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Voriconazole

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Voriconazole (VCZ) is a second generation triazole that is an antifungal agent used in human and veterinary medicine to treat systemic fungal infections. Approved by the United States Food and Drug Administration (USFDA) in 2002, it is a synthetic derivative of fluconazole with changes to the chemical structure that resulted in a greater antifungal spectrum when compared to fluconazole.[1] In human medicine, VCZ has an enhanced spectrum of activity that includes *Candida* spp., *Aspergillus* spp., *Cryptococcus* spp., dimorphic fungi (e.g., *Blastomyces dermatitidis, Coccidioides immitis, Histoplasma capsulatum*), and filamentous fungi (e.g., *Fusarium* spp.), but not Zycomycetes.[2] Due to its high oral bioavailability and efficacy, VCZ has become a mainstay of both primary and salvage treatment of human invasive aspergillosis and candidiasis.[1,2,3,4] In the last decade, evidence for the use of VCZ in veterinary patients has started to accumulate. At this time a generic option for this medication is now available, therefore the use of this antifungal agent may no longer be cost-prohibitive.

In humans, the pharmacokinetics of VCZ is non-linear; therefore the drug's dose dictates the pharmacokinetics.[1] Similar dose dependent therapeutic levels appear to occur across taxa for this medication. Voriconazole is eliminated by the hepatic enzyme P450 with saturation possible.[1] In some animal species, other than humans, there is evidence that the drug auto-induces its own metabolism with repeated administration.