

Response to the letter to the editor: Prediction of fetal loss by first trimester crown rump length in IVF pregnancies

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Dr Sabour's letter highlights some general truths about statistics in the medical literature. Our study demonstrated an association between small crown-rump length (CRL) relatively to gestational age (at less than the 10th percentile for gestational age) and fetal death. Although this result suggests the predictive role of small CRL to fetal death, we agree that a second validation cohort will prove this in a more profound method. Nevertheless, it is still wide spread to use this methodology without the validation cohort. Could be, that the use of association instead of prediction would be more statistically correct. Be that as it may, we feel that our clinical interpretation of the results, indeed, suggests that the small CRL may have prediction ability for later on fetal death.

The importance of the “*p* value” is a familiar pitfall in medical statistics. The *p* value does not actually support the hypothesis. It indicates the probability of obtaining an effect at least as extreme as the one in our sample data, assuming the truth of the null hypothesis. What it actually means is that in any case of using *p* values, the low *p* has no impact on the rightness of the hypothesis. Nevertheless, while this is true, the low *p* value in our study demonstrates that assuming that our hypothesis is wrong, it will be extremely rare to achieve our results only due to random sampling error ($p=0.005$).

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