PIPADOR REVISION

MRCOG Part 1 Revision Notes

Ultrasound Results

DATA INTERPRETATION • LECTURE 446

VISUAL EXAMINATION REVISION NOTES

2026 Edition

446

MRCOG PART 1 REVISION NOTES | DATA INTERPRETATION

Ultrasound Results

Definitions and cut-offs for early pregnancy, growth, Doppler, liquor, placenta and gynaecology scans, with worked cases

CRL ≥ 7 mm
No heartbeat → miscarriage

MSD ≥ 25 mm
No pole → miscarriage

< 10th centile
SGA

MCA PSV > 1.5 MoM
Fetal anaemia

■ KEY FACTS: Learning objectives

- Define the key ultrasound measurements in early pregnancy, fetal growth, Doppler, liquor, cervix, placenta and gynaecology.
- Apply diagnostic cut-offs (NICE, RCOG) to ultrasound reports.
- Interpret ultrasound results in worked scenarios.

446.1 Key definitions

Term	Definition / threshold
CRL (crown–rump length)	Length of embryo/fetus — dating at 11+2 to 14+1 weeks (45–84 mm)
MSD (mean sac diameter)	Average of three gestational sac diameters
PUL	Pregnancy of unknown location — positive test, no pregnancy seen
EFW / AC centile	Estimated fetal weight / abdominal circumference compared with population or customised charts
SGA / FGR	• SGA: EFW < 10th centile • FGR: failure to reach growth potential (e.g. EFW < 3rd, or < 10th with abnormal Doppler)
Pulsatility index (PI)	Doppler measure of resistance in a vessel
AEDF / REDF	Absent / reversed end-diastolic flow in the umbilical artery — severe placental dysfunction
MCA PSV	Middle cerebral artery peak systolic velocity — > 1.5 MoM suggests fetal anaemia
DVP / AFI	Deepest vertical pocket / amniotic fluid index — liquor volume
Endometrial thickness (ET)	Postmenopausal bleeding: ≥ 4 mm needs further investigation (not on HRT/tamoxifen)

■ IN PLAIN ENGLISH: Ultrasound results

Ultrasound reports are numbers plus descriptions — the skill is knowing **which cut-off applies** and whether the finding is **diagnostic** (act now) or **uncertain** (rescan).

446.2 Early pregnancy

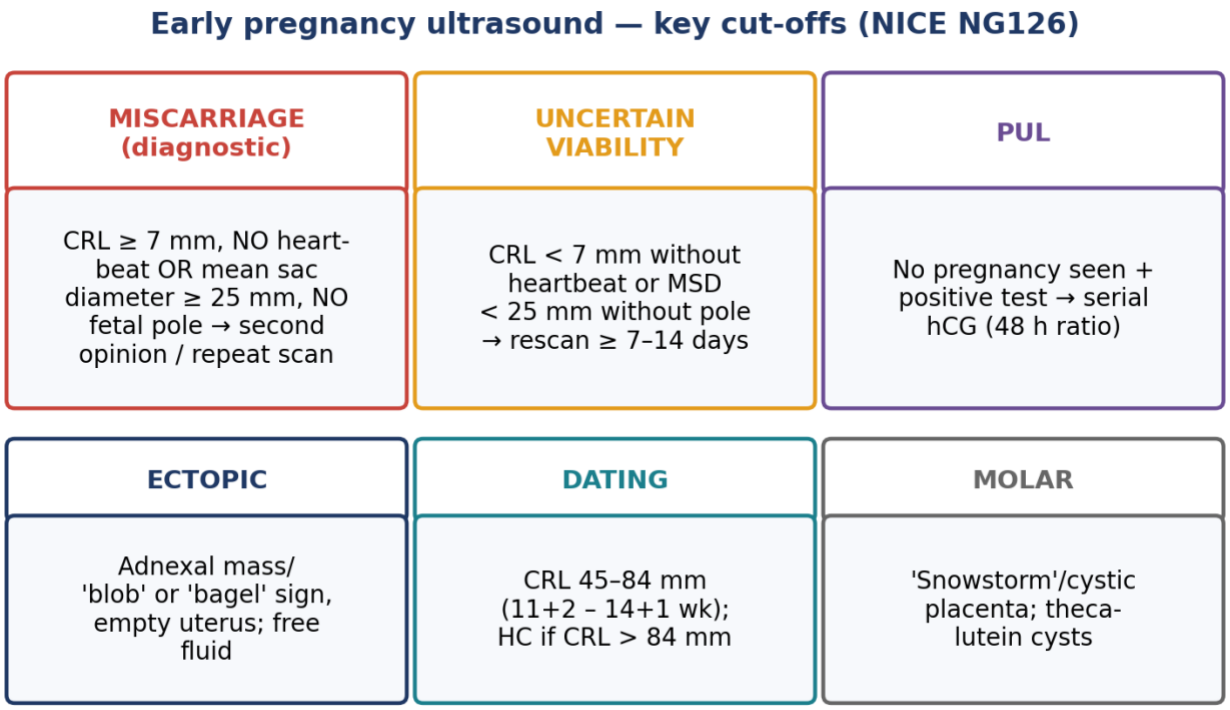


Figure 446.1 — Early pregnancy ultrasound cut-offs

446.3 Obstetric scans

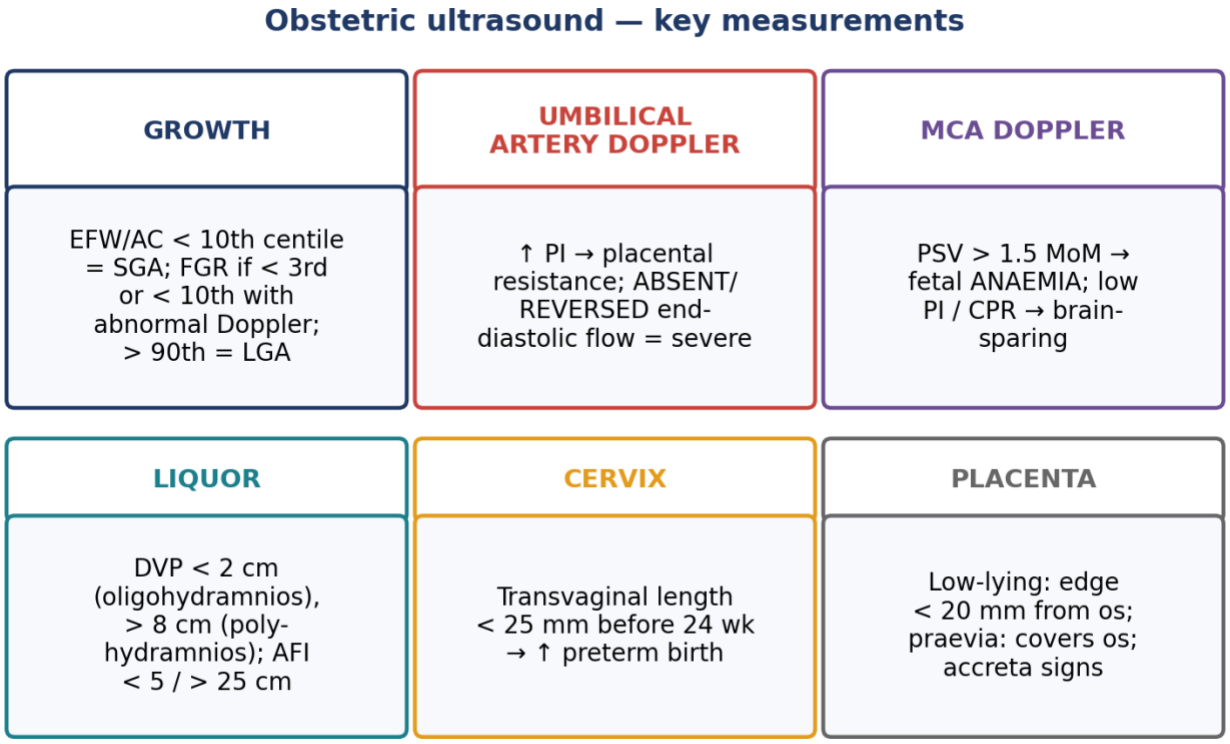


Figure 446.2 — Key obstetric measurements

446.4 Worked cases

■ **WORKED EXAMPLE**

Case 1 — TVS: intrauterine sac MSD 27 mm, no fetal pole → **miscarriage** (≥ 25 mm, no pole) — confirm with second opinion; discuss management.

Case 2 — 32 wk: EFW 5th centile, UA PI > 95th centile, normal EDF, MCA PI low → **FGR with brain-sparing** → increase surveillance, steroids, plan birth (RCOG GTG 31).

Case 3 — anti-D alloimmunisation: MCA PSV 1.7 MoM → **suspected moderate–severe fetal anaemia** → fetal blood sampling ± intrauterine transfusion.

Case 4 — 20 wk: placental edge 10 mm from internal os → **low-lying placenta** → rescan at 32 wk.

Case 5 — 60-year-old with PMB, not on HRT: ET 8 mm → **endometrial sampling/hysteroscopy** (2-week wait).

■ **COMMON PITFALLS**

Diagnosing miscarriage on one borderline scan — rescan if uncertain.

Ignoring Doppler in a small fetus (SGA vs FGR).

Applying the 4 mm ET cut-off to women on HRT/tamoxifen.

446.5 Must-know summary

■ **EXAM TIP**

- Miscarriage: CRL ≥ 7 mm no heartbeat, or MSD ≥ 25 mm no pole (NICE).
- SGA < 10th centile; FGR includes Doppler; AEDF/REDF = severe.
- MCA PSV > 1.5 MoM = fetal anaemia; DVP < 2 / > 8 cm; cervix < 25 mm.
- Low-lying placenta < 20 mm from os; PMB ET ≥ 4 mm → investigate.

■ **MNEMONIC / MEMORY AID**

Early pregnancy — '7 and 25' (CRL 7 mm, MSD 25 mm).