## COMMENTS AND RESPONSES

# Response to Comment on: Chakera et al. Antenatal Diagnosis of Fetal Genotype Determines if Maternal Hyperglycemia due to a Glucokinase Mutation Requires Treatment. Diabetes Care 2012;35:1832–1834

We appreciate the comments by Tartaglia et al. (1) in response to our study. We agree with Tartaglia et al. that maternal glucose management in glucokinase (*GCK*) pregnancy should be guided by knowledge of whether the fetus has inherited the mutation from the mother. In our article (2), we propose that fetal genetic testing should be performed if chorionic villus sampling (CVS) or amniocentesis is performed for another reason. Amniocentesis/CVS cannot be recommended as a routine procedure in the management of pregnant women with *GCK* mutations, as the 1% miscarriage rate is unacceptably high and outweighs the potential benefits of knowing fetal *GCK* genotype.

At present, fetal growth on ultrasound is used as a surrogate marker for fetal *GCK* status with increasing growth seen when the fetus has not inherited the mutation. Tartaglia et al. raise a valid point that the optimal cutoff is unclear, especially given uncertainty in measurements. If the fetus does not inherit the *GCK* mutation, maternal hyperglycemia results in an approximately sixfold increase in macrosomia, with mean increase in corrected birth weight of 700 g, ~1 SD difference (3). Using data from Hindmarsh et al. (4), we estimate that if the abdominal circumference exceeds the 75th percentile, the odds ratio that the child is unaffected is increased by 3.5-fold. If the abdominal circumference exceeds the 90th percentile, this odds ratio increases to sevenfold. The variability in measurement will determine the confidence limits around these estimates, but this will be reduced if repeated measures are used. For this reason we suggest having two values over the 75th percentile in scans separated by 2 weeks before starting insulin. One advantage of this cutoff is that it has an evidence base to support it because Buchanan et al. (5) used this cutoff in a randomized controlled trial.

Ultimately, noninvasive prenatal diagnosis (6) will replace the need to make an indirect assessment based on ultrasound and result in individualized care for pregnant women with *GCK* mutations.

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