

DAFTAR PUSTAKA

- Abbas, Z. dan Rehman, S. (2018) "Neoplasms," *Practical Immunodermatology* [Preprint]. Tersedia pada: <https://doi.org/http://dx.doi.org/10.5772/intechopen.76558>.
- Abdel-Misih, S.R.Z. dan Bloomston, M. (2010) "Liver Anatomy," *Surgical Clinics of North America*, 90(4), hal. 643–653. Tersedia pada: <https://doi.org/10.1016/j.suc.2010.04.017>.
- Abdullaeva, G., Djuraeva, G., Kim, A., Koblik, Y., Kulabdullaev, G., Rakhmonov, T. dan Saytjanov, S. (2015) "Evaluation of absorbed dose in Gadolinium neutron capture therapy," *Open Physics*, 13(1), hal. 183–187. Tersedia pada: <https://doi.org/10.1515/phys-2015-0022>.
- Al-Ibraheem, A., Hirmas, N., Fanti, S., Paez, D., Abuhijla, F., Al-Rimawi, D., Al-Rasheed, U., Abdeljalil, R., Hawari, F., Alrabi, K. dan Mansour, A. (2021) "Impact of 18F-FDG PET/CT, CT and EBUS/TBNA on preoperative mediastinal nodal staging of NSCLC," *BMC Medical Imaging*, 21(1), hal. 1–9. Tersedia pada: <https://doi.org/10.1186/s12880-021-00580-w>.
- Alaus, I. (1967) "Neutron-neutron interaction," *Reviews of Modern Physics*, 39(3), hal. 575–583. Tersedia pada: <https://doi.org/10.1103/RevModPhys.39.575>.
- American Cancer Society (2019) "Liver Cancer Early Detection , Diagnosis , and Staging Can Liver Cancer Be Found Early?," hal. 1–22.
- Ardana, I.M. (2015) "Optimasi Desain Kolimator Dan Dosimetri Terapi Kanker Sarkoma Jaringan Lunak pada leher dan kepala dengan Boron Neutron Capture Therapy untuk Sumber Neutron Cyclotron 30 MeV menggunakan Program Monte Carlo N Particle X." Tersedia pada: https://www.researchgate.net/publication/269107473_What_is_governance/link/548173090cf22525dcb61443/download%0Ahttp://www.econ.upf.edu/~reynal/Civil_wars_12December2010.pdf%0Ahttps://think-asia.org/handle/11540/8282%0Ahttps://www.jstor.org/stable/41857625.
- Ardana, I.M. dan Sardjono, Y. (2017) "Optimization of a Neutron Beam Shaping Assembly Design for Bnct and Its Dosimetry Simulation Based on Mcnpx," *Jurnal Teknologi Reaktor Nuklir Tri Dasa Mega*, 19(3), hal. 121. Tersedia pada: <https://doi.org/10.17146/tm.2017.19.3.3582>.
- Badan Pengawas Tenaga Nuklir (2013) "Peraturan Kepala Badan Pengawas Tenaga Nuklir Nomor 4 Tahun 2013 tentang Proteksi dan Keselamatan Radiasi dalam Pemanfaatan Tenaga Nuklir," *Republik Indonesia* [Preprint].
- Boellaard, R., Delgado-Bolton, R., Oyen, W.J.G., Giammarile, F., Tatsch, K., Eschner, W., Verzijlbergen, F.J., Barrington, S.F., Pike, L.C., Weber, W.A., Stroobants, S., Delbeke, D., Donohoe, K.J., Holbrook, S., Graham, M.M., Testanera, G., Hoekstra, O.S., Zijlstra, J., Visser, E., Hoekstra, C.J., Pruim, J., Willemsen, A., Arends, B., Kotzerke, J., Bockisch, A., Beyer, T., Chiti, A. dan Krause, B.J. (2015) "FDG PET/CT: EANM procedure guidelines for

- tumour imaging: version 2.0,” *European Journal of Nuclear Medicine and Molecular Imaging*, 42(2), hal. 328–354. Tersedia pada: <https://doi.org/10.1007/s00259-014-2961-x>.
- Breur, K. (1973) “Recent developments in radiotherapy,” *Archivum Chirurgicum Neerlandicum*, 25(4), hal. 341–350. Tersedia pada: <https://doi.org/10.1056/nejmra1608986>.
- Burnet, N.G., Thomas, S.J., Burton, K.E. dan Jefferies, S.J. (2004) “Defining the tumour and target volumes for radiotherapy,” *Cancer Imaging*, 4(2), hal. 153–161. Tersedia pada: <https://doi.org/10.1102/1470-7330.2004.0054>.
- Dymova, M.A., Taskaev, S.Y., Richter, V.A. dan Kuligina, E.V. (2020) “Boron neutron capture therapy: Current status and future perspectives,” *Cancer Communications*, 40(9), hal. 406–421. Tersedia pada: <https://doi.org/10.1002/cac2.12089>.
- Ebner, D.K. dan Kamada, T. (2016) “The emerging role of carbon-ion radiotherapy,” *Frontiers in Oncology*, 6(JUN), hal. 6–11. Tersedia pada: <https://doi.org/10.3389/fonc.2016.00140>.
- Edwards, D.A. dan Syphers, M.J. (1993) *An Introduction to the Physics of High Energy Accelerators, An Introduction to the Physics of High Energy Accelerators*. Tersedia pada: <https://doi.org/10.1002/9783527617272>.
- Fisher, D.R. dan Fahey, F.H. (2017) “Appropriate use of effective dose in radiation protection and risk assessment,” *Health Physics*, 113(2), hal. 102–109. Tersedia pada: <https://doi.org/10.1097/HP.0000000000000674>.
- Gomez-Quiroz, L.E. dan Roman, S. (2022) “Influence of genetic and environmental risk factors in the development of hepatocellular carcinoma in Mexico,” *Annals of Hepatology*, 27, hal. 100649. Tersedia pada: <https://doi.org/10.1016/j.aohep.2021.100649>.
- Grosu, A.-L., Sprague, L.D. dan Molls, M. (2006) “Definition of Target Volume and Organs at Risk. Biological Target Volume,” *New Technologies in Radiation Oncology*, 167, hal. 167–177. Tersedia pada: https://doi.org/10.1007/3-540-29999-8_13.
- Han, M.C., Yeom, Y.S., Lee, H.S., Shin, B., Kim, C.H. dan Furuta, T. (2018) “Multi-threading performance of Geant4, MCNP6, and PHITS Monte Carlo codes for tetrahedral-mesh geometry,” *Physics in Medicine and Biology*, 63(9). Tersedia pada: <https://doi.org/10.1088/1361-6560/aabd20>.
- Hanna, S. (2012) *RF linear accelerators for medical and industrial applications*.
- Harish, A.F. dan Sardjono, Y. (2018) “Dose Analysis of Boron Neutron Capture Therapy (BNCT) Treatment for Lung Cancer Based on Particle and Heavy Ion Transport code System (PHITS) ASEAN Journal on Science & Technology for Development Dose Analysis of Boron Neutron Capture Therapy (BNCT),” (February 2019). Tersedia pada: <https://doi.org/10.29037/ajstd.545>.

- Hawthorne, M.F. dan Lee, M.W. (2003) "A critical assessment of boron target compounds for boron neutron capture therapy," *Journal of Neuro-Oncology*, 62(1–2), hal. 33–45. Tersedia pada: <https://doi.org/10.1023/A:1023253309343>.
- He, H., Li, J., Jiang, P., Tian, S., Wang, H., Fan, R., Liu, J., Yang, Y., Liu, Z. dan Wang, J. (2021) "The basis and advances in clinical application of boron neutron capture therapy," *Radiation Oncology*, 16(1), hal. 1–8. Tersedia pada: <https://doi.org/10.1186/s13014-021-01939-7>.
- Heba Mohammed Rabia, Ph.D., Sahar S. Atrees, P.D.. (2021) "Herbs and Supplements for Liver Toxicity: A Review on Mode of Action of Herbs and Supplements on Liver Toxicity," *The Medical Journal of Cairo University*, 89(9), hal. 2179–2183. Tersedia pada: <https://doi.org/10.21608/mjcu.2021.203687>.
- Hopewell, J.W., Morris, G.M., Schwint, A. dan Coderre, J.A. (2011) "The radiobiological principles of boron neutron capture therapy: A critical review," *Applied Radiation and Isotopes*, 69(12), hal. 1756–1759. Tersedia pada: <https://doi.org/10.1016/j.apradiso.2011.04.019>.
- IAEA-TECDOC-1223 (2001) "Current Status of neutron capture therapy," *Iaea*, 2001 (8), (May), hal. 75–77.
- ICRP 103 (2007) "Annals of the ICRP," *Annals of the ICRP*, 6(1), hal. 1. Tersedia pada: [https://doi.org/10.1016/0146-6453\(81\)90127-5](https://doi.org/10.1016/0146-6453(81)90127-5).
- ICRP 92 (2003) "Relative Biological Effectiveness (RBE), Quality Factor (Q), and Radiation Weighting Factor (wR)," *Annals of the ICRP* [Preprint]. Tersedia pada: <https://doi.org/10.1358/dot.2008.44.12.1299292>.
- ICRU 44 (1998) *Tissue Substitutes in Radiation Dosimetry and Measurement*.
- Irhas, Harto, A.W. dan Sardjono, Y. (2014) "Dosimetri Boron Neutron Capture Therapy Pada Kanker Hati (Hepatocellular Cars/Noma) Menggunakan Mcnp Code Dengan Sumber Neutron Dari Kolom Termal," *Prosiding Pertemuan dan Presentasi Ilmiah - Penelitian Dasar Ilmu Pengetahuan dan Teknologi Nuklir 2014 Pusat Sains dan Teknologi Akselerator - BATAN*, 33(12), hal. 105–115. Tersedia pada: [file:///Unknown/Boron neutron capture therapy - 0.pdf](file:///Unknown/Boron%20neutron%20capture%20therapy%20-%200.pdf).
- Iwase, H., Niita, K. dan Nakamura, T. (2002) "Development of general-purpose particle and heavy ion transport monte carlo code," *Journal of Nuclear Science and Technology*, 39(11), hal. 1142–1151. Tersedia pada: <https://doi.org/10.1080/18811248.2002.9715305>.
- Jaime, D. la C.L. (2006) "No 主観的健康感を中心とした在宅高齢者における健康関連指標に関する共分散構造分析Title," 60, hal. 1–220.
- Kiyanagi, Y. (2018) "Accelerator-based neutron source for boron neutron capture therapy." Tersedia pada: <https://doi.org/10.21037/tro.2018.10.05>.
- Lamba, M., Goswami, A. dan Bandyopadhyay, A. (2021) "A periodic development

- of BPA and BSH based derivatives in boron neutron capture therapy (BNCT),” *Chemical Communications*, 57(7), hal. 827–839. Tersedia pada: <https://doi.org/10.1039/d0cc06557a>.
- Lee, S.J., Kim, M., Kwak, Y.K. dan Kang, H.J. (2021) “MRI-guided radiotherapy for PVTT in HCC patients: evaluation of the efficacy and safety,” *Journal of Cancer Research and Clinical Oncology* [Preprint], (0123456789). Tersedia pada: <https://doi.org/10.1007/s00432-021-03788-z>.
- Li, G., Jiang, W., Zhang, L., Chen, W. dan Li, Q. (2021) “Design of Beam Shaping Assemblies for Accelerator-Based BNCT With Multi-Terminals,” *Frontiers in Public Health*, 9(March), hal. 1–10. Tersedia pada: <https://doi.org/10.3389/fpubh.2021.642561>.
- Liu, C. dan Gao, X. (2018) “Determination of radiotherapy target volume for esophageal cancer,” *Precision Radiation Oncology*, 2(2), hal. 52–60. Tersedia pada: <https://doi.org/10.1002/pro6.37>.
- Liu, X., Ni, X., Li, Y., Yang, C., Wang, Y., Ma, C., Zhou, C. dan Lu, X. (2022) “Diagnostic Performance of LI-RADS Version 2018 for Primary Liver Cancer in Patients With Liver Cirrhosis on Enhanced MRI,” *Frontiers in Oncology*, 12(July), hal. 1–9. Tersedia pada: <https://doi.org/10.3389/fonc.2022.934045>.
- Malyshev, O.B. (2019) *Vacuum in particle accelerators: Modelling, design and operation of beam vacuum systems*, *Vacuum in Particle Accelerators: Modelling, Design and Operation of Beam Vacuum Systems*. Tersedia pada: <https://doi.org/10.1002/9783527809134>.
- Maughan, R.L., Chuba, P.J., Porter, A.T., Ben-Josef, E. dan Lucas, D.R. (1997) “The elemental composition of tumors: Kerma data for neutrons,” *Medical Physics*, 24(8), hal. 1241–1244. Tersedia pada: <https://doi.org/10.1118/1.598144>.
- Mir, R., Kelly, S.M., Xiao, Y., Moore, A., Clark, C.H., Clementel, E., Corning, C., Ebert, M., Hoskin, P., Hurkmans, C.W., Ishikura, S., Kristensen, I., Kry, S.F., Lehmann, J., Michalski, J.M., Monti, A.F., Nakamura, M., Thompson, K., Yang, H., Zubizarreta, E., Andratschke, N. dan Miles, E. (2020) “Organ at risk delineation for radiation therapy clinical trials: Global Harmonization Group consensus guidelines: GHG OAR consensus contouring guidance,” *Radiotherapy and Oncology*, 150, hal. 30–39. Tersedia pada: <https://doi.org/10.1016/j.radonc.2020.05.038>.
- Muramatsu, M. dan Kitagawa, A. (2012) “A review of ion sources for medical accelerators (invited),” *Review of Scientific Instruments*, 83(2). Tersedia pada: <https://doi.org/10.1063/1.3671744>.
- Naeem Ahmed, S. (2016) *Physics and Engineering of Radiation Detection*.
- Nassiri, A., Chase, B., Craievich, P., Fabris, A., Frischholz, H., Jacob, J., Jensen, E. dan Jensen, M. (2015) “History and Technology Developments of Radio Frequency (RF) Systems for Particle Accelerators,” (November). Tersedia

pada: <https://doi.org/10.1109/TNS.2015.2485164>.

- Nedunchezian, K., Aswath, N., Thiruppathy, M. dan Thirugnanamurthy, S. (2016) "Boron neutron capture therapy - a literature review," *Journal of Clinical and Diagnostic Research*, 10(12), hal. ZE01–ZE04. Tersedia pada: <https://doi.org/10.7860/JCDR/2016/19890.9024>.
- Niita, K., Sato, T., Iwase, H., Nose, H., Nakashima, H. dan Sihver, L. (2006) "PHITS-a particle and heavy ion transport code system," *Radiation Measurements*, 41(9–10), hal. 1080–1090. Tersedia pada: <https://doi.org/10.1016/j.radmeas.2006.07.013>.
- Niita, K., Takada, H., Meigo, S. ichiro dan Ikeda, Y. (2001) "High-energy particle transport code NMTC/JAM," *Nuclear Instruments and Methods in Physics Research, Section B: Beam Interactions with Materials and Atoms*, 184(3), hal. 406–420. Tersedia pada: [https://doi.org/10.1016/S0168-583X\(01\)00784-4](https://doi.org/10.1016/S0168-583X(01)00784-4).
- Ozakyol, A. (2017) "Global Epidemiology of Hepatocellular Carcinoma (HCC Epidemiology)," *Journal of Gastrointestinal Cancer*, 48(3), hal. 238–240. Tersedia pada: <https://doi.org/10.1007/s12029-017-9959-0>.
- Peach, K., Wilson, P. dan Jones, B. (2011) "Accelerator science in medical physics," *British Journal of Radiology*, 84(SPEC. ISSUE 1), hal. 4–10. Tersedia pada: <https://doi.org/10.1259/bjr/16022594>.
- Podgoršak, E.B. (2016) *M-Graduate Texts in Physics: Radiation Physics for Medical Physicists*, Springer. Tersedia pada: <http://www.springer.com/series/8431>.
- Pozzi, E.C.C., Cardoso, J.E., Colombo, L.L., Thorp, S., Hughes, A.M., Molinari, A.J., Garabalino, M.A., Heber, E.M., Miller, M., Itoiz, M.E., Aromando, R.F., Nigg, D.W., Quintana, J., Trivillin, V.A. dan Schwint, A.E. (2012) "Boron Neutron Capture Therapy (BNCT) for Liver Metastasis: Therapeutic Efficacy in an Experimental Model," *Radiation and Environmental Biophysics*, 51(3), hal. 331–339. Tersedia pada: <https://doi.org/10.1007/s00411-012-0419-8>.
- Puspita, M.D.R. (2021) "Analisis Dosis Radiasi Terapi Kanker Serviks dengan Boron Neutron Capture Therapy (BNCT) berbasis Particle And Heavy Ion Transport Code System (PHITS)."
- Rosidah, S., Sardjono, Y. dan Sumardi, Y. (2017) "Dose Analyze of Boron Neutron Capture Therapy (Bnct) At Skin Cancer Melanoma Using Mcnpx With Neutron Source From Thermal Column of Kartini Reactor," *Indonesian Journal of Physics and Nuclear Applications*, 2(3), hal. 111. Tersedia pada: <https://doi.org/10.24246/ijpna.v2i3.111-123>.
- Sakurai, Y., Tanaka, H., Takata, T., Fujimoto, N., Suzuki, M., Masunaga, S., Kinashi, Y., Kondo, N., Narabayashi, M., Nakagawa, Y., Watanabe, T., Ono, K. dan Maruhashi, A. (2015) "Advances in boron neutron capture therapy (BNCT) at kyoto university - From reactor-based BNCT to

- accelerator-based BNCT,” *Journal of the Korean Physical Society*, 67(1), hal. 76–81. Tersedia pada: <https://doi.org/10.3938/jkps.67.76>.
- Sato, T., Iwamoto, Y., Hashimoto, S., Ogawa, T., Furuta, T., Abe, S. ichiro, Kai, T., Tsai, P.E., Matsuda, N., Iwase, H., Shigyo, N., Sihver, L. dan Niita, K. (2018) “Features of Particle and Heavy Ion Transport code System (PHITS) version 3.02,” *Journal of Nuclear Science and Technology*, 55(6), hal. 684–690. Tersedia pada: <https://doi.org/10.1080/00223131.2017.1419890>.
- Sauerwein, W.A.G. dan Moss, R.L. (2009) “Requirements for boron neutron capture therapy (BNCT) at a nuclear research reactor,” hal. 125. Tersedia pada: <https://ec.europa.eu/jrc/en/publication/books/requirements-boron-neutron-capture-therapy-bnct-nuclear-research-reactor>.
- Sauerwein, W.A.G., Wittig, A., Moss, R. dan Nakagawa, Y. (2012) *Neutron Capture Therapy*, <https://Medium.Com/>. Tersedia pada: <https://doi.org/10.1007/978-3-642-31334-9>.
- Scrivens, R. (2006) “ELECTRON AND ION SOURCES FOR PARTICLE ACCELERATORS.”
- Soloway, A.H., Barth, R.F., Gahbauer, R.A., Blue, T.E. dan Goodman, J.H. (1997) “The rationale and requirements for the development of boron neutron capture therapy of brain tumors,” hal. 9–18.
- Stieb, S., McDonald, B., Gronberg, M., Engeseth, G.M., He, R. dan Fuller, C.D. (2019) “Imaging for Target Delineation and Treatment Planning in Radiation Oncology: Current and Emerging Techniques,” *Hematology/Oncology Clinics of North America*, 33(6), hal. 963–975. Tersedia pada: <https://doi.org/10.1016/j.hoc.2019.08.008>.
- Stratton, M.R., Campbell, P.J. dan Futreal, P.A. (2009) “The cancer genome,” *Nature*, 458(7239), hal. 719–724. Tersedia pada: <https://doi.org/10.1038/nature07943>.
- Taskaev, S.Y. (2015) “Accelerator based epithermal neutron source,” *Physics of Particles and Nuclei*, 46(6), hal. 956–990. Tersedia pada: <https://doi.org/10.1134/S1063779615060064>.
- “The 2007 Recommendations of the International Commission on Radiological Protection. ICRP publication 103.” (2007) *Annals of the ICRP*, 37(2–4), hal. 1–332. Tersedia pada: <https://doi.org/10.1016/j.icrp.2007.10.003>.
- The Global Cancer Observatory (2020) “International Agency for Research on Cancer.,” *International Agency for Research on Cancer*, 23(7), hal. 323–326.
- Tsoufanidis, N. (1995) “Measurement and Detection of Radiation.” Tersedia pada: <https://doi.org/10.1002/3527604294.ch14>.
- Tsuboi, K., Sakae, T. dan Gerelchuluun, A. (2020) *Proton Beam Radiotherapy, Nippon rinsho. Japanese journal of clinical medicine*. Tersedia pada: https://doi.org/10.5005/jp/books/12541_89.

- Vega-carrillo, H.R. dan Manzanares-acuña, E. (2004) “Calculation of Neutron Kerma in Tissues,” hal. 11–14.
- Vretenar, M. (2012) “Radio frequency for particle accelerators – evolution and anatomy of a technology.”
- Watson, J., Hydon, K. dan Lodge, P. (2016) “Primary and secondary liver tumours,” *InnovAiT: Education and inspiration for general practice*, 9(8), hal. 477–482. Tersedia pada: <https://doi.org/10.1177/1755738016653419>.
- Xi, M., Liu, M.Z., Deng, X.W., Zhang, L., Huang, X.Y., Liu, H., Li, Q.Q., Hu, Y.H., Cai, L. dan Cui, N.J. (2007) “Defining internal target volume (ITV) for hepatocellular carcinoma using four-dimensional CT,” *Radiotherapy and Oncology*, 84(3), hal. 272–278. Tersedia pada: <https://doi.org/10.1016/j.radonc.2007.07.021>.
- 日本原子力研究開発機構, 高度情報科学技術研究機構, 高エネルギー加速器研究機構 dan 東京工業大学 (2013) “粒子・重イオン輸送計算コード PHITSの特徴と 医学物理分野への応用 橋本,” *Jpn. J. Med. Phys.*, 33(2), hal. 88–95.