

PUBLISHED ABSTRACT

Cell-Free DNA: How Much Do Patients Actually Know?

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Background

Over the past decade there has been a profound increase in the number of genetic tests available. Counseling on cell-free DNA screening requires expertise and the physician or genetic counselor should offer appropriate information in a simple way that will allow patients to understand all the benefits, risks and limitations of the test. In this study we would like to assess patient's understanding of the information provided on cell-free fetal DNA by their primary obstetrician and determine if there is any difference with counseling provided by a genetic specialist.

Methods

This was a prospective study of patients that had cfDNA testing over a period of 3 months. Patients completed a questionnaire assessing knowledge on the performance of cfDNA as a screening test and its limitations, information regarding the patient's current pregnancy, and their personal experience during counseling. Demographics, percentage of questions answered correctly, and patients' experience were compared between those counseled by a genetic counselor vs. an OBGYN provider. Statistical analysis included Wilcoxon test, Chi-square or Fisher's exact test as appropriate.

Results

205 patients completed the questionnaire that included 10 knowledge questions. Only 58% of patients recognized that cfDNA is a screening test and 52% considered it as good as an amniocentesis or CVS. Of those patients at high risk for chromosomal abnormalities, 46.7% correctly identified themselves as high risk. In an unadjusted comparison of counseling groups, patients seen by OBGYNs had superior survey performance compared to patients seen by genetic counselors: $64.8 \pm 19.1\%$ (mean \pm SD) correct answers vs. $56.7 \pm 21.4\%$ ($P = 0.005$), respectively. However, there was no difference between groups after adjusting for age, race, and insurance status (**Figure 1**). On average those with

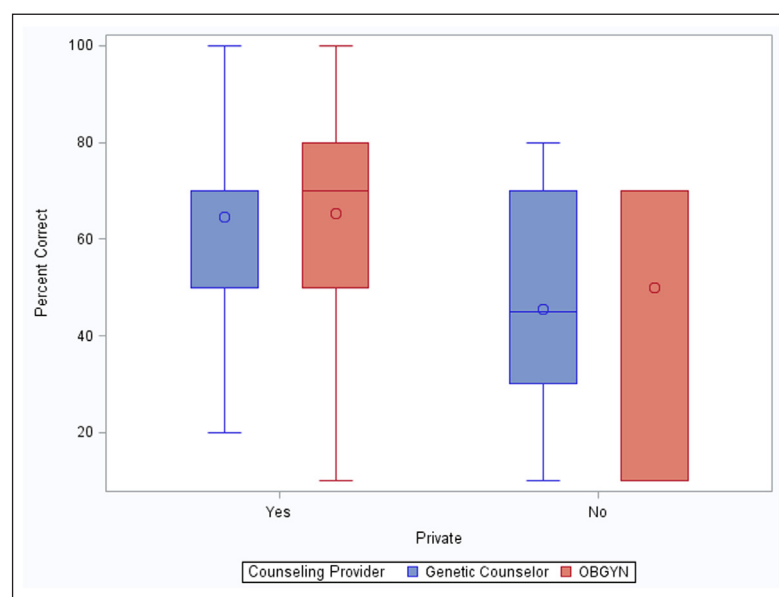


Figure 1: Box plot of percentage correct by insurance status and counseling provider.

private insurance scored 18.8 percentage points higher than those without private insurance ($p < 0.0001$). There was no significant difference in score between those who felt good vs. moderate vs. fair about the information provided to them during counseling ($P = 0.84$).

Conclusions

There are significant knowledge gaps among patients regarding cfDNA screening, regardless of who provides the counseling. More efforts need to be made for counseling to be at the educational level of the patient.

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