

## DAFTAR PUSTAKA

- Abbas, A.K., & Lichtman, A.H. (2011). Antigen Recognition in The Adaptive Immune System, in: *Basic Immunology*. pp. 67–87, Elsevier.
- Abd Alazem, E., Abdel Ghany, E., Zaky, S., & Abd Elhady, M. (2022). Thrombocytopenia is more Frequent in Gram negative Neonatal Septicemia. *Pediatr. Sci. J. 2* : 147–156.
- Abe, R., Oda, S., Sadahiro, T., Nakamura, M., Hirayama, Y., Tateishi, Y., *et al.* (2010). Gram-negative bacteremia induces greater magnitude of inflammatory response than Gram-positive bacteremia. *Crit. Care* 14 : R27.
- Akarsu, S., Taskin, E., Kilic, M., Ozdiller, S., Gurgoze, M.K., Yilmaz, E., *et al.* (2005). The Effects of Different Infectious Organisms on Platelet Counts and Platelet Indices in Neonates with Sepsis: is There an Organism-specific Response? *J. Trop. Pediatr.* 51 : 388–391.
- Akça, A. (2019). Are Platelet Indices Predictive For Antibiotics Response in Surgical Wound Infections Following Total Abdominal Hysterectomy? *SiSli Etfal Hastan. Tip Bul. / Med. Bull. Sisli Hosp.*
- Alexandraki, I., & Palacio, C. (2010). Gram-negative versus Gram-positive bacteremia: what is more alarmin(g)? *Crit. Care* 14 : 161.
- Ali, R.A., Wuescher, L.M., & Worth, R.G. (2015). Platelets: essential components of the immune system. *Curr. Trends Immunol.* 16 : 65–78.
- Aydemir, H., Piskin, N., Akduman, D., Kokturk, F., & Aktas, E. (2015). Platelet and mean platelet volume kinetics in adult patients with sepsis. *Platelets* 26 : 331–335.
- Boulassel, M.-R., Al-Farsi, R., Al-Hashmi, S., Al-Riyami, H., Khan, H., & Al-Kindi, S. (2015). Accuracy of Platelet Counting by Optical and Impedance Methods in Patients with Thrombocytopenia and Microcytosis. *Sultan Qaboos Univ. Med. J.* 15 : e463–e468.
- Brennan, M.P., Loughman, A., Devocelle, M., Arasu, S., Chubb, A.J., Foster, T.J., *et al.* (2009). Elucidating the role of Staphylococcus epidermidis serine–aspartate repeat protein G in platelet activation. *J. Thromb. Haemost.* 7 : 1364–1372.
- Budak, Y.U., Polat, M., & Huysal, K. (2016). The use of platelet indices, plateletcrit, mean platelet volume and platelet distribution width in emergency non-traumatic abdominal surgery: a systematic review. *Biochem. Medica* 178–193.
- Carestia, A., Godin, L.C., & Jenne, C.N. (2023). Step up to the platelet: Role of platelets in inflammation and infection. *Thromb. Res.* 231 : 182–194.
- CDC (2024). Bloodstream Infection (BSI) Events [WWW Document]. URL <https://www.cdc.gov/nhsn/psc/bsi/> (accessed 4.18.25).
- Çelik, O., Laloğlu, E., & Çelik, N. (2024). The role of platelet large cell ratio in determining mortality in COVID-19 patients. *Medicine (Baltimore)*. 103 : e38033.
- Chaipan, C., Soilleux, E.J., Simpson, P., Hofmann, H., Gramberg, T., Marzi, A., *et al.* (2006). DC-SIGN and CLEC-2 Mediate Human Immunodeficiency Virus Type 1 Capture by Platelets. *J. Virol.* 80 : 8951–8960.

- Chang, S.S.Y., Lim, A.Z., Ong, G.Y.-K., Piragasam, R., Allen, J.C., Ng, K.C., *et al.* (2021). Predictors of serious bacterial infections using serum biomarkers in an infant population aged 0 to 90 days: a prospective cohort study. *BMJ Paediatr. Open* 5 : e000861.
- Chela, H.K., Vasudevan, A., Rojas-Moreno, C., & Naqvi, S.H. (2019). Approach to Positive Blood Cultures in the Hospitalized Patient: A Review. *Mo. Med.* 116 : 313–317.
- Chen, X., Wei, F., Zhang, D., & Tian, S. (2022). Platelet index on admission as a predictor of bacteremia in acute cholangitis: a 7-year retrospective observational study. *Platelets* 33 : 1279–1286.
- Christaki, E., & Giamarellos-Bourboulis, E.J. (2014). The complex pathogenesis of bacteremia. *Virulence* 5 : 57–65.
- Claes, J., Vanassche, T., Peetermans, M., Liesenborghs, L., Vandembrielle, C., Vanhoorelbeke, K., *et al.* (2014). Adhesion of *Staphylococcus aureus* to the vessel wall under flow is mediated by von Willebrand factor–binding protein. *Blood* 124 : 1669–1676.
- Coskun, M., Alidris, A., Temel, M., Akbayram, S., & Hizli, S. (2019). Plateletcrit: A possible biomarker of inflammation in hepatitis A infection. *Niger. J. Clin. Pract.* 22 : 727.
- Dagasso, G., Conley, J., Parfitt, E., Pasquill, K., Steele, L., & Laupland, K. (2018). Risk factors associated with bloodstream infections in end-stage renal disease patients: a population-based study. *Infect. Dis. (Auckl)*. 50 : 831–836.
- Douglas-Louis, R., Lou, M., Lee, B., Minejima, E., Bubeck-Wardenburg, J., & Wong-Beringer, A. (2023). Prognostic significance of early platelet dynamics in *Staphylococcus aureus* bacteremia. *BMC Infect. Dis.* 23 : 82.
- Douglas, N.M., Hennessy, J.N., Currie, B.J., & Baird, R.W. (2020). Trends in Bacteremia Over 2 Decades in the Top End of the Northern Territory of Australia. *Open Forum Infect. Dis.* 7 : ofaa472.
- Dwaya, A., Urayet, A., B. Milad, M., & M. Alkout, A. (2021). Platelet Count as Useful Indicator for Gram-Type of Bacteria Causing Urinary Tract Infection in Women. *Iberoam. J. Med.* 24–29.
- Eberhardt, A., Lessig, F., Schreiter, K., Kellner, N., Fuchs, M., Sablotzki, A., *et al.* (2012). Mean platelet volume (MPV) is an outcome marker in sepsis patients. *Int. J. Infect. Dis.* 16 : e218.
- Favre, B., Hugonnet, S., Correa, L., Sax, H., Rohner, P., & Pittet, D. (2005). Nosocomial Bacteremia Clinical Significance of a Single Blood Culture Positive for Coagulase-Negative *Staphylococci*. *Infect. Control Hosp. Epidemiol.* 26 : 697–702.
- Fogagnolo, A., Campo, G.C., Mari, M., Pompei, G., Pavasini, R., Volta, C.A., *et al.* (2022). The Underestimated Role of Platelets in Severe Infection a Narrative Review. *Cells* 11 : 424.
- García-Rodríguez, J.F., & Mariño-Callejo, A. (2023). The factors associated with the trend in incidence of Bacteraemia and associated mortality over 30 years. *BMC Infect. Dis.* 23 : 69.
- Garcia, R.A., Spitzer, E.D., Beaudry, J., Beck, C., Diblasi, R., Gilleeny-Blabac, M., *et al.* (2015). Multidisciplinary team review of best practices for collection and handling of blood cultures to determine effective interventions

for increasing the yield of true-positive bacteremias, reducing contamination, and eliminating false-positive central line—a. *Am. J. Infect. Control* 43 : 1222–1237.

Geraldo, R., Sathler, P., Lourenço, A., Saito, M., Cabral, L., Rampelotto, P., *et al.* (2014). Platelets: Still a Therapeutical Target for Haemostatic Disorders. *Int. J. Mol. Sci.* 15 : 17901–17919.

Gremmel, T., Frelinger, A., & Michelson, A. (2016). Platelet Physiology. *Semin. Thromb. Hemost.* 42 : 191–204.

Grozovsky, R., Hoffmeister, K.M., & Falet, H. (2010). Novel clearance mechanisms of platelets. *Curr. Opin. Hematol.* 17 : 585–589.

Guimarães, E.S., Martins, J.M., Gomes, M.T.R., Cerqueira, D.M., & Oliveira, S.C. (2020). Lack of Interleukin-6 Affects IFN- $\gamma$  and TNF- $\alpha$  Production and Early In Vivo Control of *Brucella abortus* Infection. *Pathogens* 9 : 1040.

Gusti, A.M., S. Almuqati, M., A. Alkhalaf, S., A. AlGhamdi, N., M. Gusti, E., H. Moamina, S., *et al.* (2023). Improving Quality and Efficiency Performance of Analytical Testing Process Using Sima Metrics in Emergency Laboratory of King Fahd Armed Forces Hospital, Jeddah, Saudi Arabia. *Int. J. Adv. Res.* 11 : 583–606.

Hally, K., Fauteux-Daniel, S., Hamzeh-Cognasse, H., Larsen, P., & Cognasse, F. (2020). Revisiting Platelets and Toll-Like Receptors (TLRs): At the Interface of Vascular Immunity and Thrombosis. *Int. J. Mol. Sci.* 21 : 6150.

Handayani, N., Lardo, S., & Nugrohowati, N. (2022). Difference of Procalcitonin Levels in Gram-Positive and Gram-Negative Bacterial Sepsis Patients of Indonesia Army Central Hospital Gatot Soebroto in 2016. *JUXTA J. Ilm. Mhs. Kedokt. Univ. Airlangga* 13 : 38.

Handtke, S., & Thiele, T. (2020). Large and small platelets—(When) do they differ? *J. Thromb. Haemost.* 18 : 1256–1267.

Jeske, W.P. (2020). Platelet production, structure, and function, in: *Rodak's Hematology*. pp. 136–153, Elsevier.

Johansson, D., Rasmussen, M., & Inghammar, M. (2018). Thrombocytopenia in bacteraemia and association with bacterial species. *Epidemiol. Infect.* 146 : 1312–1317.

Johnston-Cox, H.A., Yang, D., & Ravid, K. (2011). Physiological implications of adenosine receptor-mediated platelet aggregation. *J. Cell. Physiol.* 226 : 46–51.

Kang, H. (2021). Sample size determination and power analysis using the G\*Power software. *J. Educ. Eval. Health Prof.* 18 : 17.

Kim, H.-J., Kim, H., Lee, J.-H., & Hwangbo, C. (2023). Toll-like receptor 4 (TLR4): new insight immune and aging. *Immun. Ageing* 20 : 67.

Kim, T.W., Lee, S.-U., Park, B., Jeon, K., Park, S., Suh, G.Y., *et al.* (2023). Clinical effects of bacteremia in sepsis patients with community-acquired pneumonia. *BMC Infect. Dis.* 23 : 887.

Kirn, T.J., & Weinstein, M.P. (2013). Update on blood cultures: how to obtain, process, report, and interpret. *Clin. Microbiol. Infect.* 19 : 513–520.

Kraemer, B.F., Campbell, R.A., Schwertz, H., Cody, M.J., Franks, Z., Tolley, N.D., *et al.* (2011). Novel Anti-bacterial Activities of  $\beta$ -defensin 1 in Human Platelets: Suppression of Pathogen Growth and Signaling of Neutrophil Extracellular Trap Formation. *PLoS Pathog.* 7 : e1002355.

- Li, S., & Jiang, J. (2026). Association of platelet dynamics for Klebsiella pneumoniae bloodstream infection patients with severe sepsis and/or septic shock. *Clin. Chim. Acta* 578 : 120530.
- Li, X., Wang, S., Ma, J., Bai, S.-G., & Fu, S.-Z. (2024). Predictive value of thrombocytopenia for bloodstream infection in patients with sepsis and septic shock. *World J. Crit. Care Med.* 13 : 88540.
- Liu, X., Yi, G., Zhang, G., Liu, H., Liang, Z., Nie, D., *et al.* (2025). The relationship between platelet parameters and bacterial types in patients with bacteremia: A retrospective observational study. *J. Infect. Dev. Ctries.* 19 : 381–390.
- Lovering, A.L., Lin, L.Y.-C., Sewell, E.W., Spreter, T., Brown, E.D., & Strynadka, N.C.J. (2010). Structure of the bacterial teichoic acid polymerase TagF provides insights into membrane association and catalysis. *Nat. Struct. Mol. Biol.* 17 : 582–589.
- Ludwig, N., Hilger, A., Zarbock, A., & Rossaint, J. (2022). Platelets at the Crossroads of Pro-Inflammatory and Resolution Pathways during Inflammation. *Cells* 11 : 1957.
- Maeshima, N., & Fernandez, R.C. (2013). Recognition of lipid A variants by the TLR4-MD-2 receptor complex. *Front. Cell. Infect. Microbiol.* 3 : 3.
- Mangalesh, S., Dudani, S., & Malik, A. (2021). Platelet Indices and Their Kinetics Predict Mortality in Patients of Sepsis. *Indian J. Hematol. Blood Transfus.* 37 : 600–608.
- Miller, J.M., Binnicker, M.J., Campbell, S., Carroll, K.C., Chapin, K.C., Gilligan, P.H., *et al.* (2018). A Guide to Utilization of the Microbiology Laboratory for Diagnosis of Infectious Diseases: 2018 Update by the Infectious Diseases Society of America and the American Society for Microbiology. *Clin. Infect. Dis.* 67 : e1–e94.
- O’Shea, J.J., & Paul, W.E. (2010). Mechanisms Underlying Lineage Commitment and Plasticity of Helper CD4 + T Cells. *Science (80- )*. 327 : 1098–1102.
- Ong, S.W.X., Luo, J., Fridman, D.J., Lee, S.M., Johnstone, J., Schwartz, K.L., *et al.* (2024). Epidemiology and clinical relevance of persistent bacteraemia in patients with Gram-negative bloodstream infection: a retrospective cohort study. *J. Antimicrob. Chemother.* 79 : 2053–2061.
- Ostrowska, M., Kubica, J., Adamski, P., Kubica, A., Eyileten, C., Postula, M., *et al.* (2019). Stratified Approaches to Antiplatelet Therapies Based on Platelet Reactivity Testing. *Front. Cardiovasc. Med.* 6 : 176.
- Paray, A.A., Singh, M., & Amin Mir, M. (2023). Gram Staining: A Brief Review. *Int. J. Res. Rev.* 10 : 336–341.
- Pluthero, F.G., & Kahr, W.H.A. (2018). The Birth and Death of Platelets in Health and Disease. *Physiology* 33 : 225–234.
- Pogorzelska, K., Krętońska, A., Krawczuk-Rybak, M., & Sawicka-Żukowska, M. (2020). Characteristics of platelet indices and their prognostic significance in selected medical condition – a systematic review. *Adv. Med. Sci.* 65 : 310–315.
- Portier, I., & Campbell, R.A. (2021). Role of Platelets in Detection and Regulation of Infection. *Arterioscler. Thromb. Vasc. Biol.* 41 : 70–78.
- Quach, M.E., Chen, W., & Li, R. (2018). Mechanisms of platelet clearance and translation to improve platelet storage. *Blood* 131 : 1512–1521.

- Ramachandran, G. (2014). Gram-positive and gram-negative bacterial toxins in sepsis. *Virulence* 5 : 213–218.
- Richter, J., Monteleone, M.M., Cork, A.J., Barnett, T.C., Nizet, V., Brouwer, S., *et al.* (2021). Streptolysins are the primary inflammasome activators in macrophages during *Streptococcus pyogenes* infection. *Immunol. Cell Biol.* 99 : 1040–1052.
- Roshan, M.H.K., Tambo, A., & Pace, N.P. (2016). The Role of TLR2, TLR4, and TLR9 in the Pathogenesis of Atherosclerosis. *Int. J. Inflam.* 2016 : 1–11.
- Schattner, A., Kadi, J., & Dubin, I. (2019). Reactive thrombocytosis in acute infectious diseases: Prevalence, characteristics and timing. *Eur. J. Intern. Med.* 63 : 42–45.
- Scridon, A. (2022). Platelets and Their Role in Hemostasis and Thrombosis—From Physiology to Pathophysiology and Therapeutic Implications. *Int. J. Mol. Sci.* 23 : 12772.
- Segal, A.W. (2005). How Neutrophils Kill Microbes. *Annu. Rev. Immunol.* 23 : 197–223.
- Seifert, H. (2009). The Clinical Importance of Microbiological Findings in the Diagnosis and Management of Bloodstream Infections. *Clin. Infect. Dis.* 48 : S238–S245.
- Shah, A., & DeSimone, D.C. (2022). Bacteremia, in: *A Rational Approach to Clinical Infectious Diseases*. pp. 268–276, Elsevier.
- Shapiro, N.I., Wolfe, R.E., Wright, S.B., Moore, R., & Bates, D.W. (2008). Who Needs a Blood Culture? A Prospectively Derived and Validated Prediction Rule. *J. Emerg. Med.* 35 : 255–264.
- Shen, H., Tesar, B.M., Walker, W.E., & Goldstein, D.R. (2008). Dual Signaling of MyD88 and TRIF Is Critical for Maximal TLR4-Induced Dendritic Cell Maturation. *J. Immunol.* 181 : 1849–1858.
- Siboo, I.R., Chambers, H.F., & Sullam, P.M. (2005). Role of SraP, a Serine-Rich Surface Protein of *Staphylococcus aureus*, in Binding to Human Platelets. *Infect. Immun.* 73 : 2273–2280.
- Silhavy, T.J., Kahne, D., & Walker, S. (2010). The bacterial cell envelope. *Cold Spring Harb. Perspect. Biol.* 2 : a000414.
- Simon, A.Y., Sutherland, M.R., & Pryzdial, E.L.G. (2015). Dengue virus binding and replication by platelets. *Blood* 126 : 378–385.
- Singer, M., Deutschman, C.S., Seymour, C.W., Shankar-Hari, M., Annane, D., Bauer, M., *et al.* (2016). The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3). *JAMA* 315 : 801.
- Sun, J., Uchiyama, S., Olson, J., Morodomi, Y., Cornax, I., Ando, N., *et al.* (2021). Repurposed drugs block toxin-driven platelet clearance by the hepatic Ashwell-Morell receptor to clear *Staphylococcus aureus* bacteremia. *Sci. Transl. Med.* 13.
- Surewaard, B.G.J., Thanabalasuriar, A., Zeng, Z., Tkaczyk, C., Cohen, T.S., Bardoel, B.W., *et al.* (2018).  $\alpha$ -Toxin Induces Platelet Aggregation and Liver Injury during *Staphylococcus aureus* Sepsis. *Cell Host Microbe* 24 : 271-284.e3.
- Tamelytė, E., Vaičekauskienė, G., Dagys, A., Lapinskas, T., & Jankauskaitė, L. (2019). Early Blood Biomarkers to Improve Sepsis/Bacteremia Diagnostics in Pediatric Emergency Settings. *Medicina (B. Aires).* 55 : 99.

- Tang, A., Shi, Y., Dong, Q., Wang, S., Ge, Y., Wang, C., *et al.* (2023). Prognostic differences in sepsis caused by gram-negative bacteria and gram-positive bacteria: a systematic review and meta-analysis. *Crit. Care* 27 : 467.
- Tomic, J., Jakovac, S., Zovko, T., Ljevak, I., Karabatic, S., Mucic, M., *et al.* (2024). Platelet Indices in Patients With Gram-Negative and Gram-Positive Sepsis: A Retrospective Cross-Sectional Study. *Cureus*.
- Trivigno, S.M.G., Guidetti, G.F., Barbieri, S.S., & Zarà, M. (2023). Blood Platelets in Infection: The Multiple Roles of the Platelet Signalling Machinery. *Int. J. Mol. Sci.* 24 : 7462.
- Tsuzuki, S., Matsunaga, N., Yahara, K., Shibayama, K., Sugai, M., & Ohmagari, N. (2021). Disease burden of bloodstream infections caused by antimicrobial-resistant bacteria: A population-level study, Japan, 2015–2018. *Int. J. Infect. Dis.* 108 : 119–124.
- Tunjungputri, R.N., van de Heijden, W., Urbanus, R.T., de Groot, P.G., van der Ven, A., & de Mast, Q. (2017). Higher platelet reactivity and platelet-monocyte complex formation in Gram-positive sepsis compared to Gram-negative sepsis. *Platelets* 28 : 595–601.
- Van Amersfoort, E.S., Van Berkel, T.J.C., & Kuiper, J. (2003). Receptors, Mediators, and Mechanisms Involved in Bacterial Sepsis and Septic Shock. *Clin. Microbiol. Rev.* 16 : 379–414.
- Vardon-Bounes, F., Gratacap, M.-P., Groyer, S., Ruiz, S., Georges, B., Seguin, T., *et al.* (2019). Kinetics of mean platelet volume predicts mortality in patients with septic shock. *PLoS One* 14 : e0223553.
- Verway, M., Brown, K.A., Marchand-Austin, A., Diong, C., Lee, S., Langford, B., *et al.* (2022). Prevalence and Mortality Associated with Bloodstream Organisms: a Population-Wide Retrospective Cohort Study. *J. Clin. Microbiol.* 60.
- Wang, Y., Andrews, M., Yang, Y., Lang, S., W. Jin, J., Cameron- Vendrig, A., *et al.* (2012). Platelets in Thrombosis and Hemostasis: Old Topic with New Mechanisms. *Cardiovasc. Hematol. Disord. Targets* 12 : 126–132.
- Wilke, G.A., & Wardenburg, J.B. (2010). Role of a disintegrin and metalloprotease 10 in Staphylococcus aureus  $\alpha$ -hemolysin-mediated cellular injury. *Proc. Natl. Acad. Sci.* 107 : 13473–13478.
- Wirantari, N.P., Gustawan, I.W., Utama, M.G.D., Arhana, B.N.P., Fatmawati, N.N.D., & Tarini, N.M.A. (2020). Mean platelet volume count as a risk factor for bloodstream infection in Pediatric Ward Sanglah General Hospital Denpasar, Bali-Indonesia. *Intisari Sains Medis* 11 : 55–59.
- Xiang, B., Zhang, G., Guo, L., Li, X.-A., Morris, A.J., Daugherty, A., *et al.* (2013). Platelets protect from septic shock by inhibiting macrophage-dependent inflammation via the cyclooxygenase 1 signalling pathway. *Nat. Commun.* 4 : 2657.
- Yan, H., Naadiya, C., Yiming, W., Reid, C., Alexandra, M., & Heyu, N. (2015). Platelets in hemostasis and thrombosis: Novel mechanisms of fibrinogen-independent platelet aggregation and fibronectin-mediated protein wave of hemostasis. *J. Biomed. Res.* 29 : 437.
- Yan, K., Ding, B., Huang, J., Dai, Y., Xiong, S., & Zhai, Z. (2015). Normal platelet counts mask abnormal thrombopoiesis in patients with chronic myeloid leukemia. *Oncol. Lett.* 10 : 2390–2394.

- Yang, H., Reheman, A., Chen, P., Zhu, G., Hynes, R.O., Freedman, J., *et al.* (2006). Fibrinogen and von Willebrand factor-independent platelet aggregation in vitro and in vivo. *J. Thromb. Haemost.* 4 : 2230–2237.
- Ye, Q., Shao, W.-X., Xu, X.-J., & Yang, Y. (2014). The Clinical Application Value of Cytokines in Treating Infectious Diseases. *PLoS One* 9 : e98745.
- Yoshimura, A., Lien, E., Ingalls, R.R., Tuomanen, E., Dziarski, R., & Golenbock, D. (1999). Cutting Edge: Recognition of Gram-Positive Bacterial Cell Wall Components by the Innate Immune System Occurs Via Toll-Like Receptor 2. *J. Immunol.* 163 : 1–5.
- Zhang, H.-B., Chen, J., Lan, Q.-F., Ma, X.-J., & Zhang, S.-Y. (2016). Diagnostic values of red cell distribution width, platelet distribution width and neutrophil-lymphocyte count ratio for sepsis. *Exp. Ther. Med.* 12 : 2215–2219.
- Zhang, N., & Bevan, M.J. (2011). CD8+ T Cells: Foot Soldiers of the Immune System. *Immunity* 35 : 161–168.