評価対象論文リスト(要因:妊娠中に妊娠糖尿病があった人、アウトカム:早産・低出生体重児・在胎不当過小児)

評価判定日:2025/4/17

①既存の系統的レビュー・メタ解析・統合解析

1	Greco E, Calanducci M, Nicolaides KH, Barry EVH, Huda MSB, Iliodromiti S. Gestational diabetes mellitus and adverse maternal and perinatal outcomes in twin and singleton pregnancies: a systematic review and meta-analysis. Am J Obstet Gynecol. 2024;230(2):213-225. doi:10.1016/j.ajog.2023.08.011
2	Tehrani FR, Naz MSG, Bidhendi-Yarandi R, Behboudi-Gandevani S. Effect of Different Types of Diagnostic Criteria for Gestational Diabetes Mellitus on Adverse Neonatal Outcomes: A Systematic Review, Meta-Analysis, and Meta-Regression. Diabetes Metab J. 2022;46(4):605-619. doi:10.4093/dmj.2021.0178
3	Preda A, Iliescu DG, Comănescu A, et al. Gestational Diabetes and Preterm Birth: What Do We Know? Our Experience and Mini-Review of the Literature. J Clin Med. 2023;12(14):4572. Published 2023 Jul 9. doi:10.3390/jcm12144572
4	Hirsch A, Peled T, Schlesinger S, Sela HY, Grisaru-Granovsky S, Rottenstreich M. Impact of gestational diabetes mellitus on neonatal outcomes in small for gestational age infants: a multicenter retrospective study. Arch Gynecol Obstet. 2024;310(2):685-693. doi:10.1007/s00404-024-07587-y
5	Mahmoud E, Elsayed AM, Elsayed B, Elsalakawi Y, Gopinath A, Chivese T. Association between gestational diabetes mellitus diagnostic criteria and adverse pregnancy outcomes-a systematic review and meta-analysis of adjusted effect sizes from studies using current diagnostic criteria. BMJ Open. 2024;14(11):e091258. Published 2024 Nov 21. doi:10.1136/bmjopen-2024-091258

②日本人集団の個別疫学研究

6	Yokomichi H, Mochizuki M, Shinohara R, et al. Gestational age, birth weight, and perinatal complications in mothers with diabetes and impaired glucose tolerance: Japan Environment and Children's Study cohort. PLoS One. 2022;17(6):e0269610. Published 2022 Jun 6. doi:10.1371/journal.pone.0269610
7	Kawasaki M, Arata N, Sugiyama T, et al. Risk of fetal undergrowth in the management of gestational diabetes mellitus in Japan. J Diabetes Investig. 2023;14(4):614-622. doi:10.1111/jdi.13977

■メタ解析、系統的レビュー

Reference			Include study				Event (*Definition	Design	Category	Relative risk (95% CI or p)	Weight	Magnitude of association
Author	Title	Year	Ref No.	First author	Year	Study period	Study location					
Ye W	Gestational diabetes mellitus and adverse pregnancy outcomes: systematic review and meta-	2022		Pooled analysis of 11 studies				PTB			**1.51 (1.26 to 1.80)**		↑ ↑
				Pooled analysis of 2 studies				LBW			1.40 (0.12 to 16.73)		—
				Pooled analysis of 7 studies				SGA			0.83 (0.55 to 1.23)		—
Greco E	Gestational diabetes mellitus and adverse maternal and perinatal outcomes in twin and singleton pregnancies: a systematic review and meta-analysis	2024		Pooled analysis of 53 studies				PTB		Risk of preterm birth in singleton pregnancies complicated by GDM vs controls (A) and in twin pregnancies complicated by	1.36 (1.27, 1.46)		↑
Elhassan Mahmoud	Association between gestational diabetes mellitus diagnostic criteria and adverse pregnancy outcomes—a systematic review and meta-analysis of adjusted effect sizes from studies using current diagnostic 1 criteria	2024		Darbandi	2022	2018					1.84 (1.21,2 .78)	1 .58	
				Hiersch,	2019	2012-2016					1.48 (1.39,1 .57)	45.1	
				Hiersch	2019	2012-2016					1.21 (1.08,1 .37)	12.34	
				Kim	2019	2014-2016					1.58 (0.62, 4.08)	1.00	
				Wan,	2019	2010-2013					111 0.69-1.78	1.56	
				Wan,	2019	2010-2013					1.1 (0.90,1 .34)	5 .28	
				Alfadhli	2015	2011-2014					0.67 (0.37, 1.22)	1.25	
				Bashir	2020	2015-2016					1.72 (1.32, 2.23)	3.77	
				Capula	2013	2010-2012					1.94 (0.84, 4.48)	1.14	
				Hirst,	2012	2010-2011		PTB			1.49 (1.16,1 .91)	3 .93	
				Kawasaki	2013	2015-2019					1.4 (0.96,2 .10)	1 .77	
				Kim	2012						1.86 (0.96, 3.59)	1.22	
				Mak	2019	2015					1.87 (0.62, 5.58)	0.91	
				Muche	2020	2018-2019					2.03 (1.17,3 .53)	1.35	
				Pan	2015	2010-2012					0.61 (0.32, 1.18)	1.18	
				Punnose	2022	2011-2017					2.04 (1.54, 2.69)	3.31	
				Wahabi	2017	2013-2015					1 (0.80, 1.30)	3.49	
				Wang	2021	2012-2013					1.37 (1.11, 1.70)	4.89	
				Wang	2023	2018-2020					1.77 (1.03,3 .06)	1.36	
				Yue	2022	2016-2018					1.4 (1.09,1 .78)	3.59	
										over all	**1.41 (1.21-1.64)**	**100.00**	↑
Elhassan Mahmoud	Association between gestational diabetes mellitus diagnostic criteria and adverse pregnancy outcomes—a systematic review and meta-analysis of adjusted effect sizes from studies using current diagnostic 1 criteria	2024		Kim	2019	2014-2016	Korea			0.94	0.94 (0.42-2.13)	1.82	
				Wan	2019	2010-2013	Australia			0.63	0.63 (0.40-0.99)	4.45	
				Wan	2019	2010-2013	Australia			0.87	0.87 (0.67-1.13)	12.33	
				Bashir	2020	2015-2016	Qatar			0.79	0.79 (0.59-1.07)	10.78	
				Capula	2013	2010-2012	Italy			1.98	1.98 (0.53-7.41)	1.11	
				Hirst	2012	2010-2011	Vietnam			0.94	0.94 (0.67-1.32)	8.14	
				Kawasaki	2023	2015-2019	Japan			1.3	1.3 (0.82-1.90)	4.68	
				Kim	2019	2014-2016	Koｒea			0.75	0.75 (0.38-1.47)	2.38	
				Lin	2022	2012-2020	China	SGA		1.07	1.07 (0.79-1.43)	10.07	
				Mak	2019	2015	China			2.77	2.77 (1.45-5.31)	2.44	
				Mei	2021	2016-2018	China			0.69	0.69 (0.42-1.12)	3.88	
				Muche	2020	2018-2019	Ethiopia			0.61	0.61 (0.24-1.57)	1.44	
				Ronco	2023	2010-2020	Italy			0.9	0.9 (0.70-1.20)	12.09	
				Wang	2021	2012-2013	China			0.76	0.76 (0.57-1.01)	10.79	
				Yue	2022	2016-2018	Vietnam			1.08	1.08 (0.78-1.50)	7.74	
				Zou	2022	2016-2018	China			0.85	0.85 (0.58-1.24)	5.87	
	関連なし								overall		**0.91 (0.80-1.04)**	**100.00**	関連なし

■コホート研究（コホートのプール解析含む）

Author	Title	Year	Study subjects						Category	Number among cases	Relative risk (95%CI or p)	P for trend	Confounding variables considered
			Study period	Number of subjects	Source of subjects	Event followed	Number of incident cases or deaths	Participant's race					
Yokomichi H	Gestational age, birth weight, and perinatal complications in mothers with diabetes and impaired glucose tolerance: Japan Environment and Children's Study cohort	2022	2011 to 2014	24295	Japan Environment and Children's Study	**PTB**		**Japanese**	Tipe 1 (n = 67)		2.77	p < 0.05	maternal age and maternal smoking status in the first trimester in pregnancy.
									Type 2 (n = 102)		2.65	p < 0.05	
									Group GDM (n = 2045)		1.57	p < 0.05	
									Screened GDM (n = 2949)		1.29	p < 0.05	
									Non-DM (n = 19132)		Reference	-	
Kawasaki M	Risk of fetal undergrowth in the management of gestational diabetes mellitus in Japan.	2023	2015 to 2019	1703	DREAMBee study	**PTB**		Japanese	GDM (n = 878)	77	1.4 (0.96–2.1)	p = 0.08	maternal age, parity, maternal pre-pregnancy BMI, educational background, and income
									Normal glucose tolerance (n = 825)	47	Reference		
						SGA			GDM (n = 878)	69	1.5 (1.01–2.3)	p = 0.04	
									Normal glucose tolerance (n = 825)	48	Reference		
						LBW			GDM (n = 878)	107	1.5 (1.1–2.1)	p = 0.02	
									Normal glucose tolerance (n = 825)	69	Reference	-	