

COST-EFFECTIVENESS ANALYSIS OF BRONCHIAL THERMOPLASTY VERSUS PHARMACOLOGICAL THERAPIES IN PATIENTS WITH SEVERE ASTHMA IN MEXICO, COLOMBIA AND SPAIN

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OBJECTIVES: To estimate the cost-effectiveness of the bronchial thermoplasty (BT) in Mexico, Colombia and Spain, based on the number of asthmatic exacerbations avoided and using the best available scientific evidence. **METHODS:** A Markov model was designed with a time horizon of 5 years, to project a hypothetical cohort of adult patients with severe, persistent and uncontrolled asthma. We calculated the incremental cost-effectiveness ratio (ICER) of the BT and conventional pharmacological scheme (CFE –fluticasone plus salmeterol-) in comparison with omalizumab (OMAL) and CFE. Alternatives were considered cost-effective when the ICER was equivalent or below the value of three gross domestic product (GDP) per capita (pp) per exacerbation avoided, and very cost-effective when the value was below the value of one GDP pp per exacerbation avoided. Parameters describing the consumption of health services were obtained from a local panel of experts, costs were calculated based on local and official information. Clinical parameters were obtained from meta-analysis, randomized clinical trials and indirect comparisons. Sensitivity analyses were estimated with Monte Carlo simulations. The analysis leveraged TreeAge™ Software. **RESULTS:** Compared to CFE, in Mexico, BT+CFE has an ICER of \$3,738 per avoided exacerbation; for Colombia, the ICER is \$2,732; in Spain, an ICER of \$3,060; all previous BT+CFE-ICERs were classified as very cost-effective. In all three countries, BT+CFE was a ‘dominant’ strategy – projected to provide both increased clinical efficacy and cost-savings–, compared to OMAL+CFE. **CONCLUSIONS:** In these three countries’ health care systems, BT is projected to provide a very cost-effective treatment, and estimated to likely be cost-saving compared to an alternative.