PIPADOR REVISION

MRCOG Part 1 Revision Notes

Histology and Pathology of the Male Genital Tract

PATHOLOGY • LECTURE 318

VISUAL EXAMINATION REVISION NOTES

2026 Edition

MRCOG PART 1 REVISION NOTES | PATHOLOGY

318 Histology and Pathology of the Male Genital Tract

Testis, ducts and prostate histology, testicular tumours, male infertility, prostatic and scrotal pathology

≈ 74 days	Germ cell	AFP · hCG · LDH	Cryptorchidism
Spermatogenesis	≈ 95% of testicular tumours	Tumour markers	Risk factor — infertility & cancer

■ KEY FACTS: Learning objectives

- Describe the histology of the testis, epididymis, vas deferens and prostate.
- Describe testicular tumours and markers, and causes of male infertility.
- Describe prostatic and penile pathology and acute scrotal conditions.

318.1 Normal histology

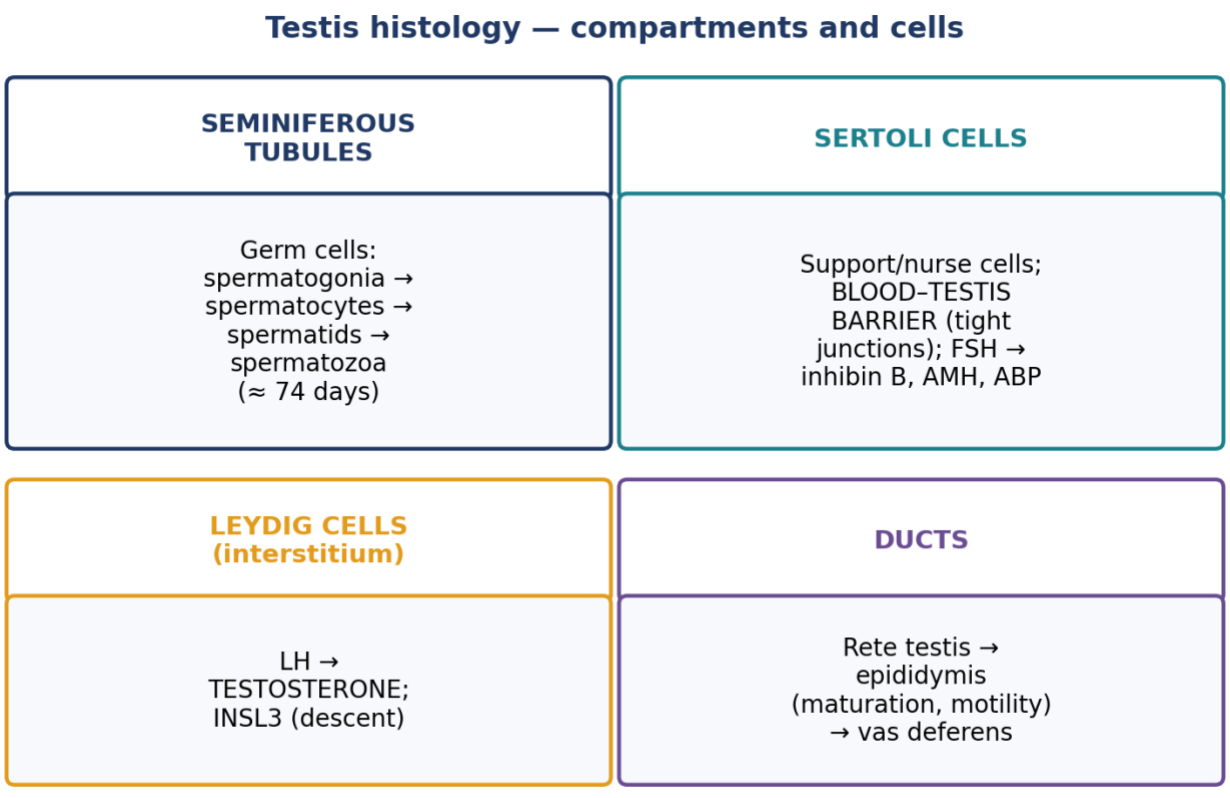


Figure 318.1 — Testis compartments

Structure	Histology / function
Epididymis	• Pseudostratified columnar epithelium with stereocilia • Sperm maturation and motility (≈ 2 weeks)

Structure	Histology / function
Vas deferens	Thick muscular wall (3 layers) — peristalsis at ejaculation
Seminal vesicles	Fructose-rich fluid (≈ 70% of semen volume)
Prostate	• Glands with luminal secretory + basal cells (basal layer lost in carcinoma) • Zones: peripheral (cancer), transition (BPH), central
Penis	Corpora cavernosa (erection — NO/cGMP), corpus spongiosum (urethra)

318.2 Pathology

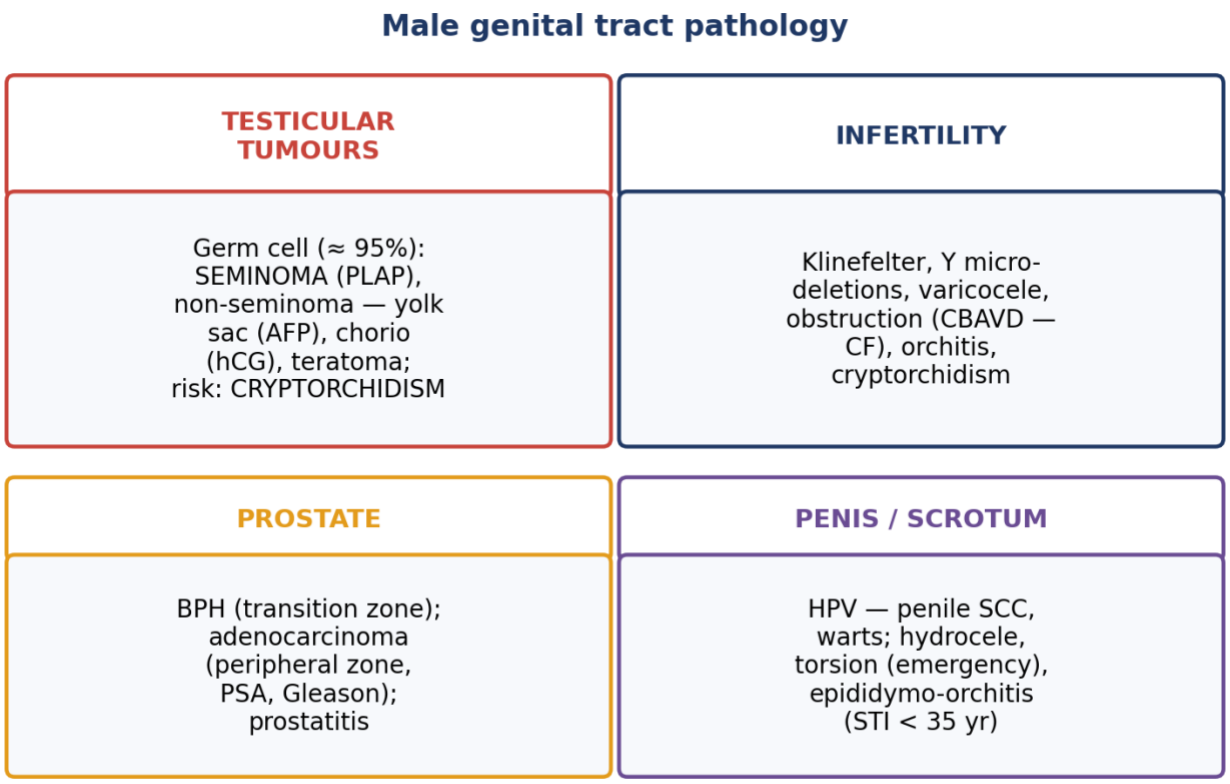


Figure 318.2 — Male genital tract pathology

Testicular tumour	Features / markers
Seminoma	• Commonest (30s) • 'fried egg' cells with lymphocytes • Radiosensitive • Markers usually normal (± hCG mildly, LDH, PLAP)
Embryonal carcinoma	Aggressive; AFP ± hCG
Yolk sac tumour	Children; Schiller–Duval bodies; AFP
Choriocarcinoma	• Very high **hCG** (gynaecomastia, hyperthyroidism) • Haematogenous spread
Teratoma	Children — benign; adults — malignant potential
Non-germ cell	• Leydig (testosterone/oestrogen — precocious puberty, gynaecomastia), Sertoli • Lymphoma in older men

- Germ cell tumours arise from **germ cell neoplasia in situ**
  - Risks: cryptorchidism, previous tumour, family history, infertility, Klinefelter (mediastinal).
- Male infertility contributes to ≈ 50% of couples' subfertility: semen analysis (WHO 2021)
  - Endocrine (FSH, LH, testosterone)
  - Genetics (karyotype, Y microdeletions, CFTR for CBAVD).
- **Acute scrotum**: testicular **torsion** (adolescents — surgical emergency within 6 h), epididymo-orchitis (STI < 35; E. coli older), torted hydatid of Morgagni.

318.3 Must-know summary

■ EXAM TIP

- Sertoli (FSH, inhibin B, AMH, blood–testis barrier) vs Leydig (LH, testosterone).
- Germ cell tumours ≈ 95%: seminoma vs non-seminoma; AFP (yolk sac), hCG (choriocarcinoma), LDH.
- Cryptorchidism → infertility and cancer; torsion is an emergency.
- Prostate: BPH (transition zone), cancer (peripheral zone, Gleason, PSA).

■ MNEMONIC / MEMORY AID

Tumour markers — 'AFP = yolk sAc; hCG = cHoriocarcinoma'.