true positive rate plus the true negative rate were compared and stratified by maternal weight categories.
RESULTS: 86 neonates with congenital heart disease were included. 48 of these neonates had fetal echocardiograms. Accuracy of detection of fetal heart defects was higher with echocardiograms when compared to standard fetal ultrasounds (73% vs. 48%). As maternal BMI increased, the accuracy of fetal echocardiography decreased slightly, but standard ultrasound decreased rapidly. The odds ratio for diagnosis of congenital heart disease was 2.8 for fetal echocardiogram compared with standard ultrasound ($p=0.01$). When compared to ultrasound, fetal echocardiograms were more likely to detect a cardiac anomaly in women with increasing BMI ($p=0.07$).
CONCLUSION: In patients where a fetal echocardiogram is indicated, it often provides more comprehensive results than the standard ultrasound. This suggests that obese patients may be good candidates for a routine fetal echocardiography referral. However, further work is needed to determine if fetal echocardiograms would work as well when used as a routine screening test in this population.
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385 Occupational injury is a risk to perinatal ultrasound

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OBJECTIVE: Over the past 15 years, many surveys have been conducted involving non-physician sonographers in all ultrasound (U/S) specialities. Few surveys have been conducted of physicians (sonologists) who perform U/S exams as part of their clinical practice. The largest study was collected in Italy of 2041 physician sonographers (sonologists). The objective was to determine the incidence of work-related musculoskeletal disorders (WRDSD) among sonographer and sonologists.
STUDY DESIGN: An online survey (48 questions) of SMFM members was understaken between October 2008 - June 2009. The survey was completed by 252 of 2000 members (12.6% response). Of those, 222 were MDs and 30 were sonographers.
RESULTS: The incidence of scanning in pain/discomfort was present in 64.6% of respondents. The most common site of pain was the shoulder followed by the neck and wrist/hand and fingers. Most sonologists (78.5%) had height adjustable tables and of these 65.8% were electronically adjustable (EHA); 76.5% used scanning chairs (27.7% had lumbar support). More MDs are spending >50% of their day on a PACS or computer workstation (CWS). When asked what they would change in their work environment, the #1 answer was "the design of the CWS or PACS." The #2 answer was tied between "buy an EHA bed" and "reduce the # of scans per day" (16.9% each).
CONCLUSION: In summary, these data confirm the significant effect on ongoing scanning on the number of WRMSD. More effective solutions to avoid these injuries must be sought.
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386 Association between pregnancy complications and small for gestational age (SGA) birthweight defined by customized versus population-based standards

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OBJECTIVE: To estimate the association between pregnancy complications and SGA defined by customized fetal growth potential (custSGA) developed for our population compared with the population-based Alexander growth chart for the US (popSGA).
STUDY DESIGN: A retrospective cohort study using our ultrasound database, with 54,287 cases with complete data on pregnancy characteristics and outcome. SGA was defined as <10th percentile for gestational age by each growth standard. Outcome variables included: threatened preterm labor (PTL), preterm premature rupture of membranes (<37 weeks, PPROM), placental abruption (ABRPT), hypertensive disorders (HTNDZ= gestational hypertension and preeclampsia), neonatal care stay >7 days (NICU7) and stillbirth (SB).
RESULTS: 7551 (13.9%) of cases were cust SGA, of which 4063 (53.8%) were not identified as SGA by the population method. 3695 (6.8%) were popSGA, of which 207 cases (5.6%) were not SGA by the customised method. For each complication tested (Table), the cust SGA only category identified additional cases which were significantly associated with adverse outcome. In contrast, cases which were popSGA only were not associated with adverse outcome, with the exception of HTNDZ.
CONCLUSION: SGA defined by customized growth potential identifies pregnancies at the highest risk for complication by differentiating between physiologically and pathologically small fetuses.

	custSGA & popSGA (OR, 95% CI)	custSGA only (OR, 95% CI	popSGA only (OR, 95% CI)
PTL	1.1 (1.0-1.3)	1.3 (1.2-1.4)	0.9 (0.6-1.6)
PPROM	1.4 (1.1-1.7)	2.3 (1.9-2.7)	0.2 (0.03-1.7)
ABRPT	2.3 (1.7-3.1)	2.4 (1.8-3.3)	0.8 (0.1-6.0)
HTNDZ	2.7 (2.4-2.9)	1.7 (1.6-1.9)	1.6 (1.0-2.6)
NICU7	3.5 (3.1-4.0)	3.1 (2.7-3.6)	0.8 (0.3-2.1)
SB	9.3 (7.1-12.2)	9.6 (7.4-12.3)	1.7(0.2-11.9)

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387 Prenatally diagnosed duodenal versus jejunal atresia: analysis of outcomes

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OBJECTIVE: To compare neonatal outcomes in prenatally diagnosed fetal duodenal (DA) versus jejunal atresia (JA).
STUDY DESIGN: Retrospective review of 18 cases of DA and 20 cases of JA diagnosed by prenatal ultrasonography over 6.5 years. Parameters recorded were maternal age, gestation age at delivery, parity and preterm birth (PTB). Neonatal outcomes studied were aneuploidy, birthweight (BW), median hospital stay, time to full enteral feeding (FEF) and duration of total paraenteral nutrition (TPN). Data analysis included Mann-Whitney U, t, Chi-square, and Fisher's Exact.
RESULTS: There were no significant differences in maternal demographics (age, $p = 0.585$; parity, $p = 0.82$; or percentage of PTB, $p = 0.48$). Gestation age at delivery was similar (DA 35.7W, JA 35.4W, $p = 0.80$). Nearly 50% in each group had spontaneous PTB ($p = 0.48$). With cases of aneuploidy excluded DA had lower rates of PTB (DA 16%; JA 53%; $p = 0.02$). All infants were liveborn, underwent surgery and were alive at hospital discharge. There were 6 aneuploid infants with DA and one with JA (DA 33%, JA 5%; $p = 0.038$). Infants with DA had lower mean BW than infants with JA (DA 2074g, JA 2599g; $p = 0.014$). Exclusion of aneuploid infants demonstrated no significant difference in BW between groups (DA 2184g, JA 2588g; $p = 0.12$). There was a trend toward earlier FEF in infants with DA (DA 14d, JA 17d; $p = 0.096$). Length of TPN was similar (DA 16d, JA 24d; $p = 0.14$) as was median hospital stay (DA 30d, JA 37d; $p = 0.82$).
CONCLUSION: Maternal demographics are similar in cases of fetal DA or JA. PTB was common in both DA and JA. Aneuploidy plays a significant role in the birthweight of infants with DA. Euploid fetuses with DA or JA had similar outcomes.
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