PIPADOR REVISION

MRCOG Part 1 Revision Notes

CT and MRI Results

DATA INTERPRETATION • LECTURE 450

VISUAL EXAMINATION REVISION NOTES

2026 Edition

450

MRCOG PART 1 REVISION NOTES | DATA INTERPRETATION

CT and MRI Results

Definitions, indications, safety in pregnancy and worked report interpretation

CT	MRI	No gadolinium	MDT
Ovarian cancer staging	Pelvic soft tissue	In pregnancy	Imaging + pathology

■ KEY FACTS: Learning objectives

- Define CT, MRI, contrast agents and key radiological terms used in gynaecological and obstetric reports.
- Describe the main indications for CT and MRI in O&G and their safety in pregnancy.
- Interpret typical CT/MRI report findings with worked cases.

450.1 Key definitions

Term	Definition
CT (computed tomography)	• Cross-sectional X-ray imaging — fast, good for chest/abdomen • Uses ionising radiation
MRI	• Imaging using magnetic fields and radiofrequency — excellent soft-tissue contrast • No ionising radiation
T1 / T2-weighted	MRI sequences: fluid bright on T2 (e.g. cysts), fat/blood bright on T1 (endometrioma 'T2 shading')
DWI (diffusion-weighted imaging)	Shows restricted water movement — cellular tumours, abscess
Iodinated contrast	• CT contrast — caution in renal impairment • Neonatal thyroid check if given in pregnancy
Gadolinium	MRI contrast — crosses placenta; avoid in pregnancy unless essential
Omental cake	Thickened omentum infiltrated by tumour (ovarian cancer)
Junctional zone	Inner myometrium on T2 MRI — thickened (≥ 12 mm) in adenomyosis
Parametrial invasion	Tumour spread into tissues beside the cervix (cervical cancer stage IIB)

■ IN PLAIN ENGLISH: CT and MRI

CT is the workhorse for **spread** (chest, abdomen, nodes, ovarian cancer). **MRI** is best for **detail in the pelvis** (cervix, uterus, endometriosis, placenta) and is safe in pregnancy without contrast.

450.2 Indications

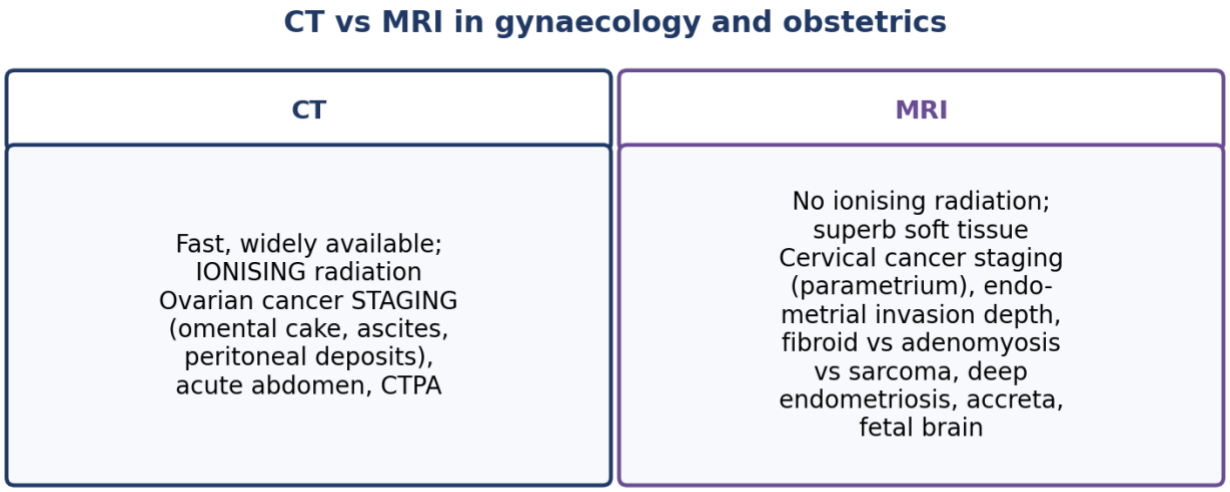


Figure 450.1 — CT vs MRI in O&G

450.3 Safety in pregnancy

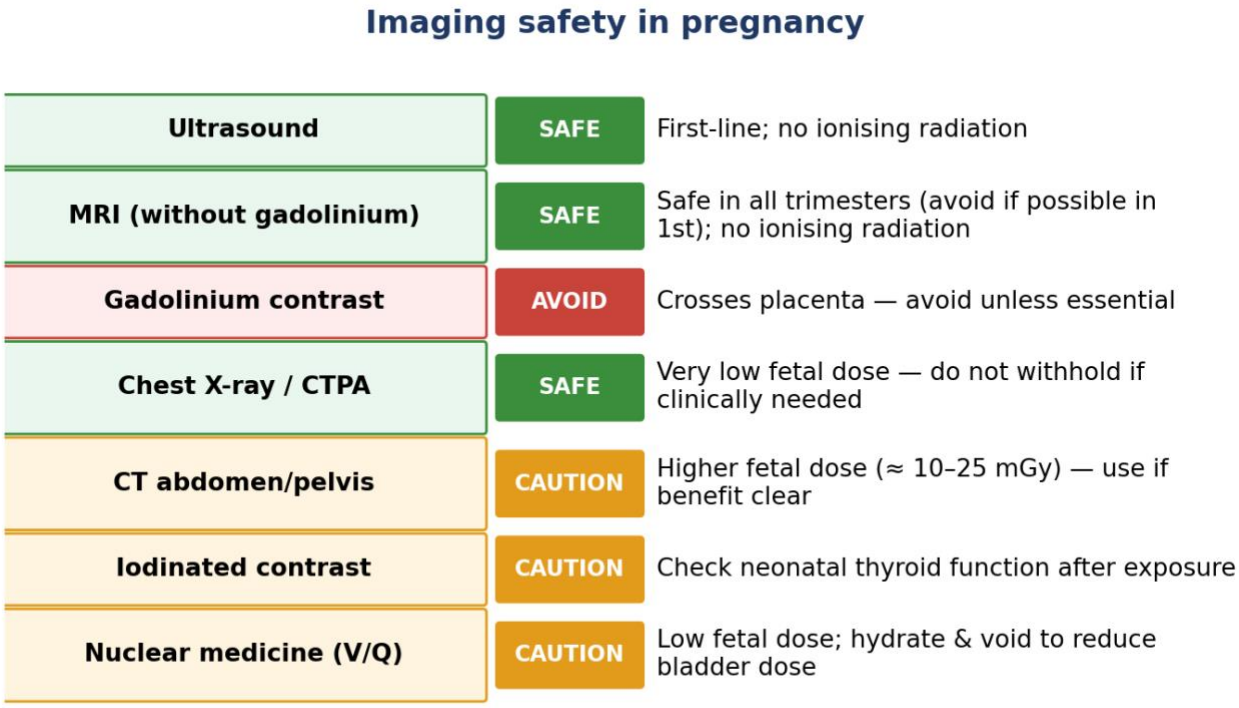


Figure 450.2 — Imaging safety in pregnancy

450.4 Worked cases

■ WORKED EXAMPLE

Case 1 — CT chest/abdomen/pelvis: bilateral complex adnexal masses, ascites, **omental cake**, peritoneal deposits on diaphragm, CA-125 1,200 → **advanced ovarian cancer (≥ stage III)** → MDT, image-guided biopsy, neoadjuvant chemotherapy or primary debulking.

Case 2 — MRI pelvis: 3 cm cervical tumour, intact parametrial fat, no nodes → **stage IB2** → radical hysterectomy (or chemoradiation per MDT).

Case 3 — MRI for presumed fibroid growing after menopause: heterogeneous mass with high T2 signal, restricted diffusion, necrosis → **suspicious for leiomyosarcoma** → avoid morcellation.

Case 4 — 32 wk, placenta praevia with previous CS: MRI shows loss of retroplacental myometrium, placental bulge into bladder → **placenta accreta spectrum** → specialist MDT, planned CS-hysterectomy.

■ COMMON PITFALLS

Avoiding necessary CT in a pregnant woman with a life-threatening condition.

Giving gadolinium routinely in pregnancy.

Assuming CT can reliably stage cervical cancer locally (MRI is better).

450.5 Must-know summary

■ EXAM TIP

- CT: staging (ovarian cancer — omental cake, ascites), acute abdomen, CTPA; ionising radiation.
- MRI: cervical cancer (parametrium), endometrial invasion, adenomyosis (JZ ≥ 12 mm), sarcoma features, deep endometriosis, accreta, fetal brain.
- MRI safe in pregnancy without gadolinium; iodinated contrast → neonatal thyroid check.
- Interpret with clinical findings and MDT.

■ MNEMONIC / MEMORY AID

'CT for spread, MRI for detail'.