BACKGROUND AND OBJECTIVES: We present an updated birth weight-for-gestational-age portrait, based on nearly 8 million observations of an ethnic-mixed population. It comprises the first comprehensive charts with Brazilian data. This contribution intends to assist clinicians in classifying fetal growth, to provide a reference for investigations of predictors and to show the consequences of small and large patterns for gestational age delivery. Most of the reference data for assessing birth weight for gestational age deal with insufficient sample size, especially at low gestational age. Population-based studies with considerably large sample size refer to data collected more than 15 years ago.

METHODS: We accomplished a population-based study on births in all the Brazilian states from 2003 to 2005. Results were based on 7,993,166 singletons. We constructed the 3rd, 5th, 10th, 25th, 50th, 90th, 95th and 97th smoothed percentiles curves and gender-specific tables from 22 to 43 completed weeks.

RESULTS: The resulting tables and graphical representation provide a gender-specific reference to access the birth weights distribution according to the gestational age in the Brazilian population. CONCLUSIONS: This is the first population-based reference constructed on a developing country data. These charts could provide an important tool to improve clinical assessment of growth in newborns.

Keywords
Birth weight, newborn, gestational age, fetal growth, preterm, postterm.