

## First Trimester Bleeding Referral

### Diagnosis/Definition

- Vaginal Bleeding before 13 weeks gestation
- 12% of normal pregnancies can have a sub-optimal HCG slope
- 13% of ectopic pregnancies can have a normal HCG slope
- 'Pregnancy of unknown location': No signs of either intra- or extrauterine pregnancy or retained products of conception in a woman with a positive pregnancy test (see Table 1)
- 'Pregnancy of 'uncertain viability':  
 Crown-rump length of  $\geq 7$  mm and no heartbeat  
 Mean sac diameter of  $\geq 25$  mm and no embryo  
 Absence of embryo with heartbeat  $\geq 2$  wk after a scan that showed a gestational sac without a yolk sac  
 Absence of embryo with heartbeat  $\geq 11$  days after a scan that showed a gestational sac with a yolk sac  
 In order to confirm or refute viability, a repeat scan at an interval of 11 days is recommended (For 'Findings suspicious for, but not diagnostic of, pregnancy failure', please see Table 2)

### Initial Diagnosis and Management

- Last menstrual period, recent contraceptive usage history
- Quantitative HCGs serially q 48 hrs - 72 hrs
- Transvaginal Ultrasound (repeat in 11 days)
- Blood type and Rh factor
- Presence of fetal heart tones
- Bleeding from cervical os, e. g. rule out local sources
- Query about loss of tissue, e. g., products of conception

### Indications for Specialty Care Referral

- Hemodynamically unstable
- Serial quantitative HCGs not following expected HCG slope for normal SAB or normal pregnancy
- Unclear clinical scenario
- CO elects surgical management
- CO elects to receive medical management of ectopic with methotrexate

### Customer Owner Information

- Normal pregnancy: Vaginal bleeding is common in the first trimester, occurring in 20 to 40 percent of pregnant women.
- Miscarriage: 15% of 'known' pregnancies can miscarry, 30% of all pregnancies can miscarry
- Ectopic pregnancy is much less common (prevalence of ectopic pregnancy: 2 % of pregnancies), but the most serious etiology of first trimester bleeding as rupture of the extrauterine pregnancy is a life-threatening complication. Therefore, this diagnosis must be excluded in pregnant women with bleeding.

Approved 6/4/14njm  
 Reviewed 7/24/16 njm  
 Revised 10/16/18 njm

**Table 1**  
**Diagnostic and Management Guidelines Related to the Possibility of a Viable Intrauterine Pregnancy in a Woman with a Pregnancy of Unknown Location.**

Finding	Key Points
No intrauterine fluid collection and normal (or near-normal) adnexa on ultrasonography	<p>A single measurement of hCG, regardless of its value, does not reliably distinguish between ectopic and intrauterine pregnancy (viable or nonviable). If a single hCG measurement is &lt;3000 mIU/ml, presumptive treatment for ectopic pregnancy with the use of methotrexate or other pharmacologic or surgical means should not be undertaken, in order to avoid the risk of interrupting a viable intrauterine pregnancy.</p> <p>If a single hCG measurement is <math>\geq 3000</math> mIU/ml, a viable intrauterine pregnancy is possible but unlikely. However, the most likely diagnosis is a nonviable intrauterine pregnancy, so it is generally appropriate to obtain at least one follow-up hCG measurement and follow-up ultrasonogram before undertaking treatment for ectopic pregnancy.</p>
Ultrasonography not yet performed	<p>The hCG levels in women with ectopic pregnancies are highly variable, often &lt;1000 mIU/ml, and the hCG level does not predict the likelihood of ectopic pregnancy rupture. Thus, when the clinical findings are suspicious for ectopic pregnancy, transvaginal ultrasonography is indicated even when the hCG level is low.</p>

**Table 2**  
**Failure Findings Suspicious for, but Not Diagnostic of, Pregnancy Failure**

- -Crown–rump length of <7 mm and no heartbeat
- -Mean sac diameter of 16–24 mm and no embryo
- -Absence of embryo with heartbeat 7–13 days after a scan that showed a gestational sac without a yolk sac
- -Absence of embryo with heartbeat 7–10 days after a scan that showed a gestational sac with a yolk sac
- -Absence of embryo  $\geq 6$  wk after last menstrual period
- -Empty amnion (amnion seen adjacent to yolk sac, with no visible embryo)
- -Enlarged yolk sac (>7 mm)
- -Small gestational sac in relation to the size of the embryo (<5 mm difference between mean sac diameter and crown–rump length)