UNIVERSITAS
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**Pengaruh Hidrasi dan Frekuensi Urinasi terhadap Laju Eliminasi Iodium-131 Pasien Kanker Tiroid Dosis
150 mCi**
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

DAFTAR PUSTAKA

[1] M. Ervik, M. Laversanne, F. Lam, M. Colombet, J. Ferlay and A. Filho, "Global Cancer Observatory: Cancer Today (2024 estimates, version 1.0)," 2026. [Online]. Available: https://gco.iarc.who.int/today. [Accessed 5 August 2026].

[2] M. Ringel, "2025 American Thyroid Association Management Guidelines for Adult Patients with Differentiated Thyroid Cancer," *Thyroid,* vol. 35, no. 8, pp. 841-931, 2025.

[3] International Atomic Energy Agency, "Nuclear Medicine in Thyroid Cancer Management: A Practical Approach, IAEA-TECDOC-1608," IAEA, Vienna, Austria, 2009.

[4] Badan Pengawas Tenaga Nuklir, "Peraturan Kepala Badan Pengawas Tenaga Nuklir Nomor 17 Tahun 2012 tentang Keselamatan Radiasi dalam Kedokteran Nuklir," BAPETEN, Jakarta, 2012.

[5] International Commision on Radiological Protection, "Radiation Dose to Patients from Radiopharmaceuticals: A Compendium of Current Information Related to Frequently Used Substances," *ICRP Publications 128,* vol. 44, no. 25, 2015.

[6] A. K. C. Hoe, L. Y. Fong, F. N. A. Halim, Q. K. Fatt and F. Hamzah, "The minimum amount of fluids needed to achieve the fastest time to reach permissible level for release in well-differentiated thyroid patients undergoing high-dose I-131 therapy," *World Journal of Nuclear Medicine,* vol. 17, no. 3, pp. 182-187, 2018.

[7] N. İ. IŞIKCI, M. DEMIR and M. ABUQBEITAH, "Effects of Hydration on Radioactivity Excretion and Patients Isolation after Radioiodine Therapy," *Turkish Journal of Oncology,* vol. 38, no. 1, pp. 100-103, 2023.

[8] M. Demir, P. Y, Ç. İ, Y. N, T. H, G. G, S. E, E. S and S. H, "The evaluation of urine activity and external dose rate from patients receiving radioiodine therapy for thyroid cancer," *Radiation Protection Dosimetry,* vol. 156, no. 1, pp. 25-29, 2013.

[9] W. H. Biraima, A. Ali, M. K. Saeed and A. M. Ibrahim, "Assessment of radiation dose rate emitted from patients undergoing iodine therapy," *Radiation Physics and Chemistry,* pp. 1-4, 2023.

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[10] M. Klain, C. Nappil, M. De Risi, L. Piscopo, F. Volpe, M. Manganelli, E. Caiazzo, D. Bianco, M. Schlumberger and A. Cuocolo, "Whole-Body Radioiodine Effective Half-Life in Patients with Differentiated Thyroid Cancer," *Diagnostics,* vol. 11, no. 10, 2021.

[11] L. Kääriä, M. Lapela, M. Seppänen, M. Högerman, J. Ruohola, A. Ålgars and T. Noponen, "Determination of Effective Half-Life of ^{131}I in Thyroid Cancer Patients Using Remote Dose-Rate Meter," *EJNMMI Physics,* vol. 11, no. 101, 2024.

[12] H. Remy, I. Borget, S. Leboulleux, N. Guilabert, F. Lavielle, J. Garsi, C. Bournaud, G. S, M. Schlumberger and M. Ricard, "^{131}I Effective Half-Life and Dosimetry in Thyroid Cancer Patients," *Journal of Nuclear Medicine,* vol. 49, no. 9, pp. 1445-1450, 2008.

[13] N. Takata, N. Kawaguchi, M. Miyagawa, A. Itou, R. Yamada, A. Takimoto and T. Kido, "Clinical factors affecting colonic iodine-131 distribution after radioactive iodine therapy for thyroid cancer," *Japanese Journal of Radiology,* vol. 44, pp. 394-401, 2026.

[14] M. Haghighatafshar, A. Banani, F. Gheisari and M. Alikhani, "Impact of sweating on equivalent dose of patients treated with 131Iiodine," *Indian Journal of Nuclear Medicine,* vol. 31, pp. 172-175, 2016.

[15] M. Haghighatafshar, A. Banani, Z.-R. Banasfeh, Z. Etemadi and T. Ghaedian, "Impact of the amount of liquid intake on the dose rate of patients treated with radioiodine," *Indian Journal of Nuclear Medicine,* no. 33, pp. 10-13, 2018.

[16] A. M. Al-Esaei, E. E. Saleh, S. E. Maghraby, T. M. E. Sayed and A. M. I. Kany, "Evaluation of Radiation Safety Parameters from Patients Receiving I-131 Therapy for Thyroid Carcinoma," *Journal of Medical Physics and Applied Sciences,* vol. 9, no. 1, pp. 1-6, 2024.

[17] G. J. Tortora and B. Derrickson, Principles of Anatomy & Physiology 15th Edition, Hoboken: John Wiley & Sons, Inc, 2017.

[18] H. A. Ziessman, J. P. O'Malley and J. H. Thrall, Nuclear Medicine: The Requisites 3rd Edition, Philadelphia: Elsevier, 2006.

[19] A. M. Avram, L. Giovanella, B. Greenspan, S. A. Lawson, M. Luster and D. Van Nostrand, "SNMMI procedure standard/EANM practice guideline for nuclear medicine evaluation and therapy of differentiated thyroid cancer: Abbreviated version," *Journal of Nuclear Medicine,* vol. 63, no. 6, pp. 15N-35N, 2022.

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[20] A. De la Vieja and G. Riesco-Eizaguirre, "Radio-iodine treatment: From molecular aspects to the clinical view," *Cancers,* vol. 13, no. 5, 2021.

[21] W. Al-Jubeh, A. Shaheen and O. Zalloum, "Radioiodine I-131 for Diagnosing and Treatment of Thyroid Diseases," in *Students Innovation Conference*, Hebron, 2012.

[22] S. R. Cherry, J. A. Sorenson and M. E. Phelps, Physics in Nuclear Medicine 4th Edition, Philadelphia: Elsevier Saunders, 2012.

[23] G. B. Saha, Physics and Radiobiology of Nuclear Medicine Fifth Edition, New York: Springer Science+Business Media, 2013.

[24] L.-F. Pan, C.-Y. Chiang, C.-C. Huang, H.-T. Kao, C.-F. Chen, B.-R. Peng and L.-K. Pan, "Biokinetics for Radioactive I-131 in Twelve Thyroid Cancer Patients via the Refined Nine-Compartmental Model," *applied sciences,* vol. 12, pp. 1-13, 2022.

[25] International Atomic Energy Agency, "Safety Reports Series No. 63: Release of Patients After Radionuclide Therapy," IAEA, Vienna, 2009.

[26] S. E. International, Inc, Radiation Alert Ranger Operation Manual Revision 2, Summertown, USA: S. E. International, 2018.

[27] H. S. Ahmed, "Correlation and causation for cardiothoracic surgeons: part 4—distinguishing relationships in data," *Indian Journal of Thoracic and Cardiovascular Surgery,* vol. 3, no. 41, pp. 371-380, 2025.

[28] R. R. de Souza, M. Toebe, A. C. Mello and K. C. Bittencourt, "Sample size and Shapiro-Wilk test: An analysis for soybean grain yield," *European Journal of Agronomy,* vol. 142, no. 126666, pp. 1-9, 2023.

[29] D. Chicco, A. Sichenze and G. Jurman, "A simple guide to the use of Student's t-test, Mann-Whitney U test, Chi-squared test, and Kruskal-Wallis test in biostatistics," *BioData Mining,* vol. 18, no. 56, pp. 1-51, 2025.

[30] N. P. Utami, C. E. Ayuningtyas and W. Hariyono, "Association of Body Composition and Anthropometric Measurement with Hypertension among Workers in Universitas Ahmad Dahlan," *Electronic Journal of General Medicine,* vol. 5, no. 17, pp. 1-6, 2020.