TRANSFORMING NEUROLOGICAL HEALTHCARE.
At Medtronic, our goal is to be an intrinsic partner in global neurological care, so that together we can confront healthcare’s biggest challenges. The human brain is at the heart of our mission. It’s what gets us up in the morning and what keeps us innovating throughout the day. Our solutions are designed to support your growth, streamline your surgical workflow, manage complexities, and most importantly, enhance neurological patient outcomes.

**Together, we can transform the way the world treats neurological disorders and diseases.**
PARTNERSHIP.
Together, we confront the challenges of neurological disorders and diseases.

- Acute ischemic stroke
- Brain tumors and lesions
- Cranial trauma
- Dystonia*
- Essential tremor
- Hemorrhagic stroke
- Hydrocephalus
- Obsessive-compulsive disorder*
- Parkinson’s disease
- Subdural hematomas

*Approved as a Humanitarian Device in the US: the effectiveness of DBS for the treatment of Dystonia and OCD has not been demonstrated.

Hospital Team
- Quality patient care
- Efficient surgical workflow
- Alignment across specialties
- Staff excellence
- Cost-effectiveness

Medtronic Partner
- OR decision support
- Procedure-specific solutions
- Service and support
- Diverse therapies and interventions

NEURO CENTER OF EXCELLENCE
THE HUMAN BRAIN. THE FOCUS OF OUR PAST, PRESENT, AND FUTURE.

Like you, we are students of the human brain. We revel in its beauty, its power, and its mystery. Decades of experience in revolutionary technologies have demonstrated our commitment to our mission: to help alleviate pain, restore health, and extend the life of your patients. Together, we're constantly evolving our understanding of neurological disorders and diseases.

Like you, our goal is to change healthcare for the better.

2.25 Million patients touched by StealthStation over 25 years

200,000 O-arm patients over 10 years

300,000 patients treated with Stealth™ EM Navigation

55 YEARS

Midas Rex™ powered surgical motors and tools

HYDROCEPHALUS THERAPIES

2.5 MILLION patients treated over 35 years

StrataMR™ Valve
DEEP BRAIN STIMULATION

135,000 patients implanted over 25 years

Activa™ Neurostimulator

5 YEARS
Pipeline™ Embolization Device

4 YEARS
Solitaire™ Revascularization Device

VISUALASE™ MRI-GUIDED LASER ABLATION

OVER 2,000 neuro cases performed in the past 6 years

BENEFITS OF MEDTRONIC TECHNOLOGIES

- Surgeon and interventionalist-inspired
- Built on decades of scientific, clinical, and engineering research findings
- Designed for clinical and OR settings
- Over 400 patents in neurosurgical technologies
**StealthStation™ Planning**
- Rehearse your procedure prior to entering the operating room
- Fulfill your most basic to advanced planning needs
- Combine valuable patient data and segment structures for 3D visualization
- Create white matter tracts and use this information in the OR to enhance your workflow
- Avoid critical structures and ensure the best patient outcomes

**StealthStation™ Navigation**
Consolidate multi-sourced data inputs regarding the patient and procedure, into the right place at the right time.

**O-arm™ Imaging**
Streamlined procedure workflow by bringing imaging into the OR providing you with decision support and confidence that the surgical goal was achieved.

**Midas Rex™ Power**
High-speed pneumatic and electric motors and tools, for power, performance and reliability.

**NIM Eclipse™ Nerve Monitoring**
Monitor sensory and motor pathways to provide information to guide surgery and assess a patient’s neurological status.

**PRE-OPERATIVE OR PRE-TREATMENT**

**SURGICAL TECHNOLOGIES**

**COMPLEMENTING YOUR NEURO WORKFLOW.**
**Activa™ DBS post-implant management**
The N’Vision™ clinician programmer model 8840 is a portable device that offers a single programming platform for Medtronic implantable deep brain stimulation devices.

**DBS patient programmer** – Patients use a hand-held device to program their implanted stimulator by turning the device on or off and changing therapy settings within physician specified limits.

**Strata™ post-implant management**
**Strata™ Adjustment System** – Confidently and non-invasively modify your hydrocephalus patients’ adjustable valve performance level without the need for radiographic confirmation.

**Duet™ External Drainage and Monitoring System**
A complete system for externally draining and monitoring cerebrospinal fluid (CSF) from the ventricles or lumbar space, as well as for monitoring intracranial pressure.

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**Visualase™ MRI-Guided Laser Ablation**
Precision and control for soft tissue ablation with real-time thermal monitoring.

**Strata™ Hydrocephalus Therapy**
Adjustable valves in a range of sizes and configurations for convenience and flexibility in managing hydrocephalus patients.

**Activa™ Deep Brain Stimulation Therapy**
Neurostimulators for management of movement disorders. Stimulation is programmed and adjusted non-invasively for better symptom control and fewer side effects.

**Solitaire™ Revascularization Device**
Solitaire™ provides revolutionary stent-thrombectomy technology to optimize clot retrieval and restore flow for the treatment of acute ischemic stroke.¹

**Pipeline™ Flex Embolization Device**
Clinically Proven.² Delivery redefined. A safe, effective solution for the treatment of large and giant brain aneurysms.³

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¹Solitaire™ FR with the Intention for Thrombectomy (SWIFT) Study SWIFT IDE #G090082FD2923
²Pipeline Embolization device and Pipeline Flex Embolization device contain the same implant which was studied in the PUF3 trial.
³Becske T. et. Al., Pipeline for Uncoilable or Failed Aneurysms. Results from a Multicenter Clinical Trial. Radiology, Published June 2013
VIEW. PLAN. COLLABORATE.
You can study the target anatomy before you enter the OR, saving you valuable time.

We provide you with ways to explore your patients’ nuanced requirements and the details of their anatomy before their day of surgery. Explore the unique needs of your critical care patient. Study the details of your tumor patient. Compare historical medical data for your patient.

Construct and understand layers of data from MRI, MRA, CT, CTA, DTI—all integrated on one screen for easier comprehension.

Immerse yourself in tractography and neuro anatomy from wherever, whenever. Whether you’re at home, in the office, or on the train, our solutions let you plan your procedures when and where it’s most convenient.

Transform complex data into useful information.

BRING YOUR DATA TO LIFE
**O-ARM™ SURGICAL IMAGING SYSTEM**

- Real time intra-operative **2D and 3D imaging**
- Breakable gantry and variable positioning of the gantry integrates seamlessly into existing procedure workflows
- Robotic and memory positioning returns the gantry to imaging position or park position with the press of a button
- Adapts to your surgical workflow, integrates with your existing OR
- Supports a variety of imaging options to meet your procedural needs:
  - Register your patient for navigation without the use of fiducials
  - Image a stereotactic frame localizer in the OR. No need to send the patient to radiology, streamlining workflow and saving time
  - Close with confidence by imaging placement of leads, depth electrodes, needles and other high contrast objects
Create your plan and implement it with millimeter accuracy. Make decisions quickly and add layers of information to real-time imaging with Medtronic’s technologies and solutions.

**STEALTHSTATION™ SURGICAL NAVIGATION SYSTEM**

- Visualization and integration at the right time
- Navigation provides confidence during surgical intervention
- Fiber tractography. Navigate to avoid critical structures
- Versatile intelligence for intraoperative decision-making
- Choice and flexibility with optical navigation and electromagnetic navigation. Optimize for the patient—and for the procedure

**STEALTHSTATION™ ELECTROMAGNETIC (EM) NAVIGATION**

- Stealth EM technology allows for navigated procedures without fixing the patient in pins, freeing you to perform surgery as you deem best for your patient
- Small, non-invasive patient referencing that is easy to attach
- Tip-tracking allows for navigation of flexible devices
- Does not rely on line-of-sight between the emitter and the surgical instruments
- With a commitment to surgical navigation accuracy, patented algorithms constantly monitor the EM field, including metal disturbance
DICOM, Hospital IT Integration

Interface directly with hospital IT systems for constant access to patient data. Use the hospital network to export patient data from StealthStation® to PACs or between StealthStations. Patient data where you need it, when you need it.

Surgical Robotic Integration

The StealthStation-MGS Cranial Robot Project* is currently under development. The StealthStation-integrated robot will enable affordable, robotic trajectory guidance for cranial stereotactic procedures.

Surgical Imaging Integration

- StealthStation™ supports custom integrated solutions for a variety of surgical needs in your facility
- Boom-mounted camera and monitors
- Connectivity to data management systems
- Streamline integration workflows for iMR with auto-merge capabilities
- Streamline integration workflows for iCT with auto-registration capabilities.

Ultrasound Navigation Integration

Accommodate for brain shift by integrating ultrasound technology with StealthStation navigation. Real-time data that enables more precise tumor resection levels.

Microscope Integration

Auto-positioning integrates the robotic capability of the microscope with the StealthStation System to automatically align with a target or plan set in StealthStation software.

Powered Instruments Integration

Midas Rex® powered instruments are integrated with StealthStation® technology for intra-operative confirmation of a dissecting tool’s position.

*Project is under development and not yet released in the US.
CT
PET/Nuclear
High-Field MRI
O-arm® Imaging System
Ultrasound
COMPREHENSIVE SERVICE AND SUPPORT.

We’re there for you as an intrinsic partner, throughout the entire patient journey.

WE SUPPORT CASES.
At Medtronic, our goal is to minimize OR downtime and ensure peace of mind. Our vast network of highly skilled professionals are ready to help in any situation to support your success.

WE SUPPORT PATIENT MANAGEMENT.
Hydrocephalus solutions that help you manage changing cerebrospinal fluid (CSF) pressure and drainage needs throughout your patient’s lifetime.

Neurostimulator programming and non-invasive adjustments for better symptom control and fewer side effects throughout your DBS patient’s lifetime.

WE SUPPORT MEDICAL EDUCATION FOR SURGEONS AND STAFF.
Relevant and effective educational programs build knowledge and confidence in using our technologies, therapies and interventions.

THOUSANDS OF STUDENTS. HUNDREDS OF COURSES. ANNUALLY. ACROSS THE GLOBE.
Transforming the state of healthcare means providing support and expertise throughout a patient’s journey. By providing clinically meaningful service and support, we’re able to impact neurological healthcare — one patient, one procedure, and one intervention at a time.
EUROPE, MIDDLE EAST, AFRICA (EMEA)

155+ COUNTRIES

460+ LOCATIONS

GREATER CHINA

80+ MANUFACTURING FACILITIES

ASIA PACIFIC

50+ RESEARCH AND INNOVATION CENTERS
YOUR EXPERTISE.  
OUR TECHNOLOGIES.

Indications: contraindications, warnings and instructions for use can be found in the product labeling supplied with each device.

CAUTION: Federal (USA) law restricts this device to sale by or on the order of a physician.

Solitaire™ 2 revascularization device: The Solitaire™ 2 revascularization device is intended to restore blood flow by removing thrombus from a large intracranial vessel in patients experiencing ischemic stroke within 8 hours of symptom onset. Patients who are ineligible for intravenous tissue plasminogen activator (IV t-PA) or who fail IV t-PA therapy are candidates for treatment.

Pipeline™ Flex embolization device: The Pipeline™ Flex embolization device should be used only by physicians trained in percutaneous, intravascular techniques and procedures at medical facilities with the appropriate fluoroscopy equipment.

Indications for Use: The Pipeline™ Flex embolization device is indicated for the endovascular treatment of adults (22 years of age or older) with large or giant wide-necked intracranial aneurysms (IAs) in the internal carotid artery from the petrous to the superior hypophyseal segments.

CAUTION: Federal (USA) law restricts this device to sale, distribution and use by or on the order of a physician. Indications, contraindications, warnings and instructions for use can be found in the product labeling supplied with each device.

Warnings: 1) Restheathing of the Pipeline™ Flex embolization device more than 2 full cycles may cause damage to the distal or proximal ends of the braid. 2) Persons with known allergy to platinum or cobalt/chromium alloy (including the major elements platinum, cobalt, chromium, nickel, molybdenum or tungsten) may suffer an allergic reaction to the Pipeline™ Flex embolization device implants. 3) Person with known allergy to tin, silver, stainless steel or silicone elastomer may suffer an allergic reaction to the Pipeline™ Flex embolization device delivery system. 4) Do not reprocess or resterilize. Reprocessing and resterilization increase the risk of patient infection and compromised device performance. 5) Delayed rupture may occur with large and giant aneurysms. 6) Placement of multiple Pipeline™ Flex embolization devices may increase the risk of ischemic complications.

Precautions: 1) Do not use product if the sterile package is damaged. 2) Do not use the Pipeline™ Flex embolization device in patients in whom angiography demonstrates inappropriate anatomy, such as severe prior post-aneurysm narrowing. 3) The Pipeline™ Flex embolization device should be used only by physicians trained in percutaneous, intravascular techniques and procedures at medical facilities with the appropriate fluoroscopic equipment. 4) Physicians should undergo appropriate training prior to using the Pipeline™ Flex embolization device in patients. 5) The Pipeline™ Flex embolization device is provided sterile for single use only. Store in a cool, dry place. 6) Carefully inspect the sterile package and device components prior to use to verify that they have not been damaged during shipping. Do not use linked or damaged components. 7) Use the Pipeline™ Flex embolization device system prior to the “Use By” date printed on the package. 8) The appropriate anti-platelet and anticoagulation therapy should be administered in accordance with standard medical practice. 9) A thromboembolic aneurysm may aggravate pre-existing, or cause new, symptoms of mass effect and may require medical therapy. 10) Do not attempt to reposition after deployment. 11) Do not use in patients in whom the angiography demonstrates the anatomy is not appropriate for endovascular treatment, due to conditions such as severe intracranial vessel tortuosity or stenosis. 12) Use of implants with labeled diameter larger than the parent vessel diameter may result in decreased effectiveness and additional safety risk due to incomplete foreshortening resulting in an implant longer than anticipated.

Potential Complications: Potential complications, some of which could be fatal, include, but are not limited to the following: Adverse reaction to antiplatelet/anticoagulation agents or contrast media, Blindness, Coma, Device fracture, Device migration or misplacement, Dissection of the parent artery, Embolism, Graft infection, Headache, Hemorrhage, Hydrocephalus, Infection, Intracerebral bleeding, Ischemia, Mass effect, Neurological deficits, Parent Artery Stenosis, Perforation, Perforator occlusion, Post-procedure bleeding, Ruptured or perforated aneurysm, Seizure, Stroke, Thromboembolism, Transient ischemic attack (TIA), Vasospasm, Vessel occlusion, Vessel perforation, Vision impairment.

Contraindications: The use of the Pipeline™ Flex embolization device is contraindicated for patients with any of the following conditions: 1) Patients with active bacterial infection. 2) Patients in whom dual antiplatelet therapy (aspirin and clopidogrel) is contraindicated. 3) Patients who have not received dual antiplatelet agents prior to the procedure. 4) Patients in whom a pre-existing stent is in place in the parent artery at the target aneurysm location.

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Caution: Federal Law (USA) restricts these devices for sale by or on the order of a physician. Refer to product instruction manual/package insert for instructions, warnings, precautions and contraindications. Healthcare professionals must review the product technical manual prior to use for detailed disclosure. For information on Indications, Safety, and Warnings, call Medtronic at (877) 242-9504. For further information, please contact Medtronic Neurosurgery at (877) 242-9504, and/or consult Medtronic’s website at www.medtronicneurosurgery.com.

Healthcare professionals must review the product technical manual prior to use for detailed disclosure. For information on Indications, Safety, and Warnings, call Medtronic at (877) 242-9504, or visit Medtronic’s website at www.medtronicneurosurgery.com

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