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AUBAGIO (teriflunomide)

*Preferred product: teriflunomide

RATIONALE FOR INCLUSION IN PA PROGRAM

Background

Aubagio (teriflunomide) is indicated for relapsing multiple sclerosis. It is an anti-inflammatory immunomodulatory agent, which inhibits dihydroorotate dehydrogenase, a mitochondrial enzyme involved in de novo pyrimidine synthesis. The exact mechanism by which teriflunomide exerts its therapeutic effect in multiple sclerosis is unknown but may involve a reduction in the number of activated lymphocytes in the CNS (1).

Regulatory Status

FDA-approved indication: Aubagio is a pyrimidine synthesis inhibitor indicated for the treatment of relapsing forms of multiple sclerosis (MS), to include clinically isolated syndrome, relapsing-remitting disease, and active secondary progressive disease (1).

The Aubagio label includes a boxed warning citing the risk of hepatotoxicity. Aubagio is contraindicated in patients with severe hepatic impairment. Severe liver injury, including fatal liver failure, has been reported in patients treated with leflunomide, which is indicated for rheumatoid arthritis. A similar risk would be expected for teriflunomide because recommended doses of teriflunomide and leflunomide result in a similar range of plasma concentrations of teriflunomide. Concomitant use of Aubagio with other potentially hepatotoxic drugs may increase the risk of severe liver injury. Obtain transaminase and bilirubin levels within 6 months before initiation of Aubagio and monitor ALT levels at least monthly for six months after starting Aubagio. If drug induced liver injury is suspected, discontinue Aubagio and start an accelerated elimination procedure. Elimination of Aubagio can be accelerated by administration of cholestyramine or activated charcoal for 11 days (1).

Aubagio also carries a boxed warning on the risk of teratogenicity. Aubagio is contraindicated in pregnant women or women of childbearing potential who are not using reliable contraception. Pregnancy must be avoided during Aubagio treatment or prior to the completion of an accelerated elimination procedure after Aubagio treatment has ended. If pregnancy does occur during treatment, the drug should be immediately discontinued, and an accelerated elimination procedure should be initiated. It is possible that rapidly lowering the plasma concentration of teriflunomide by instituting an accelerated elimination procedure may decrease the risk to the fetus from Aubagio. Under these conditions, the patient should be referred to an obstetrician/gynecologist, preferably



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experienced in reproductive toxicity, for further evaluation and counseling. Men wishing to father a child should discontinue use of Aubagio and undergo an accelerated elimination procedure to decrease the plasma concentration of teriflunomide to less than 0.02 mg/L (1).

Teriflunomide is the principal active metabolite of leflunomide. Co-administration of teriflunomide with leflunomide is contraindicated (1).

Aubagio may decrease WBC. Do not start Aubagio in patients with active infections. Patients with active acute or chronic infections should not start treatment until the infection(s) is resolved. Monitor for signs and symptoms of infection. If a patient develops a serious infection, consider suspending treatment with Aubagio and using an accelerated elimination procedure. Aubagio is not recommended for patients with severe immunodeficiency, bone marrow disease, or severe, uncontrolled infections. Medications like teriflunomide that have immunosuppression potential may cause patients to be more susceptible to infection, including opportunistic infection. Obtain a complete blood cell count (CBC) within 6 months before the initiation of treatment with Aubagio (1).

In clinical studies with Aubagio, cases of tuberculosis have been observed. Prior to initiating Aubagio, screen patients for latent tuberculosis infection with a tuberculin skin test. Aubagio has not been studied in patients with a positive tuberculosis screen, and the safety of Aubagio in individuals with latent tuberculosis infection is unknown. For patients testing positive to tuberculosis screening, treat by standard medical practice prior to therapy with Aubagio (1).

In placebo-controlled studies, peripheral neuropathy, including both polyneuropathy and mononeuropathy, was reported more frequently in patients taking Aubagio than in patients taking placebo. If a patient develops symptoms consistent with peripheral neuropathy, evaluate the patient and consider discontinuing Aubagio and using accelerated elimination procedure (1).

Serum potassium level and renal function should be checked in Aubagio-treated patients with symptoms of hyperkalemia or with acute renal failure (1).

Rare cases of Stevens-Johnson syndrome and toxic epidermal necrolysis have been reported in patients with rheumatoid arthritis receiving leflunomide. A similar risk would be expected for teriflunomide. If a patient taking Aubagio develops any of these conditions, stop Aubagio therapy



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and perform an accelerated elimination procedure (1).

Blood pressure should be checked before the start of Aubagio treatment and periodically thereafter. Elevated blood pressure should be appropriately managed during treatment with Aubagio (1).

Interstitial lung disease and worsening of pre-existing interstitial lung disease have been reported during treatment with leflunomide. A similar risk would be expected for teriflunomide. If discontinuation of the drug is necessary, consider initiation of an accelerated elimination procedure (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 (2).

The safety and effectiveness of Aubagio in pediatric patients have not been established (1).

Summary

Aubagio is an immunomodulatory agent with anti-inflammatory properties and is indicated for the treatment of patients with relapsing forms of multiple sclerosis. Aubagio carries a boxed warning for an increased risk for liver injury and teratogenicity. Patients with active acute or chronic infections should not start treatment until the infection(s) is resolved. Co-administration of Aubagio with Arava (leflunomide) is contraindicated. Aubagio has not been studied in patients with a positive tuberculosis screen, and the safety of Aubagio in individuals with latent tuberculosis infection is unknown. Elimination of Aubagio can be accelerated by administration of cholestyramine or activated charcoal for 11 days. The safety and efficacy of Aubagio in pediatric patients have not been established (1).

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

References

1. Aubagio [package insert] Cambridge MA; Genzyme Corporation. June 2024.



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2. Cahill JF, Izzo A, Garg N. Immunization in patients with multiple sclerosis. Neurological Bulletin. 2010;2(1):17-21