Mandibular reconstruction using stereolithographic 3-dimensional printing modeling technology

DOI: 10.1016/j.tripleo.2009.05.023
Oral Surgery Oral Medicine Oral Pathology Oral Radiology and Endodontics, 2009, 108, 661-6.

#	Paper	IF	Citations
288	Mandible reconstruction. **2010**, 18, 317-22		26
287	Precontoured mandibular plate with three-dimensional model significantly shortened the mandibular reconstruction time. **2010**, 22, 198-201		3
286	Stereolithographic bone scaffold design parameters: osteogenic differentiation and signal expression. **2010**, 16, 523-39		182
285	Mandible reconstruction using the calcium-sulphate three-dimensional model and rubber stick: a new method, Pmould techniqueP, for more accurate, efficient and simplified fabrication. **2011**, 64, 614-22		17
284	Deep circumflex iliac artery flap combined with a costochondral graft for mandibular reconstruction. *British Journal of Oral and Maxillofacial Surgery*, **2011**, 49, 597-601	1.4	10
283	Prototyping for surgical and prosthetic treatment. *Journal of Craniofacial Surgery*, **2011**, 22, 914-7	1.2	51
282	Orthognathic surgical planning on three-dimensional stereolithographic biomodel. *Journal of Craniofacial Surgery*, **2011**, 22, 1336-41	1.2	10
281	Getting in touch--3D printing in forensic imaging. **2011**, 211, e1-6		79
280	[Computer-assisted reconstruction of the facial skeleton]. **2011**, 59, 800-6		15
279	Pre-operative planning for mandibular reconstruction - a full digital planning workflow resulting in a patient specific reconstruction. **2011**, 3, 45		41
278	Comparing 3D virtual methods for hemimandibular body reconstruction. **2011**, 294, 1116-25		14
277	Virtual bending of titanium reconstructive plates for mandibular defect bridging: review of three clinical cases. **2011**, 4, 223-34		15
276	Evaluation of the effect of computed tomography scan protocols and freeform fabrication methods on bone biomodel accuracy. **2011**, 72, 1178-85		22
275	Maxillary reconstruction using a multi-element free fibula flap based on a three-dimensional polyacrylic resin model. **2012**, 84, 49-55		7
274	Surgical Engineering in Cranio-Maxillofacial Surgery: A Literature Review. **2012**, 3, 53-86		9
273	Accuracy assessment of prototypes produced using multi-slice and cone-beam computed tomography. **2012**, 41, 1291-5		23
272	Using computer simulation and stereomodel for accurate mandibular reconstruction with vascularized iliac crest flap. **2012**, 114, 175-82		28

271	Additive manufacturing for microvascular reconstruction of the mandible in 20 patients. **2012**, 40, 43-6		89
270	Reconstructive surgery. **2012**, 70, e272-309		2
269	A CAD/CAM-prototyped anatomical condylar prosthesis connected to a custom-made bone plate to support a fibula free flap. **2012**, 50, 743-9		66
268	Mandible reconstruction assisted by preoperative virtual surgical simulation. **2012**, 113, 604-11		65
267	Design and manufacturing of customized surgical devices for mandibular rehabilitation. **2013**, 7, 227-237		16
266	Selective laser sintering in biomedical engineering. **2013**, 51, 245-56		226
265	Computer-assisted design and rapid prototype modeling in microvascular mandible reconstruction. **2013**, 123, 597-604		170
264	Digital measurements of 120 mandibular angles to determine the ideal fibula wedge osteotomy to re-create the mandibular angle for microvascular reconstruction. **2013**, 71, 2169-75		7
263	Mandibular resection and reconstruction in the management of extensive ameloblastoma. **2013**, 71, 528-37		38
262	Validation of the cone beam computed tomography-based stereolithographic surgical guide aiding autotransplantation of teeth: clinical case-control study. **2013**, 115, 667-75		49
261	Intraoperative temporary fixation for primary reconstruction of composite mandibular ablative defects. *British Journal of Oral and Maxillofacial Surgery*, **2013**, 51, 976-7	1.4	0
260	Toward 3D Printed Bioactive Titanium Scaffolds with Bimodal Pore Size Distribution for Bone Ingrowth. **2013**, 5, 158-163		46
259	Hard Tissue Reconstruction. **2013**, 283-316		
258	Rekonstruktion nach Trauma. **2013**, 6, 154-164		
257	Adjunctive use of medical modeling for head and neck reconstruction. **2013**, 21, 335-43		1
256	Risk factors and surgical refinements of postresective mandibular reconstruction: a retrospective study. **2014**, 2014, 893746		8
255	Maxillary ridge augmentation with custom-made CAD/CAM scaffolds. A 1-year prospective study on 10 patients. **2014**, 40, 561-9		27
254	Mandibular reconstruction using plates prebent to fit rapid prototyping 3-dimensional printing models ameliorates contour deformity. **2014**, 10, 45		90

253	Complex craniofacial reconstruction using stereolithographic modeling. **2014**, 72, 59-63		5
252	Basics and applications of rapid prototyping medical models. **2014**, 20, 256-267		77
251	Intermaxillary splint and positioning stents to guide mandibular reconstruction. *British Journal of Oral and Maxillofacial Surgery*, **2014**, 52, 473-4	1.4	
250	Characterization of rapid PDMS casting technique utilizing molding forms fabricated by 3D rapid prototyping technology (RPT). **2014**, 7, 189-196		32
249	Clinical use of three-dimensional models of the temporomandibular joint established by rapid prototyping based on cone-beam computed tomography imaging data. **2014**, 30, 98-104		11
248	Finite element analysis of customized reconstruction plates for mandibular continuity defect therapy. **2014**, 47, 264-8		49
247	Technical procedures for template-guided surgery for mandibular reconstruction based on digital design and manufacturing. *BioMedical Engineering OnLine*, **2014**, 13, 63	4.1	75
246	The production of anatomical teaching resources using three-dimensional (3D) printing technology. **2014**, 7, 479-86		338
245	Surgical planning, three-dimensional model surgery and preshaped implants in treatment of bilateral craniomaxillofacial post-traumatic deformities. **2014**, 72, 1138.e1-14		35
244	Making three-dimensional mandible models using a personal three-dimensional printer. **2014**, 67, 576-8		8
243	Advances in oncologic head and neck reconstruction: systematic review and future considerations of virtual surgical planning and computer aided design/computer aided modeling. **2014**, 67, 1171-85		132
242	Metals for bone implants. Part 1. Powder metallurgy and implant rendering. **2014**, 10, 4058-70		161
241	Accuracy assessment of image-based surface meshing for volumetric computed tomography images in the craniofacial region. *Journal of Craniofacial Surgery*, **2014**, 25, 2051-5	1.2	12
240	A plastic surgery application in evolution: three-dimensional printing. *Plastic and Reconstructive Surgery*, **2014**, 133, 446-451	2.7	132
239	Evaluation of PC-ISO for customized, 3D printed, gynecologic HDR brachytherapy applicators. **2015**, 16, 246-253		37
238	Normal and Fibrotic Cardiac Myocardium Tissue Identified and Reproduced in Anatomically Accurate 3D for Perioperative Usage. **2015**,		
237	3D-printed haptic "reverse" models for preoperative planning in soft tissue reconstruction: a case report. **2015**, 35, 148-53		37
236	Treating Parry-Romberg Syndrome Using Three-Dimensional Scanning and Printing and the Anterolateral Thigh Dermal Adipofascial Flap. *Journal of Craniofacial Surgery*, **2015**, 26, 1826-9	1.2	14

235	Secondary reconstruction for mandibular osteoradionecrosis defect with fibula osteomyocutaneous flap flowthrough from radial forearm flap using stereolithographic 3-dimensional printing modeling technology. *Journal of Craniofacial Surgery*, **2015**, 26, e190-3	1.2	10
234	Customized "In-Office" Three-Dimensional Printing for Virtual Surgical Planning in Craniofacial Surgery. *Journal of Craniofacial Surgery*, **2015**, 26, 1584-6	1.2	40
233	Emerging Applications of Bedside 3D Printing in Plastic Surgery. **2015**, 2, 25		207
232	Rapid prototyping modelling in oral and maxillofacial surgery: A two year retrospective study. **2015**, 7, e605-12		11
231	A three-dimensional mediastinal model created with rapid prototyping in a patient with ectopic thymoma. **2015**, 21, 87-9		6
230	3D printed reproductions of orbital dissections: a novel mode of visualising anatomy for trainees in ophthalmology or optometry. **2015**, 99, 1162-7		48
229	Three-dimensional Physical Modeling: Applications and Experience at Mayo Clinic. **2015**, 35, 1989-2006		108
228	Dimensional error of three-dimensional images generated by different software. **2015**, 39, 480-4		3
227	Accuracy of surgical guides made from conventional and a combination of digital scanning and rapid prototyping techniques. **2015**, 113, 295-303		43
226	Three-dimensional printing in urological surgery: what are the possibilities?. **2015**, 22, 423		3
225	Current and future options of regeneration methods and reconstructive surgery of the facial skeleton. **2015**, 120, 315-23		15
224	Three-dimensional printing in surgery: a review of current surgical applications. **2015**, 199, 512-22		233
223	The value of three-dimensional printing modelling for surgical correction of orbital hypertelorism. *Oral and Maxillofacial Surgery*, **2015**, 19, 91-5	1.6	20
222	Anatomical Models: a Digital Revolution. **2015**, 25, 183-194		46
221	Rapid prototyping-assisted maxillofacial reconstruction. **2015**, 47, 186-208		27
220	Anti-Reflux Ureteral Stent with Polymeric Flap Valve Using Three-Dimensional Printing: An In Vitro Study. **2015**, 29, 933-8		24
219	Three-dimensional liver model based on preoperative CT images as a tool to assist in surgical planning for hepatoblastoma in a child. **2015**, 31, 593-6		47
218	The use of computer-aided design/manufacturing (CAD/CAM) technology to aid in the reconstruction of congenitally deficient pediatric mandibles: A case series. **2015**, 79, 2332-42		7

217	Preoperative surgical simulation of laparoscopic adrenalectomy for neuroblastoma using a three-dimensional printed model based on preoperative CT images. **2015**, 50, 2112-5		22
216	Laser-based three-dimensional multiscale micropatterning of biocompatible hydrogels for customized tissue engineering scaffolds. **2015**, 112, 12052-7		104
215	Editorial comment for del junco et Al. **2015**, 29, 62		1
214	Surgical planning and microvascular reconstruction of the mandible with a fibular flap using computer-aided design, rapid prototype modelling, and precontoured titanium reconstruction plates: a prospective study. *British Journal of Oral and Maxillofacial Surgery*, **2015**, 53, 49-53	1.4	75
213	Development and initial porcine and cadaver experience with three-dimensional printing of endoscopic and laparoscopic equipment. **2015**, 29, 58-62		28
212	Rapid development of complex shaped customized products. **2015**, 37, 263-274		10
211	3D printing as an adjunct to complex airway assessment. **2016**, 4, 109-112		0
210	Three-dimensional printing: review of application in medicine and hepatic surgery. **2016**, 13, 443-451		34
209	Surgical applications of three-dimensional printing: a review of the current literature & how to get started. **2016**, 4, 456		170
208	Possibilities of Preoperative Medical Models Made by 3D Printing or Additive Manufacturing. **2016**, 2016, 6191526		27
207	Clinical applications of custom-made vaginal cylinders constructed using three-dimensional printing technology. **2016**, 8, 208-14		35
206	Virtual surgical planning and 3D printing in prosthetic orbital reconstruction with percutaneous implants: a technical case report. **2016**, 9, 341-345		18
205	3D Volumetric Modeling and Microvascular Reconstruction of Irradiated Lumbosacral Defects after Oncologic Resection. **2016**, 3, 66		4
204	Advances in three-dimensional bioprinting for hard tissue engineering. **2016**, 13, 622-635		39
203	Three-dimensional Printing Approaches for the Treatment of Critical-sized Bone Defects. **2016**, 233-278		2
202	Evolution of Bioinks and Additive Manufacturing Technologies for 3D Bioprinting. **2016**, 2, 1662-1678		187
201	The Application of Virtual Planning and Navigation Devices for Mandible Reconstruction and Immediate Dental Implantation. **2016**, 9, 125-33		5
200	Comparative Accuracy of Facial Models Fabricated Using Traditional and 3D Imaging Techniques. **2016**, 1-13		

199	3D haptic modelling for preoperative planning of hepatic resection: A systematic review. **2016**, 10, 1-7		35
198	Three dimensional printing: A review on the utility within medicine and otolaryngology. **2016**, 89, 145-8		47
197	Metals for bone implants: safety, design, and efficacy. **2016**, 1, 1		63
196	Fluid and structure coupling analysis of the interaction between aqueous humor and iris. *BioMedical Engineering OnLine*, **2016**, 15, 133	4.1	15
195	Computer Image-Guided Template for Horizontal Advancement Genioplasty. *Journal of Craniofacial Surgery*, **2016**, 27, 2004-2008	1.2	6
194	The effects of computed tomography scanner parameters on the quality of the reverse triangular surface model of the fibula. **2016**, 38, 21-31		1
193	Advantages and disadvantages of 3-dimensional printing in surgery: A´systematic review. **2016**, 159, 1485-1500		329
192	3D-printing and the effect on medical costs: a new era?. **2016**, 16, 23-32		76
191	A synergistic approach to the design, fabrication and evaluation of 3D printed micro and nano featured scaffolds for vascularized bone tissue repair. **2016**, 27, 064001		106
190	Current Trends in 3D Printing, Bioprosthetics, and Tissue Engineering in Plastic and Reconstructive Surgery. **2016**, 4, 1		13
189	3D printing from diagnostic images: a radiologistâ primer with an emphasis on musculoskeletal imaging-putting the 3D printing of pathology into the hands of every physician. **2016**, 45, 307-21		29
188	Validation of cone beam computed tomography-based tooth printing using different three-dimensional printing technologies. **2016**, 121, 307-15		25
187	Printing Technologies for Medical Applications. **2016**, 22, 254-265		160
186	Combining regenerative medicine strategies to provide durable reconstructive options: auricular cartilage tissue engineering. **2016**, 7, 19		35
185	Characterisation of the surface structure of 3D printed scaffolds for cell infiltration and surgical suturing. **2016**, 8, 015016		31
184	Segmental Mirroring: Does It Eliminate the Need for Intraoperative Readjustment of the Virtually Pre-Bent Reconstruction Plates and Is It Economically Valuable?. **2016**, 74, 621-30		12
183	Cell-Derived Extracellular Matrix: Basic Characteristics and Current Applications in Orthopedic Tissue Engineering. **2016**, 22, 193-207		68
182	Applications of 3-Dimensional Printing in Facial Plastic Surgery. **2016**, 74, 427-8		9

181	3D printing with polymers: Challenges among expanding options and opportunities. **2016**, 32, 54-64		802
180	Three-Dimensional Printing and Medical Imaging: A Review of the Methods and Applications. **2016**, 45, 2-9		219
179	Personalized 3D printed model of kidney and tumor anatomy: a useful tool for patient education. **2016**, 34, 337-45		180
178	Use of three-dimensional printed haptic models for preoperative planning in an Australian plastic surgery unit. **2017**, 87, 1057-1059		4
177	A two-tiered structure device based on stereolithography for residual mandible repositioning in mandibular reconstruction with fibular flap. **2017**, 37, 509-515		3
176	Manejo quirúrgico de tumor mandibular asistido con la tecnología de impresión tridimensional: nota técnica y reporte de caso. **2017**, 69, 332-340		0
175	Feasibility study on accurate rapid prototyping for human hand bones and affiliated artery. **2017**, 23, 96-100		1
174	The use of virtual surgical planning and navigation in the treatment of orbital trauma. **2017**, 20, 9-13		47
173	The application of three-dimensional printing technology in anaesthesia: a systematic review. **2017**, 72, 641-650		33
172	3D Digitization and Prototyping of the Skull for Practical Use in the Teaching of Human Anatomy. **2017**, 41, 83		6
171	A New Classification of Three-Dimensional Printing Technologies: Systematic Review of Three-Dimensional Printing for Patient-Specific Craniomaxillofacial Surgery. *Plastic and Reconstructive Surgery*, **2017**, 139, 1211-1220	2.7	71
170	3D printing families. **2017**, 21-42		12
169	Security features embedded in computer aided design (CAD) solid models for additive manufacturing. **2017**, 128, 182-194		34
168	Shrinkage prediction using finite element analysis and experimental validation using three-dimension slurry printing system. *International Journal of Advanced Manufacturing Technology*, **2017**, 91, 1289-1296	3.2	7
167	Materials for 3D printing in medicine: Metals, polymers, ceramics, hydrogels. **2017**, 43-71		17
166	A three-dimensional pelvic model made with a three-dimensional printer: applications for laparoscopic surgery to treat rectal cancer. **2017**, 21, 383-387		18
165	Current and emerging applications of 3D printing in medicine. **2017**, 9, 024102		252
164	Internal Fixation of Complicated Acetabular Fractures Directed by Preoperative Surgery with 3D Printing Models. **2017**, 9, 257-260		21

163	Mandibular Rami Implant: A New Approach in Mandibular Reconstruction. **2017**, 75, 2550-2558		7
162	Reconstruction of a mandibular segmental defect with a customized 3-dimensional-printed titanium prosthesis in a cat with a mandibular osteosarcoma. **2017**, 250, 900-908		8
161	Feasibility of fabricating personalized 3D-printed bone grafts guided by high-resolution imaging. **2017**,		1
160	In silico modeling of structural and porosity properties of additive manufactured implants for regenerative medicine. **2017**, 76, 810-817		12
159	Rapid Prototyping as an Auxiliary in Mandibular Reconstructions. *Journal of Craniofacial Surgery*, **2017**, 28, e744-e745	1.2	2
158	Printing@Clinic: From Medical Models to Organ Implants. **2017**, 3, 3083-3097		16
157	Advances in 3D Modeling: Preoperative Templating for Revision Wrist Surgery. **2017**, 12, NP68-NP72		6
156	The application of 3-dimensional printing for preoperative planning in oral and maxillofacial surgery in dogs and cats. **2017**, 46, 942-951		30
155	Reconstructive Surgery. **2017**, 75, e264-e301		
154	Prototyping for the treatment of late zygomatic-orbital fracture: A case report. **2017**, 38, 91-94		2
153	3D Printing: current use in facial plastic and reconstructive surgery. **2017**, 25, 291-299		49
152	Mandibular reconstruction after cancer: an in-house approach to manufacturing cutting guides. **2017**, 46, 24-31		56
151	A novel three-dimensional print of liver vessels and tumors in hepatectomy. **2017**, 47, 521-524		42
150	Applications of 3D printing in the management of severe spinal conditions. **2017**, 231, 471-486		44
149	3D printing from MRI Data: Harnessing strengths and minimizing weaknesses. **2017**, 45, 635-645		42
148	Three-Dimensional Printing and Its Applications in Otorhinolaryngology-Head and Neck Surgery. **2017**, 156, 999-1010		88
147	A novel method for soft tissue retraction during periapical surgery using 3D technology: a case report. *International Endodontic Journal*, **2017**, 50, 813-822	5.4	19
146	The use of 3D models to improve sinus augmentation outcomes - A case report. **2017**, 38, 63-70		3

145	Three-Dimensional Printing Model as a Tool to Assist in Surgery for Large Mandibular Tumour: a Case Report. **2017**, 8, e4	5
144	3D printers for surgical practice. **2017**, 139-154	5
143	Management techniques of ameloblastoma: a literature review. **2017**, 65, 62-69	2
142	Minimally invasive surgery for resection of ossification of the ligamentum flavum in the thoracic spine. **2017**, 12, 96-105	12
141	The accuracy of three-dimensional fused deposition modeling (FDM) compared with three-dimensional CT-Scans on the measurement of the mandibular ramus vertical length, gonion-menton length, and gonial angle. **2017**, 884, 012050	
140	Surgical correction of grade III hypertelorism. **2017**, 43, S19-S24	2
139	Three-dimensional printing for craniomaxillofacial regeneration. **2017**, 43, 288-298	5
138	Low-cost Method for Obtaining Medical Rapid Prototyping Using Desktop 3D printing: A Novel Technique for Mandibular Reconstruction Planning. **2017**, 9, e1103-e1108	12
137	A review on quality control in additive manufacturing. **2018**, 24, 645-669	108
136	Surgical results of cranioplasty using three-dimensional printing technology. **2018**, 168, 118-123	21
135	Customized Titanium Lattice Structure in Three-Dimensional Alveolar Defect: An Initial Case Letter. **2018**, 44, 219-224	1
134	A visible light-curable yet visible wavelength-transparent resin for stereolithography 3D printing. **2018**, 10, 82-89	42
133	Fabrication of tough epoxy with shape memory effects by UV-assisted direct-ink write printing. **2018**, 14, 1879-1886	86
132	3D printed models in mandibular reconstruction with bony free flaps. **2018**, 29, 23	24
131	Custom Implant for Reconstruction of Mandibular Continuity Defect. **2018**, 76, 1370-1376	5
130	3D imaging, 3D printing and 3D virtual planning in endodontics. **2018**, 22, 641-654	40
129	Novel Patient-Specific 3-Dimensional Printed Fixation Tray for Mandibular Reconstruction With Fibular Free Flaps. **2018**, 76, 2211-2219	9
128	Augmented patient-specific facial prosthesis production using medical imaging modelling and 3D printing technologies for improved patient outcomes. **2018**, 13, 164-176	23

127	Polymeric 3D Printed Structures for Soft-Tissue Engineering. **2018**, 135, 45569		21
126	Multi-modal 3D Simulation Makes the Impossible Possible. *Plastic and Reconstructive Surgery - Global Open*, **2018**, 6, e1751	1.2	2
125	Virtual Surgical Planning Decreases Operative Time for Isolated Single Suture and Multi-suture Craniosynostosis Repair. *Plastic and Reconstructive Surgery - Global Open*, **2018**, 6, e2038	1.2	9
124	Radiological Society of North America (RSNA) 3D printing Special Interest Group (SIG): guidelines for medical 3D printing and appropriateness for clinical scenarios. *3D Printing in Medicine*, **2018**, 4, 11	5	116
123	Mandibular reconstruction using customized three-dimensional titanium implant. **2018**, 19, 152-156		8
122	3D printing in cell culture systems and medical applications. **2018**, 5, 041109		20
121	In house virtual surgery and 3D complex head and neck reconstruction. **2018**, 47, 75		13
120	Design and additive manufacturing of patient-specific cranial and pelvic bone implants from computed tomography data. **2018**, 40, 1		12
119	The Suitability of 3D Data: 3D Digitisation of Human Remains. **2018**, 14, 250-271		5
118	Patient-Specific 3D Printed Models for Education, Research and Surgical Simulation. **2018**,		5
117	New frontiers and emerging applications of 3D printing in ENT surgery: a systematic review of the literature. **2018**, 38, 286-303		17
116	Use of 3-D printing technologies in craniomaxillofacial surgery: a review. *Oral and Maxillofacial Surgery*, **2018**, 22, 249-259	1.6	43
115	Three-dimensional accuracy of mandibular reconstruction by patient-specific pre-bent reconstruction plates using an "in-house" 3D-printer. **2018**, 46, 1645-1651		13
114	3D printing for preoperative planning and surgical training: a review. **2018**, 20, 65		74
113	Accuracy of computer-assisted surgery in mandibular reconstruction: A systematic review. *Oral Oncology*, **2018**, 84, 52-60	4.4	52
112	Addressing Unmet Clinical Needs with 3D Printing Technologies. *Advanced Healthcare Materials*, **2018**, 7, e1800417	10.1	49
111	Utilizing a low-cost desktop 3D printer to develop a "one-stop 3D printing lab" for oral and maxillofacial surgery and dentistry fields. *3D Printing in Medicine*, **2018**, 4, 6	5	33
110	Application of 3-D Printing for Tissue Regeneration in Oral and Maxillofacial Surgery: What is Upcoming?. **2018**,		1

109	Guide design in virtual planning for scapular tip free flap reconstruction. **2018**, 3, 162-168		15
108	Current status and challenges of Additive manufacturing in orthopaedics: An overview. **2019**, 10, 380-386		34
107	The fitting accuracy of pre-bend reconstruction plates and their impact on the temporomandibular joint. **2019**, 47, 53-59		6
106	Oral Malignancies: Etiology, Distribution, and Treatment Considerations. **2019**, 71-89		
105	Customized Novel Design of 3D Printed Pregabalin Tablets for Intra-Gastric Floating and Controlled Release Using Fused Deposition Modeling. **2019**, 11,		32
104	The effect of fixation plate use on bone healing during the reconstruction of mandibular defects. **2019**, 45, 276-284		3
103	Functional Reconstruction of Mandibular Segment Defects With Individual Preformed Reconstruction Plate and Computed Tomographic Angiography-Aided Iliac Crest Flap. **2019**, 77, 1293-1304		2
102	Patient-specific 3D Printing: A Novel Technique for Complex Pediatric Renal Transplantation. **2019**, 269, e18-e23		16
101	Clinical applications of three-dimensional printing in otolaryngology-head and neck surgery: A systematic review. **2019**, 129, 2045-2052		17
100	Biomechanical Assessment of Design Parameters on a Self-Developed 3D-Printed Titanium-Alloy Reconstruction/Prosthetic Implant for Mandibular Segmental Osteotomy Defect. **2019**, 9, 597		3
99	The Role of 3D Printing in Medical Applications: A State of the Art. **2019**, 2019, 5340616		155
98	Biomaterials-aided mandibular reconstruction using in vivo bioreactors. **2019**, 116, 6954-6963		26
97	3D Printing: Applications in evolution and ecology. **2019**, 9, 4289-4301		22
96	Analysis of biomechanical behavior of 3D printed mandibular graft with porous scaffold structure designed by topological optimization. *3D Printing in Medicine*, **2019**, 5, 5	5	15
95	Surgical management of ameloblastoma. Review of literature. **2019**, 11, e70-e75		9
94	Application of 3-Dimensional Printing in Pediatric Living Donor Liver Transplantation: A Single-Center Experience. **2019**, 25, 831-840		11
93	The Fate of the Mandibular Reconstruction Plate. *Journal of Craniofacial Surgery*, **2019**, 30, e97-e101	1.2	2
92	Application of Three-Dimensional Printing Technology for Improved Orbital-Maxillary-Zygomatic Reconstruction. *Journal of Craniofacial Surgery*, **2019**, 30, e127-e131	1.2	12

91	Three-Dimensional Printing for Craniofacial Surgery: A Single Institution's 5-Year Experience. **2019**, 56, 729-734		7
90	Analysis of simulated mandibular reconstruction using a segmental mirroring technique. **2019**, 47, 468-472		15
89	Feasibility of 3D-printed models of the proximal femur to real bone: a cadaveric study. **2019**, 29, 452-455		1
88	3D Models Revolutionizing Surgical Outcomes in Oral and Maxillofacial Surgery: Experience at Our Center. *Journal of Maxillofacial and Oral Surgery*, **2020**, 19, 208-216	0.9	4
87	3D and 4D printing of biomaterials and biocomposites, bioinspired composites, and related transformers. **2020**, 467-504		2
86	Patient-Specific Mandibular Reconstruction Plates Increase Accuracy and Long-Term Stability in Immediate Alloplastic Reconstruction of Segmental Mandibular Defects. *Journal of Maxillofacial and Oral Surgery*, **2020**, 19, 609-615	0.9	9
85	3D printed bone models in oral and cranio-maxillofacial surgery: a systematic review. *3D Printing in Medicine*, **2020**, 6, 30	5	24
84	Challenges on optimization of 3D-printed bone scaffolds. *BioMedical Engineering OnLine*, **2020**, 19, 69	4.1	26
83	Cost Analysis for In-house versus Industry-printed Skull Models for Acute Midfacial Fractures. *Plastic and Reconstructive Surgery - Global Open*, **2020**, 8, e2831	1.2	2
82	The manufacturing procedure of 3D printed models for endoscopic endonasal transsphenoidal pituitary surgery. *Technology and Health Care*, **2020**, 28, 131-150	1.1	1
81	Development of patient specific 3D printed mandible implant. *IOP Conference Series: Materials Science and Engineering*, **2020**, 912, 062020	0.4	0
80	Accurate and cost-effective mandibular biomodels: a standardized evaluation of 3D-Printing via fused layer deposition modeling on soluble support structures. *Journal of Stomatology, Oral and Maxillofacial Surgery*, **2021**, 122, 355-360	1.7	4
79	Recent Advances in Formulating and Processing Biomaterial Inks for Vat Polymerization-Based 3D Printing. *Advanced Healthcare Materials*, **2020**, 9, e2000156	10.1	54
78	Computer-Assisted Preoperative Simulations and 3D Printed Surgical Guides Enable Safe and Less-Invasive Mandibular Segmental Resection: Tailor-Made Mandibular Resection. *Applied Sciences (Switzerland)*, **2020**, 10, 1325	2.6	0
77	Functionally graded biomimetic biomaterials in dentistry: an evidence-based update. *Journal of Biomaterials Science, Polymer Edition*, **2020**, 31, 1144-1162	3.5	10
76	Nanomaterial Patterning in 3D Printing. *Advanced Materials*, **2020**, 32, e1907142	24	72
75	Use of CAD-based pre-bent implants reduces theatre time in orbital floor reconstruction: results of a prospective study. *British Journal of Oral and Maxillofacial Surgery*, **2020**, 58, 753-758	1.4	2
74	Effect of nano-TiO2 on properties of 3 mol% yttria-stabilized zirconia ceramic via layered extrusion forming. *Journal of the European Ceramic Society*, **2020**, 40, 4539-4546	6	9

73	Case report: The use of three-dimensional biomodels for surgical planning of rib fixation. *Trauma Case Reports*, **2020**, 26, 100291	0.5	0
72	3D Printing for the Clinic: Examining Contemporary Polymeric Biomaterials and Their Clinical Utility. *Biomacromolecules*, **2020**, 21, 1037-1059	6.9	20
71	Autotransplantation of third molars with completely formed roots to replace compromised molars with the computer-aided rapid prototyping. *Journal of Esthetic and Restorative Dentistry*, **2020**, 32, 265-271	3.5	2
70	Contemporary reconstruction after complex facial trauma. *Burns and Trauma*, **2020**, 8, tkaa003	5.3	3
69	3D printing in dental implants. **2021**, 83-104		2
68	The reproduction of human pathology specimens using three-dimensional (3D) printing technology for teaching purposes. *Medical Teacher*, **2021**, 43, 189-197	3	1
67	Applications of three-dimensional printers in prosthetic dentistry. *Journal of Oral Science*, **2021**, 63, 212-216	1.5	1
66	Applications of Additive Manufacturing. *Springer Series in Advanced Manufacturing*, **2021**, 201-226	0.9	3
65	Current Status, Applications, and Factors Affecting Implementation of Additive Manufacturing in Indian Healthcare Sector: A Literature-Based Review. *Lecture Notes in Mechanical Engineering*, **2021**, 1015-1030	0.4	0
64	Rapid prototyping technology for silicone auricular prosthesis fabrication: A pilot study. *Journal of Head & Neck Physicians and Surgeons*, **2021**, 9, 35	0.2	1
63	Resection of large proportion ameloblastoma with immediate reconstruction: A case report. *International Journal of Case Reports and Images*, **2021**, 12, 1-7	1	
62	Clinical application of patient-specific 3D printing brain tumor model production system for neurosurgery. *Scientific Reports*, **2021**, 11, 7005	4.9	8
61	Biofabrication in Congenital Cardiac Surgery: A Plea from the Operating Theatre, Promise from Science. *Micromachines*, **2021**, 12,	3.3	3
60	The Use of Three-Dimensional Printed Technology for Mandibular Reconstruction in a Rare Case of Giant Odontogenic Myxofibroma. *Journal of Craniofacial Surgery*, **2021**, 32, e618-e620	1.2	
59	The role of additive manufacturing for biomedical applications: A critical review. *Journal of Manufacturing Processes*, **2021**, 64, 828-850	5	32
58	Tissue Engineering Through 3D Bioprinting to Recreate and Study Bone Disease. *Biomedicines*, **2021**, 9,	4.8	2
57	Affordable Three-Dimensional Printed Heart Models. *Frontiers in Cardiovascular Medicine*, **2021**, 8, 642015	5.4	4
56	The accuracy of clinical 3D printing in reconstructive surgery: literature review and validation study. *Gland Surgery*, **2021**, 10, 2293-2303	2.2	3

55	Establishing a point-of-care additive manufacturing workflow for clinical use. *Journal of Materials Research*, **2021**, 1-20	2.5	3
54	Influence of 3D-Printed TPU Properties for the Design of Elastic Products. *Polymers*, **2021**, 13,	4.5	5
53	Contemporary 3D planning for distraction osteogenesis creating predictable outcomes. *Advances in Oral and Maxillofacial Surgery*, **2021**, 3, 100098		1
52	Artificial Intelligence in 3D Printing: A Revolution in Health Care. *Lecture Notes in Bioengineering*, **2022**, 57-79	0.8	2
51	Rheological properties, dispensing force and printing fidelity of starchy-gels modulated by concentration, temperature and resting time. *Food Hydrocolloids*, **2021**, 117, 106703	10.6	11
50	Design of 3D-printed macro-models for undergraduatesPpreclinical practice of endodontic access cavities. *European Journal of Dental Education*, **2021**,	2.5	0
49	Three-Dimensional Printing for Cancer Applications: Research Landscape and Technologies. *Pharmaceuticals*, **2021**, 14,	5.2	2
48	Rapid Manufacturing of Biomedical Devices: Process Alternatives, Selection and Planning. *Materials Horizons*, **2022**, 77-104	0.6	0
47	Bacteriological and mechanical impact of the Sterrad sterilization method on personalized 3D printed guides for mandibular reconstruction. *Scientific Reports*, **2021**, 11, 581	4.9	1
46	3D Rapid Prototyping Heart Model Validation for Teaching and Training - A Pilot Project in a Teaching Institution. *Brazilian Journal of Cardiovascular Surgery*, **2021**, 36, 707-716	1.1	0
45	Image Guided 3D Printing and Haptic Modelling in Plastic Surgery. **2014**, 819-830		2
44	3D Rapid Prototyping for Otolaryngology-Head and Neck Surgery: Applications in Image-Guidance, Surgical Simulation and Patient-Specific Modeling. *PLoS ONE*, **2015**, 10, e0136370	3.7	60
43	Breast volumetric analysis for aesthetic planning in breast reconstruction: a literature review of techniques. *Gland Surgery*, **2016**, 5, 212-26	2.2	31
42	Recent Trends in 3D Printing of Dental Models. *Advances in Medical Technologies and Clinical Practice Book Series*, **2019**, 217-237	0.3	1
41	Ameloblastoma: Reconstruction Using Titanium Plates adapted Using Stereolithographic Models. *Annals of Maxillofacial Surgery*, **2018**, 8, 337-341	1	2
40	Prospect for 3D Printing Technology in Medical, Dental, and Pediatric Dental Field. *The Journal of the Korean Academy of Pedtatric Dentistry*, **2016**, 43, 93-108	0.4	14
39	Additive manufacturing: recent trends, applications and future outlooks. *Progress in Additive Manufacturing*, 1	5	3
38	The application of use case modeling in designing medical imaging information systems. *ISRN Radiology*, **2013**, 2013, 530729		2

37	Application of Three-Dimensional Printing in Facial Plastic and Reconstructive Surgery. *Korean Journal of Otorhinolaryngology-Head and Neck Surgery*, **2015**, 58, 599	0.2	0
36	MDCT of the Chest Wall. *Medical Radiology*, **2016**, 491-523	0.2	
35	Microvascular Craniomaxillofacial Reconstructive Bone Surgery. **2019**, 345-354		
34	Automated Design of Efficient Supports in FDM 3D Printing of Anatomical Phantoms. *IFMBE Proceedings*, **2020**, 292-300	0.2	1
33	3B Yaz□□le Elde Edilen Mandibula Modellerinin Boyutsal De□□rlendirilmesi. *Bilecik □□yh Edebali □niversitesi Fen Bilimleri Dergisi*, **2020**, 7, 444-451	0.2	
32	Bone marrow space volume of the mandible influencing intraoperative blood loss in bilateral sagittal split osteotomy: A pilot Study. *Journal of Stomatology, Oral and Maxillofacial Surgery*, **2021**,	1.7	
31	Mechanical effects of residual bone mass, a maxillofacial prosthesis, and a reconstruction plate on the mandible after marginal resection. *Journal of Oral Science*, **2020**, 62, 377-381	1.5	
30	Recent Trends in 3D Printing of Dental Models. **2020**, 424-444		
29	Outcomes of using pre-bent reconstruction plates in mandibular reconstruction. **2020**, 4,		1
28	Treatment of extensive tumors of the jaws by hemimandibuloectomy with simultaniouse reconstruction of the mandible, arthroplasty of temporomandibular joint, orthopedic rehabilitation supported by dental implants. *Opuholi Golovy I Sei*, **2020**, 10, 97-110	0.2	1
27	Customized Surgical Protocols for Guided Bone Regeneration Using 3D Printing Technology: A Retrospective Clinical Trial. *Journal of Craniofacial Surgery*, **2021**, 32, e198-e202	1.2	1
26	Rapid Prototyping Technologies and their Applications in Prosthodontics, a Review of Literature. *Journal of Dentistry*, **2015**, 16, 1-9	0.5	26
25	Three-Dimensional Printing Surgical Applications. *Eplasty*, **2015**, 15, e37	0.3	43
24	3D Printing Applications for Radiology: An Overview. *Indian Journal of Radiology and Imaging*, **2021**, 31, 10-17	0.8	1
23	[Virtual surgical planning and intraoperative navigation for mandibular reconstruction: from accurate to minimal invasive]. *Zhongguo Xiu Fu Chong Jian Wai Ke Za Zhi = Zhongguo Xiufu Chongjian Waike Zazhi = Chinese Journal of Reparative and Reconstructive Surgery*, **2018**, 32, 821-826	0.2	0
22	Three-Dimensional Virtual and Printed Prototypes in Complex Congenital and Pediatric Cardiac Surgery-A Multidisciplinary Team-Learning Experience. *Biomolecules*, **2021**, 11,	5.9	1
21	Reconstruction of large mandibular bone defects extended to the condyle using patient-specific implants based on CAD-CAM technology and 3D printing. *Advances in Oral and Maxillofacial Surgery*, **2022**, 5, 100229		0
20	Mandibular Body Reconstruction Utilizing a Three-Dimensional Custom-Made Porous Titanium Plate: A Four-Year Follow-Up Clinical Report.. *Case Reports in Dentistry*, **2022**, 2022, 5702066	0.6	0

19	EPPOCRATIS: Expedited Preoperative Point-of-Care Reduction of Fractures to Normalized Anatomy and Three-Dimensional Printing to Improve Surgical Outcomes.. *Plastic and Reconstructive Surgery*, **2022**, 149, 695-699	2.7	2
18	A critical analysis of research methods and experimental models to study root canal fillings.. *International Endodontic Journal*, **2022**,	5.4	0
17	The Use of Customized Three-Dimensionally Printed Mandible Prostheses with a Pressure-Reducing Device: A Finite Element Analysis in Different Chewing Positions, Biomechanical Testing, and In Vivo Animal Study Using Lanyu Pigs.. *BioMed Research International*, **2022**, 2022, 9880454	3	
16	Geometrical defect detection on additive manufacturing parts with curvature feature and machine learning. *International Journal of Advanced Manufacturing Technology*, 1	3.2	0
15	Theoretical analysis on 3D printed lower jaw. *Materials Today: Proceedings*, **2022**,	1.4	
14	Analysis of Quality of Life With 3D-Printed Model vis-Evis Conventional Procedure in Oral & Maxillofacial Surgery An Empirical Study. **2022**, 7, 275284642210983		
13	Analysis of the 100 most cited articles on ameloblastoma. *Oral and Maxillofacial Surgery*,	1.6	
12	The role of computer aided design/computer assisted manufacturing (CAD/CAM) and 3-dimensional printing in head and neck oncologic surgery: A review and future directions. *Oral Oncology*, **2022**, 132, 105976	4.4	0
11	Accuracy of additive manufacturing in stomatology. 10,		0
10	Fused Deposition Modeling 3D Printing in Oral and Maxillofacial Surgery: Problems and Solutions. **2022**,		0
9	Application of Additive Manufacturing for Resilient Healthcare Sector. **2022**,		0
8	Additive Manufacturing in Medicine and Craniofacial Applications of 3D Printing. **2022**, 454-465		0
7	Custom-Made 3D Titanium Plate for Mandibular Reconstruction in Surgery of Ameloblastoma: A Novel Case Report. **2022**, 11, 98-104		0
6	The Added Value of 3D Imaging and 3D Printing in Head and Neck Surgeries. **2022**, 1608-1622		0
5	3D printing families: laser, powder, and nozzle-based techniques. **2023**, 29-57		0
4	Materials for 3D printing in medicine: metals, polymers, ceramics, and hydrogels. **2023**, 59-103		0
3	3D printers for surgical practice. **2023**, 127-147		0
2	The Progress in Reconstruction of Mandibular Defect Caused by Osteoradionecrosis. **2023**, 2023, 1-12		0

1	Natural fiber biocomposites via 4D printing technologies: a review of possibilities for agricultural bio-mulching and related sustainable applications.	0