HIV — CD4 Thresholds & OI Recognition

CD4 staging, OI risk & recognition clues

CLINICAL PATHWAY

Opportunistic infection (OI) risk rises sharply once CD4 falls below 200 cells/mm³. Starting and maintaining ART is the best prevention — suppression restores CD4 and reduces OI risk. Test for HIV in anyone presenting with an unexplained or unusual infection.

CD4 THRESHOLDS & OI RISK

Risk rises sharply once CD4 falls below 200

>500	Normal range. OI risk very low. Routine GP follow-up; annual VL if stable on ART.
350–500	Mild immunosuppression. Monitor; ensure ART adherence; no specific prophylaxis required.
200–350	Begin watching closely. Vaccinate; screen for latent TB; review adherence at each visit.
100–200	PCP, TB & cryptococcus risk rise — start co-trimoxazole prophylaxis; specialist input.
<100	Severe immunosuppression. MAC, CMV & toxoplasma risk. All indicated prophylaxis; urgent review.

KEY OIs — RECOGNITION CLUES

- **PCP (CD4 <200):** subacute SOB, dry cough, fever, desaturation on exertion.
- **Toxoplasmosis (CD4 <100):** headache, focal neurology, ring-enhancing CNS lesions on imaging.
- **Cryptococcal meningitis (CD4 <100):** headache, fever, neck stiffness, raised ICP.
- **CMV retinitis (CD4 <50):** floaters, visual loss — urgent ophthalmology review.
- **MAC (CD4 <50):** fever, night sweats, diarrhoea, raised LFTs, pancytopenia.
- **Oesophageal candida (CD4 <100):** dysphagia, odynophagia; oral thrush usually present.

■ SAFETY

- A first presentation of an OI can be the first sign of undiagnosed HIV — test broadly in unexplained or unusual infections.
- Interpret CD4 alongside viral load; a falling CD4 with detectable VL suggests adherence failure or resistance — needs specialist input.

■ RED FLAGS / REFER

- Any suspected opportunistic infection in a person with HIV and low CD4 — refer same day.
- New neurological signs: headache, focal deficit, confusion, fever.
- Visual changes (floaters, vision loss) or severe/subacute dyspnoea with desaturation.

Companion sheet: ID-04B (OI prophylaxis, TB co-infection & vaccination). See also ID-01/02 (diagnosis & ART) and ID-03 (STI screening).
Verify against ASHM/hiv.guidelines.org.au and the CDC/NIH Adult OI Guidelines before prescribing prophylaxis.