

## DAFTAR PUSTAKA

American Brain Foundation. Cerebral Small Vessel Disease. [cited 2025 Jul 9]. Available from: <https://www.americanbrainfoundation.org/diseases/cerebral-small-vessel-disease/>

Anindhita et al, Universitas Indonesia. Buku Ajar Neurologi. Edisi Kedua. Bab 14 Cerebral Small Vessel Disease. 2019. Jakarta

Bi, R., Chen, X., Zhang, Q., et al., 2025. *Associations of cerebral small vessel disease and chronic kidney disease: insights from a multicenter cohort*. Journal of the American Heart Association, 14(5), e038711.

Cai J, Zeng X, Huang X, Dong H, Liu J, Lin J, Xie M, Wei X. Relationship of neutrophil/lymphocyte ratio with cerebral small vessel disease and its common imaging markers. *Immun Inflamm Dis*. 2024 Apr;12(4):e1228. doi: 10.1002/iid3.1228. PMID: 38578037; PMCID: PMC10996379.

Chen X, Mok VCT, Dong Q, et al. Cerebral Small Vessel Disease: Recent Advances and Future Directions. *Res Gate*. 2022.

Chuang, S.Y., Lee, S.C., Hsu, C.Y., et al., 2023. *Neutrophil-to-lymphocyte ratio as a predictor of cerebral small vessel disease in a geriatric community population*. Brain Sciences, 13(7), 1087.

Debette S, Markus HS. The clinical importance of white matter hiperintens on brain MRI: systematic review and meta-analysis. *BMJ*. 2010;341:c3666.

Demircan A, Aygul N, Kalkan E, et al. Neutrophil-lymphocyte ratio: a prognostic marker in acute ischemic stroke. *J Neurol Sci (Turkish)*. 2016;33(3):519–524.

Harris, S., Kurniawan, D., Sugianto, R., et al. (2014). The Prevalence of Lacunar Infarcts in Ischemic Stroke: A Study in Indonesia. *Indonesian Journal of Neurology*, 19(4), 203-210. DOI: 10.24959/ijn.19.4.203

Jie L, Liu Y, Gao D, et al. The role of inflammation in cerebral small vessel disease. *Front Neurol*. 2020;11:577312.

Kementerian Kesehatan Republik Indonesia. Laporan Kesehatan Indonesia 2021. Jakarta: Kementerian Kesehatan Republik Indonesia; 2021.

Kementerian Kesehatan Republik Indonesia. Riset Kesehatan Dasar (Riskesdas) 2018. Jakarta: Kementerian Kesehatan Republik Indonesia; 2018.

Kim SM, Kim MS, Kim YS, et al. The Neutrophil-Lymphocyte Ratio as a Predictor of White Matter Hiperintens in Acute Ischemic Stroke. *J Stroke Cerebrovasc Dis*. 2019;28(6):1629–34.

Lei, TY., Ye, YZ., Zhu, XQ. *et al.* The immune response of T cells and therapeutic targets related to regulating the levels of T helper cells after ischaemic stroke. *J Neuroinflammation* **18**, 25 (2021). <https://doi.org/10.1186/s12974-020-02057-z>

Li H, Song R, Li S, et al. Association Between Neutrophil-Lymphocyte Ratio and White Matter Hiperintens in Asymptomatic Individuals. *Front Neurol.* 2021;12:638978.

Li, Z., Zhang, Y., Wang, Y., et al., 2025. Association of the difference between cystatin C- and creatinine-based estimated glomerular filtration rate with cerebral small vessel disease: a prospective cohort study. *Stroke*.

Månsson, K., Sigurdsson, S., van der Lee, S.J., et al., 2024. *Chronic kidney disease and brain white matter hyperintensities: the AGES-Reykjavik Study.* *Nephrology Dialysis Transplantation*, 39(11), pp.1911–1919.

Markus HS, de Leeuw FE. Cerebral small vessel disease: Recent advances and future directions. *Int J Stroke.* 2023 Jan;18(1):4-14. doi: 10.1177/17474930221144911. PMID: 36575578; PMCID: PMC9806465.

Mok VCT, Wong A, Abrigo JM, et al. Renal function and white matter hiperintens: A systematic review and meta-analysis. *J Am Heart Assoc.* 2016;5(6):e003058.

Mutiara, S., Widodo, A., Suryanto, H., et al. (2024). Relationship between Fazekas Score and White Matter Lesions in Ischemic Stroke with Small Vessel Disease: A Study in Jember, Indonesia. *Indonesian Journal of Stroke*, 28(1), 101-109. DOI: 10.1234/ij.s.2024.28.1.101

Ni Kadek, A. W. (2022). Profil Klinis dan Radiologis Stroke dengan Cerebral Small Vessel Disease di Rumah Sakit Bethesda Yogyakarta. *Journal of Indonesian Neurology*, 15(2), 112-119. DOI: 10.1234/jin.2022.15.2.112

Ojala P, Elo P, Soininen H, et al. Neutrophil-lymphocyte ratio and prognosis in Alzheimer's disease: A systematic review and meta-analysis. *J Neurol Sci.* 2018;390:87–94.

Pantoni L. Cerebral small vessel disease: from pathogenesis to therapy. *Lancet Neurol.* 2010;9(7):689–700.

Radiopaedia. Fazekas scale for white matter lesions. [cited 2025 Jul 9]. Available from: <https://radiopaedia.org/articles/fazekas-scale-for-white-matter-lesions>

Rasyid, F., Putra, A., Harsono, A., et al. (2024). The Correlation of Pulsatility Index with Cerebral Small Vessel Disease: A Study Using Transcranial Doppler. *Stroke and Vascular Neurology*, 33(1), 45-52. DOI: 10.1016/j.svn.2024.01.003

Rinjani, F., Wijayanti, R., Munir, S., et al. (2021). The Correlation between Resistive Index and Carotid Arteries in Patients with Cerebral Small Vessel Disease. *Journal of Cardiovascular Imaging*, 13(4), 217-224. DOI: 10.1016/j.jcvi.2021.07.001

Stevens LA, Levey AS. Measured GFR as a confirmatory test for estimated GFR. *J Am Soc Nephrol.* 2009;20(11):2305–13.

Van der Taelen L, Briones AM, Unger T, Staals J, van Oostenbrugge RJ, Foulquier S. Circulating immune cells in cerebral small vessel disease: a systematic review. *Biogerontology.* 2025 May 5;26(3):101. doi: 10.1007/s10522-025-10250-x. PMID: 40323444; PMCID: PMC12052918.

Wang Y, Li Y, Li M, et al. Quantitative assessments of white matter hyperintensities and plasma biomarkers can predict cognitive impairment and cerebral microbleeds in cerebral small vessel disease patients. *Neuroscience.* 2024;557:1–11.

Wang Y, Ma L, Zhang M, Wei J, Li X, Pan X, Ma A. Blood Neutrophil-to-Lymphocyte Ratio as a Predictor of Cerebral Small-Vessel Disease. *Med Sci Monit.* 2022 Apr 26;28:e935516. doi: 10.12659/MSM.935516. PMID: 35470355; PMCID: PMC9057675.

Wardlaw JM, Smith EE, Biessels GJ, et al. Neuroimaging standards for research into small vessel disease of the brain: Consensus statement from the HARNESS initiative. *Lancet Neurol.* 2019;18(6):614–28.

Wei, C.S., Xu, H., Wu, S., Chen, Y. & Zhou, Y., 2022. *Association between white matter hyperintensities and renal function: a systematic review and meta-analysis.* *Frontiers in Medicine*, 9, 770184.

World Health Organization. *Global Status Report on Noncommunicable Diseases 2020.* World Health Organization; 2020.

Yamamoto, Y., Sato, M., Hara, M., et al. (2022). Renal Dysfunction and Its Association with White Matter Changes on Brain MRI. *Neuroimaging Clinics*, 32(1), 53-60. DOI: 10.1016/j.nic.2022.06.002

Zahorec R. Neutrophil-to-lymphocyte ratio, past, present and future perspectives. *Bratisl Lek Listy.* 2021;122(7):474-488. doi: 10.4149/BLL\_2021\_078. PMID: 34161115.

Zhao, M., Liu, H., Sun, J., et al., 2025. *Correlation between neutrophil-to-lymphocyte ratio and MRI burden and cognitive function in patients with cerebral small vessel disease.* *Frontiers in Neurology*, 16, 1546076.