

Voriconazole (V-Fend®)

IV and PO Only

Use requires formal ID Consult

Activity: Coverage against most *Candida spp.*, except *C. glabrata* which may be S-DD or resistant. Does not cover zygomycoses (*Mucor*, *Rhizopus*, *Cunninghamella*, etc.).

Criteria for Use:

- Treatment of documented invasive aspergillosis
- Can be used in combination with caspofungin in microbiologically or radiographically confirmed *Aspergillus*
- Serious mycosis infections due to *Fusarium spp.*, *Scedosporium apiospermum*

Dosing in Adults:

- **Standard dose:**
 - IV:** 6 mg/kg IV x2 doses (load), then 4 mg/kg IV Q12H
 - IV voriconazole should be avoided in patients with CrCl < 50 mL/min due to accumulation of cyclodextran vehicle (excipient)
 - Patients tolerating PO medications, should be given orally
Voriconazole oral formulation is >95% bioavailable
 - PO:** 400 mg PO x2 doses (load), then 200 mg PO Q12H
 - Oral formulation may be used without dose adjustment
- **Hepatic dose adjustment:**
Mild to Moderate hepatic impairment: Standard loading dose, but half maintenance dose (IV: 2 mg/kg IV Q12H; PO: 100mg PO q12H)

Monitoring:

- Aspartate aminotransferase (AST)/ Alanine aminotransferase (ALT)/ bilirubin at baseline and every 1-2 weeks after
- Serum trough levels: Draw first level within 2 to 5 days of initiating therapy and regularly thereafter. Also check when changing from IV to PO since this agent does not demonstrate linear pharmacokinetics
 - Goal level between 2 and 5 mcg/mL
 - Levels > 5 or 6 mcg/mL are associated with toxicities including visual disturbances, liver dysfunction, skin reaction, neurotoxicity (confusion, hallucinations)

Important note regarding drug interactions:

- Voriconazole has multiple drug interactions that may affect its levels and/or those of co-administered drugs. Dose adjustment may be necessary
- Some drugs with interactions of major significance include:
 - Carbamazepine
 - Rifampin/rifabutin
 - Ritonavir
 - Sirolimus
 - Tacrolimus
 - Cyclosporine
 - Warfarin
 - Phenytoin

ALT= Alanine aminotransferase; AST= Aspartate aminotransferase; CrCl= Creatinine Clearance; H= hour(s); ID= infectious diseases; IV= Intravenous; mcg= micrograms; mL= milliliter; PO= by mouth; Q= every; S-DD= susceptible dose-dependent; spp= species