Implementation of first trimester combined test in a local practice

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Objective
The objective was to describe our experience with the first-trimester combined test since its implementation and to perform an audit of the quality of our screening program.

Methods
This is a retrospective study of cases scanned from 2009 to 2016. Were included in the study live, singleton pregnancies, with a crown-rump length of 45-84 mm, which had the combined test using the Fetal Medicine Foundation algorithm.

Results
1362 patients were evaluated, 99.9% being Caucasian. The median maternal age was 31 years and the median BMI was 22.5. The most common risk calculation used nuchal translucency, fetal heart rate, all additional markers, free β-hCG and PAPP-A in 831 (61%) of cases. 65 (4.8%) had a risk for trisomy 21 greater than 1 in 100. 58 of the 65 (87.7%) women with high risk chose to have an invasive test and we performed 50 CVS and 10 amniocenteses. Overall, 92 of fetuses (6.8%) from our first trimester population were evaluated through an invasive procedure. There were 24 aneuploid fetuses in our population (1.7%): 12 cases of trisomy 21, 3 cases of trisomy 18, 3 cases of triploidy, 4 cases of monosomy X and 2 other numerical sex chromosomes anomalies. The combined test detected 11 of the 12 cases of trisomy 21, with a first trimester detection rate of 91.7%. First trimester detection rate for trisomy 18 was 100%. 39 fetuses 18 (2.8%) had different types of structural anomalies.

Conclusion
The combined test at 11-13 weeks is a feasible and effective method to detect chromosomal abnormalities and fetal structural low-risk pregnancies.