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Table S1 Twin neonatal outcomes by the IOM recommended GWG

	Mean (SD) / N (%)	IOM standard			*P*
		Low GWG	Normal GWG	Excess GWG	
AGA / AGA pairs	3868 (85.22)	1214 (26.91)	1768 (39.18)	886 (19.52)	
AGA / SGA pairs	615 (13.55)	234 (5.19)	276 (6.12)	105 (2.31)	0.002
SGA / SGA pairs	56 (1.23)	31 (0.69)	17 (0.38)	8 (0.18)	
Larger twin birth weight (g)	2651.36 (381.25)	2551.06 (398.17)	2666.60 (360.53)	2768.43 (358.77)	<0.0001
Smaller twin birth weight (g)	2358.08 (382.79)	2266.51 (397.58)	2371.44 (366.04)	2466.10 (362.13)	<0.0001
Sum birth weight of twins	5009.45 (724.04)	4817.57 (758.83)	5038.04 (685.01)	5234.53 (674.86)	<0.0001
Both twins ≥2500 g	1869 (61.38)	465 (9.05)	880 (17.12)	524 (17.21)	
Both twins ≥1500 g and <2500g	1132 (37.18)	471 (9.16)	496 (9.65)	165 (3.21)	<0.0001
Both twins ≥1000 g and <1500g	44(1.44)	28 (0.54)	14 (0.27)	2 (0.04)	
Gestational weeks	36.22 (1.76)	35.91 (2.00)	36.33 (1.67)	36.48 (1.44)	<0.0001
≤ 32	174 (3.83)	95 (2.11)	67 (1.48)	12 (0.27)	
33~36	2093 (46.11)	752 (16.67)	903 (20.01)	438 (9.65)	<0.0001
≥ 37	2272 (50.06)	632 (14.01)	1091 (24.18)	549 (12.10)	

Abbreviations: SGA, small for gestational age; AGA, appropriate for gestational age.

Table S2 ORs of pregnancy outcomes in relation to IOM recommended GWG and twin zygosity

	No. of women below recommendations	Adjusted OR (95% CI)	No. of women within recommendations (Referrence)	No. of women above recommendations	Adjusted OR (95% CI)
SGA/ SGA pairs	31/1214	2.87 (1.57, 5.23) *	17/1768	8/886	0.89 (0.38, 2.07) *
SGA/AGA pairs	234/1214	1.25 (1.03, 1.51) *	276/1768	105/886	0.74 (0.58, 0.91) *
LBW/ LBW pairs	535/465	1.63 (1.33, 1.99) *	535/880	173/524	0.51 (0.40, 0.64) *
LBW/NBW pairs	479/465	1.35 (1.14, 1.60) *	646/880	302/524	0.75 (0.63, 0.89) *
Gestational week <=32	95/1384	2.04 (1.48, 2.82) §	67/1994	12/987	0.37 (0.20, 0.68)§
Gestational week <=36	847/632	1.49 (1.30, 1.71) §	970/1091	450/548	0.94 (0.80, 1.09)§
Monozygotic Twin					

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SGA/ SGA pairs	14/275	2.63 (1.07, 6.43) [a]	8/428	3/214	0.69 (0.18, 2.65) [a]
SGA/AGA pairs	67/275	1.03 (0.73, 1.46) [a]	100/428	32/214	0.62 (0.40, 0.96) [a]
LBW/ LBW pairs	155/107	1.56 (1.07, 2.27) [a]	180/205	52/122	0.48 (0.31, 0.74) [a]
LBW/NBW pairs	94/107	1.17 (0.82, 1.67) [a]	151/205	75/122	0.80 (0.56, 1.15) [a]
Gestational week <=32	17/339	4.03 (1.64, 9.88) [b]	7/529	2/247	0.65 (0.13, 3.17) [b]
Gestational week <=36	179/177	1.32 (1.01, 1.73) [b]	233/303	97/152	0.86 (0.63, 1.18) [b]
Dizygotic Twin					
SGA/ SGA pairs	17/939	3.03 (1.34, 6.87) [a]	9/1340	5/672	1.07 (0.36, 3.24) [a]
SGA/AGA pairs	167/939	1.35 (1.07, 1.70) [a]	176/1340	73/672	0.80 (0.60, 1.07) [a]
LBW/ LBW pairs	380/358	1.65 (1.30, 2.09) [a]	355/675	121/402	0.52 (0.39,0.70) [a]
LBW/NBW pairs	385/358	1.39 (1.15, 1.69) [a]	495/675	227/402	0.73 (0.59,0.90) [a]
Gestational week <=32	78/1045	1.84 (1.30, 2.60) [b]	60/1465	10/740	0.33 (0.17, 0.66) [b]
Gestational week <=36	668/455	1.56 (1.33, 1.82) [b]	737/788	353/397	0.96 (0.81, 1.15) [b]

Abbreviations: OR, odds ratio; CI: confidence interval; SGA, small for gestational age; LBW, low birth weight, <2500g.

[*] Adjusted for maternal delivery age (continuous), education level, parity, gravidity, pre-pregnancy BMI, twin zygosity , and gestational weeks.

[§]Adjusted for maternal delivery age (continuous), education level, parity, gravidity, pre-pregnancy BMI, and twin zygosity.

[a] Adjusted for maternal delivery age (continuous), education level, parity, gravidity, pre-pregnancy BMI, and gestational weeks.

[b] Adjusted for maternal delivery age (continuous), education level, parity, gravidity, and pre-pregnancy BMI.