

## DAFTAR PUSTAKA

1. Sari YN, Herfanda E, Putri IM. Gambaran Faktor Risiko Kejadian Abortus Spontan pada Ibu Hamil di RSUD Panembahan Senopati Bantul Tahun 2017-2018. *J Sehat Mandiri*. 2022;17(1):135-145.
2. Prahesti R. Analisis faktor-faktor yang berhubungan dengan kejadian anemia pada ibu hamil di Puskesmas Prambanan, Sleman, Yogyakarta. Published online 2017.
3. Purwaningrum ED, Fibriyana AI. Faktor risiko kejadian abortus spontan. *HIGEIA (Journal Public Heal Res Dev)*. 2017;1(3):84-94.
4. Singh S, Maddow-Zimet I. Facility-based treatment for medical complications resulting from unsafe pregnancy termination in the developing world, 2012: a review of evidence from 26 countries. *BJOG An Int J Obstet Gynaecol*. 2016;123(9):1489-1498.
5. Camuci MB, Martins JT, Cardeli AAM, Robazzi ML do CC. Nursing Activities Score: nursing work load in a burns Intensive Care Unit. *Rev Lat Am Enfermagem*. 2014;22:325-331.
6. Ganatra B, Gerds C, Rossier C, et al. Global, regional, and subregional classification of abortions by safety, 2010–14: estimates from a Bayesian hierarchical model. *Lancet*. 2017;390(10110):2372-2381.
7. Kuntari T, Wilopo SA, Emilia O. Determinan abortus di Indonesia. *Kemas J Kesehatan Masy Nas (National Public Heal Journal)*. 2010;4(5):223-229.
8. Sitilonga JM, Sitorus RJ, Yeni Y. CAUSAL FACTORS OF ABORTUS SPONTANEOUS OCCURENCE IN DR. MOHAMMAD HOESIN GENERAL STATE HOSPITAL PALEMBANG. *J Ilmu Kesehatan Masy*. 2017;8(2):100-108.
9. World Health Organization (WHO). *Abortion*.; 2014. <https://www.who.int/news-room/fact-sheets/detail/abortion>
10. Kementerian Kesehatan RI. *Riset Kesehatan Dasar Di Indonesia Tahun 2010*.; 2010.
11. Kementrian Kesehatan RI. *Profil Kesehatan Indonesia Tahun 2015*.; 2015.
12. Amalia M. FAKTOR RISIKO KEJADIAN ABORTUS (STUDI DI RUMAH SAKIT ISLAM SULTAN AGUNG SEMARANG). *J Kesehat Masy Indones*. 2015;10(1):23-29.
13. Bhattacharya S, Townend J, Shetty A, Campbell D, Bhattacharya S. Does miscarriage in an initial pregnancy lead to adverse obstetric and perinatal

outcomes in the next continuing pregnancy? *BJOG An Int J Obstet Gynaecol.* 2008;115(13):1623-1629.

14. Hou W, Yan XT, Bai CM, Zhang XW, Hui LY, Yu XW. Decreased serum vitamin D levels in early spontaneous pregnancy loss. *Eur J Clin Nutr.* 2016;70(9):1004-1008.
15. Urrutia-Pereira M, Solé D. Vitamin D deficiency in pregnancy and its impact on the fetus, the newborn and in childhood. *Rev Paul Pediatr.* 2015;33:104-113.
16. Curtis EM, Moon RJ, Harvey NC, Cooper C. Maternal vitamin D supplementation during pregnancy. *Br Med Bull.* 2018;126(1):57-77.
17. Miliku K, Vinkhuyzen A, Blanken LME, et al. Maternal vitamin D concentrations during pregnancy, fetal growth patterns, and risks of adverse birth outcomes. *Am J Clin Nutr.* 2016;103(6):1514-1522.
18. Wagner CL, Taylor SN, Johnson DD, Hollis BW. The role of vitamin D in pregnancy and lactation: emerging concepts. *Women's Heal.* 2012;8(3):323-340.
19. Wagner CL, Hollis BW. The implications of vitamin D status during pregnancy on mother and her developing child. *Front Endocrinol (Lausanne).* Published online 2018:500.
20. Suryana H, Kampono N, Hestiantoro A. Perbandingan kadar interleukin-10 serum antara wanita hamil normal dan hamil dengan ancaman persalinan preterm. *Indones J Obstet Gynecol.* Published online 2006.
21. Ji J, Muyayalo KP, Zhang Y, Hu X, Liao A. Immunological function of vitamin D during human pregnancy. *Am J Reprod Immunol.* 2017;78(2):e12716.
22. Tamblyn JA, Hewison M, Wagner CL, Bulmer JN, Kilby MD. Immunological role of vitamin D at the maternal-fetal interface. *J Endocrinol.* 2015;224(3):R107-R121.
23. Ganguly A, Tamblyn JA, Finn-Sell S, et al. Vitamin D, the placenta and early pregnancy: effects on trophoblast function. *J Endocrinol.* 2018;236(2):R93-R103.
24. Koch Y, Wimberger P, Grümmer R. Human chorionic gonadotropin induces decidualization of ectopic human endometrium more effectively than forskolin in an in-vivo endometriosis model. *Exp Biol Med.* 2018;243(11):953-962.
25. Ng S-W, Norwitz GA, Pavlicev M, Tilburgs T, Simón C, Norwitz ER. Endometrial decidualization: the primary driver of pregnancy health. *Int J Mol Sci.* 2020;21(11):4092.

26. Greer LL NJ. *Buku Acuan Persalinan Kurang Bulan (Prematur) 1.*; 2005.
27. Zygumt M, Lang U, Katz N, Künzel W. Maternal plasma fibronectin: a predictor of preterm delivery. *Eur J Obstet Gynecol Reprod Biol.* 1997;72(2):121-126.
28. Chan SY, Susarla R, Canovas D, et al. Vitamin D promotes human extravillous trophoblast invasion in vitro. *Placenta.* 2015;36(4):403-409.
29. Li N, Wu H, Hang F, Zhang YS, Li MJ. Women with recurrent spontaneous abortion have decreased 25 (OH) vitamin D and VDR at the fetal-maternal interface. *Brazilian J Med Biol Res.* 2017;50.
30. Romanowska-Próchnicka K, Felis-Giemza A, Olesińska M, Wojdasiewicz P, Paradowska-Gorycka A, Szukiewicz D. The role of TNF- $\alpha$  and anti-TNF- $\alpha$  agents during preconception, pregnancy, and breastfeeding. *Int J Mol Sci.* 2021;22(6):2922.
31. McLoughlin RM, Jenkins BJ, Grail D, et al. IL-6 trans-signaling via STAT3 directs T cell infiltration in acute inflammation. *Proc Natl Acad Sci.* 2005;102(27):9589-9594.
32. Challis JR, Lockwood CJ, Myatt L, Norman JE, Strauss III JF, Petraglia F. Inflammation and pregnancy. *Reprod Sci.* 2009;16(2):206-215.
33. Ragsdale HB, Kuzawa C, Borja J, McDade TW. Inflammatory cytokines in pregnancy and birth outcomes in the Philippines. In: *AMERICAN JOURNAL OF HUMAN BIOLOGY.* Vol 30. WILEY 111 RIVER ST, HOBOKEN 07030-5774, NJ USA; 2018.
34. Adhi KC, Sulistywati S, Respati SH. KADAR HUMAN LEUKOCYTE ANTIGEN-G (HLA-G) DAN TUMOR NERCROSIS FAKTOR ALPHA (TNF- $\alpha$ ) PADA ABORTUS DAN KEHAMILAN NORMAL. *J Kesehat Reproduksi.* 2016;2(2).
35. Kwiatek M, Gęca T, Kwaśniewska A. Pro-and Anti-Inflammatory Cytokines in the First Trimester—Comparison of Missed Miscarriage and Normal Pregnancy. *Int J Environ Res Public Health.* 2021;18(16):8538.
36. Obrowski M, Obrowski M, Starski K. Normal Pregnancy: A clinical review. *Acad J Pediatr Neonatol.* 2016;1(1):15-18.
37. Al-wataar B. Fertilization. Published online 2019. doi:10.13140/RG.2.2.24039.70560
38. Kim S-M, Kim J-S. A review of mechanisms of implantation. *Dev Reprod.* 2017;21(4):351.



39. Hamid HY, Zakaria MZAB. Embryo implantation: Shedding light on the roles of ovarian hormones, cytokines and growth factors in the implantation process. *African J Biotechnol*. 2012;11(97):16297-16304.
40. Darmawati D. Mengenal Abortus Dan Faktor Yang Berhubungan Dengan Kejadian Abortus. *Idea Nurs J*. 2011;2(1):12-18.
41. Akbar A. Faktor Penyebab Abortus Di Indonesia Tahun 2010-2019: Studi Meta Analisis. *J Biomedik JBM*. 2019;11(3).
42. Sheiner EK. *Bleeding during Pregnancy: A Comprehensive Guide*. Springer Science & Business Media; 2011.
43. Holick MF. Vitamin D deficiency. *N Engl J Med*. 2007;357(3):266-281.
44. Astuti Y, Adyani K. Vitamin D dalam Kehamilan (Literature Review). *J Ilm PANNMED (Pharmacist, Anal Nurse, Nutr Midwifery, Environ Dent)*. 2020;15(3):508-512.
45. Flood-Nichols SK, Tinnemore D, Huang RR, Napolitano PG, Ippolito DL. Vitamin D deficiency in early pregnancy. *PLoS One*. 2015;10(4):e0123763.
46. Hollis BW, Wagner CL. New insights into the vitamin D requirements during pregnancy. *Bone Res*. 2017;5(1):1-16.
47. Yockey LJ, Iwasaki A. Interferons and proinflammatory cytokines in pregnancy and fetal development. *Immunity*. 2018;49(3):397-412.
48. Aji AS, Erwinda E, Yusrawati Y, Malik SG, Lipoeto NI. Vitamin D deficiency status and its related risk factors during early pregnancy: a cross-sectional study of pregnant Minangkabau women, Indonesia. *BMC Pregnancy Childbirth*. 2019;19(1):1-10.
49. Agarwal S, Kovilam O, Agrawal DK. Vitamin D and its impact on maternal-fetal outcomes in pregnancy: A critical review. *Crit Rev Food Sci Nutr*. 2018;58(5):755-769.
50. Antonakou A. Vitamin D supplementation for women during pregnancy. *Women and Birth*. 2018;31(4):e286.
51. Evans KN, Nguyen L, Chan J, et al. Effects of 25-hydroxyvitamin D3 and 1, 25-dihydroxyvitamin D3 on cytokine production by human decidual cells. *Biol Reprod*. 2006;75(6):816-822.
52. Thota C, Farmer T, Garfield RE, Menon R, Al-Hendy A. Vitamin D elicits anti-inflammatory response, inhibits contractile-associated proteins, and modulates Toll-like receptors in human myometrial cells. *Reprod Sci*. 2013;20(4):463-475.

53. Liu N, Kaplan AT, Low J, et al. Vitamin D induces innate antibacterial responses in human trophoblasts via an intracrine pathway. *Biol Reprod.* 2009;80(3):398-406.
54. Barrera D, Avila E, Hernández G, et al. Calcitriol affects hCG gene transcription in cultured human syncytiotrophoblasts. *Reprod Biol Endocrinol.* 2008;6(1):1-8.
55. Mor G, Abrahams VM. Immunology of implantation. *Immunol allergy Clin.* 2002;22(3):545-565.
56. Nadeau-Vallée M, Obari D, Palacios J, et al. Sterile inflammation and pregnancy complications: a review. *Reproduction.* 2016;152(6):R277-R292.
57. Abdulkhaliq RJ, Mohammed ST, Abbas AA-H. The role of IL-6 and TGF- $\beta$ 1 in Iraqi women with recurrent abortion. Published online 2018.
58. Chan G, Hemmings DG, Yurochko AD, Guilbert LJ. Human cytomegalovirus-caused damage to placental trophoblasts mediated by immediate-early gene-induced tumor necrosis factor- $\alpha$ . *Am J Pathol.* 2002;161(4):1371-1381.
59. Pérez-Roque L, Núñez-Gómez E, Rodríguez-Barbero A, Bernabéu C, López-Novoa JM, Pericacho M. Pregnancy-induced high plasma levels of soluble endoglin in mice lead to preeclampsia symptoms and placental abnormalities. *Int J Mol Sci.* 2021;22(1):1-20. doi:10.3390/ijms22010165
60. Azizieh FY, Raghupathy RG. Tumor necrosis factor- $\alpha$  and pregnancy complications: A prospective study. *Med Princ Pract.* 2015;24(2):165-170. doi:10.1159/000369363
61. Haider S, Knöfler M. Human Tumour Necrosis Factor: Physiological and Pathological Roles in Placenta and Endometrium. *Placenta.* 2009;30(2):111-123. doi:10.1016/j.placenta.2008.10.012
62. Giannubilo SR, Landi B, Pozzi V, et al. The involvement of inflammatory cytokines in the pathogenesis of recurrent miscarriage. *Cytokine.* 2012;58(1):50-56.
63. Vitoratos N, Papadias C, Economou E, Makrakis E, Panoulis C, Creatsas G. Elevated circulating IL-1 $\beta$  and TNF-alpha, and unaltered IL-6 in first-trimester pregnancies complicated by threatened abortion with an adverse outcome. *Mediators Inflamm.* 2006;2006:1-6. doi:10.1155/MI/2006/30485
64. Dai FF, Hu M, Zhang YW, et al. TNF- $\alpha$ /anti-TNF- $\alpha$  drugs and its effect on pregnancy outcomes. *Expert Rev Mol Med.* 2022;24. doi:10.1017/erm.2022.18
65. Ai F, Li G, Jiang J, Dong X. Neutrophil elastase and fetal fibronectin levels as predictors of single-birth prematurity. *Exp Ther Med.* 2015;10(2):665-670.



66. Albahlol IA, Almaeen AH, Alduraywish AA, Dar UF, El-Metwally TH. Vitamin D status and pregnancy complications: serum 1, 25-di-hydroxyl-vitamin D and its ratio to 25-hydroxy-vitamin D are superior biomarkers than 25-hydroxy-vitamin D. *Int J Med Sci.* 2020;17(18):3039.
67. Rahma S, Sahputri J, Nadira CS. Hubungan Usia Ibu Hamil dengan Kejadian Abortus Spontan di Rumah Sakit Umum Cut Meutia Kabupaten Aceh Utara Tahun 2020. *COMSERVA J Penelit dan Pengabd Masy.* 2022;1(12):1138-1146.
68. Sulistyorini D, Putri SS. Analisis faktor-faktor yang mempengaruhi kejadian BBLR di Puskesmas Pedesaan Kabupaten Banjarnegara tahun 2014. *J Ilm Medsains.* 2015;1(1):23-29.
69. Tafti FD, Zare F, Miresmaeili SM, Fesahat F. Evaluating Vitamin D and foxp3 mRNA levels in women with recurrent spontaneous abortion. *JBRA Assist Reprod.* 2022;26(2):232.
70. Lee SM, Meyer MB, Benkusky NA, O'Brien CA, Pike JW. The impact of VDR expression and regulation in vivo. *J Steroid Biochem Mol Biol.* 2018;177:36-45.
71. Hamzaoui A, Berraïes A, Hamdi B, Kaabachi W, Ammar J, Hamzaoui K. Vitamin D reduces the differentiation and expansion of Th17 cells in young asthmatic children. *Immunobiology.* 2014;219(11):873-879.
72. Christakos S, Dhawan P, Verstuyf A, Verlinden L, Carmeliet G. Vitamin D: metabolism, molecular mechanism of action, and pleiotropic effects. *Physiol Rev.* 2016;96(1):365-408.
73. Yang S-L, Tan H-X, Niu T-T, Li D-J, Wang H-Y, Li M-Q. Kynurenine promotes the cytotoxicity of NK cells through aryl hydrocarbon receptor in early pregnancy. *J Reprod Immunol.* 2021;143:103270.
74. Dai F, Hu M, Zhang Y, et al. TNF- $\alpha$ /Anti-TNF- $\alpha$  drugs and its effect on pregnancy outcomes. *Expert Rev Mol Med.* 2022;24:e26.
75. Cantorna MT. Diet, immunity and inflammation: 9. Vitamin D and the immune system. *Elsevier Inc Chapters.* Published online 2013.
76. Gil Á, Plaza-Diaz J, Mesa MD. Vitamin D: classic and novel actions. *Ann Nutr Metab.* 2018;72(2):87-95.
77. Shin JS, Choi MY, Longtine MS, Nelson DM. Vitamin D effects on pregnancy and the placenta. *Placenta.* 2010;31(12):1027-1034.
78. Akoh CC, Pressman EK, Cooper E, Queenan RA, Pillittere J, O'Brien KO. Low vitamin D is associated with infections and proinflammatory cytokines during pregnancy. *Reprod Sci.* 2018;25:414-423.

79. Chen B, Chen Y, Xu Y. Vitamin D deficiency in pregnant women: Influenced by multiple risk factors and increase the risks of spontaneous abortion and small-for-gestational age. *Medicine (Baltimore)*. 2021;100(41).
80. Kasim SF. The relationship between vitamin D and spontaneous abortion among Iraqi women. *J Med Life*. 2022;15(6):757.
81. Rasud R. Hubungan Kadar Serum 25 (OH) Vitamin D Ibu Hamil Trimester III Dengan Luaran Maternal. Published online 2020.
82. Putri NI, Lipoeto NI, Rita RS, Aji AS. Hubungan kadar vitamin D pada ibu hamil dengan berat bayi lahir di Kabupaten Tanah Datar dan Kabupaten Solok. *J Ilm Univ Batanghari Jambi*. 2019;19(1):61-64.
83. Sharif K, Sharif Y, Watad A, et al. Vitamin D, autoimmunity and recurrent pregnancy loss: More than an association. *Am J Reprod Immunol*. 2018;80(3):e12991.
84. Adorini L, Penna G. Control of autoimmune diseases by the vitamin D endocrine system. *Nat Clin Pract Rheumatol*. 2008;4(8):404-412.
85. Kamen DL, Tangpricha V. Vitamin D and molecular actions on the immune system: modulation of innate and autoimmunity. *J Mol Med*. 2010;88:441-450.
86. Schröder-Heurich B, Springer CJP, von Versen-Höynck F. Vitamin D effects on the immune system from periconception through pregnancy. *Nutrients*. 2020;12(5):1432.
87. Saito S, Nakashima A, Shima T, Ito M. Th1/Th2/Th17 and regulatory T-cell paradigm in pregnancy. *Am J Reprod Immunol*. 2010;63(6):601-610.
88. Jang HG, Choi Y, Kim JO, et al. Polymorphisms in tumor necrosis factor-alpha (- 863C> A, - 857C> T and + 488G> A) are associated with idiopathic recurrent pregnancy loss in Korean women. *Hum Immunol*. 2016;77(6):506-511.
89. Pietrowski D, Bettendorf H, Keck C, et al. Lack of association of TNF $\alpha$  gene polymorphisms and recurrent pregnancy loss in Caucasian women. *J Reprod Immunol*. 2004;61(1):51-58.
90. Babbage SJ, Arkwright PD, Vince GS, et al. Cytokine promoter gene polymorphisms and idiopathic recurrent pregnancy loss. *J Reprod Immunol*. 2001;51(1):21-27.
91. Al-Hilli NM. Maternal Serum Tumor Necrosis Factor-alpha in Patients with Missed and Recurrent Miscarriage. *Med J Babylon*. 2009;6(3-4):521-526.
92. Calleja-Agius J, Muttukrishna S, Pizzey AR, Jauniaux E. Pro-and antiinflammatory cytokines in threatened miscarriages. *Am J Obstet Gynecol*.

2011;205(1):83-e8.

93. Hua F, Li C-H, Wang H, Xu H-G. Relationship between expression of COX-2, TNF- $\alpha$ , IL-6 and autoimmune-type recurrent miscarriage. *Asian Pac J Trop Med*. 2013;6(12):990-994.
94. Kaur A, Kaur A. Recurrent pregnancy loss: TNF- $\alpha$  and IL-10 polymorphisms. *J Hum Reprod Sci*. 2011;4(2):91.
95. Aboutorabi R, Behzadi E, Sadegh MJ, et al. The study of association between polymorphism of TNF- $\alpha$  gene's promoter region and recurrent pregnancy loss. *J Reprod Infertil*. 2018;19(4):211.
96. Kim JH, Jeon YJ, Rah H, et al. Tumor necrosis factor-alpha promoter polymorphisms are associated with idiopathic primary ovarian insufficiency in Korean women. *Fertil Steril*. 2012;98(5):1260-1265.
97. Piosik ZM, Goegebeur Y, Klitkou L, Steffensen R, Christiansen OB. Plasma TNF- $\alpha$  levels are higher in early pregnancy in patients with secondary compared with primary recurrent miscarriage. *Am J Reprod Immunol*. 2013;70(5):347-358.
98. Yu X-W, Li X, Ren Y-H, Li X-C. Tumour necrosis factor- $\alpha$  receptor 1 polymorphisms and serum soluble TNFR1 in early spontaneous miscarriage. *Cell Biol Int*. 2007;31(11):1396-1399.

