

## Voriconazole - Therapeutic Drug Monitoring (TDM) Guidance

On the microbiology request card for serum levels, please supply details of the level required, the time and date of the sample and the time since the last dose was administered. For further details and information on the sample required please visit the [Laboratories departmental page for Individual tests and select the appropriate drug from the A-Z list.](#)

Results can be obtained electronically via TrakCare and SCI-store or from Medical Microbiology (Ext 52451). Help in interpretation of the results and dose adjustments for individual patients can be obtained from your ward Clinical Pharmacist, Specialist Antibiotic Pharmacists (Ext 51048), Medicines Information Service (Ext 52316), or out of hours the On-call Pharmacist via switchboard or from the duty medical microbiologist.

In patients with impaired renal function or levels outwith the therapeutic range, please contact your clinical pharmacist or medical microbiologist for advice on dosage and the need for further assays.

Drug	Optimum sampling time(s)	Target Range/Points to note
<b>Voriconazole</b>	Pre-dose (trough) level taken 2-5 days after starting therapy.	<p>Prophylaxis and treatment: 1 - 5.5 mg/L - see below for severe infections.</p> <p>Severe infections: 2 - 6 mg/L, e.g. multifocal, disseminated disease, CNS infections or treatment of pathogens with elevated MICs, e.g. <i>Aspergillus fumigatus</i> MIC of 2 mg/L.</p> <p>Repeat level the following week to ensure patients remains in the therapeutic range.</p> <p>Repeated monitoring advised until confirmation of steady-state level in the therapeutic range, following any change in clinical condition and, e.g. when interacting drugs stopped or started, concerns about non-compliance, gastro-intestinal absorption or toxicity.</p> <p>Monitor liver function before starting treatment, then at least weekly for 1 month, and then monthly during treatment.</p> <p>Monitor renal function.</p> <p>Electrolyte disturbances such as hypokalaemia, hypomagnesaemia and hypocalcaemia should be monitored and corrected, if necessary, prior to initiation and during voriconazole therapy.</p> <p><i>(NB: Levels not assayed in ARI – liaise with Medical Microbiology).</i></p>

## References

1. Individual drug monograph - <https://bnf.nice.org.uk/drug/voriconazole.html>
2. Summary of product characteristics – (Voriconazole Actavis 200mg Powder for Solution for Infusion, Accord-UK Ltd – accessed 4/6/20)
3. North Bristol NHS Trust Antimicrobial Reference Laboratory – Guideline Ranges 2020 - <https://www.nbt.nhs.uk/sites/default/files/Antibiotic%20Guideline%20Ranges%202020.pdf>
4. North Bristol NHS Trust Antimicrobial Reference Laboratory – Analytes – Voriconazole <https://www.nbt.nhs.uk/severn-pathology/requesting/test-information/voriconazole>
5. Ullmann A.J. et al. 2018. Diagnosis and management of Aspergillus diseases: executive summary of the 2017 ESCMID-ECMM-ERS guideline. Clin Microbiol Infect. S1:e1-e38 [https://www.clinicalmicrobiologyandinfection.com/article/S1198-743X\(18\)30051-X/fulltext](https://www.clinicalmicrobiologyandinfection.com/article/S1198-743X(18)30051-X/fulltext)