findings may, as in the present case, indicate a combination of traits indicative of psoriasis and toxicoderma [7, 8]. In most of these patients, the lesions can be controlled with topical therapy [4-6, 8]. In the present case, however, the skin condition not only worsened when the anticancer therapy was stopped (perhaps because cessation coincided with the withdrawal of oral corticosteroids) but also prevented the use of alternative therapies to halt tumour progression. Ixekizumab is an anti-IL-17A drug approved for the treatment of moderate-to-severe plaque psoriasis. It is highly effective and produces a rapid clinical response, achieving a 75-90% reduction in PASI score in 70-90% of patients at 12 weeks [9]. A case of prembrolizumab-induced psoriasis treated with secukinumab is documented in the literature [10]. However, there are no previous reports of ixekizumab use for psoriasis triggered by tremelimumab and durvalumab. In the present case, given the urgent need to obtain clinical remission, ixekizumab was administered, achieving complete resolution of the skin condition within a few weeks. Biologic therapy may be a rapid and effective therapeutic option in patients with severe psoriasis triggered by immunotherapy, although more information is needed on long-term outcome and safety in these patients. ■

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Dermatology department, Hospital Universitario Germans Trias i Pujol, Carretera de Canyet, s/n, 08916 Badalona, Spain
<arantxa.arrieta.vinaixa.93@gmail.com>

Arrieta VINAIXA ARANZAZU
Víctor MORILLAS-LAHUERTA
María BLANCO DE TORD
José-Manuel CARRASCOSA CARRILLO

1. Weber MM, Fottner C. Immune checkpoint inhibitors in the treatment of patients with neuroendocrine neoplasia. *Oncol Res Treat* 2018; 41: 306-12.

2. Sibaud V, Meyer N, Lamant L, Vigarios E, Mazieres J, Delord JP. Dermatologic complications of anti-PD-1/PD-L1 immune checkpoint antibodies. *Curr Opin Oncol* 2016; 28: 254-63.

3. Baxi S, Yang A, Gennarelli RL, *et al.* Immune-related adverse events for anti-PD-1 and anti-PD-L1 drugs: systematic review and meta-analysis. *BMJ* 2018; 360: k793.

4. Bonigen J, Raynaud-Donzel C, Hureaux J, *et al.* Anti-PD1-induced psoriasis: a study of 21 patients. *JEADV* 2016; 31(5): e254-7.

5. Murata S, Kaneko S, Harada Y, *et al.* Case of de novo psoriasis possibly triggered by nivolumab. *J Dermatol* 2016; 44(1): 99-100.

6. Ruiz-Bañobre J, Abdulkader I, Anido U, *et al.* Development of de novo psoriasis during nivolumab therapy for metastatic renal cell carcinoma: immunohistochemical analyses and clinical outcome. *APMIS* 2017; 125(3): 259-63.

7. Ohtsuka M, Miura T, Mori T, Ishikawa M, Yamamoto T. Occurrence of psoriasiform eruption during nivolumab therapy for primary oral mucosal melanoma. *JAMA Dermatology* 2015; 151(7): 797.

8. Totonchy MB, Ezaldein HH, Ko CJ, *et al.* Inverse psoriasiform eruption during pembrolizumab therapy for metastatic melanoma. *JAMA Dermatology* 2016; 152(5): 590.

9. Gordon KB, Blauvelt A, Papp KA, *et al.* Phase 3 trials of ixekizumab in moderate-to-severe plaque psoriasis. *N Eng J Med* 2016; 375(4): 345-56.

10. Johnson D, Patel AB, Uemura MI, Trinh VA, Jackson N, Zobniw CM, *et al.* IL17A blockade successfully treated psoriasiform dermatologic toxicity from immunotherapy. *Cancer Immunol Res* 2019; 7(6): 860-5.

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The impact of COVID-19 on the new diagnoses of melanoma

The COVID-19 pandemic has had serious impact on general and dermatology health care in terms of diagnosis, treatment and follow-up [1]. In Belgium, there were two lockdown periods. During the first period (18/3/2020-11/05/2020), access to routine medical and dermatology care was prohibited (access to a dermatologist or a hospital was granted only for urgent cases). Following a progressive re-instauration of visits, during the first six weeks, one patient per 30 minutes was permitted in order to respect the recommended disinfection measures. During the second lockdown (since October 2020), dermatology consultations were maintained but the huge backlog of cancelled appointments severely impacted the return to the usual workflow.
Our working hypothesis was that the strict lockdown measures could have an impact on the total number of new diagnoses and the mean Breslow measurements of cutaneous melanomas (CM). We therefore compared the number and Breslow thickness of CM diagnosed per month during the COVID-19 period (15/03/2020-31/12/2020) with the same periods in 2018 and 2019. Data were retrieved from the University Dermatopathology Laboratory, servicing the University Dermatology Department and several loco-regional private and hospital dermatologists.
During the COVID-19 period, 140 invasive versus 21 *in situ* CM were diagnosed. In the 2018 and 2019 periods, the respective figures were 169 versus 56, and 161 versus 45. The proportion of invasive CM was similar for the three periods ($p = 0.24$) (Chi-square test for equal proportions). The mean ($\pm$SD) and median (IQR) invasive CM thickness was 1.13 ± 1.55 and 0.58 (0.35-1.15), 1.27 ± 2.24 and 0.70 (0.38-1.47), and 1.24 ± 1.59 and 0.50 (0.35-1.50) for 2018, 2019 and 2020, respectively ($p = 0.75$ and $p = 0.38$). The number of new invasive CM per month for all the observation periods is illustrated in *figure 1*.
There was a statistically non-significant decrease in the total number of new cases during the COVID-19 period. This is in line with an American group who observed 102 new cases in 2020 versus 106 during the 2015-2019 period. However, they observed a significant increase in melanoma thickness and ulceration [2]. Another Spanish group reported 18 new cases in the period April-August in 2020 versus 48 cases in the same period in 2019 [3], with four melanomas >2 mm thick (compared to seven cases during the COVID-19 period). Another American dermatopathology laboratory evaluated 172 versus 153 melanoma patients in the pre-COVID-19 and COVID-19 periods, respectively. The Breslow thickness was 0.81 mm versus 1.4 mm, respectively [4]. An Italian group also reported a significantly increased number of advanced basal and squamous cell carcinomas [5].

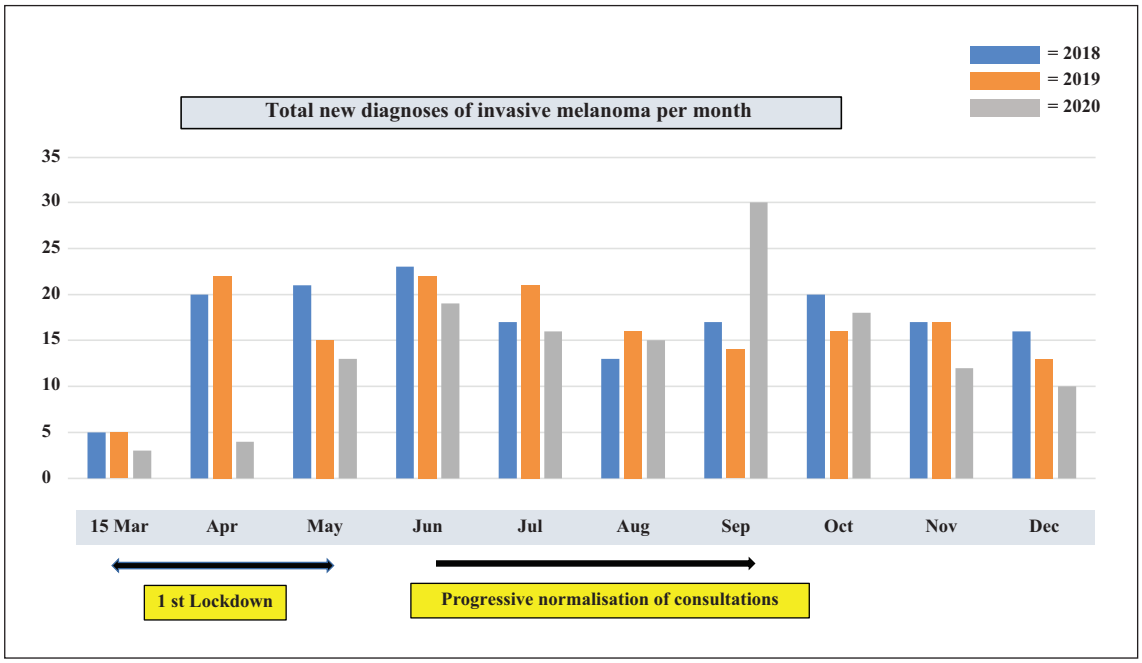

Figure 1. Number of new melanomas diagnosed per month in 2018, 2019 and the COVID-19 period in 2020. The proportions of invasive cutaneous melanomas were similar for the three periods ($p = 0.24$; Chi-square test).

We observed a clear shift in the number of new cases per month with a decrease in new cases detected linked to the first lockdown period and a significant increase during September 2020, related to the backlog of cancelled visits. In the perspective of a total lockdown, the Belgian Association for Dermato-Oncology published recommendations for dermato-oncology care [7]. Furthermore, several teledermatology systems were rapidly on offer for dermatologists and reimbursed by the health authorities. A surgery service in the University Dermatology Department was maintained, respecting the recommended COVID-19 precautions for urgent cases of skin cancer. However, the length of time required to become accustomed to these changes probably explains the reduction in the number of cases during March and April 2020. Furthermore, the patients feared contamination by visiting a hospital. Another issue could be a fear of financial difficulties because of work loss or temporary unemployment, despite government aides.

One limitation to the study could be that we did not take into account the slow but steady increase in new CM cases in our region, and our analysis involved only the last three years [6]. Another limitation could be the relatively low number of new CM cases diagnosed each year.

In conclusion, although there was a shift in the number of new CM cases per month compared to previous years, the total number and Breslow thickness were not statistically different, possibly due to the rapid publication of dermato-oncology care recommendations as well as the organization of teledermatology consultations and surgery services for urgent cases. These data highlight the importance of organizing and facilitating access to teledermoscopy consultations [7] and emergency surgery services in order to maintain high-quality skin cancer care and access to dermatology care during pandemic periods [8]. ■

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[1] Department of Dermatology,
[2] Department of Dermatopathology,
[3] Department of Medical Oncology,
[4] Department of Biostatistics,
University Hospital Centre, CHU du Sart Tilman, Liège, Belgium
<af.nikkels@chu.ulg.ac.be>

Christophe GEDEAH[1]
Thomas DAMSIN[1]
Gilles ABSIL[1]
Joan SOMJA[2]
Patrick COLLINS[2]
Andrée RORIVE[3]
Nathalie MARCHAL[3]
Laurence SEIDEL[4]
Arjen F NIKKELS[1]

1. Gomolin T, Cline A, Handler MZ. The danger of neglecting melanoma during the COVID-19 pandemic. *J Dermatolog Treat* 2020; 31: 444-5.

2. Weston GK, Jeong HS, Mu EW, Polsky D, Meehan SA. Impact of COVID-19 on melanoma diagnosis. *Melanoma Res* 2021; 31(3): 280-1.

3. Fernandez Canedo MI, de Troya Martin M, Rivas Riuz F. Impact of the SARS-CoV-2 pandemic on the early diagnosis of melanoma. *Med Clin* 2021; 156(7): 356-7.

4. Shannon AB, Sharon CE, Straker RJ, *et al.* The impact of the COVID-19 pandemic on the presentation status of newly diagnosed melanoma: a single institution experience. *J Am Acad Dermatol* 2021; 84: 1096-8.

5. Valenti M, Pavia G, Gargiulo L, *et al.* Impact of delay in follow-up due to COVID-19 pandemic on skin cancer progression: a real-life experience from an Italian hub hospital. *Int J Dermatol* 2021; 60(7): 860-3.

6. Uhoda I, Quatresooz P, Fumal I, Nikkels AF, Piérard-Franchimont C, Piérard GE. Updating trends in cutaneous cancers in south-east Belgium. *Oncol Rep* 2004; 12: 111-4.

7. Brochez L, Baurain JF, Del Marmol V, *et al.* Recommendations for skin cancer consultation and surgery during COVID-19 pandemic. *J Eur Acad Dermatol Venereol* 2020; 34: 1876-8.

8. Pathoulas JT, Stoff BK, Lee KC, Farah RS. Ethical outpatient dermatology care during the coronavirus (COVID-19) pandemic. *J Am Acad Dermatol* 2020; 82: 1272-3.

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Effectiveness of combined bexarotene and excimer laser treatment for folliculotropic mycosis fungoides

Folliculotoropic mycosis fungoides (MF) is a variant of MF, that clinically shows acneiform or follicular keratosis-pilaris-like lesions on the head and neck, which histologically shows selective infiltration of atypical lymphocytes in the follicular epithelium. Folliculotropic MF shows a more aggressive clinical course in comparison to classic MF [1]. In a recent study, folliculotropic MF was classified into two distinct patterns: an early variant and an advanced tumour variant. The prognostic implications differ, with the early variant following a more indolent course [2].

In an excimer laser, the dissociation of xenon and chloride gases creates a 308-nm monochromatic light, which suppresses T lymphocyte proliferation via the induction of apoptosis [3]. The effectiveness of excimer laser for classic MF has been reported [4]. We herein report a patient with advanced stage folliculotropic MF, who was successfully treated with a combination of bexarotene and excimer laser therapy.

A 58-year-old Japanese man presented to our hospital with a skin lesion that had persisted for three months. A physical examination revealed several tumours on his head and face (*figure 1A*) and erythema with follicular accentuation on his back, abdomen and upper extremities (*figure 1B)* . A histological examination of a tissue specimen obtained from a head nodule revealed infiltration of atypical small cells around the hair follicles (*figure 1C)* and prominent folloculotropism. (*figure 1 D*). Immunohistochemically, the atypical cells were positive for CD3 and CD4 (*figure 1E)*. Clonal rearrangement of the T-cell receptor gene of lymphocytes that had infiltrated into the skin was detected. Blood test findings were almost within normal limits. No atypical lymphocytes were detected. Soluble interleukin-2 receptor level was not elevated (378 U/mL). HTLV-I antibodies were not detected. No lymph node or internal organ abnormalities were detected on positron emission tomography-computed tomography. No bone marrow involvement was observed. Accordingly, the patient was diagnosed with folliculotropic MF (T3N0M0, Stage-b). The patient was initially treated with topical steroids and bexarotene (300 mg/m^2). Two weeks later, the skin lesions on the trunk showed slight improvement; however, the tumours showed no change. Therefore, irradiation using an excimer laser (XTRAC® velocity7; STRATA Skin Sciences, Inc., PA) was performed for the remaining erythema and tumours on the face, head and trunk (200 mJ/cm^2, three times/week). Thereafter, the skin lesions gradually improved, and completely disappeared at 10 weeks (*figure 1F, G)*. No side effects, except for slight erythema, were observed. The bexaroten and excimer laser treatment (200 mJ/cm^2, twice/month) has been continued as maintenance therapy without signs of relapse.

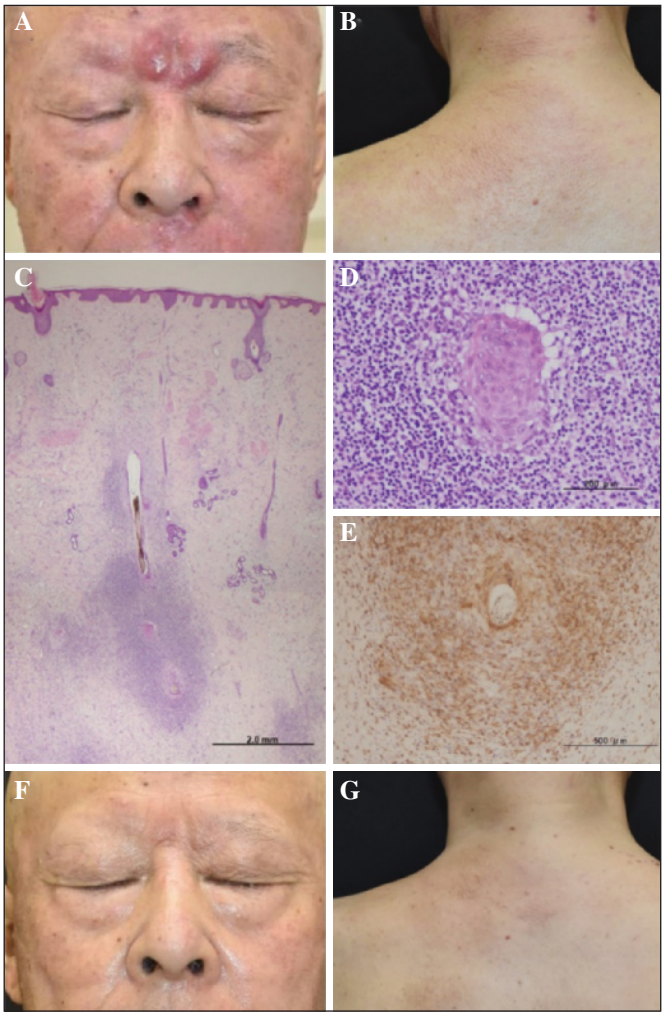

Figure 1. **A**, **B**) Clinical appearance of the forehead (**A**) and upper back (**B**) before treatment. **C**, **D**) Histological examination showing tumour cell infiltration around hair follicles (haematoxylin and eosin staining). **E**) Immunohistochemical examination showing infiltrating tumour cells expressing CD4. **F**, **G**) Clinical appearance of the forehead (**F**) and upper back (**G**) at 10 weeks after irradiation with XTRAC®.

In the present patient, combination therapy with bexarotene and excimer laser treatment was effective for both the erythema on the trunk and the tumour on the face and head. Skin-directed therapy, such as psoralen plus ultraviolet A (PUVA), is recommended for the initial treatment of early-stage folliculotropic MF. Radiotherapy, oral retinoids or systemic chemotherapy are commonly required for the treatment of advanced stage folliculotropic MF [5]. Bexarotene (synthetic retinoid X receptor agonist) is approved for the treatment of cutaneous T cell lymphoma. Single cases in which folliculotropic MF was successfully treated with bexarotene have been reported, mostly involving combination therapy with interferon alpha or radiotherapy [6, 7]. Combination therapy with bexarotene and PUVA was also reported to induce a good response in a case of folliculotropic MF [8]. The XTRAC®