

Bosentan (TRACLEER)

Criteria for Use

August 2025

VA Pharmacy Benefits Management Services and National Formulary Committee

The following recommendations are based on medical evidence, clinician input, and expert opinion. The content of the document is dynamic and will be revised as new information becomes available. The purpose of this document is to assist practitioners in clinical decision-making, to standardize and improve the quality of patient care, and to promote cost-effective drug prescribing. THE CLINICIAN SHOULD USE THIS GUIDANCE AND INTERPRET IT IN THE CLINICAL CONTEXT OF THE INDIVIDUAL PATIENT. INDIVIDUAL CASES THAT ARE EXCEPTIONS TO THE EXCLUSION AND INCLUSION CRITERIA SHOULD BE ADJUDICATED AT THE LOCAL FACILITY ACCORDING TO THE POLICY AND PROCEDURES OF ITS P&T COMMITTEE AND PHARMACY SERVICES. The Product Information should be consulted for detailed prescribing information.

Exclusion Criteria

If ANY of the following are selected, the patient will NOT meet criteria for bosentan.

- Known pregnancy
- Baseline hepatic transaminase elevations >3 times the upper limit of normal
- Moderate or severe liver impairment (e.g., Child-Pugh Class B or C)

Inclusion Criteria

All of the following must be selected to meet criteria.

- Care provided by a VA/VA Community Care provider experienced in the management of pulmonary arterial hypertension (PAH) (certified and enrolled in the bosentan REMS Program)
- World Health Organization (WHO) Group 1 PAH
- Definitive PAH confirmed by right-heart catheterization and hemodynamic diagnosis: mean pulmonary artery pressure >25 mmHg, pulmonary artery wedge pressure \leq 15 mm Hg, and pulmonary vascular resistance >3 Wood Units^{^1}
- Baseline hepatic transaminase testing and commitment to monthly testing
- Intolerance, inadequate response, or unable to use ambrisentan. Ambrisentan is the preferred endothelin receptor antagonist when clinically appropriate.

Additional Inclusion Criteria

- Females who can become pregnant: Excluded pregnancy prior to receiving bosentan. Provided counseling on potential risk vs benefit of treatment and the use of effective contraception prior to, during, and one month after stopping treatment.
- Males of reproductive potential: Counseling provided on the potential risk of bosentan to adversely affect spermatogenesis and impair fertility.

Other Justification

1. The listed hemodynamic definition should apply to the majority of PAH patients and is recommended by the 7th World Symposium for Pulmonary Hypertension for consideration of PAH specific drug therapy including endothelin receptor antagonists. Decisions to use endothelin receptor antagonists for patients with hemodynamic parameters falling outside of the thresholds should be made by PAH specialists in the context of the entire presentation of the individual patient.

mPAP and PVR: Thresholds for the diagnosis of pulmonary hypertension have been expanded to include mPAP >20 mmHg and PVR >2 Wood Units; however, most PAH therapies including endothelin receptor antagonists were studied in populations meeting the older definition included in the criterion. Consensus is lacking on whether PAH treatment should be considered in patients with mildly elevated pressures according to the 7th World Symposium on Pulmonary Hypertension.

PAWP: PAWP \leq 15 mmHg is a measure traditionally used in the hemodynamic diagnosis of PAH to aid in ruling out pulmonary hypertension due to left-heart disease, where PAH-specific therapies have not been shown to benefit and may result in harm. REVEAL U.S. registry data suggests that PAH may exist in patients with PAWP 16-18 mmHg. Survival in patients with PAH and a PAWP 16-18 mmHg at diagnosis did not significantly differ from those with PAWP \leq 15 mm Hg.