



MASSACHUSETTS

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Medical Policy

Bronchial Thermoplasty

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Policy Number: 284

BCBSA Reference Number: 7.01.127 (For Plan internal use only)

NCD/LCD: N/A

Related Policies

None

Policy¹

Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity Medicare HMO BlueSM and Medicare PPO BlueSM Members

Bronchial thermoplasty, performed by a pulmonologist who has completed a bronchial thermoplasty training curriculum, may be considered **MEDICALLY NECESSARY** for individuals ≥18 years when the following criteria are met:

- Individual has been diagnosed with severe persistent asthma by having any of the following criteria in the absence of controller medications:
 - Daily symptoms
 - Nighttime awakenings, every night
 - Use of rescue medicine multiple times per day
 - Normal activities are extremely limited
 - Impaired lung function (less than or equal to 60% predicted)
 - Frequent exacerbations, **AND**
- Co-morbid conditions contributing to asthma exacerbations have either been ruled out or fully controlled (e.g., allergy symptoms, GERD), **AND**
- Individual is taking chronic oral corticosteroids, **OR**
- Poor asthma control despite being on high-dose ICS and LABA for a minimum of 3 months with two or more asthma exacerbations per year. Asthma exacerbations are defined as follows:
 - Individual required oral systemic corticosteroid use due to respiratory symptoms, **OR**
 - Urgent provider's office visit due to severe respiratory symptoms, **OR**
 - Emergency department visit due to respiratory symptoms, **OR**
 - Hospitalization due to respiratory symptoms.

Bronchial thermoplasty is **contraindicated** for individuals with the following conditions:

- Presence of a pacemaker, internal defibrillator, or other implantable electronic device
- Known sensitivity to medications required to perform bronchoscopy, including lidocaine, atropine and benzodiazepines
- Individuals previously treated with bronchial thermoplasty
- Active respiratory infection
- Asthma exacerbation or changing dose of systemic corticosteroids for asthma (up or down) in the past 14 days
- Known coagulopathy.

Bronchial thermoplasty is considered **INVESTIGATIONAL** when the above criteria are not met.

Prior Authorization Information

Inpatient

- For services described in this policy, precertification/preauthorization **IS REQUIRED** for all products if the procedure is performed **inpatient**.

Outpatient

- For services described in this policy, see below for products where prior authorization **might be required** if the procedure is performed **outpatient**.

	Outpatient
Commercial Managed Care (HMO and POS)	Prior authorization is required .
Commercial PPO	Prior authorization is required .
Medicare HMO Blue SM	Prior authorization is required .
Medicare PPO Blue SM	Prior authorization is required .

CPT Codes / HCPCS Codes / ICD Codes

Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

The following codes are included below for informational purposes only; this is not an all-inclusive list.

The following CPT codes are considered medically necessary when the policy guidelines above are met for Commercial Members: Managed Care (HMO and POS), PPO, Indemnity, Medicare HMO Blue and Medicare PPO Blue:

CPT Codes

CPT codes:	Code Description
31660	Bronchoscopy, rigid or flexible, including fluoroscopic guidance, when performed; with bronchial thermoplasty, 1 lobe
31661	Bronchoscopy, rigid or flexible, including fluoroscopic guidance, when performed; with bronchial thermoplasty, 2 or more lobes

ICD-10 Procedure Codes

ICD-10-PCS procedure codes:	Code Description
0B538ZZ	Destruction of Right Main Bronchus, Via Natural or Artificial Opening

0B548ZZ	Destruction of Right Upper Lobe Bronchus, Via Natural or Artificial Opening Endoscopic
0B558ZZ	Destruction of Right Middle Lobe Bronchus, Via Natural or Artificial Opening Endoscopic
0B568ZZ	Destruction of Right Lower Lobe Bronchus, Via Natural or Artificial Opening
0B578ZZ	Destruction of Left Main Bronchus, Via Natural or Artificial Opening Endoscopic
0B588ZZ	Destruction of Left Upper Lobe Bronchus, Via Natural or Artificial Opening Endoscopic
0B598ZZ	Destruction of Lingula Bronchus, Via Natural or Artificial Opening Endoscopic
0B5B8ZZ	Destruction of Left Lower Lobe Bronchus, Via Natural or Artificial Opening Endoscopic

Description

Asthma

Asthma, a chronic lung disease, affects approximately 8.4% of adults and 5.8% of children in the United States (U.S.).¹As of 2018, 14.3% of Black children under 18 in the U.S. had asthma, followed by 8% of Hispanic children, 5.6% of White children, and 3.6% of Asian children.² In the U.S., the burden of asthma falls disproportionately on Black, Hispanic, and American Indian/Alaska Native individuals; these groups have the highest rates, deaths, and hospitalizations.³ Compared to White Americans, Black Americans are 1.5 times more likely to have asthma, and Puerto Rican Americans are almost 2 times more likely to have asthma. In 2018 and 2020, asthma exacerbations accounted for approximately 1.6 million emergency department visits and 4145 deaths overall, respectively.¹Black Americans are 5 times more likely than White Americans to visit the emergency department for asthma and 3 times more likely to die from asthma.³Asthma symptoms include episodic shortness of breath that is generally associated with other symptoms such as wheezing, coughing, and chest tightness. Objective clinical features include bronchial hyperresponsiveness, airway inflammation, and reversible airflow obstruction (at least 12% improvement in forced expiratory volume in 1-second post-bronchodilator, with a minimum of 200 mL improvement). However, there is substantial heterogeneity in the inflammatory features of patients diagnosed with asthma, and this biologic diversity is responsible, at least in part, for the variable response to treatment in the asthma population.

Management

Management of asthma consists of environmental control, patient education, management of comorbidities, and regular follow-up for affected patients, as well as a stepped approach to medication treatment. Guidelines from the National Heart, Lung and Blood Institute have defined 6 pharmacologic steps: step 1 for intermittent asthma and steps 2 through 6 for persistent asthma.⁴ The preferred daily medications: step 1: short-acting β -agonists as-needed; step 2: low-dose inhaled corticosteroids (ICS); step 3: ICS and long-acting β -agonists (LABA) or medium-dose ICS; step 4: medium-dose ICS and LABA; step 5: high-dose ICS and LABA; and step 6: high-dose ICS and LABA, and oral corticosteroids. A focused update in 2020 addressed the use of add-on long-acting antimuscarinic agents (LAMA), immunotherapy, and bronchial thermoplasty (see Practice Guidelines and Position Statements).

Despite this multidimensional approach, many patients continue to experience considerable morbidity. In addition to ongoing efforts to implement optimally standard approaches to asthma treatment, new therapies are being developed. One recently developed therapy is bronchial thermoplasty, the controlled delivery of radiofrequency energy to heat tissues in the distal airways. Bronchial thermoplasty is based on the premise that patients with asthma have an increased amount of smooth muscle in the airway and that contraction of this smooth muscle is a major cause of airway constriction. The thermal energy delivered via bronchial thermoplasty aims to reduce the amount of smooth muscle and thereby decrease muscle-mediated bronchoconstriction with the ultimate goal of reducing asthma-related morbidity. A typical full course of treatment consists of 3, one hour sessions, given 3 weeks apart under moderate sedation. All accessible airways distal to the main stem bronchus that are 3 to 10 mm in diameter are treated once, except those in the right middle lobe. The lower lobes are treated first followed by the upper lung.

Bronchial thermoplasty is intended for consideration as a supplemental treatment for patients with severe persistent asthma (ie, steps 5 and 6 in the stepwise approach to care).

Summary

Description

Bronchial thermoplasty is a potential treatment option for patients with severe persistent asthma. It consists of radiofrequency energy delivered to the distal airways with the aim of decreasing smooth muscle mass believed to be associated with airway inflammation.

Summary of Evidence

For individuals who have asthma refractory to standard treatment who receive bronchial thermoplasty added to medical management, the evidence includes 3 randomized controlled trials (RCTs) and observational studies. Relevant outcomes are symptoms, quality of life (QOL), hospitalizations, and treatment-related morbidity. Early studies (Research in Severe Asthma [RISA], Asthma Intervention Research [AIR]) investigated safety outcomes, finding similar rates of adverse events and exacerbations between the bronchial thermoplasty and control groups. These trials were limited by their lack of sham control. The AIR2 trial is the largest of the 3 published RCTs, and the only trial that is double-blind and sham-controlled, with sites in the United States. Over 1 year, bronchial thermoplasty was not found to be superior to sham treatment on the investigator-designated primary efficacy outcome of mean change in the QOL score but was found to be superior on a related outcome, improvement in the QOL of at least 0.5 points on the Asthma Quality of Life Questionnaire (AQLQ) score. There was a high response rate in the sham group of the AIR2 trial, suggesting a large placebo effect, particularly for subjective outcomes such as QOL. There are limited long-term sham-controlled efficacy data. Findings on adverse events from the 3 trials have suggested that bronchial thermoplasty is associated with a relatively high rate of adverse events, including hospitalizations during the treatment period, but not in the posttreatment period. Safety data up to 10 years have been reported for patients in the AIR2 trial, with a higher rate of new cases of bronchiectasis observed in bronchial thermoplasty-treated patients. Data from a United Kingdom registry showed that 20% of bronchial thermoplasty procedures were associated with a safety event (ie, procedural complications, emergency respiratory readmissions, emergency department visits, and/or postprocedure overnight stays), with uncertain benefit. Conclusions cannot be drawn about the effect of bronchial thermoplasty on the net health outcome due to the limited amount of sham-controlled data (1 RCT) on short-term efficacy, the uncertain degree of treatment benefit in that single sham-controlled trial, the lack of sufficient long-term sham-controlled data in the face of a high initial placebo response, and the presence of substantial adverse events. Also, there is a lack of data on patient selection factors for this procedure and, as a result, it is not possible to determine whether there are patient subgroups that might benefit. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Policy History

Date	Action
8/2022	Annual policy review. Description, summary, and references updated. Policy statements unchanged.
6/2022	Prior authorization information clarified for PPO plans. Effective 6/1/2022.
1/2022	Clarified prior authorization information
8/2020	BCBSA National medical policy review. Description, summary and references updated. Policy statements unchanged.
8/2019	BCBSA National medical policy review. Description, summary and references updated. Policy statements unchanged.
7/2018	New references added from BCBSA National medical policy. Background and summary clarified.
7/2017	New references added from BCBSA National medical policy.
10/2016	New medically necessary indications described based on expert opinion. Clarified coding information. Effective 10/1/2016.
12/2015	Added coding language.

8/2015	New references added from BCBSA National medical policy.
9/2014	New references added from BCBSA National medical policy.
7/2014	Clarified coding information.
11/2011-4/2012	Medical policy ICD 10 remediation: Formatting, editing and coding updates. No changes to policy statements.
4/2011	Reviewed - Medical Policy Group – Cardiology and Pulmonology. No changes to policy statements.
11/1/2010	Medical Policy #284 effective 11/1/2010 describing ongoing non-coverage.

Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:

[Medical Policy Terms of Use](#)

[Managed Care Guidelines](#)

[Indemnity/PPO Guidelines](#)

[Clinical Exception Process](#)

[Medical Technology Assessment Guidelines](#)

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Endnotes

¹ Based on expert opinion, MPG April 2016