PIPADOR REVISION

MRCOG Part 1 Revision Notes

Routes of Metastasis

PATHOLOGY • LECTURE 339

VISUAL EXAMINATION REVISION NOTES

2026 Edition

339

MRCOG PART 1 REVISION NOTES | PATHOLOGY

Routes of Metastasis

Metastatic cascade, routes of spread and patterns in gynaecological cancers

Lymphatic	Haemato- genous	Trans- coelomic	Sentinel node
Carcinomas	Sarcomas, choriocarcinoma	Ovarian cancer	Vulva, endometrium, cervix

■ KEY FACTS: Learning objectives

- Describe the metastatic cascade.
- Describe routes of spread: direct, lymphatic, haematogenous, transcoelomic and implantation.
- Apply routes of spread to gynaecological cancers, staging and surgery.

339.1 The metastatic cascade

Local invasion — ↓ E-cadherin (EMT), MMPs degrade basement membrane ▶ Intravasation into lymphatics/blood vessels ▶ Survival in circulation (platelet cloaking, immune evasion) ▶ Extravasation at distant site ▶ Colonisation — dormancy, angiogenesis (VEGF), 'seed and soil'

339.2 Routes

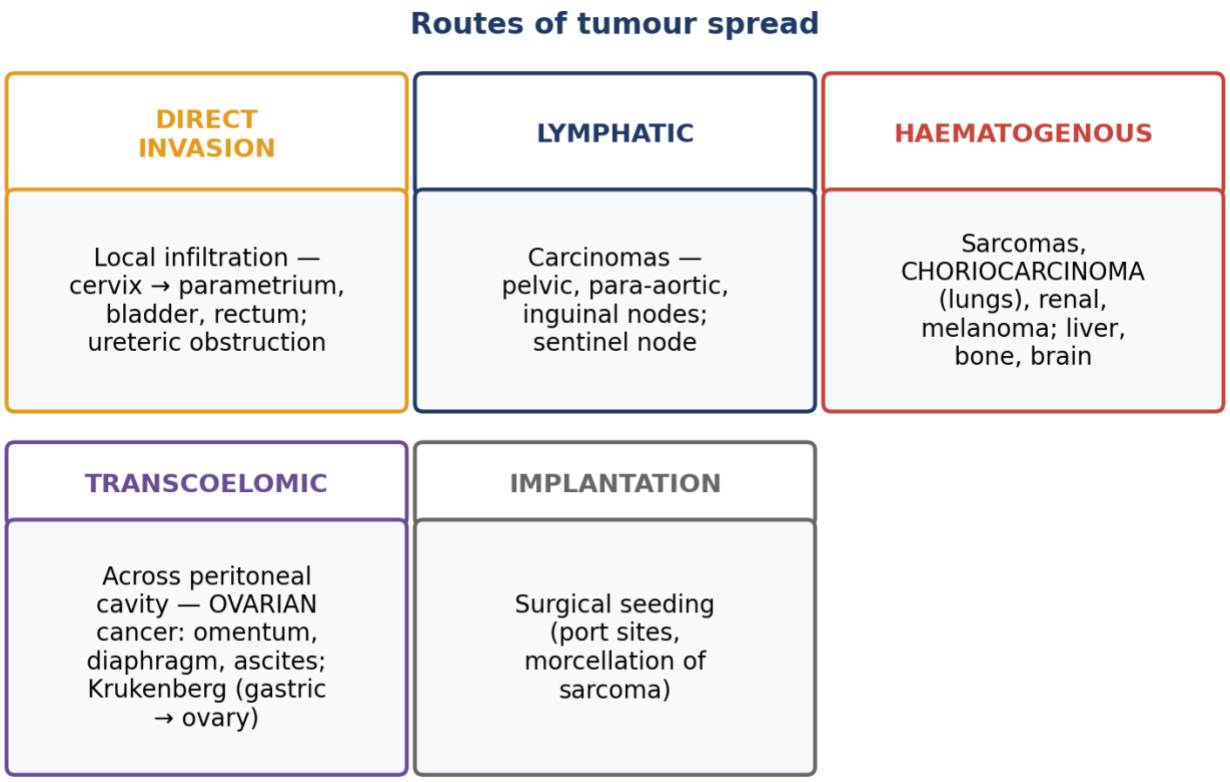


Figure 339.1 — Routes of spread

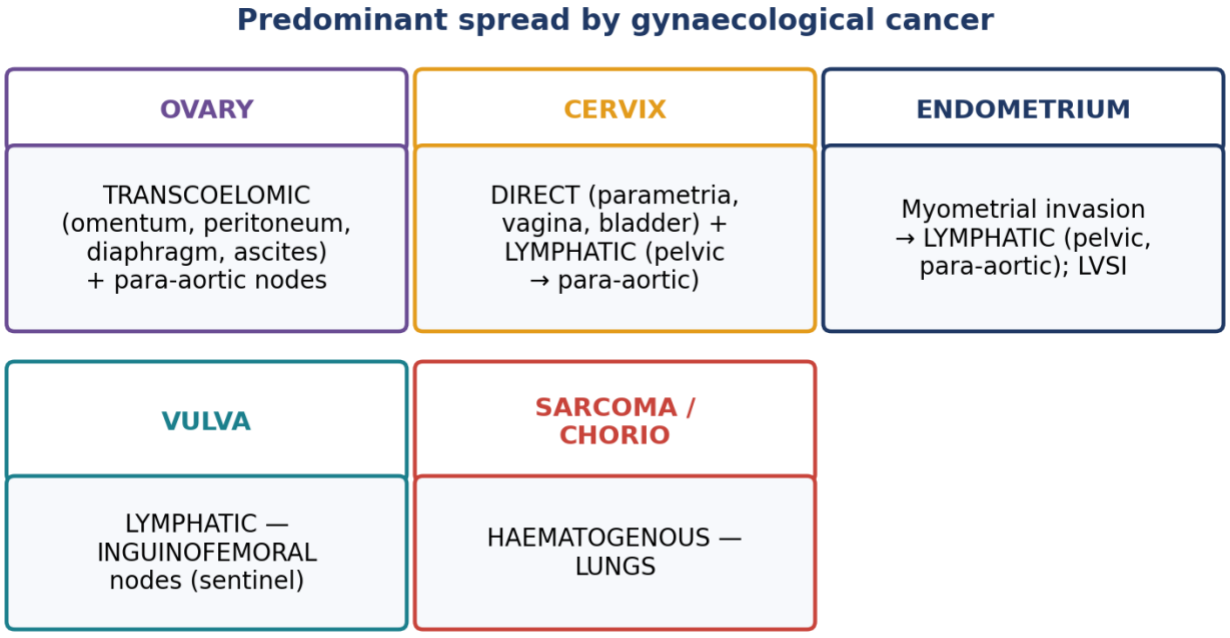


Figure 339.2 — Spread of gynaecological cancers

Cancer	Spread and clinical relevance
Ovary	• Transcoelomic → omentum, peritoneum, diaphragm, ascites • Para-aortic nodes (via ovarian vessels) • **Cytoreductive surgery** (no residual disease) is key
Cervix	• Direct → parametria (ureteric obstruction — hydronephrosis), vagina, bladder/rectum

Cancer	Spread and clinical relevance
	• Lymphatic → pelvic → para-aortic • FIGO 2018 includes nodal status (IIIC)
Endometrium	• Myometrial invasion, LVSI → pelvic/para-aortic nodes (sentinel node biopsy) • Cervical stroma • Haematogenous (lung) in high-grade
Vulva	Inguinofemoral nodes (ipsilateral first; midline lesions bilateral) — sentinel node for unifocal < 4 cm
Choriocarcinoma, sarcoma	Haematogenous → lungs (cannonball), liver, brain
Krukenberg tumour	Gastric/colorectal/breast metastases to ovaries (signet-ring cells) — bilateral

339.3 Must-know summary

■ **EXAM TIP**

- Cascade: invasion → intravasation → survival → extravasation → colonisation.
- Carcinomas favour lymphatics; sarcomas/choriocarcinoma haematogenous; ovarian cancer transcoelomic.
- Cervix → parametria/pelvic nodes; endometrium → pelvic/para-aortic nodes; vulva → inguinofemoral.
- Sentinel node biopsy reduces morbidity; Krukenberg = GI metastasis to ovary.

■ **MNEMONIC / MEMORY AID**

'Carcinoma Climbs Lymphatics, Sarcoma Swims in blood'.