Bronchial Thermoplasty

Policy Number: 2026T0542AA
Effective Date: October 1, 2026

➲ Instructions for Use

Table of Contents **Page**

Application 1
Coverage Rationale 1
Applicable Codes 1
Description of Services 1
Clinical Evidence 2
U.S. Food and Drug Administration 6
References 6
Policy History/Revision Information 8
Instructions for Use 8

Community Plan Policy
• Bronchial Thermoplasty

Application

UnitedHealthcare Commercial

This Medical Policy applies to UnitedHealthcare Commercial benefit plans.

UnitedHealthcare Individual Exchange

This Medical Policy applies to Individual Exchange benefit plans.

Coverage Rationale

Bronchial thermoplasty is unproven and not medically necessary for treating asthma due to insufficient evidence of efficacy.

Applicable Codes

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this policy does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by the member specific benefit plan document and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other policies and guidelines may apply.

CPT 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

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Description of Services

Asthma is a heterogeneous disease that is usually characterized by chronic airway inflammation. The symptoms of asthma include wheezing, shortness of breath, chest tightness, and/or cough. These symptoms may vary over time and in

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intensity, together with expiratory airflow limitation. The treatment for asthma includes a personalized and stepwise approach for symptom control with medications. (Global Initiative for Asthma, 2025)

Bronchial thermoplasty (BT) is a minimally invasive procedure that is intended for treating adults with severe, persistent asthma that is not well controlled with medications. BT uses thermal radiofrequency energy to reduce airway smooth muscle mass and responsiveness. In turn, this may reduce airway constriction and the severity and frequency of asthma symptoms. BT is administered at three outpatient visits approximately 3 weeks apart. During the procedure, a standard flexible bronchoscope is introduced through the nose or mouth and into the lungs. A specialized catheter is advanced through the bronchoscope until it contacts the targeted airway wall. Controlled thermal radiofrequency energy is then delivered to the airway smooth muscle while leaving the surrounding tissue undamaged. (ECRI, 2020)

Clinical Evidence

Conclusive quality evidence is lacking to support the safety and efficacy of bronchial thermoplasty (BT) in the control of severe asthma. Retrospective studies of BT have shown variable results, with less efficacy in individuals who are older than 65 years of age and have a higher body mass index. BT is noninferior to biologics in quality of life (QOL), and differences may exist due to the heterogeneity of the cohort populations used in studies. Moreover, there are concerns that some studies involve individuals with less severe asthma and a discordant correlation with clinical observations. Thus, the positive outcomes and biased QOL scores that are observed in these studies may not be applicable to individuals with severe asthma. Further randomized controlled trials (RCTs) are needed to determine the durability of clinical effects, assess long-term adverse events (AEs), and further understand the mechanism of BT in asthma.

Rayner et al. (2026) conducted this systematic review and meta-analysis, with the objective of synthesizing evidence regarding the efficacy and safety of BT in adults with severe asthma, using data from six RCTs that encompassed 573 individuals; of the individuals, 334 received BT. The review, which was conducted as part of guideline updates for the American Academy of Allergy, Asthma & Immunology and American College of Allergy, Asthma & Immunology Joint Task Force, followed Cochrane, GRADE (Grading of Recommendations Assessment, Development, and Evaluation), and PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) standards and assessed multiple outcomes, including asthma control, QOL, severe exacerbations, AEs, and mortality. During the procedural period, BT was associated with increased severe exacerbations [incidence rate ratio (IRR), 2.95; 95% CI, 1.20-7.25] and serious respiratory AEs (IRR, 5.98; 95% CI, 1.07-33.29), with moderate-certainty evidence. Post procedure, BT may reduce severe exacerbations (IRR, 0.67; 95% CI, 0.50-0.89), although the certainty of evidence is low. Across all follow-up periods, BT may be associated with modest improvements in asthma control (mean difference, -0.37), asthma-related QOL (mean difference, +0.55), and overall severe exacerbation rates (IRR, 0.81); however, these benefit estimates are supported by low-certainty evidence. The authors concluded that while BT may improve asthma control and QOL, it has shown increased risks of procedural severe asthma exacerbations and serious respiratory AEs. Limitations include a high risk of bias due to limited blinding, insufficient subgroup reporting, lack of direct comparisons with other severe asthma therapies, and potential conflicts of interest arising from authors' relationships with pharmaceutical and medical device companies. (Goorsenberg et al., 2021, also in Hayes, 2022, is included in this systematic review.)

Fong et al. (2023) conducted a systematic review and network meta-analysis to examine if BT compares favorably with U.S. Food and Drug Administration (FDA)–approved biological therapies for use in severe asthma and to generate probability-based rankings of safety and efficacy. The review included 29 RCTs and 15,547 individuals. No RCTs included in the network meta-analysis directly compared BT with biologics. The results of the network meta-analysis revealed that fewer individuals who were treated with BT experienced greater than one asthma exacerbation compared with the control. The annual exacerbation rate ratio of BT vs control was nonsignificant. Significant improvements in QOL, morning peak expiratory flow rate, and oral corticosteroid (OCS) dose reduction were found. No significant differences between BT and biologics were seen across indirect comparisons of all studies. The authors concluded that despite the lack of head-to-head comparative trials, the network meta-analysis suggests that BT is noninferior to biologics in terms of QOL. BT may also be noninferior for the outcomes of exacerbation rate reduction, lung function improvement, and OCS dose reduction. BT is a promising alternative for individuals with severe asthma. Recommendations for future BT clinical trials included biomarkers or direct comparison with biologics to enrich current evidence. Limitations of the network meta-analysis include the absence of individual data, difficulty assessing methodological equivalence, and differences in individual selection criteria across studies. (This study is included in the Health Technology Assessment by Hayes, 2022, updated 2025.)

Hatch et al. (2023) evaluated the safety and efficacy of BT 5 years post procedure in a real-world cohort of participants with severe asthma. The study included 51 participants who were enrolled in a registry and treated with BT at two Australian tertiary centers. Five years post procedure, participants were evaluated by interview, record review, the Asthma Control Questionnaire (ACQ), spirometry, and high-resolution chest computed tomography (CT). The results of the study

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revealed significant improvements in the ACQ from baseline (3.0 ±1.0) to 60 months later (1.8 ±1.0) ($p < 0.001$). Overall, 76% of participants responded to BT, with a fall in the ACQ of 0.5 units or greater. Of the 13 participants in whom the ACQ had not improved by 0.5 units, the ACQ improved by 0.4 units in five participants. The remaining eight participants had no change in the ACQ at 60 months. Per annum steroid requiring exacerbation frequency was also reduced from baseline (3.8 ±3.6) to 60 months later (1.0 ±1.6) ($p < 0.001$). In total, 44% of participants were weaned off oral steroids. A greater than 50% reduction in the requirement for reliever medications was also noted. There were no changes in spirometry observed. Minor degrees of localized radiological bronchiectasis were observed on CT in 23 of 47 participants (four participants were noted as unavailable to undergo CT). Modified Reiff scores increased from baseline (0.6 ±2.6) to 5 years after BT (1.3 ±2.5) ($p < 0.001$). However, no participants had features of clinical bronchiectasis. The authors concluded that a sustained clinical benefit from BT at 5 years was demonstrated in this cohort of participants with severe asthma. While radiological bronchiectasis was noted on CT, it did not appear to be inducing clinical disease. Limitations of the study include a lack of randomization. (This study is included in the Health Technology Assessment by Hayes, 2022, updated 2025.)

Nishi et al. (2023) conducted a retrospective case series in patients with severe asthma who underwent BT at a single institution in Japan. The study included clinical data from 21 patients recorded at the last visit before BT (baseline assessment) and at 12 months after BT (follow-up assessment). At the follow-up assessment, the study results revealed that Asthma Quality of Life Questionnaire scores ($p = 0.003$), maintenance OCS ($p = 0.027$), and exacerbation frequency ($p = 0.017$) significantly improved. Prebronchodilator forced expiratory volume in 1 second (FEV_1; percent predicted) did not significantly change ($p = 0.19$). Additionally, when patients were grouped according to their body mass index, Asthma Quality of Life Questionnaire scores were improved more in patients with overweight/obesity than those with normal weight ($p = 0.01$). The authors concluded that those with noncontrolled severe asthma with overweight/obesity and low QOL had potential benefits from BT. The study findings are limited by a small sample size, retrospective nature of the review, and lack of a comparison group that was undergoing a different treatment.

Chupp et al. (2022) conducted a 5-year evaluation based on the data collected from PAS2 (Post-FDA Approval Clinical Trial Evaluating Bronchial Thermoplasty in Severe Persistent Asthma) study that evaluated the efficacy and safety in participants with severe asthma who underwent BT. The inclusion criteria consisted of adults (age 18-65 years) who were taking inhaled corticosteroids ≥ 1,000 µg/d (beclomethasone or equivalent) and long-acting β-agonists ≥ 80 µg/d (salmeterol or equivalent). The analysis included 227 of 284 participants (80%) who completed 5 years of follow-up. The study results revealed that by year 5, the proportion of participants with severe exacerbations, emergency department (ED) visits, and hospitalizations was 42.7%, 7.9%, and 4.8% post treatment, respectively. This was compared with 77.8%, 29.4%, and 16.1% in the 12 months prior to treatment. Severe exacerbations were defined as a worsening of asthma symptoms that required the use of systemic corticosteroids; for those already taking OCSs on a daily or alternate-day basis, a severe exacerbation was defined as a worsening of symptoms that required an increase in the daily dose of systemic corticosteroids. The proportion of participants on maintenance OCS decreased from 19.4% at baseline to 9.7% at 5 years. Additionally, a subgroup analysis, which was based on baseline clinical and biomarker characteristics, revealed a statistically significant clinical improvement among all subgroups. The authors concluded that 5 years after treatment, participants in PAS2 experienced decreases in severe exacerbations, hospitalizations, ED visits, and corticosteroid exposure. All subgroups also had clinically significant improvement, suggesting that BT improves asthma control in different asthma phenotypes. Limitations of the study include the lack of a sham or control group; failure to follow up participants for the entire 5 years, which introduced bias; and no comparison in response after BT to responses to biological medications. (This study is included in the Health Technology Assessment by Hayes, 2022, updated 2025.)

Hayes completed a Health Technology Assessment that focused on the use of BT as an adjunct treatment for severe, persistent asthma in adult individuals who remained symptomatic despite medical management with inhaled corticosteroids and long-acting β-2 agonists. The assessment included 18 publications that reported on 15 studies. Hayes concluded that a low-quality body of evidence suggests that BT may reduce asthma exacerbations, health care utilization, and medication usage in individuals with severe asthma. Improvements in symptom control and asthma-related QOL were also observed and, for the most part, were clinically significant. The benefits of BT were generally sustained. BT did not improve pulmonary function measurements. During the BT treatment period, AEs were common. Hayes noted that there were individual study limitations, some inconsistency in findings for several outcomes, and limited evidence comparing BT with clinical alternatives. Future studies are needed to determine which individuals with severe asthma are most likely to benefit from BT compared with other add-on treatments. During the most recent annual review for the assessment, Hayes identified five newly published studies. Based on a review of abstracts, Hayes concluded that these studies are unlikely to change the conclusion of the assessment. There is a potential but still unproven benefit with BT as a treatment for severe, persistent asthma in adult individuals whose condition is not well controlled with long-acting bronchodilators and glucocorticoids and who accept the short-term risk of increased AEs. Additionally, there remains insufficient evidence for BT as a treatment for mild to moderate asthma in adults (Hayes, 2022; updated 2025). Akaba et al. (2023), Chaudhuri et al. (2021), and Goorsenberg et al. (2021), previously cited in this policy, are included in this Hayes report.

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Menzella et al. (2021) conducted a retrospective observational study to compare those diagnosed with severe, refractory asthma who were currently being treated with omalizumab, mepolizumab, benralizumab, or BT and to evaluate the efficacy of these treatments over a 12-month observation period. The study included 199 patients, who were older than age 12 years, from a single center. The study results revealed a 16.7% reduction in hospitalizations, 66.6% reduction in exacerbations ($p = 0.0001$), and greater improvement in FEV_1 (+37.4%; $p < 0.0001$) in patients who were treated with benralizumab (n = 32). There was an 85.7% reduction in hospitalizations ($p = 0.012$) and an 88.8% reduction in exacerbations ($p < 0.0001$) in patients who were treated with omalizumab (n = 54). There was an 89.5% reduction in hospitalizations ($p = 0.02$) and a 92.1% reduction in exacerbations ($p < 0.0001$) in patients who were treated with mepolizumab (n = 83). There was a 93.7% reduction in hospitalizations ($p = 0.001$) and a 73.5% reduction in exacerbations ($p < 0.0001$) in patients who were treated with BT (n = 30). Patients who were treated with BT and mepolizumab experienced the best OCS sparing effect: -76% ($p < 0.0001$) and -90.2% ($p = 0.002$), respectively. The authors concluded that all biologics, to varying degrees, reduced hospitalizations, exacerbations, and usage of OCS. Additionally, despite a starting point for those in the BT group that was worse for hospitalizations, exacerbations, and usage of OCS, BT obtained positive results that were comparable to those with biologics. The study is limited by the lack of randomization to the various treatment groups or comparison to a sham procedure. (This study is included in the Health Technology Assessment by Hayes, 2022, updated 2025.)

Langton et al. (2020) conducted a small, prospective case series to evaluate the effects of BT 12 months post procedure on airway volume in participants with severe asthma. The study included 10 consecutive participants who needed to be using inhaled triple therapy, had poorly controlled symptoms, and had frequent exacerbations that required oral steroids. Baseline data collection included the ACQ and high-resolution CT at total lung capacity (TLC) and functional residual capacity (FRC). The CT was repeated 4 weeks after the left lung was treated with BT but prior to right lung treatment and then again 12 months after both lungs were treated. Other outcome parameters, including the ACQ and oral steroid-requiring exacerbations, were measured at 6 and 12 months post BT. The study results revealed that the ACQ improved from 3.4 ±1.0 to 1.5 ±0.9 ($p = 0.001$) 12 months post BT. The frequency of oral steroid–requiring exacerbations also improved ($p = 0.008$). Total airway volume increased 12 months after BT in both the TLC ($p = 0.03$) and the FRC scans ($p = 0.02$). No change was observed in airway volume for the untreated central airways. In the BT-treated distal airways, increases in airway volume of 38.4% ±31.8% at TLC ($p = 0.03$) and 30.0% ±24.8% at FRC ($p = 0.01$) were observed. The change in distal airway volume was correlated with the improvement in the ACQ ($r = -0.71$; $p = 0.02$). The authors concluded that BT induces long-term increases in airway volume, which correlates with symptomatic improvement. This study is limited by a lack of a comparison group and small sample size.

ECRI (2020) completed a Clinical Evidence Assessment that focused on how well the Alair System (Boston Scientific Corp.) worked for treating severe asthma with BT in individuals who were irresponsive to medications. The assessment included two systematic reviews and one prospective, nonrandomized comparison study that reported on a total of 1,845 individuals. The results of the assessment revealed that the reported benefits of the Alair are modest and of unclear clinical significance for asthma control, asthma exacerbation, reduced hospitalizations, and QOL up to 1 year. It was also unclear whether the benefits were clinically significant or sustained beyond 1 year. The AEs were more common with Alair than with sham or standard medical therapy. ECRI concluded that the available clinical evidence for the Alair was inconclusive due to study limitations. One systematic review that compared BT with immunotherapy provided only indirect evidence because no head-to-head RCTs were available. The studies in both systematic reviews were at a risk of bias due to a small sample size, lack of randomization, lack of blinding, and/or differences in follow-up times. Studies reported between-group differences of unclear significance because the results were imprecise for some outcomes. The findings may also not be generalizable because of differences in individual characteristics across studies. The comparison study is at a high risk of bias due to the small sample size, single-center focus, and lack of randomization. Larger, multicenter RCTs that report longer-term outcomes are needed to validate BT with Alair. Wu et al. (2011), previously cited in this policy, was included in this ECRI assessment.

Burn et al. (2017) reported results from a retrospective study of BT procedural and short-term safety outcomes for routine United Kingdom clinical practice patients. Individual characteristics and safety outcomes were assessed using two independent data sources, the British Thoracic Society United Kingdom Difficult Asthma Registry and the Hospital Episodes Statistics database. A matched cohort of 59 patients that involved 152 procedures at six centers was used to estimate safety outcome event rates compared with clinical trial results. Study results in the matched cohort revealed that procedural complications were reported in 17 of 152 procedures (11.2%; 13 of 59 patients); 18 of 152 procedures (11.8%; 15 of 59 patients) were followed by an emergency readmission within 30 days for respiratory cause; and 13 of 152 procedures (8.6%; 13 of 59 patients) were followed within 30 days by an accident and emergency attendance admission for any cause. Overall, 31 of 152 procedures (20.4%) were associated with at least one safety issue within 30 days. Overall, 70 of 152 procedures (46.1%) were followed by an overnight stay. Compared with those in published clinical trials, which found lower hospitalization rates, patients who were undergoing BT in routine clinical practice were, on average, older and had worse baseline lung function and asthma QOL. The authors concluded that a higher proportion of

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patients experienced AEs compared with those in clinical trials. However, the greater severity of disease in those who were undergoing BT in routine clinical practice may explain the observed rate of postprocedural stay and readmission. The study findings are limited by a lack of randomization. (This study is included in the Health Technology Assessment by Hayes, 2022, updated 2025.)

Chupp et al. (2017) published a comparison of 3-year follow-up results from two prospective multicenter studies of BT in participants with severe asthma. The study compared the first 190 participants who were enrolled in the postmarketing PAS2 trial with the 190 participants who were treated with BT in the AIR2 (Asthma Intervention Research 2) RCT. The study results revealed that the percentage of participants who were enrolled in PAS2 with severe exacerbations, ED visits, and hospitalizations at year 3 after BT significantly decreased by 45%, 55%, and 40%, respectively. The PAS2 results echoed the AIR2 results. Participants who were enrolled in PAS2 and AIR2 were both able to significantly reduce their mean inhaled corticosteroid daily dose. The percentage of participants who were enrolled in PAS2 and taking daily OCS to improve asthma control was reduced from 18.9% at baseline to 10.2% in the third year after BT. However, this decrease was not apparent in the AIR2 trial, in which a lower percentage of the participants who received BT were on maintenance OCS medication at baseline. Prebronchodilator FEV_1 remained unchanged from baseline throughout the 3-year follow-up period. Postbronchodilator FEV_1 always remained higher than prebronchodilator values. The authors concluded that PAS2 demonstrated similar improvements in asthma control after BT compared with the AIR2 trial despite enrolling participants who may have had poorer asthma control. BT was safe; participants had durable and markedly lower rates of steroid exacerbations, ED visits, and hospitalizations 3 years after BT. Limitations of the study include the lack of comparison with a contemporary control group that was undergoing a different therapy.

Zhou et al. (2016) performed a systematic review and meta-analysis to evaluate the long-term efficacy and safety of BT in the treatment of individuals with moderate to severe, persistent asthma. The review included 249 individuals who were treated with BT and had 1-year follow-up data and 216 individuals who had 5-year follow-up data from three RCTs and three extension studies. The outcomes assessed after BT included spirometric data, respiratory AEs, ED visits, and hospitalization for respiratory illness at the 1-year and 5-year follow-ups. The study results revealed no evidence of significant decline in prebronchodilator FEV_1 or in postbronchodilator FEV_1 between 1 year and 5 years. The frequency of respiratory AEs was reduced significantly during the follow-up. The number of ED visits for respiratory AEs remained unchanged after BT treatment. There was no statistically significant increase in the incidence of hospitalization for respiratory AEs. The authors concluded that BT showed reasonable long-term safety and efficacy in individuals with moderate to severe, persistent asthma. However, a large-scale clinical study should be performed to confirm the finding. There are several limitations in this study. Almost all studies that were included in this meta-analysis did not have a control group (sham group) for the 5-year follow-up. The authors stated that findings from current studies are based merely on clinical manifestations and outcomes. Histological assessment after BT could provide more evidence to support the findings. (This study is included in the Health Technology Assessment by Hayes, 2022, updated 2025, and the Clinical Evidence Assessment by ECRI, 2020.)

Torrego et al. (2014) reported that a Cochrane systematic review, which was based on a review of AIR (Asthma Intervention Research), AIR2, and Research in Severe Asthma RCTs (429 individuals), found that BT in individuals with moderate to severe asthma provides a modest clinical benefit in QOL and lower rates of asthma exacerbation but no significant difference in asthma control scores. This procedure increases the risk of AEs during treatment but has a reasonable safety profile after completion of the bronchoscopies. The overall quality of evidence regarding this procedure is moderate. Further research should provide a better understanding of the mechanisms of action of BT as well as its effect on different asthma phenotypes or in individuals with worse lung function. The QOL findings were at a risk of bias, as the main benefits were seen in the two studies that did not include a sham treatment arm. (This study is included in the Health Technology Assessment by Hayes, 2022, updated 2025, and the assessment by ECRI, 2020.)

Clinical Practice Guidelines

American College of Chest Physicians (CHEST)

CHEST published a coverage and payment position statement that concluded, based on the strength of clinical evidence, that BT offers an important treatment option for adults with severe asthma who continue to be symptomatic despite maximal medical treatment. (CHEST, 2014)

British Thoracic Society (BTS)/National Institute for Health and Care Excellence (NICE)/Scottish Intercollegiate Guidelines Network (SIGN)

The BTS/NICE/SIGN guidelines for the diagnosis, monitoring, and management of chronic asthma in adults, young people, and children do not mention BT as a potential treatment or address managing severe asthma. (NICE, 2024)

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European Respiratory Society (ERS)/American Thoracic Society (ATS)

The ERS/ATS guidelines for the treatment of severe asthma recommend BT for adults only in the context of an independent systematic registry or a clinical study with institutional review board approval (strong recommendation; very low-quality evidence). The guidelines note, "This is a strong recommendation, because of the very low confidence in the currently available estimates of effects of BT in individuals with severe asthma. Both potential benefits and harm may be large and the long-term consequences of this new approach to asthma therapy utilizing an invasive physical intervention are unknown. Specifically designed studies are needed to define its effects on relevant objective primary outcomes such as exacerbation rates, and long-term effects on lung function. Studies are also needed to better understand the phenotypes of responding individuals, its effects in individuals with severe obstructive asthma (FEV_1 < 60% of predicted value) or in whom systemic corticosteroids are used, and its long-term benefits and safety. Further research is likely to have an important impact on this recommendation". (Chung et al., 2014)

Global Initiative for Asthma (GINA)

GINA guidelines for asthma management and prevention state that BT is a potential treatment option for select adults with uncontrolled asthma despite optimized therapeutic regimens and referral to an asthma specialty center. However, BT should only be performed as part of an independent institutional review board–approved systematic registry or clinical research study. BT is associated with an increase in asthma exacerbations during the 3-month treatment period, followed by a subsequent decrease in frequency. BT has shown no beneficial effect on lung function or asthma symptoms compared with sham control. However, during extended follow-up, some patients who were treated with BT reported a sustained reduction in exacerbations. The number of BT clinical studies is small. Patients with chronic sinus disease, frequent chest infections, or an FEV_1 of < 60% predicted were excluded from the pivotal sham-controlled study. Patients were also not on optimized asthma treatment prior to treatment with BT. There is a need for larger, sham-controlled studies that include a longer-term follow-up period and compare both effectiveness and safety, including lung function. (GINA, 2025)

National Asthma Education and Prevention Program Coordinating Committee (NAEPPCC)/National Heart, Lung, and Blood Institute (NHLBI)

The expert panel working group (2020) guidelines on asthma management state, "Most individuals ages 18 years and older with uncontrolled, moderate-to-severe, persistent asthma should not undergo BT to treat asthma because the benefits are small, the risks are moderate, and the long-term outcomes are uncertain. Some individuals with moderate-to-severe persistent asthma who have troublesome symptoms may be willing to accept the risks of BT and, therefore, might choose this intervention after shared decision-making with their health care provider. Clinicians should offer the procedure in the setting of a clinical trial or a registry study to enable the collection of long-term data on the use of BT for asthma." These guidelines are based on the AIR, AIR2, and Research in Severe Asthma RCTs. Limitations of these three trials include funding by the company that markets the BT device, a lack of long-term follow-up, and an insufficient number of individuals to fully assess clinical benefits and harms. Additional research that includes RCTs and long-term registry outcomes would be beneficial.

National Institute for Health and Care Excellence (NICE)

NICE interventional procedures guidance on BT for severe asthma states that the current safety and efficacy evidence is adequate to support the use of this procedure, provided that standard arrangements are in place for clinical governance, consent, and audit. However, BT should only be used for severe asthma that is uncontrolled despite optimal drug treatment. BT should only be performed by a multidisciplinary team in specialist centers with on-site access to intensive care. Additionally, BT should only be performed by clinicians with training in the procedure and experience managing severe asthma. There is uncertainty about which individuals may benefit from BT. Future research should report the details of BT individual selection and long-term safety and efficacy outcomes. (NICE, 2018)

U.S. Food and Drug Administration (FDA)

This section is to be used for informational purposes only. FDA approval alone is not a basis for coverage.

For information on BT systems, refer to the following website (use product code OOY): https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfPMA/pma.cfm. (Accessed March 23, 2026)

References

Akaba T, Jo T, Iwagami M, et al. Reduced asthma exacerbations in adult patients treated with bronchial thermoplasty. J Allergy Clin Immunol Pract. 2023 Oct;11(10):3076-3083.e3.

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American College of Chest Physicians. Position payment for coverage and payment bronchial thermoplasty. May 12, 2014. Available at: https://www.chestnet.org/Newsroom/CHEST-News/2014/05/Position-Statement-for-Coverage-and-Payment-for-Bronchial-Thermoplasty. Accessed March 19, 2026.

Burn J, Sims AJ, Keltie K, et al. Procedural and short-term safety of bronchial thermoplasty in clinical practice: evidence from a national registry and hospital episode statistics. J Asthma. 2017 Oct;54(8):872-879.

Chaudhuri R, Rubin A, Sumino K, et al.; BT10+ Study Group. Safety and effectiveness of bronchial thermoplasty after 10 years in patients with persistent asthma (BT10+): a follow-up of three randomized controlled trials. Lancet Respir Med. 2021 May;9(5):457-466.

Chung KF, Wenzel SE, Brozek JL, et al. International ERS/ATS guidelines on definition, evaluation, and treatment of severe asthma. Eur Respir J. 2014 Feb;43(2):343-373.

Chupp G, Kline JN, Khatri SB, et al. Bronchial thermoplasty in patients with severe asthma at 5 years: the post-FDA approval clinical trial evaluating bronchial thermoplasty in severe persistent asthma study. Chest. 2022 Mar;161(3):614-628.

Chupp G, Laviolette M, Cohn L, et al. Long-term outcomes of bronchial thermoplasty in subjects with severe asthma: a comparison of 3-year follow-up results from two prospective multicenter studies. Eur Respir J. 2017 Aug;50(2):1700017.

ECRI. Alair bronchial thermoplasty system (Boston Scientific Corp.) for treating severe asthma. Plymouth Meeting (PA): ECRI; 2020 May 28. (Clinical Evidence Assessment).

Expert Panel Working Group of the National Asthma Education and Prevention Program Coordinating Committee. 2020 focused updates to the asthma management guidelines: a report from the National Asthma Education and Prevention Program Coordinating Committee Expert Panel Working Group. J Allergy Clin Immunol. 2020 Dec;146(6):1217-1270.

Fong KY, Zhao JJ, Syn NL, et al. Comparing bronchial thermoplasty with biologicals for severe asthma: systematic review and network meta-analysis. Respir Med. 2023 Sep;216:107302.

Global Initiative for Asthma (GINA). Global strategy for asthma management and prevention. Updated 2025. Available at: https://ginasthma.org/reports/. Accessed March 19, 2026.

Goorsenberg AWM, d'Hooghe JNS, Srikanthan K, et al. TASMA research group. Bronchial thermoplasty induced airway smooth muscle reduction and clinical response in severe asthma. The TASMA randomized trial. Am J Respir Crit Care Med. 2021 Jan;203(2):175-184.

Hatch M, Lilburn P, Scott C, et al. Safety and efficacy of bronchial thermoplasty in Australia 5 years post-procedure. Respirology. 2023 Nov;28(11):1053-1059.

Hayes, Inc. Health Technology Assessment. Bronchial thermoplasty for treatment of asthma in adults. Lansdale, PA: Hayes, Inc.; July 2022. Updated July 15, 2025.

Langton D, Banks C, Noble PB, et al. The effect of bronchial thermoplasty on airway volume measured 12 months post-procedure. ERJ Open Res. 2020 Nov;6(4):00300-2020.

Menzella F, Fontana M, Galeone C, et al. A real-world evaluation of clinical outcomes of biologicals and bronchial thermoplasty for severe refractory asthma (BIOTERM). J Asthma Allergy. 2021 Aug;14:1019-1031.

National Institute for Health and Care Excellence (NICE). Asthma: diagnosis, monitoring and chronic asthma management (BTS, NICE, SIGN). NICE guideline NG245. London (UK): NICE; November 27, 2024.

National Institute for Health and Care Excellence (NICE). Bronchial thermoplasty for severe asthma. HTG494. December 19, 2018.

Nishi K, Yoshimura C, Morita K, et al. Effectiveness of bronchial thermoplasty in patients with asthma exhibiting overweight/obesity and low quality of life. World Allergy Organ J. 2023 Mar;16(3):100756.

Rayner DG, Chu AWL, Cox G, et al. Bronchial thermoplasty for severe asthma: systematic review and meta-analysis of benefits and harms. J Allergy Clin Immunol Glob. 2026 Mar;5(3):100678.

Torrego A, Solà I, Munoz AM, et al. Bronchial thermoplasty for moderate or severe persistent asthma in adults. Cochrane Database of Systematic Reviews 2014, Issue 3. Art. No.: CD009910.

Wu Q, Xing Y, Zhou X, et al. Meta-analysis of the efficacy and safety of bronchial thermoplasty in patients with moderate-to-severe persistent asthma. J Int Med Res. 2011;39(1):10-22.

Zhou JP, Feng Y, Wang Q, et al. Long-term efficacy, and safety of bronchial thermoplasty in patients with moderate-to-severe persistent asthma: a systemic review and meta-analysis. J Asthma. 2016;53(1):94-100.

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Policy History/Revision Information

Date	Summary of Changes
10/01/2026	**Supporting Information** • Updated *Clinical Evidence* and *References* sections to reflect the most current information • Archived previous policy version 2026T0542Z

Instructions for Use

This Medical Policy aids in interpreting UnitedHealthcare standard benefit plans. When deciding coverage, the member specific benefit plan document must be referenced as the terms of the member specific benefit plan may differ from the standard plan. In the event of a conflict, the member specific benefit plan document governs. Before using this policy, check the member specific benefit plan document and any applicable federal or state mandates. UnitedHealthcare reserves the right to modify its policies and guidelines as necessary. This Medical Policy is provided for informational purposes. It does not constitute medical advice.

This Medical Policy may also be applied to Medicare Advantage plans in certain instances. In the absence of a Medicare National Coverage Determination (NCD), Local Coverage Determination (LCD), or other Medicare coverage guidance, CMS allows a Medicare Advantage Organization (MAO) to create its own coverage determinations, using objective evidence-based rationale relying on authoritative evidence (Medicare IOM Pub. No. 100-16, Ch. 4, §90.5).

UnitedHealthcare may also use tools developed by third parties, such as the InterQual® criteria, to assist us in administering health benefits. UnitedHealthcare Medical Policies are intended to be used in connection with the independent professional medical judgment of a qualified health care provider and do not constitute the practice of medicine or medical advice.

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