early pregnancy loss
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When performing ultrasound to determine the viability of an intrauterine pregnancy, the ASA recommends the following guidance for transvaginal ultrasound diagnosis of early pregnancy loss.

Initial scan

Criteria for initial scan [1]
Presenting without an embryo or yolk sac, and mean gestational sac diameter ≥25 mm
Presenting with an embryo with no heart activity, and crown-rump length ≥7 mm

The above "findings diagnostic of pregnancy failure" are reproduced in clinical guidelines produced by the American College Obstetrics and Gynecology [2]. They are also recommended in clinical guidelines used the Royal College Obstetricians and Gynaecologists (RCOG) [3].

- If there is no visible heartbeat but there is a visible fetal pole, measure the crown-rump length. If the fetal pole is not visible the mean gestational sac diameter should be measured as an estimate of gestational age [3].
- Documentation of the absence of a heartbeat should be in the form of M-mode. If indicated, Doppler techniques (including colour and spectral Doppler) may also be considered to confirm pregnancy failure [4].
- If a transvaginal ultrasound is unacceptable to the woman, offer a transabdominal ultrasound scan. The limitations of a transabdominal approach in isolation should be explained. A transabdominal ultrasound scan should also be considered in the presence of an enlarged uterus or other pelvic pathology [3].
- Transabdominal imaging without transvaginal scanning may be sufficient for diagnosing early pregnancy failure when an embryo with crown-rump length ≥15 mm has no visible cardiac activity [1].
- In the case of positive HCG and a poorly formed or absent intrauterine gestational sac, a review of the female pelvis to include ovaries, by transvaginal scan (when acceptable to the patient) should be performed to exclude ectopic pregnancy. The ASA endorses the RCOG criteria for ultrasound diagnosis of ectopic pregnancy [5].
- When findings are not consistent with the above diagnostic criteria for early pregnancy loss, a second opinion is recommended, including a follow-up ultrasound at 7–10 days to assess for ongoing viability [2][3].

Repeat scan

Additional criteria for repeat scan [6]
Presenting with no visible embryo (with or without visible yolk sac) with mean gestational sac diameter ≥12 mm and returning after at least seven days: no embryo with embryo heart activity visible
Presenting without an embryo (with or without visible yolk sac) with mean gestational sac diameter <12 mm and returning after at least 14 days: no embryo heart activity and mean gestational sac diameter has not doubled
Presenting with an embryo (irrespective of crown-rump length) without heart activity, and still no heart activity visible after at least seven days

In accordance with the ASA's *Standards of Practice* [7], sonographers should follow workplace policies and protocols when giving verbal results directly to patients. In particular, sonographers are referred to sections '7.7 Communication' and '7.13 Reporting technique and protocol'. Any findings should not include a discussion of management options.

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To be reviewed 2018

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