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# No. 352-Technical Update: The Role of Early Comprehensive Fetal Anatomy Ultrasound Examination

This Technical Update has been prepared by the Diagnostic Imaging Committee,\* reviewed by the Guideline Management and Oversight Committee, and approved by the Board of the SOGC.

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#### **Abstract**

**Objective:** This guideline presents an evidence-based technical update and recommendations for the performance of early comprehensive fetal anatomic scanning (ECFAS) at 11 to 16 weeks' gestation.

**Options:** Patients at high risk for fetal anomalies and in whom traditional mid–second trimester transabdominal imaging may be challenging or who may benefit from earlier identification of fetal anomalies may be suitable for early fetal anatomy scanning.

**Outcomes:** This practice may result in earlier identification of fetal anomalies and provide earlier intervention options in high-risk populations and/or in populations where mid–second trimester transabdominal scanning is challenging.

**Target Population:** This population consists of obstetrical patients in whom mid–second trimester ultrasound scanning will be technically challenging and patients who are at higher risk for major fetal anomalies.

Evidence: Published literature was retrieved through searches of PubMed and Medline in 2016 using key words. Results were restricted to controlled clinical trials, reviews, and observational studies published in English. There were no date restrictions, and searches were updated in the guideline to 2016. Grey (unpublished) literature was identified through searching the websites of health technology assessment and clinical practice guidelines and national and international medical specialty societies. No relevant studies were found.

Validation Methods: The content and recommendations were drafted and agreed on by the principal authors. The Board of the SOGC approved the final draft for publication. The quality of evidence was rated using the criteria described in the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) methodology framework.

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Women have the right and responsibility to make informed decisions about their care in partnership with their health care providers. To facilitate informed choice women should be provided with information and support that is evidence based, culturally appropriate, and tailored to their needs. The values, beliefs, and individual needs of each woman and her family should be sought, and the final decision about the care and treatment options chosen by the woman should be respected.

- Benefits, Harms, and/or Costs: It is anticipated that there will be an increase in earlier detection of major fetal anomalies in the target population with the benefits of earlier interventions for those individuals. In areas where the service is not available the patient may need to travel to a nearby centre. Early fetal anatomy scanning is considered to be safe and is not expected to cause a risk to the pregnancy.
- **Guideline Update:** Evidence will be reviewed 5 years after publication to decide whether all or part of the guideline should be updated. However, if important new evidence is published before the 5-year cycle, the review process may be accelerated for a more rapid update of some recommendations.

**Sponsors:** This technical update was developed with resources funded by the SOGC.

#### **Summary Statements:**

 Development of fetal organs begins early in the first trimester, with the majority of organs visible by ultrasound evaluation towards the end of the first trimester of pregnancy (High).

- The majority of significant and sonographically detectable fetal anomalies can be detected on early fetal anatomic ultrasound assessment (High).
- Early detection of fetal anomalies allows patients to obtain counselling consultations, and genetic testing at an earlier gestational age, as well as more time to consider options for pregnancy management (High).

#### Recommendations:

- Medical personnel (physicians, technologists, or ultrasound practitioners) who have substantial experience or training in the assessment and interpretation of early comprehensive fetal anatomic scanning should be performing the examination (Strong, High).
- The examination can be performed transvaginally, transabdominally, or by both approaches, and the choice for each mode depends on the fetal position, the gestational age, and the experience of the operator (Strong, High).
- 3. Early comprehensive fetal anatomic scanning at 13–16 weeks' gestation should be considered for women who have higher risk for significant fetal anomalies or in whom it is anticipated that a midtrimester transabdominal scan will be technically challenging (High). This scan does not replace the routine 18- to 22-week anatomy scan.

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