

Supplemental Table 1. The diagnostic criteria for GDM in China

Guidelines	Year	Testing Method	Diagnostic Method	Abnormal Value(s)	Threshold (\geq) mmol/L (plasma/serum sample)				References
					Fasting	1 (h)	2 (h)	3 (h)	
Previous Chinese GDM guidelines (the 7 th edition textbook)	2008	two-step	50-g OGT + 75-g OGTT	2	5.6	10.3	8.6	6.7	[38]
Current Chinese guidelines (ADA 2011) ²	2011	one-step	75-g OGTT	1	5.1	10.0	8.5	-	[10]

Supplemental Table 2. Clinical characteristics in women screened with 75-g oral glucose**tolerance test by the IADPSG criteria and the Previous Chinese criteria**

	GDM_Missing by				p-value
	NGT (n = 1810)	Textbook (n=1087)	GDM_Textbook (n=368)	GDM_IADPSG (n=1455)	
Maternal baseline characteristics					
Height(m), mean (SD)	1.60 (0.05)	1.60 (0.05)	1.58 (0.05)	1.59 (0.05)	<0.01
Weight(kg), mean (SD)	66.70 (8.08)	67.64 (8.83)	67.96 (8.92)	67.72 (8.85)	<0.01
Age(year), mean (SD)	28.6 (3.7)	30.0 (4.2)	31.5 (4.5)	30.4 (4.3)	<0.01
Age group(year), mean (%)					<0.01
<30	1172 (64.8%)	533 (49.0%)	129 (35.1%)	662 (45.5%)	
30-39	620 (34.3%)	523 (48.1%)	221 (60.1%)	744 (51.1%)	
>39	18 (1.0%)	31 (2.9%)	18 (4.9%)	49 (3.4%)	
Duration of pregnancy(week)(SD)	38.9 (3.1)	38.8 (2.6)	38.4 (3.3)	38.7 (2.8)	0.02
BMI, mean (SD)	26.1 (2.9)	26.5 (3.1)	27.2 (3.4)	26.7 (3.2)	<0.01
BMI_group					<0.01
<18.5	4 (0.2%)	2 (0.2%)	2 (0.5%)	4 (0.3%)	
18.5-24.9	597 (33.0%)	298 (27.4%)	73 (19.8%)	371 (25.5%)	
25-29.9	866 (47.8%)	475 (43.7%)	179 (48.6%)	654 (44.9%)	
30-34.9	142 (7.8%)	111 (10.2%)	44 (12.0%)	155 (10.7%)	
>35	201 (11.1%)	201 (18.5%)	70 (19.0%)	271 (18.6%)	
Gestational hypertension	19 (1.0%)	6 (0.6%)	8 (2.2%)	14 (1.0%)	0.06
Neonatal characteristics					
Neonatal weight (kg), mean (SD)	3.169 (0.434)	3.202 (0.451)	3.212 (0.492)	3.204 (0.461)	0.08
Neonatal height (m), mean (SD)	0.494 (0.018)	0.495 (0.019)	0.495 (0.019)	0.495 (0.019)	0.78
Biparietal diameter (m), mean (SD)	0.092 (0.006)	0.092 (0.006)	0.091 (0.008)	0.092 (0.007)	<0.01
Abdominal perimeter(m), mean (SD)	0.326 (0.034)	0.326 (0.030)	0.324 (0.037)	0.326 (0.032)	0.71
Femur length (m), mean (SD)	0.076 (0.067)	0.072 (0.050)	0.068 (0.006)	0.071 (0.043)	0.02

Delivery characteristics					
Gestation, mean (SD)	1.7 (1.0)	2.0 (1.2)	2.1 (1.3)	2.0 (1.2)	<0.01
Parity, mean (SD)	1.2 (0.5)	1.4 (0.6)	1.4 (0.6)	1.4 (0.6)	<0.01
Delivery mode					<0.01
Spontaneous delivery	914 (50.5%)	515 (47.4%)	152 (41.3%)	667 (45.8%)	
Clamp labor	7 (0.4%)	5 (0.5%)	2 (0.5%)	7 (0.5%)	
Vacuum labor	25 (1.4%)	6 (0.6%)	2 (0.5%)	8 (0.5%)	
Cesarean section	533 (29.4%)	377 (34.7%)	154 (41.8%)	531 (36.5%)	
Emergency cesarean	322 (17.8%)	181 (16.7%)	53 (14.4%)	234 (16.1%)	
Missing values	9 (0.5%)	3 (0.3%)	5 (1.4%)	8 (0.5%)	
Induction					<0.01
No induction	1311 (72.4%)	867 (79.8%)	294 (79.9%)	1161 (79.8%)	
Oxytocin	355 (19.6%)	127 (11.7%)	47 (12.8%)	174 (12.0%)	
Water sac	26 (1.4%)	31 (2.9%)	10 (2.7%)	41 (2.8%)	
Prostaglandin E2	23 (1.3%)	7 (0.6%)	1 (0.3%)	8 (0.5%)	
Oxytocin + Water sac	15 (0.8%)	44 (4.0%)	8 (2.2%)	52 (3.6%)	
Oxytocin + Prostaglandin E2	19 (1.0%)	4 (0.4%)	1 (0.3%)	5 (0.3%)	
Missing values	61 (3.4%)	7 (0.6%)	7 (1.9%)	14 (1.0%)	

Remarks: * <0.01 ; Normal glucose tolerance (NGT); Missed by Textbook: women diagnosed as GDM under the IADPSG but as NGT using the Previous Chinese criteria (Textbook criteria); GDM: women diagnosed as GDM under both IADPSG and Previous Chinese criteria (Textbook criteria).

#Propensity score matched for maternal age, gestational weight, and gestational age at delivery, and duration of pregnancy.

- a. The P-value was obtained from analysis of variance (ANOVA) between 3 groups (NGT, missing, and GDM-textbook);
- b. The P-value was obtained from independent sample t-test between 2 groups before propensity match (missing and GDM-textbook)

Supplemental Table 3. Perinatal outcomes of women screened with 75-g oral glucose tolerance test by the IADPSG criteria and the Previous Chinese criteria

	GDM_Missed				<i>p</i> -value
	NGT (n = 1810)	by Textbook (n=1087)	GDM_Textbook (n=368)	GDM_IADPSG (n=1455)	
Maternal outcomes					
Deliveries <37 weeks	111 (6.1%)	70 (6.4%)	35 (9.5%)	105 (7.2%)	0.1
Cervical laceration	74 (4.1%)	39 (3.6%)	8 (2.2%)	47 (3.2%)	0.26
Preeclampsia	27 (1.5%)	14 (1.3%)	14 (3.8%)	28 (1.9%)	0.01
Uterine scar after cesarean section or trauma	78 (4.3%)	10 (0.9%)	3 (0.8%)	13 (0.9%)	<0.01
Premature rupture of membrane	311 (17.2%)	160 (14.7%)	58 (15.8%)	218 (15.0%)	0.23
Placental abruption	10 (0.6%)	4 (0.4%)	0 (0.0%)	4 (0.3%)	0.36
Polyhydramnios	50 (3.7%)	19 (1.8%)	6 (1.7%)	25 (1.8%)	<0.01
Oligohydramnios	141 (10.3%)	107 (10.0%)	35 (9.8%)	142 (9.9%)	0.99
Perineal injury					<0.01
No injury	976 (53.9%)	602 (55.4%)	216 (58.7%)	818 (56.2%)	
Grade I	314 (17.3%)	296 (27.2%)	79 (21.5%)	375 (25.8%)	
Grade II	104 (5.7%)	42 (3.9%)	11 (3.0%)	53 (3.6%)	
Grade III	334 (18.5%)	112 (10.3%)	44 (12.0%)	156 (10.7%)	
Grade IV	17 (0.9%)	24 (2.2%)	8 (2.2%)	32 (2.2%)	
Missing data	65 (3.6%)	11 (1.0%)	10 (2.7%)	21 (1.4%)	
Episiotomy					<0.01
	1703				
-No	(94.1%)	1074 (98.8%)	365 (99.2%)	1439 (98.9%)	
-Lateral	95 (5.2%)	8 (0.7%)	2 (0.5%)	10 (0.7%)	
-Straight	9 (0.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	
-Others	3 (0.2%)	5 (0.5%)	1 (0.3%)	6 (0.4%)	
Fetal outcomes					
Apgar 1', mean (SD)	8.9 (0.7)	8.9 (0.5)	8.9 (0.5)	8.9 (0.5)	0.08

Apgar 5', mean (SD)	9.9 (0.7)	9.9 (0.5)	10.0 (0.2)	9.9 (0.4)	0.17
Apgar 10', mean (SD)	9.9 (0.6)	10.0 (0.4)	10.0 (0.1)	10.0 (0.3)	0.13
NICU admission	889 (49.1%)	211 (19.4%)	80 (21.7%)	291 (20.0%)	<0.01
NICU admission days, mean (SD)	1.9 (4.4)	1.4 (4.8)	1.4 (3.6)	1.4 (4.5)	<0.01
Fetal distress	237 (13.1%)	72 (6.6%)	21 (5.7%)	93 (6.4%)	<0.01
Umbilical cord around the neck	171 (9.4%)	16 (1.5%)	6 (1.6%)	22 (1.5%)	<0.01
Hyperbilirubinemia	86 (4.8%)	54 (5.0%)	17 (4.6%)	71 (4.9%)	0.99
Caput succedaneum	68 (3.8%)	23 (2.1%)	4 (1.1%)	27 (1.9%)	<0.01
Neonatal anemia	104 (5.7%)	51 (4.7%)	20 (5.4%)	71 (4.9%)	0.57
Neonatal infection	204 (11.3%)	117 (10.8%)	42 (11.4%)	159 (10.9%)	0.97
Neonatal encephalopathy	15 (0.8%)	3 (0.3%)	0 (0.0%)	3 (0.2%)	0.02
Hypocalcemia	72 (4.0%)	34 (3.1%)	21 (5.7%)	55 (3.8%)	0.17
Pulmonary pathologies	21 (1.2%)	18 (1.7%)	5 (1.4%)	23 (1.6%)	0.66
Cardiac damage	159 (8.8%)	72 (6.6%)	24 (6.5%)	96 (6.6%)	0.05
Patent foramen ovale	67 (3.7%)	59 (5.4%)	30 (8.2%)	89 (6.1%)	<0.01
Hypokalemia	17 (0.9%)	6 (0.6%)	5 (1.4%)	11 (0.8%)	0.45
Prematurity	65 (3.6%)	32 (2.9%)	18 (4.9%)	50 (3.4%)	0.37
Macrosomia	8 (0.4%)	10 (0.9%)	8 (2.2%)	18 (1.2%)	<0.01
Small-for-date infant	15 (0.8%)	8 (0.7%)	2 (0.5%)	10 (0.7%)	0.93
Cephalohematoma	22 (1.2%)	13 (1.2%)	3 (0.8%)	16 (1.1%)	0.92
High risk infants	16 (0.9%)	4 (0.4%)	1 (0.3%)	5 (0.3%)	0.11
Metabolic acidosis	22 (1.2%)	13 (1.2%)	3 (0.8%)	16 (1.1%)	0.92

Remarks: *<0.01; Normal glucose tolerance (NGT); Missed by Textbook: women diagnosed as GDM under the IADPSG but as NGT using the Previous Chinese criteria (Textbook criteria); GDM: women diagnosed as GDM under both IADPSG and Previous Chinese criteria (Textbook criteria).

#Propensity score matched for maternal age, gestational weight, and gestational age at delivery, and duration of pregnancy.

- a. The P-value was obtained from analysis of variance (ANOVA) between 3 groups (NGT, missing, and GDM-textbook);
- b. The P-value was obtained from independent sample t-test between 2 groups before propensity match (missing and GDM-textbook)

Supplemental Table 4. the association between gestational diabetes and perinatal outcomes in multivariate logistic regression models.

Measure (dichotomous variables)	GDM	
	aOR(95%CI) ^a	p-value
gestational hypertension	0.92 (0.41, 2.04)	0.83
preeclampsia	1.27 (0.71, 2.27)	0.43
scarred uterus	0.11 (0.05, 0.22)	<0.01*
premature rupture of membrane	0.93 (0.75, 1.15)	0.50
placental abruption	0.35 (0.07, 1.63)	0.18
fetal distress	0.46 (0.35, 0.61)	<0.01*
cord around the neck	0.14 (0.08, 0.23)	<0.01*
cervical laceration	0.90 (0.59, 1.36)	0.60
polyhydramnios	0.36 (0.21, 0.63)	<0.01*
oligohydramnios	1.00 (0.76, 1.31)	1.00
myocardial damage	0.70 (0.52, 0.95)	0.02
encephalopathy	0.29 (0.81, 1.01)	0.05
hypocalcemia	0.97 (0.65, 1.46)	0.90
neonatal infection	1.05 (0.83, 1.34)	0.69
anemia	0.99 (0.70, 1.41)	0.98
caput succedaneum	0.62 (0.38, 1.01)	0.06
hyperbilirubinemia	1.20 (0.84, 1.73)	0.32

pulmonary diseases	1.79 (0.88, 3.63)	0.11
patent foramen ovale	1.79 (1.25, 2.56)	0.00
hypokalemia	0.85 (0.38, 1.91)	0.70
preterm infant	1.05 (0.67, 1.65)	0.83
macrosomia	2.86 (1.13, 7.21)	0.03
small for gestational age infant	0.97 (0.41, 2.31)	0.95
hematoma	0.91 (0.44, 1.90)	0.81
high risk infants	0.41 (0.13, 1.29)	0.13
metabolic acidosis	0.91 (0.44, 1.90)	0.81
confirmed postpartum hemorrhage	4.62 (1.02, 20.94)	0.05

^a adjusted for age, height, weight, gestation times, parity, and duration of pregnancy.

Supplementary Table 5. The association between gestational diabetes and baseline characteristics in multivariate regression models.

Measure (continuous variables, nominal variables, and categorical variables)	GDM	
	Standard error ^a	p-value
postpartum hemorrhage	262.25 (-359.43, 923.96)	0.32
biparietal diameter	0 (-0.01, 0)	0.42
head circumference in US	0.01 (-0.01, 0.01)	0.94
abdominal circumference	0.01 (-0.02, 0.29)	0.81
femur length	0.14 (-0.24, 0.46)	0.48
neonatal weight	0.33 (-0.71, 0.93)	0.75
neonatal height	0.01 (-0.02, 0.04)	0.28
head circumference	0.01 (-0.01, 0.02)	0.67
NICU admission days	2.06 (-8.12, 1.98)	0.19
perineal injury	0.08 (-0.18, 0.12)	0.73
Amniotic fluid turbidity	0.1 (-0.64, -0.23)	<0.01*
Delivery mode		
Spontaneous delivery	base outcome	
Clamp labor	0.62 (-0.84, 1.6)	0.54
Vacuum labor	0.44 (-1.53, 0.21)	0.14

Cesarean section	0.09 (0, 0.34)		0.06
Emergency cesarean	0.11 (-0.27, 0.16)		0.61
Sex of the infants			
male	base outcome		
female	0.08 (-0.19, 0.12)		0.65
Episiotomy			
-No			
-Lateral	0.36 (-2.48, -1.09)	<0.01*	
-Straight	1615.43 (-3182.69, 3149.66)		0.99
-Others	0.78 (-0.63, 2.43)		0.25
Induction			
-No induction	base outcome		
-Oxytocin	0.11 (-0.79, -0.35)	<0.01*	
-Water sac	0.28 (0.13, 1.23)		0.02
-Propess™	0.45 (-1.66, 0.08)		0.08
-Oxytocin + Water sac	0.31 (0.86, 2.08)	<0.01*	
-Oxytocin + Propess™	0.53 (-1.81, 0.26)		0.14

^a adjusted for age, height, weight, gestation times, parity, and duration of pregnancy.