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Title	Author	Year	Journal	Keywords	Link
Surgical planning, histopathology findings and postoperative outcome in MR-negative extra-temporal epilepsy using intracranial EEG, functional imaging, magnetoencephalography, neuronavigation and intraoperative MRI	Maslarova A	2023	Clinical neurology and neurosurgery	Elements Stereotaxy, Cranial Navigation, Frameless Stereotaxy, Epilepsy, Elements BOLD MRI Mapping, Intraoperative Ultrasound, Patient Outcomes, IPlan Stereotaxy	Go to article
Connectivity-based segmentation of the thalamic motor region for deep brain stimulation in essential tremor: A comparison of deterministic and probabilistic tractography	Tsolaki E	2024	NeuroImage: Clinical	Elements Fibertracking, Elements Segmentation Cranial, Elements Object Manipulation, Essential Tremor, Accuracy, Patient Outcomes	Go to article
Enhancing outcomes in deep brain stimulation: a comparative study of direct targeting using 7T versus 3T MRI	Middlebrooks EH	2024	Journal of neurosurgery	Elements Distortion Correction Cranial, Elements Image Fusion, Essential Tremor, Patient Specific Targeting, Accuracy, Patient Outcomes	Go to article
Deep Brain Stimulation Lead Localization Variability Comparing Intraoperative MRI Versus Postoperative Computed Tomography	Alexander G Yearley	2023	Operative neurosurgery (Hagerstown, Md.)	Elements Lead Localization, Elements Image Fusion, Accuracy, IMRI	Go to article
Radiofrequency ablation of the pallidothalamic tract and ventral intermediate nucleus for dystonic tremor through the parietal approach	Shiro Horisawa	2023	Surgical Neurology International	Elements Stereotaxy, Elements Segmentation Basal Ganglia, Patient Specific Targeting, Tremor	Go to article
Accuracy and Utility of Frameless Stereotactic Placement of Stereoelectroencephalography Electrodes	Brimley C	2023	World Neurosurg.	VarioGuide, Elements Stereotaxy, Epilepsy, Frameless Stereotaxy, Registration Accuracy	Go to article
Technical Note: Advantages of a 2-Room Intraoperative 3-Tesla Magnetic Resonance Imaging Operating Suite for Performing Laser Interstitial Thermal Therapy in Pediatric Epilepsy and Tumor Surgery	Tomschik M	2023	World Neurosurg	VarioGuide, Automatic Image Registration (AIR), Cranial Navigation, IMRI, Epilepsy, Brain Tumor	Go to article
Intraoperative Local Field Potential Beta Power and Three-Dimensional Neuroimaging Mapping Predict Long-Term Clinical Response to Deep Brain Stimulation in Parkinson Disease: A Retrospective Study	di Biase L, Lazio DBS Study Group	2023	Neuromodulation	Elements Guide XT, Elements Lead Localization, Elements Segmentation Basal Ganglia, Directional Deep Brain Stimulation, Parkinson's Disease	Go to article



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Targeting Accuracy of the Leksell Vantage Stereotactic System for Deep Brain Stimulation Surgery: A Retrospective Review	Phillips KR	2023	Oper Neurosurg (Hagerstown)	Elements Stereotaxy, Elements Lead Localization, Elements Image Fusion, Intraoperative Ultrasound, Airo	Go to article
Resolving dyskinesias at sustained anti-OCD efficacy by steering of DBS away from the anteromedial STN to the mesencephalic ventral tegmentum - case report.	Coenen VA	2022	Acta Neurochir (Wien)	Elements Guide XT, Elements Lead Localization, Elements Segmentation Basal Ganglia, Directional Deep Brain Stimulation, Obsessive Compulsive Disorder (OCD), Automatic Image Registration (AIR)	Go to article
VarioGuide® frameless neuronavigation-guided stereoelectroencephalography in adult epilepsy patients: technique, accuracy and clinical experience	Ladisich B	2021	Acta neurochirurgica	VarioGuide, Elements Stereotaxy, Epilepsy, Frameless Stereotaxy, Registration Accuracy, IPlan Stereotaxy	Go to article
Automated optimization of deep brain stimulation parameters for modulating neuroimaging-based targets	Malekmohamadi M	2022	Journal of neural engineering	Elements Lead Localization, Elements Image Fusion, Treatment Resistant Depression, Automatic Image Registration (AIR)	Go to article
Focused ultrasound using a novel targeting method four-tract tractography for magnetic resonance-guided high-intensity focused ultrasound targeting	Feltrin et al.	2022	Brain Communications	Elements Fibertracking, Elements Trajectory Planning, Elements Distortion Correction Cranial, Diffusion Tensor Imaging, Elements Object Manipulation, Elements DICOM Burned-In Export	Go to article
Stimulation of the Presupplementary Motor Area Cluster of the Subthalamic Nucleus Predicts More Consistent Clinical Outcomes	Kähkölä et al.	2022	Neurosurgery	Elements Fibertracking, Elements Guide XT, Elements Stereotaxy, Parkinson's Disease, Directional Deep Brain Stimulation, Diffusion Tensor Imaging	Go to article
Diffusion tensor magnetic resonance imaging (DTI) tractography-guided deep brain stimulation in neuropathic pain	Coenen et al.	2015	Acta neurochirurgica	Elements Fibertracking	Go to article
Intraoperative computed tomography as reliable navigation registration device in 200 cranial procedures	Carl et al.	2018	Acta neurochirurgica	Airo, Cranial Navigation, Intraoperative Ultrasound, Registration Accuracy, Radiation Dose	Go to article
Navigation-Supported Stereotaxy by Applying Intraoperative Computed Tomography	Carl et al.	2018	World neurosurgery	Airo, Cranial Navigation, Elements Stereotaxy, VarioGuide, Intraoperative Ultrasound	Go to article



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Visualization of volume of tissue activated modeling in a clinical planning system for deep brain stimulation	Carl et al.	2020	Journal of neurosurgical sciences	Elements Guide XT, Elements Segmentation Basal Ganglia, Elements Fibertracking, Automatic Image Registration (AIR), Directional Deep Brain Stimulation	Go to article
Longitudinal Assessment of Rotation Angles after Implantation of Directional Deep Brain Stimulation Leads	Lange et al.	2021	Stereotactic and functional neurosurgery	Elements Viewer, Automatic Image Registration (AIR), Directional Deep Brain Stimulation, Intraoperative Ultrasound	Go to article
Navigated Deep Brain Stimulation Surgery: Evaluating the Combined Use of a Frame-Based Stereotactic System and a Navigation System	Krüger et al.	2021	Stereotactic and functional neurosurgery	Elements Stereotaxy, Cranial Navigation, Elements Segmentation Basal Ganglia, Complex Procedures	Go to article
Application of Augmented Reality in Percutaneous Procedures-Rhizotomy of the Gasserian Ganglion	Rau et al.	2021	Operative Neurosurgery	Magic Leap, Elements Viewer, Mixed Reality, Pain, Complex Procedures	Go to article
Superolateral medial forebrain bundle deep brain stimulation in major depression: a gateway trial	Coenen et al.	2019	Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology	Elements Fibertracking, Elements Guide XT, Elements Lead Localization, Elements Segmentation Basal Ganglia, Treatment Resistant Depression	Go to article
Electrode placement for SEEG: Combining stereotactic technique with latest generation planning software for intraoperative visualization and postoperative evaluation of accuracy and accuracy predictors	Kogias et al.	2022	Clinical Neurology and Neurosurgery	Elements Stereotaxy, Elements Segmentation Cranial, Elements Lead Localization, Epilepsy, Patient Specific Targeting	Go to article
Deep brain stimulation and refractory freezing of gait in Parkinson's disease: Improvement with high-frequency current steering co-stimulation of subthalamic nucleus and substantia Nigra	Golfrè Andreasi et al.	2020	Brain stimulation	Elements Guide XT, Elements Segmentation Basal Ganglia, Elements Lead Localization, Automatic Image Registration (AIR), Parkinson's Disease	Go to article
Imaging-based programming of subthalamic nucleus deep brain stimulation in Parkinson's disease	Waldthaler et al.	2021	Brain stimulation	Elements Guide XT, Elements Segmentation Basal Ganglia, Elements Lead Localization, Automatic Image Registration (AIR), Directional Deep Brain Stimulation	Go to article



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Reduced Programming Time and Strong Symptom Control Even in Chronic Course Through Imaging-Based DBS Programming	Lange et al.	2021	Front. Neurol. (Frontiers in Neurology)	Elements Guide XT, Elements Segmentation Basal Ganglia, Elements Lead Localization, Automatic Image Registration (AIR), Directional Deep Brain Stimulation	Go to article
A detailed analysis of anatomical plausibility of crossed and uncrossed streamline rendition of the dentato-rubro-thalamic tract (DRT(T)) in a commercial stereotactic planning system	Coenen et al.	2021	Acta neurochirurgica	Elements Fibertracking, Elements Segmentation Basal Ganglia, Patient Specific Targeting, Elements Adaptive Hybrid Surgery Analysis, Parkinson's Disease	Go to article
Reliable navigation registration in cranial and spine surgery based on intraoperative computed tomography	Carl et al.	2019	Neurosurgical focus	Airo, Cranial Navigation, Elements Stereotaxy, Intraoperative Ultrasound, Registration Accuracy, Radiation Dose	Go to article
Intraoperative Stereotactic Frame Registration Using a Three-Dimensional Imaging System with and without Preoperative Computed Tomography for Image Fusion	Spatz et al.	2020	Stereotactic and functional neurosurgery	Elements Image Fusion, Registration Accuracy, Intraoperative Ultrasound, Radiation Dose	Go to article
Understanding gamma ventral capsulotomy: Potential implications of diffusion tensor image tractography on target selectivity	Santos et al.	2019	Surgical neurology international	Elements Fibertracking, Elements Trajectory Planning, Patient Specific Targeting, Diffusion Tensor Imaging, Parkinson's Disease, Obsessive Compulsive Disorder (OCD)	Go to article
Do directional deep brain stimulation leads rotate after implantation?	Krüger et al.	2021	Acta neurochirurgica	Elements Lead Localization, Elements Stereotaxy, Directional Deep Brain Stimulation, Automatic Image Registration (AIR)	Go to article
Implementation of Intraoperative Computed Tomography for Deep Brain Stimulation: Pitfalls and Optimization of Workflow, Accuracy, and Radiation Exposure	Carl et al.	2018	World neurosurgery	Airo, Cranial Navigation, Elements Segmentation Basal Ganglia, Elements Lead Localization, Intraoperative Ultrasound, Radiation Dose	Go to article
Implantation of Depth Electrodes in Children Using VarioGuide® Frameless Navigation System: Technical Note	Budke et al.	2018	Operative Neurosurgery	VarioGuide, Elements Stereotaxy, Epilepsy, Cranial Navigation, Complex Procedures, Registration Accuracy, IPlan Stereotaxy	Go to article
Early outcomes of stereoelectroencephalography followed by MR-guided laser interstitial thermal therapy: a paradigm for minimally invasive epilepsy surgery	Cobourn et al.	2018	Neurosurgical focus	VarioGuide, Cranial Navigation, Epilepsy, Complex Procedures	Go to article



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Novel Programming Features Help Alleviate Subthalamic Nucleus Stimulation-Induced Side Effects	Dayal et al.	2020	Movement disorders : official journal of the Movement Disorder Society	Elements Guide XT, Elements Lead Localization, Directional Deep Brain Stimulation, Automatic Image Registration (AIR), Parkinson's Disease	Go to article
Targeting for stereotactic radiosurgical thalamotomy based on tremor treatment response	Luo et al.	2021	Journal of neurosurgery	Elements Segmentation Basal Ganglia, Elements Fibertracking, Elements Distortion Correction Cranial, Patient Specific Targeting, Essential Tremor	Go to article
Automatic Segmentation of the Subthalamic Nucleus: A Viable Option to Support Planning and Visualization of Patient-Specific Targeting in Deep Brain Stimulation	Reinacher et al.	2019	Operative Neurosurgery	Elements Segmentation Basal Ganglia, Elements Stereotaxy, Patient Specific Targeting, Parkinson's Disease, Automatic Image Registration (AIR)	Go to article
Validation of diffusion tensor imaging tractography to visualize the dentatorubrothalamic tract for surgical planning	Nowacki et al.	2018	Journal of neurosurgery	Elements Stereotaxy, Diffusion Tensor Imaging, Patient Specific Targeting, Essential Tremor, IPlan Stereotaxy	Go to article
Evaluation of Automatic Segmentation of Thalamic Nuclei through Clinical Effects Using Directional Deep Brain Stimulation Leads: A Technical Note	Krüger et al.	2020	Brain sciences	Elements Guide XT, Elements Segmentation Basal Ganglia, Elements Lead Localization, Automatic Image Registration (AIR), Directional Deep Brain Stimulation, Patient Specific Targeting	Go to article
Comparison of Automatic Segmentation Algorithms for the Subthalamic Nucleus	Polanski et al.	2020	Stereotactic and functional neurosurgery	Elements Segmentation Basal Ganglia, Patient Specific Targeting, Parkinson's Disease	Go to article