LearnInfection
a learning platform for infection trainees

Cidofovir

Indications: Has effect against a **variety of DNA viruses** – adenovirus, herpesviruses, papillomaviruses, polyomaviruses, & poxviruses

Most commonly used in treatment of **CMV retinitis**

Due to **significant nephrotoxicity**, usually used as a last resort agent in **drug resistant infections**

Mechanism of action: cidofovir is a **monophosphate nucleotide analogue.**

- Cellular uptake then cellular phosphorylation to active form **cidofovir diphosphate.** This has two actions:

1. directly inhibiting viral DNA polymerase
2. acts as alternate substrate for incorporation into newly formed DNA

These actions combine to result in growing **DNA chain termination**

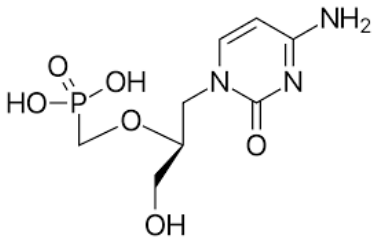
Dose: IV only. Dosing frequency = weekly or fortnightly.

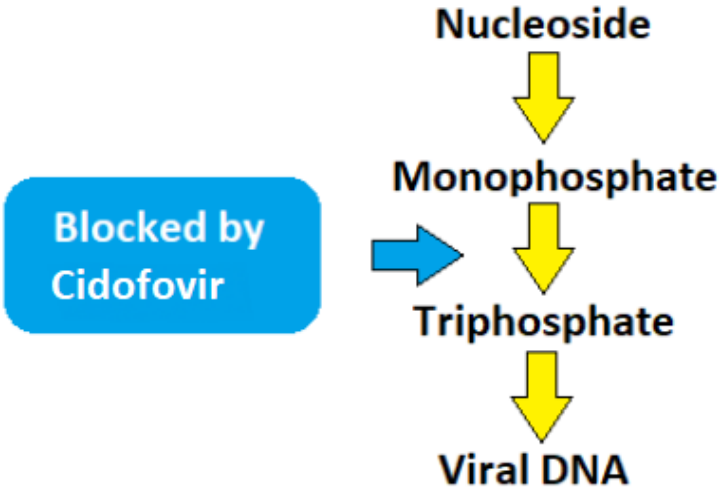
Must be given **with IV fluids before and after; AND probenecid.**

Probenecid provides **nephro-protection**. Cidofovir is primarily cleared by the kidneys. **Probenecid competes with Cidovoir** for tubular secretion. This results in maintaining the blood drug level in therapeutic range for longer, whilst reducing renal accumulation and nephrotoxicity.

Adverse effects (please see BNF)

- **nephrotoxicity – significant risk.** Usually reversible on discontinuation.
- **neutropenia**





Use in Pregnancy/ Breast feeding
Lack of information available.
Manufacturer advises to avoid

Use in Renal impairment
Avoid in significant renal impairment