SydPath
ST VINCENT'S PATHOLOGY

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POSACONAZOLE DRUG MEASUREMENT

INFORMATION SHEET

<table>
<tr><td>Prosaconazole</td><td>- Broad-spectrum triazole antifungal.
- Active against most Candida spp., Cryptococcus spp., dimorphic fungi, filamentous fungi including Aspergillus spp., Zygomycetes.</td></tr>
<tr><td>When to consider TDM</td><td>At initiation of therapy and regularly thereafter. Consider TDM when starting or stopping interacting drugs and in whom there is concern for suboptimal/altered absorption, e.g severe mucositis, or graft-versus-host disease of the gut.</td></tr>
<tr><td>Pharmacokinetics (may be altered in critical illness and organ dysfunction)</td><td>
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<tr><td>Absorption</td><td>Oral liquid: When administered with food, bioavailability improves to a level comparable to tablet formulation. Oral tablet: 54%</td></tr>
<tr><td>Protein binding</td><td>>98%</td></tr>
<tr><td>Clearance</td><td><u>Metabolism:</u>
- Primarily hepatic glucuronidation.
- Strong inhibitor of CYP3A4
<u>Renal:</u>
- 14%</td></tr>
<tr><td>Elimination t½</td><td>Oral liquid: 20-66 hours
Oral tablet: 26-31 hours
IV: ~27 hours</td></tr>
<tr><td>Time to steady state</td><td>Oral liquid: about 7-10 days. (longer because of erratic absorption)
Oral tablets or IV formulation: about 5 days</td></tr>
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<tr><td>Sample Collection Time</td><td>Collect samples at steady state: Trough sample.</td></tr>
<tr><td>Requesting and Collection</td><td>Collect 4 mL in a purple top (EDTA) tube (no gel separator). Important information required on request form: 1) Time and date of last dose 2) Time since last dose change/commencement 3) Time of blood sample collection 4) Dosing regimen.</td></tr>
<tr><td>Handling and Transport</td><td>Sample must be delivered to laboratory within 1 hour of collection. If not delivered to the lab within 2 hours of collection, centrifuge, separate plasma and freeze within 3 hours of collection.</td></tr>
<tr><td>Availability</td><td>Test generally performed 3 days a week. Specific days and timing should be confirmed with SydPath.</td></tr>
<tr><td>Reference Intervals</td><td>Suggested Therapeutic Targets
For prophylaxis: Trough >700 µg/L</td></tr>
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	For treatment of established infection: Trough >1000 µg/L **Toxic Range:** Not well defined
Contact	Patient Results: (02) 8382 9100 Further information: www.sydpath.com.au - Test Database
Instructions for Referring laboratories	Centrifuge, separate plasma within 3 hours of collection, store and transport plasma frozen.
Document Approval	07/2017
References	1. Ashbee HR, Barnes RA et al. Therapeutic drug monitoring (TDM) of antifungal agents: guidelines from the British Society for Medical Mycology. J Antimicrob Chemother. 2014;69(5):1162-76. 2. Myers E, Ashley E. Antifungal Drug Therapeutic Monitoring: What are the Issues? Curr Clin Micro Rpt (2015) 2:55- 66 3. Micromedex Solutions [Database]. Greenwood Village, Colorado: Truven Health Analytics 2017. Available from: www.micromedexsolutions.com. 4. Australian Medicines Handbook online. Accessed 02/03/2017. 5. Product Information: Noxafil(R) oral delayed-release tablets, oral suspension, posaconazole oral delayed-release tablets, oral suspension. Merck Sharp & Dohme Corp. (per FDA), Whitehouse Station, NJ, 2013.