A total of 72 out of 955 patients with a mean age of 62.6±6.8 years (range 25-81) and 1251±13 male gender developed pneumonitis during immunotherapy treatment. A total of 30 (1.6%) IP and 20 (1.2%) OTP cases were identified. The major histologic type in this group were adenocarcinomas (151, 16%) and squamous cell carcinomas (105, 11%). The most frequent clinical presentations were immunotherapy-related pneumonitis (39, 9%), neoplastic disorders (20, 1%), infections (19, 7%), and infections (19, 7%). There were no significant differences in OS and PFS in the 105 patients with IP and 1251 patients with OTP (p = 0.392 and p = 0.338, respectively). Patients with autoimmune disorders (4, 2%) and paraneoplastic autoimmune syndromes (18, 2%) were the most frequently affected anti-IO drug recipients. Patients with the histological diagnosis of lung cancer were treated with immunotherapy inhibitors.

**Results**

In the clinical and radiologic model, the significant factors and predictors were considered. The factors considered in the analysis were age, sex, smoking history, the presence of comorbidities, and the type of immunotherapy. The results showed that the factors that significantly predicted the development of pneumonitis were age, the presence of comorbidities, and the type of immunotherapy used.

**Discussion**

So, in conclusion, we know that the first patient-specific risk prediction algorithm to estimate the probability of pneumonitis development during immunotherapy with PD-L1 monoclonal antibodies.

The clinical model revealed a significant association between comorbidities and the likelihood of pneumonitis. Moreover, the study highlighted the importance of considering comorbidities in the prediction of pneumonitis during immunotherapy, which may help in identifying patients who are at a greater risk of developing pneumonitis.

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