

Table S1: Association between WHO suggested waist circumference cut-off values and clinical ART outcomes (N=264 women, cycles=445)

Adjusted proportions (mean, 95% CI) ^a	WC≤80		WC>80		P trend
	cycles=215		cycles=230		
Implantation	0.62	(0.53-0.71)	0.51*	(0.42-0.61)	0.04
Clinical pregnancy	0.57	(0.48-0.66)	0.48	(0.39-0.58)	0.09
Live birth	0.48	(0.38-0.58)	0.41	(0.31-0.51)	0.19

Adjusted proportions (mean, 95% CI) ^a	WC≤88		WC>88		P trend
	cycles=322		cycles=123		
Implantation	0.60	(0.51-0.67)	0.49	(0.37-0.61)	0.08
Clinical pregnancy	0.55	(0.47-0.63)	0.46	(0.34-0.58)	0.12
Live birth	0.47	(0.38-0.55)	0.38	(0.27-0.51)	0.20

Adjusted proportions (mean, 95% CI) ^a	Waist circumference (cm)						
	WC≤80		80<WC≤ 88		WC>88.0		P trend
	cycles=215		cycles=107		cycles=123		
Implantation	0.62	(0.53-0.71)	0.54	(0.42-0.65)	0.49*	(0.38-0.61)	0.04
Clinical pregnancy	0.57	(0.48-0.66)	0.51	(0.39-0.62)	0.46	(0.34-0.58)	0.08
Live birth	0.48	(0.38-0.58)	0.43	(0.31-0.56)	0.38	(0.27-0.51)	0.15

^a: All models were adjusted for age, race (white vs. non-white), smoking (ever vs. never), infertility diagnosis (male factor, female factor, unexplained), day 3 FSH, BMI, and height.

WHO: World Health Organization. *: p<0.05 compared with the first category.

Table S2. Association between waist circumference and probability of clinical ART outcomes (N=264 women, cycles=445)

Implantation						
Adjusted proportions (95% CI)^a	Measured waist circumference, cm					
	Tertile 1 (<77.0)	Tertile 2 (77.0-86.0)	Tertile 3 (>86.0)	P trend		
Model 1	0.64 (0.54-0.74)	0.56 (0.46-0.66)	0.50* (0.39-0.61)	0.03		
Model 2	0.64 (0.53-0.74)	0.56 (0.45-0.66)	0.50* (0.39-0.61)	0.03		
Model 3	0.63 (0.52-0.73)	0.56 (0.45-0.66)	0.52 (0.40-0.63)	0.14		
Adjusted proportions (95% CI)^a	BMI-adjusted waist circumference					
	Tertile 1 (<80.9)	Tertile 2 (80.9-86.7)	Tertile 3 (>86.7)	P trend		
Model 4	0.66 (0.56-0.75)	0.51* (0.40-0.61)	0.52* (0.41-0.63)	0.02		
Model 5	0.66 (0.55-0.75)	0.50* (0.40-0.61)	0.53 (0.42-0.64)	0.03		
Clinical pregnancy						
Adjusted proportions (95% CI)^a	Measured waist circumference, cm					
	Tertile 1 (<77.0)	Tertile 2 (77.0-86.0)	Tertile 3 (>86.0)	P trend		
Model 1	0.60 (0.49-0.70)	0.51 (0.41-0.62)	0.47* (0.37-0.58)	0.06		
Model 2	0.60 (0.49-0.70)	0.52 (0.41-0.62)	0.47* (0.36-0.58)	0.05		
Model 3	0.61 (0.50-0.71)	0.52 (0.41-0.62)	0.46 (0.34-0.58)	0.06		
Adjusted proportions (95% CI)^a	BMI-adjusted waist circumference					
	Tertile 1 (<80.9)	Tertile 2 (80.9-86.7)	Tertile 3 (>86.7)	P trend		
Model 4	0.62 (0.52-0.72)	0.48* (0.37-0.58)	0.47* (0.36-0.58)	0.01		
Model 5	0.62 (0.52-0.72)	0.48* (0.37-0.58)	0.47* (0.36-0.58)	0.01		
Live birth						

Adjusted proportions (95% CI) ^a	Measured waist circumference, cm					
	Tertile 1 (<77.0)	Tertile 2 (77.0-86.0)	Tertile 3 (>86.0)	P trend		
Model 1	0.53 (0.42-0.65)	0.42 (0.32-0.53)	0.38* (0.28-0.50)	0.04		
Model 2	0.53 (0.42-0.65)	0.42 (0.32-0.53)	0.38* (0.28-0.50)	0.04		
Model 3	0.53 (0.41-0.65)	0.42 (0.31-0.53)	0.39 (0.27-0.52)	0.10		

Adjusted proportions (95% CI) ^a	BMI-adjusted waist circumference					
	Tertile 1 (<80.9)	Tertile 2 (80.9-86.7)	Tertile 3 (>86.7)	P trend		
Model 4	0.53 (0.39-0.62)	0.41 (0.27-0.49)	0.38* (0.24-0.48)	0.03		
Model 5	0.52 (0.41-0.63)	0.41 (0.31-0.52)	0.38 (0.28-0.50)	0.04		

Model 1: Adjusted for age, race (white vs. non-white), smoking (ever vs. never), infertility diagnosis (male factor, female factor, unexplained), day 3 FSH, and height.

Model 2: Model 1 adjusted for BMI residual (waist circumference adjusted BMI).

Model 3: Model 1 adjusted for measured BMI.

Model 4: Adjusted for age, race (white vs. non-white), smoking (ever vs. never), infertility diagnosis (male factor, female factor, unexplained), day 3 FSH, and height.

Model 5: Model 4 adjusted for measured BMI.

*: p<0.05 compared with the first category.

Table S3. Adjusted probabilities (95% confidence intervals) of implantation, clinical pregnancy and live birth among women undergoing infertility treatment with ART jointly stratified by BMI and WC categories (N=257 women, cycles=435)

Number of Cycles	121		162		13		139	
	18.5≤BMI<25				BMI≥25			
Adjusted proportions (95% CI)^a	WC<77.0		WC≥77.0		WC<77.0		WC≥77.0	
Implantation	0.64	(0.52-0.74)	0.55	(0.45-0.65)	0.73	(0.39-0.92)	0.49*	(0.38-0.61)
Clinical pregnancy	0.61	(0.49-0.72)	0.50	(0.40-0.60)	0.66	(0.35-0.88)	0.48	(0.37-0.60)
Live birth	0.54	(0.42-0.66)	0.41	(0.32-0.52)	0.54	(0.24-0.81)	0.38*	(0.27-0.50)

Number of Cycles	191		92		17		135	
	18.5≤BMI<25				BMI≥25			
Adjusted proportions (95% CI)^a	WC≤80		WC>80		WC≤80		WC>80	
Implantation	0.62	(0.52-0.71)	0.53	(0.40-0.66)	0.76	(0.48-0.91)	0.48*	(0.37-0.60)
Clinical pregnancy	0.58	(0.48-0.67)	0.48	(0.35-0.60)	0.67	(0.40-0.86)	0.47	(0.36-0.59)
Live birth	0.49	(0.39-0.59)	0.43	(0.30-0.56)	0.45	(0.21-0.71)	0.39	(0.28-0.51)

Number of Cycles	250		33		34		118	
	18.5≤BMI<25				BMI≥25			
Adjusted proportions (95% CI)^a	WC≤86		WC>86		WC≤86		WC>86	
Implantation	0.59	(0.50-0.67)	0.60	(0.41-0.76)	0.71	(0.52-0.85)	0.45*	(0.33-0.56)
Clinical pregnancy	0.54	(0.45-0.63)	0.53	(0.35-0.70)	0.68	(0.49-0.82)	0.43	(0.32-0.55)
Live birth	0.46	(0.37-0.55)	0.49	(0.31-0.68)	0.59	(0.40-0.76)	0.32*	(0.22-0.45)

Number of Cycles	263		20		49		103	
	18.5≤BMI<25				BMI≥25			

Adjusted proportions (95% CI) ^a	WC≤88		WC>88		WC≤88		WC>88	
	Implantation	0.59	(0.50-0.67)	0.64	(0.38-0.83)	0.66	(0.49-0.79)	0.45*
Clinical pregnancy	0.54	(0.46-0.63)	0.55	(0.31-0.76)	0.62	(0.46-0.76)	0.43	(0.32-0.56)
Live birth	0.46	(0.37-0.55)	0.56	(0.32-0.77)	0.52	(0.35-0.69)	0.33	(0.23-0.46)

^a: All models were adjusted for age, race (white vs. non-white), smoking, infertility diagnosis (male factor, female factor, unexplained), day 3 FSH, and height.

*: p<0.05 compared with the first category.

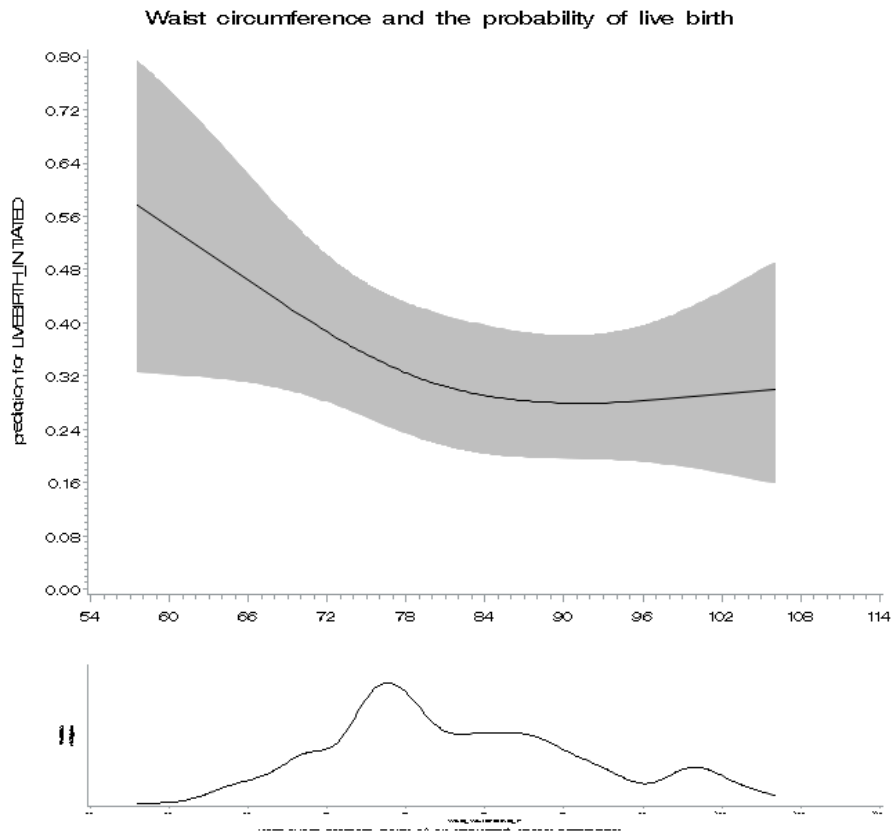


Figure S1. Restricted cubic spline plot of the association between waist circumference and probability of live birth. P-value for non-linear relation: 0.20.

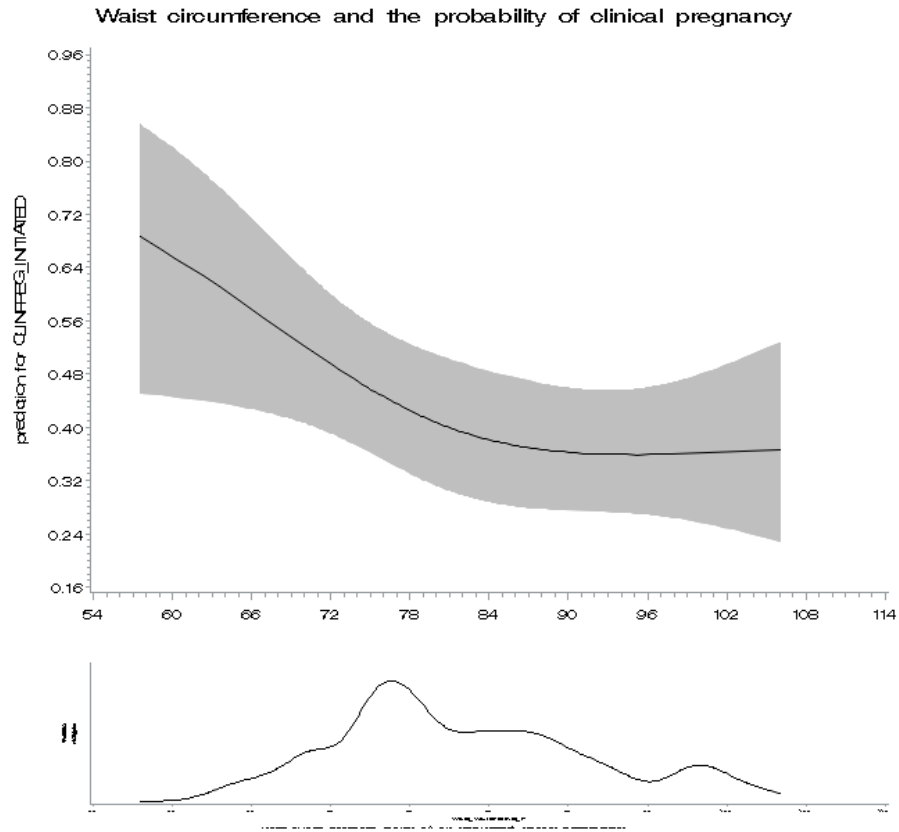


Figure S2. Restricted cubic spline plot of the association between waist circumference and probability of clinical pregnancy. P-value for non-linear relation: 0.19.

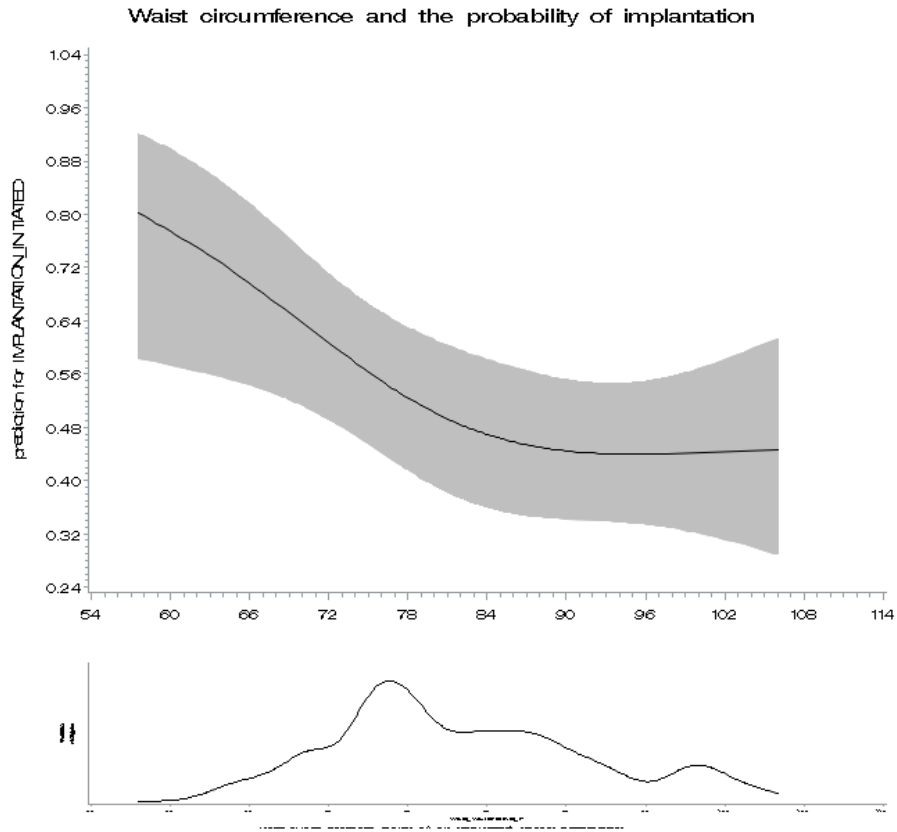


Figure S3. Restricted cubic spline plot of the association between waist circumference and probability of implantation. P-value for non-linear relation: 0.13