

## DAFTAR PUSTAKA

- [1] N. Chalouhi, B. L. Hoh, and D. Hasan, “Review of cerebral aneurysm formation, growth, and rupture,” *Stroke*, vol. 44, no. 12, pp. 3613–3622, 2013, doi: 10.1161/STROKEAHA.113.002390.
- [2] A. M. Jersey and D. M. Foster, “Cerebral Aneurysm,” *Rapid Rev. Anesthesiol. Oral Boards*, pp. 130–135, Mar. 2023, doi: 10.1017/CBO9781139775380.030.
- [3] J. Novitzke, “The basics of brain aneurysms: a guide for patients.,” *J. Vasc. Interv. Neurol.*, vol. 1, no. 3, pp. 89–90, 2008, [Online]. Available: <http://www.ncbi.nlm.nih.gov/pubmed/22518230%0Ahttp://www.ncbi.nlm.nih.gov/articlerender.fcgi?artid=PMC3317292>
- [4] E. Van Lindert, A. Perneczky, D. Ph, G. Fries, and E. Pierangeli, “The Supraorbital Keyhole Approach to Supratentorial Aneurysms : Concept and Technique,” vol. 3019, no. January 1989, 1998.
- [5] O. Algin, A. Keles, and C. Oto, “Cerebrovascular modelling for the management of aneurysm embolization using an intrasaccular flow diverter made by 3D printing,” *Polish J. Radiol.*, vol. 87, no. 1, pp. 557–562, 2022, doi: 10.5114/pjr.2022.120520.
- [6] J. L. Wang, Z. G. Yuan, G. L. Qian, W. Q. Bao, and G. L. Jin, “3D printing of intracranial aneurysm based on intracranial digital subtraction angiography and its clinical application,” *Med. (United States)*, vol. 97, no. 24, pp. 1–6, 2018, doi: 10.1097/MD.00000000000011103.
- [7] E. A. Marciuc *et al.*, “3D Printed Models—a Useful Tool in Endovascular Treatment of Intracranial Aneurysms,” *Brain Sci.*, vol. 11, no. 5, 2021, doi: 10.3390/brainsci11050598.
- [8] J. U. Pucci, B. R. Christophe, J. A. Sisti, and E. S. Connolly, “Three-dimensional printing: technologies, applications, and limitations in neurosurgery,” *Biotechnol. Adv.*, vol. 35, no. 5, pp. 521–529, 2017, doi: 10.1016/j.biotechadv.2017.05.007.
- [9] P. Tack, J. Victor, P. Gemmel, and L. Annemans, “3D-printing techniques

- in a medical setting: A systematic literature review,” *Biomed. Eng. Online*, vol. 15, no. 1, pp. 1–21, 2016, doi: 10.1186/s12938-016-0236-4.
- [10] M. N. Nadagouda, V. Rastogi, and M. Ginn, “A review on 3D printing techniques for medical applications,” *Curr. Opin. Chem. Eng.*, vol. 28, pp. 152–157, 2020, doi: 10.1016/j.coche.2020.05.007.
  - [11] B. J. Doyle, L. G. Morris, A. Callanan, P. Kelly, D. A. Vorp, and T. M. McGloughlin, “3D reconstruction and manufacture of real abdominal aortic aneurysms: From CT scan to silicone model,” *J. Biomech. Eng.*, vol. 130, no. 3, 2008, doi: 10.1115/1.2907765.
  - [12] A. Sulaiman *et al.*, “In vitro non-rigid life-size model of aortic arch aneurysm for endovascular prosthesis assessment,” *Eur. J. Cardio-thoracic Surg.*, vol. 33, no. 1, pp. 53–57, 2008, doi: 10.1016/j.ejcts.2007.10.016.
  - [13] C. L. Cheung, T. Looi, J. Drake, and P. C. W. Kim, “Magnetic resonance imaging properties of multimodality anthropomorphic silicone rubber phantoms for validating surgical robots and image guided therapy systems,” *Med. Imaging 2012 Image-Guided Proced. Robot. Interv. Model.*, vol. 8316, p. 83161X, 2012, doi: 10.1117/12.908274.
  - [14] Y. Kang *et al.*, “Three-dimensional printing technology for treatment of intracranial aneurysm,” *Chinese Neurosurg. J.*, vol. 2, no. 1, pp. 125–134, 2016, doi: 10.1186/s41016-016-0046-3.
  - [15] A. Price, L. Savastano, W. C. Lin, B. Belmont, and A. Shih, “Manufacturing of anatomically accurate cerebral arteries for the brain aneurysm surgical simulator,” *ASME 2016 11th Int. Manuf. Sci. Eng. Conf. MSEC 2016*, vol. 2, pp. 3–7, 2016, doi: 10.1115/MSEC2016-8806.
  - [16] V. K. Chivukula *et al.*, “Reconstructing patient-specific cerebral aneurysm vasculature for in vitro investigations and treatment efficacy assessments,” *J. Clin. Neurosci.*, vol. 61, no. xxxx, pp. 153–159, 2019, doi: 10.1016/j.jocn.2018.10.103.
  - [17] R. G. Nagassa, P. G. McMenamin, J. W. Adams, M. R. Quayle, and J. V. Rosenfeld, “Advanced 3D printed model of middle cerebral artery aneurysms for neurosurgery simulation,” *3D Print. Med.*, vol. 5, no. 1, 2019, doi: 10.1186/s41205-019-0048-9.

- [18] Q. Lan, Q. Zhu, L. Xu, and T. Xu, “Application of 3D-Printed Craniocerebral Model in Simulated Surgery for Complex Intracranial Lesions,” *World Neurosurg.*, vol. 134, pp. e761–e770, 2020, doi: 10.1016/j.wneu.2019.10.191.
- [19] S. J. Li, F. Wang, W. Chen, and Y. Su, “Application of three dimensional (3D) curved multi-planar reconstruction images in 3D printing mold assisted eyebrow arch keyhole microsurgery,” *Brain Behav.*, vol. 10, no. 10, pp. 1–7, 2020, doi: 10.1002/brb3.1785.
- [20] M. Błaszczyk, R. Jabbar, B. Szmyd, and M. Radek, “3D printing of rapid, low-cost and patient-specific models of brain vasculature for use in preoperative planning in clipping of intracranial aneurysms,” *J. Clin. Med.*, vol. 10, no. 6, pp. 1–12, 2021, doi: 10.3390/jcm10061201.
- [21] M. K. Faraj and A. J. M. et al , Samer S. Hoz, ?“e use of three-dimensional anatomical patient-specific printed models in surgical clipping of intracranial aneurysm: A pilot study,” *Surg. Neurol. Int.*, vol. 13, no. 510, pp. 1–5, 2022, doi: 10.25259/SNI.
- [22] M. Roldan and P. A. Kyriacou, “Head Phantom for the Acquisition of Pulsatile Optical Signals for Traumatic Brain Injury Monitoring,” *Photonics*, vol. 10, no. 5, 2023, doi: 10.3390/photonics10050504.
- [23] B. Jiang, M. Paff, G. P. Colby, A. L. Coon, and L. M. Lin, “Cerebral aneurysm treatment: Modern neurovascular techniques,” *Stroke Vasc. Neurol.*, vol. 1, no. 3, pp. 93–100, 2016, doi: 10.1136/svn-2016-000027.
- [24] T. O. Skodvin, L. H. Johnsen, Ø. Gjertsen, J. G. Isaksen, and A. Sorteberg, “Cerebral Aneurysm Morphology before and after Rupture: Nationwide Case Series of 29 Aneurysms,” *Stroke*, vol. 48, no. 4, pp. 880–886, 2017, doi: 10.1161/STROKEAHA.116.015288.
- [25] “Brain Aneurysm: What It Is, Causes, Symptoms & Treatment,” *Cleveland Clinic medical professional*, 2023. <https://my.clevelandclinic.org/health/diseases/16800-brain-aneurysm#outlook--prognosis> (accessed Jun. 11, 2023).
- [26] U. Sure and E. I. Sandalcioglu, “Forsting M, Wanke I (Eds): Intracranial vascular malformations and aneurysms,” *Neurosurg. Rev.*, vol. 32, no. 3, pp.

- 379–379, 2009, doi: 10.1007/s10143-009-0198-0.
- [27] T. Krings, R. L. Piske, and P. L. Lasjaunias, “Intracranial arterial aneurysm vasculopathies: Targeting the outer vessel wall,” *Neuroradiology*, vol. 47, no. 12, pp. 931–937, 2005, doi: 10.1007/s00234-005-1438-9.
- [28] A. G. Sastrodiningrat, “NEUROSURGERY,” *Neurosurgery*, 2012.
- [29] R. D. E. Jeffrey E Florman, “Neurosurgery for Cerebral Aneurysm: Background, Saccular Aneurysms: Degenerative or Developmental, Saccular Aneurysms: Traumatic,” *Medscape*. <https://emedicine.medscape.com/article/252142-overview#a18> (accessed Jun. 13, 2023).
- [30] K. Mori, “Keyhole concept in cerebral aneurysm clipping and tumor removal by the supraciliary lateral supraorbital approach,” *Asian J. Neurosurg.*, vol. 9, no. 01, pp. 14–20, 2014, doi: 10.4103/1793-5482.131059.
- [31] H. Prajapati, A. Ansari, and M. Jaiswal, “Keyhole approach in anterior circulation aneurysm: Current indication, advantages, technical limitations, complications and their avoidance,” *J. Cerebrovasc. Endovasc. Neurosurg.*, vol. 24, no. 2, pp. 101–112, 2022, doi: 10.7461/jcen.2022.E2021.07.008.
- [32] L. Frizziero *et al.*, “New methodology for diagnosis of orthopedic diseases through additive manufacturing models,” *Symmetry (Basel)*., vol. 11, no. 4, 2019, doi: 10.3390/sym11040542.
- [33] R. Schmidt and K. Singh, “Meshmixer: An interface for rapid mesh composition,” *ACM SIGGRAPH 2010 Talks, SIGGRAPH '10*, p. 2006, 2010, doi: 10.1145/1837026.1837034.
- [34] T. Rusianto, S. Huda, dan Harry Wibowo, J. Kalisahak No, and K. Balapan Yogyakarta, “a Riview: Jenis Dan Pencetakan 3D (3D Printing) Untuk Pembuatan Prototipe,” *J. Teknol.*, vol. 12, no. 1, pp. 14–21, 2019, [Online]. Available: <https://aaq.auburn.edu/node/9907/take>
- [35] S. M. Peltola, F. P. W. Melchels, D. W. Grijpma, and M. Kellomäki, “A review of rapid prototyping techniques for tissue engineering purposes,” *Ann. Med.*, vol. 40, no. 4, pp. 268–280, 2008, doi: 10.1080/07853890701881788.
- [36] A. M. J. Frölich *et al.*, “3D printing of intracranial aneurysms using fused

- deposition modeling offers highly accurate replications,” *Am. J. Neuroradiol.*, vol. 37, no. 1, pp. 120–124, 2016, doi: 10.3174/ajnr.A4486.
- [37] S. Jasveer and X. Jianbin, “Comparison of Different Types of 3D Printing Technologies,” *Int. J. Sci. Res. Publ.*, vol. 8, no. 4, pp. 1–9, 2018, doi: 10.29322/ijrsp.8.4.2018.p7602.
- [38] J. R. Anderson *et al.*, “Three-dimensional printing of anatomically accurate patient specific intracranial aneurysm models,” pp. 517–520, 2016, doi: 10.1136/neurintsurg-2015-011686.
- [39] A. Scribante *et al.*, “Properties of CAD/CAM 3D Printing Dental Materials and Their Clinical Applications in Orthodontics: Where Are We Now?,” *Appl. Sci.*, vol. 12, no. 2, 2022, doi: 10.3390/app12020551.
- [40] I. A. Dharma and M. F. Darmawan, “Fabrikasi Model Anatomi 3-D menggunakan 3-D Printing untuk Simulasi Proses Operasi Total Knee Replacement (TKR) berdasarkan Rekonstruksi Pemindaian CT/MRI sebagai Alat Edukasi dan Pelatihan,” *J. Rekayasa Mesin*, vol. 18, no. 2, p. 265, 2023, doi: 10.32497/jrm.v18i2.4709.
- [41] R. Karuppiah, T. Munusamy, N. F. A. Bahuri, and V. Waran, “The utilisation of 3D printing in paediatric neurosurgery,” *Child’s Nerv. Syst.*, vol. 37, no. 5, pp. 1479–1484, 2021, doi: 10.1007/s00381-021-05123-w.
- [42] Q. Lan, Q. Zhu, L. Xu, and T. Xu, “Application of 3D-Printed Craniocerebral Model in Simulated Surgery for Complex Intracranial Lesions,” *World Neurosurg.*, vol. 134, pp. e761–e770, 2020, doi: 10.1016/j.wneu.2019.10.191.
- [43] B. Nguyen, O. Ashraf, R. Richards, H. Tra, and T. Huynh, “Cranioplasty Using Customized 3-Dimensional-Printed Titanium Implants: An International Collaboration Effort to Improve Neurosurgical Care,” *World Neurosurg.*, vol. 149, pp. 174–180, 2021, doi: 10.1016/j.wneu.2021.02.104.
- [44] I. Murtezani, N. Sharma, and F. M. Thieringer, “Medical 3D printing with a focus on Point-of-Care in Cranio- and Maxillofacial Surgery. A systematic review of literature,” *Ann. 3D Print. Med.*, vol. 6, p. 100059, 2022, doi: 10.1016/j.stlm.2022.100059.
- [45] F. Alshomer, F. Alfaqeeh, M. Alariefy, I. Altweijri, and T. Alhumsi, “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.*, vol. 30, no. 6, pp. 1652–1656, 2019, doi: 10.1097/SCS.00000000000005401.
- [46] M. A. Cuiffo, J. Snyder, A. M. Elliott, N. Romero, S. Kannan, and G. P. Halada, “Impact of the fused deposition (FDM) printing process on polylactic acid (PLA) chemistry and structure,” *Appl. Sci.*, vol. 7, no. 6, pp. 1–14, 2017, doi: 10.3390/app7060579.
- [47] M. Zare, E. R. Ghomi, P. D. Venkatraman, and S. Ramakrishna, “Silicone-based biomaterials for biomedical applications: Antimicrobial strategies and 3D printing technologies,” *J. Appl. Polym. Sci.*, vol. 138, no. 38, pp. 1–18, 2021, doi: 10.1002/app.50969.
- [48] D. Y. Lestari, “Pemilihan Katalis Yang Ideal,” *Pros. Semin. Nas. Penelitian, Pendidik. dan Penerapan MIPA*, pp. 1–6, 2012.
- [49] P. I. Braileanu, A. Calin, T. G. Dobrescu, and N. E. Pascu, “Comparative Examination of Friction Between Additive Manufactured Plastics and Steel Surface,” *Mater. Plast.*, vol. 60, no. 3, pp. 48–57, 2023, doi: 10.37358/MP.23.3.5675.
- [50] R. A. Nicholson and M. Crofton, “Training phantom for ultrasound guided biopsy,” *Br. J. Radiol.*, vol. 70, no. FEB., pp. 192–194, 1997, doi: 10.1259/bjr.70.830.9135447.
- [51] J. Program and D. Tiga, “Kesesuaian Dimensi Universal Joint Hasil Cetak Mesin 3d Printer,” 2021.
- [52] C. M. García-Herrera *et al.*, “Mechanical behaviour and rupture of normal and pathological human ascending aortic wall,” *Med. Biol. Eng. Comput.*, vol. 50, no. 6, pp. 559–566, 2012, doi: 10.1007/s11517-012-0876-x.
- [53] J. Kwon, J. Ock, and N. Kim, “Mimicking the mechanical properties of aortic tissue with pattern-embedded 3d printing for a realistic phantom,” *Materials (Basel).*, vol. 13, no. 21, pp. 1–13, 2020, doi: 10.3390/ma13215042.
- [54] Z. Tan, D. Dini, F. Rodriguez y Baena, and A. E. Forte, “Composite hydrogel: A high fidelity soft tissue mimic for surgery,” *Mater. Des.*, vol.

- 160, pp. 886–894, 2018, doi: 10.1016/j.matdes.2018.10.018.
- [55] Y. Li, J. Deng, J. Zhou, and X. Li, “Elastic and viscoelastic mechanical properties of brain tissues on the implanting trajectory of sub-thalamic nucleus stimulation,” *J. Mater. Sci. Mater. Med.*, vol. 27, no. 11, pp. 0–1, 2016, doi: 10.1007/s10856-016-5775-5.
- [56] D. J. Macdonald, H. M. Finlay, and P. B. Canham, “Directional Wall Strength in Saccular Brain Aneurysms from Polarized Light Microscopy,” *Ann. Biomed. Eng.*, vol. 28, no. 5, pp. 533–542, 2000, doi: 10.1114/1.292.
- [57] M. Rizky Mubarok, R. Herteno, I. Komputer Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Lambung Mangkurat Jalan Ahmad Yani Km, and K. Selatan, “Hyper-Parameter Tuning Pada Xgboost Untuk Prediksi Keberlangsungan Hidup Pasien Gagal Jantung,” *Klik - Kumpul. J. Ilmu Komput.*, vol. 9, no. 2, pp. 391–401, 2022, [Online]. Available: <http://klik.ulm.ac.id/index.php/klik/article/view/484>
- [58] R. Denti Salindeho, J. Soukota, R. Poeng, J. Teknik, M. Universitas, and S. Ratulangi, “Pemodelan Pengujian Tarik Untuk Menganalisis Sifat Mekanik Material,” *Poros Tek. Mesin Unsrat*, vol. 2, pp. 1–11, 2013.
- [59] M. Griffin, Y. Premakumar, A. Seifalian, P. E. Butler, and M. Szarko, “Biomechanical characterization of human soft tissues using indentation and tensile testing,” *J. Vis. Exp.*, vol. 2016, no. 118, 2016, doi: 10.3791/54872.
- [60] P. Leroux and D. Li, “Yield & Tensile Strength of Steel & Aluminium Using Microindentation,” *Today's Stand. tomorrow's Mater.*, no. January, pp. 1–6, 2015, doi: 10.13140/RG.2.1.2612.1122.
- [61] A. P. Ebrahimi, “Mechanical properties of normal and diseased cerebrovascular system,” *J. Vasc. Interv. Neurol.*, vol. 2, no. 2, pp. 155–62, 2009, [Online]. Available: <http://www.ncbi.nlm.nih.gov/pubmed/22518247%0Ahttp://www.ncbi.nlm.nih.gov/articlerender.fcgi?artid=PMC3317338>