

## REFERENCES

- Amarenco, P., Cohen, A., Tzourjo, C., Bertrand, B., Hommel, M., 1994. *Atherosclerotic Diseases of the Aortic Arch and the Risk of Ischemic Stroke*. *NEJM*, 331(22), pp.1474-1479
- Baretta, Z., Mocellin, S., Goldin, E., Olopade, O. and Huo, D., 2016. Effect of BRCA germline mutations on breast cancer prognosis. *Medicine*, 95(40), p.e4975.
- Bray, F., Ferlay, J., Soerjomataram, I., Siegel, R., Torre, L. and Jemal, A., 2018. Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: A Cancer Journal for Clinicians*, 68(6), pp.394-424.
- Cassidy, J., dan Donald, B., 2014. *Oxford Handbook of Oncology*. UK: Oxford University Press.
- Dien et al., 2013, 2008. 基因的改变 NIH Public Access. *Bone* 23, 1–7. <https://doi.org/10.1038/jid.2014.371>
- Dahlan, M.S., 2017. *Statistik untuk Kedokteran dan Kesehatan*. Jatinangor: Alqaprint. pp.4-6, 223-32.
- Duffy, M.J., Harbeck, N., Nap, M., Molina, R., Nicolini, A., Senkus, E., Cardoso, F., 2017. Clinical use of biomarkers in breast cancer: Updated guidelines from the European Group on Tumor Markers (EGTM). *European Journal of Cancer* 75, 284–298. <https://doi.org/10.1016/j.ejca.2017.01.017>
- Ferlay, J., Soerjomataram, I., Ervik, M., Dikshit, R., Eser, S., Mathers, C., 2012. *Cancer Incidence and Mortality Worldwide: IARC Cancer Base No. 11*. France: International Agency for Research on Cancer.
- Fernandes, H.P., Cesar, C.L., Barjas-Castro, M.L., 2011. Electrical properties of the red blood cell membrane and immunohematological investigation. *The Revista Brasileira de Hematologia e Hemoterapia*, 33(4):297-301.
- Gunasekaran, S., Sankari, G., 2004. FTIR and UV-visible spectral study on normal and diseased blood samples. *Asian Journal of Chemistry*, 16, pp.1779–1786.
- Ichikawa, L.E., Barlow, W.E., Anderson, M.L., Taplin, S.H., Geller, B.M., Brenner, R.J., 2010. Time trends in radiologists' interpretive performance at screening mammography from the community-based breast cancer surveillance consortium, 1996-2004. *Radiology*, 256, pp.74–82. <https://doi.org/10.1148/radiol.10091881>
- Iqbal, Nida, Iqbal, Naveed, 2014. *Human Epidermal Growth Factor Receptor 2 (HER2)*

in Cancers: Overexpression and Therapeutic Implications. *Molecular Biology International* 2014, 1–9. <https://doi.org/10.1155/2014/852748>

Jafari, S.H., Saadatpour, Z., Salmaninejad, A., Momeni, F., Mokhtari, M., Nahand, J.S., Rahmati, M., Mirzaei, H., Kianmehr, M., 2018. Breast cancer diagnosis: Imaging techniques and biochemical markers. *Journal of Cellular Physiology* 233, 5200–5213. <https://doi.org/10.1002/jcp.26379>

Kemenkes RI, 2011. Pedoman Interpretasi Data Klinik.

Kemenkes RI, 2015. Situasi Penyakit Kanker. Jakarta: Pusdatin.

Koo, M., von Wagner, C., Abel, G., McPhail, S., Rubin, G. and Lyratzopoulos, G. (2017). Typical and atypical presenting symptoms of breast cancer and their associations with diagnostic intervals: Evidence from a national audit of cancer diagnosis. *Cancer Epidemiology*, 48, pp.140-146.

Loke, S.Y., Lee, A.S.G., 2018. The future of blood-based biomarkers for the early detection of breast cancer. *European Journal of Cancer* 92, 54–68. <https://doi.org/10.1016/j.ejca.2017.12.025>

Mishalian, I., Granot, Z., Fridlender, Z.G., 2017. The diversity of circulating neutrophils in cancer. *Immunobiology* 222, 82–88. <https://doi.org/10.1016/j.imbio.2016.02.001>

Murray, R.K., Granner, D.M., dan Rodwell, V.W., 2000. Harper's Biochemistry. London: Prentice-Hall International Inc.

Nasser, S., Pars, M., 2011. Breast Cancer from Molecular Point of View: Pathogenesis and Biomarkers. *Breast Cancer - Focus. Tumor Microenvironment Stem cells Metastasis*. <https://doi.org/10.5772/24940>

Ngadikun, 1998. Pengukuran Laju Endap Darah dengan Metode Spektrofotometri. Tesis. Fakultas Kedokteran Universitas Indonesia.

Ngadikun, 2006. Gambaran Pola Potensial Zeta Sel Darah dengan Metode Spektrofotometri pada Pasien Karsinoma Hepatoseluler dan Tikus (*Rattus norvegicus*). Disertasi. Fakultas Kedokteran Universitas Padjajaran.

Nielsen, SS., 2009. Food Analysis (4<sup>th</sup> edition). Springer.

Nonoyama, A., Garcia-Lopez, A., Garcia-Rubio, L.H., Leparo, G.F., Potter, R.L., 2011. Hypochromicity in red blood cells: an experimental and theoretical investigation. *Biomedical Optic Express* 2, 2126. <https://doi.org/10.1364/boe.2.002126>

Nicolás-Ávila, J.Á., Adrover, J.M., Hidalgo, A., 2017. Neutrophils in Homeostasis, Immunity, and Cancer. *Immunity* 46, 15–28.

<https://doi.org/10.1016/j.immuni.2016.12.012>

Petekkaya, I., Aksoy, S., Roach, E.C., Okoh, A.K., Gecmez, G., Gezgen, G., Isler, D.C., Dogan, E., Babacan, T., Sarici, F., Petekkaya, E., Altundag, K., 2014. Impact of inflammatory markers on the prognosis of patients with operable breast cancer. *Journal of The Balkan Union of Oncology*. 19, 673–680.

Provan, D., Singer, C.R.J., Baglin, T., Dokal, I., 2009. Oxford Handbook of Clinical Haematology. <https://doi.org/10.1093/med/9780199227396.001.0001>

Salgin, S., Salgin, U., Bahadir, S., 2012. Zeta Potentials and Isoelectric Points of Biomolecules: The Effects of Ion Types and Ionic Strengths. *International Journal of Electrochemical Science*, 7, pp.12404-14.

Shah, R., Rosso, K., David Nathanson, S., 2014. Pathogenesis, prevention, diagnosis and treatment of breast cancer. *World Journal of Clinical Oncology* 5, 283–298. <https://doi.org/10.5306/wjco.v5.i3.283>

Shaul, M.E., Fridlender, Z.G., 2017. Neutrophils as active regulators of the immune system in the tumor microenvironment. *Journal of Leukocyte Biology* 102, 343–349. <https://doi.org/10.1189/jlb.5mr1216-508r>

Sugiyono, 2007. Metode Penelitian Kuantitatif Kualitatif dan R&D. Bandung: Alfabeta.

Treffers, L.W., Hiemstra, I.H., Kuijpers, T.W., van den Berg, T.K., Matlung, H.L., 2016. Neutrophils in cancer. *Immunology Review* 273, 312–328. <https://doi.org/10.1111/imr.12444>

Uribe-Querol, E., Rosales, C., 2015. Neutrophils in cancer: Two sides of the same coin. *Journal of Immunology Research* 2015. <https://doi.org/10.1155/2015/983698>

WHO. (2008). *Cancer Control*. Geneva: World Health Organization.

Witko-Sarsat, V., Rieu, P., Descamps-Latscha, B., Lesavre, P., Halbwachs-Mecarelli, L., 2000. Neutrophils: Molecules, functions and pathophysiological aspects. *Laboratory Investigation* 80, 617–654. <https://doi.org/10.1038/labinvest.3780067>

Wu, L., Qu, X., 2015. Cancer biomarker detection: Recent achievements and challenges. *Chemistry Society Review* 44, 2963–2997. <https://doi.org/10.1039/c4cs00370e>

Zijlstra, W.G., Buursma, A., Meeuwse, W.P., 1991. Absorption Spectra of Human Fetal and Adult Oxyhemoglobin, De-Oxyhemoglobin, Carboxyhemoglobin, and Methemoglobin. *Clinical Chemistry*, 37(9), 1633-8.

Zwaveling, A., dan Soebhag, R., 1985. Testicular Tumors in Netherlands. *Cancer*,



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55(7), 1612-7.

Kaushansky, K. and Williams, W., 2010. *Williams Hematology*. 7th ed. New York:  
McGraw-Hill Medical, pp.59-66.