

EP08.18 The relationship between late pregnancy fetal growth velocity and stillbirth: a population-based cohort study

Chiara Granieri, Emily Peacock, Marta Garbagnati, Samuel Dockree, Elena D'Alberti, Christina Aye, Sam Mathewlynn, Katherine Robertson, Christos Ioannou, Angelo Cavallaro, Alison Noble, Lawrence Impey



Objectives

The role of fetal growth velocity at term in predicting stillbirth and severe neonatal morbidity is unknown. We aimed to investigate the association between fetal growth velocity after 36 weeks of gestation and adverse perinatal outcomes.

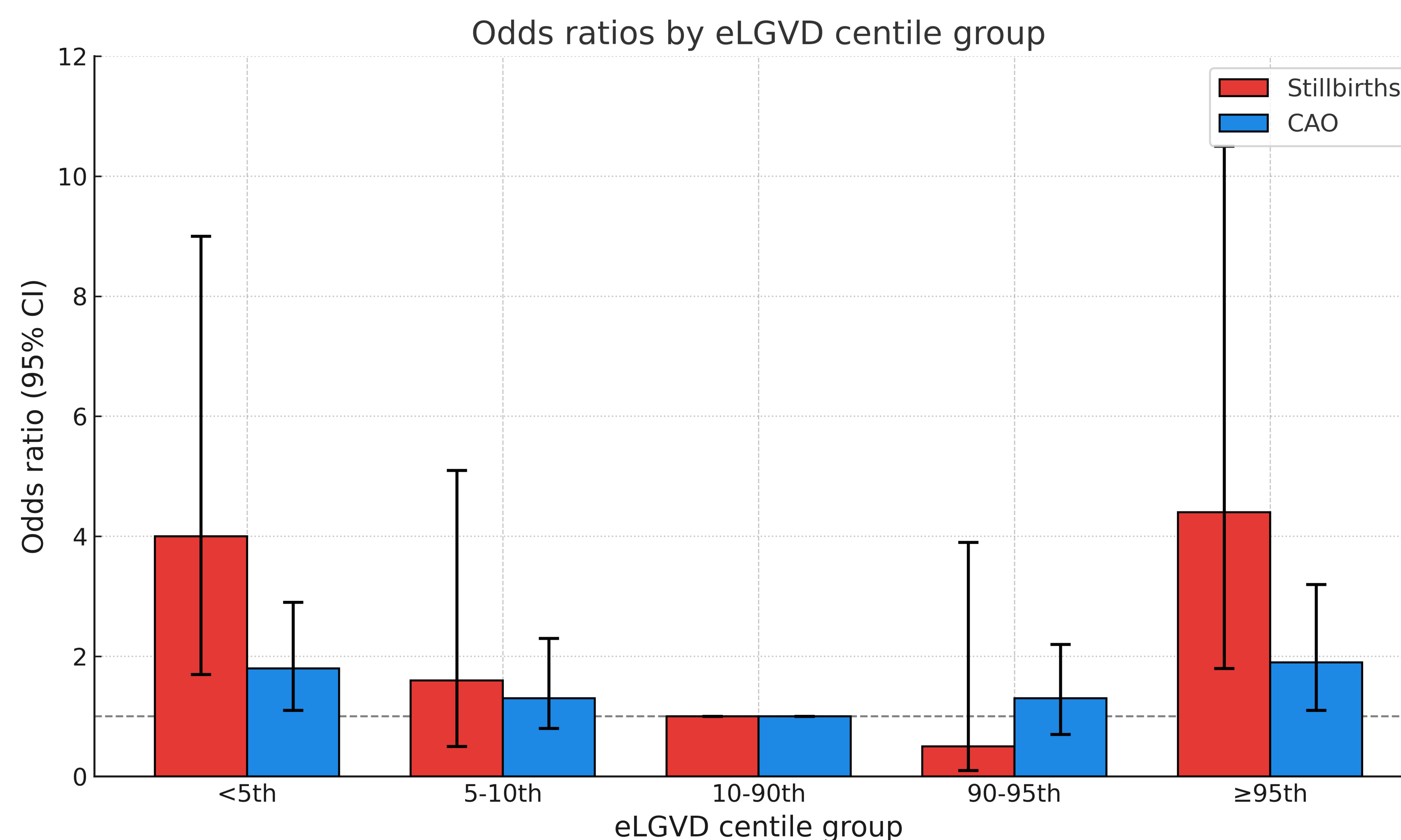
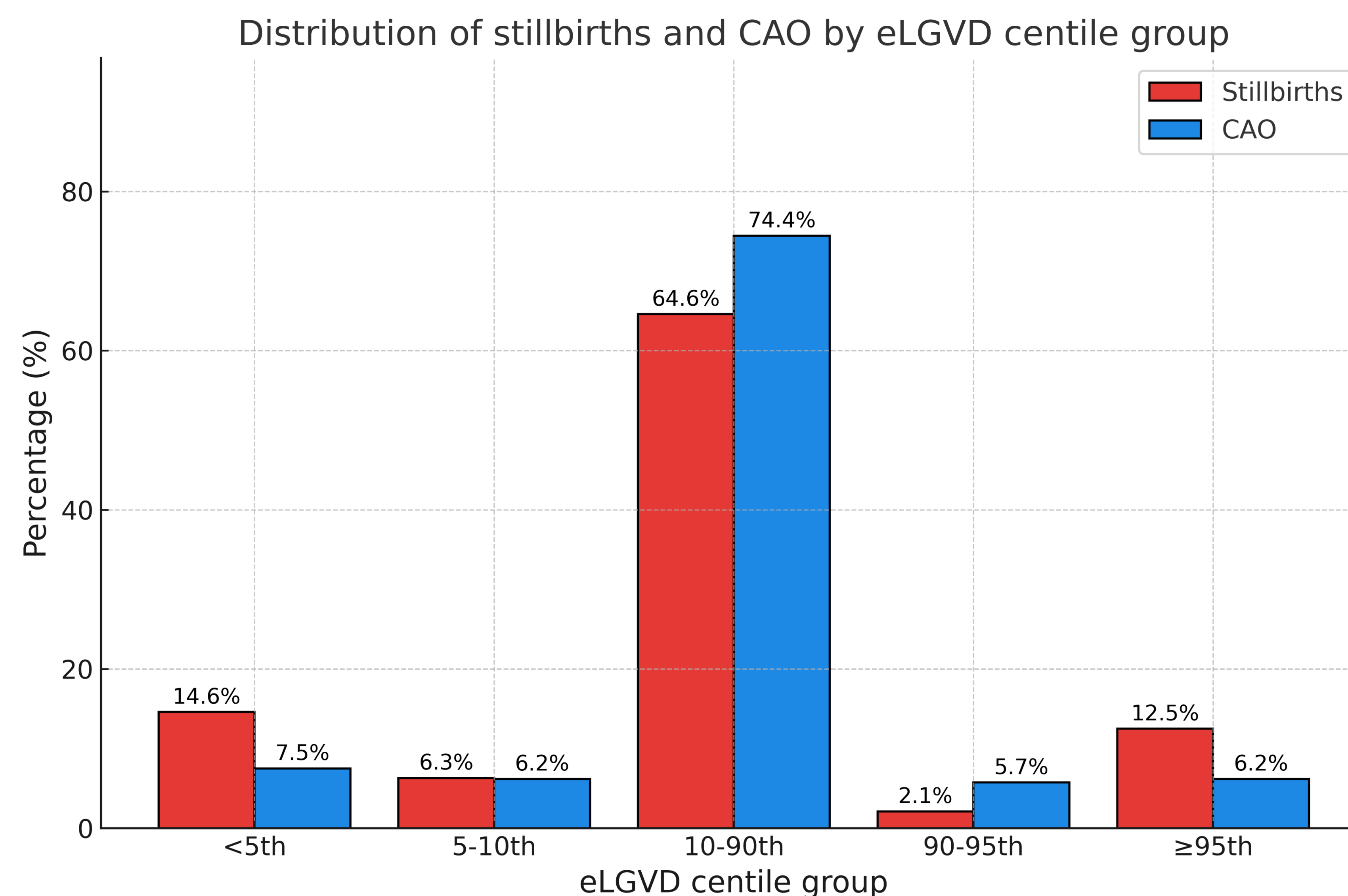
Methods

Retrospective population-based cohort study including non-anomalous singleton pregnancies at a UK tertiary center, where universal ultrasound was performed at 35⁺¹-36⁺⁶ weeks.

Births at least seven days after the scan were included. Estimated late growth velocity divergence (eLGVD) was calculated as the difference between z-scores for actual and estimated fetal weights, divided by the number of days between the scan and birth. Centiles (c) of eLGVD were calculated.

Adverse outcomes were stillbirth, and a severe composite outcome (CAO); the risks of each were compared using the overall distribution of eLGVD and at its extremes.

Odds ratios (OR) with 95% confidence intervals (CI) were calculated.



Results

A total of 43602 pregnancies were included. Stillbirth occurred in 48 cases (0.11%), and CAO in 227 (0.52%). An eLGVD <5th c was significantly associated with stillbirth (OR 4.0, 95% CI 1.7-9.0) and CAO (OR 1.8, 95% CI 1.1-2.9). The association with stillbirth remained in babies with a birthweight (BW) ≥10th centile (OR 3.8, 95% CI 1.3-11.0). An eLGVD ≥95th c was also associated with stillbirth (OR 4.4, 95% CI 1.8-10.5) and CAO (OR 1.9, 95% CI 1.1-3.2). However, the majority of stillborn (72.9%) and babies with CAO (86.3%) had an eLGVD between the 5th and 95th c.

Conclusion

Although extremes of fetal growth velocity at term are associated with stillbirth and severe neonatal morbidity, most adverse outcomes occurred in fetuses with apparently normal growth.

Fetal biometry at term will fail to detect most at risk pregnancies.