UTILIZATION MANAGEMENT MEDICAL POLICY

POLICY: Ophthalmology – Tepezza Utilization Management Medical Policy
- Tepezza™ (teprotumumab intravenous infusion – Horizon)

REVIEW DATE: 01/18/2023

OVERVIEW

Tepezza, an insulin-like growth factor-1 receptor (IGF-1R) antagonist, is indicated for the treatment of **thyroid eye disease**, regardless of thyroid eye disease activity or duration.[1]

The Tepezza labeling (indication) was revised in April 2023 to include "regardless of thyroid eye disease activity or duration".[1] This change was supported by data from a Phase IV study.[2,3] However, full analysis of the data is not yet available. Based on limited available data, criteria changes are not needed at this time.

Disease Overview

Thyroid eye disease is a progressive, vision-threatening autoimmune inflammatory disease of the eye and orbital tissues with predominant features of fibrosis and adipogenesis.[4] It is also recognized in literature as Graves' ophthalmopathy, Graves' orbitopathy, thyroid-associated ophthalmopathy, and thyroid orbitopathy. Thyroid eye disease is most commonly related to Graves' disease. It can also develop in patients with other thyroid diseases (e.g., Hashimoto's thyroiditis) and has a higher prevalence in women than men (16 per 100,000 vs. 3 per 100,000, respectively).[5] In active disease, orbital fibroblasts appear responsible for soft tissue enlargement by expressing potential pathogenic autoantigens, such as thyrotropin receptor and IGF-1R.[4] Activation of orbital fibroblasts leads to increased hyaluronic acid production, proinflammatory cytokine synthesis, and enhanced differentiation into either myofibroblasts or adipocytes. These processes result in inflammation, enlargement of extraocular muscles and expansion of orbital tissue and fat, which in turn cause forward displacement of the eye, resulting in proptosis and inflammation.[6] The degree of severity can be staged as mild, moderate-to-severe, or sight-threatening, following quantitative assessment of lid aperture width, proptosis measurement, diplopia score, degrees of abduction in eye muscle movement, examination of the cornea for evidence of exposure keratitis or ulceration, and assessment of optic nerve function.

Dosing Information

The recommended dose is 10 mg/kg administered by intravenous infusion for the initial dose, followed by 20 mg/kg administered intravenously once every 3 weeks for seven additional doses.[1]

POLICY STATEMENT

Prior Authorization is recommended for medical benefit coverage of Tepezza. Approval is recommended for those who meet the **Criteria** and **Dosing** for the listed indication. Requests for doses outside of the established dosing documented in this policy will be considered on a case-by-case basis by a clinician (i.e., Medical Director or Pharmacist). All approvals are provided for the duration noted below. In cases where the approval is authorized in months, 1 month is equal to 30 days. Because of the specialized skills required for evaluation and diagnosis of patients treated with Tepezza as well as the monitoring required for adverse events and long-term efficacy, approval requires Tepezza to be prescribed by or in consultation with a physician who specializes in the condition being treated.

Automation: None.

RECOMMENDED AUTHORIZATION CRITERIA

Coverage of Tepezza is recommended in those who meet the following criteria:

FDA-Approved Indication

1. **Thyroid Eye Disease.** Approve for 6 months if the patient meets the following criteria (A, B, C, and D):
   Note: Thyroid Eye Disease is also recognized as Graves' ophthalmopathy, Graves' orbitopathy, thyroid-associated ophthalmopathy, and thyroid orbitopathy.
   A) Patient is ≥ 18 years of age; AND
   B) Patient has been assessed as having active disease of at least moderate severity based on signs and symptoms, according to the prescriber; AND
   Note: Examples of active disease of at least moderate severity include the degree of inflammation, degree of proptosis, presentation of diplopia.
   C) Patient has not received 8 doses (total) of Tepezza; AND
   Note: The maximum recommended treatment is for 8 doses. For a patient who has started therapy but has not completed 8 doses, approve the number of doses required for the patient to receive a total of 8 doses.
   D) The medication is prescribed by or in consultation with an ophthalmologist, endocrinologist, or a physician who specializes in thyroid eye disease.

   Dosing. Approve up to 20 mg/kg per dose administered by intravenous infusion no more frequently than every 3 weeks for 8 doses.

CONDITIONS NOT RECOMMENDED FOR APPROVAL

Coverage of Tepezza is not recommended in the following situations:

1. Coverage is not recommended for circumstances not listed in the Recommended Authorization Criteria. Criteria will be updated as new published data are available.

REFERENCES

1. Tepezza intravenous infusion [prescribing information]. Lake Forest, IL: Horizon; April 2023.
2. Horizon Therapeutics. A study evaluating Tepezza treatment in patients with chronic (inactive) thyroid eye disease. In: ClinicalTrials.gov [internet]. Bethesda (MD): National Library of Medicine (US). 2023-04-20. Available at: https://clinicaltrials.gov/ct2/show/NCT04583735?cond=tepezza&draw=2&rank=1. NCT04583735. Accessed on April 20, 2023.
3. Horizon Therapeutics, press release. Horizon Therapeutics plc announces positive topline data from Tepezza (teprotumumab-trbw) phase 4 clinical trial in patients with chronic/low clinical activity score (CAS) thyroid eye disease (TED). Released April 10, 2023. Available at: https://ir.horizontherapeutics.com/news-releases/news-release-details/horizon-therapeutics-plc-announces-positive-topline-data. Accessed on April 20, 2023.
4. Horizon Therapeutics. Teprotumumab for injection. Briefing document for the Food and Drug Administration Dermatologic and Ophthalmic Drugs Advisory Committee. Meeting Date: December 13, 2019. Available at: https://www.fda.gov/advisory-committees/advisory-committee-calendar/updated-public-participation-information-december-13-2019-meeting-dermatologic-and-ophthalmic-drugs#event-information. Accessed on January 10, 2023.
5. Bartley GB, Fatourechi V, Kadrmas EF, et al. Clinical features of Graves' ophthalmopathy in an incidence cohort. *Am J Ophthalmol.* 1996;121(3):284-290.
6. Shan S, Douglas R. The pathophysiology of thyroid eye disease. *J Neuroophthalmol*. 2014 Jun;34(2):177-85.

HISTORY

Type of Revision	Summary of Changes	Review Date
Annual Revision	No criteria changes.	01/19/2022
Selected Revision	**Thyroid Eye Disease:** Criteria were removed that allow Tepezza to treat each affected eye. Additionally, examples of active disease of at least moderate severity were moved to a Note.	05/25/2022
Annual Revision	No criteria changes.	01/18/2023
Update	05/24/2023: Tepezza prescribing information was revised in April 2023. FDA-approved indication was revised to "Treatment of thyroid eye disease, regardless of thyroid eye disease or duration" from "Treatment of thyroid eye disease". Criteria were not changed.	--