

FUSION Compact<sup>™</sup> ENT Navigation System

Medtronic

## WHY IMAGE GUIDED SURGERY?





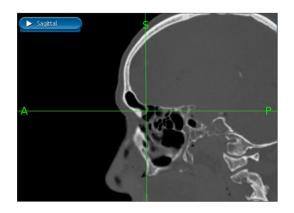
#### **SAFETY**

The navigation system 3D map helps in avoiding critical areas like brain and eye which provides safety especially in complex surgery. The enhanced vision is especially useful in revision cases & extensive sinus diseases which have poor anatomical landmarks<sup>1</sup>.



#### **PRECISION**

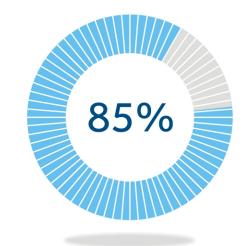
Navigation provides real-time images that can help to navigate in the sinuses for precise removal of diseased tissue. Traditional endoscope gives two dimensional images, hence the vision is very limited which leads to incomplete exposure. <sup>2</sup> The navigation system provides you with minute details and helps in doing complete surgery.





#### **INCREASE CONFIDENCE**

In a survey of American Otolaryngologists 85% of surgeons reported increase in level of confidence as a major advantage of IGS<sup>3</sup>. Although IGS is not a replacement of good anatomical knowledge, as an adjunct, it can help in enhancing the understanding of the anatomy of the patient especially when it is altered due to sinus disease.

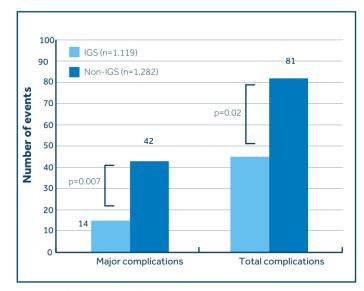




Evidence suggests that IGS in endoscopic sinus surgery is associated with a significantly lower risk of major and total complications versus non-IGS sinus surgery in selected populations <sup>4</sup>

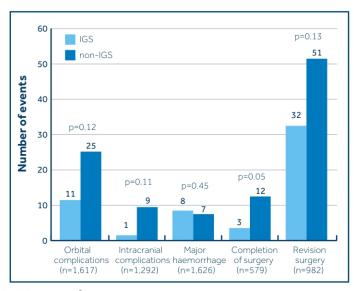
#### MAJOR AND TOTAL COMPLICATIONS

Significantly fewer major and total complications were reported in the IGS versus the non-IGS groups (p=0.007, p=0.02 respectively).



#### **SPECIFIC COMPLICATIONS**

Although most other measures favoured the use of IGS versus non-IGS, these did not reach statistical significance.



Adapted from Dalgorf DM, et al. Am Academy Otolaryngol - Head and Neck Surg 2013.5

#### RECOMMENDED BY GLOBAL EXPERTS

The following are the published recommendations for the use of image guidance during endoscopic sinus surgery.

#### AMERICAN ACADEMY OF OTOLARYNGOLOGY

- 1. Revision sinus surgery
- 2. Distorted sinus anatomy of development, postoperative, or traumatic origin
- 3. Extensive sinonasal polyposis
- 4. Pathology involving the frontal, posterior ethmoid, and sphenoid sinuses
- 5. Disease abutting the skull base, orbit, optic nerve, or carotid artery
- 6. CSF rhinorrhea or conditions in which there is a skull base defect
- 7. Benign and malignant sinonasal neoplasms

Adapted from Dalgorf DM, et al. Am Academy Otolaryngol - Head and Neck Surg 2013.5

Abbreviations: CSF, cerebrospinal fluid; IGS, image-guided surgery.

<sup>&</sup>lt;sup>a</sup>Orbital decompression included.

<sup>&</sup>lt;sup>b</sup>Optic nerve is outside the limits of the paranasal sinuses.

<sup>&</sup>lt;sup>c</sup>No simple transnasal biopsy of nasopharynx tumor.

## ADVANCING PATIENT CARE WITH ENT NAVIGATION

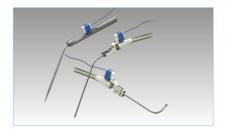
FUSION Compact<sup>TM</sup> navigation delivers meaningful innovation. With reliable accuracy, you can display the instrument-tip location on the screen-which may allow more thorough dissection and reduced complication risk in select patients.  $^{6-8}$ 

But it's more than that. We make technology smart and simple. Like factory-calibrated instruments with built-in navigation. And a one-piece, non-invasive patient tracker.

Whatever the surgery, whatever the need-our systems, instruments, and accessories can enhance your workflow and advance patient care.



#### **FIRST & ONLY**



## ENT Electromagnetic Image Guidance System that:

- Provides reproducible accuracy comparable to the high level of accuracy offered by our optical systems
- Works with reusable standard instruments
- Can track up to 3 instruments at a time



# Select Surgeon Profile Select Surgeon Profile Select Surgeon Select Sele

### ENT Image Guidance System that:

- Allows customization for each surgeon, including:
  - Procedure-specific for FESS and anterior or lateral skull base
  - Surgeon-specific room setup
  - Instrument preference
  - C.T. windowing
  - · Orthogonal view positioning
- Provides navigation instruments with the same look and feel as your standard ENT instruments



## Factory-Calibrated Blades for Navigation

- No array, no clamps, no calibration, no waiting
- First and only factory-calibrated blades for navigation
- True "plug and play" is more convenient and efficient

## FUSION Compact ENT Navigation System

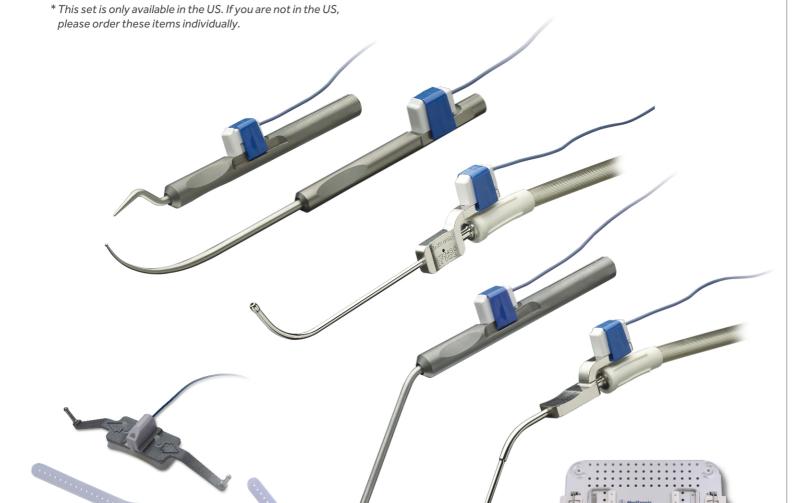
The modular Fusion Compact  $^{\text{TM}}$  gives you the freedom to use navigation where and when you need it.

## **OUR NAVIGATION PORTFOLIO**

#### **REUSABLE STANDARD INSTRUMENT SET**

Mirrors the instruments used in non-navigated ENT surgery

Part #	Description	Qty	
9733452	Fusion ENT Navigation Instrument Set*	1	
Set Includes:			
9733454	Head Frame Kit	1	
9733446	Registration Probe	1	
9733447	Straight Probe	1	
9733449	Straight Suction	1	
9733450	Curved Suction, 70°	1	
9733451	Curved Suction, 90°	1 6	
9733448	Ostium Seeker	1	
9733455	Instrument Tray	1	



## **PLUG AND PLAY SOLUTIONS**

## NUVENT® EM SINUS DILATION SYSTEM

#### Balloon Dilation with Integrated Navigation

- Simple, targeted, and precise
- Rigid construction to move tissue and bone
- Frontal, maxillary, and sphenoid designs





## AxiEM<sup>TM</sup> Non-Invasive Patient Tracker

 Self-adhesive, one-piece tracker enables simpler, easier workflow during navigated ENT surgery





## Cranial DRF: Dynamic Reference Frame 9731132 (5 Pack)

- Attaches to the cranium in essentially any location
- Designed for surgery with coronal flaps and lengthy complex cases such as lateral skull base
- Includes reference frame and screwdriver



#### **Automatically Recognized and Ready for Use**

#### MALLEABLE SUCTION INSTRUMENTS

#### Bendable Suction with Built-in Navigation

- Re-shape without having to re-verify
- Standard suction design
- Multiple sizes and tips



Part #	Description	Qty
9735015	Small standard tip, 14.5 cm	1
9735016	Medium standard tip, 16.5 cm	1
9735017	Medium angle tip, 16.5 cm	1
9735018	Medium ball tip, 16.5 cm	1
9735019	Large standard tip, 20 cm	1





Angle tip



Ball tip

#### STRAIGHTSHOT® AUTOMATED EM TRACKING BLADES

Part #	Description
1884080EM	Tricut <sup>®</sup> 13 cm Straight Rotatable Blade, 4 mm
1884012EM	RAD <sup>®</sup> 12 Curved Rotatable Blade, 4 mm
1884006EM	RAD 40 Curved Rotatable Blade, 4 mm
1883080EM	Quadcut <sup>®</sup> Blade 3 mm X 13 cm
1883480EM	Quadcut Blade 3.4 mm X 13 cm
1884380EM	Quadcut Blade 4.3 mm X 13 cm
1895522	Irrigation Tubing Set



#### **StealthMerge® ENT** Image Registration Software

More Information from Multiple Sources

- Automatically merges image data from CT, CTA, MR, and MRA exams
- Precisely correlates up to 4 patient data sets
- Exclusive advanced 3D matching algorithms





#### **DICOM Query/Retrieve**

Image Retrieval Software

Patient Data at Your Fingertips

- Easily find and retrieve patient exams directly from the Fusion system via your existing PACS
- Faster, more convenient way to get the images you need

## ResponseCare® Services

#### DELIVERING UPTIME AND PEACE OF MIND



Medtronic helps you protect your technology investment and minimize downtime with comprehensive service and support.



Our expert clinical and technical support specialists ensure your system delivers optimal performance. Medtronic ENT representatives are extensively trained and qualified to provide surgical support, staff training, and system maintenance.

#### **Annual Planned Maintenance**

We check your system thoroughly to ensure it's operating at peak performance

#### Software Updates

We'll keep your system with current software updates

#### **Phone Support**

 You can log your query by calling the toll free number\* 18004190575 or email us at rs.indiartgcallcentre@medtronic.com

Rx only. Refer to product instruction manual/package insert for instructions, warnings, precautions and contraindications.

#### References

- 1. Ralph Metson, MD; Mathew Cosenza, RPh, DO; Richard E. Gliklich, MD; William W. Montgomery, MD. The Role of Image-Guidance Systems for Head and Neck Surgery. Arch Otolaryngol head Neck Surg /VOL 125, OCT 1999: 110:1104
- 2. Han Demin, Zhou Bing, GE Wentong, Zhang Luo, Zhanng Yonjie. Advantages of using an image-guided system for transnasal endoscopic surgery. Chinese Medical Journal 2003; 116 (7): 1106-1107
- 3. Ralph B. Metson, MD; Mathew J. Cosenza, DO; Michael J. Cunningham, MD; Gregory W. Randolph, MD. Physician Experience With an Optical Image Guidance System for Sinus Surgery The Laryngoscope Lippincott Williams & Wilkins, Inc., Philadelphia © 2000 The American Laryngological, Rhinological and Otological Society, Inc.
- 4. Boone JL, Feldt BA, McMains KC, Weitzel EK. Improved function of prototype 4.3mm Medtronic Quadcut microdebrider blade over standard 4.0mm Medtronic Tricut microdebrider blade. Int Forum Allergy Rhinol. 2011; 00(Jan/Feb):1-3.
- 5. Roth M, Lanza DC, Zinreich J, el al. Advantages and disadvantages of three-dimensional computed tomography intraoperative localization for functional endoscopic sinus surgery. Laryngoscope 1995;105:1279-1286.
- $6. \, Dalgorf\,D,\,Sacks\,R,\,Wormald\,P-J,\,et\,al.\,Image-guided\,surgery\,influences\,perioperative\,morbidity\,from\,endoscopic\,sinus\,surgery:\,A\,systematic\,review\,and\,meta-perioperative\,morbidity\,from\,endoscopic\,sinus\,surgery:\,A\,systematic\,review\,and\,meta-perioperative\,morbidity\,from\,endoscopic\,sinus\,surgery:\,A\,systematic\,review\,and\,meta-perioperative\,morbidity\,from\,endoscopic\,sinus\,surgery:\,A\,systematic\,review\,and\,meta-perioperative\,morbidity\,from\,endoscopic\,sinus\,surgery:\,A\,systematic\,review\,and\,meta-perioperative\,morbidity\,from\,endoscopic\,sinus\,surgery:\,A\,systematic\,review\,and\,meta-perioperative\,morbidity\,from\,endoscopic\,sinus\,surgery:\,A\,systematic\,review\,and\,meta-perioperative\,morbidity\,from\,endoscopic\,sinus\,surgery:\,A\,systematic\,review\,and\,meta-perioperative\,morbidity\,from\,endoscopic\,sinus\,surgery:\,A\,systematic\,review\,and\,meta-perioperative\,morbidity\,from\,endoscopic\,sinus\,surgery:\,A\,systematic\,sinus\,surgery:\,A\,system$ analysis. Otolaryngol Head Neck Surg. July 2013;149(1):17-29,

DOI:10.1177/0194599813488519.

- 7. Chiu AG and Vaughan WC. Revision endoscopic frontal sinus surgery with surgical navigation. Otolaryngol Head Neck Surg. 2004;130:312-318.
- 8. Pillai P, Sammet S, Ammirati M. Image-guided, endoscopic-assisted drilling and exposure of the whole length of the internal auditory canal and its fundus with preservation of the integrity of the labyrinth using a retrosigmoid approach: a laboratory investigation. Operative Neurosurgery. 2009;65:ons53-59.

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