"IS THE HCG DISCRIMINATORY ZONE A RELIABLE INDICATOR OF INTRAUTERINE OR ECTOPIC PREGNANCY?"
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A few outliers don't justify dismissing the hCG discriminatory zone

We respect Dr. Kaunitz and the authors of the study he reviewed, but we believe their conclusions blur the line between possibility and probability.

Doubilet and Benson document a single case in which a human chorionic gonadotropin (hCG) level of 4,336 mIU/mL was not associated with an intrauterine fluid collection and led to a live birth; they also document five other singleton pregnancies (and one twin gestation) with similar findings and hCG levels that ranged from 2,000 to 3,000 mIU/mL.[1] To properly claim these findings as evidence against the hCG discriminatory zone, however, one needs an appropriate control group. As a parallel example, one shouldn't recommend expectant management for advanced cancer simply because spontaneous remissions exist. Doubilet and Benson fail to provide a denominator reflecting how many pregnancies in the described ranges both didn't demonstrate a fluid collection and were not viable.

Based on its Web information, Brigham and Women's Hospital has 35 combined labor and delivery rooms and six cesarean suites and performs more than 8,000 deliveries a year (more than 25% of the deliveries in Boston as a whole). If a program with that volume sees, every 11 years, one viable pregnancy with an hCG level above 3,000 mIU/mL and no intrauterine fluid collection, as well as a handful more with an hCG level between 2,000 and 3,000 mIU/mL, wouldn't that argue that the current discriminatory zone is relatively informative? Especially given that most concurrent lab and ultrasonographic testing at early gestational ages is usually performed in symptomatic patients, the authors should not conclude, based solely on their study, that: "The hCG discriminatory level should not be used to determine the management of a hemodynamically stable patient with suspected ectopic pregnancy." To reach such a conclusion, one needs to address the positive and negative predictive values associated with such levels (factoring in symptoms), along with the cost and benefits of continued observation—including the likelihood of ruptured ectopic pregnancy with expectant management.

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Reference
1. Doubilet PM, Benson CB. Further evidence against the reliability of the human chorionic gonadotropin level. J Ultrasound Med. 2011;30(12):1637–1642.

The discriminatory zone should go

I agree with Dr. Kaunitz that the discriminatory zone should be abandoned. In fact, I argued, in 2003, against a recommendation of D&C for anyone who had an hCG level of 1,500 mIU/mL without a documented intrauterine pregnancy on transvaginal ultrasonography.[1] I have been practicing what is suggested in Dr. Kaunitz's commentary—abandoning the hCG zone—and have had a few more term deliveries that might otherwise have been aborted.

Hamid Sanjaghsaz, DO
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Reference
1. Sanjaghsaz H. Presumed diagnosis of ectopic pregnancy. Obstet Gynecol. 2003;101(1):200–201.

›› Dr. Kaunitz responds

Intervention should not be based on a single hCG level

I thank my colleagues for their thoughtful comments. This topic has ignited much interest and controversy.

Dr. Barry and colleagues have methodologic concerns about the original paper, and I agree that Doubilet and Benson failed to quantitatively compare the pros and cons of immediate intervention with those of expectant management in women who had hCG levels above 2,000 mIU/mL and no intrauterine pregnancy on ultrasonography. However, I also recognize that the incidence of normal intrauterine pregnancy in women with an hCG level above the discriminatory zone is substantially higher than Dr. Barry and colleagues imply, as only pregnancies that met strict inclusion criteria were selected by Doubilet and Benson for their analysis.

As Dr. Sanjaghsaz implies, many physicians, pregnant women and couples have little tolerance for the inadvertent termination of early pregnancies with unknown implantation status and unknown viability. I write this response from Vienna, where I am attending a meeting. I queried my European colleagues here about this subject, but they are not familiar with the concept of a discriminatory zone and expressed surprise that some US ObGyns are willing to intervene when the patient is hemodynamically stable and has had only one assessment of her hCG level.

While we await more data on the pros and cons of intervention versus expectant management, we need to help these patients make prudent decisions. I believe it is most prudent to follow such women and gather more data before deciding to intervene.