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5.30.071

Section:	Prescription Drugs	**Effective Date:**	April 1, 2025
Subsection:	Endocrine and Metabolic Drugs	**Original Policy Date:**	August 27, 2020
Subject:	Demser	**Page:**	1 of 5

Last Review Date: March 7, 2025

Demser

Description

Demser (metyrosine)

Background
Demser (metyrosine) is a tyrosine hydroxylase inhibitor indicated for the treatment of pheochromocytoma. Blocking tyrosine hydroxylase results in decreased endogenous levels of catecholamines (e.g., epinephrine, norepinephrine, and dopamine). In patients with pheochromocytoma, who produce excessive amounts of norepinephrine and epinephrine, administration of Demser has reduced catecholamine biosynthesis from about 35% to 80% as measured by the total excretion of catecholamines and their metabolites (1).

Regulatory Status
FDA-approved indications: Demser is indicated in the treatment of patients 12 years of age and older with pheochromocytoma for (1):

1. Preoperative preparation of patients for surgery
2. Management of patients when surgery is contraindicated
3. Chronic treatment of patients with malignant pheochromocytoma

Demser is not recommended for the control of essential hypertension (1).

The maximum biochemical effect of Demser usually occurs within two to three days, and the urinary concentration of catecholamines and their metabolites usually returns to pretreatment levels within three to four days after Demser is discontinued. In some patients the total excretion

of catecholamines and catecholamine metabolites may be lowered to normal or near normal levels (less than 10 mg/24 hours). In most patients the duration of treatment has been two to eight weeks, but several patients have received Demser for periods of 1 to 10 years (1).

Most patients with pheochromocytoma treated with Demser experience decreased frequency and severity of hypertensive attacks with their associated headache, nausea, sweating, and tachycardia. In patients who respond, blood pressure decreases progressively during the first two days of therapy with Demser; after withdrawal, blood pressure usually increases gradually to pretreatment values within two to three days (1).

The recommended initial dose of Demser for adults and children aged ≥ 12 years is 250 mg four times daily. This may be increased by 250 to 500 mg every day to a maximum of 4.0 grams/day in divided doses. When used for preoperative preparation, the optimally effective dose of Demser should be administered for at least 5 to 7 days. Optimally effective dosages for Demser are usually between 2.0 and 3.0 grams/day, and the dose should be titrated by monitoring clinical symptoms and catecholamine excretion. In those who are hypotensive, the dosage should be titrated to achieve normalization of blood pressure and control of clinical symptoms (1).

Guidelines from the Endocrine Society recommend alpha1-adrenergic receptor blockers as the first choice to control blood pressure and prevent a hypertensive crisis in patients with pheochromocytoma (2).

The safety and effectiveness of Demser in patients less than 12 years of age have not been established (1).

Related policies

Policy

This policy statement applies to clinical review performed for pre-service (Prior Approval, Precertification, Advanced Benefit Determination, etc.) and/or post-service claims.

Demser may be considered **medically necessary** if the conditions indicated below are met.

Demser may be considered **investigational** for all other indications.

Prior-Approval Requirements

Age 12 years of age and older

Diagnosis

Patient must have the following:

1. Pheochromocytoma:
    a. Patient has surgical resection planned **OR**
    b. Surgery is contraindicated **OR**
    c. Patient has malignant pheochromocytoma

AND ALL of the following:

1. **NOT** being used for the treatment of essential hypertension
2. Patient has inadequate treatment response, intolerance, or contraindication to a selective alpha 1-adrenergic receptor blocker (e.g., doxazosin, terazosin and prazosin)
3. Patient has inadequate treatment response, intolerance, or contraindication to phenoxybenzamine
4. Prescriber will not exceed the FDA maximum daily dose of 4 grams/day
5. Prescribed by, or recommended by, an endocrinologist or a physician who specializes in the management of pheochromocytoma

Prior–Approval *Renewal* Requirements

Age 12 years of age and older

Diagnosis

Patient must have the following:

1. Pheochromocytoma
    a. Surgery is contraindicated **OR**

b. Patient has malignant pheochromocytoma

AND ALL of the following:

1. Patient's condition has improved or stabilized with therapy
2. Prescriber will not exceed the FDA maximum daily dose of 4 grams/day
3. Prescribed by, or recommended by, an endocrinologist or a physician who specializes in the management of pheochromocytoma

Policy Guidelines

Pre–PA Allowance

None

Prior–Approval Limits

Quantity 1440 capsules per 90 days

Duration 3 months

Prior–Approval *Renewal* Limits

Quantity 1440 capsules per 90 days

Duration 12 months

Rationale

Summary

Demser (metyrosine) is a tyrosine hydroxylase inhibitor indicated for the treatment of pheochromocytoma for: preoperative preparation of patients for surgery, management of patients when surgery is contraindicated, and chronic treatment of patients with malignant pheochromocytoma. Blocking tyrosine hydroxylase results in decreased endogenous levels of catecholamines (e.g., epinephrine, norepinephrine, and dopamine). Demser is not

recommended for the control of essential hypertension. The safety and effectiveness of Demser in patients less than 12 years of age have not been established (1).

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

References

1. Demser [package insert]. Bridgewater, NJ: Bausch Health US, LLC; July 2021.
2. Lenders JWM, Duh QY, Eisenhofer G, et al. Pheochromocytoma and paraganglioma: An Endocrine Society Clinical Practice Guideline. J Clin Endocrinol Metab. 2014;99(6):1915-1942.

Policy History

Date	Action
August 2020	Addition to PA
September 2020	Annual review
March 2021	Annual editorial review and reference update
March 2022	Annual review and reference update
March 2023	Annual review. Changed policy number to 5.30.071
March 2024	Annual review
March 2025	Annual review

Keywords

This policy was approved by the FEP® Pharmacy and Medical Policy Committee on March 7, 2025 and is effective on April 1, 2025.