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Predicting Adverse Perinatal Outcomes in Dichorionic Twin Pregnancies: A Multicentre Cohort Study

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Introduction

Dichorionic (DC) twin pregnancies are associated with increased risks of stillbirth or medically indicated early preterm birth (ePTB) to avoid stillbirths. This study evaluated the predictive value of estimated fetal weight (EFW) and Doppler indices before adverse perinatal outcomes.

Main Outcome

Stillbirths (of one or both twins) or medically indicated ePTB before 34weeks' gestation for fetal indications.

Methods

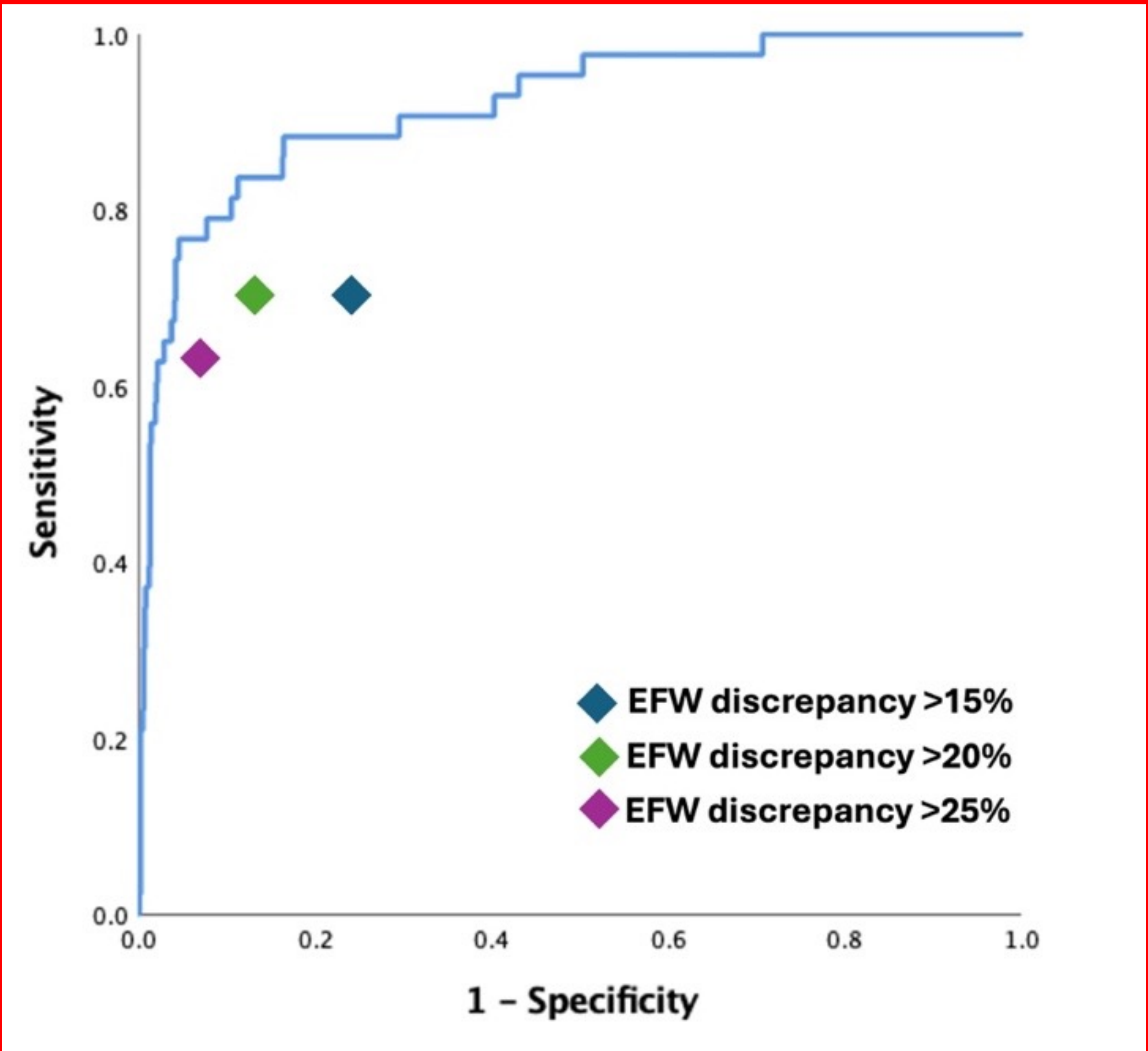
Univariable and multivariable analyses assessed the association and the predictive accuracy between EFW and Doppler indices taken within 2 weeks of birth or adverse perinatal outcomes.

Result

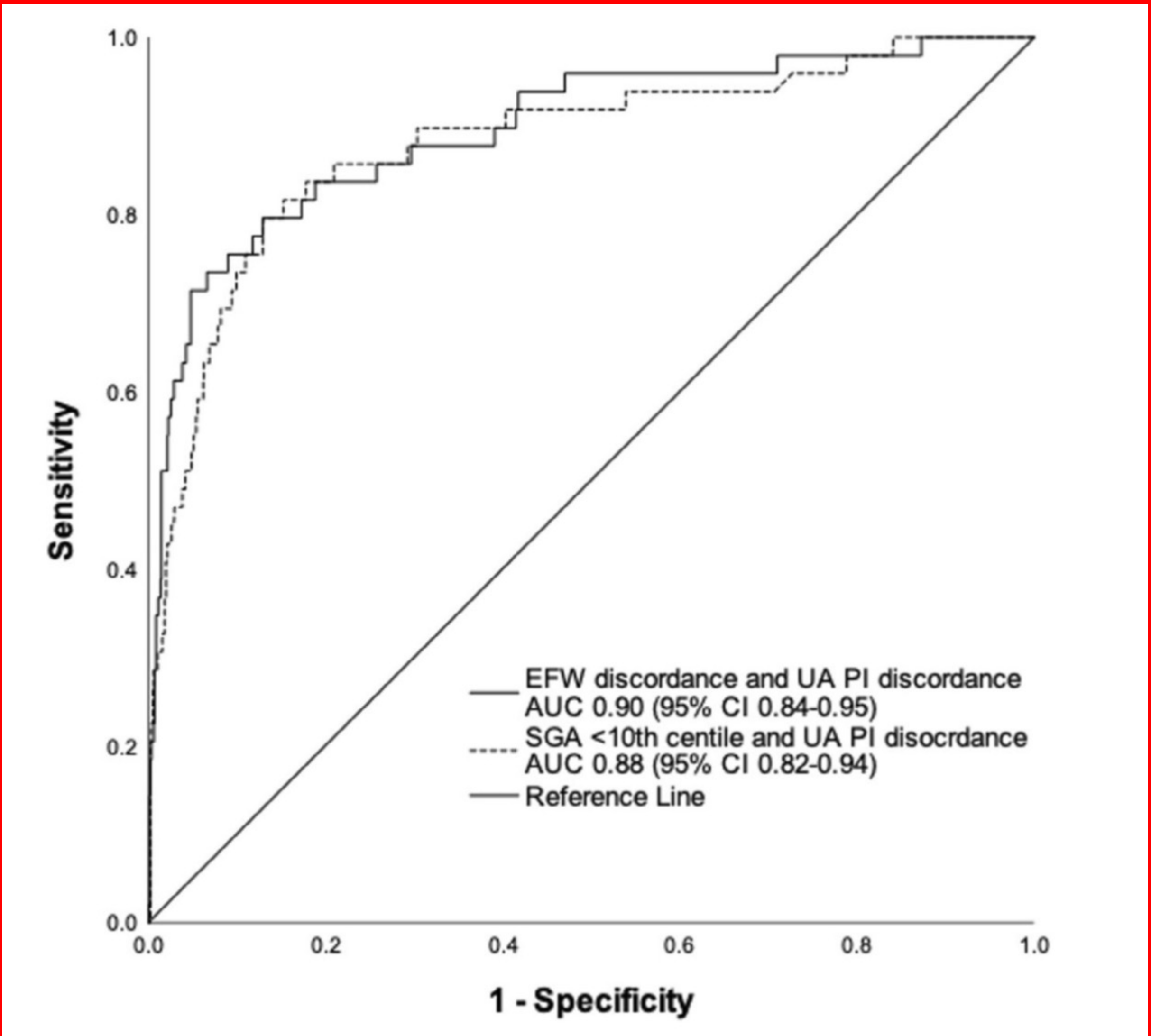
There were 58 (4.5%) pregnancies that met the study outcome criteria complicated by at least one stillbirth ($n=15$) or medically indicated PTB for fetal indications ($n = 43$).
The best model with the least number of variables was achieved using EFW discordance and UA PI discordance with AUC 0.90 (95% CI 0.84–0.95).

Conclusions:

The integration of intertwin EFW and UA PI discordance can effectively predict stillbirths or the need for medically indicated ePTB. After external validation in larger populations, this model could provide effective risk stratification of DC pregnancies to enable targeted interventions to improve clinical outcomes.



ROC curves for EFW discordance versus screening performance of EFW discordance (> 25%, > 20% and > 15%)



ROC curves for EFW discordance versus SGA <10th centile when used with UA PI discordance to predict adverse perinatal outcomes.