BRAINLAB

Sharing Scientific Knowledge and Evidence

Clinical Literature Library

Title	Author	Year	Journal	Keywords	Link
A New Approach to Virtual Occlusion in Orthognathic Surgery Planning Using Mixed Reality-A Technical Note and Review of the Literature	Max Wilkat	2023	Journal of personalized medicine	Elements Mixed Reality Viewer, Orthognathic Surgery	Go to article
Usage of Object Matching Algorithms Combined with Mixed Reality for Enhanced Decision Making in Orbital Reconstruction-A Technical Note	Max Wilkat	2023	Journal of personalized medicine	Elements Mixed Reality Viewer, Magic Leap, Elements Angio Contouring, Orbital Reconstruction, Patient Specific Implants	Go to article
Advances and Innovations in Ablative Head and Neck Oncologic Surgery Using Mixed Reality Technologies in Personalized Medicine	Nadia Karnatz	2022	Journal of clinical medicine	Elements Mixed Reality Viewer, Elements Stereotaxy, Magic Leap	Go to article
Mixed reality in oral and maxillofacial surgery: a symbiosis of virtual and augmented reality or a pointless technological gadget?	Alexander K Bartella	2021	International journal of computerized dentistry	Elements Mixed Reality Viewer, Elements Stereotaxy, Magic Leap, Elements Segmentation Cranial, Elements Image Fusion	Go to article
Navigation-guided resection of locally advanced midface malignancies. Does it improve the safety of oncologic resection?	Ranz-Colio Álvaro et al.	2023	Oral oncology	CMF Navigation, Tumor Resection And Reconstruction, Complex Procedures	Go to article
Personalized Medicine Workflow in Post-Traumatic Orbital Reconstruction	Sabelis et al.	2022	Journal of personalized medicine	CMF Navigation, Preoperative Planning, Orbital Reconstruction, Patient Specific Implants	Go to article
Primary Orbital Reconstruction with Selective Laser Melting (SLM) of Patient-Specific Implants (PSIs): An Overview of 96 Surgically Treated Patients	Rana et al.	2022	Journal of clinical medicine	CMF Navigation, Elements Segmentation Cranial, Orbital Reconstruction, Patient Specific Implants, Accuracy	Go to article
A prospective multicenter study to compare the precision of posttraumatic internal orbital reconstruction with standard preformed and individualized orbital implants	Zimmerer et al.	2016	Journal of cranio-maxillo-facial surgery : official publication of the European Association for Cranio-Maxillo-Facial Surgery	CMF Navigation, Orbital Reconstruction, Patient Specific Implants	Go to article
Removal of Orbital Metallic Foreign Bodies With Image-Guided Surgical Navigation	Zhao et al.	2020	Ophthalmic plastic and reconstructive surgery	CMF Navigation, Stereotactic Body Radiotherapy (SBRT/SABR), Orbital Reconstruction	Go to article

Title	Author	Year	Journal	Keywords	Link
Surgical navigation improves reductions accuracy of unilateral complicated zygomaticomaxillary complex fractures: a randomized controlled trial	Zhang et al.	2018	Scientific Reports	CMF Navigation, Zygomatic Fractures, Accuracy, Complex Procedures	Go to article
Reconstruction of maxillary defects with free fibula flap assisted by computer techniques	Zhang et al.	2015	Journal of cranio-maxillo-facial surgery : official publication of the European Association for Cranio-Maxillo-Facial Surgery	CMF Navigation, Fibula, 3D, Orbital Reconstruction, Patient Outcomes	Go to article
Digital Diagnosis and Treatment Program for Maxillofacial Fractures: A Retrospective Analysis of 626 Cases	Zeng et al.	2018	Journal of oral and maxillofacial surgery : official journal of the American Association of Oral and Maxillofacial Surgeons	CMF Navigation, Condylar Fractures, 3D, Orbital Reconstruction, Zygomatic Fractures	Go to article
Comparison of the Outcomes of Complex Orbital Fracture Repair with and without a Surgical Navigation System: A Prospective Cohort Study with Historical Controls	Zavattero et al.	2017	Plastic and reconstructive surgery	CMF Navigation, Orbital Reconstruction, Patient Outcomes, Complex Procedures	Go to article
Three-Dimensional Accuracy of Virtual Planning and Surgical Navigation for Mandibular Reconstruction With Free Fibula Flap	Yu et al.	2016	Journal of oral and maxillofacial surgery : official journal of the American Association of Oral and Maxillofacial Surgeons	CMF Navigation, 3D, Mandibular Fractures, Patient Outcomes, Fibula	Go to article
Application of Computer-Assisted Navigation System in Acute Zygomatic Fractures	Yang et al.	2019	Annals of plastic surgery	CMF Navigation, Zygomatic Fractures, Patient Outcomes	Go to article
The Use of Brainlab Navigation in Le Fort III Osteotomy	Wood et al.	2015	The Journal of craniofacial surgery	CMF Navigation, Postoperative Complications, Adults, Pedriatics	Go to article
Intraoperative imaging in orbital and midface reconstruction	Wilde, Schramm	2014	Facial plastic surgery : FPS	CMF Navigation, Orbital Reconstruction, 3D	Go to article

Title	Author	Year	Journal	Keywords	Link
"Mirroring" computational planning, navigation guidance system, and intraoperative mobile C-arm cone-beam computed tomography with flat-panel detector: a new rationale in primary and secondary treatment of midfacial fractures?	Scolozzi, Terzic	2011	Journal of oral and maxillofacial surgery : official journal of the American Association of Oral and Maxillofacial Surgeons	CMF Navigation, Orbital Reconstruction, Facial Symmetry, Zygomatic Fractures	Go to article
Applications of 3D orbital computer-assisted surgery (CAS)	Scolozzi	2017	Journal of stomatology, oral and maxillofacial surgery	CMF Navigation, Orbital Reconstruction, 3D, Adults, Pedriatics	Go to article
Advances and innovations in computer-assisted head and neck oncologic surgery	Rana et al.	2012	The Journal of craniofacial surgery	CMF Navigation, Tumor Resection And Reconstruction, Biopsy	Go to article
Intraoperative stereotactic navigation for reconstruction in zygomatic-orbital trauma	Nyachhyon, Kim	2011	JNMA; journal of the Nepal Medical Association	CMF Navigation, Orbital Reconstruction, Zygomatic Fractures, Stereotaxy	Go to article
Surgical navigation in craniomaxillofacial surgery: expensive toy or useful tool? A classification of different indications	Lübbers et al.	2011	Journal of oral and maxillofacial surgery : official journal of the American Association of Oral and Maxillofacial Surgeons	CMF Navigation, Stereotactic Body Radiotherapy (SBRT/SABR), Orbital Reconstruction, Zygomatic Fractures	Go to article
Three-Dimensional Accuracy of Bone Contouring Surgery for Zygomaticomaxillary Fibrous Dysplasia Using Virtual Planning and Surgical Navigation	Liu et al.	2020	Journal of oral and maxillofacial surgery : official journal of the American Association of Oral and Maxillofacial Surgeons	CMF Navigation, Preoperative Planning, 3D, Zygomatic Fractures	Go to article
Three-dimensional computer-assisted orthognathic surgery: experience of 37 patients	Lin et al.	2015	Annals of plastic surgery	CMF Navigation, Orthognathic Surgery, 3D	Go to article

Title	Author	Year	Journal	Keywords	Link
Applications of Computer-Assisted Navigation for the Minimally Invasive Reduction of Isolated Zygomatic Arch Fractures	Li, Yang	2015	Journal of oral and maxillofacial surgery : official journal of the American Association of Oral and Maxillofacial Surgeons	CMF Navigation, Zygomatic Fractures, Minimal Invasiveness, Adults	Go to article
Application of Computer-Aided Navigation Technology in the Extraction of Foreign Body From the Face	Lan et al.	2020	The Journal of craniofacial surgery	CMF Navigation, Stereotactic Body Radiotherapy (SBRT/SABR), Adults, Pediatric	Go to article
Orbital floor symmetry after maxillectomy and orbital floor reconstruction with individual titanium mesh using computer-assisted navigation	Kang et al.	2020	Journal of plastic, reconstructive & aesthetic surgery : JPRAS	CMF Navigation, Orbital Reconstruction, Patient Specific Implants	Go to article
Application of a computer-assisted surgical navigation system in temporomandibular joint ankylosis surgery: a retrospective study	He et al.	2017	International journal of oral and maxillofacial surgery	CMF Navigation, Mandibular Fractures, Patient Outcomes	Go to article
Orbitozygomatic fractures with enophthalmos: analysis of 64 cases treated late	He et al.	2012	Journal of oral and maxillofacial surgery : official journal of the American Association of Oral and Maxillofacial Surgeons	CMF Navigation, Orbital Reconstruction, Patient Specific Implants, Patient Outcomes, Zygomatic Fractures	Go to article
Does Intraoperative Navigation Improve the Anatomical Reduction of Intracapsular Condylar Fractures?	Han et al.	2018	Journal of oral and maxillofacial surgery : official journal of the American Association of Oral and Maxillofacial Surgeons	CMF Navigation, Condylar Fractures, Mandibular Fractures, Orbital Reconstruction	Go to article

Title	Author	Year	Journal	Keywords	Link
Diagnostic and therapeutic aspects in the treatment of gunshot wounds of the viscerocranium	Gröbe et al.	2011	European journal of trauma and emergency surgery : official publication of the European Trauma Society	CMF Navigation, Stereotactic Body Radiotherapy (SBRT/SABR)	Go to article
Predictability in orbital reconstruction.	Dubois et al.	2015	Journal of cranio-maxillo-facial surgery : official publication of the European Association for Cranio-Maxillo-Facial Surgery	CMF Navigation, Automatic Image Registration (AIR), Orbital Reconstruction, 3D, Patient Specific Implants	Go to article
Intraoperative navigation for single-splint two-jaw orthognathic surgery: From model to actual surgery	Chang et al.	2015	Journal of cranio-maxillo-facial surgery : official publication of the European Association for Cranio-Maxillo-Facial Surgery	CMF Navigation, Orthognathic Surgery, 3D	Go to article
Intraoperative navigation in complex head and neck resections: indications and limits	Catanzaro et al.	2017	International journal of computer assisted radiology and surgery	CMF Navigation, Complex Procedures, Tumor Resection And Reconstruction	Go to article
Computer-assisted navigational surgery improves outcomes in orbital reconstructive surgery	Cai et al.	2012	The Journal of craniofacial surgery	CMF Navigation, Orbital Reconstruction, Postoperative Complications	Go to article
Late Reconstruction of the Orbit With Patient-Specific Implants Using Computer-Aided Planning and Navigation	Baumann et al.	2015	Journal of oral and maxillofacial surgery : official journal of the American Association of Oral and Maxillofacial Surgeons	CMF Navigation, Preoperative Planning, Orbital Reconstruction, Patient Specific Implants	Go to article

Title	Author	Year	Journal	Keywords	Link
Quantitative assessment of symmetry recovery in navigation-assisted surgical reduction of zygomaticomaxillary complex fractures	Bao et al.	2019	Journal of cranio-maxillo-facial surgery : official publication of the European Association for Cranio-Maxillo-Facial Surgery	CMF Navigation, Complex Procedures, Orbital Reconstruction, Facial Symmetry, Zygomatic Fractures	Go to article
A Multicenter Experience With Image-Guided Surgical Navigation: Broadening Clinical Indications in Complex Craniomaxillofacial Surgery	Andrews et al.	2015	The Journal of craniofacial surgery	CMF Navigation, Complex Procedures	Go to article
Utilization of computed tomography image-guided navigation in orbit fracture repair	Andrews et al.	2013	The Laryngoscope	CMF Navigation, Orbital Reconstruction, Accuracy	Go to article
Advances in assessing the volume of odontogenic cysts and tumors in the mandible: a retrospective clinical trial	Stoetzer et al.	2013	Head & Face Medicine	Deliniation, Tumor Resection And Reconstruction, Preoperative Planning	Go to article
Design and development of a virtual anatomic atlas of the human skull for automatic segmentation in computer-assisted surgery, preoperative planning, and navigation	Metzger et al.	2013	International journal of computer assisted radiology and surgery	Elements Segmentation Cranial, Accuracy, Preoperative Planning	Go to article
Virtual surgery simulation in orbital wall reconstruction: integration of surgical navigation and stereolithographic models	Novelli et al.	2014	Journal of cranio-maxillo-facial surgery : official publication of the European Association for Cranio-Maxillo-Facial Surgery	CMF Navigation, Elements Segmentation Cranial, Preoperative Planning, Orbital Volume, Orbital Reconstruction	Go to article
Development and first clinical application of automated virtual reconstruction of unilateral midface defects	Wagner et al.	2015	Journal of cranio-maxillo-facial surgery : official publication of the European Association for Cranio-Maxillo-Facial Surgery	Elements Segmentation Cranial, Orbital Reconstruction, Preoperative Planning	Go to article

Title	Author	Year	Journal	Keywords	Link
Development and evaluation of an automatic tumor segmentation tool: a comparison between automatic, semi-automatic and manual segmentation of mandibular odontogenic cysts and tumors	Rana et al.	2015	Journal of cranio-maxillo-facial surgery : official publication of the European Association for Cranio-Maxillo-Facial Surgery	Elements Segmentation Cranial, Tumor Resection And Reconstruction	Go to article
Patient specific implants (PSI) in reconstruction of orbital floor and wall fractures	Gander et al.	2015	Journal of cranio-maxillo-facial surgery : official publication of the European Association for Cranio-Maxillo-Facial Surgery	Elements Segmentation Cranial, Orbital Reconstruction, Patient Specific Implants	Go to article
Orbital volume analysis: validation of a semi-automatic software segmentation method	Jansen et al.	2016	International journal of computer assisted radiology and surgery	Elements Segmentation Cranial, Orbital Volume, Preoperative Planning, Deliniation	Go to article
Removal of recurrent intraorbital tumour using a system of augmented reality	Scolozzi, Bijlenga	2017	The British journal of oral & maxillofacial surgery	CMF Navigation, Orbital Reconstruction, Tumor Resection And Reconstruction, Augmented Reality, Microscope Navigation	Go to article
Intraoperative 3-dimensional cone beam computed tomographic imaging during reconstruction of the zygoma and orbit	Gander et al.	2018	Oral surgery, oral medicine, oral pathology and oral radiology	Elements Segmentation Cranial, Orbital Reconstruction, Zygomatic Fractures, Preoperative Planning	Go to article
Primary orbital reconstruction with selective laser melted core patient-specific implants: overview of 100 patients	Rana et al.	2019	The British journal of oral & maxillofacial surgery	Elements Segmentation Cranial, Orbital Reconstruction, 3D, Preoperative Planning	Go to article