



## Bronchial thermoplasty: what we know, what we don't know, and what we need to know

## Richard J. Russell and Christopher E. Brightling

Dept of Respiratory Sciences, NIHR Biomedical Research Centre, Institute for Lung Health, University of Leicester, Leicester, UK.

Corresponding author: Christopher E. Brightling (ceb17@le.ac.uk)



Shareable abstract (@ERSpublications)

Bronchial thermoplasty leads to sustained improvements in airway remodelling and clinical outcomes in severe asthma, but questions remain about how it works, who should be treated, and where it fits in current treatment guidelines https://bit.ly/3xl1qZC

Cite this article as: Russell RJ, Brightling CE. Bronchial thermoplasty: what we know, what we don't know, and what we need to know. Eur Respir J 2022; 59: 2102018 [DOI: 10.1183/13993003.02018-2021].

This single-page version can be shared freely online.

Copyright ©The authors 2022. For reproduction rights and permissions contact permissions@ersnet.org

Received: 20 July 2021 Accepted: 26 July 2021 Bronchial thermoplasty is a non-pharmacological treatment for severe asthma, which aims to reverse the remodelling changes typically seen in the airways of asthma patients. Radiofrequency energy is applied to the airway walls using a bronchoscope-delivered thermoplasty catheter comprising a basket of four conducting wires which expand to contact the airway wall. The thermoplasty catheter is designed to heat the airway wall to approximately 65°C for 10 s. Over three procedures approximately 3 weeks apart, the majority of the bronchial tree (airways of calibre 3–10 mm) is treated; typically the right lower lobe in procedure one, the left lower lobe in procedure two, and both upper lobes in procedure three. The right middle lobe is not usually treated due to the risk of airway wall oedema leading to obstruction and right middle lobe collapse (termed "right middle lobe syndrome") [1].