

REFERENCES

- Adams, H.P., Bendixen, B.H., Kappelle, L.J., Biller, J., Love, B.B., Gordon, D.L. and Marsh, E.E. (1993). Classification of subtype of acute ischemic stroke. Definitions for use in a multicenter clinical trial. TOAST. Trial of Org 10172 in Acute Stroke Treatment. *Stroke*, 24(1), pp.35–41. doi:<https://doi.org/10.1161/01.str.24.1.35>.
- Ahmadabad, M.A., Naeimi, A., Keymoradzadeh, A., Faghani, S., Ahmadabad, M.A., Boroujeni, N.A., Mohammadpour, H. and Saberi, A. (2022). Evaluation of De Ritis (AST/ALT), ALP/ALT, and AST/ALP Ratios as Prognostic Factors in Patients with Acute Ischemic Stroke. *BMC Neurology*, 22(1). doi:<https://doi.org/10.1186/s12883-022-02989-4>.
- An, C., Shi, Y., Li, P., Hu, X., Gan, Y., Stetler, R.A., Leak, R.K., Gao, Y., Sun, B.-L., Zheng, P. and Chen, J. (2014). Molecular Dialogs between the Ischemic Brain and the Peripheral Immune system: Dualistic Roles in Injury and Repair. *Progress in Neurobiology*, 115, pp.6–24. doi:<https://doi.org/10.1016/j.pneurobio.2013.12.002>.
- Andersen, J.V., Markussen, K.H., Jakobsen, E., Schousboe, A., Waagepetersen, H.S., Rosenberg, P.A. and Aldana, B.I. (2021). Glutamate metabolism and recycling at the excitatory synapse in health and neurodegeneration. *Neuropharmacology*, [online] 196, p.108719. doi:<https://doi.org/10.1016/j.neuropharm.2021.108719>.
- Aronson, D., Mittleman, M.A. and Burger, A.J. (2004). Elevated Blood Urea Nitrogen Level as a Predictor of Mortality in Patients Admitted for Decompensated Heart Failure. *The American Journal of Medicine*, 116(7), pp.466–473. doi:<https://doi.org/10.1016/j.amjmed.2003.11.014>.
- Baizabal-Carvallo, J.F., Alonso-Juarez, M. and Samson, Y. (2014). Clinical Deterioration following Middle Cerebral Artery Hemodynamic Changes after Intravenous Thrombolysis for Acute Ischemic Stroke . *Journal of Stroke and Cerebrovascular Diseases*, 23(2), pp.254–258. doi:<https://doi.org/10.1016/j.jstrokecerebrovasdis.2013.01.015>.
- Balitbangkes Kemenkes RI (2013). *Riset Kesehatan Dasar (Riskesdas) 2013*. Jakarta: Lembaga Penerbit LPB, pp.126–128.
- Balitbangkes Kemenkes RI (2019a). *Laporan Nasional Riskesdas 2018*. Jakarta: Lembaga Penerbit LPB, p.165.
- Balitbangkes Kemenkes RI (2019b). *Laporan Provinsi DI Yogyakarta 2018*. Jakarta: Lembaga Penerbit LPB, p.114.

Botros, M. and Sikaris, K.A. (2013). The De Ritis Ratio: the Test of Time. *The Clinical Biochemist Reviews*, 34(3), pp.117–130.

Campos, F., Sobrino, T., Ramos-Cabrer, P., Castellanos, M., Blanco, M., Rodríguez-Yáñez, M., Serena, J., Leira, R. and Castillo, J. (2011a). High Blood Glutamate Oxaloacetate Transaminase Levels Are Associated with Good Functional Outcome in Acute Ischemic Stroke. *Journal of Cerebral Blood Flow & Metabolism*, 31(6), pp.1387–1393. doi:<https://doi.org/10.1038/jcbfm.2011.4>.

Campos, F., Sobrino, T., Ramos-Cabrer, P., Argibay, B., Agulla, J., Pérez-Mato, M., Rodríguez-González, R., Brea, D. and Castillo, J. (2011b). Neuroprotection by Glutamate Oxaloacetate Transaminase in Ischemic stroke: an Experimental Study. *Journal of Cerebral Blood Flow and Metabolism*, 31(6), pp.1378–1386. doi:<https://doi.org/10.1038/jcbfm.2011.3>.

Castillo, J., Davalos, A., Naveiro, J. and Noya, M. (1996). Neuroexcitatory Amino Acids and Their Relation to Infarct Size and Neurological Deficit in Ischemic Stroke. *AHA Journal of Stroke*, 27(6), pp.1060–1065. doi:<https://doi.org/10.1161/01.str.27.6.1060>.

Castillo, J., Dávalos, A. and Noya, M. (1997). Progression of Ischaemic Stroke and Excitotoxic Aminoacids. *The Lancet*, 349(9045), pp.79–82. doi:[https://doi.org/10.1016/s0140-6736\(96\)04453-4](https://doi.org/10.1016/s0140-6736(96)04453-4).

Centers for Disease Control and Prevention (2023). *Diabetes Tests*. [online] Centers for Disease Control and Prevention. Available at: <https://www.cdc.gov/diabetes/basics/getting-tested.html>.

Chen, J., Venkat, P., Zacharek, A. and Chopp, M. (2014). Neurorestorative Therapy for Stroke. *Frontiers in Human Neuroscience*, 8. doi:<https://doi.org/10.3389/fnhum.2014.00382>.

Chen, R., Ovbiagele, B. and Feng, W. (2017). Diabetes and Stroke: Epidemiology, Pathophysiology, Pharmaceuticals and Outcomes. *The American Journal of the Medical Sciences*, 351(4), pp.380–386. doi:<https://doi.org/10.1016/j.amjms.2016.01.011>.

Cramer, S.C., Nelles, G., Benson, R.R., Kaplan, J.D., Parker, R.A., Kwong, K.K., Kennedy, D.N., Finklestein, S.P. and Rosen, B.R. (1997). A Functional MRI Study of Subjects Recovered from Hemiparetic Stroke. *Stroke*, 28(12), pp.2518–2527. doi:<https://doi.org/10.1161/01.str.28.12.2518>.

Das, G. and Kumar, P. (2022). Potential Key Genes for Predicting Risk of Stroke occurrence: a Computational Approach. *Neuroscience Informatics*, 2(2), p.100068. doi:<https://doi.org/10.1016/j.neuri.2022.100068>.

Dhanesha, N., Chorawala, M.R., Jain, M., Bhalla, A., Thedens, D., Nayak, M., Doddapattar, P. and Chauhan, A.K. (2019). Fn-EDA (Fibronectin Containing Extra

Domain A) in the Plasma, but Not Endothelial Cells, Exacerbates Stroke Outcome by Promoting Thrombo-Inflammation. *Stroke*, 50(5), pp.1201–1209. doi:<https://doi.org/10.1161/strokeaha.118.023697>.

Edjoc, R.K., Reid, R.D., Sharma, M. and Fang, J. (2013). The Prognostic Effect of Cigarette Smoking on Stroke Severity, Disability, Length of Stay in Hospital, and Mortality in a Cohort with Cerebrovascular Disease. *Journal of Stroke and Cerebrovascular Diseases*, 22(8), pp.e446–e454. doi:<https://doi.org/10.1016/j.jstrokecerebrovasdis.2013.05.001>.

Erdur, H., Scheitz, J.F., Grittner, U., Laufs, U., Endres, M. and Nolte, C.H. (2014). Heart Rate on Admission Independently Predicts in-hospital Mortality in Acute Ischemic Stroke Patients. *International Journal of Cardiology*, 176(1), pp.206–210. doi:<https://doi.org/10.1016/j.ijcard.2014.07.001>.

Farhana, A. and Lappin, S.L. (2023). Biochemistry, Lactate Dehydrogenase. In: *StatPearls*. Treasure Island (FL): StatPearls Publishing.

Feigin, V.L., Brainin, M., Norrving, B., Martins, S., Sacco, R.L., Hacke, W., Fisher, M., Pandian, J. and Lindsay, P. (2022). World Stroke Organization (WSO): Global Stroke Fact Sheet 2022. *International Journal of Stroke*, 17(1), pp.18–29. doi:<https://doi.org/10.1177/17474930211065917>.

Feigin, V.L., Krishnamurthi, R.V., Parmar, P., Norrving, B., Mensah, G.A., Bennett, D.A., Barker-Collo, S., Moran, A.E., Sacco, R.L., Truelsén, T., Davis, S., Pandian, J.D., Naghavi, M., Forouzanfar, M.H., Nguyen, G., Johnson, C.O., Vos, T., Meretoja, A., Murray, C.J.L. and Roth, G.A. (2015). Update on the Global Burden of Ischemic and Hemorrhagic Stroke in 1990-2013: The GBD 2013 Study. *Neuroepidemiology*, [online] 45(3), pp.161–76. doi:<https://doi.org/10.1159/000441085>.

Fonarow, G.C., Saver, J.L., Smith, E.E., Broderick, J.P., Kleindorfer, D.O., Sacco, R.L., Pan, W., Olson, D.M., Hernandez, A.F., Peterson, E.D. and Schwamm, L.H. (2012). Relationship of National Institutes of Health Stroke Scale to 30-Day Mortality in Medicare Beneficiaries with Acute Ischemic Stroke. *Journal of the American Heart Association*, 1(1). doi:<https://doi.org/10.1161/jaha.111.000034>.

Gao, F., Chen, C., Lu, J., Zheng, J., Ma, X.-C., Yuan, X.-Y., Huo, K. and Han, J.-F. (2017). De Ritis Ratio (AST/ALT) as an Independent Predictor of Poor Outcome in Patients with Acute Ischemic Stroke. *Neuropsychiatric Disease and Treatment*, Volume 13, pp.1551–1557. doi:<https://doi.org/10.2147/ndt.s139316>.

Gaughan, J., Gravelle, H., Santos, R. and Siciliani, L. (2017). Long-term Care provision, Hospital Bed blocking, and Discharge Destination for Hip Fracture and Stroke Patients. *International Journal of Health Economics and Management*, 17(3), pp.311–331. doi:<https://doi.org/10.1007/s10754-017-9214-z>.

Giannini, E.G., Testa, R. and Savarino, V. (2005). Liver Enzyme alteration: a Guide for Clinicians. *Canadian Medical Association Journal*, [online] 172(3), pp.367–379. doi:<https://doi.org/10.1503/cmaj.1040752>.

Gore, M., Bansal, K., Suheb, M.Z.K. and Asuncion, R.M.D. (2023). Lacunar Stroke. In: *StatPearls*. Treasure Island (FL): StatPearls Publishing.

Gounden, V., Bhatt, H. and Jialal, I. (2023). Renal Function Tests. In: *StatPearls*. Treasure Island (FL): StatPearls Publishing.

Hakman, E.N. and Cowling, K.M. (2023). Paradoxical Embolism. In: *StatPearls*. Treasure Island (FL): StatPearls Publishing.

Harris, S., Kurniawan, M., Rasyid, A., Mesiano, T. and Hidayat, R. (2018). Cerebral small vessel disease in Indonesia: Lacunar infarction study from Indonesian Stroke Registry 2012–2014. *SAGE Open Medicine*, 6, p.205031211878431. doi:<https://doi.org/10.1177/2050312118784312>.

Hawkins, B.T., Brown, R.C. and Davis, T.P. (2002). Smoking and Ischemic stroke: a Role for nicotine? *Trends in Pharmacological Sciences*, 23(2), pp.78–82. doi:[https://doi.org/10.1016/s0165-6147\(02\)01893-x](https://doi.org/10.1016/s0165-6147(02)01893-x).

Hosten, A.O. (1990). BUN and Creatinine. In: *Clinical Methods: the History, Physical, and Laboratory Examinations*. 3rd Edition. Boston: Butterworths.

Huang, X.-J., Choi, Y.-K., Im, H.-S., Yarimaga, O., Yoon, E. and Kim, H.-S. (2006). Aspartate Aminotransferase (AST/GOT) and Alanine Aminotransferase (ALT/GPT) Detection Techniques. *Sensors*, 6(7), pp.756–782. doi:<https://doi.org/10.3390/s6070756>.

Hui, C., Tadi, P. and Patti, L. (2022). Ischemic Stroke. In: *StatPearls*. Treasure Island (FL): StatPearls Publishing.

Jeon, J.W., Jeong, H.S., Choi, D.E., Ham, Y.R., Na, K.R., Lee, K.W., Shin, J.W. and Kim, J. (2017). Prognostic Relationships between Microbleed, Lacunar Infarction, White Matter Lesion, and Renal Dysfunction in Acute Ischemic Stroke Survivors. *Journal of Stroke and Cerebrovascular Diseases*, 26(2), pp.385–392. doi:<https://doi.org/10.1016/j.jstrokecerebrovasdis.2016.09.037>.

Jerrgensen, H.S., Nakayama, H., Reith, J., Raaschou, H.O. and Olsen, T.S. (1997). Stroke recurrence: Predictors, severity, and prognosis. the Copenhagen Stroke Study. *Neurology*, 48(4), pp.891–895. doi:<https://doi.org/10.1212/wnl.48.4.891>.

Jin, X.-X., Fang, M.-D., Hu, L.-L., Yuan, Y., Xu, J.-F., Lu, G.-G. and Li, T. (2022). Elevated Lactate Dehydrogenase Predicts Poor Prognosis of Acute Ischemic Stroke. *PloS One*, 17(10), pp.e0275651–e0275651. doi:<https://doi.org/10.1371/journal.pone.0275651>.

Johnston, K.C., Connors, A.F., Wagner, D.P. and Haley, E.C. (2003). Predicting Outcome in Ischemic Stroke. *Stroke*, 34(1), pp.200–202. doi:<https://doi.org/10.1161/01.str.0000047102.61863.e3>.

Kalas, M.A., Chavez, L., Leon, M., Taweesedt, P.T. and Surani, S. (2021). Abnormal Liver enzymes: a Review for Clinicians. *World Journal of Hepatology*, 13(11), pp.1688–1698. doi:<https://doi.org/10.4254/wjh.v13.i11.1688>.

Katzan, I.L., Spertus, J., Bettger, J.P., Bravata, D.M., Reeves, M.J., Smith, E.E., Bushnell, C., Higashida, R.T., Hinchey, J.A., Holloway, R.G., Howard, G., King, R.B., Krumholz, H.M., Lutz, B.J. and Yeh, R.W. (2014). Risk Adjustment of Ischemic Stroke Outcomes for Comparing Hospital Performance. *Stroke*, 45(3), pp.918–944. doi:<https://doi.org/10.1161/01.str.0000441948.35804.77>.

Khanevski, A.N., Bjerkreim, A.T., Novotny, V., Næss, H., Thomassen, L., Logallo, N. and Kvistad, C.E. (2019). Recurrent Ischemic stroke: Incidence, predictors, and Impact on Mortality. *Acta Neurologica Scandinavica*, 140(1), pp.3–8. doi:<https://doi.org/10.1111/ane.13093>.

Khanna, S., Briggs, Z. and Rink, C. (2015). Inducible Glutamate Oxaloacetate Transaminase as a Therapeutic Target against Ischemic Stroke. *Antioxidants & Redox Signaling*, 22(2), pp.175–186. doi:<https://doi.org/10.1089/ars.2014.6106>.

Khatiri, M., Wright, C.B., Nickolas, T.L., Yoshita, M., Paik, M.C., Kranwinkel, G., Sacco, R.L. and DeCarli, C. (2007). Chronic Kidney Disease Is Associated with White Matter Hyperintensity Volume. *Stroke*, 38(12), pp.3121–3126. doi:<https://doi.org/10.1161/strokeaha.107.493593>.

König I.R., Ziegler, A., Bluhmki, E., Hacke, W., Bath, P.M.W., Sacco, R.L., Diener, H.C. and Weimar, C. (2008). Predicting Long-Term Outcome after Acute Ischemic Stroke. *Stroke*, 39(6), pp.1821–1826. doi:<https://doi.org/10.1161/strokeaha.107.505867>.

Koton, S., Telman, G., Kimiagar, I. and Tanné, D. (2013). Gender Differences in characteristics, Management and Outcome at Discharge and Three Months after Stroke in a National Acute Stroke Registry. *International Journal of Cardiology*, 168(4), pp.4081–4084. doi:<https://doi.org/10.1016/j.ijcard.2013.07.019>.

Lala, V., Zubair, M. and Minter, D.A. (2023). Liver Function Tests. In: *StatPearls*. Treasure Island (FL): StatPearls Publishing.

Lau, L., Lew, J., Borschmann, K., Thijs, V. and Ekinci, E.I. (2018). Prevalence of Diabetes and Its Effects on stroke outcomes: a Meta-analysis and Literature Review. *Journal of Diabetes Investigation*, 10(3), pp.780–792. doi:<https://doi.org/10.1111/jdi.12932>.

Li, B., Li, D., Liu, J.-F., Wang, L., Li, B.-Z., Yan, X.-J., Liu, W., Wu, K. and Xiang, R.-L. (2021). ‘Smoking paradox’ Is Not True in Patients with Ischemic stroke: a

Systematic Review and meta-analysis. *Journal of Neurology*, 268(6), pp.2042–2054. doi:<https://doi.org/10.1007/s00415-019-09596-3>.

Lindgren, A. (2014). Stroke Genetics: a Review and Update. *Journal of Stroke*, 16(3), p.114. doi:<https://doi.org/10.5853/jos.2014.16.3.114>.

Lyden, P. (2017). Using the National Institutes of Health Stroke Scale. *Stroke*, 48(2), pp.513–519. doi:<https://doi.org/10.1161/strokeaha.116.015434>.

Martin, E.A. (2010). *Oxford Concise Medical Dictionary*. 8th ed. [online] Oxford University Press. Available at: <https://www.oxfordreference.com/display/10.1093/acref/9780199557141.001.0001/acref-9780199557141>.

Matsuo, R., Ago, T., Kiyuna, F., Sato, N., Nakamura, K., Kuroda, J., Wakisaka, Y. and Kitazono, T. (2020). Smoking Status and Functional Outcomes after Acute Ischemic Stroke. *Stroke*, 51(3), pp.846–852. doi:<https://doi.org/10.1161/strokeaha.119.027230>.

Mengel, A., Ulm, L., Hotter, B., Harms, H., Piper, S.K., Grittner, U., Montaner, J., Meisel, C., Meisel, A. and Hoffmann, S. (2019). Biomarkers of Immune capacity, Infection and Inflammation Are Associated with Poor Outcome and Mortality after Stroke - the PREDICT Study. *BMC Neurology*, 19(1). doi:<https://doi.org/10.1186/s12883-019-1375-6>.

Miyoshi, N., Tanigawa, T., Nishioka, S., Maruyama, K., Eguchi, E., Tanaka, K., Saito, I., Yamazaki, K. and Miyake, Y. (2018). Association of Salivary Lactate Dehydrogenase Level with Systemic Inflammation in a Japanese Population. *Journal of Periodontal Research*, 53(4), pp.487–494. doi:<https://doi.org/10.1111/jre.12537>.

Mohanty, S., Tripathi, B., Bhatia, K., Gupta, B. and Mittal, M. (2015). Predictors of Early Neurological Deterioration in Patients with Acute Ischaemic Stroke with Special Reference to Blood Urea Nitrogen (BUN)/creatinine Ratio & Urine Specific Gravity. *Indian Journal of Medical Research*, 141(3), p.299. doi:<https://doi.org/10.4103/0971-5916.156564>.

Moore, K.L., Dalley, A.F. and Agur, A.M.R. (2013). *Moore's Clinically Oriented Anatomy*. 7th ed. Philadelphia: Lippincott Williams & Wilkins, pp.882–883.

Moriles, K.E. and Azer, S.A. (2022). Alanine Amino Transferase. In: *StatPearls*. Treasure Island (FL): StatPearls Publishing.

Murphy, S.JX. and Werring, D.J. (2020). Stroke: Causes and Clinical Features. *Acute Neurology*, 48(9), pp.561–566. doi:<https://doi.org/10.1016/j.mpmed.2020.06.002>.

National Institute of Neurological Disorders and Stroke (2024). NIH Stroke Scale. pp.1–8.

National Institute of Neurological Disorders and Stroke rt-PA Stroke Study Group (1995). Tissue Plasminogen Activator for Acute Ischemic Stroke. *New England Journal of Medicine*, 333(24), pp.1581–1588. doi:<https://doi.org/10.1056/nejm199512143332401>.

Nesheiwat, Z., Goyal, A. and Jagtap, M. (2023). Atrial Fibrillation. In: *StatPearls*. Treasure Island (FL): StatPearls Publishing.

Ovbiagele, B., Weir, C.J., Saver, J.L., Muir, K.W. and Lees, K.R. (2006). Effect of Smoking Status on Outcome after Acute Ischemic Stroke. *Cerebrovascular Diseases*, 21(4), pp.260–265. doi:<https://doi.org/10.1159/000091224>.

Panuganti, K.K., Tadi, P. and Liu, F. (2023). Transient Ischemic Attack. In: *StatPearls*. Treasure Island (FL): StatPearls Publishing.

Peng, Q., Sun, W., Liu, W., Liu, R. and Huang, Y. (2016). Longitudinal Relationship between Chronic Kidney Disease and Distribution of Cerebral Microbleeds in Patients with Ischemic Stroke. *Journal of the Neurological Sciences*, 362, pp.1–6. doi:<https://doi.org/10.1016/j.jns.2016.01.015>.

Phan, T.G., Clissold, B.B., Ma, H., Ly, J.V. and Srikanth, V. (2017). Predicting Disability after Ischemic Stroke Based on Comorbidity Index and Stroke Severity—From the Virtual International Stroke Trials Archive-Acute Collaboration. *Frontiers in Neurology*, 8(192). doi:<https://doi.org/10.3389/fneur.2017.00192>.

Rogers, R.L. (1983). Cigarette Smoking Decreases Cerebral Blood Flow Suggesting Increased Risk for Stroke. *JAMA: the Journal of the American Medical Association*, 250(20), p.2796. doi:<https://doi.org/10.1001/jama.1983.03340200030024>.

Rost, N.S., Bottle, A., Lee, J., Randall, M., Middleton, S., Shaw, L., Thijs, V., Rinkel, G.J.E. and Hemmen, T.M. (2016). Stroke Severity Is a Crucial Predictor of Outcome: an International Prospective Validation Study. *Journal of the American Heart Association*, 5(1). doi:<https://doi.org/10.1161/jaha.115.002433>.

Ryu, W.-S., Lee, S.-H., Kim, C.K., Kim, B.J. and Yoon, B.-W. (2012). The Relation between Chronic Kidney Disease and Cerebral Microbleeds: Difference between Patients with and without Diabetes. *International Journal of Stroke*, 7(7), pp.551–557. doi:<https://doi.org/10.1111/j.1747-4949.2011.00732.x>.

Sacco, R.L., Kasner, S.E., Broderick, J.P., Caplan, L.R., Connors, J.J.B., Culebras, A., Elkind, M.S.V., George, M.G., Hamdan, A.D., Higashida, R.T., Hoh, B.L., Janis, L.S., Kase, C.S., Kleindorfer, D.O., Lee, J.-M., Moseley, M.E., Peterson, E.D., Turan, T.N., Valderrama, A.L. and Vinters, H.V. (2013). An updated definition of stroke for the 21st century: a statement for healthcare professionals from the

American Heart Association/American Stroke Association. *Stroke*, [online] 44(7), pp.2064–89. doi:<https://doi.org/10.1161/STR.0b013e318296aeca>.

Saver, J.L. and Altman, H. (2012). Relationship between Neurologic Deficit Severity and Final Functional Outcome Shifts and Strengthens during First Hours after Onset. *Stroke*, 43(6), pp.1537–1541. doi:<https://doi.org/10.1161/strokeaha.111.636928>.

Sedgwick, P. (2012). Observational Study Designs. *British Medical Journal*, 344. doi:<https://doi.org/10.1136/bmj.e4209>.

Setia, M.S. (2016). Methodology Series Module 3: Cross-sectional Studies. *Indian Journal of Dermatology*, [online] 61(3), pp.261–264. doi:<https://doi.org/10.4103/0019-5154.182410>.

Setyopranoto, I., Bayuangga, H.F., Panggabean, A.S., Alifaningdyah, S., Lazuardi, L., Dewi, F.S.T. and Malueka, R.G. (2019). Prevalence of Stroke and Associated Risk Factors in Sleman District of Yogyakarta Special Region, Indonesia. *Stroke Research and Treatment*, [online] 2019, pp.1–8. doi:<https://doi.org/10.1155/2019/2642458>.

Shekhar, S., Cunningham, M.W., Pabbidi, M.R., Wang, S., Booz, G.W. and Fan, F. (2018). Targeting Vascular Inflammation in Ischemic stroke: Recent Developments on Novel Immunomodulatory Approaches. *European Journal of Pharmacology*, 833, pp.531–544. doi:<https://doi.org/10.1016/j.ejphar.2018.06.028>.

Song, T.J., Kim, J., Song, D., Nam, H.S., Kim, Y.D., Lee, H.S. and Heo, J.H. (2014). Association of Cerebral Microbleeds with Mortality in Stroke Patients Having Atrial Fibrillation. *Neurology*, 83(15), pp.1308–1315. doi:<https://doi.org/10.1212/wnl.0000000000000862>.

Tadi, P. and Lui, F. (2023). Acute Stroke. In: *StatPearls*. Treasure Island (FL): StatPearls Publishing.

Terabe, M., Ago, T., Wakisaka, Y., Kuroda, J., Shijo, M., Yoshikawa, Y., Komori, M., Nishimura, A., Makihara, N., Nakamura, K. and Kitazono, T. (2017). Early Reperfusion after Brain Ischemia Has Beneficial Effects beyond Rescuing Neurons. *Stroke*, 48(8), pp.2222–2230. doi:<https://doi.org/10.1161/strokeaha.117.016689>.

Tian, F., Li, H., Wang, L., Li, B., Aibibula, M., Zhao, H., Feng, N., Lv, J., Zhang, G. and Ma, X. (2020). The Diagnostic Value of Serum C-reactive protein, procalcitonin, interleukin-6 and Lactate Dehydrogenase in Patients with Severe Acute Pancreatitis. *Clinica Chimica Acta*, 510, pp.665–670. doi:<https://doi.org/10.1016/j.cca.2020.08.029>.

Turner, J., Pasha, M. and Badireddy, M. (2023). Anemia. In: *StatPearls*. Treasure Island (FL): StatPearls Publishing.

Usberti, M., Federico, S., Di Minno, G., Ungaro, B., Ardilo, G., Pecoraro, C., Cianciaruso, B., Cerbone, A.M., Cirillo, F. and Panain, M. (1985). Effects of Angiotensin II on Plasma ADH, Prostaglandin synthesis, and Water Excretion in Normal Humans. *American Journal of Physiology - Renal Physiology*, 248(2), pp.254–259. doi:<https://doi.org/10.1152/ajprenal.1985.248.2.F254>.

Vandenbroucke, J.P., von Elm, E., Altman, D.G., Gøtzsche, P.C., Mulrow, C.D., Pocock, S.J., Poole, C., Schlesselman, J.J. and Egger, M. (2014). Strengthening the Reporting of Observational Studies in Epidemiology (STROBE): Explanation and Elaboration. *International Journal of Surgery (London, England)*, [online] 12(12), pp.1500–24. doi:<https://doi.org/10.1016/j.ijsu.2014.07.014>.

Venketasubramanian, N., Yoon, B.W., Pandian, J. and Navarro, J.C. (2017). Stroke Epidemiology in South, East, and South-East Asia: A Review. *Journal of Stroke*, [online] 19(3), pp.286–294. doi:<https://doi.org/10.5853/jos.2017.00234>.

Vroon, D.H. and Israili, Z. (1990). Aminotransferases. In: *Clinical Methods: The History, Physical, and Laboratory Examinations*. Boston: Butterworths.

Wang, A., Tian, X., Zuo, Y., Wang, X., Xu, Q., Meng, X., Chen, P., Li, H. and Wang, Y. (2021). High Lactate Dehydrogenase Was Associated with Adverse Outcomes in Patients with Acute Ischemic Stroke or Transient Ischemic Attack. *Annals of Palliative Medicine*, 10(10), pp.101850195–101810195. doi:<https://doi.org/10.21037/apm-21-2195>.

Wang, G., Jing, J., Li, J., Pan, Y., Yan, H., Meng, X., Zhao, X., Liu, L., Li, H., Wang, D.Z. and Wang, Y. (2020). Association of Elevated hs-CRP and Multiple Infarctions with Outcomes of Minor Stroke or TIA: Subgroup Analysis of CHANCE Randomised Clinical Trial. *Stroke and Vascular Neurology*, 6(1), pp.80–86. doi:<https://doi.org/10.1136/svn-2020-000369>.

World Health Organization (2023a). *Hypertension*. [online] World Health Organization. Available at: <https://www.who.int/news-room/fact-sheets/detail/hypertension>.

World Health Organization (2023b). *Obesity*. [online] World Health Organization. Available at: https://www.who.int/health-topics/obesity#tab=tab_1.

Wouters, A., Nysten, C., Thijs, V. and Lemmens, R. (2018). Prediction of Outcome in Patients with Acute Ischemic Stroke Based on Initial Severity and Improvement in the First 24 h. *Frontiers in Neurology*, 9. doi:<https://doi.org/10.3389/fneur.2018.00308>.

Xu, Q., Zhang, X., Li, H., Tian, X., Zuo, Y., Zhang, Y., Zhang, X., Wang, Y., Wang, A. and Meng, X. (2022). Aspartate Aminotransferase to Alanine Aminotransferase Ratio and Clinical Outcomes after Acute Ischemic stroke: the CNSR-III Registry. *Internal and Emergency Medicine*, 17(7), pp.1987–1996. doi:<https://doi.org/10.1007/s11739-022-03059-w>.

Yallowitz, A.W. and Decker, L.C. (2023). Infectious Endocarditis. In: *StatPearls*. Treasure Island (FL): StatPearls Publishing.

You, S., Zheng, D., Zhong, C., Wang, X., Tang, W., Sheng, L., Zheng, C., Cao, Y. and Liu, C.-F. (2018). Prognostic Significance of Blood Urea Nitrogen in Acute Ischemic Stroke. *Circulation Journal: Official Journal of the Japanese Circulation Society*, 82(2), pp.572–578. doi:<https://doi.org/10.1253/circj.CJ-17-0485>.

Zhang, J., Liu, L., Li, Z., Sun, H. and Ju, X. (2014). Associations between Biomarkers of Renal Function with Cerebral Microbleeds in Hypertensive Patients. *American Journal of Hypertension*, 28(6), pp.739–745. doi:<https://doi.org/10.1093/ajh/hpu229>.

Zhou, Y. and Danbolt, N.C. (2014). Glutamate as a neurotransmitter in the healthy brain. *Journal of Neural Transmission*, [online] 121(8), pp.799–817. doi:<https://doi.org/10.1007/s00702-014-1180-8>.