superantigen-mediated diseases, such as scarlatiniform rash, staphylococcal scalded skin syndrome, toxic shock syndrome or Kawasaki disease.[5]

In conclusion, the association between COVID-19 and PRP may be coincidental, nevertheless viral infections have been proposed to be a triggering event for PRP pathogenesis. Further research is needed to confirm the correlation between SARS-CoV-2 infection and PRP.

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The patients in this manuscript have given written informed consent to publication of their case details.

Conflicts of interest

The authors have no conflicts of interest to declare.

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Patients with primary cutaneous lymphoma are at risk for severe COVID-19. Data from the Spanish Primary Cutaneous Lymphoma Registry

Dear Editor,

While some papers report an increased risk of COVID-19 and worse outcomes[1] in oncological patients, others have found no differences.[2]

We are not aware of studies assessing risk for COVID-19 and clinical outcomes of patients with Primary Cutaneous Lymphomas (PCL).

The objectives of our study were to evaluate the incidence of COVID-19 and severe outcomes in a cohort of PCL patients, compare it to the general population, and describe changes in lymphoma staging 8 weeks after COVID-19.

Registro Español de Linfomas Cutaneos (RELC) is a prospective cohort recruiting all patients with PCL referred to the 27 participating dermatology departments. In May 2020, we collected all patients with COVID-19 and described their clinical data and evolution. We defined COVID-19 cases, according to the European Centre for Disease Prevention and Control,[3] as possible, probable or confirmed. COVID-19 outcomes included asymptomatic or mild, hospitalized, intensive care unit (ICU) and deaths.

We estimated cumulative incidences, 95% Confidence Intervals (CI), and standardized incidence ratios (SIR) by age, sex and geographical area corresponding to the same period (January–November 2020) of Spanish figures published by the Spanish Ministry of Health.[4] This study was approved by the ethics committee of Hospital 12 de Octubre (CEIM 20/297).

RELC included 1542 patients [56% Mycosis fungoides/Sézary (MF/SS), 44% nonMF/SS primary cutaneous lymphomas]. 20% were in T3 and T4 stages. Sixty patients (3.9%) suffered from COVID-19, median age of 59.1 years (SD = 13.1); 50% of them are MF/SS, and 50% are nonMF/SS. Forty-two patients had a microbiologically confirmed infection (70%), seven of them being probable cases (12%) and 11 possible cases (18%). Most patients (65%) experienced mild disease, 25% required hospitalization, 5% needed ICU and 5% died. 82% of patients reported stability of their PCLs, 9% improvement and 9% worsening.

Table 1 describes age-specific cumulative incidences of COVID-19 and COVID-19 related events and compares them with the general population by means of the overall SIRs. None of the SIRs is statistically significant, but they increase with the severity of COVID-19 disease. Patients in the 60–69 years stratum show a strongly increased risk of hospitalization [SIR: 4.81 (95% CI: 2.2–9.12)] and need for intensive care [SIR: 12.41 (95% CI: 1.5–45)]. In patients surviving, the oncological disease remains stable.

There were limited data regarding PCL and COVID-19. The United States CL Consortium and the EORTC CLTF established some general recommendations for the treatment of PCLs during the COVID-19 pandemic[5,6] while some authors suggested that PCL does not increase the risk of SARS-CoV-2.[7] As far as we know, this study is the first to describe the incidence and severity of COVID-19 among PCL patients.

The strengths of our study are that it's based on a previously defined and closely followed prospective cohort, and has comparable data for the general population. Few cases remained

Table 1 Age-specific cumulative incidence and Standardized Incidence Ratio of COVID-19 incidence and COVID-19 events in patients with cutaneous lymphomas compared with the equivalent definition in the general population of Spain

	COVID-19 cases observed in Spain	Population in the provinces where RELC is established	Cumulative Incidence of COVID-19 in Spain 95% CI (per 100 000 persons)	Observed cases in RELC	Expected cases	Adjusted Cumulative Incidence of COVID-19 and 95% CI (per 100 000 persons)	SIR† 95% CI
All PCR confirmed cases vs Spanish confirmed cases (Only provinces where RELC is established)							
All ages	906 160	23 874 765	3795 (3788–3803)	42	55.0	2900 (2089–3922)	0.76 (0.55–1.03)
10–49	521 362	13 422 094	3884 (3874–3895)	10	12.6	3022 (1439–5578)	0.8 (0.38–1.46)
50–59	142 436	3 862 125	3688 (3669–3707)	8	12.2	2497 (1066–4944)	0.66 (0.28–1.3)
60–69	91 777	2 904 159	3160 (3140–3181)	18	13.9	4907 (2902–7770)	1.29 (0.77–2.04)
≥70	150 585	3 686 387	4085 (4064–4106)	6	17.5	1302 (469–2852)	0.34 (0.13–0.75)
PCR Hospitalized cases vs Spanish hospitalized cases (Only provinces where RELC is established)							
All ages	123 554	23 874 765	518 (515–520)	17	12.6	698 (406–1120)	1.35 (0.79–2.16)
10–49	22 537	13 422 094	168 (166–170)	3	1.7	885 (167–2620)	1.71 (0.35–5)
50–59	19 107	3 862 125	495 (488–502)	1	0.6	315 (0–1807)	0.61 (0.02–3.39)
60–69	21 957	2 904 159	756 (746–766)	9	4.8	2487 (1128–4741)	**4.81 (2.2–9.12)**
≥70	59 953	3 686 387	1626 (1613–1639)	4	1.7	879 (229–2272)	1.7 (0.46–4.35)
PCR ICU cases vs Spanish ICU cases (Only provinces where RELC is established)							
All ages	9939	23 874 765	42 (41–42)	3	1.1	111 (21–328)	2.66 (0.55–7.77)
10–49	1512	13 422 094	11 (11–12)	0	NA	–	–
50–59	2029	3 862 125	53 (50–55)	1	0.1	291 (0–1665)	6.98 (0.18–39.0)
60–69	3126	2 904 159	108 (104–111)	2	0.2	517 (49–1899)	**12.41 (1.5–45)**
≥70	3272	3 686 387	89 (86–92)	0	NA	–	–
PCR death cases vs Spanish death cases (Only provinces where RELC is established)							
All ages	28 624	23 874 765	120 (119–121)	2	3.56	67 (6–248)	0.56 (0.07 –2.03)
10–49	446	13 422 094	3 (3–4)	0	NA	–	–
50–59	1031	3 862 125	27 (25–28)	0	NA	–	–
60–69	2644	2 904 159	91 (88–95)	2	0.4	557 (53–2048)	4.65 (0.56–17.0)
≥70	24 503	3 686 387	665 (656–673)	0	NA	–	–

From January 2020 to 30 November 2020. Statistically significant results in bold.
ICU, Intensive care unit; PCR, Polymerase chain reaction test confirmed cases; RELC, Spanish Primary Cutaneous Lymphoma Registry.
†SIR, Standardized Incidence Ratio by age-sex and province.

unnoticed because it is unlikely that COVID-19 were diagnosed in a different setting.

Nevertheless, our study couldn't reach high statistical power, because the number of COVID-19 outcomes was relatively low, especially for severe outcomes and death, and the elderly were less represented in RELC, probably due to reduced survival after disease.

We could not detect increased risks in all PCL patients compared to the general population, especially for rare outcomes such as mortality. However, we found an augmented risk of severe disease compared to the general population among those of 60 to 69 years of age (this group included more patients and outcomes, thus, offering more statistical power). The insufficient number of total cases didn't allow us further subdivision of the PCL group.

Our study suggests that PCL patients should be considered at risk for severe COVID-19, requiring reinforced preventive measures and prioritization in vaccination strategies.

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Conflict of interest

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Immune thrombocytopenic purpura associated with COVID-19 Pfizer-BioNTech BNT16B2b2 mRNA vaccine

To the Editor:

A 74-year-old Caucasian male patient presented to Dermatology Department with multiple haemorrhagic blisters on oral and nasal mucosa and purpuric rash on lower extremities. The cutaneous lesions appeared for the first time a day before admission, firstly on patient's thighs and then spread to lower legs and forearms. Moreover, that morning patient woke up with blood on his pillow. According to the anamnesis, on the day preceding the appearance of the symptoms, the patient received first dose of Pfizer (New York, NY, USA) – BioNTech (Mainz, Germany) BNT16B2b2 mRNA vaccine. On admission, physical examination revealed multiple haemorrhagic blisters on oral and nasal mucous membranes of various size (Fig. 1a). Moreover, purpuric rash localized on lower legs, thigs and forearms was visible (Fig. 1b). At the injection site, an ecchymosis of 2 cm in diameter was observed (Fig. 1c). The patient did not report any subjective symptoms associated with mucous and cutaneous lesions. Besides hypertension, the patient did not suffer from any other chronic diseases. There was no history of abnormal bleeding or family history of coagulopathies. The performed laboratory examinations revealed severe thrombocytopenia ($2*10^9$/L), with normal clotting parameters. Normal D-dimers concentration permitted us to exclude the associated thrombosis. Based on clinical manifestation and laboratory tests, immune thrombocytopenic purpura associated with SARS-CoV-2 vaccine was diagnosed. The patient was transferred to Hematology Department, where, to the best of our knowledge, he was put on bolus