No direct visualization; Performed in an operating room

Patient may be awake for own brain surgery⁽¹⁾

Long procedures – Can be up to 8 hours

Accuracy to target based on prior images

May require OR and MRI for same procedure (laser ablation)

Poor economics for hospital and physician

With ClearPoint

Direct, high resolution visualization; Performed in an MRI Suite

Patient may be under general anesthesia⁽¹⁾

Shorter procedures – Can be 3 hours or less

Highly accurate, based on real time images

One procedure, one place

Attractive economics for hospital and physician

Better for Patients

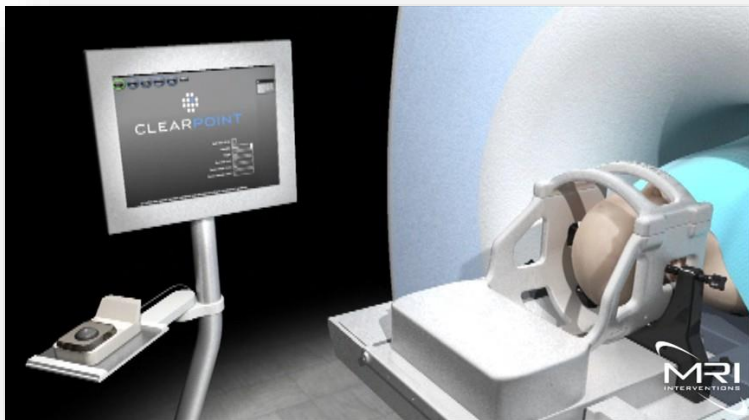
Better for Surgeons

Better for Hospitals

(1) Microelectrode recording and macrostim are processes that involve listening to neuronal firings (i.e., physiological recordings) and observing physiological responses to stimuli during brain surgery. In connection with our 510(k) clearance in 2010, the FDA requested a warning within ClearPoint's Instructions for Use based on the lack of data with respect to deep brain stimulation (DBS) procedures. The warning states that the ClearPoint system, alone, should not be used to guide a DBS lead to a specific brain target and that final placement of DBS leads requires physiological recordings to confirm that they are located in the correct brain target and functioning as intended.

BUSINESS MODEL – RAZOR / RAZORBLADE

- ClearPoint Hardware/Software: \$100,000 - \$150,000 ASP
- ClearPoint Disposables: \$7,500 (average) ASP per procedure with strong margins
- Recurring revenue from the sale of disposables
- Procedures covered by existing inpatient DRG reimbursement codes



Growing the ClearPoint Footprint

Installed Base of 39 sites in the US



	<u><i>Parkinson's</i></u>	<u><i>Epilepsy</i></u>	<u><i>Brain Tumors</i></u>
Total Prevalence (US)	1,500,000	2,200,000	80,000 (<i>annual diagnosis</i>)
Prevalence – Drug Treatment Resistant (DTR)	125,000	264,000	
Incidence – DTR	7,500	18,000	Resections: 80,000 Stereotactic Biopsy: 10,000
ClearPoint Enabled Therapy	Electrode Placement (DBS)	Laser Ablation RNS ¹	Biopsy / Laser Ablation / Drug Delivery
Potential ClearPoint Procedures, Annually²	12,500	28,000	14,500

55,000+ Potential Procedures Per Year

Note: Prevalence and Incidence based on either market research conducted by a third party on behalf of MRI Interventions or research conducted by MRI Interventions of publicly available sources.

(1) Responsive neurostimulation device (RNS)

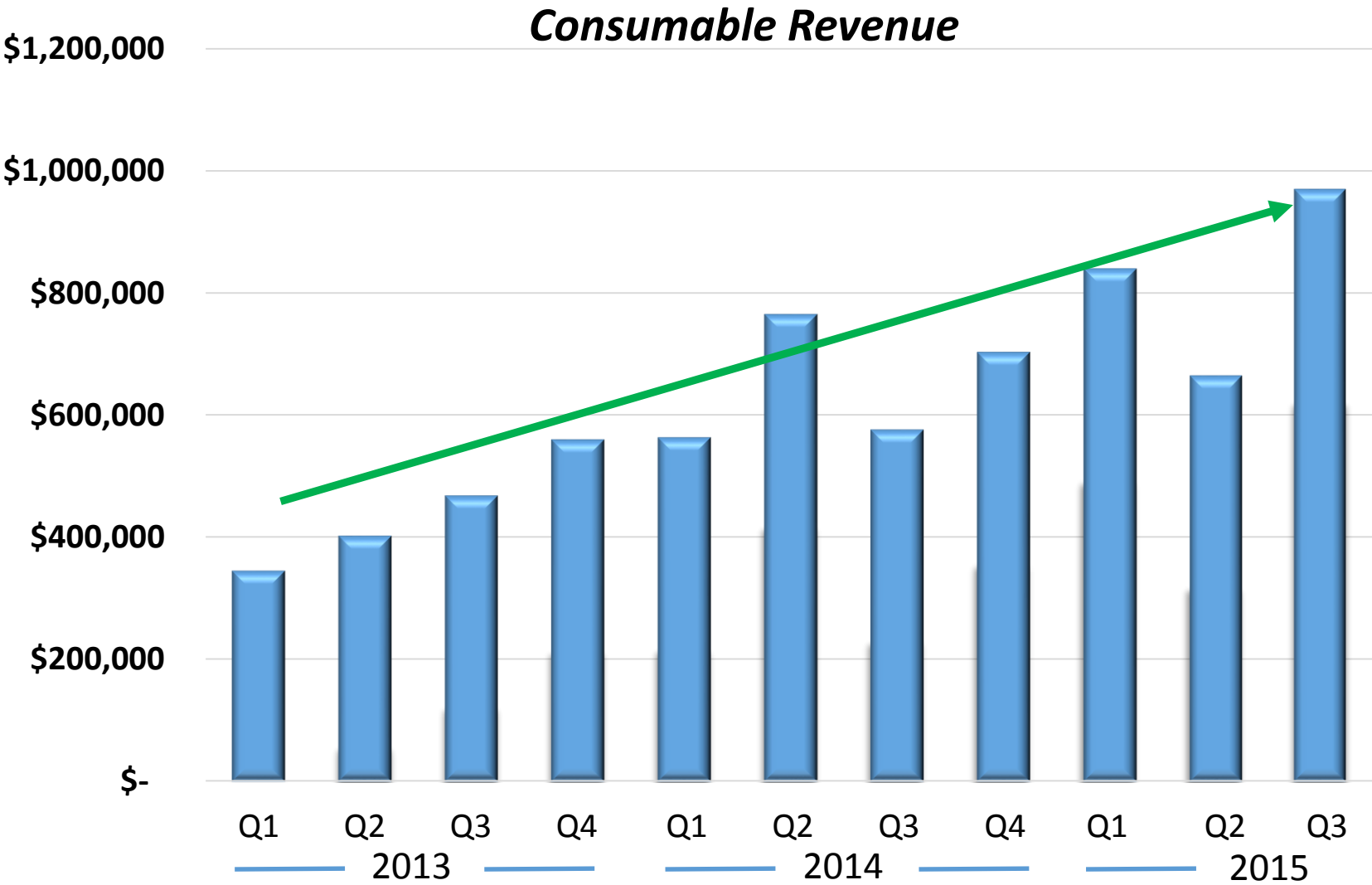
(2) Potential Annual ClearPoint Procedures based upon 5% of prevalence and 85% of incidence; Potential Annual ClearPoint Procedures for brain tumors based on market research conducted by a third party on behalf of MRI Interventions.

ClearPoint Future Opportunities

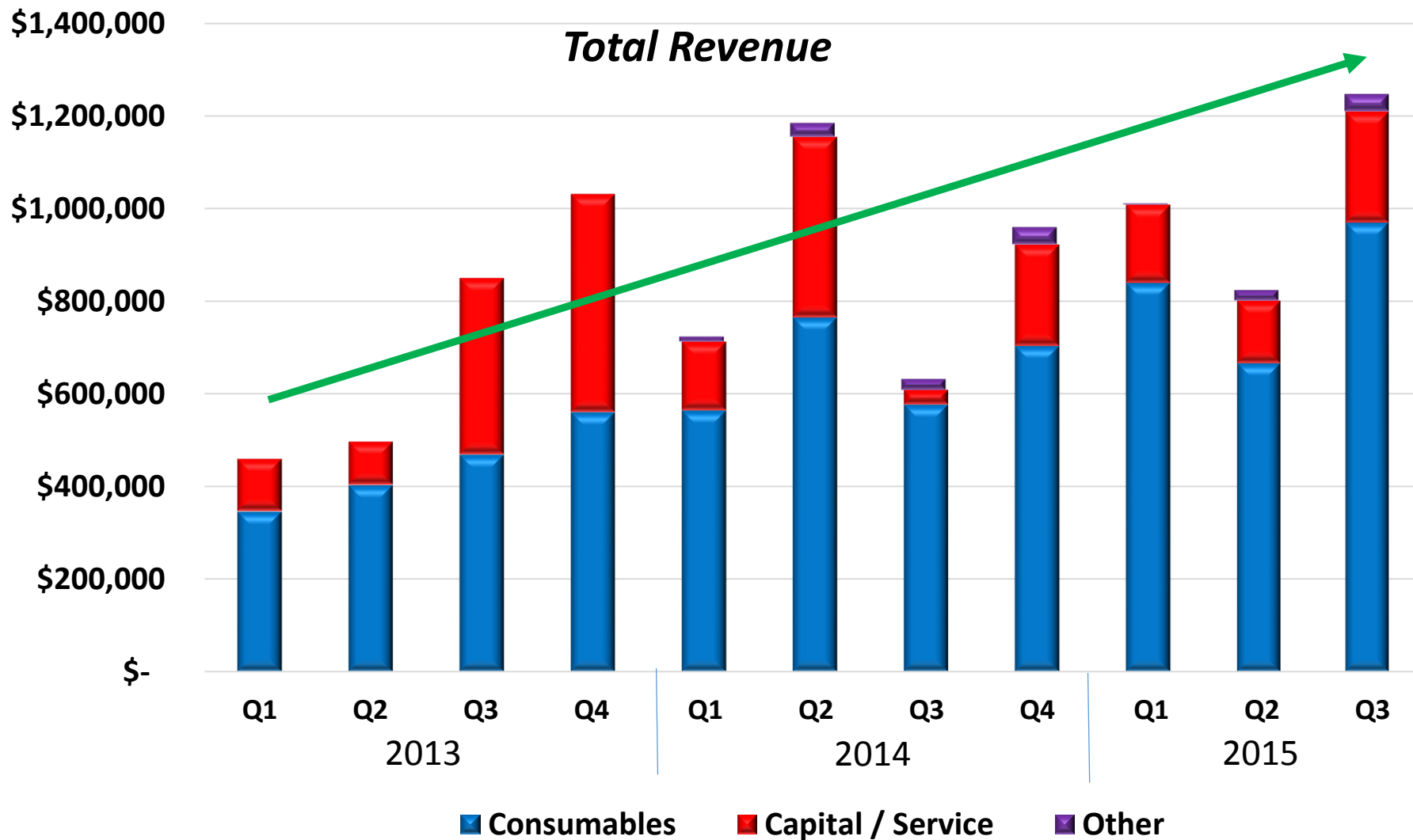
Multiple Therapies for Future Growth



<u><i>Neuro Disorder</i></u>	<u><i>Patient Population</i></u>	<u><i>Treatment Resistant Patient Population</i></u>	<u><i>ClearPoint Enabled Therapy</i></u>	<u><i>Current Status</i></u>
Dystonia	250,000	25,000	DBS	Active Use, HDE
OCD	3,300,300	100,000	DBS	Active Use, HDE
Severe Depression	6,000,000	1,200,000	DBS	IDE Trials (DBS)
Parkinson's Disease	1,500,000	125,000	Drug Delivery	Clinical Trials – Phase 1
Brain Tumors (GBM)	11,000	11,000	Drug Delivery	Clinical Trials – Phase 1
Huntington's	30,000	30,000	Drug Delivery	Pre-Clinical
ALS	30,000	30,000	Drug Delivery	Pre-Clinical
Alzheimer's	5,400,000	500,000	DBS	Research



Total Revenue, 2013 - 2015



Increase Utilization

- Focus on adding surgeons at existing accounts
- Target high volume sites, including epilepsy and tumor neurosurgeons within each account; gain greater share of their procedures
- Add Clinical Specialists and sales reps to commercial team; compensate for utilization growth

Enhance Communication

- Increase peer-to-peer events, presence at trade shows
- Highlight existing data on ClearPoint applications to neurologists and neurosurgeons
- Communicate value proposition across procedures:
 - Accuracy
 - Real time visualization
 - Improved workflow
 - Increase patient volume

Expand Account Base

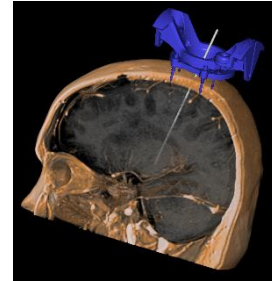
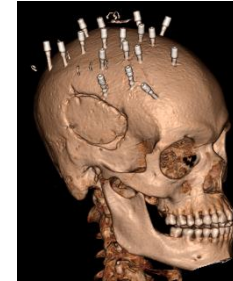
- Identify highest volume potential accounts across multiple procedures
- Support local hospital marketing efforts
- Capitalize on interest in drug delivery to expand in oncology accounts
- Add sales reps

Achieve Cash Breakeven

- Tightly control working capital, consumption of cash
- Hire additional personnel only in key functions – commercial team; engineering

Software 2.0

- Significant upgrade to existing software; includes real time fusion, enhanced graphic and User Interface
- Technology licenses near complete with three additional software companies for this effort



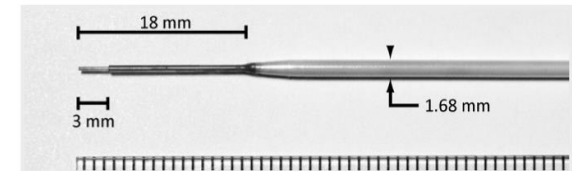
OR SmartFrame

- Through partnership(s), expand our products and brand into the operating room for CT based neuro procedures



Drug Delivery

- Establish additional drug delivery partnerships, and participate in additional clinical trials
- Become the neuro **drug delivery device** partner of choice



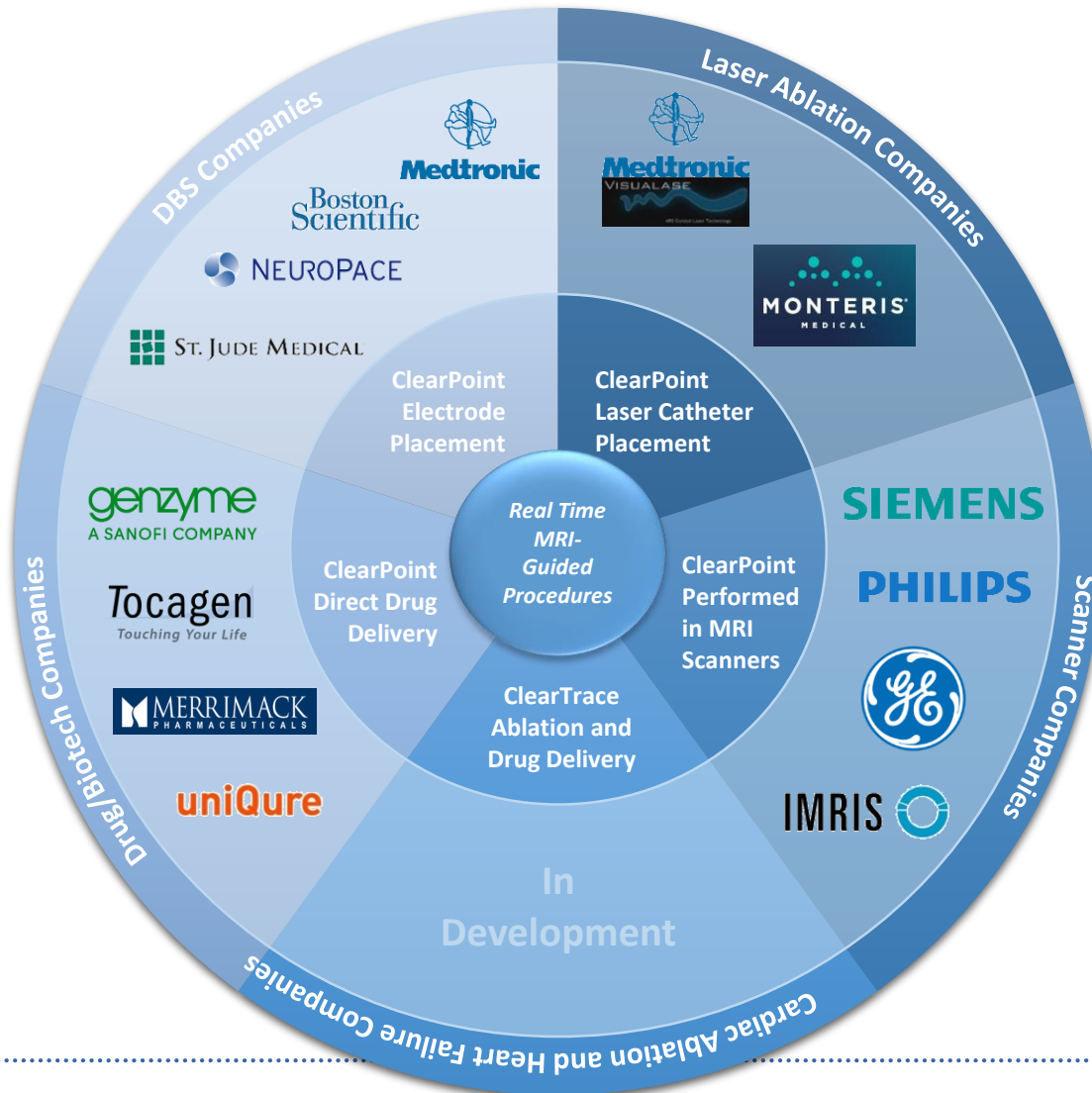
Procedure Enhancements

- Continue to enhance product line with a focus on procedure simplification and consistency



*Bolt Driver
for
Laser Ablation*

At the Center of an Emerging Industry Trend



MRIC is at the point of convergence in an industry trend impacting some of the most influential and innovative medical device companies in the world



Ticker: MRIC

MRI Interventions, Inc.
Irvine, CA

949.900.6833

mriinterventions.com



Transforming minimally invasive neurosurgery by enabling real-time visualization with MRI