Response to: Comment on "Systematic retrospective study on 64 patients anti-Mi2 dermatomyositis: A classic skin rash with a necrotizing myositis and high risk of malignancy"

To the Editor: We read with great interest the comment of Lim et al[1] to our letter. They underline that anti-Mi2–positive dermatomyositis (DM) had previously not been associated with an increased risk of cancer,[2,3] even if this association still remains a matter of debate.

In the Dutch study[2] cited, no association between anti-Mi2–positive patients and malignancy within 3 years of idiopathic inflammatory myopathy (IIM) onset was reported. This retrospective study included 840 patients for whom a myositis-specific antibody screening had been performed. Among them, only 187 (22.7%) were considered as patients with IIM, and only 14 patients were anti-Mi2–positive. They compared the frequency of malignancy in anti-Mi2–positive patients and other patients without IIM diagnosis.

The absence of an association with cancer may result from a low sample size of anti-Mi2–positive patients and, therefore, low statistical power. They also failed to demonstrate a significant association between the presence of anti-Mi2 antibody and DM skin involvement. Moreover, anti-Mi2–positive patients were not compared to age- and sex-matched control individuals from the general population but, instead to a group of patients suspected of having IIM without diagnostic confirmation.

In the other study cited, Yang et al[3] used a similar approach to ours, using the Chinese general population as the comparator group for cancer incidence. Yet again, the low number of cases of anti-Mi2–positive DM (n = 24) included did not allow for a significant increase in cancer risk. The standardized incidence ratio (SIR) was estimated by comparing the observed number of malignancies (0) to the expected number according to the corresponding incidence in the age- and sex-matched population over 6 years: 0 (95% confidence interval, 0-7.03).

In our study, we calculated that at least 220 person-years were necessary to demonstrate an association corresponding to an SIR value of 5.1 or lower, with 80% power and with the expected cancer incidence in the French general population in 2016 (French Network of Cancer Registries FRANCIM, data not shown). By allowing a maximum contribution of 6 years per patient, the maximal numbers of person-years would, respectively, be 88 for 14 patients[2] and 144 for 24 patients.[3] Moreover, considering that cancer incidence was approximately 1.6 times lower in China than in France in 2018,[4] the number of patients required to achieve similar power would necessarily be higher when studying the Chinese population. The power was therefore not sufficient in these studies to draw definite conclusions on cancer association. Finally, a recent case series of 58 anti-Mi2–positive patients with DM an SIR of cancer of 2.4 (95% confidence interval, 0.8-5.5),[5] a range including the median value we obtained but that also includes the value 1. Nonetheless, the authors underlined a trend toward a positive association with cancer and recommended continuing screening for cancer within 3 years of the onset of myositis symptoms.

To conclude, our data suggest a higher risk of cancer in the anti-Mi2–positive DM in the French population. Further studies are needed to validate this finding.

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