Background: the impact of nontuberculous mycobacterial pulmonary disease (NTM-PD) is difficult to assess. Aims and objectives: to calculate survival rates of patients with pulmonary NTM isolate and/or NTM-PD.
Methods: Retrospective analysis of all Croatian residents with pulmonary NTM isolated from 2006 to 2016. Based on previously shown correlation, we assessed the 5-year survival regarding fulfilment of American Thoracic Society (ATS) microbiologic criteria and the level of species’ clinical relevance. For those with clinically diagnosed NTM-PD, survival rate was calculated in regard to the received therapy (adequate therapy; short duration adequate therapy; inadequate/no therapy; tuberculosis therapy).

Results: 436 out of 2007 patients with pulmonary NTM isolate met the microbiologic criteria. A 5-year survival rate for those meeting the criteria was 60%, compared to 70% in those who did not (p<0.001). The result was similar for M. xenopi (intermediately relevant species) but didn’t reach statistical significance (p=0.055), while there was no difference for M. avium complex (highly relevant species). NTM-PD was diagnosed in 160 out of 545 patients with available medical records. With respect to different therapies, we found no differences regarding the NTM caused mortality, but the all cause mortality was 17% in adequately treated, compared to 36% in those receiving no treatment (p=0.018).

Conclusion: patients meeting the microbiologic criteria had significantly lower survival rate compared to those who do not, but the difference was lost in case of species of high clinical relevance. Adequate treatment of NTM-PD significantly reduces the all-cause mortality indicating a high morbidity of the disease.