



Medical Policy Bulletin

Title:

Teprotumumab (Tepezza™)

Policy #:

MA08.115a

This Policy Bulletin document describes the status of CMS coverage, medical terminology, and/or benefit plan documents and contracts at the time the document was developed. This Policy Bulletin will be reviewed regularly and be updated as Medicare changes their regulations and guidance, scientific and medical literature becomes available, and/or the benefit plan documents and/or contracts are changed.

Policy

Coverage is subject to the terms, conditions, and limitations of the member's Evidence of Coverage.

The Company reserves the right to reimburse only those services that are furnished in the most appropriate and cost-effective setting that is appropriate to the member's medical needs and condition.

MEDICALLY NECESSARY

Teprotumumab-trbw (Tepezza) is considered medically necessary and, therefore, covered for adult individuals with confirmed diagnosis of Graves' disease with thyroid eye disease when all of the following criteria listed below are met, including dosing and frequency:

- Documentation of active moderate to severe thyroid eye disease (TED) with documentation of one or more of the following:
 - moderate or severe soft-tissue involvement
 - proptosis ≥ 3 mm above normal values for race and sex
 - periodic or constant diplopia
- Individual is euthyroid or with mild hypo- or hyperthyroidism defined as free thyroxine (FT4) and free triiodothyronine (FT3) levels less than 50% above or below the normal limits.
- Clinical Activity Score of ≥ 4 .

- Prescribed by an ophthalmologist, or endocrinologist in consultation with an ophthalmologist.
- Dosing and Frequency: 10 mg/kg for first infusion, followed by 20 mg/kg every 3 weeks for 7 additional infusions. Lifetime maximum of 8 doses.

EXPERIMENTAL/INVESTIGATIONAL

All other uses of teprotumumab-trbw (Tepezza), including the list below, are considered experimental/investigational and, therefore, not covered unless the indication is supported as an accepted off-label use, as defined in the medical policy on off-label coverage for prescription drugs and biologics:

- Chronic/inactive/stable disease
- Subsequent treatment/retreatment

DOSING AND FREQUENCY REQUIREMENTS

The Company reserves the right to modify the Dosing and Frequency Requirements listed in this policy to ensure consistency with the most recently published recommendations for the use of teprotumumab-trbw (Tepezza). Changes to these guidelines are based on a consensus of information obtained from resources such as, but not limited to: the US Food and Drug Administration (FDA); Company-recognized authoritative pharmacology compendia; or published peer-reviewed clinical research. The professional provider must supply supporting documentation (i.e., published peer-reviewed literature) in order to request coverage for an amount of teprotumumab-trbw (Tepezza) outside of the Dosing and Frequency Requirements listed in this policy. For a list of Company-recognized pharmacology compendia, view our policy on off-label coverage for prescription drugs and biologics.

Accurate member information is necessary for the Company to approve the requested dose and frequency of this drug. If the member's dose, frequency, or regimen changes (based on factors such as changes in member weight or incomplete therapeutic response), the provider must submit those changes to the Company for a new approval based on those changes as part of the utilization management process. The Company reserves the right to conduct post-payment review and audit procedures for any claims submitted for teprotumumab-trbw (Tepezza).

REQUIRED DOCUMENTATION

The individual's medical record must reflect the medical necessity for the care provided. These medical records may include, but are not limited to: records from the professional provider's office, hospital, nursing home, home health agencies, therapies, and test reports.

The Company may conduct reviews and audits of services to our members, regardless of the participation status of the provider. All documentation is to be available to the Company upon request. Failure to produce the requested information may result in a denial for the drug.

When coverage of teprotumumab-trbw (Tepezza) is requested outside of the Dosing and Frequency Requirements listed in this policy, the prescribing professional provider must supply documentation (i.e., published peer-reviewed literature) to the Company that supports this request.

[Guidelines](#)

There is no Medicare coverage determination addressing teprotumumab-trbw (Tepezza); therefore, the Company policy is applicable.

BENEFIT APPLICATION

Subject to the terms and conditions of the applicable Evidence of Coverage, teprotumumab-trbw (Tepezza) for intravenous infusion is covered under the medical benefits of the Company's Medicare Advantage products when the medical necessity criteria and Dosing and Frequency Requirements listed in this medical policy are met.

However, services that are identified in this policy as experimental/investigational are not eligible for coverage or reimbursement by the Company.

US FOOD AND DRUG ADMINISTRATION (FDA) STATUS

Teprotumumab-trbw (Tepezza) was approved by the FDA on January 21, 2020 for treatment of thyroid eye disease (TED).

PEDIATRIC USE

The safety and effectiveness of teprotumumab-trbw (Tepezza) in pediatric individuals have not been established.

CLINICAL ACTIVITY SCORE (CAS)

Pain or pressure in a periorbital or retroorbital distribution	1
Pain with eye movement	1
Redness of the eyelids	1
Swelling of the eyelids	1
Redness of the conjunctiva	1
Chemosis (edema of the conjunctiva)	1
Inflammation of the caruncle or plica	1

* 7-point scale with 1-point given for each element present

Description

Teprotumumab-trbw (Tepezza) is a fully human antibody that targets the insulin-like growth factor-1 receptor (IGF-1R) indicated for the treatment of active thyroid eye disease (TED) / Graves' disease in adult individuals 18 years of age and older. Thyroid eye disease is a rare, autoimmune disease, in which the muscles and fatty tissues behind the eye become inflamed, causing the eyes to be pushed forward and bulge outwards (proptosis).

Thyroid eye disease (TED) is characterized by proptosis (outward bulging of the eye) that can cause a variety of symptoms such as eye pain, double vision, light sensitivity or difficulty closing the eye. This disease impacts a relatively small population, with women more commonly affected than men. Although this condition impacts relatively few individuals, TED can be incapacitating. For example, the troubling ocular symptoms can lead to the progressive inability of people with TED to perform important daily activities, such as driving or working.

The FDA granted this application Priority Review, in addition to Fast Track and Breakthrough Therapy Designation. Additionally, teprotumumab-trbw (Tepezza) received Orphan Drug designation, which provides incentives to assist and encourage the development of drugs for rare diseases or conditions. Development of this product was also in part supported by the FDA Orphan Products Grants Program, which provides grants for clinical studies on safety and efficacy of products for use in rare diseases or conditions.

PEER-REVIEWED LITERATURE

Summary of Trials for FDA-approval

Two trials have investigated teprotumumab-trbw (Tepezza) Tepeza. Both trials enrolled participants with active thyroid eye disease. The participants received either teprotumumab-trbw (Tepezza) or placebo by intravenous infusion every three weeks for a total of 8 infusions.

After trials end (24 weeks), the researchers reported on the percentage of individuals who achieved the trials primary outcomes of a reduction greater than 2 mm in proptosis between the two treatment groups.

In a randomized, double-masked, placebo-controlled, phase 3 multicenter trial, participants with active thyroid eye disease were assigned in a 1:1 ratio to receive intravenous infusions of the IGF-1R inhibitor teprotumumab-trbw (Tepezza) (10 mg per kilogram of body weight for the first infusion and 20 mg per kilogram for subsequent infusions) or placebo once every 3 weeks for 21 weeks.

A total of 41 individuals were assigned to the teprotumumab-trbw (Tepezza) group and 42 to the placebo group. At week 24, the percentage of patients with a proptosis response was higher with teprotumumab-trbw (Tepezza) than with placebo (83% [34 patients] vs. 10% [4 patients], $P < 0.001$). Treatment arm resulted in better outcomes with respect to proptosis, CAS, diplopia, and quality of life than placebo in individuals with active TED.

Summary of Literature for Inactive TED

The 2021 European Group on Graves' orbitopathy (EUGOGO) clinical practice guidelines for the medical management of Graves' orbitopathy (Bartalena 2021), the management of inactive TED may require low dose immunosuppressives or surgical intervention. There have been a few case reports and small, retrospective, case series researching the use of teprotumumab-trbw (Tepezza) in individuals with inactive TED (also cited in literature as chronic or stable TED). The researchers found benefit of this treatment in some individuals with inactive TED. In the OPTIC-X study (Douglas, et al 2022), there was exploratory evidence showing some benefit in 5 individuals. A clinical trial of 57 individuals with inactive TED is ongoing, with estimated study completion date of April 2023 (NCT04583735). Researchers are exploring the hypothesis that individuals with chronic TED maintain an IGF-1R overexpression. Due to the paucity of literature, more large, prospective trials are needed to confirm the benefit and safety of teprotumumab-trbw (Tepezza) in individuals with inactive TED.

Summary of Literature for Subsequent Treatments/Retreatment

The data for the role of subsequent treatments (or retreatment) of teprotumumab-trbw (Tepezza) after 1 course of therapy is still being investigated. In the OPTIC-X study (Douglas, et al 2022), researchers saw benefit in a few individuals who were non-responders to initial therapy. Due to the paucity of literature, more large, prospective trials are needed to confirm the benefit and safety of teprotumumab-trbw (Tepezza) in individuals who need subsequent treatments of teprotumumab-trbw (Tepezza).

OFF-LABEL INDICATIONS

There may be additional indications contained in the Policy section of this document due to evaluation of criteria highlighted in the Company's off-label policy, and/or review of clinical guidelines issued by leading professional organizations and government entities.

References

American Hospital Formulary Service (AHFS). Drug Information 2022. teprotumumab-trbw. [Lexicomp Online Web site]. 02/24/2020. Available at: <http://online.lexi.com/lco/action/home> [via subscription only]. Accessed February 17, 2022.

Bartalena L, Kahaly GJ, Baldeschi L, et al. The 2021 European Group on Graves' orbitopathy (EUGOGO) clinical practice guidelines for the medical management of Graves' orbitopathy. *Eur J Endocrinol*. 2021 Aug 27;185(4):G43-G67.

Davies TF, Burch HB. Clinical features and diagnosis of Graves' orbitopathy (ophthalmopathy). 03/19/2021. Available at: [Clinical features and diagnosis of Graves' orbitopathy \(ophthalmopathy\) - UpToDate](#). Accessed February 18, 2022.

Davies TF, Burch HB. Treatment of Graves' orbitopathy (ophthalmopathy). 05/14/2020. Available at: [Treatment of Graves' orbitopathy \(ophthalmopathy\) - UpToDate](#). Accessed February 18, 2022.

Dickinson AJ, Perros P. Controversies in the clinical evaluation of active thyroid-associated orbitopathy: use of a detailed protocol with comparative photographs for objective assessment. *Clin Endocrinol (Oxf)*. 2001 Sep;55(3):283-303.

Douglas RS, Kahaly GJ, Patel A, et al. Teprotumumab for the treatment of active thyroid eye disease. *N Engl J Med*. 2020 Jan 23;382(4):341-352.

Douglas RS, Kahaly GJ, Ugradar S, et al. Teprotumumab Efficacy, Safety, and Durability in Longer-Duration Thyroid Eye Disease and Re-treatment: OPTIC-X Study. *Ophthalmology*. 2022 Apr;129(4):438-449.

Elsevier's Clinical Pharmacology Compendium. teprotumumab-trbw. 01/24/2020. [Clinical Key Web site]. Available at: <https://www.clinicalkey.com/pharmacology/> [via subscription only]. Accessed March 3, 2022.

Kahaly GJ, Douglas RS, Holt RJ, Sile S, Smith TJ. Teprotumumab for patients with active thyroid eye disease: a pooled data analysis, subgroup analyses, and off-treatment follow-up results from two randomised, double-masked, placebo-controlled, multicentre trials. *Lancet Diabetes Endocrinol*. 2021 Jun;9(6):360-372.

Lexi-Drugs Compendium. teprotumumab-trbw. 01/28/2022. [Lexicomp Online Web site]. Available at: <http://online.lexi.com/lco/action/home> [via subscription only]. Accessed March 3, 2022.

Mourits MP, Koornneef L, Wiersinga WM, et al. Clinical criteria for the assessment of disease activity in Graves' ophthalmopathy: a novel approach. *Br J Ophthalmol*. 1989 Aug;73(8):639-44.

National Organization of Rare Diseases (NORD). Thyroid eye disease. 2020. Available at: [Thyroid Eye Disease - NORD \(National Organization for Rare Disorders\) \(rarediseases.org\)](https://rarediseases.org/). Accessed February 18, 2022.

Ozzello DJ, Dallalzadeh LO, Liu CY. Teprotumumab for chronic thyroid eye disease. *Orbit*. 2021 Jun 1:1-8.

Ozzello DJ, Kikkawa DO, Korn BS. Early experience with teprotumumab for chronic thyroid eye disease. *Am J Ophthalmol Case Rep*. 2020 May 15;19:100744.

Ross DS, Burch HB, Cooper DS, et al. 2016 American Thyroid Association guidelines for diagnosis and management of hyperthyroidism and other causes of thyrotoxicosis. *Thyroid*. 2016;26(10):1343-1421.

Smith TJ, Kahaly GJ, Ezra DG, et al. Teprotumumab for thyroid-associated ophthalmopathy. *N Engl J Med*. 2017 May 4;376(18):1748-1761.

Truven Health Analytics. Micromedex® DrugDex® Compendium. teprotumumab-trbw. 11/09/2021. Greenwood Village, CO. [Micromedex® Solutions Web site]. Available at: <http://www.micromedexsolutions.com/micromedex2/librarian> [via subscription only]. Accessed March 3, 2022.

Ugradar S, Shi L, Wang Y, Mester T, Yang H, Douglas RS. Teprotumumab for non-inflammatory thyroid eye disease (TED): evidence for increased IGF-1R expression. *Eye (Lond)*. 2021 Sep;35(9):2607-2612.

US Food and Drug Administration. Center for Drug Evaluation and Research. teprotumumab-trbw (Tepezza) Product Labeling. [FDA Web site]. 10/26/2021. Available at: <https://www.accessdata.fda.gov/scripts/cder/daf/>. Accessed March 3, 2022.

US Food and Drug Administration. Center for Drug Evaluation and Research. teprotumumab-trbw (Tepezza) Approval Letter. [FDA Web site]. Available at: https://www.accessdata.fda.gov/drugsatfda_docs/applletter/2020/761143Orig1s000ltr.pdf. Accessed March 3, 2022.

Coding

Inclusion of a code in this table does not imply reimbursement. Eligibility, benefits, limitations, exclusions, precertification/referral requirements, provider contracts, and Company policies apply.

The codes listed below are updated on a regular basis, in accordance with nationally accepted coding guidelines. Therefore, this policy applies to any and all future applicable coding changes, revisions, or

updates.

In order to ensure optimal reimbursement, all health care services, devices, and pharmaceuticals should be reported using the billing codes and modifiers that most accurately represent the services rendered, unless otherwise directed by the Company.

The Coding Table lists any CPT, ICD-10, and HCPCS billing codes related only to the specific policy in which they appear.

[CPT Procedure Code Number\(s\)](#)

N/A

[ICD - 10 Procedure Code Number\(s\)](#)

N/A

[ICD - 10 Diagnosis Code Number\(s\)](#)

E05.00 Thyrotoxicosis with diffuse goiter without thyrotoxic crisis or storm

[HCPCS Level II Code Number\(s\)](#)

J3241 Injection, teprotumumab-trbw, 10 mg

[Revenue Code Number\(s\)](#)

N/A

Policy History

Revisions From MA08.115a:

06/06/2022	This version of the policy will become effective 06/06/2022. This policy has been updated to communicate the coverage criteria for teprotumumab-trbw (Tepezza), consistent with its clinical trials for FDA-approval, as well as prevailing community standards. Additionally, teprotumumab-trbw (Tepezza) is considered experimental/investigational for its use in chronic/inactive/stable disease and subsequent treatment/retreatment.
------------	---

Revisions From MA08.115:

05/24/2021	This version of the policy will become effective 05/24/2021. The following new policy has been developed to communicate Company's coverage criteria for Teprotumumab (Tepezza™) intravenous infusion.
------------	---

Version Effective Date:

06/06/2022

Version Issued Date:

06/06/2022

Version Reissued Date:

N/A