

DAFTAR PUSTAKA

- Abul K. Abbas, MBBS, Andrew H. Lichtman, MD, PhD, Shiv Pillai, MBBS, P. (2024). Humoral Immune Responses. In *BASIC IMMUNOLOGY: FUNCTIONS AND DISORDERS OF THE IMMUNE SYSTEM, SEVENTH EDITION* (7th Ed., P. 162).
- Aguilar-Nascimento JE, Zampieri-Filho JP, Bordin JO. Implications of perioperative allogeneic red blood cell transfusion on the immune inflammatory response. *Hematol Transfus Cell Ther.* 2021;43:58–64
- Aisagbonhi, O., Morris, G.P., 2022. Human Leukocyte Antigens in Pregnancy and Preeclampsia. *Front. Genet.* 13,1–11. <https://doi.org/10.3389/fgene.2022.884275>
- Ajmani, P. (2020). Donor Blood Collection. , 25-35. https://doi.org/10.1007/978-981-15-8435-0_3.
- Álvarez, P., Carrasco, R., Romero-Dapuerto, C., Castillo, R., 2015. Transfusion-Related Acute Lung Injured (TRALI): Current Concepts. *Open Respir. Med.* J. 9, 92–96. <https://doi.org/10.2174/1874306401509010092>
- Ardhaneswari, P.D.P., Mahartini, N.N., 2023. Transfusion-related acute lung injury (TRALI). *Indones. J. Blood Transfus.* 1, 17–20.
- Armstrong, B. (2020). Blood donors. *ISBT Science Series*, 15. <https://doi.org/10.1111/voxs.12595>.
- Aubert O, Loupy A, Hidalgo L, et al. Antibody-mediated rejection due to preexisting versus de novo donor-specific antibodies in kidney allograft recipients. *J Am Soc Nephrol.* 2017;28:1912–1923.
- Bayat, B., Nielsen, K.R., Bein, G., Traum, A., Burg-Roderfeld, M., Sachs, U.J., 2021. Transfusion of target antigens to preimmunized recipients: A new mechanism in transfusion-related acute lung injury. *Blood Adv.* 5, 3975–3985. <https://doi.org/10.1182/bloodadvances.2020003843>
- Blatyta, P., Custer, B., Liu, J., Mendrone-Júnior, A., Wright, D., Leão, S., Lopes, M., Carneiro-Proietti, A., Sabino, E., & De Almeida-Neto, C. (2013). The impact of policies to restrict the use of plasma containing products and apheresis platelets from female donors to mitigate transfusion related acute lung injury (TRALI) in Brazil.. *Transfusion and apheresis science : official journal of the World Apheresis Association : official journal of the European Society for Haemapheresis*, 48 1, 15-20 . <https://doi.org/10.1016/j.transci.2012.07.010>.
- Cho, M.S., Modi, P., Sharma, S., 2023. Transfusion-Related Acute Lung Injury. *StatPearls* [Internet].
- Courtwright, A., Diamond, J.M., Wood, I., Guleria, I., Milford, E., El-Chemaly, S., Goldberg, H.J., 2018. Detection and clinical impact of human leukocyte antigen antibodies in lung transplantation: A systematic review and meta-analysis. *HLA* 91, 102–111. <https://doi.org/10.1111/tan.13185>
- Craenmehr, M.H.C., Nederlof, I., Cao, M., Drabbels, J.J.M., Spruyt-Gerritse, M.J.D.H., Kapsenberg, H.M., Stegehuis, J.A., Van Der Keur, C., Fasse, E., Haasnoot, G.W., Van Der Hoorn, M.L.P., Claas, F.H.J., Heidt, S., Eikmans, M., 2019. Increased HLA-G expression in term placenta of women with a history of recurrent miscarriage despite their genetic predisposition to decreased HLA-G levels. *Int. J. Mol. Sci.* 20. <https://doi.org/10.3390/ijms20030625>
- Cunningham, Sarah, and Holger Hackstein. 2021. "Cord-Blood-Derived Professional Antigen-Presenting Cells: Functions and Applications in Current and Prospective Cell Therapies" *International Journal of Molecular Sciences* 22, no. 11: 5923.

<https://doi.org/10.3390/ijms22115923>

- Desterke, C., Turhan, A.G., Bennaceur-Griscelli, A., Griscelli, F., 2021. HLA-dependent heterogeneity and macrophage immunoproteasome activation during lung COVID-19 disease. *J. Transl. Med.* 19, 1–19. <https://doi.org/10.1186/s12967-021-02965-5>
- E. J. (2024). Diversity in the HLA-I Recognition of HLA-F Monoclonal Antibodies: HLA-F or HLA-Ib Monospecific, HLA-E or HLA-G Bispecific Antibodies with or without HLA-Ia Reactivity. *Antibodies*, 13(1). <https://doi.org/10.3390/antib13010008>
Elsevier B.V.
- Fang, X., Mo, C., Zheng, L., Gao, F., Xue, F.S., Zheng, X., 2025. Transfusion-Related Acute Lung Injury: from Mechanistic Insights to Therapeutic Strategies. *Adv. Sci.* 2413364, 1–21. <https://doi.org/10.1002/adv.202413364>
- Fingrut, W., Davis, E., Archer, A., Brown, S., Devlin, S., Chinapen, S., Scaradavou, A., Politikos, I., Blouin, A., Shaffer, B., & Barker, J. (2023). Gender disparities in allograft access due to HLA-sensitization in multiparous women. *Blood Advances*, 8, 403–406. <https://doi.org/10.1182/bloodadvances.2023011893>.
- Hassan S, Gleeson S, Thomson T, et al. Clinical impact of early post transplant red cell transfusions in kidney transplantation: a systematic review and meta-analysis. *Front Transplant.* 2023;2:1215130.
- Heron SD, Shaw J, Dapprich J. Anti-HLA antibodies may be a subset of polyreactive immunoglobulins generated after viral superinfection. *Transpl Immunol.* 2025 May;90:102197. doi: 10.1016/j.trim.2025.102197. Epub 2025 Feb 13. PMID: 39954820.
- Heron, S. D., Shaw, J., & Dapprich, J. (2025). Anti-HLA antibodies may be a subset of polyreactive immunoglobulins generated after viral superinfection. *Transplant Immunology*, 90(November 2024), 102197. <https://doi.org/10.1016/j.trim.2025.102197>
- Kementerian Kesehatan Republik Indonesia. (2015). Peraturan Menteri Kesehatan Republik Indonesia Nomor 91 Tahun 2015 tentang Standar Pelayanan Transfusi Darah. Jakarta: Kementerian Kesehatan RI
- Küssel, L., Herkner, H., Wahrmann, M., Eskandary, F., Doberer, K., Binder, J., Pateisky, P., Zeisler, H., Böhmig, G. A., & Bond, G. (2017). Longitudinal assessment of HLA and MIC-A antibodies in uneventful pregnancies and pregnancies complicated by preeclampsia or gestational diabetes. *Scientific Reports*, 7(1). <https://doi.org/10.1038/s41598-017-13275-6>
- Liu Z, Liang Q, Ren Y, Guo C, Ge X, Wang L, Cheng Q, Luo P, Zhang Y, Han X. Immunosenescence: molecular mechanisms and diseases. *Signal Transduct Target Ther.* 2023 May 13;8(1):200. doi: 10.1038/s41392-023-01451-2. PMID: 37179335; PMCID: PMC10182360.
- Mac Donald, A., Guipouy, D., Lemieux, W., Harvey, M., Bordeleau, L.J., Guay, D., Roméro, H., Li, Y., Dion, R., Béland, K., Haddad, E., 2023. KLRC1 knockout overcomes HLA-E-mediated inhibition and improves NK cell antitumor activity against solid tumors. *Front. Immunol.* 14, 1–13. <https://doi.org/10.3389/fimmu.2023.1231916>
- Maeda, A., Kawamura, T., Ueno, T., Usui, N., Eguchi, H., Miyagawa, S., 2013. The suppression of inflammatory macrophage-mediated cytotoxicity and proinflammatory cytokine production by transgenic expression of HLA-E. *Transpl. Immunol.* 29, 76–81. <https://doi.org/10.1016/j.trim.2013.08.001>
- Merz, E. (2024). The availability of plasma donors and plasma: A sociologist's

perspective. Vox Sanguinis, 119, 131 - 133.
<https://doi.org/10.1111/vox.13588>.

Nordquist, H., Jamil, R.T., 2023. Biochemistry, HLA Antigens. StatPearls [Internet].

Pan, Q., , X., You, Y., Yu, Y., Fan, S., Wang, X., Wang, M., Gao, M., Gong, G., Miao, K., Shen, J., & Zhou, X. (2024). The impact of ageing on the distribution of preformed anti-HLA and anti-MICA antibody specificities in recipients from eastern China prior to initial HSCT. *Immunity & Ageing : I & A*, 21. <https://doi.org/10.1186/s12979-024-00417-4>.

Park JE, Jardine L, Gottgens B, Teichmann SA, Haniffa M. Prenatal development of human immunity. *Science*. 2020 May 8;368(6491):600-603. doi: 10.1126/science.aaz9330. PMID: 32381715; PMCID: PMC7612900.

Persson, G., Picard, C., Marin, G., Isgaard, C., Stæhr, C.S., Molinari, N., Chiaroni, J., Lebech, M., Hviid, T.V.F., Di Cristofaro, J., 2021. Maternal HLA Ib Polymorphisms in Pregnancy Allo-Immunization. *Front.Immunol*.

Phelan, D.L., Morris, G.P., 2019. The HLA System, in: Harmening, D.M. (Ed.), *Modern Blood Banking & Transfusion Practices*. F. A. Davis Company, pp. 497–510.

Priyadarsini, A., Dhawan, H., Sharma, R., Saikia, B., & Minz, R. (2021). Prevalance of Anti-HLA antibodies in parous female blood donors: A pilot study from tertiary care hospital of north india. *Asian Journal of Transfusion Science*, 15(1), 16–20. https://doi.org/10.4103/ajts.AJTS_30_19

Ravindranath, M. H., Ravindranath, N. M., Amato-Menker, C. J., El Hilali, F., & Filippone, E. J. (2024). Diversity in the HLA-I Recognition of HLA-F Monoclonal Antibodies: HLA-F or HLA-Ib Monospecific, HLA-E or HLA-G Bispecific Antibodies with or without HLA-Ia Reactivity. *Antibodies*, 13(1). <https://doi.org/10.3390/antib13010008>

Sachs, U.J.H., Wasel, W., Bayat, B., Bohle, R.M., Hattar, K., Berghöfer, H., Reil, A., Bux, J., Bein, G., Santoso, S., Weissmann, N., 2011. Mechanism of transfusion-related acute lung injury induced by HLA class II antibodies. *Blood* 117, 669–677. <https://doi.org/10.1182/blood-2010-05-286146>

San Segundo, D., Comins-Boo, A., López-Hoyos, M., 2025. Anti-Human Leukocyte Antigen Antibody Detection from Terasaki's Humoral Theory to Delisting Strategies in 2024. *Int. J. Mol. Sci.* 26, 1–14. <https://doi.org/10.3390/ijms26020630>

Sarah A. Robertson, Margaret G. Petroff, Joan S. Hunt. 2015. Chapter 41 - Immunology of Pregnancy. *Knobil and Neill's Physiology of Reproduction (Fourth Edition)*. Academic Press. 1835-1874. ISBN 9780123971753. <https://doi.org/10.1016/B978-0-12-397175-3.00041-7>.

Savulescu, D.M., Groome, M., Malfeld, S.C.K., Madhi, S., Koen, A., Jones, S., Duxbury, V., Scheuermaier, K., De Assis Rosa, D., Suchard, M., 2020. HLA antibody repertoire in infants suggests selectivity in transplacental crossing. *Am. J. Reprod. Immunol.* 84, 1–13. <https://doi.org/10.1111/aji.132>

Shang, W., Ou, G., Ji, X., Chen, J., Wang, J., Jiang, Y., 2023. Investigating the Correlation Between HLA-II Gene Polymorphism and RhE Alloimmunization in Pregnant Chinese Women. *Indian J. Hematol. Blood Transfus.* 39, 662–669. <https://doi.org/10.1007/s12288-023-01632-7>

Stroncek, D.F., Fadeyi, E., Adams, S., 2007. Leukocyte Antigen and Antibody Detection Assays: Tools for Assessing and Preventing Pulmonary Transfusion Reactions. *Transfus Med Rev* 21, 273–286. <https://doi.org/10.1016/j.tmr.2007.05.003> Sugiyono, 2011. *Metode*

Penelitian Kuantitatif, Kualitatif dan R&D. Alfabeta, Bandung.

Taha, Z., El Ktaibi, F., Al Dhaheri, A. I., Papandreou, D., & Ali Hassan, A. (2022). Prevalence and Sociodemographic Profiles of Grand Multipara in Abu Dhabi, United Arab Emirates. *Nutrients*, 14(21). <https://doi.org/10.3390/nu14214686>

Tait, B.D., 2016. Detection of HLA antibodies in organ transplant recipients - triumphs and challenges of the solid phase bead assay. *Front. Immunol.* 7. <https://doi.org/10.3389/fimmu.2016.00570>

Tait, B.D., Süsal, C., Gebel, H.M., Nickerson, P.W., Zachary, A.A., Claas, F.H.J., Reed, E.F., Bray, R.A., Campbell, P., Chapman, J.R., Coates, P.T., Colvin, R.B., Cozzi, E., Doxiadis, I.I.N., Fuggle, S. V., Gill, J., Glotz, D., Lachmann, N., Mohanakumar, T., Suciu-Foca, N., Sumitran-Holgersson, S., Tanabe, K., Taylor, C.J., Tyan, D.B., Webster, A., Zeevi, A., Opelz, G., 2013. Consensus guidelines on the testing and clinical management issues associated with HLA and Non-HLA antibodies in transplantation. *Transplantation* 95, 19–47. <https://doi.org/10.1097/TP.0b013e31827a19cc>

Tambur, A.R., Lavee, J., 2016. Incorporating human leukocyte antibody results into clinical practice. *J. Hear. Lung Transplant.* 35, 851–856. <https://doi.org/10.1016/j.healun.2016.05.010>

Tantengco, O.A.G., Richardson, L., Lee, A., Kammala, A., Silva, M. de C., Shahin, H., Sheller-Miller, S., Menon, R., 2021. Histocompatibility antigen, class i, g (Hla-g)'s role during pregnancy and parturition: A systematic review of the literature. *Life* 11. <https://doi.org/10.3390/life1110106112>, 1–7. <https://doi.org/10.3389/fimmu.2021.657217>

Tersigni, C., Meli, F., Neri, C., Iacoangeli, A., Franco, R., Lanzone, A., Scambia, G., Di Simone, N., 2020. Role of human leukocyte antigens at the feto-maternal interface in normal and pathological pregnancy: An update. *Int. J. Mol. Sci.* 21, 1–13. <https://doi.org/10.3390/ijms21134756>

Triulzi, D. J., Kleinman, S., Kakaiya, R. M., Busch, M. P., Norris, P. J., Steele, W. R., Glynn, S. A., Hillyer, C. D., Carey, P., Gottschall, J. L., Murphy, E. L., Rios, J. A., Ness, P. M., Wright, D. J., Carrick, D., & Schreiber, G. B. (2009). The effect of previous pregnancy and transfusion on HLA alloimmunization in blood donors: Implications for a transfusion-related acute lung injury risk reduction strategy. *Transfusion*, 49(9), 1825–1835. <https://doi.org/10.1111/j.1537-2995.2009.02206.x>

Tung, J.-P., Chiaretti, S., Dean, M.M., Sultana, A.J., Reade, M.C., Fung, Y.L., 2022. Transfusion-related acute lung injury (TRALI): Potential pathways of development, strategies for prevention and treatment, and future research directions. *BloodRev* 53, 00926. <https://doi.org/10.1016/j.blre.2021.100926>

Van Wonderen, S.F., Klanderma, R.B., Vlaar, A.P.J., 2022. Understanding transfusion-related acute lung injury (TRALI) and its complex pathophysiology. *Blood Transfus.* 20, 443–445. <https://doi.org/10.2450/2022.0232-22>

Vittoraki, A. G., Fylaktou, A., Tarassi, K., Tsinaris, Z., Sioranta, A., Petasis, G. C., Gerogiannis, D., Lehmann, C., Carmagnat, M., Doxiadis, I., Iniotaki, A. G., & Theodorou, I. (2021). Hidden Patterns of Anti-HLA Class I Alloreactivity Revealed Through Machine Learning. *Frontiers in Immunology*, 12(July), 1–16. <https://doi.org/10.3389/fimmu.2021.6709>

Wan, R., Wang, Z.W., Li, H., Peng, X.D., Liu, G.Y., Ou, J.M., Cheng, A.Q., 2018. Human Leukocyte Antigen-G Inhibits the Anti-Tumor Effect of Natural Killer Cells via Immunoglobulin-Like Transcript 2 in Gastric

Cancer. Cell. Physiol. Biochem. 44, 1828– 1841.
<https://doi.org/10.1159/000485819>

Wehmeier, C., Hönger, G., Schaub, S., 2020. Caveats of HLA antibody detection by solid-phase assays. Transpl. Int. 33, 18–29. <https://doi.org/10.1111/tri.13484>

Weinstock C, Schnaidt M. Human leucocyte antigen sensitisation and its impact on transfusion practice. Transfus Med Hemother. 2019;46: 356–369.

Willicombe M, Roberts DJ. Transfusion-induced HLA sensitization in wait-list patients and kidney transplant recipients. Kidney Int. 2024 Nov;106(5):795-805. doi: 10.1016/j.kint.2024.07.030. Epub 2024 Aug 22. PMID: 39181398.

World Health Organization. Action framework to advance universal access to safe, effective and quality-assured blood products 2020-2023. Accessed July 1, 2024. www.who.int/bloodproducts

World Health Organization. Global status report on blood safety and availability. 2021. Accessed July 1, 2024. <https://www.who.int/publications/i/item/9789240051683>