Introduction: There are many parameters to evaluate ovarian reserve. The antral follicle count has been widely used and is considered the best clinical predictor of ovarian response in assisted reproduction.

Aim: To design an age-related antral follicle normogram for the Venezuelan female population that seeks gynecological consultation.

Study Design: Cross-sectional and descriptive analysis with simple sequential sampling of 110 healthy patients attending the gynecological services at the Caracas University Hospital between March 2012 and September 2013. Ages were between 18 and 45 years old with regular menstrual cycles, with no history of hormonal contraception and no previous gynecological surgeries. Transvaginal ultrasound was performed, between second and fourth day of the menstrual cycle to quantify the total antral follicles present. Statistical analysis consisted in adjusting the antral follicles percentiles according to age using the procedure proposed by Royston and Wright. The reliability indicator of the model was verified applying the Pearson correlation coefficient and establishing the regression line between the age and the number of antral follicles.

Results: The antral follicle count was correlated with age and the regression analysis showed a biphasic curve. There was a more noticeable reduction of the follicular counts before 26 to 30 years of age. This was evident in the group of patients with follicular counts between 5-25 percentiles in which after this period, a reduction of the follicular reserve was seen. In contrast, patients with follicular counts between percentiles of 75-95 showed an initial performance plateau followed by a rapid fall from its follicular reserve between 35-40 years of age.

Conclusion: For the first time a normogram showing the normal values and the interquartile age related of the antral follicular reserve in Venezuelan patients has been performed. Further studies are needed to determine if the AFC normogram could be clinically relevant to select the optimal gonadotrophin dose for ovulation induction in infertile patients.