

# Ultrasound Evaluation of First Trimester Pregnancy Complications

## PRINCIPAL AUTHORS

Lucie Morin, MD, FRCSC, Montreal QC

Michiel C. Van den Hof, MD, FRCSC, Halifax NS

## DIAGNOSTIC IMAGING COMMITTEE MEMBERS

Stephen Bly, PhD, Health Canada Radiation Protection Bureau, Ottawa ON

Duncan Farquharson, MD, FRCSC, Vancouver BC

Ms Barbara Lewthwaite, MN, ARDMS, Winnipeg MB

Robert Gagnon, MD, FRCSC, London ON

Shia Salem, MD, FRCP, Canadian Association of Radiologists Representative, Toronto ON

Amanda Skoll, MD, FRCSC, Vancouver BC

sonographic features. Maternal morbidity and mortality can be reduced with an early diagnosis of ectopic pregnancy.

**Recommendations:** There is good (class A) evidence that current ultrasound technology can distinguish between normal and abnormal pregnancies in the first trimester. There is good (class A) evidence that transvaginal ultrasound in conjunction with quantitative-HCG can diagnose ectopic pregnancy.

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## Abstract

**Objectives:** First, to review normal embryonic development and the sonographic evidence of early pregnancy failure; second, to review sonographic evidence of ectopic pregnancy.

**Outcomes:** First, prediction of pregnancy failure; second, sonographic identification of ectopic pregnancy.

**Evidence:** A MEDLINE search and review of bibliographies in identified articles was conducted.

**Values:** The evidence was reviewed by the Diagnostic Imaging Committee along with the principal authors. A quality of evidence assessment was undertaken as outlined in the report of the Canadian Task Force on the Periodic Health Examination (Table 1).

**Benefits, Harms, and Costs:** Women presenting with first trimester bleeding may be incorrectly diagnosed with a missed abortion and (or) may be inappropriately reassured about viability. Transvaginal ultrasound provides improved resolution allowing description of early embryonic development characteristics. Improvement in the identification of the sonographic landmarks of normal embryonic development and awareness of the sonographic risk factors of pregnancy failure may lead to more successful management strategies. Diagnosis of suspected ectopic pregnancy often involves an assessment of both hormonal markers and

**Key Words:** Ectopic, ultrasound, missed abortion, blighted ovum, threatened abortion

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