Echogenic Intracardiac Focus: A bright white dot in the fetal heart

An echogenic intracardiac focus (EIF) is a bright white spot in the fetal heart that looks like a tiny golf ball. This bright spot is due to a bit of calcium in one of the muscles that attaches to the heart valve. It is **NOT** an abnormality and is **NOT** associated with heart defects. Approximately 5% of all *normal* babies will have an EIF detected during a routine mid trimester ultrasound. The presence of an EIF does vary with ethnicity and can be seen in up to 30% of babies of Asian ancestry.

The finding, in and of itself *alone* is NOT a cause for concern. It is *only* to be used as a modifier in calculating a patient specific risk of Down syndrome. This is because approximately 20% of fetuses with Down have an EIF. If an EIF is noted on your ultrasound, we will perform a detailed evaluation of your baby looking for birth defects and other signs that the baby might be at increased risk for having a chromosomal problem. This includes evaluating the back of the neck (nuchal fold) and for the presence or absence of the nasal bone as well as other anatomic parameters.

After a meticulous examination of your baby, we will be able to determine whether the EIF is the only finding or whether there are other concerns. In the non-Asian population the presence of an isolated EIF will roughly double the risk that a fetus has Down syndrome. . The finding is not associated with alteration of risk in patients of Asian ancestry. This sonographic finding **MUST** be interpreted in the context of the individual's specific risk of carrying a fetus with Down syndrome. The best method of determining this risk is by one of the currently accepted screening protocols that may involve early ultrasound in combination with various blood analytes. Age is no longer an adequate method of assessing risk

For example, a patient whose risk of carrying a fetus with Down syndrome has been established by screening to be 1:10,000; an isolated EIF would increase that risk to 1:5,000. If the patient's risk was 1:1000, the revised risk would be 1:500. If the initial risk was 1:100, the revised risk would be 1:50. Ultrasound only provides a risk modification; it can neither diagnose nor exclude a chromosomal problem such as Down syndrome.

Individual patients must evaluate the risk estimate within their own personal framework. One person's 'high risk' is another person's 'low risk'. The only way to determine for certain if a fetus has Down syndrome is by performing an amniocentesis. This procedure involves inserting a needle into the amniotic sac and obtaining fluid to analyze directly. The procedure carries a risk of approximately 1:300-500 for pregnancy loss.

An EIF will generally resolve during the course of pregnancy and no further follow up is recommended.