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Proton Therapy Worldwide, 2011, Retrieved April 23, 2013

Alpen, E. L., 1998, *Radiation Biophysics*, 2nd ed., San Diego, Academic Press.

Attix, F. H., 1986, *Introduction to Radiological Physics and Radiation Dosimetry*, Madison, Wisconsin, WILEY-VCH Verlag GmbH & Co. KGaA.

Bauman, G. S., dan Wong, E., 2004, Re: new radiotherapy technologies for meningiomas: 3D conformal radiotherapy? Radiosurgery? Sterotactic radiotherapy? Intensity modulated radiotherapy? Proton beam radiotherapy? Spot scanning proton radiation therapy? Or nothing at all? *Radiother Oncol*, 71(3), 247-249.

Boon, S. N., 1998, Dosimetry and Quality Control of Scanning Proton Beams, *Disertasi*, Rijksuniversiteit Groningen, Netherlands.

Bortfeld, T., dan Schlegel, W., 1996, An analytical approximation of depth - dose distributions for therapeutic proton beams, *Physics in Medicine and Biology*, 41(8), 1331-1339.

Buchsbaum, J. C., McDonald, M. W., Johnstone, P. A., Hoene, T., Mendonca, M., Cheng, C.-W., Das, I.J., McMullen, K.P., dan Wolanski, M. R., 2014. Range modulation in proton therapy planning: a simple method for mitigating effects of increased relative biological effectiveness at the end-of-range of clinical proton beams. *Radiation Oncology*, 9(2), 1-10.

Carron, N. J., 2007, An Introduction to the Passage of Energetic Particles through Matter, New York, Taylor and Francis Group.

Castro, J. R. ,1990, Review Of Medical Treatment with Heavy Charged Particle Beams, *2nd European Particle Accelerator Conference*, Nice, France, Editions Frontieres, 369-373

Chuma, J., 2012, *Extrema*, Retrieved from www.exsiteware.com/extrema at February 14, 2015

Deasy, J. O., 1998, A proton dose calculation algorithm for conformal therapy simulations based on Moliere theory of lateral deflections (*Med. Phys.*) 25, 476–83

De Cicco, L., Celli, L., Liuzzi, R., Solla, R., Farella, A., Punzo, G., Tranfa, F., Strianese, D., Conson, M., Bonavolonta, G., Salvatore, M., dan Pacelli, R., 2009, Radiation therapy in primary orbital lymphoma: a single institution retrospective analysis. *Radiation Oncology*, 1-6.



- de Vera, P., Abril, I., dan Garcia-Molina, R., 2013, Water equivalent properties of materials commonly used in proton dosimetry. *Appl. Radiat. Isotopes*, 1-6.
- Devicienti, S., Strigari, L., D'Andrea, M., Benassi, M., Dimiccoli, V., dan Portaluri, M., 2010, Patient positioning in the proton radiotherapy era. *Journal of Experimental & Clinical Cancer Research*, 1-5.
- Evseev, I. G., Schelin, H. R., Paschuk, S. A., Milhoretto, E., Setti, J. A., Yevseyeva, O., de Assis, J.T., Hormaza, J.M., Diaz, K.S, dan Lopes, R. T., 2010, Comparison of SRIM, MCNPX and GEANT simulations with experimental data for thick Al absorbers. *Applied Radiation and Isotopes*, 948-950.
- Font, J. P., dan Resto, V., 2008, *Applications of Proton Beam Radiation*, Grand Rounds Presentation, University of Texas Medical Branch, Department of Otolaryngology, Retrieved May 26, 2012
- Getachew, A., 2007, Stopping Power of Protons of Various Energies in Different Materials, *Thesis*, Department of Physics, Addis Ababa University School of Graduate Studies.
- Glatstein, E., Glick, J., Kaiser, L., dan Hahn, S. M., 2008, Should Randomized Clinical Trials Be Required for Proton Radiotherapy? An Alternative View. *Journal of Clinical Oncology*, 26(15), 2438-2439.
- Goitein, M., 2008, *Radiation Oncology: A Physicist's-Eye View*, New York, Springer Science+Business Media, LLC.
- Greco, C., dan Wolden, S., 2007, Current Status of Radiotherapy With Proton. *American Cancer Society*, 109(7), 1227-1328.
- Grevillot, M. L., 2011, Monte Carlo simulation of active scanning proton therapy system with Gate/Geant4: Towards a better patient dose quality assurance, *Disertasi*, Institut National des Sciences Appliquées de Lyon.
- Habrand, J. -L., Bolle, S., Datchary, J., Alapetite, C., Petras, S., Helfre, S., Feufret, L., Calugaru, V., De Marzi, L., Bouyon-Monteaup, A., Dendale, R., Kalifa, C., Grill, J., dan Doz, F., 2009, Proton beam therapy in pediatric radiotherapy. *Société française de radiothérapie oncologique (SFRO)*, 550-555.
- Handley, S. M., 2010, Monte Carlo Simulations Using MCNPX of Proton and Anti-proton Beam Profiles for Radiation Therapy, *Tesis*, The University of Oklahoma, Health Sciences Center Graduate College, Oklahoma.
- Hendee, W. R., dan Ritenour, E. R., 2002, *Medical Imaging Physics*, Canada, Wiley-Liss, Inc.



- Hillbrand, M., Georg, D., Gadner, H., Potter, R., dan Dieckmann, K., 2008, Abdominal cancer during early childhood: A dosimetric comparison of proton beams to standard and advanced photon radiotherapy, *Radiotherapy and Oncology*, 141-149.
- Hong, L., Goitein M., Bucciolini M., Comiskey R., Gottschalk B., Rosenthal S., Serago C. dan Urie M., 1996, A pencil beam algorithm for proton dose calculations (*Phys. Med. Biol.*), **41**, 1305–30
- Hubbell, J. H., dan Seltzer, S. M., 2014, Tables of X-Ray Mass Attenuation Coefficients and Mass Energy-Absorption Coefficients from 1 keV to 20 MeV for Elements Z = 1 to 92 and 48 Additional Substances of Dosimetric Interest. Retrieved January 28, 2015, from NIST : X-Ray Mass Attenuation Coefficients:
<http://physics.nist.gov/PhysRefData/XrayMassCoef/tab4.html>
- ICRU, 1984, *Report #37*, USA: ICRU, Bethesda, Md. 20814.
- Jermann, M., 2015, Particle Therapy Statistics in 2014, *Intl. J. Particle Ther.*, 2(1), 50-54.
- Jette, D., dan Chen, W., 2011, Creating a spread-out Bragg peak in proton beams, *Physics in Medicine and Biology*, 56, N131.
- Jia, X., Schumann, J., Paganetti, H., dan Jiang, S. B., 2012, GPU-based fast Monte Carlo dose calculation for proton therapy, *Physics in Medicine and Biology*, 7783-7797.
- Jones, B., dan Errington, R. D., 2000, Proton beam radiotherapy, *The British Journal of Radiology*, 73, 802-805.
- Kawashima, M., Furuse, J., Nishio, T., Konishi, M., Ishii, H., Kinoshita, T., Nagase, M., Nihei, K., dan Ogino, T., 2005, Phase II study of radiotherapy employing proton beam for hepatocellular carcinoma, *J Clin Oncol*, 1839-1846.
- Khan, F. M., dan Gibbons, J. P., 2014, *The Physics of Radiation Therapy*, Philadelphia, PA 19103 USA: LIPPINCOTT WILLIAMS & WILKINS, a WOLTERS KLUWER business.
- Lawrence, J. H., Tobias, C. A., Born, J. L., Linfoot, J. A., Kling, R. P., dan Gottschalk, A., 1963, *Alpha and Proton Heavy Particles and the Bragg Peak in Therapy*, University of California, Donner Laboratory and Lawrence Radiation Laboratory, California.
- Levin, W. P., Kooy, H., Loeffler, J. S., dan DeLaney, T. F., 2005, Proton beam therapy, *British Journal of Cancer*, 93, 849-854.



Loma Linda Medical Center, 2016, *Videos of Cancer Survivors & Proton Treatment Procedures*|Loma Linda Medical Center, Retrieved from Proton Therapy Treatment Center | Loma Linda Medical Center: <http://proton.com/our-videos>

Lomax, A., 1999, Intensity modulation methods for proton radiotherapy, *Phys Med Biol.*, 185–205.

Lomax, A. J., Goeitein, M., dan Adams, J., 2003, Intensity modulation in radiotherapy: photons versus protons in the paranasal sinus. *Radiotherapy and Oncology*, 66, pp. 11-18.

Mairani, A., Bohlen, T. T., Schiavi, A., Tessonnier, T., Molinelli, S., Brons, S., Battistoni, G., Parodi, K., dan Patera, V., 2013, A Monte Carlo-based treatment planning tool for proton therapy, *Phys. Med. Biol.*, 2471–2490.

Martin, J. E., 2006, *Physics for Radiation Protection*, Weinheim: WILEY-VCH Verlag GmbH and Co. KGaA.

Mirimanoff, R.-O., 2004, New radiotherapy technologies for meningiomas: 3D conformal radiotherapy? Radiosurgery? Stereotactic radiotherapy? Intensity-modulated radiotherapy? Proton beam radiotherapy? Spot scanning proton radiation therapy... or nothing at all? *Radiotherapy and Oncology*, 247–249.

Mowlavi, A. A., Homaei, M., dan Alipoor, M., 2010, SRIM Code Use for the Evaluation of Optimum Proton Energy Interval for Thyroid Cancer Therapy, *African Physical Review*, 107-111.

Mukherjee, B., 1983, Mass stopping powers of protons up to 200 MeV in some biologically important materials, *Nuclear Instruments and Methods*, 235-237.

Nakagawa, T., dan Yoda, K., 2000, A method for achieving variable widths of the spread-out Bragg peak using a ridge filter, *Med. Phys.*, 712-716.

Newhauser, W. D., dan Zhang, R., 2015, The physics of proton therapy, *Physics in Medicine and Biology*, R155-R209.

Paganetti, H., 2012, Range Uncertainties in proton therapy and the role of Monte Carlo simulations, *Phys. Med. Biol.*, 99-117.

Paganetti, H., dan Bortfeld, T., 2005, Proton Beam Radiotherapy - The State of the Art, *New Technologies in Radiation Oncology (Medical Radiology Series)*, 1-36.

Petti, P. L., 1992, Differential-pencil-beam dose calculations for charged particles (*Med. Phys.*), **19**, 137–49.



Podgorsak, E. B., 2010, *Radiation Physics for Medical Physicists*, Berlin: Springer-Verlag.

Russell, K. R, Grusell E. dan Montelius A., 1995, Dose calculations in proton beams: range straggling corrections and energy scaling, (*Phys. Med. Biol.*), **40**, 1031–43

Schneider U, Schaffner B, Lomax A J, Pedroni E and Tourovsky A 1998 A technique for calculating range spectra of charged particle beams distal to thick inhomogeneities *Med. Phys.* 25 457–63

Singh, H., Rathi, S. K., dan Verma, A. S., 2013, Stopping Powers of Protons in Biological Human Body Substances, *Universal Journal of Medical Science*, 17-22.

Slater, J. M., 1990, Applying Charged Particle Physics Technology for Cancer Control at Loma Linda University Medical Center, USA. In P. Marin, dan P. Mandrillon (Ed.), *2nd European Particle Accelerator Conference*. 1, pp. 286-288. Nice, France: Editions Frontieres.

Smith, A. R., 2006, Proton Therapy, *Physics in Medicine and Biology*, 51, R491-R504.

Smith, F. A.. 2000, *A Primer in Applied Radiation Physics*, Singapore: World Scientific Publishing Co. Re. Ltd.

Sudjatmoko, Triyono, dan Supriyatni, E., 2000, Kajian Perkembangan Teknologi Akselerator Untuk Radioterapi Kanker. *Prosiding Seminar Nasional Teknologi Akselerator dan Aplikasinya*, Yogyakarta.

Sulistya, E., Kusminarto, dan Hermanto, A., 2012, Stopping Power and Range of Proton in Medium - a Study for Proton Radiotherapy, *International Conference on Physics*, Department of Physics FMIPA UGM, Jogjakarta

Sulistya, E., Kusminarto, dan Hermanto, A., 2014, Computation to Obtain the Spread Out Bragg Peak (SOBP) for Proton Radiotherapy on Model of Thyroid Cancer, *International Conference On Research, Implementation And Education Of Mathematics And Sciences*, Yogyakarta State University, Yogyakarta.

Sulistya, E., Kusminarto, dan Hermanto, A., 2014, Numerical equation for the mass stopping power of protons in human body substances, *International Conference on Physics (ICP 2014)*, Published by Atlantis Press

Tobias, C. A., Lawrence, J. H., Born, J. L., McCombs, R. K., Roberts, J. E., Anger, H. O., Low-Beer, B.V.A., dan Huggins, C. B., 1958, Pituitary Irradiation with High-Energy Proton Beams A Preliminary Report, *Cancer Research*, 18, 121-139.



Tsoulfanidis, N., dan Landsberger, S., 2015, *Measurement and Detection of Radiation*, New York, CRC Press Taylor & Francis Group.

Turner, J. E., 2007, *Atoms, Radiation, and Radiation Protection*, Weinheim, WILEY-VCH Verlag GmbH & Co. KGaA.

Yepes, P. P., Mirkovic, D., dan Taddei, P. J. (2010). A GPU implementation of a track-repeating algorithm for proton radiotherapy dose calculations. *Phys Med Biol*, 55(23), 7107-7120. doi: 10.1088/0031-9155/55/23/S11

Warshaw, S. D., dan Allison, S. K., 1953, Passage of Heavy Particles through Matter, *Reviews of Modern Physics*, 25(4), pp. 779-817.

Wilson, R. R., 1946, Radiological Use of Fast Protons, *Radiology*, 47, 487-91.

Woodard, H. Q., dan White, D. R., 1986, The composition of body tissues, *The British Journal of Radiology*, 1209-1219.

Yuan, L. C., dan Wu, C.-S., 1961, Methods of Experimental Physics: Volume 5 Nuclear Physics, Part A. New York: Academic Press.

Ziegler, J. F., Biersack, J. P., dan Ziegler, M. D., 2008, *SRIM-The Stopping and Range of Ions in Matter*, Chester, Maryland: SRIM Co.

Ziegler, J. F., Ziegler, M. D., dan Biersack, J. P., 2010, SRIM – The stopping and range of ions in matter, *Nuclear Instruments and Methods in Physics Research B*, 1818-1823.