

3d printer unclassified

- 1: Ge P, Zhang Q, Ye X, Liu X, Deng X, Wang J, Wang R, Zhang Y, Zhang D, Zhao J. Postoperative collateral formation after indirect bypass for hemorrhagic moyamoya disease. *BMC Neurol*. 2020 Jan 17;20(1):28. doi: 10.1186/s12883-020-1612-z. PubMed PMID: 31952515.
- 2: Yang HS, Park JY. 3D Printer Application for Endoscope-Assisted Spine Surgery Instrument Development: From Prototype Instruments to Patient-Specific 3D Models. *Yonsei Med J*. 2020 Jan;61(1):94-99. doi: 10.3349/ymj.2020.61.1.94. PubMed PMID: 31887805; PubMed Central PMCID: PMC6938781.
- 3: Zhu KJ, Aiani LM, Pedersen NP. Reconfigurable 3D-Printed headplates for reproducible and rapid implantation of EEG, EMG and depth electrodes in mice. *J Neurosci Methods*. 2019 Dec 20:108566. doi: 10.1016/j.jneumeth.2019.108566. [Epub ahead of print] PubMed PMID: 31870688.
- 4: Ge P, Ye X, Liu X, Deng X, Wang J, Wang R, Zhang Y, Zhang D, Zhang Q, Zhao J. Angiographic Outcomes of Direct and Combined Bypass Surgery in Moyamoya Disease. *Front Neurol*. 2019 Dec 3;10:1267. doi: 10.3389/fneur.2019.01267. eCollection 2019. PubMed PMID: 31849825; PubMed Central PMCID: PMC6903770.
- 5: Chen Y, Ma L, Lu J, Chen X, Ye X, Zhang D, Zhang Y, Wang R, Zhao Y. Postoperative hemorrhage during the acute phase after direct or combined revascularization for moyamoya disease: risk factors, prognosis, and literature review. *J Neurosurg*. 2019 Oct 18:1-10. doi: 10.3171/2019.7.JNS19885. [Epub ahead of print] PubMed PMID: 31628285.
- 6: Ge P, Ye X, Liu X, Deng X, Wang J, Wang R, Zhang Y, Zhang D, Zhang Q, Zhao J. Association between p.R4810K Variant and Postoperative Collateral Formation in Patients with Moyamoya Disease. *Cerebrovasc Dis*. 2019;48(1-2):77-84. doi: 10.1159/000503250. Epub 2019 Oct 2. PubMed PMID: 31578010.
- 7: Chen J, Chen X, Lv S, Zhang Y, Long H, Yang K, Qi S, Zhang W, Wang J. Application of 3D Printing in the Construction of Burr Hole Ring for Deep Brain Stimulation Implants. *J Vis Exp*. 2019 Sep 7;(151). doi: 10.3791/59560. PubMed PMID: 31545320.
- 8: Ge P, Zhang Q, Ye X, Liu X, Deng X, Wang J, Wang R, Zhang Y, Zhang D, Zhao J. Cranioplasty after decompressive craniectomy in hemorrhagic moyamoya disease. *J Clin Neurosci*. 2019 Dec;70:234-237. doi: 10.1016/j.jocn.2019.08.028. Epub 2019 Aug 19. PubMed PMID: 31439481.
- 9: Clifton W, Nottmeier E, Damon A, Dove C, Pichelmann M. The Future of Biomechanical Spine Research: Conception and Design of a Dynamic 3D Printed Cervical Myelography Phantom. *Cureus*. 2019 May 3;11(5):e4591. doi: 10.7759/cureus.4591. PubMed PMID: 31309016; PubMed Central PMCID: PMC6609301.
- 10: Ge P, Ye X, Liu X, Deng X, Wang R, Zhang Y, Zhang D, Zhang Q, Zhao J. Association Between p.R4810K Variant and Long-Term Clinical Outcome in Patients With Moyamoya Disease. *Front Neurol*. 2019 Jun 25;10:662. doi: 10.3389/fneur.2019.00662. eCollection 2019. PubMed PMID: 31293503; PubMed Central PMCID: PMC6603092.
- 11: Kim PS, Choi CH, Han IH, Lee JH, Choi HJ, Lee JI. Obtaining Informed Consent Using Patient Specific 3D Printing Cerebral Aneurysm Model. *J Korean Neurosurg Soc*. 2019 Jul;62(4):398-404. doi: 10.3340/jkns.2019.0092. Epub 2019 Jul 1. PubMed PMID: 31290295; PubMed Central PMCID:

PMC6616983.

12: Bow H, Zuckerman SL, Griffith B, Lewis S, McGruder C, Pruthi S, Parker SL. A 3D-Printed Simulator and Teaching Module for Placing S2-Alar-Iliac Screws. *Oper Neurosurg* (Hagerstown). 2019 Jun 24. pii: opz161. doi: 10.1093/ons/opz161. [Epub ahead of print] PubMed PMID: 31232434.

13: Clifton W, Nottmeier E, Damon A, Dove C, Chen SG, Pichelmann M. A Feasibility Study for the Production of Three-dimensional-printed Spine Models Using Simultaneously Extruded Thermoplastic Polymers. *Cureus*. 2019 Apr 12;11(4):e4440. doi: 10.7759/cureus.4440. PubMed PMID: 31205831; PubMed Central PMCID: PMC6561520.

14: Deng X, Ge P, Wang S, Zhang D, Zhang Y, Wang R, Zhao J. Treatment of Moyamoya Disease. *Neurosurgery*. 2018 Sep 1;65(CN_suppl_1):62-65. doi: 10.1093/neuros/nyy114. PubMed PMID: 31076784.

15: Alshomer F, AlFaqeeh F, Alariefy M, Altweijri I, Alhums T. Low-Cost Desktop-Based Three-Dimensional-Printed Patient-Specific Craniofacial Models in Surgical Counseling, Consent Taking, and Education of Parent of Craniosynostosis Patients: A Comparison With Conventional Visual Explanation Modalities. *J Craniofac Surg*. 2019 Sep;30(6):1652-1656. doi: 10.1097/SCS.00000000000005401. PubMed PMID: 30946228.

16: Bettega AL, Brunello LFS, Nazar GA, De-Luca GYE, Sarquis LM, Wiederkehr HA, Foggiatto JA, Pimentel SK. Chest tube simulator: development of low-cost model for training of physicians and medical students. *Rev Col Bras Cir*. 2019 Jan 17;46(1):e2011. doi: 10.1590/0100-6991e-20192011. Portuguese, English. PubMed PMID: 30672976.

17: Yoon K, Jeong C, Kim SW, Cho B, Kwak J, Kim SS, Song SY, Choi EK, Ahn S, Lee SW. Dosimetric evaluation of respiratory gated volumetric modulated arc therapy for lung stereotactic body radiation therapy using 3D printing technology. *PLoS One*. 2018 Dec 26;13(12):e0208685. doi: 10.1371/journal.pone.0208685. eCollection 2018. PubMed PMID: 30586367; PubMed Central PMCID: PMC6306268.

18: Bartikian M, Ferreira A, Gonçalves-Ferreira A, Neto LL. 3D printing anatomical models of head bones. *Surg Radiol Anat*. 2019 Oct;41(10):1205-1209. doi: 10.1007/s00276-018-2148-4. Epub 2018 Dec 13. PubMed PMID: 30547209.

19: Leal A, Souza M, Nohama P. Additive Manufacturing of 3D Biomodels as Adjuvant in Intracranial Aneurysm Clipping. *Artif Organs*. 2019 Jan;43(1):E9-E15. doi: 10.1111/aor.13303. Epub 2018 Oct 25. PubMed PMID: 30357865.

20: Hoerner MR, Maynard MR, Rajon DA, Bova FJ, Hintenlang DE. Three-Dimensional Printing for Construction of Tissue-Equivalent Anthropomorphic Phantoms and Determination of Conceptus Dose. *AJR Am J Roentgenol*. 2018 Dec;211(6):1283-1290. doi: 10.2214/AJR.17.19489. Epub 2018 Oct 24. PubMed PMID: 30354270.

21: Naros A, Weise H, Tilsen F, Hoefert S, Naros G, Krimmel M, Reinert S, Polligkeit J. Three-dimensional accuracy of mandibular reconstruction by patient-specific pre-bent reconstruction plates using an "in-house" 3D-printer. *J Craniomaxillofac Surg*. 2018 Sep;46(9):1645-1651. doi: 10.1016/j.jcms.2018.05.047. Epub 2018 Jun 1. PubMed PMID: 29983306.

22: Dell'Aversana Orabona G, Abbate V, Maglitter F, Bonavolontà P, Salzano G, Romano A, Reccia A, Committeri U, Iaconetta G, Califano L. Low-cost, self-made CAD/CAM-guiding system for mandibular reconstruction. *Surg Oncol*. 2018 Jun;27(2):200-207. doi: 10.1016/j.suronc.2018.03.007. Epub 2018

Mar 29. PubMed PMID: 29937172.

23: Bow H, He L, Raees MA, Pruthi S, Chitale R. Development and Implementation of an Inexpensive, Easily Producing, Time Efficient External Ventricular Drain Simulator Using 3-Dimensional Printing and Image Registration. *Oper Neurosurg* (Hagerstown). 2019 Apr 1;16(4):496-502. doi: 10.1093/ons/opy142. PubMed PMID: 29873765.

24: Hsieh TY, Cervenka B, Dedhia R, Strong EB, Steele T. Assessment of a Patient-Specific, 3-Dimensionally Printed Endoscopic Sinus and Skull Base Surgical Model. *JAMA Otolaryngol Head Neck Surg*. 2018 Jul 1;144(7):574-579. doi: 10.1001/jamaoto.2018.0473. PubMed PMID: 29799965; PubMed Central PMCID: PMC6145784.

25: Wu C, Radevic MB, Glass JS, Skubic SE. Technical note: A 3D-printed phantom for routine accuracy check of Gamma Knife Icon HDMM system. *J Appl Clin Med Phys*. 2018 Jul;19(4):299-301. doi: 10.1002/acm2.12339. Epub 2018 May 23. PubMed PMID: 29797396; PubMed Central PMCID: PMC6036381.

26: De La Peña A, De La Peña-Brambila J, Pérez-De La Torre J, Ochoa M, Gallardo GJ. Low-cost customized cranioplasty using a 3D digital printing model: a case report. *3D Print Med*. 2018;4(1):4. doi: 10.1186/s41205-018-0026-7. Epub 2018 Apr 12. PubMed PMID: 29782609; PubMed Central PMCID: PMC5954791.

27: Garling RJ, Jin X, Yang J, Khasawneh AH, Harris CA. Low-cost endoscopic third ventriculostomy simulator with mimetic endoscope. *J Neurosurg Pediatr*. 2018 Aug;22(2):137-146. doi: 10.3171/2018.2.PEDS17671. Epub 2018 May 11. PubMed PMID: 29749882.

28: Zhang Q, Nguyen PD, Shi S, Burrell JC, Cullen DK, Le AD. 3D bio-printed scaffold-free nerve constructs with human gingiva-derived mesenchymal stem cells promote rat facial nerve regeneration. *Sci Rep*. 2018 Apr 26;8(1):6634. doi: 10.1038/s41598-018-24888-w. PubMed PMID: 29700345; PubMed Central PMCID: PMC5919929.

29: Ge P, Zhang Q, Ye X, Wang S, Zhang D, Zhao J. Clinical Features, Surgical Treatment, and Long-Term Outcome in Children with Hemorrhagic Moyamoya Disease. *J Stroke Cerebrovasc Dis*. 2018 Jun;27(6):1517-1523. doi: 10.1016/j.jstrokecerebrovasdis.2017.12.047. Epub 2018 Mar 19. PubMed PMID: 29567119.

30: Wang L, Ye X, Hao Q, Ma L, Chen X, Wang H, Zhao Y. Three-dimensional intracranial middle cerebral artery aneurysm models for aneurysm surgery and training. *J Clin Neurosci*. 2018 Apr;50:77-82. doi: 10.1016/j.jocn.2018.01.074. Epub 2018 Feb 10. PubMed PMID: 29439905.

31: Lin QS, Lin YX, Wu XY, Yao PS, Chen P, Kang DZ. Utility of 3-Dimensional-Printed Models in Enhancing the Learning Curve of Surgery of Tuberculum Sellae Meningioma. *World Neurosurg*. 2018 May;113:e222-e231. doi: 10.1016/j.wneu.2018.01.215. Epub 2018 Feb 9. PubMed PMID: 29432945.

32: Ge P, Ye X, Zhang Q, Zhang D, Wang S, Zhao J. Encephaloduroarteriosynangiosis versus conservative treatment for patients with moyamoya disease at late Suzuki stage. *J Clin Neurosci*. 2018 Apr;50:277-280. doi: 10.1016/j.jocn.2017.12.004. Epub 2018 Feb 1. PubMed PMID: 29366619.

33: Chhabra S, Chopra S, Kataria R, Sinha VD. Use of 3D printer model to study vertebral artery anatomy and variations in developmental craniovertebral junction anomalies and as a preoperative tool-an institutional experience. *J Spine Surg*. 2017 Dec;3(4):572-579. doi: 10.21037/jss.2017.10.07. PubMed PMID: 29354734; PubMed Central PMCID: PMC5760406.

- 34: Evins AI, Dutton J, Imam SS, Dadi AO, Xu T, Cheng D, Stieg PE, Bernardo A. On-Demand Intraoperative 3-Dimensional Printing of Custom Cranioplastic Prostheses. *Oper Neurosurg* (Hagerstown). 2018 Sep 1;15(3):341-349. doi: 10.1093/ons/oxp280. PubMed PMID: 29346608; PubMed Central PMCID: PMC6887998.
- 35: Dong M, Chen G, Qin K, Ding X, Zhou D, Peng C, Zeng S, Deng X. Development of three-dimensional brain arteriovenous malformation model for patient communication and young neurosurgeon education. *Br J Neurosurg*. 2018 Jan 15:1-4. doi: 10.1080/02688697.2018.1424320. [Epub ahead of print] PubMed PMID: 29334259.
- 36: Zheng JP, Li CZ, Chen GQ, Song GD, Zhang YZ. Three-Dimensional Printed Skull Base Simulation for Transnasal Endoscopic Surgical Training. *World Neurosurg*. 2018 Mar;111:e773-e782. doi: 10.1016/j.wneu.2017.12.169. Epub 2018 Jan 5. PubMed PMID: 29309974.
- 37: Son AI, Opfermann JD, McCue C, Ziobro J, Abrahams JH 3rd, Jones K, Morton PD, Ishii S, Oluigbo C, Krieger A, Liu JS, Hashimoto-Torii K, Torii M. An Implantable Micro-Caged Device for Direct Local Delivery of Agents. *Sci Rep*. 2017 Dec 15;7(1):17624. doi: 10.1038/s41598-017-17912-y. PubMed PMID: 29247175; PubMed Central PMCID: PMC5732160.
- 38: Shah A, Jankharia B, Goel A. Three-dimensional model printing for surgery on arteriovenous malformations. *Neurol India*. 2017 Nov-Dec;65(6):1350-1354. doi: 10.4103/0028-3886.217958. PubMed PMID: 29133713.
- 39: Rashim K, Verma Pawan K, Sinha VD. Increasing the safety of surgical treatment for complex Cranio-vertebral anomalies using customized 3D printed models. *J Clin Neurosci*. 2018 Feb;48:203-208. doi: 10.1016/j.jocn.2017.10.061. Epub 2017 Nov 9. PubMed PMID: 29129522.
- 40: Ghizoni E, de Souza JPSAS, Raposo-Amaral CE, Denadai R, de Aquino HB, Raposo-Amaral CA, Joaquim AF, Tedeschi H, Bernardes LF, Jardini AL. 3D-Printed Craniosynostosis Model: New Simulation Surgical Tool. *World Neurosurg*. 2018 Jan;109:356-361. doi: 10.1016/j.wneu.2017.10.025. Epub 2017 Oct 20. PubMed PMID: 29061457.
- 41: Broeckx CE, Maal TJJ, Vreeken RD, Bos RRM, Ter Laan M. Single-Step Resection of an Intraosseous Meningioma and Cranial Reconstruction: Technical Note. *World Neurosurg*. 2017 Dec;108:225-229. doi: 10.1016/j.wneu.2017.08.177. Epub 2017 Sep 5. PubMed PMID: 28887277.
- 42: Bannon R, Parihar S, Skarparis Y, Varsou O, Cezayirli E. 3D printing the pterygopalatine fossa: a negative space model of a complex structure. *Surg Radiol Anat*. 2018 Feb;40(2):185-191. doi: 10.1007/s00276-017-1916-x. Epub 2017 Aug 30. PubMed PMID: 28856438; PubMed Central PMCID: PMC5846833.
- 43: James MD, Bova FJ, Rajon DA, Carrera-Justiz S, Clemmons RM. Novel MRI and CT compatible stereotactic brain biopsy system in dogs using patient-specific facemasks. *J Small Anim Pract*. 2017 Nov;58(11):615-621. doi: 10.1111/jsap.12705. Epub 2017 Aug 26. PubMed PMID: 28843044.
- 44: Pallotta S, Calusi S, Foggi L, Lisci R, Masi L, Marrazzo L, Talamonti C, Livi L, Simontacchi G. ADAM: A breathing phantom for lung SBRT quality assurance. *Phys Med*. 2018 May;49:147-155. doi: 10.1016/j.ejmp.2017.07.004. Epub 2017 Jul 20. PubMed PMID: 28736284.
- 45: Ge P, Zhang Q, Zhao J. In Reply To "Moyamoya Disease: From Hypoperfusion to Network Disruption". *World Neurosurg*. 2017 Aug;104:1038-1039. doi: 10.1016/j.wneu.2017.05.116. PubMed PMID: 28732427.

- 46: Grauvogel TD, Engelskirchen P, Semper-Hogg W, Grauvogel J, Laszig R. Navigation accuracy after automatic- and hybrid-surface registration in sinus and skull base surgery. *PLoS One*. 2017 Jul 10;12(7):e0180975. doi: 10.1371/journal.pone.0180975. eCollection 2017. PubMed PMID: 28700740; PubMed Central PMCID: PMC5507282.
- 47: Ge P, Zhang Q, Ye X, Liu X, Deng X, Li H, Wang R, Zhang Y, Zhang D, Cao Y, Wang S, Zhao J. Clinical Features of Hemorrhagic Moyamoya Disease in China. *World Neurosurg*. 2017 Oct;106:224-230. doi: 10.1016/j.wneu.2017.06.145. Epub 2017 Jul 1. PubMed PMID: 28673885.
- 48: Sommer K, Izzo RL, Shepard L, Podgorsak AR, Rudin S, Siddiqui AH, Wilson MF, Angel E, Said Z, Springer M, Ionita CN. Design Optimization for Accurate Flow Simulations in 3D Printed Vascular Phantoms Derived from Computed Tomography Angiography. *Proc SPIE Int Soc Opt Eng*. 2017 Feb 11;10138. pii: 101380R. doi: 10.1117/12.2253711. Epub 2017 Mar 13. PubMed PMID: 28663663; PubMed Central PMCID: PMC5485824.
- 49: Meess KM, Izzo RL, Dryjski ML, Curl RE, Harris LM, Springer M, Siddiqui AH, Rudin S, Ionita CN. 3D Printed Abdominal Aortic Aneurysm Phantom for Image Guided Surgical Planning with a Patient Specific Fenestrated Endovascular Graft System. *Proc SPIE Int Soc Opt Eng*. 2017 Feb 11;10138. pii: 101380P. doi: 10.1117/12.2253902. Epub 2017 Mar 13. PubMed PMID: 28638171; PubMed Central PMCID: PMC5476205.
- 50: Liu Y, Gao Q, Du S, Chen Z, Fu J, Chen B, Liu Z, He Y. Fabrication of cerebral aneurysm simulator with a desktop 3D printer. *Sci Rep*. 2017 May 17;7:44301. doi: 10.1038/srep44301. PubMed PMID: 28513626; PubMed Central PMCID: PMC5434791.
- 51: Okonogi S, Kondo K, Harada N, Masuda H, Nemoto M, Sugo N. Operative simulation of anterior clinoidectomy using a rapid prototyping model molded by a three-dimensional printer. *Acta Neurochir (Wien)*. 2017 Sep;159(9):1619-1626. doi: 10.1007/s00701-017-3202-4. Epub 2017 May 15. PubMed PMID: 28508160.
- 52: Abdel Hay J, Smayra T, Moussa R. Customized Polymethylmethacrylate Cranioplasty Implants Using 3-Dimensional Printed Polylactic Acid Molds: Technical Note with 2 Illustrative Cases. *World Neurosurg*. 2017 Sep;105:971-979.e1. doi: 10.1016/j.wneu.2017.05.007. Epub 2017 May 11. PubMed PMID: 28502686.
- 53: Wang L, Ye X, Hao Q, Chen Y, Chen X, Wang H, Wang R, Zhao Y, Zhao J. Comparison of Two Three-Dimensional Printed Models of Complex Intracranial Aneurysms for Surgical Simulation. *World Neurosurg*. 2017 Jul;103:671-679. doi: 10.1016/j.wneu.2017.04.098. Epub 2017 Apr 24. PubMed PMID: 28450234.
- 54: Ge P, Zhang Q, Ye X, Liu X, Deng X, Li H, Wang R, Zhang Y, Zhang D, Zhao J. Long-Term Outcome After Conservative Treatment and Direct Bypass Surgery of Moyamoya Disease at Late Suzuki Stage. *World Neurosurg*. 2017 Jul;103:283-290. doi: 10.1016/j.wneu.2017.03.101. Epub 2017 Mar 30. PubMed PMID: 28366750.
- 55: Kaneko N, Mashiko T, Ohnishi T, Ohta M, Namba K, Watanabe E, Kawai K. Manufacture of patient-specific vascular replicas for endovascular simulation using fast, low-cost method. *Sci Rep*. 2016 Dec 15;6:39168. doi: 10.1038/srep39168. PubMed PMID: 27976687; PubMed Central PMCID: PMC5156941.
- 56: Watanabe Y, Sandhu D, Warmington L, Moen S, Tummala R. Three-dimensional assessment of the effects of high-density embolization material on the absorbed dose in the target for Gamma Knife radiosurgery of arteriovenous malformations. *J Neurosurg*. 2016 Dec;125(Suppl 1):123-128. PubMed PMID: 27903193.

- 57: Olanrewaju AO, Robillard A, Dagher M, Juncker D. Autonomous microfluidic capillare circuits replicated from 3D-printed molds. *Lab Chip*. 2016 Sep 21;16(19):3804-3814. PubMed PMID: 27722504; PubMed Central PMCID: PMC5314688.
- 58: Lan Q, Chen AL, Zhang T, Zhu Q, Xu T. [Preparation of simulate craniocerebral models via three dimensional printing technique]. *Zhonghua Yi Xue Za Zhi*. 2016 Aug 9;96(30):2434-7. doi: 10.3760/cma.j.issn.0376-2491.2016.30.015. Chinese. PubMed PMID: 27545038.
- 59: Ishibashi T, Takao H, Suzuki T, Yuki I, Kaku S, Kan I, Nishimura K, Suzuki T, Watanabe M, Karagiozov K, Murayama Y. Tailor-made shaping of microcatheters using three-dimensional printed vessel models for endovascular coil embolization. *Comput Biol Med*. 2016 Oct 1;77:59-63. doi: 10.1016/j.compbiomed.2016.07.005. Epub 2016 Aug 2. PubMed PMID: 27521515.
- 60: Konno T, Mashiko T, Oguma H, Kaneko N, Otani K, Watanabe E. [Rapid 3-Dimensional Models of Cerebral Aneurysm for Emergency Surgical Clipping]. *No Shinkei Geka*. 2016 Aug;44(8):651-60. doi: 10.11477/mf.1436203350. Japanese. PubMed PMID: 27506842.
- 61: Deng K, Ye X, Yang Y, Liu M, Ayyad A, Zhao Y, Yuan Y, Zhao J, Xu T. Evaluation of efficacy and biocompatibility of a new absorbable synthetic substitute as a dural onlay graft in a large animal model. *Neurol Res*. 2016 Sep;38(9):799-808. doi: 10.1080/01616412.2016.1214418. Epub 2016 Aug 2. PubMed PMID: 27487559.
- 62: Shui W, Zhou M, Chen S, Pan Z, Deng Q, Yao Y, Pan H, He T, Wang X. The production of digital and printed resources from multiple modalities using visualization and three-dimensional printing techniques. *Int J Comput Assist Radiol Surg*. 2017 Jan;12(1):13-23. doi: 10.1007/s11548-016-1461-9. Epub 2016 Aug 1. PubMed PMID: 27480284.
- 63: Conti A, Pontoriero A, Iatì G, Marino D, La Torre D, Vinci S, Germanò A, Pergolizzi S, Tomasello F. 3D-Printing of Arteriovenous Malformations for Radiosurgical Treatment: Pushing Anatomy Understanding to Real Boundaries. *Cureus*. 2016 Apr 29;8(4):e594. doi: 10.7759/cureus.594. PubMed PMID: 27335707; PubMed Central PMCID: PMC4914061.
- 64: Muelleman TJ, Peterson J, Chowdhury NI, Gorup J, Camarata P, Lin J. Individualized Surgical Approach Planning for Petroclival Tumors Using a 3D Printer. *J Neurol Surg B Skull Base*. 2016 Jun;77(3):243-8. doi: 10.1055/s-0035-1566253. Epub 2015 Nov 3. PubMed PMID: 27175320; PubMed Central PMCID: PMC4862860.
- 65: Kondo K, Harada N, Masuda H, Sugo N, Terazono S, Okonogi S, Sakaeyama Y, Fuchinoue Y, Ando S, Fukushima D, Nomoto J, Nemoto M. A neurosurgical simulation of skull base tumors using a 3D printed rapid prototyping model containing mesh structures. *Acta Neurochir (Wien)*. 2016 Jun;158(6):1213-9. doi: 10.1007/s00701-016-2781-9. Epub 2016 Apr 6. PubMed PMID: 27052513.
- 66: Izzo RL, O'Hara RP, Iyer V, Hansen R, Meess KM, Nagesh SVS, Rudin S, Siddiqui AH, Springer M, Ionita CN. 3D Printed Cardiac Phantom for Procedural Planning of a Transcatheter Native Mitral Valve Replacement. *Proc SPIE Int Soc Opt Eng*. 2016 Feb 27;9789. pii: 978908. doi: 10.1117/12.2216952. Epub 2016 Apr 5. PubMed PMID: 28615797; PubMed Central PMCID: PMC5467736.
- 67: Tan ET, Ling JM, Dinesh SK. The feasibility of producing patient-specific acrylic cranioplasty implants with a low-cost 3D printer. *J Neurosurg*. 2016 May;124(5):1531-7. doi: 10.3171/2015.5.JNS15119. Epub 2015 Nov 13. PubMed PMID: 26566203.
- 68: Watanabe E. [3D Printer and Its Impact on Neurosurgery]. *No Shinkei Geka*. 2015 Nov;43(11):967-76. doi: 10.11477/mf.1436203162. Review. Japanese. PubMed PMID: 26549716.

- 69: Weinstock P, Prabhu SP, Flynn K, Orbach DB, Smith E. Optimizing cerebrovascular surgical and endovascular [procedures](#) in children via personalized 3D printing. *J Neurosurg Pediatr*. 2015 Nov;16(5):584-589. doi: 10.3171/2015.3.PEDS14677. Epub 2015 Jul 31. PubMed PMID: 26230460.
- 70: Kondo K, Nemoto M, Masuda H, Okonogi S, Nomoto J, Harada N, Sugo N, Miyazaki C. Anatomical Reproducibility of a Head Model Molded by a Three-dimensional Printer. *Neurol Med Chir (Tokyo)*. 2015;55(7):592-8. doi: 10.2176/nmc.oa.2014-0436. Epub 2015 Jun 29. PubMed PMID: 26119896; PubMed Central PMCID: PMC4628193.
- 71: Mendez BM, Chiodo MV, Patel PA. Customized "In-Office" Three-Dimensional Printing for Virtual Surgical Planning in Craniofacial Surgery. *J Craniofac Surg*. 2015 Jul;26(5):1584-6. doi: 10.1097/SCS.0000000000001768. PubMed PMID: 26106998.
- 72: Jung J, Song SY, Yoon SM, Kwak J, Yoon K, Choi W, Jeong SY, Choi EK, Cho B. Verification of Accuracy of CyberKnife Tumor-tracking Radiation Therapy Using Patient-specific Lung Phantoms. *Int J Radiat Oncol Biol Phys*. 2015 Jul 15;92(4):745-53. doi: 10.1016/j.ijrobp.2015.02.055. Epub 2015 Mar 5. PubMed PMID: 25936598.
- 73: Soleman J, Thieringer F, Beinemann J, Kunz C, Guzman R. Computer-assisted virtual planning and surgical template fabrication for frontoorbital advancement. *Neurosurg Focus*. 2015 May;38(5):E5. doi: 10.3171/2015.3.FOCUS14852. PubMed PMID: 25929967.
- 74: Namba K, Higaki A, Kaneko N, Mashiko T, Nemoto S, Watanabe E. Microcatheter Shaping for Intracranial Aneurysm Coiling Using the 3-Dimensional Printing Rapid Prototyping Technology: Preliminary Result in the First 10 Consecutive Cases. *World Neurosurg*. 2015 Jul;84(1):178-86. doi: 10.1016/j.wneu.2015.03.006. Epub 2015 Mar 14. PubMed PMID: 25779852.
- 75: Mashiko T, Yang Q, Kaneko N, Konno T, Yamaguchi T, Watanabe E. [Pre-surgical simulation of microvascular decompression for hemifacial spasm using 3D-models]. *No Shinkei Geka*. 2015 Jan;43(1):41-9. doi: 10.11477/mf.1436202943. Japanese. PubMed PMID: 25557098.
- 76: Ionita CN, Mokin M, Varble N, Bednarek DR, Xiang J, Snyder KV, Siddiqui AH, Levy EI, Meng H, Rudin S. Challenges and limitations of patient-specific vascular phantom fabrication using 3D Polyjet printing. *Proc SPIE Int Soc Opt Eng*. 2014 Mar 13;9038:90380M. PubMed PMID: 25300886; PubMed Central PMCID: PMC4188370.
- 77: Cheung CL, Looi T, Lendvay TS, Drake JM, Farhat WA. Use of 3-dimensional printing technology and silicone modeling in surgical simulation: development and face validation in pediatric laparoscopic pyeloplasty. *J Surg Educ*. 2014 Sep-Oct;71(5):762-7. doi: 10.1016/j.jsurg.2014.03.001. Epub 2014 Apr 18. PubMed PMID: 24776857.
- 78: Vongerichten A, Aristovich K, dos Santos GS, McEvoy AW, Holder DS. Design for a three-dimensional printed laryngoscope blade for the intubation of rats. *Lab Anim (NY)*. 2014 Apr;43(4):140-2. doi: 10.1038/labani.463. PubMed PMID: 24651789.
- 79: Waran V, Narayanan V, Karuppiah R, Pancharatnam D, Chandran H, Raman R, Rahman ZA, Owen SL, Aziz TZ. Injecting realism in surgical training-initial simulation experience with custom 3D models. *J Surg Educ*. 2014 Mar-Apr;71(2):193-7. doi: 10.1016/j.jsurg.2013.08.010. Epub 2013 Nov 22. PubMed PMID: 24602709.
- 80: Kim H, Fabien J, Zheng Y, Yuan J, Brindle J, Sloan A, Yao M, Lo S, Wessels B, Machtay M, Welford S, Sohn JW. Establishing a process of irradiating small animal brain using a CyberKnife and a microCT scanner. *Med Phys*. 2014 Feb;41(2):021715. doi: 10.1118/1.4861713. PubMed PMID: 24506606.

- 81: Waran V, Narayanan V, Karuppiiah R, Owen SL, Aziz T. Utility of multimaterial 3D printers in creating models with pathological entities to enhance the training experience of neurosurgeons. *J Neurosurg*. 2014 Feb;120(2):489-92. doi: 10.3171/2013.11.JNS131066. Epub 2013 Dec 10. PubMed PMID: 24321044.
- 82: Mashiko T, Otani K, Kawano R, Konno T, Kaneko N, Ito Y, Watanabe E. Development of three-dimensional hollow elastic model for cerebral aneurysm clipping simulation enabling rapid and low cost prototyping. *World Neurosurg*. 2015 Mar;83(3):351-61. doi: 10.1016/j.wneu.2013.10.032. Epub 2013 Oct 16. Review. PubMed PMID: 24141000.
- 83: Inoue D, Yoshimoto K, Uemura M, Yoshida M, Ohuchida K, Kenmotsu H, Tomikawa M, Sasaki T, Hashizume M. Three-dimensional high-definition neuroendoscopic surgery: a controlled comparative laboratory study with two-dimensional endoscopy and clinical application. *J Neurol Surg A Cent Eur Neurosurg*. 2013 Nov;74(6):357-65. doi: 10.1055/s-0033-1345100. Epub 2013 Jul 25. PubMed PMID: 23888482.
- 84: Kim BJ, Hong KS, Park KJ, Park DH, Chung YG, Kang SH. Customized cranioplasty implants using three-dimensional printers and polymethyl-methacrylate casting. *J Korean Neurosurg Soc*. 2012 Dec;52(6):541-6. doi: 10.3340/jkns.2012.52.6.541. Epub 2012 Dec 31. PubMed PMID: 23346326; PubMed Central PMCID: PMC3550422.
- 85: Grauvogel TD, Grauvogel J, Arndt S, Berlis A, Maier W. Is there an equivalence of non-invasive to invasive referencing in computer-aided surgery? *Eur Arch Otorhinolaryngol*. 2012 Oct;269(10):2285-90. doi: 10.1007/s00405-012-2023-6. Epub 2012 May 5. PubMed PMID: 22562399.
- 86: Mavili ME, Canter HI, Saglam-Aydinatay B, Kamaci S, Kocadereli I. Use of three-dimensional medical modeling methods for precise planning of orthognathic surgery. *J Craniofac Surg*. 2007 Jul;18(4):740-7. PubMed PMID: 17667659.
- 87: Ribas GC, Bento RF, Rodrigues AJ Jr. Anaglyphic three-dimensional stereoscopic printing: revival of an old method for anatomical and surgical teaching and reporting. *J Neurosurg*. 2001 Dec;95(6):1057-66. PubMed PMID: 11765824.

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