



DAFTAR PUSTAKA

- Abramson, S. (2010). *Extracorporeal Treatment of Poisonings. Chronic Kidney Disease, Dialysis, and Transplantation.* 700-719.
- Akchurin, O., Patino, E., Dalal, V., Meza, K., Bhatia, D., Brovender, S., & Choi, M. E. (2018). Interleukin-6 Contributes to the Development of Anemia in Juvenile CKD. *Kidney International Reports.*
- Amin, N., Mahmood, R. T., Asad, M. J., Zafar, M., & Raja, A. M. (2014). Evaluating urea and creatinine levels in chronic renal failure pre and post dialysis: a prospective study. *JCVD.*
- Ankawi, G., Neri, M., Zhang, J., Breglia, A., Ricci, Z., & Ronco, C. (2018). Extracorporeal techniques for the treatment of critically ill patients with sepsis beyond conventional blood purification therapy: the promises and the pitfalls. *Crit. Care,* 22(1), 262.
<https://doi.org/10.1186/s13054-018-2181-z>
- Baran, P. (2018). The balance of interleukin (IL)-6, IL-6soluble IL-6 receptor (sIL-6R), and. *Journal of Biological Chemistry,* 293(18), 6762-6775.
- Barreto, D. V, Barreto, F. C., Liabeuf, S., Temmar, M., Lemke, H.-D., Tribouilloy, C., Choukroun, G., Vanholder, R., Massy, Z. A., & (EUTOx), E. U. T. W. G. (2010). Plasma interleukin-6 is independently associated with mortality in both hemodialysis and pre-dialysis patients with chronic kidney disease. *Kidney Int.,* 77(6), 550-556.
<https://doi.org/10.1038/ki.2009.503>
- Barzegar, H., Jafari, H., Yazdani Charati, J., & Esmaeili, R. (2017). Relationship between duration of dialysis and quality of life in hemodialysis patients. *Iran. J. Psychiatry Behav. Sci.,* 11(4). <https://doi.org/10.5812/ijpbs.6409>
- Bosch, T., Schmidt, B., Kleophas, W., Otto, V., & Samtleben, W. (1997). LDL hemoperfusion--a new procedure for LDL apheresis: biocompatibility results from a first pilot study in hypercholesterolemic atherosclerosis patients. *Artificial organs,* 21(10), 1060-1065.
<https://doi.org/10.1111/J.1525-1594.1997.TB00443.X>
- Bossola, M., Di Stasio, E., Marzetti, E., De Lorenzis, K., Pepe, G., & Vulpio, C. (2018). Fatigue is associated with high prevalence and severity of physical and emotional symptoms in patients on chronic hemodialysis. *Int. Urol. Nephrol.,* 50(7), 1341-1346.
<https://doi.org/10.1007/s11255-018-1875-0>
- Boyapati, A., Schwartzman, S., Msihid, J., Choy, E., Genovese, M. C., Burmester, G. R., Lam, G., Kimura, T., Sadeh, J., Weinreich, D. M., Yancopoulos, G. D., & Graham, N. M. H. (2020). Association of high serum interleukin-6 levels with severe progression of rheumatoid arthritis and increased treatment response differentiating sarilumab from adalimumab or methotrexate in a post hoc analysis. *Arthritis Rheumatol.,* 72(9), 1456-1466.
<https://doi.org/10.1002/art.41299>
- Chen, S.-J., Jiang, G.-R., Shan, J.-P., Lu, W., Huang, H.-D., Ji, G., Wu, P., Wu, G.-F., Wang, W., Zhu, C., & Bian, F. (2011). Combination of maintenance hemodialysis with hemoperfusion: a



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effective model of artificial kidney. *Int. J. Artif. Organs*, 34(4), 339-347.

<https://doi.org/10.5301/IJAQ.2011.7748>

Chen, T. K., Knicely, D. H., & Grams, M. E. (2019). Chronic kidney disease diagnosis and management: A review. *JAMA*, 322(13), 1294-1304.

<https://doi.org/10.1001/jama.2019.14745>

Chou, J. A., Streja, E., Nguyen, D. V, Rhee, C. M., Obi, Y., Inrig, J. K., Amin, A., Kovesdy, C. P., Sim, J. J., & Kalantar-Zadeh, K. (2018). Intradialytic hypotension, blood pressure changes and mortality risk in incident hemodialysis patients. *Nephrol. Dial. Transplant*, 33(1), 149-159. <https://doi.org/10.1093/ndt/gfx037>

Cobo, G., Lindholm, B., & Stenvinkel, P. (2018). Chronic inflammation in end-stage renal disease and dialysis. *Nephrol. Dial. Transplant*, 33(suppl_3), iii35-iii40. <https://doi.org/10.1093/ndt/gfy175>

Cockwell, P., & Fisher, L.-A. (2020). The global burden of chronic kidney disease. *Lancet*, 395(10225), 662-664. [https://doi.org/10.1016/S0140-6736\(19\)32977-0](https://doi.org/10.1016/S0140-6736(19)32977-0)

Coyne, D. W., & Fleming, R. (2021). Will targeting interleukin-6 in the anemia of CKD change our treatment paradigm? *J. Am. Soc. Nephrol.*, 32(1), 6-8. <https://doi.org/10.1681/asn.2020101476>

Cruz, S. (2021). Interleukin-6 Is a Biomarker for the Development of Fatal Severe Acute Respiratory Syndrome Coronavirus 2 Pneumonia. *Frontiers in Immunology*, 12, 1-10.

Darban, M., Yarmohamadi, M., Mohammadkhani, M. M., & Jazaeri, S. M. (2022). Outcome and Complications of Hemoperfusion in Patients with COVID-19 in Intensive Care Unit: A Cross-Sectional Study. *Cardiovascular & Hematological Agents in Medicinal Chemistry*, 21(1), 60-66. <https://doi.org/10.2174/1871525720666220514164855>

Davenport, A. (2014). *Chronic Kidney Failure. Kidney Transplantation-Principles and Practice*. 39-53.

Denti, E., Luboz, M. P., & Tessore, V. (1975). Adsorption characteristics of cellulose acetate coated charcoals. *J. Biomed. Mater. Res.*, 9(2), 143-150. <https://doi.org/10.1002/jbm.820090204>

Dong Lihua Qu Lai Xue Qiuli, L. X. (2020). Hemodialysis plus hemoperfusion on uremia and micro-inflammatory state. *Int J Clin Exp Med*, 13(4), 2724-2730.

Drukker, W., Parsons, F. M., & Maher, J. F. (2012). *Replacement of renal function by dialysis: a textbook of dialysis*. Springer Science & Business Media.

Dwi, N., Notopuro, P. B., Hernaningsih, Y., & Widodo. (2020). Changes Due To Ultrafiltrationhemodialysis in Chronic Kidney Disease Patients. *Indonesian Journal of Clinical Pathology and Medical Laboratory*, 26(3), 340-343. <https://doi.org/https://www.doi.org/10.24293/ijcpml.v26i3.1565>



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Eddington, H., & Heaf, J. G. (2009). Clinical management of disturbances of calcium and phosphate metabolism in dialysis patients. *Clin. Kidney J.*, 2(4), 267-272.
<https://doi.org/10.1093/ndtplus/sfp044>

Feigerlová, E., & Battaglia-Hsu, S. F. (2017). IL-6 signaling in diabetic nephropathy: From pathophysiology to therapeutic perspectives. *Cytokine & growth factor reviews*, 37, 57-65.
<https://doi.org/10.1016/J.CYTOGFR.2017.03.003>

Ferreira E De, S., Moreira, T. R., Da Silva, R. G., Da Costa, G. D., Da Silva, L. S., Cavalier, S. B., & De, O. (2020). Survival and analysis of predictors of mortality in patients undergoing replacement renal therapy: a 20-year cohort. *BMC Nephrol*, 21(1), 1-14.

Gallo, J., Svoboda, M., Zapletalova, J., Proskova, J., & Juranova, J. (2018). Serum IL-6 in combination with synovial IL-6/CRP shows excellent diagnostic power to detect hip and knee prosthetic joint infection. *PLoS One*, 13(6), e0199226.
<https://doi.org/10.1371/journal.pone.0199226>

Gong, Y., Liang, S., Zeng, L., Ni, Y., Zhou, S., & Yuan, X. (2019). Effects of blood sample handling procedures on measurable interleukin 6 in plasma and serum. *J. Clin. Lab. Anal.*, 33(7), e22924. <https://doi.org/10.1002/jcla.22924>

Group, K. D. I. G. O. (KDIGO) C.-M. U. W. (2017). KDIGO 2017 clinical practice guideline update for the diagnosis, evaluation, prevention, and treatment of chronic kidney disease-mineral and bone disorder (CKD-MBD). *Kidney Int. Suppl.* (2011), 7(1), 1-59.
<https://doi.org/10.1016/j.kisu.2017.04.001>

Gu, Y. H., Yang, X. H., Pan, L. H., Zhan, X. L., Guo, L. L., & Jin, H. M. (2019). Additional hemoperfusion is associated with improved overall survival and self-reported sleep disturbance in patients on hemodialysis. *Int. J. Artif. Organs*, 42(7), 347-353.
<https://doi.org/10.1177/0391398819837546>

Harbord, N. (2023). *Hemoperfusion - UpToDate*.
<https://www.uptodate.com/contents/hemoperfusion>

Hasuike, Y., Nonoguchi, H., Ito, K., Naka, M., Kitamura, R., Nanami, M., Tokuyama, M., Kida, A., Otaki, Y., Kuragano, T., & Nakanishi, T. (2009). Interleukin-6 is a predictor of mortality in stable hemodialysis patients. *Am. J. Nephrol.*, 30(4), 389-398.
<https://doi.org/10.1159/000235687>

Hilligan, K., & Ronchese, F. (2020). Antigen presentation by dendritic cells and their instruction of CD4+ T helper cell responses. *Cellular & Molecular Immunology*, 17(6), 587-599.

Indonesia, M. K. R. (2017). *Pedoman Nasional Pelayanan Kedokteran Tata Laksana Penyakit Ginjal Tahap Akhir*. Kementerian Kesehatan Republik Indonesia.

Jaar, B. G., Hermann, J. A., Furth, S. L., Briggs, W., & Powe, N. R. (2000). Septicemia in diabetic hemodialysis patients: comparison of incidence, risk factors, and mortality with nondiabetic hemodialysis patients. *American journal of kidney diseases : the official journal of the National Kidney Foundation*, 35(2), 282-292. [https://doi.org/10.1016/S0272-6386\(00\)70338-6](https://doi.org/10.1016/S0272-6386(00)70338-6)



Jitraknatee, J., Ruengorn, C., & Nnochaiwong, S. (2020). Prevalence and risk factors of chronic kidney disease among type 2 diabetes patients: A cross-sectional study in primary care practice. *Sci. Rep.*, 10(1), 6205. <https://doi.org/10.1038/s41598-020-63443-4>

Jofré, R. (2006). Inflammatory syndrome in patients on hemodialysis. *Journal of the American Society of Nephrology*, 17, 274-280.

Kamimura, M. A., Draibe, S. A., Dalboni, M. A., Cendoroglo, M., Avesani, C. M., Manfredi, S. R., Canziani, M. E. F., & Cuppari, L. (2007). Serum and cellular interleukin-6 in haemodialysis patients: relationship with energy expenditure. *Nephrology Dialysis Transplantation*, 22(3), 839-844. <https://doi.org/10.1093/NDT/GFL705>

Kittanamongkolchai, W., El-Zoghby, Z. M., Eileen Hay, J., Wiesner, R. H., Kamath, P. S., LaRusso, N. F., Watt, K. D., Cramer, C. H., & Leung, N. (2017). Charcoal hemoperfusion in the treatment of medically refractory pruritus in cholestatic liver disease. *Hepatol. Int.*, 11(4), 384-389. <https://doi.org/10.1007/s12072-016-9775-9>

Konda, D., Chandrashekhar, L., Rajappa, M., Kattimani, S., Thappa, D. M., & Ananthanarayanan, P. H. (2015). Serotonin and interleukin-6: Association with pruritus severity, sleep quality and depression severity in Prurigo Nodularis. *Asian J. Psychiatr.*, 17, 24-28. <https://doi.org/10.1016/j.ajp.2015.07.010>

Laude-Sharp, M., Caroff, M., & Simard, L. (1990). Induction of IL-1 during hemodialysis: Transmembrane passage of intact endotoxins (LPS). *Kidney Int*, 38, 1089-1094.

Lavergne, V., Nolin, T. D., Hoffman, R. S., Roberts, D., Gosselin, S., Goldfarb, D. S., Kielstein, J. T., Mactier, R., Maclare, R., Mowry, J. B., Bunchman, T. E., Juurlink, D., Megarbane, B., Anseeuw, K., Winchester, J. F., Dargan, P. I., Liu, K. D., Hoegberg, L. C., Li, Y., ... Ghannoum, M. (2012). The EXTRIP (EXtracorporeal TRetreatments In Poisoning) workgroup: Guideline methodology. *Clin. Toxicol. (Phila.)*, 50(5), 403-413. <https://doi.org/10.3109/15563650.2012.683436>

Li, C., Wan, L., Luo, J., Jiang, M., & Wang, K. (2021). Advances in Subcutaneous Delivery Systems of Biomacromolecular Agents for Diabetes Treatment. *International Journal of Nanomedicine*, 16, 1261. <https://doi.org/10.2147/IJN.S283416>

Li, L., Bo, W., Chen, H., XiaoWei, L., Hongbao, L., & Peng, Z. (2020). Hemoperfusion plus continuous veno-venous hemofiltration in the treatment of patients with multiple organ failure after wasp stings. *Int. J. Artif. Organs*, 43(3), 143-149. <https://doi.org/10.1177/0391398819881459>

Li, W., Wang, J., Wang, Y., Guan, R., Zhao, F., & Zhang, R. (2023). Additional hemoperfusion for patients receiving maintenance hemodialysis: a retrospective analysis. *Am. J. Transl. Res.*, 15(6), 4045-4054. <https://www.ncbi.nlm.nih.gov/pubmed/37434811>

Lo, P., Sharma, A., Craig, J. C., Wyburn, K., Lim, W., Chapman, J. R., Palmer, S. C., Strippoli, G. F. M., & Wong, G. (2016). Preconditioning therapy in ABO-incompatible living kidney transplantation: A systematic review and meta-analysis. *Transplantation*, 100(4), 933-942. <https://doi.org/10.1097/TP.0000000000000933>

Lu, J. Da, & Xue, J. (2019). Poisoning: Kinetics to Therapeutics. *Critical Care Nephrology: Third Edition*, 600-629.e7. <https://doi.org/10.1016/B978-0-323-44942-7.00101-1>



Lu, W., Jiang, G., & Group, S. H.-H. C. (2022). Hemoperfusion in maintenance hemodialysis patients. *Blood Purif.*, 51(10), 1-9. <https://doi.org/10.1159/000525952>

Mackenzie, T. A., Zawada Jr, E. T., & Stacy, W. K. (1985). Hemodialysis. Basic principles and practice. *Postgrad. Med.*, 77(1), 95-101, 104.
<https://doi.org/10.1080/00325481.1985.11698842>

Magno, A., Herat, L., Carnagarin, R., Schlaich, M., & Matthews, V. (2019). Current knowledge of IL-6 cytokine family members in acute and chronic kidney disease. *Biomedicines*, 7(1), 19. <https://doi.org/10.3390/biomedicines7010019>

Malaponte, G., Bevelacqua, V., Fatuzzo, P., Rapisarda, F., Emmanuele, G., Travali, S., & Mazzarino, M. C. (2002). IL-1 β , TNF- α and IL-6 release from monocytes in haemodialysis patients in relation to dialytic age. *Nephrology Dialysis Transplantation*, 17(11), 1964-1970.
<https://doi.org/10.1093/NDT/17.11.1964>

Mayo Clinics Laboratories. (2022). *Interleukin 6, Plasma*.

Memoli, B., Postiglione, L., & Cianciaruso, B. (2000). Role of different dialysis membranes in the release of interleukin 6 soluble receptor in uremic patients. *Kidney Int*, 58, 417-424.

Memon, M., Shaikh, K., Ghafoor, A., Memon, F. R., Mumtaz, S., & Naeem, A. (2022). Variations in Complete Blood Count, in Pre and Post Hemodialysis Patients of Chronic Renal Failure. *J. Haematol Stem Cell*, 2(2), 73-76.

Meyersburg, D., Schmidt, E., Kasperkiewicz, M., & Zillikens, D. (2012). Immunoabsorption in Dermatology. *Therapeutic Apheresis and Dialysis*, 16(4), 311-320.

Mihai, S., Codrici, E., Popescu, I. D., Enciu, A.-M., Rusu, E., Zilisteau, D., Necula, L. G., Anton, G., & Tanase, C. (2019). Inflammation-related patterns in the clinical staging and severity assessment of chronic kidney disease. *Dis. Markers*, 2019, 1814304.
<https://doi.org/10.1155/2019/1814304>

Muhammad, A. (2020). Effect of haemodialysis on haematological parameters in chronic kidney failure patients Peshawar-Pakistan. *Pure Appl. Biol.*, 9(1).
<https://doi.org/10.19045/bspab.2020.90121>

Murakami, M., Hibi, M., Nakagawa, N., Nakagawa, T., Yasukawa, K., Yamanishi, K., Taga, T., & Kishimoto, T. (1993). IL-6-induced homodimerization of gp130 and associated activation of a tyrosine kinase. *Science*, 260(5115), 1808-1810.
<https://doi.org/10.1126/science.8511589>

Murdeswar, H. N., & Anjum, F. (2022). *Hemodialysis*.

Narazaki, M., Yasukawa, K., & Saito, T. (1993). Soluble forms of the interleukin 6 signal-transducing receptor component gp 130 in human serum possessing a potential to inhibit signals through membrane-anchored gp 130. *Blood*, 82, 1120-1126.

Nazzal, Z., Hamdan, Z., Masri, D., Abu-Kaf, O., & Hamad, M. (2022). Prevalence and risk factors of chronic kidney disease in Palestinian patients with diabetes: a cross-sectional study. *Lancet*, 399 Suppl 1, S8. [https://doi.org/10.1016/S0140-6736\(22\)01143-6](https://doi.org/10.1016/S0140-6736(22)01143-6)



Nguyen Huu, D., Dao Bui Quy, Q., Nguyen Thi Thu, H., Phan The, C., Nguyen Thi Hong, Q.,

Nguyen Duc, L., Do, Q., & Le Viet, T. (2021). A combination of hemodialysis with hemoperfusion helped to reduce the cardiovascular-related mortality rate after a 3-year follow-up: A pilot study in Vietnam. *Blood Purif.*, 50(1), 65-72.

<https://doi.org/10.1159/000507912>

Nishiwaki, H., Hasegawa, T., Koiwa, F., Hamano, T., & Masakane, I. (2019). The association of the difference in hemoglobin levels before and after hemodialysis with the risk of 1-year mortality in patients undergoing hemodialysis. Results from a nationwide cohort study of the Japanese Renal Data Registry. *PLoS One*, 14(1), e0210533.

<https://doi.org/10.1371/journal.pone.0210533>

Nordan, R. P., Richards, C. D., & Gauldie, J. (2001). Measurement of interleukin 6. *Curr. Protoc. Immunol., Chapter 6, Unit 6.6.* <https://doi.org/10.1002/0471142735.im0606s17>

Oji, S., & Nomura, K. (2017). Immunoabsorption in neurological disorders. *Transfus. Apher. Sci.*, 56(5), 671-676. <https://doi.org/10.1016/j.transci.2017.08.013>

Paczek, L., Schaefer, R. M., & Heidland, A. (1991). Dialysis membranes decrease immunoglobulin and interleukin-6 production by peripheral blood mononuclear cells in vitro. *Nephrology, Dialysis, Transplantation : Official Publication of the European Dialysis and Transplant Association - European Renal Association*, 6 Suppl 3(SUPPL. 3), 41-44. <https://europepmc.org/article/med/1775266>

Park, S., Islam, M.-I., Jeong, J.-H., Cho, N.-J., Song, H.-Y., Lee, E.-Y., & Gil, H.-W. (2019). Hemoperfusion leads to impairment in hemostasis and coagulation process in patients with acute pesticide intoxication. *Sci. Rep.*, 9(1), 13325. <https://doi.org/10.1038/s41598-019-49738-1>

Pecoits-Filho, R., Lindholm, B., Axelsson, J., & Stenvinkel, P. (2003). Update on interleukin-6 and its role in chronic renal failure. In *Nephrology Dialysis Transplantation* (Vol. 18, Numéro 6, p. 1042-1045). <https://doi.org/10.1093/ndt/gfg111>

Petrie, J. R., Guzik, T. J., & Touyz, R. M. (2018). Diabetes, Hypertension, and Cardiovascular Disease: Clinical Insights and Vascular Mechanisms. *The Canadian Journal of Cardiology*, 34(5), 575. <https://doi.org/10.1016/J.CJCA.2017.12.005>

Registry, T. I. R. (2018). *Indonesian Renal Registry 2018*.
<https://www.indonesianrenalregistry.org/data/IRR%202018.pdf>

Ronco, C., Ricci, Z., & Husain-Syed, F. (2019). From Multiple Organ Support Therapy to Extracorporeal Organ Support in Critically Ill Patients. *Blood Purification*, 48(2), 99-105.

Rosales, A., Madrid, A., Muñoz, M., Dapena, J. L., & Ariceta, G. (2021). Charcoal hemoperfusion for methotrexate toxicity: A safe and effective life-rescue alternative when glucarpidase is not available. *Front. Pediatr.*, 9, 635152. <https://doi.org/10.3389/fped.2021.635152>

Rose-John, S. (2020). Interleukin-6 signalling in health and disease. *F1000Res.*, 9, 1013. <https://doi.org/10.12688/f1000research.26058.1>

Schlinder, R., Lonnemann, G., & Shaldon, S. (1990). Transcription, not synthesis, of interleukin 1 and tumor necrosis factor by complement. *Kidney Int*, 37, 85-93.



Shannon, M. W., Borron, S. W., Snook, C. P., Handel, D. A., & Arias, J. C. (2007). Emergency Management of Poisoning. In *Haddad and Winchester's Clinical Management of Poisoning and Drug Overdose, Fourth Edition* (p. 13-61). Elsevier. <https://doi.org/10.1016/B978-0-7216-0693-4.50007-4>

Shu, K.-H., Cheng, C.-H., Wu, M.-J., Chen, C.-H., Yu, T.-M., Chuang, Y.-W., Huang, S.-T., Tsai, S.-F., & Lo, Y.-C. (2013). Effect of different hemodialyzers on serum levels of interleukin-6, interleukin-10 and interleukin-18. *Blood Purif.*, 36(3-4), 295-300. <https://doi.org/10.1159/000356225>

Soleimani, A., Taba, S. M. M., Hasibi Taheri, S., Loghman, A. H., & Shayestehpour, M. (2021). The effect of hemoperfusion on the outcome, clinical and laboratory findings of patients with severe COVID-19: a retrospective study. *New Microbes and New Infections*, 44, 100937. <https://doi.org/10.1016/J.NMNI.2021.100937>

Stummvoll, G., Aringer, M., Handisurya, A., & Derfler, K. (2017). Immunoabsorption in autoimmune diseases affecting the kidney. *Semin. Nephrol.*, 37(5), 478-487. <https://doi.org/10.1016/j.semnnephrol.2017.05.020>

Su, H., Lei, C.-T., & Zhang, C. (2017). Interleukin-6 signaling pathway and its role in kidney disease: An update. *Front. Immunol.*, 8, 405. <https://doi.org/10.3389/fimmu.2017.00405>

Suri, R. S., Larive, B., Sherer, S., Eggers, P., Gassman, J., James, S. H., Lindsay, R. M., Lockridge, R. S., Ornt, D. B., Rocco, M. V, Ting, G. O., & Kliger, A. S. (2013). Risk of vascular access complications with frequent hemodialysis. *J. Am. Soc. Nephrol.*, 24(3), 498-505. <https://doi.org/10.1681/asn.2012060595>

Takahashi, T., Kubota, M., Nakamura, T., Ebihara, I., & Koide, H. (2000). Interleukin-6 Gene Expression in Peripheral Blood Mononuclear Cells From Patients Undergoing Hemodialysis or Continuous Ambulatory Peritoneal Dialysis. *Renal Failure*, 22(3), 345-354.

Tamura, M. K., Desai, M., Kappahn, K. I., Thomas, I. C., Asch, S. M., & Chertow, G. M. (2018). Dialysis versus medical management at different ages and levels of kidney function in veterans with advanced CKD. *J Am Soc Nephrol*, 29(8), 2169-2177.

Thiruvoipati, T., Kielhorn, C. E., & Armstrong, E. J. (2015). Peripheral artery disease in patients with diabetes: Epidemiology, mechanisms, and outcomes. *World Journal of Diabetes*, 6(7), 961. <https://doi.org/10.4239/WJD.V6.I7.961>

Udomsinprasert, W., Jittikoon, J., Sangroongruangsri, S., & Chaikledkaew, U. (2021). Circulating levels of interleukin-6 and interleukin-10, but not tumor necrosis factor-alpha, as potential biomarkers of severity and mortality for COVID-19: Systematic review with meta-analysis. *J. Clin. Immunol.*, 41(1), 11-22. <https://doi.org/10.1007/s10875-020-00899-z>

Vaziri, N. D. (2004). Oxidative stress in uremia: Nature, mechanisms, and potential consequences. *Seminars in Nephrology*, 24(5), 469-473. <https://doi.org/10.1016/j.semnnephrol.2004.06.026>

Wali V, V., A Gulavan, G., & Kishore, V. (2020). A comparative study of pre and post dialysis biochemical parameters in chronic renal failure patients. *Int. J. Clin. Biochem. Res.*, 7(2), 204-206. <https://doi.org/10.18231/j.ijcbr.2020.044>



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Webster, A., Nagler, E., Morton, R., & Masson, P. (2017). Chronic Kidney Disease. *The Lancet*, 389, 1238-1252.

Winchester, J. F. (2002a). Dialysis and hemoperfusion in poisoning. *Adv. Ren. Replace. Ther.*, 9(1), 26-30. <https://doi.org/10.1053/jarr.2002.30470>

Winchester, J. F. (2002b). Dialysis and hemoperfusion in poisoning. *Advances in renal replacement therapy*, 9(1), 26-30.

Yang, X., Xin, S., Zhang, Y., & Li, T. (2018). Early hemoperfusion for emergency treatment of carbamazepine poisoning. *Am. J. Emerg. Med.*, 36(6), 926-930.

<https://doi.org/10.1016/j.ajem.2017.10.048>

Zhou, M., Du, Y., Wu, Y., Zhang, P., Liu, P., & Li, J. (2021). Analysis of inflammatory factor levels in serum and risk factors in patients with chronic renal failure undergoing maintenance hemodialysis. *Am. J. Transl. Res.*, 13(6), 6994-7000.

<https://www.ncbi.nlm.nih.gov/pubmed/34306454>

Zoccali, C., Mallamaci, F., & Tripepi, G. (2004). Inflammatory proteins as predictors of cardiovascular disease in patients with end-stage renal disease. *Nephrology, dialysis, transplantation : official publication of the European Dialysis and Transplant Association - European Renal Association*, 19 Suppl 5(SUPPL. 5). <https://doi.org/10.1093/NDT/GFH1059>