

## BRONCHIECTASIS CHARACTERISTICS IN CROATIAN PATIENTS: DATA FROM THE EUROPEAN MULTICENTER BRONCHIECTASIS AUDIT AND RESEARCH COLLABORATION (EMBARC) REGISTRY

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## **Objective:**

Background and objective: Bronchiectasis is one of the most neglected respiratory diseases. The European Multicenter Bronchiectasis Audit and Research Collaboration (EMBARC) registry was established to address the underinvestment in bronchiectasis research, education and clinical care in Europe. The bronchiectasis severity index (BSI) is an assessment of severity tool that accurately predicts mortality, exacerbations, quality of life and lung function decline in bronchiectasis. We aimed to describe the clinical features and calculate the BSI of Croatian bronchiectasis patients enrolled in the EMBARC registry and compare them to other European cohorts.



Methods: data from the EMBARC registry was used to describe the clinical features and calculate BSI. The BSI was calculated with the assistance of an online tool using the following criteria: age, BMI, FEV1 % predicted, number of hospital admissions and exacerbations 12 months prior to study inclusion, MRC breathlessness score, *Pseudomonas aeruginosa* colonization, other chronic colonization and radiological severity.

Results: Out of the 61 patients 29 (47.5%) are female and 32 (52.5%) male, with a mean age of 55.9 years. The FEV1 % predicted was >80% in 29.5%, 50-80% in 34.4%, 30-50% in 21.3%, <30% in 11.5% of patients, while data was missing for 3.3%. Most of the patients (45.9%) didn't require hospital care prior to study inclusion, 41% had 1, 8.2% had 2 and 4.9% had 3 hospital admissions. The majority of patients experienced at least 1 exacerbation before study inclusion (18% had 0, 19.7% had 1, 29.5% had 2 and 32.8% had 3 or more exacerbations). 17 patients are currently colonized with *P. aeruginosa*, 3 patients with *Haemophilus spp.*, and 3 more patients have a history of chronic *P.aeruginosa* colonization. 42.6% of patients in our cohort have severe bronchiectasis (BSI 9+), 31.1% have moderate bronchiectasis (BSI 5-8) and 26.2% have mild bronchiectasis (BSI 0-4).

Conclusion: To our knowledge, this is the first description of the clinical features and BSI in bronchiectasis patients from Croatia. The percentage of patients in different severity categories is similar to that of other European cohorts. Most of the patients in our cohort have severe bronchiectasis with a 7.6-10.5% estimated 1 year mortality rate. Long term follow up and further enrollment of patients from Croatia to the EMBARC registry is required to improve our understanding and, consequently, quality of care for Croatian bronchiectasis patients.