

Supplementary Table 1: Summary of the literature examining fetal biometry and fat mass in GDM

Study	Sample size	Gestational weeks	Adiposity measures	Other fetal biometry	Birth Weight (BW)	GDM diagnostic criteria
Larciprete [1]	85 GDM, 218 controls	Enrolled at 20-22 weeks	No difference seen prior to 31 weeks. Abdominal fat mass higher at 39-40 weeks, Mid-arm fat and supra-scapular fat mass higher at 31 weeks, mid-thigh fat higher at 37 weeks in GDM	Mid-thigh lean mass higher at 20-22 weeks in GDM	Higher in GDM	National diabetes data group (NDDG)
Aksoy [2]	55 GDM, 69 controls	26-28 weeks	AAWT: 4.07 ± 0.46 vs. 3.28 ± 0.37 mm (GDM vs. controls), $p < 0.0001$	No difference	Higher in GDM	IADPSG
Tantanasis [3]	20 GDM, 15 control	24 and 26 weeks	Increased Subcutaneous fat at Abdomen GDM: 6.57 (0.99) vs. controls: 3.39 (0.61) mm, $p < 0.0005$	Not reported	Not reported	(FPG: 7 mmol/l & 2hPG: 11.1 mmol/l)
De-Santis[4]	171 GDM, 43 controls	20-38 week serial measurements (only 15 scans <22 weeks)	Significantly higher fat mass (abdominal, supra-scapular, arm and thigh fat)	HC and BPD similar; Faster growth of AC and FL in GDM	Higher BW z score in GDM, similar length	Carpenter Coustan
Vedavathi [5]	30 GDM, 30 controls	32-40 weeks	Not Studied	Higher AC and HC in GDM	Higher in GDM	Carpenter Coustan
Hammoud [6]	99 GDM, 145 Controls	17 and 37 weeks	Not studied	Similar AC, HC, FL	Not reported	100 g OGTT American Diabetes Association (ADA)
Sovio [7]	171 GDM, 3898 controls	20 and 28 weeks	Not Studied	2.0-fold risk of AC >90 th centile, 1.52.0-fold risk of HC:AC ratio >10th centile at 28 weeks in GDM. No difference at 20 weeks	Higher BW z score in GDM	WHO-1999 and IADPSG
Enzi [8]	17 GDM, 17 controls	At birth	% body fat: GDM ($17\% \pm 1.7\%$) vs. controls ($12.2\% \pm 0.5\%$) (newborn anthropometry)	Not reported	No difference	Whites Classification
Catalano [9]	195 GDM, 220 controls	At birth	Restricting comparisons between infants appropriate for gestational age with GDM and controls: Fat mass in g: (371 ± 163 g vs. 329 ± 150 g, $p = 0.002$) (GDM vs. controls): Body fat (%): $11.4\% \pm 4.6\%$ vs. $9.9\% \pm 4.0\%$, $p = 0.002$ (GDM vs. controls).	No difference in lean mass, HC, leg length, AC. (Whole GDM group vs. controls)	Higher proportion of LGA in GDM group.	NDDG
Nasrat [10]	51 GDM, 501 controls	At birth	Increased skim fold: Biceps, subscapular, supra-iliac, sum of all skin folds.	Similar HC and AC	Higher in GDM	ADA

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