

# Ganciclovir

## Newborn Use Only

2017

<b>Alert</b>	<b>IV ganciclovir is a cytotoxic agent.</b>
<b>Indication</b>	1) Treatment of severe or moderately severe, symptomatic congenital CMV, or 2) Treatment of acute severe CMV disease.
<b>Action</b>	Synthetic nucleoside analogue of 2-deoxyguanosine that inhibits replication of herpes viruses. Sensitive human viruses include cytomegalovirus, herpes simplex virus 1 and 2, herpes virus type 6, 7 and 8, Epstein-Barr virus, varicella zoster virus and hepatitis B virus.
<b>Drug Type</b>	Antiviral
<b>Trade Name</b>	Cymevene
<b>Presentation</b>	Injection containing ganciclovir sodium 500 mg (for reconstitution)
<b>Dosage/Interval</b>	6 mg/kg/dose 12 hourly.  Infants may be switched to oral valganciclovir if clinically stable and able to take oral medications. IV ganciclovir should generally not be used for more than 6 weeks. Please note, oral valganciclovir is the oral prodrug of ganciclovir and prescribed at a different dose.
<b>Route</b>	IV
<b>Preparation/Dilution</b>	<b>IV ganciclovir is a cytotoxic agent.</b> Contact Pharmacy to order reconstituted/pre-diluted product. Final concentration should not be higher than 10 mg/mL.
<b>Administration</b>	<b>IV ganciclovir is a cytotoxic agent. Follow full cytotoxic precautions as per local policy.</b>  IV infusion over 30 minutes with a syringe pump. Central line is preferred as medication has high pH and can cause tissue irritation. Peripheral cannula may be used for short-term treatment but the IV site should be monitored carefully.
<b>Monitoring</b>	Full blood count, particularly neutrophil count, should be followed weekly for 6 weeks, then at week 8, then monthly for the duration of therapy.  Liver function tests monthly throughout therapy.  Renal function tests.
<b>Contraindications</b>	Hypersensitivity to ganciclovir, valganciclovir, aciclovir or valacyclovir.  Patients with: <ul style="list-style-type: none"> <li>• absolute neutrophil count below <math>0.5 \times 10^9/L</math> or</li> <li>• platelet count below <math>25 \times 10^9/L</math> unless thrombocytopenia is related to CMV disease, or</li> <li>• haemoglobin less than 80 g/L (8 g/dL).</li> </ul>
<b>Precautions</b>	Ganciclovir has both gonadal toxicity and carcinogenicity in animal models and its long-term safety after administration to young children is not established. <sup>1</sup>
<b>Drug Interactions</b>	Convulsions have been reported in patients receiving ganciclovir and imipenem-cilastatin concurrently. Concurrent use of tacrolimus and ganciclovir increases nephrotoxicity.
<b>Adverse Reactions</b>	Commonly causes neutropenia. If absolute neutrophil count (ANC) falls below $0.5 \times 10^9/L$ and if it is thought not to be due to CMV disease, withhold medication until ANC is above $0.75 \times 10^9/L$ then restart medication at half dose. If ANC falls below $0.5 \times 10^9/L$ again, consider discontinuing the medication.  Can also cause anaemia and thrombocytopenia. Discontinue medication if platelet count below $25 \times 10^9/L$ or haemoglobin less than 80 g/L occurs and is thought not to be due to CMV disease.
<b>Compatibility</b>	<u>Fluids:</u> Glucose 5%, sodium chloride 0.9%.  <u>Drugs via Y-site:</u> Anidulafungin, caspofungin, filgrastim, fluconazole, linezolid, remifentanyl.
<b>Incompatibility</b>	<u>Fluids:</u> Amino acid/glucose. Lipid emulsion.  <u>Drugs:</u> Adrenaline (epinephrine) hydrochloride, amikacin, aminophylline, ampicillin, aztreonam, benztropine, benzylpenicillin, cefazolin, cefepime, cefotaxime, cefoxitin, ceftazidime, ceftriaxone, clindamycin, dobutamine, dopamine, erythromycin, esmolol, gentamicin,

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	hydralazine, hydrocortisone sodium succinate, imipenem-cilastatin, lidocaine (lignocaine), magnesium sulfate, methylprednisolone sodium succinate, metronidazole, midazolam, morphine sulfate, mycophenolate mofetil, noradrenaline (norepinephrine), pentamidine, pethidine, phenylephrine, piperacillin-tazobactam (EDTA-free), potassium acetate, pyridoxine, sodium ascorbate, sodium bicarbonate, suxamethonium, tacrolimus, thiamine, ticarcillin-clavulanate, tobramycin, vancomycin, vecuronium, verapamil.
<b>Stability</b>	Compounding centres that are licensed by the Australian Therapeutic Goods Administration to reconstitute and/or further dilute cytotoxic medicines and have validated aseptic procedures and regular monitoring of aseptic technique may apply a shelf life of 15 days at 2 to 8°C (refrigerate, do not freeze) to ganciclovir IV infusions reconstituted with water and further diluted with sodium chloride 0.9% or glucose 5%. Please contact your Pharmacy Department for more information or refer to expiry date on the product.
<b>Storage</b>	Unused vials: Store below 30°C. Pre-diluted solution: Store at 2 to 8°C (or as instructed on product label by compounding facility).
<b>Special Comments</b>	
<b>Evidence summary</b>	
<b>References</b>	

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