BlueCross BlueShield Federal Employee Program

MAVENCLAD (cladribine)

RATIONALE FOR INCLUSION IN PA PROGRAM

Background

Mavenclad (cladribine) is a purine antimetabolite that is thought to involve cytotoxic effects on B and T lymphocytes through impairment of DNA synthesis, resulting in depletion of lymphocytes. The exact mechanism of action in Multiple Sclerosis (MS) is unknown. It is thought that the cytotoxic effect and reduction in the number of circulating lymphocytes may result in a reduction of the damaging immune response seen in MS (1).

Regulatory Status

FDA-approved indication: Mavenclad is a purine antimetabolite indicated for the treatment of relapsing forms of multiple sclerosis (MS), to include relapsing-remitting disease and active secondary progressive disease, in adults (1).

Because of its safety profile, use of Mavenclad is generally recommended for patients who have had an inadequate response to, or are unable to tolerate, an alternate drug indicated for the treatment of MS (1).

Limitations of Use: Mavenclad is not recommended for use in patients with clinically isolated syndrome (CIS) because of its safety profile (1).

Mavenclad has a boxed warning that it may increase the risk of malignancy. Mavenclad is contraindicated in patients with current malignancy. In patients with prior malignancy or with increased risk of malignancy, they should be evaluated for the benefits and risks of the use of Mavenclad on an individual patient basis (1).

Mavenclad also carries a boxed warning regarding the risk of teratogenicity. Mavenclad is contraindicated for use in pregnant women and in women and men of reproductive potential who do not plan to use effective contraception because of the potential for fetal harm (1).

Mavenclad is contraindicated in patients with: (1)

- Current malignancy

- Pregnant women, and women and men of reproductive potential who do not plan to use effective contraception during Mavenclad dosing and for 6 months after the last dose in each treatment course
- HIV infection
- Active chronic infections (e.g., hepatitis or tuberculosis)
- Women intending to breastfeed on a Mavenclad treatment day and for 10 days after the last dose

Before each Mavenclad treatment course, a complete blood count (CBC) with differential including lymphocyte count should be obtained. Lymphocytes must be within normal limits before initiating the first treatment course and lymphocytes must be at least 800 cells per microliter before initiating the second treatment course (1).

Vaccination of patients who are antibody-negative for varicella zoster virus is recommended prior to Mavenclad initiation (1).

A baseline (within 3 months) magnetic resonance imaging should be obtained prior to the first treatment course because of the risk of progressive multifocal leukoencephalopathy (PML) (1).

Mavenclad has not been administered concomitantly with antineoplastic, immunosuppressive or immune modulating therapies used for treatment of MS. Concomitant use of Mavenclad with any of these therapies would be expected to increase the risk of immunosuppression (1).

Due to the risk of liver injury, serum aminotransferase, alkaline phosphatase, and total bilirubin levels should be obtained (1).

Live, attenuated vaccines are generally not recommended for a person with MS because their ability to cause disease has been weakened but not totally inactivated. Administer live-attenuated or live vaccines at least 4 to 6 weeks prior to starting Mavenclad, because of a risk of active vaccine infection. Avoid vaccination with live-attenuated or live vaccines during and after Mavenclad treatment while the patient’s white blood cell counts are not within normal limits (1-2).

The recommended cumulative dosage of Mavenclad is 3.5 mg per kg body weight administered

orally and divided into 2 yearly treatment courses (1.75 mg per kg per treatment course). Following the administration of 2 treatment courses, do not administer additional Mavenclad treatment during the next 2 years. Treatment during these 2 years may further increase the risk of malignancy. The safety and efficacy of reinitiating Mavenclad more than 2 years after completing 2 treatment courses have not been studied (1).

The safety and effectiveness of Mavenclad in pediatric patients less than 18 years of age have not been established (1).

Summary

Mavenclad (cladribine) is a purine antimetabolite that is thought to involve cytotoxic effects on B and T lymphocytes through impairment of DNA synthesis, resulting in depletion of lymphocytes. Although the exact mechanism of action in Multiple Sclerosis (MS) is unknown, it is thought that through this cytotoxic effect and by reducing the number of lymphocytes that are circulating in the bloodstream, this results in a reduction of the damaging immune response seen in MS (1).

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

References

1. Mavenclad [package insert]. Rockland, MA: EMD Serono Inc.; May 2024.
2. Cahill JF, Izzo A, Garg N. Immunization in patients with multiple sclerosis. Neurological Bulletin. 2010;2(1):17-21