

EP08.25. Performance of the competing risks model for prediction of small for gestational age neonates in the first trimester in a Mexican population. Oviedo-Cruz H.

Objectives

The objective was to validate the **FMF-2020** algorithm, adapted to a Mexican population.

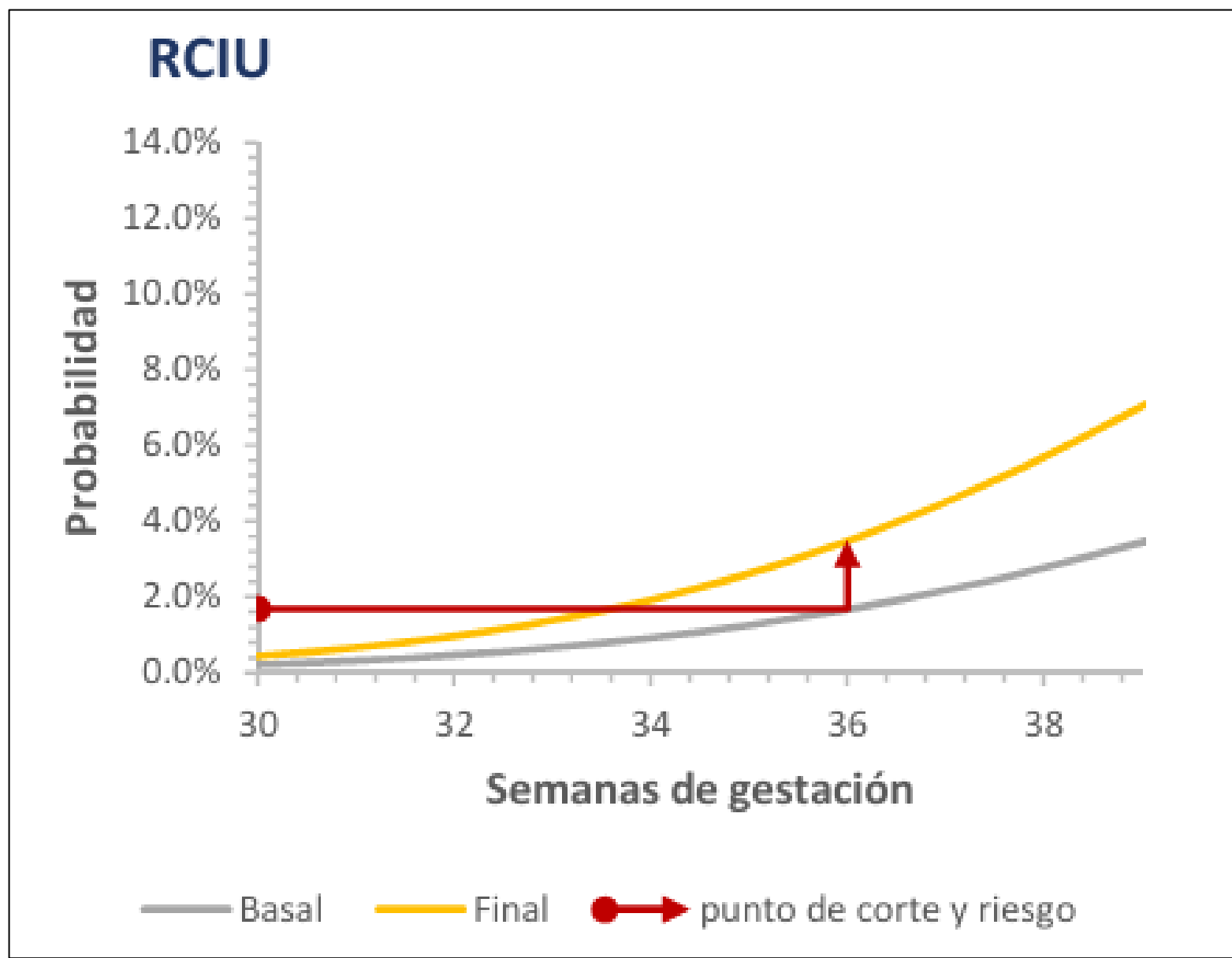
Methods

A retrospective cohort study of live and normal singleton pregnancies with crown-rump length between 45 and 84 mm in a tertiary hospital center in Mexico City.

Mean arterial pressure, uterine artery mean pulsatility index (UtA-PI), and pregnancy-associated plasma protein A (PAPP-A) were measured and **MoM-transformed** according to **population reference values**.

A **standalone software** (*Figure 1*) was developed to calculate the personalized joint probability distribution $f(Z, GA)$ for any region R^2 , and the post-test **Bayes'** probability from the respective probability densities of the **MoM**, according to the **folding regression models** of reference. The performance of the model was tested for different regions R^2 .

Figure 1. GUI for individual results from the **standalone software** developed (ver. 3.1 SPA).



Results

A total of **1180** pregnancies were included, delivery was at 38.4 (IQ, 37.4 - 39.4) weeks' gestation, with 104 (**9%**) neonates below the 10th percentile, and 36 (**3%**) below the 3rd percentile. The performance of the model is presented.

Conclusion

The FMF-2020 competing risk model adapted to a Mexican population performed as expected, specially for neonates < 3rd percentile, and prematures. UtA-PI and PAPP-A provided a significant contribution to the performance of the model.

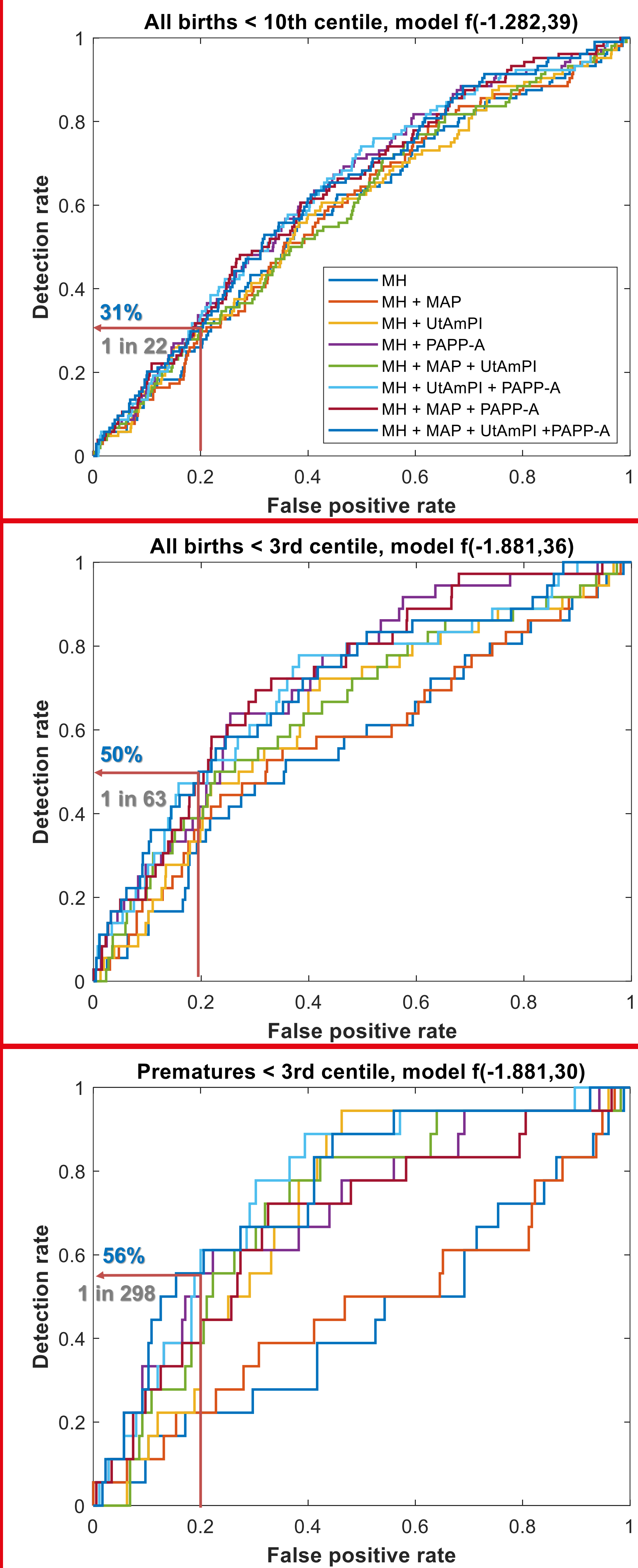


Figure 2. Performance of the model set at selected R^2 regions and **outcomes**. Arrows show the **detection rates** and **cut-off points** at 20% FPR, all markers.