

(medical). There were no differences between groups with respect to gestational age at delivery, infant gender, mode of delivery, birthweight, and gestational age at maximal bowel dilation. Infants requiring surgery had statistically significant maximal bowel dilation at 50% and 100% increases over the 90th percentile ($p = .02$, $p = .004$). These infants also had significantly higher maximal bowel diameters ($p = 0.01$), and hospital length of stay ($p = .007$) (Table).

CONCLUSION: Prenatal diagnosis of bowel dilation is concerning and may suggest the presence of bowel obstruction requiring surgical intervention. Our data show that the degree of bowel dilation antenatally may be a better predictor in determining those infants most likely to require surgery. Further examination of surgical cases is required to determine the degree to which ultrasound diagnosis of bowel dilation can predict surgical diagnosis.

	Medical (n=25)	Surgical (n=13)	p-value
Birthweight (grams)	3032	2787	0.260
Gestational age at delivery (weeks)	37.9	36.55	0.141
Maximal bowel dilation (mm)	17.7	29.9	0.010
>50% increase (proportion)	0.16	0.54	0.024
>100% increase (proportion)	0.04	0.46	0.004
>200% increase (proportion)	0.04	0.15	0.265
Length of Stay (days)	13.9	45.4	0.007

Significance $p < 0.05$ is indicated in bold

336 Ultrasound derived estimated fetal weight using customized standards: does it improve prediction of adverse pregnancy outcomes?

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OBJECTIVE: Customized birth weight standards have been shown to be better associated with adverse pregnancy outcomes compared to population-based standards. Our purpose was to estimate the rate of sub-optimal fetal growth identified by prenatal ultrasound estimated fetal weight (EFW) utilizing customized standards compared to population-based standards and determine whether there is improved prediction of adverse pregnancy outcomes utilizing these methods.

STUDY DESIGN: We performed a retrospective cohort study of all women who underwent prenatal ultrasound examination at ≥ 24 weeks 0 days with a live fetus and delivered at a tertiary care hospital from July 1, 2010 to June 31, 2011. Cases with major structural fetal anomalies were excluded. Ultrasound-derived EFW and growth percentiles (popEFW) were reported utilizing the Hadlock formula and the percentile table devised by Williams et al. (Obstet Gynecol 1982; 59:624-32). A customized EFW (custEFW) was calculated adjusting for maternal height, weight, ethnicity, parity, and fetal sex (www.Gestation.net). The frequency of small for gestational age (SGA) defined as EFW < 10 th%ile, was compared between methods. Secondary outcomes studied were SGA by customized newborn weight, preterm birth (PTB) < 37 weeks, PTB < 34 weeks, cesarean delivery (CD), and neonatal intensive care (NICU) admission.

RESULTS: A total of 782 women met inclusion criteria. On prenatal ultrasound, more fetuses were identified as SGA using custEFW compared to popEFW (15.1% vs. 3.8%; $p = < 0.0001$). Of those with prenatal SGA, 48.4% of custEFW and 14.8% of popEFW were diagnosed as SGA by customized newborn weight. All secondary outcome measures were more frequent among those diagnosed as SGA by custEFW (Table).

CONCLUSION: This is the first study to date using custEFW centiles for prenatal ultrasound diagnosis of abnormal fetal growth. When comparing the popEFW centile to the custEFW centiles, custEFW demonstrated markedly higher rates of adverse pregnancy outcomes compared to the population standard.

Table. Adverse outcomes associated with SGA by popEFW compared to custEFW

Outcome	SGA by ultrasound EFW	SGA by Customized EFW	P Value
PTB (<37 weeks) N=192	10 (5.2%)	56 (29.2%)	<0.0001
PTB (<34 weeks) N=65	0 (0%)	19 (29.2%)	<0.0001
CD for fetal indications N=87	8 (9.2%)	24 (27.6%)	<0.0001
NICU Admission N=123	13 (10.6%)	46 (37.4%)	<0.0001

337 Diagnosis of fetal growth restriction using customized growth standards in twin gestations

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OBJECTIVE: To determine rate of small for gestational age (SGA) infants in twin gestations using customized (SGAcust) versus population (SGApop) growth curves.

STUDY DESIGN: Historical cohort of women with twin gestation delivered at our institution from July 2010 till July 2011. Congenital and chromosomal anomalies as well as monoamniotic twins were excluded from the study. Fetal growth centiles were determined for each pregnancy using a population norm (Alexander) and a customized model (Gardosi). Rates of SGA (birthweight < 10 th%ile) were compared between the study groups.

RESULTS: A total of 82 women (75 dichorionic and 7 monochorionic twin gestations) met inclusion criteria. They were 25 cases of SGA in both twins not identified by population standards. Population standards only identified 13 cases of SGA in both twins. 68% of normal for gestational age twins were identified by customized growth curves.

CONCLUSION: In our population, customized growth potential allowed us to identify 25% more SGA infants in women with twin gestations. Customized growth standards for twins will identify SGA infants not diagnosed by the usual population curves.

	SGApop	SGAcust	P value
SGA One Twin	40 (49%)	56 (68%)	> 0.05
SGA both twins	13 (16%)	33 (40%)	> 0.05
Normal twins	69 (84%)	56 (68%)	> 0.05