BlueCross BlueShield Federal Employee Program

VALCYTE (valganciclovir)

RATIONALE FOR INCLUSION IN PA PROGRAM

Background

Valcyte (valganciclovir) is an orally administered antiviral prodrug with no antiviral activity until converted in the body to ganciclovir. Ganciclovir is used in the treatment of Cytomegalovirus (CMV) by interfering with DNA synthesis (1).

Regulatory Status

FDA-approved indications: Valcyte is a deoxynucleoside analogue cytomegalovirus (CMV) DNA polymerase inhibitor indicated for: (1)

Adult Patients

1. Treatment of Cytomegalovirus (CMV) Retinitis in patients with acquired immunodeficiency syndrome (AIDS).

2. Prevention of CMV Disease in kidney, heart, or kidney-pancreas transplant patients at high risk (Donor CMV seropositive/Recipient CMV seronegative [D+/R-]).

Pediatric Patients

1. Prevention of CMV Disease in kidney transplant patients (4 months to 16 years of age) and heart transplant patients (1 month to 16 years of age) at high risk.

Off-Label Uses: (2-3).

- Treatment of cytomegalovirus (CMV) disease in symptomatic patients
- Prevention of CMV infection in post-hematopoietic stem cell transplant (HSCT)
- Prevention of CMV infection in post solid organ transplant (including liver or lung)

Adult patients should use Valcyte tablets, not Valcyte for oral solution. Both the tablets and solution are indicated in pediatric patients (1).

Cytomegalovirus (CMV) infections are among the most common infections that occur following solid organ transplantation. Organ transplant recipients at highest risk of CMV infection are those who are seronegative before transplantation and receive an organ from a seropositive donor (a combination

commonly referred to as donor-positive/ recipient-negative [D^+/R^-]); in these patients, latent CMV can be transmitted with the organ and subsequently reactivate, causing *de novo* or primary infection. The incidence of CMV disease in D^-/R^- transplantations is <5% (4).

Valcyte has a boxed warning regarding hematologic toxicity, carcinogenicity, teratogenicity, and impairment of fertility. Clinical toxicity of Valcyte includes leukopenia, neutropenia, anemia, thrombocytopenia, pancytopenia and bone marrow failure including aplastic anemia (1).

Valcyte should be avoided if the absolute neutrophil count is <500 cells/µL, the platelet count is <25,000/µL, or the hemoglobin is <8 g/dL (1).

Use with caution in patients with pre-existing cytopenias, or who have received or who are receiving myelosuppressive drugs or irradiation. Cytopenia may occur at any time during treatment and may worsen with continued dosing. Cell counts usually begin to recover within 3 to 7 days after discontinuing drug (1).

Advise female patients of reproductive potential to use effective contraception during treatment and for at least 30 days following treatment with Valcyte. Advise male patients to practice barrier contraception during and for at least 90 days following treatment with Valcyte (1).

Acute renal failure may occur in elderly patients with or without reduced renal function, patients receiving concomitant nephrotoxic drugs, or patients without adequate hydration. Monitor CBC with differential, platelets, ophthalmic, and renal function. Patients must maintain adequate hydration (1).

Maribavir may inhibit the antiviral activity of valganciclovir due to its mechanism of action, and therefore coadministration should be avoided (5).

Summary

Valcyte (valganciclovir) is an orally administered antiviral prodrug with no antiviral activity until converted in the body to ganciclovir. Valcyte is used for the treatment of Cytomegalovirus (CMV) disease in symptomatic patients, or for the prevention of CMV disease in patients who are post solid

organ transplant (including heart, liver, lung, kidney, or kidney-pancreas), or post hematopoietic cell transplant (HCT) (1-3).

Prior authorization is required to ensure the safe, clinically appropriate and cost-effective use of Valcyte while maintaining optimal therapeutic outcomes.

References

1. Valcyte [prescribing information]. South San Francisco, CA: Genentech USA, Inc.; December 2021.
2. Personal Communication, Gerald Medoff, MD, Infectious Diseases, Washington University Hospital, March 1, 2012, for treatment of symptomatic CMV infection, and off-label use post-transplant by recipients of lung and liver transplants.
3. Ljungman, Per, Morgan Hakki, and Michael Boeckh. “Cytomegalovirus in Hematopoietic Stem Cell Transplant Recipients.” *Hematology/Oncology Clinics of North America* 25.1 (2011): 151–169. *PMC*. Web. 18 Aug. 2017.
4. Kotton CN, Kumar D, Caliendo AM, et al. International consensus guidelines on the management of cytomegalovirus in solid organ transplantation. *Transplantation*. 2010;89:779.
5. Livtencity [package insert]. Lexington, MA: Takeda Pharmaceuticals U.S.A., Inc.; November 2021.