SUMMARY:

CPG Citation: *ACEP Clinical Policy: Critical Issues in the Initial Evaluation and Management of Patients Presenting to the Emergency Department in Early Pregnancy (February 2017)*

Downloadable at: https://www.acep.org/Clinical---Practice-Management/ACEP-Current-Clinical-Policies/

Scope: Physicians working in hospital-based Emergency Departments (EDs)

Inclusion: Stable (normal vital signs) 1st trimester pregnant patients with abdominal pain and/or vaginal bleeding, without prior confirmed intrauterine pregnancy (IUP)

Exclusion: Patients who are clinically unstable, abdominal trauma or higher risk of heterotopic pregnancy (e.g.. infertility candidates)

Funding: ACEP

KEY RECOMMENDATIONS:

Each recommendation is accompanied by the "strength" of recommendation and the level of evidence (LoE) supporting that recommendation.

RECOMMENDATIONS	STRENGTH, LoE
FOR Clinical Action Perform or obtain a pelvic ultrasound for symptomatic pregnant patients with any β-hCG level.	Level B
NEUTRAL Clinical Action Obtain specialty consultation or arrange close outpatient follow-up for all patients with an indeterminate pelvic ultrasound result.	Level C
AGAINST Clinical Action Do not use the β-hCG value to exclude the diagnosis of ectopic pregnancy in patients who have an indeterminate pelvic ultrasound result.	Level B

CLINICAL COMMENTARY:

Early pregnancy problems present a management challenge for ED physicians, especially in patients with abdominal pain or vaginal bleeding. The main priority is safe exclusion of ectopic pregnancy (EP), reported to be as high as 13% in some series.

Prior studies aimed at linking serum β-hCG levels above a "discriminatory threshold" with ED US usage to safely exclude EP have not consistently proven to be reliable, due to confounders such as diagnostic test assay use, and cutoff levels that are institution-, operator- and patient-dependent. It has been previously shown that EP can present with any level of β-hCG, and that EP ruptures can happen at very low levels. The Table (p. 247) presents selected studies (n=11) exploring the test characteristics of different β-hCG cutoffs, showing no likelihood ratios (LR+ or LR-) that would satisfactorily include or exclude EP reliably.

Prior ACEP Policies

The previous 2012 ACEP guideline addressed use of methotrexate (MTX) in ED EP management, which recommended close gynecologic follow up for any suspected EP patients given MTX in the ED, and to strongly consider ruptured EP in patients previously given MTX with concerning signs/symptoms of EP.

The 2003 version of this policy recommended use of anti-D immunoglobulin in Rh-negative patients with suspected miscarriage, EP or minor abdominal trauma (Level B), albeit based on weak supporting evidence. Current recommendations for anti-D Ig use should be guided by specialty Ob-Gyn policies if available (e.g., ACOG, SOGC, etc.).

GRADING SYSTEM USED:

ACEP Evidentiary process (Schriger 1993)

- **Level A Recommendations:** Generally accepted principles for patient care that reflect a high degree of clinical certainty (e.g., based on evidence from 1 or more Class of Evidence I or multiple Class of Evidence II studies).
- **Level B Recommendations:** Recommendations for patient care that may identify a particular strategy or range of strategies that reflect moderate clinical certainty (e.g., based on evidence from 1 or more Class of Evidence II studies or strong consensus of Class of Evidence III studies).
- **Level C Recommendations:** Recommendations for patient care that are based on evidence from Class of Evidence III studies or, in the absence of any adequate published literature, based on expert consensus. In instances where consensus recommendations are made, "consensus" is placed in parentheses at the end of the recommendation.

IOM GUIDELINE "TRUSTWORTHINESS" CHECKLIST

RATING DOMAIN	RATING
1. Establishing transparency	Good
2. Managing conflict of interest in CPG development group	Good
3. Group composition (range of stakeholders involved)	Fair (unclear affiliations of authors, no patients?)
4. Critical evaluation of supporting evidence	Good (detailed Evidentiary Table included)
5. Framing recommendations based on supporting evidence	Good
6. Clear articulation of recommendations	Good
7. External review by relevant stakeholders/organizations	Good (detailed process for external review)
8. Updating schedule	Fair (not clearly articulated)
9. Implementation issues	Good

The search strategy is limited to electronic databases, English-language articles involving human subjects, hence prone to publication/other search biases (e.g., grey literature, non-English studies, etc.).

Expert input included individual EM physicians, members of ACOG and the American Institute of Ultrasound in Medicine (AIUM), ACEP's Ultrasound Section and the Medical Legal committee.

No relevant conflicts of interest reported among author group members.