

## DAFTAR PUSTAKA

- Abbas, A., Litchman, A. and Pillai, S. (2012), “Innate immunity”, *Cellular and Molecular Immunology*, 7th ed., Elsevier, Philadelphia, pp. 51–86.
- Anggraini, D., Hasni, D. and Amelia, R. (2022), “Pathogenesis of Sepsis”, Vol. 1 No. 4, pp. 334–341, doi: <https://doi.org/10.56260/sciena.v1i4>.
- Asati, A., Gupta, R. and Behera, D. (2018), “To Determine Blood Lactate Levels in Patients with Sepsis Admitted to a Respiratory Intensive Care Unit and to Correlate with their Hospital Outcomes”, *Int J Crit Care Emerg Med*, Vol. 4 No. 2, doi: 10.23937/2474-3674/1510045.
- Basile-Filho, A., Lago, A., Menegueti, M., Nicolini, E., Nunes, R., de Lima, S., Ferreira, J., *et al.* (2018), “The use of SAPS 3, SOFA, and Glasgow Coma Scale to predict mortality in patients with subarachnoid hemorrhage: A retrospective cohort study”, *Medicine (Baltimore)*, Vol. 97 No. 41, p. e12769, doi: 10.1097/MD.00000000000012769.
- Bennett, S.R. (2015), “Sepsis in the intensive care unit”, *Surgery (Oxford)*, Vol. 33 No. 11, pp. 565–571, doi: <https://doi.org/10.1016/j.mpsur.2015.08.002>.
- Böhmer, A., Just, K., Lefering, R., Paffrath, T., Bouillon, B. and Joppich, R. (2014), “Factors influencing length of stay in the intensive care unit for surviving trauma patients: a retrospective analysis of 30,157 case”, *Critical Care*, Vol. 18, p. R1143, doi: 10.1186/cc13976.

Bone, R. (1996), “Immunologic dissonance: a continuing evolution in our understanding of the systemic inflammatory response syndrome (SIRS) and the multiple organ dysfunction syndrome (MODS)”, Vol. 125 No. 8, pp. 680–687.

Bouch, D. and Thompson, J. (2008), “Severity scoring systems in the critically ill”, *Contin Educ Anaesth Crit Care Pain*, Vol. 8 No. 5, pp. 181–185, doi: <https://doi.org/10.1093/bjaceaccp/mkn033>.

Brahmi, N.H., Soesilowati, D. and Pujo, J.L. (2016), “Validitas Skor Apache II, MSofa, dan SAPS 3 Terhadap Mortalitas Pasien Non Bedah di Perawatan Intensif Dewasa RSUP dr Kariadi Semarang”, *JAI (Jurnal Anestesiologi Indonesia)*, Vol. 8 No. 3, p. 164, doi: 10.14710/jai.v8i3.19815.

Capuzzo, M., Scaramuzza, A., Vaccarini, B., Gilli, G., Zannoli, S., Farabegoli, L., Felisatti, G., *et al.* (2009), “Validation of SAPS 3 Admission Score and comparison with SAPS II”, *Acta Anaesthesiologica Scandinavica*, Vol. 53 No. 5, pp. 589–594, doi: 10.1111/j.1399-6576.2009.01929.x.

Carmo, T., Ferreira, I., Menezes, R., Telles, G., Otero, M. and Arriaga, M. (2021), “Derivation and Validation of a Novel Severity Scoring System for Pneumonia at Intensive Care Unit Admission”, Vol. 72, pp. 942–949.

Champion, H. (2002), “Trauma scoring”, *Scand J Surg*, Vol. 91, pp. 12–22.

Chattopadhyay, A. and Chatterjee, S. (2015), “Predicting ICU length of stay using APACHE-IV in persons with severe sepsis – a pilot study”, *Journal of Epidemiological Research*, Vol. 2 No. 1, p. 1, doi: 10.5430/jer.v2n1p1.

Chen, M., Lu, X., Hu, L., Liu, P., Zhao, W., Yan, H., Tang, L., *et al.* (2017),  
“Development and validation of a mortality risk model for pediatric sepsis”,  
*Medicine (Baltimore)*, Vol. 96 No. 20, p. e6923, doi:  
10.1097/MD.00000000000006923.

Coelho, F.R. and Martins, J.O. (2012), “Diagnostic methods in sepsis: the need of  
speed”, *Revista Da Associação Médica Brasileira (English Edition)*, Vol.  
58 No. 4, pp. 498–504, doi: 10.1016/S2255-4823(12)70236-9.

Costa e Silva, V.T., De Castro, I., Liano, F., Muriel, A., Rodriguez-Palomares, J.R.  
and Yu, L. (2011), “Performance of the third-generation models of severity  
scoring systems (APACHE IV, SAPS 3 and MPM-III) in acute kidney  
injury critically ill patients”, *Nephrology Dialysis Transplantation*, Vol. 26  
No. 12, pp. 3894–3901, doi: 10.1093/ndt/gfr201.

Deng, R.-M., Huang, G., Wang, T. and Zhou, J. (2025), “Regulated programmed  
cell death in sepsis associated acute lung injury: From pathogenesis to  
therapy”, *Int Immunopharmacol*, Vol. 19 No. 148, p. 114111, doi:  
10.1016/j.intimp.2025.114111.

Elbaih, A.H., Elsayed, Z.M., Ahmed, R.M. and Abd-elwahed, S.A. (2019), “Sepsis  
patient evaluation emergency department (SPEED) score & mortality in  
emergency department sepsis (MEDS) score in predicting 28-day mortality  
of emergency sepsis patients”, *Chin J Traumatol*, Vol. 22 No. 6, pp. 316–  
322, doi: 10.1016/j.cjtee.2019.10.004.

Emamian, N., Miller, T., Glick, Z., Day, L., Becker, L., Singh, A., Shi, T., *et al.*  
(2024), “Association between measures of resuscitation in the critical care

resuscitation unit and in-hospital mortality among patients with sepsis”,

*JACEP Open*, Vol. 5 No. e13281, pp. 1–7, doi: 10.1002/emp2.13281.

Escobar, M.F., Ramos, I., Marta Guerra, K., Soto Franco, N., Galindo-Sánchez, J.S., Libreros-Peña, L., Peña-Zárate, E.E., *et al.* (2025), “Unveiling the potential role of the shock index in maternal sepsis: reality or fantasy?”, *The Journal of Maternal-Fetal & Neonatal Medicine*, Vol. 38 No. 1, p. 2453999, doi: 10.1080/14767058.2025.2453999.

Evans, L., Rhodes, A., Alhazzani, W., Antonelli, M., Coopersmith, C.M., French, C. and Levy, M. (2021), “Surviving sepsis campaign: international guidelines for management of sepsis and septic shock 2021”, *Critical Care Medicine*, Vol. 49 No. 11, pp. e1063–e1143.

Evran, T., Serin, S., Gürses, E. and Sungurtekin, H. (2016), “Various scoring systems for predicting mortality in Intensive Care Unit”, *Nigerian Journal of Clinical Practice*, Vol. 19 No. 4, p. 530, doi: 10.4103/1119-3077.183307.

Fagbenro, A., Amadi, E.S., Ewumiro, F.E., Nwebonyi, S.O., Edwards, Q., Okere, M.O., Awala, S.V., *et al.* (2024), “Rates, Diagnoses, and Predictors of Unplanned 30-Day Readmissions of Critical Care Survivors Hospitalized for Lung Involvement in Systemic Lupus Erythematosus: An Analysis of National Representative US Readmissions Data”, *Cureus*, Vol. 16 No. 11, p. e73099, doi: 10.7759/cureus.73099.

Farhan, A., Ali, S.M., Mansoor, V.B., Chaudhary, R. and Rehman, H.U. (2021), “Comparison of SAPS III and SOFA score for the prediction of mortality

among ICU patients”, *Int j Endorsing Health Sci Res*, Vol. 9 No. 4, pp. 437–442, doi: 10.29052/IJEHSR.v9.i4.2021.437-442.

Feijó, C.A., Borges, A.E., da Cunha, E.Q., de Meneses, F.A., Albuquerque, M.P., Aragão, N.L., Pinheiro, T.O., *et al.* (2015), “In the ICU and post ICU, platelets have more impact as a prognosis marker than leukocytes!”, *Critical Care*, Vol. 19 No. Suppl 2, p. P74, doi: doi:10.1186/cc14707.

Ferguson, N.D., Fan, E., Camporota, L., Antonelli, M., Anzueto, A. and Beale, R. (2012), “The Berlin definition of ARDS: an expanded rationale, justification, and supplementary material”, *Intensive Care Medicine*, Vol. 38 No. 10, pp. 1573–1582, doi: <https://doi.org/10.1007/s00134-012-2682-1>.

Fleischmann-Struzek, C., Mellhammar, L., Rose, N., Cassini, A., Rudd, K.E., Schlattmann, P., Allegranzi, B., *et al.* (2020), “Incidence and mortality of hospital- and ICU-treated sepsis: results from an updated and expanded systematic review and meta-analysis”, *Intensive Care Medicine*, Vol. 46 No. 8, pp. 1552–1562, doi: 10.1007/s00134-020-06151-x.

Flocco, G., Abu-Hammour, M., Abdel-Razeq, R., Kumar, P. and Salazar, M. (2024), “The Impact of Hospital Size on the Outcomes of Patients Admitted with Esophageal Variceal Bleeding”, *The American Journal of Gastroenterology*, Vol. 119 No. 10S, p. S728, doi: 10.14309/01.ajg.0001033532.24435.a6.

Goldner, K., DeWitt, M. and Maves, R. (2025), “Monocyte Distribution Width (MDW) as a Biomarker to Distinguish Septic Shock with Bacteremia from

Cardiogenic Shock”, *Open Forum Infect Dis*, Vol. 12 No. Suppl 1, p. ofae631.2394, doi: 10.1093/ofid/ofae631.2394.

Gotts, J. and Matthay, M.A. (2016), “Sepsis: pathophysiology and clinical management”, Vol. 353, p. i1585, doi: 10.1136/bmj.i1585.

Gu, Y., Li, H. and Shao, F. (2025), “The Evaluation of PCT/ALB in Predicting the Prognosis of Patients with Acute Kidney Injury Caused by Sepsis Secondary to Bloodstream Infection”, *Kidney International Reports*, Vol. 10 No. 2, pp. S12–S13.

Hagberg, L., Cinque, P., Gisslen, M., Brew, B.J., Spudich, S., Bestetti, A., Price, R.W., *et al.* (2010), “Cerebrospinal fluid neopterin: an informative biomarker of central nervous system immune activation in HIV-1 infection”, *AIDS Research and Therapy*, Vol. 7 No. 15, pp. 1–12.

Hall, M., Williams, S., DeFrances, C. and Golosinskiy, A. (2011), “Inpatient care for septicemia or sepsis: a challenge for patients and hospitals”, Vol. 62, pp. 1–8.

Hanley, J. and McNeil, B. (1981), “The Meaning and Use of the area under a receiver operating characteristic (ROC) curve”, Vol. 143, pp. 29–36.

Hatman, F.A., Semedi, B.P. and Budiono, B. (2021), “Analisis Faktor Risiko terhadap Lama Perawatan Pasien Sepsis yang Meninggal di Ruang Perawatan Intensif RSUD Dr. Soetomo Surabaya”, *JAI (Jurnal Anestesiologi Indonesia)*, Vol. 13 No. 2, pp. 78–87, doi: 10.14710/jai.v13i2.32441.

He, Y., Xu, J., Shang, X., Fang, X., Gao, C., Sun, D., Yao, L., *et al.* (2022), “Clinical characteristics and risk factors associated with ICU-acquired infections in sepsis: A retrospective cohort study”, *Frontiers in Cellular and Infection Microbiology*, Vol. 12, p. 962470, doi: 10.3389/fcimb.2022.962470.

Hidayat, Kestriani, N.D. and Pradian, E. (2020), “Angka Kejadian, Lama Rawat, dan Mortalitas Pasien Acute Kidney Injury di ICU RSUP Dr. Hasan Sadikin Bandung”, *Jurnal Anestesi Perioperatif*, Vol. 8 No. 2, pp. 108–118.

Hong, H., Li, M., Zheng, J., Shi, H. and Xiao, M. (2025), “Predictive value of thrombomodulin in sepsis associated acute kidney injury”, *Kidney International Reports*, Vol. 10 No. 2, p. S10.

Hosmer, D. and Lemeshow, S. (1995), “Confidence interval estimates of an index of quality performance based on logistic regression models”, Vol. 14, pp. 2161–2172.

Hotchkiss, R.S., Marshall, J.C., Abraham, E., Angus, D.C. and Cook, D. (2016), “Sepsis and septic shock”, pp. 1–20.

Huang, M., Cai, S. and Su, J. (2019), “The Pathogenesis of Sepsis and Potential Therapeutic Targets”, *International Journal of Molecular Sciences*, Vol. 20 No. 21, p. 5376, doi: 10.3390/ijms20215376.

Ilman, P., Wisudarti, C.F.R. and Widyastuti, Y. (2023), *Performa Model Skor ICU RSUP Dr. Sardjito Dibandingkan Dengan SAPS Untuk Memprediksi Prolonged Length of Stay Di ICU RSUP Dr. Sardjito*, Universitas Gadjah Mada, Yogyakarta.

- Iqbal, A., Kolamunnage-Dona, R., Toh, C. and Downey, C. (2015), “Developing a laboratory-based score to predict mortality in patients admitted to the ICU”, *Critical Care*, Vol. 19 No. 1, pp. S190–S191, doi: 10.1186/cc14627.
- Irvan, I., Febyan, F. and Suparto, S. (2018), “Sepsis dan Tata Laksana Berdasar Guideline Terbaru”, *JAI (Jurnal Anestesiologi Indonesia)*, Vol. 10 No. 1, p. 62, doi: 10.14710/jai.v10i1.20715.
- Isaranuwatthai, S., Bupphanharun, J., Thongbun, T., Thavornwattana, K., Harnphadungkit, M. and Siripongboonsitti, T. (2025), “Early antibiotics administration reduces mortality in sepsis patients in tertiary care hospital”, *BMC Infectious Diseases*, Vol. 25 No. 135.
- Jeganathan, N., Yau, S., Ahuja, N., Otu, D., Stein, B., Fogg, L. and Balk, R. (2017), “The characteristics and impact of source of infection on sepsis-related ICU outcomes”, *Journal of Critical Care*, Vol. 41, pp. 170–176, doi: 10.1016/j.jcrc.2017.05.019.
- Jimenez, M. and Marshall, J.C. (2001), “International Sepsis Forum: Source control in the management of sepsis”, Vol. 27, pp. S49–S62.
- Junhasavasdikul, D., Theerawit, P., Ingsathit, A. and Kiatboonsri, S. (2016), “Lactate and combined parameters for triaging sepsis patients into intensive care facilities”, *J Crit Care*, Vol. 33, pp. 71–77, doi: <https://doi.org/10.1016/j.jcrc.2016.01.019>.
- Kassam, N., Aghan, E., Somji, S., Aziz, O., Orwa, J. and Surani, S.R. (2021), “Performance in mortality prediction of SAPS 3 And MPM-III scores among adult patients admitted to the ICU of a private tertiary referral



hospital in Tanzania: a retrospective cohort study”, *PeerJ*, Vol. 9, pp. 1–15, doi: 10.7717/peerj.12332.

Khairallah, M., Gaber, A., Maghraby, M., Dahpy, M., Parmer, S. and Mostafa, M. (2024), “Epidemiology, risk factors, outcomes, and role of Serpin A3 as a biomarker for transition of acute kidney injury to chronic kidney disease in critically ill patients”, *The Egyptian Journal of International Medicine*, Vol. 36 No. 30, pp. 1–8, doi: doi.org/10.1186/s43162-024-00291-y.

Kim, H., Chung, S.P., Choi, S.-H., Kang, G.H., Shin, T.G., Kim, K., Park, Y.S., *et al.* (2019), “Impact of timing to source control in patients with septic shock: A prospective multi-center observational study”, *Journal of Critical Care*, Vol. 53, pp. 176–182, doi: 10.1016/j.jcrc.2019.06.012.

Koozi, H., Engström, J., Spångfors, M., Friberg, H. and Frigyesi, A. (2024), “Plasma endostatin is an early creatinine independent predictor of acute kidney injury and need for renal replacement therapy in critical care”, doi: 10.1101/2024.04.25.24306345.

Koozi, H., Lengquist, M. and Frigyesi, A. (2020), “C-reactive protein as a prognostic factor in intensive care admissions for sepsis: A Swedish multicenter study”, *Journal of Critical Care*, Vol. 56, pp. 73–79, doi: 10.1016/j.jcrc.2019.12.009.

Kramer, A. and Zimmerman, J. (2010), “A predictive model for the early identification for a prolonged intensive care unit length of stay”, *BMC Med Inform Decis Mak*, Vol. 10, p. 27, doi: 10.1186/1472-6947-10-27.

- Kubler, A., Durek, G., Zamirowska, A., Duszynska, W., Palysinska, B. and Gaszynski, W. (2004), “Severe sepsis in Poland: Results of internet surveillance of 1043 cases”, Vol. 10 No. 11, pp. 635–641.
- Kwizera, A., Dünser, M. and Nakibuuka, J. (2012), “National intensive care unit bed capacity and ICU patient characteristics in a low income country”, *BMC Research Notes*, Vol. 5, p. 475.
- Lagu, T., Rothberg, M., Shieh, M., Pekow, P., Steingrub, J. and Lindenauer, P. (2012), “Hospitalizations, costs, and outcomes of severe sepsis in the United States 2003 to 2007”, Vol. 40 No. 3, pp. 754–761.
- Le Gall, J., Lemeshow, S. and Saulnier, F. (1993), “A new Simplified Acute Physiology Score (SAPS II) based on a European/North American multicenter study”, *JAMA*, Vol. 270 No. 24, pp. 2957–2963, doi: doi:10.1001/jama.1993.03510240069035.
- Le Gall, J., Loirat, P. and Alperovitch, A. (1984), “A simplified acute physiology score for ICU patients”, *Critical Care Medicine*, Vol. 12 No. 11, pp. 975–977.
- Leiwakabessy, D.C.B., Yulia, R. and Herawati, F. (2024), “Analisis penggunaan antibiotik pada pasien sepsis di intensive care unit (ICU) RSI Surabaya Jemursari”, *Jurnal Kesehatan Madani Medika*, Vol. 15 No. 01, pp. 67–76.
- Leligdowicz, A., Dodek, P., Norena, M., Wong, H. and Kumar, A. (2014), “Association between source of infection and hospital mortality in patients who have septic shock”, Vol. 189 No. 10, pp. 1204–1213.

Lemeshow, S. and Hosmer, D. (1982), “A review of Goodness-of-fit Statistics for Use in the development of logistic regression models”, Vol. 115, pp. 92–106.

Levy, M., Rhodes, A., Philips, G., Townsend, R., Schorr, C., Beale, R., Osborn, T., *et al.* (2014), “Surviving sepsis campaign: association between performance metrics and outcomes in a 7.5 year study”, Vol. 40 No. 11, pp. 1623–1633.

L’Heureux, M., Sternberg, M., Brath, L., Turlington, J. and Kahiouris, M. (2020), “Sepsis-Induced Cardiomyopathy: a Comprehensive Review”, *Curr Cardiol Rep*, Vol. 22 No. 5, p. 35, doi: 10.1007/s11886-020-01277-2.

Mahon, C. and Mahlen, S. (2015), “Host-parasite interaction”, *Textbook of Diagnostic Microbiology*, 5th ed., Saunders Elseiver, Missouri, pp. 23–46.

Marik, P.E. and Hedman, L. (2000), “What’s in a day? Determining intensive care unit length of stay”, *Crit Care Med*, Vol. 28, p. 2090=2093.

Martin, G., Mannino, D. and Moss, M. (2006), “The effect of age on the development and outcome of adult sepsis”, Vol. 34 No. 1, pp. 15–21.

Maryani, N., Jufan, A.Y., Uyun, Y., Wisudarti, C.F.R. and Widodo, U. (2023), “Penggunaan Delta C-Reactive Protein dan SOFA Score Sebagai Prediktor Kematian Pasien Sepsis”, *Jurnal Anestesi Perioperatif*, Vol. 11 No. 1, doi: 10.15851/jap.v11n1.2955.

Mayr, F., Yende, S. and Angus, D. (2013), “Epidemiology of severe sepsis”, Vol. 5 No. 1, pp. 4–11.

Metnitz, B., Schaden, E., Moreno, R., Le Gall, J., Bauer, P. and Metnitz, P.G.H. (2008), “Austrian validation and customization of the SAPS 3 Admission

Score”, *Intensive Care Medicine*, Vol. 35 No. 4, pp. 616–622, doi:  
10.1007/s00134-008-1286-2.

Metnitz, P.G.H., Moreno, R.P., Almeida, E., Jordan, B., Bauer, P., Campos, R.A., Iapichino, G., *et al.* (2005), “SAPS 3—From evaluation of the patient to evaluation of the intensive care unit. Part 1: Objectives, methods and cohort description”, *Intensive Care Med*, Vol. 31 No. 10, pp. 1336–1344, doi:  
10.1007/s00134-005-2762-6.

Metnitz, P.G.H., Moreno, R.P., Fellingner, T., Posch, M. and Zajic, P. (2021), “Evaluation and calibration of SAPS 3 in patients with COVID-19 admitted to intensive care units”, *Intensive Care Medicine*, Vol. 47, pp. 910–912.

Minhas, P.S., Liu, L., Moon, P.K., Joshi, A.U., Dove, C., Mhatre, S., Contrepois, K., *et al.* (2019), “Macrophage de novo NAD<sup>+</sup> synthesis specifies immune function in aging and inflammation”, *Nature Immunology*, Vol. 20, pp. 50–63.

Misra, U. (2025), “Speciality Grand Challenge in Neuroinfectious Diseases”, *Frontiers in Neurology*, Vol. 16, doi: 10.3389/fneur.2025.1557610.

Moitra, V., Guerra, C., Linde-Zwirble, W. and Wunsch, H. (2016), “Relationship between ICU length of stay and long-term mortality for elderly ICU survivors”, *Critical Care Medicine*, Vol. 44 No. 4, pp. 655–662, doi:  
10.1097/CCM.0000000000001480.

Moralez, G.M., Rabello, L.S.C.F., Lisboa, T.C., Lima, M.D.F.A., Hatum, R.M., De Marco, F.V.C., Alves, A., *et al.* (2017), “External validation of SAPS 3 and

MPM0-III scores in 48,816 patients from 72 Brazilian ICUs”, *Annals of Intensive Care*, Vol. 7 No. 1, p. 53, doi: 10.1186/s13613-017-0276-3.

Moreno, R.P., Metnitz, P.G.H., Almeida, E., Jordan, B., Bauer, P., Campos, R.A., Lapichino, G., *et al.* (2005), “– SAPS 3 – From evaluation of the patient to evaluation of the intensive care unit. Part 2: Development of a prognostic model for hospital mortality at ICU admission”, *Intensive Care Med*, Vol. 31, pp. 1345–1355, doi: 10.1007/s00134-005-2763-5.

Mulyadi, C., Singh, G., Sugiarto, A. and Tahapary, D. (2021), “Kesahihan Simplified Acute Physiology Score (SAPS 3) Sebagai Prediktor Mortalitas Pneumonia Komunitas Bakterial dan Viral Berat”, *Indonesia Journal Chest*, Vol. 8 No. 2, pp. 15–22.

Mungan, İ., Bektaş, Ş., Altınkaya Çavuş, M., Sarı, S. and Turan, S. (2019), “The predictive power of SAPS-3 and SOFA scores and their relations with patient outcomes in the Surgical Intensive Care Unit”, *Turkish Journal of Surgery*, Vol. 35 No. 2, pp. 124–130, doi: 10.5578/turkjsurg.4223.

Myers, P., Ng, K., Kartoun, U., Dai, W., Huang, W., Anderson, A. and Stultz, C. (2020), “Identifying unreliable predictions in clinical risk models”, *Npj Digit Med*, Vol. 3 No. 1, pp. 1–8.

Nainggolan, J.J.P., Kumaat, L.T. and Laihad, M.L. (2017), “Gambaran Sumber Terjadinya Infeksi pada Penderita Sepsis dan Syok Septik di ICU RSUP Prof. Dr. R. D. Kandou Manado Periode Agustus 2016 sampai dengan September 2017”, *e-CliniC*, Vol. 5 No. 2, doi: 10.35790/ecl.5.2.2017.18570.

Naqvi, F., Jain, P., Umer, A., Rana, B. and Hadique, S. (2022), “Outcomes of Patients With Sepsis and Septic Shock Requiring Source Control: A Prospective Observational Single-Center Study”, *Critical Care Explorations*, Vol. 4 No. 12, p. e0807, doi: 10.1097/CCE.0000000000000807.

Octora, M., Mertaniasih, N.M., Semedi, B.P. and Koendhori, E.B. (2021), “Predictive Score Model of Clinical Outcomes Sepsis in Intensive Care Unit Tertier Referral Hospital of Eastern Indonesia”, *Open Access Macedonian Journal of Medical Sciences*, Vol. 9 No. B, pp. 1710–1716, doi: 10.3889/oamjms.2021.7780.

Oliveira, V., Brauner, J. and Vieira, S. (2013), “Is SAPS 3 better than Apache II at predicting mortality in critically ill transplant patients?”, *Clinics*, Vol. 68 No. 2, pp. 153–158.

Patel, V. (2018), *Hyperlactatemia in Sepsis in Patients Admitted in Intensive Care Unit*, Doctoral dissertation, Sumandeep Vidyapeeth, Gujarat.

Pellathy, T.P., Pinsky, M.R. and Hravnak, M. (2021), “Intensive Care Unit Scoring Systems”, *Critical Care Nurse*, Vol. 41 No. 4, pp. 54–64, doi: 10.4037/ccn2021613.

Peyer, M., Bismar, N., Zhang, S. and Chen, C. (2024), “A Retrospective Analysis of Intravenous Fluid Administration and Timing of Vasopressor Initiation in Patients with Septic Shock”, *Chest Journal*, Vol. 166 No. 4, p. A1833.

Pinsky, M.R. (1989), “Multiple systems organ failure: malignant intravascular inflammation”, Vol. 5 No. 2, pp. 195–198.

- Pinsky, M.R. and Matuschak, G. (1989), “Multiple systems organ failure: failure inflammation”, Vol. 5 No. 2, pp. 199–220.
- Pohan, H.T. (2005), “Assessment of clinical and laboratory parameters that reflect inflammatory response and organ function in sepsis”, *Med J Indones*, Vol. 14 No. 1, pp. 26–32.
- Poole, D., Rossi, C., Anghileri, A., Giardino, M., Latronico, N. and Radrizzani, D. (2009), “External validation of the simplified acute physiology score (SAPS) 3 in a cohort of 28,357 patients from 147 Italian intensive care units”, *Intensive Care Medicine*, Vol. 35 No. 11, pp. 1916–1924, doi: 10.1007/s00134-009-1615-0.
- Poole, D., Rossi, C., Latronico, N., Rossi, G., Finazzi, S. and Bertolini, G. (2012), “Comparison between SAPS II and SAPS 3 in predicting hospital mortality in a cohort of 103 Italian ICUs. Is new always better?”, *Intensive Care Medicine*, Vol. 38 No. 8, pp. 1280–1288, doi: 10.1007/s00134-012-2578-0.
- Porto, B.M., Pereira, D.N., Kopittke, L., Asevedo, A., Gomes, A.G.D.R., Behring, A., Lima, B., *et al.* (2025), “Comparison between the Characteristics and Outcomes of Patients Hospitalized for COVID-19 in Three Waves of the Pandemic”, *Open Forum Infectious Diseases*, Vol. 12 No. Supplement\_1, p. ofae631.874, doi: 10.1093/ofid/ofae631.874.
- Prawita, H., Hadisaputro, S. and Supriyadi. (2015), “Perbandingan Penggunaan APACHE IV, SAPS 3 dan SOFA untuk Memprediksi Mortalitas pada Pasien Kritis”, *Jurnal Riset Kesehatan*, Vol. 4 No. 1, pp. 693–699, doi: 10.31983/jrk.v4i1.348.

- Purwanto, D.S. and Astrawinata, D.A.W. (2018), “Mekanisme Kompleks Sepsis dan Syok Septik”, *JURNAL BIOMEDIK (JBM)*, Vol. 10 No. 3, p. 143, doi: 10.35790/jbm.10.3.2018.21979.
- Raj, S., Patra, B., Hashim, S., Dasgupta, S. and Kumar, D. (2024), “Preventing Sepsis in ICU by Analyzing Patients with Big Data Using Tableau Application”, *AI and IoT Technology and Applications for Smart Healthcare Systems*, 1st Edition., Auerbach Publications, Boca Raton.
- Sakr, Y., Krauss, C., Amaral, A.C.K.B., Réa-Neto, A., Specht, M., Reinhart, K. and Marx, G. (2008), “Comparison of the performance of SAPS II, SAPS 3, APACHE II, and their customized prognostic models in a surgical intensive care unit”, *Br J Anaesth*, Vol. 101 No. 6, pp. 798–803, doi: 10.1093/bja/aen291.
- Saliccioli, J.D., Cristia, C., Chase, M., Giberson, T., Graver, A., Gautam, S., Cocchi, M.N., *et al.* (2013), “Performance of SAPS II AND SAPS III Scores in Post-Cardiac Arrest”, *Minerva Anesthesiol*, Vol. 78 No. 12, pp. 341–1347.
- Salem, M.S., Abosabaa, M.A., El Ghafar, M.S.A., El-Gendy, H.M.E.M. and Alsherif, S.E.I. (2025), “Norepinephrine titration in patients with sepsis-induced encephalopathy: cerebral pulsatility index compared to mean arterial pressure guided protocol: randomized controlled trial”, *BMC Anesthesiology*, Vol. 25 No. 5, pp. 1–10, doi: doi.org/10.1186/s12871-024-02814-0.



Sands, K., Bates, D.W., Lanken, P.N., Graman, P., Hibberd, P. and Kahn, K. (1997),  
“Epidemiology of sepsis syndrome in 8 academic medical centers”, *JAMA*,  
Vol. 278 No. 3, pp. 234–240.

Sastroasmoro, S. and Ismael, S. (2014), *Dasar-Dasar Metodologi Penelitian Klinis*,  
Binarupa Aksara, Jakarta.

Sathaporn, N. and Khwannimit, B. (2019), “Validation the performance of New  
York Sepsis Severity Score compared with Sepsis Severity Score in  
predicting hospital mortality among sepsis patients”, *Journal of Critical  
Care*, Vol. 53, pp. 155–161.

Shankar-Hari, M., Philips, G., Levy, M., Seymour, C., Liu, V. and Deutschman, C.  
(2016), “Developing a New Definition and Assessing New Clinical Criteria  
for Septic Shock: For the Third International Consensus Definitions for  
Sepsis and Septic Shock (Sepsis-3) New Definition and Criteria for Septic  
Shock New Definition and Criteria for Septic Shock”, *JAMA*, Vol. 315 No.  
8, pp. 775–787, doi: <https://doi.org/10.1001/jama.2016>.

Sheikh, M.H., Errede, M., d’Amati, A., Khan, N.Q., Fanti, S., Loiola, R.A.,  
McArthur, S., *et al.* (2022), “Impact of metabolic disorders on the structural,  
functional, and immunological integrity of the blood-brain barrier:  
Therapeutic avenues”, *The FASEB Journal*, Vol. 36 No. 1, doi:  
10.1096/fj.202101297R.

Silva Junior, J.M., Malbouisson, L.M.S., Nuevo, H.L., Barbosa, L.G.T.,  
Marubayashi, L.Y., Teixeira, I.C., Nassar, A.P., *et al.* (2010), “Applicability  
of the Simplified Acute Physiology Score (SAPS 3) in Brazilian Hospitals”,

*Braz J Anesthesiol*, Vol. 60 No. 1, pp. 20–31, doi: 10.1016/S0034-7094(10)70003-9.

Singer, M., Deutschman, C.S., Seymour, C.W., Shankar-Hari, M., Annane, D., Bauer, M., Bellomo, R., *et al.* (2016), “The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3)”, *JAMA*, Vol. 315 No. 8, p. 801, doi: 10.1001/jama.2016.0287.

Soares, M. and Salluh, J.I.F. (2006), “Validation of the SAPS 3 admission prognostic model in patients with cancer in need of intensive care”, *Intensive Care Medicine*, Vol. 32 No. 11, pp. 1839–1844, doi: 10.1007/s00134-006-0374-4.

Sukmono, R.B., Manggala, S.K., Priscilla, P. and Aditianingsih, D. (2022), “SAPS 3 as a 28-day mortality predictor in critically ill COVID-19 patients”, *Anaesthesia, Pain & Intensive Care*, Vol. 26 No. 5, pp. 640–648, doi: 10.35975/apic.v26i5.1986.

Suwondo, V.N., Jatmiko, H.D. and Hendrianingtyas, M. (2015), “Karakteristik Dasar Pasien Sepsis yang Meninggal di ICU RSUP Dr. Kariadi Semarang Periode 1 Januari - 31 Desember 2014”, *Media Medika Muda*, Vol. 4 No. 4, pp. 1586–1596.

Tanrioover, M., Guven, G., Sen, D., Unal, S. and Uzun, O. (2006), “Epidemiology and outcome of sepsis in a tertiary-care hospital in a developing country”, Vol. 1342 No. 2, pp. 315–322, doi: 10.1017/S0950268805004978.

Taofik, S., Senapathi, T. and Wiryana, M. (2015), “Perbandingan validitas sistem skoring APACHEII, SOFA dan cSOFA (Customized Sequential Organ

Failure Assessment) untuk memperkirakan mortalitas pasien non bedah yang dirawat di ruang perawatan intensif RSUP Sanglah”, *JAI (Jurnal Anestesiologi Indonesia)*, Vol. 3, pp. 45–49.

The SAPS 3 Team. (n.d.). “SAPS 3 Score Calculation Sheets”, *SAPS 3 Research Group*, Guideline, , available at: <https://www.saps3.org/>.

Toker, M., Gülleroğlu, A., Karabay, A., Biçer, Y. G. and Demiraran, Y. (2018), “SAPS 3 or APACHE IV: Which Score to Choose for Acute Trauma Patients in Intensive Care Unit?”, *Turkish Journal of Trauma and Emergency Surgery*, Vol. 25 No. 3, pp. 247–252, doi: 10.5505/tjtes.2018.22866.

Vigneron, C., Devautour, C., Charpentier, J., Birsén, R., Jamme, M. and Pène, F. (2024), “Severe bleeding events among critically ill patients with haematological malignancies”, *Annals of Intensive Care*, Vol. 14 No. 155, pp. 1–10, doi: [doi.org/10.1186/s13613-024-01383-2](https://doi.org/10.1186/s13613-024-01383-2).

Vincent, J.-L., Abraham, E., Annane, D., Bernard, G., Rivers, E. and Van Den Berghe, G. (2002), “Reducing mortality in sepsis: new directions”, *Critical Care*, Vol. 6 No. Suppl 3, p. S1, doi: 10.1186/cc1860.

Wenzel, A., Röder, J., Poos, T., Dusse, F. and Kron, F. (2024), “Economic effects of next-generation sequencing diagnostics in unspecific sepsis patients – a budget impact analysis from the healthcare providers’ perspective in Germany”, *European Journal of Clinical Microbiology & Infectious Diseases*, Vol. 43 No. 12, pp. 2311–2321, doi: 10.1007/s10096-024-04940-6.

Yan, J., Li, S. and Li, S. (2014), “The role of the liver in sepsis”, *Int Rev Immunol*, Vol. 33 No. 6, pp. 498–510, doi: 10.3109/08830185.2014.889129.

Yilmaz, E., Şahin, Y., Keleş, B. and Altınbaş, A. (2024), “Prolonged hospitalization in intensive care unit; contributing factors and impact on mortality”, *Anatolian Curr Med J*, Vol. 6 No. 2, pp. 185–190, doi: 10.38053/acmj.1416658.

Zhang, Y.-X., Ma, L., Yiliaikebaier, M., Zhang, W., Li, R.-X., Wang, Y., Chen, Z., *et al.* (2025), “Intravenous lidocaine for the treatment of sepsis-associated encephalopathy: a retrospective cohort study”, *Neurological Research*, Vol. 47 No. 2, pp. 115–121, doi: <https://doi.org/10.1080/01616412.2024.2448634>.

Zhu, Y., Zhang, R., Ye, X., Liu, H. and Wei, J. (2022), “SAPS III is superior to SOFA for predicting 28-day mortality in sepsis patients based on Sepsis 3.0 criteria”, *Int J Infect Dis*, Vol. 114, pp. 135–141, doi: 10.1016/j.ijid.2021.11.015.