Tepezza (teprotumumab-trbw)
PAM – 022

Iowa Medicaid Program	Prior Authorization	**Effective Date**	01/01/2021
Revision Number	5	**Last Reviewed**	04/18/2025
Reviewed By	Medicaid Medical Director	**Next Review**	04/17/2026
Approved By	Medicaid Clinical Advisory Committee	**Approved Date**	04/16/2021

Overview

Medication: [1]	teprotumumab-trbw
Brand Name:	Tepezza®
Pharmacologic Category:	Insulin-like growth factor 1 receptor (IGF-1R) inhibitor
FDA-Approved Indication(s):	Treatment of thyroid eye disease (TED), regardless of TED activity or duration
How Supplied:	500 mg lyophilized powder in a single-dose vial for reconstitution
Dosage and Administration:	10 mg/kg intravenous (IV) one-time dose, followed by 20 mg/kg IV once every 3 weeks for 7 infusions (total of 8 infusions is a complete course of therapy)
Benefit Category:	Medical

Descriptive Narrative

Thyroid eye disease (TED) is an autoimmune disease of the orbit and retro-ocular tissues occurring primarily in patients with Graves' disease and rarely in patients with Hashimoto's thyroiditis. It is characterized by outward bulging of eyes (proptosis), excessive tearing, and periorbital edema, and is often accompanied by pain and diplopia associated with optic nerve compression.

About 90 percent of patients with thyroid eye disease have Graves' disease, the most common cause of hyperthyroidism. Factors which may increase the risk of orbitopathy in patients with Graves' disease include genetics, gender (more common in females than in males), smoking (cigarette smoking is a confirmed risk factor for Graves' orbitopathy), and radioiodine therapy. Other possible risk factors include advancing age, stress, and poorly controlled thyroid function. Although about 10 percent of TED patients are labeled as having "euthyroid" Graves' disease, most cases of TED occur in the setting of current or past Graves' hyperthyroidism.[2]

While most patients have self-limiting mild disease, moderate-to-severe and sight-threatening thyroid eye disease occur in about 6 percent and 0.5 percent of patients with Graves' disease, respectively. Patients who have self-limiting mild disease, with no progression during follow-up, are often successfully treated with local measures alone. Patients with moderate-to-severe orbitopathy, however, may require immunomodulatory therapy, and those with sight-threatening orbitopathy frequently require surgical rehabilitation.[3]

Treatment measures for most patients with thyroid eye disease:

- Reversal of hyperthyroidism, if present;
- Cessation of smoking, if applicable;
- Local measures to reduce ocular surface tension (e.g., artificial tears, raising the head of the bed at night [theoretically to reduce orbital congestion].

Additional treatment of TED should be tailored according to the severity of the disease:

- Mild disease
    - Local measures – For patients with mild eye involvement (mild chemosis, mild-to-moderate eyelid swelling, absence of significant proptosis [often cited as <3 mm above upper limit of normal for race], no or intermittent diplopia, corneal exposure responsive to lubricants), local measures often lead to sufficient relief of eye symptoms, and no additional treatment is needed.
- Moderate-to-severe disease
    - All patients should be advised of local measures to improve symptoms. Most patients with moderate-to-severe disease will require additional therapy.
    - Initial medical therapy with either teprotumumab or glucocorticoids.
    - For patients with moderate-to-severe orbitopathy, the initial treatment for many years has been with glucocorticoids, despite their many side effects.
- Sight-threatening disease
    - Occurs in 1 to 2 percent of patients with Graves' disease.
    - Threatened loss of vision, often preceded by loss of color vision, is an ophthalmologic emergency. Close and coordinated observation of the effects of medical therapy and the progress of the disease is necessary to determine whether and when a surgical approach to treatment is needed in the patient with visual loss.
    - Patients with sight-threatening eye disease should receive immediate glucocorticoid therapy, preferably IV (e.g., methylprednisolone, 0.5 to 1 g daily for either three consecutive days or on every second day) and should be hospitalized for possible urgent orbital decompression surgery if the response is inadequate.
    - Orbital decompression surgery, if indicated.[4]

Guidelines

A joint consensus statement was issued by the American Thyroid Association and the European Thyroid Association in 2022.[5]

The consensus statement includes the following recommendations:

Diagnosis and assessment

- Early diagnosis of thyroid eye disease (TED) and simple measures to prevent TED development or progression should be pursued.
- Endocrinologists managing patients with Graves' disease should identify referral pathways that ensure patient access to TED specialty care.
- Ophthalmologists are the key to management of TED and should always be involved in the care of patients with moderate-to-severe and sight-threatening TED.

Therapy of moderate-to-severe TED

- Clinicals should balance the demonstrated efficacy of recently introduced therapies against the absence of experience on sustained long-term efficacy, safety, and cost-effectiveness.
- Intravenous glucocorticoid (IVGC) therapy is a preferred treatment for active moderate-to-severe TED when disease activity is the prominent feature in the absence of either significant proptosis* or diplopia.
- Rituximab (RTX) and tocilizumab (TCZ) may be considered for TED inactivation in glucocorticoid (GC)-resistant patients with active moderate-to-severe TED. Teprotumumab (Tepezza®) has not been evaluated in this setting.
- Teprotumumab (Tepezza®) is a preferred therapy, if available, in patients with active moderate-to-severe TED with significant proptosis* and/or diplopia.
- RTX therapy is acceptable in patients with moderate-to-severe TED and prominent soft tissue involvement.
- TCZ is an acceptable treatment for TED inactivation in GC-resistant patients with active moderate-to-severe disease.
- Radiotherapy (RT) is a preferred treatment in patients with active moderate-to-severe TED whose principal feature is progressive diplopia.
- Surgery for moderate-to-severe TED should be performed by an orbital surgeon experienced with these procedures and their complications.

Therapy of sight-threatening TED

- Patients with dysthyroid optic neuropathy (DON) require urgent treatment with IVGC therapy, with close monitoring of response and early (after 2 weeks) consideration for decompression surgery if baseline visual function is not restored and maintained with medical therapy.
- RT may be considered for preventing or as an adjunct to treating DON.

* For therapies selected to reduce proptosis, the task force elected to use the term "significant proptosis" rather than a numerical threshold. In keeping with the definition of moderate-to-severe TED, a degree of proptosis ≥ 3mm above the upper limit for race and sex would be regarded as "significant proptosis."

Thyroid Eye Disease (TED) Severity Assessment [6]						
Grade [a]	**Lid Retraction**	**Soft Tissues**	**Proptosis [b]**	**Diplopia**	**Corneal Exposure**	**Optic Nerve Status**
Mild	< 2 mm	Mild involvement	< 3 mm	Transient or absent	Absent	Normal
Moderate	≥ 2 mm	Moderate involvement	≥ 3 mm	Inconstant	Mild	Normal
Severe	≥ 2 mm	Severe involvement	≥ 3 mm	Constant	Mild	Normal
Sight threatening	----	----	----	----	Severe	Compression
Upper Limits of Normal						
Black populations	F/M = 23/24 mm				F: female M: male	
White populations	F/M = 19/21 mm					
Asian populations	F/M = 16/17 mm (Thai) or 18/19 mm (Chinese)					

[a] **Mild TED:** patients whose features of TED have only a minor impact on daily life, generally insufficient to justify immunosuppressive or surgical treatment.

Moderate-to-severe TED: patients without sight-threatening TED whose eye disease has sufficient impact on daily life to justify the risks of immunosuppression (if active) or surgical intervention (if inactive).

Sight-threatening TED: patients with dysthyroid optic neuropathy and/or corneal breakdown. This category warrants immediate intervention.

[b] **Proptosis** refers to the variation compared with the upper limit of normal for each race/sex or the patient's baseline, if available.

Criteria

Prior authorization is required.

Tepezza® is considered medically necessary when **ALL** of the following are met:

1. Diagnosis of Graves' disease with associated thyroid eye disease (TED); **AND**
2. Member is 18 years of age or older; **AND**
3. Thyroid function tests [free thyroxine (FT4) and free triiodothyronine (FT3)] within the past 30 days meet **ONE** of the following (a or b):
    a. Results are within the laboratory-defined reference range (i.e., member is euthyroid); **OR**
    b. Results document mild hypo- or hyperthyroidism (i.e., FT4 and FT3 levels are less than 50 percent above or below the laboratory defined reference range) and member is undergoing treatment to achieve and maintain a euthyroid state; **AND**
4. Failure of a 4-week trial of a systemic corticosteroid (at up to maximally indicated doses), unless at least one of the following applies (a, b, or c):
    a. Clinically significant adverse effects are experienced or all are contraindicated; and/or
    b. Member has significant proptosis ≥ 3 mm above the upper limit for race and sex, or proptosis that impacts the activities of daily life (e.g., reading, driving, computer work, and watching television); and/or
    c. Member has diplopia; **AND**
5. Member meets **ALL** of the following (a, b, and c):
    a. Has **NOT** had previous surgical intervention for TED; **AND**
    b. Does **NOT** require surgical ophthalmological intervention; **AND**
    c. Does **NOT** have hyperglycemia (note: hyperglycemia or pre-existing diabetes should be under appropriate glycemic control before and while receiving Tepezza®); **AND**
6. Prescribed by, or in consultation with, an ophthalmologist; **AND**
7. Request meets **BOTH** of the following (a and b):
    a. Regimen prescribed does not exceed 10 mg/kg for the first infusion, followed by 20 mg/kg every 3 weeks for an additional 7 infusions; **AND**
    b. Member has received less than 8 infusions of Tepezza® in their lifetime.

Tepezza® is considered medically necessary for continuation of therapy when **ALL** of the following are met:

1. Member is currently receiving medication through the Iowa Medicaid benefit or has previously met initial approval criteria; **AND**
2. Member meets **ALL** of the following (a, b, and c):
    a. Has **NOT** had previous surgical intervention for TED; **AND**
    b. Does **NOT** require surgical ophthalmological intervention; **AND**
    c. Does **NOT** have hyperglycemia (note: hyperglycemia or pre-existing diabetes should be under appropriate glycemic control before and while receiving Tepezza®); **AND**
3. Prescribed by, or in consultation with an ophthalmologist; **AND**
4. Request meets **BOTH** of the following (a and b):
    a. Dose prescribed does not exceed 20 mg/kg every 3 weeks; **AND**
    b. Member has received less than 8 infusions of Tepezza® (authorization may only be granted up to a total of 8 infusions per lifetime).

Approval Duration and Quantity Limits

Initial Authorization	Subsequent Authorization(s)
Approval Duration: 9 months	Only applicable if member has not received a lifetime total of 8 infusions **and** meets criteria for continued therapy. May authorize for 20 mg/kg IV every 3 weeks until a total of 8 lifetime infusions is met.≠
Quantity Limits: 8 total infusions (one 10 mg/kg IV dose, followed by 20 mg/kg IV once every 3 weeks for 7 additional infusions)	

≠ Ongoing clinical trials to reassess retreatment have limited results available so far. Data not sufficient to justify approving retreatment at this time.

Coding and Product Information

The following list(s) of codes and product information are provided for reference purposes only and may not be all inclusive. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment, nor does the exclusion of a code imply that its association to the HCPCS code is inappropriate.

HCPCS	Description
J3241	Injection, teprotumumab-trbw, 10 mg

ICD-10	Description
E05.00	Thyrotoxicosis with diffuse goiter without thyrotoxic crisis or storm
E05.01	Thyrotoxicosis with diffuse goiter with thyrotoxic crisis or storm
E05.55	Thyroid eye disease (TED); Graves' orbitopathy
H05.89	Other disorders of orbit

NDC (Strength)	Labeler	Dosage	Pkg Size	Pkg Qty	Units/ Pkg
75987-0130-15 (500 mg vial)	Horizon Therapeutics USA, Inc. (75987)	10 mg	1	EA	50

Compliance

1. Should conflict exist between the policy and applicable statute, the applicable statute shall supersede.
2. Federal and State law, as well as contract language, including definitions and specific contract provisions or exclusions, take precedence over medical policy and must be considered first in determining eligibility for coverage.
3. Medical technology is constantly evolving, and Iowa Medicaid reserves the right to review and update medical policy on an annual or as-needed basis.

Medical necessity guidelines have been developed for determining coverage for member benefits and are published to provide a better understanding of the basis upon which coverage decisions are made. Medical necessity guidelines are developed for selected physician-administered medications found to be safe and proven to be effective in a limited, defined population or clinical circumstances. They include concise clinical coverage criteria based on current literature review, consultation with practicing physicians in the service area who are medical experts in the particular field, FDA and other government agency policies, and standards adopted by national accreditation organizations. Criteria are revised and updated annually, or more frequently if new evidence becomes available that suggests needed revisions.

References

[1] Tepezza prescribing information (07/2023). Horizon Therapeutics USA, Inc.: Deerfield, IL. Available online at www.tepezzahcp.com. Accessed March 10, 2025.

[2] Davies TF, Burch HB. Clinical features and diagnosis of thyroid eye disease. Mulder JE, ed. UpToDate. Waltham, MA: UpToDate Inc. www.uptodate.com. Accessed March 10, 2025.

[3] Burch HB, Perros P, et al. Management of Thyroid Eye Disease: A Consensus Statement by the American Thyroid Association and the European Thyroid Association. Thyroid. 2022 Dec;32(12):1439-1470. Epub 2022 Dec 8. PMID: 36480280.

[4] Davies TF, Burch HB. Treatment of thyroid eye disease. Mulder JE, ed. UpToDate. Waltham, MA: UpToDate Inc. www.uptodate.com. Accessed March 10, 2025.

[5] Burch HB, Perros P, et al. Management of Thyroid Eye Disease: A Consensus Statement by the American Thyroid Association and the European Thyroid Association. Thyroid. 2022 Dec;32(12):1439-1470. Epub 2022 Dec 8. PMID: 36480280.

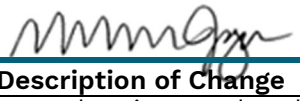
[6] Ross DS, Burch HB, Cooper DS, et al. 2016 American Thyroid Association guidelines for diagnosis and management of hyperthyroidism and other causes of thyrotoxicosis. Thyroid 2016; 26:1343.

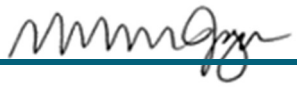
Development of utilization management criteria may also involve research into other state Medicaid programs, other payer policies, consultation with experts and review by the Medicaid Clinical Advisory Committee (CAC). These sources may not be referenced individually unless they are specifically published and are otherwise applicable to the criteria at issue.

Criteria Change History

Change Date	Changed By	Description of Change	Version
[mm/dd/yyyy]	CAC		
Signature			

Change Date	Changed By	Description of Change	Version
[mm/dd/yyyy]	CAC		
Signature			

Change Date	Changed By	Description of Change	Version
04/18/2025	CAC	Annual review. No changes.	5
Signature William (Bill) Jagiello, DO			

Change Date	Changed By	Description of Change	Version
07/19/2024	CAC	Annual review. Updated references. Updated Overview table to reflect revised indication: "Treatment of thyroid eye disease (TED), *regardless of TED activity or duration*." Updated treatment recommendations in Descriptive Narrative. Updated 2022 joint consensus statement from American and European Thyroid Associations to include additional information regarding Tepezza. Removed criteria required clinical activity score ≥ 4 to align with revised indication and added dosing into criteria. Extended authorization period from 6 months to 9 months, allowing members who may experience a delay in dosing to complete the full 8-dose course.	4
Signature William (Bill) Jagiello, DO			

Criteria Change History *(continued)*

Change Date	Changed By	Description of Change	Version
04/21/2023	CAC	Annual review. Updated references. Added criterion "Members with hyperglycemia or pre-existing diabetes should be under appropriate glycemic control before and while receiving Tepezza®" in response to recent warning and precaution added to Tepezza® prescribing information regarding the incidence of hyperglycemia in treated patients. Added dosing information into criteria. Added recommendations from 2022 Joint Consensus Statement (ATA and ETA). Added statement regarding retreatment to Approval Duration/Quantity Limits: "Ongoing clinical trials to reasses retreatment have limited results available so far. Data not sufficient to justify approving retreatment at this time."	3
Signature William (Bill) Jagiello, DO			
Change Date	**Changed By**	**Description of Change**	**Version**
04/15/2022	CAC	Annual review.	2
Signature William (Bill) Jagiello, DO			
Change Date	**Changed By**	**Description of Change**	**Version**
04/16/2021	CAC	Criteria implementation.	1
Signature William (Bill) Jagiello, DO			

CAC = Medicaid Clinical Advisory Committee