

## LETTER - THERAPY

### Abemaciclib-induced lichen planus pigmentosus inversus improving after switching to ribociclib<sup>☆</sup>



Dear Editor,

Abemaciclib and ribociclib are Cyclin-Dependent Kinase 4/6 (CDK) inhibitors, targeted therapies recently approved for the treatment of hormone receptor-positive and human epidermal growth factor receptor 2-negative breast cancer in association with hormonal therapy, potentially causing various cutaneous adverse events. Here, we report a case of Lichen Planus Pigmentosus Inversus (LPPi) induced by abemaciclib treatment improving after switching to ribociclib.

A 61-year-old woman, who had been treated with abemaciclib for 5 months with a conceded dose of 100 mg/day due to diarrhea was admitted with an asymptomatic flexural pigmentation of the submammary, cubital and inguinal folds. The patient had a Fitzpatrick II skin type and was only taking letrozole and loperamide as other drugs, introduced simultaneously. She showed gray hyperpigmented lesions with papules and desquamation on the flexural areas (Figs. 1 and 2). There was no mucosal involvement. A punch

biopsy on the right thigh showed an acanthotic and orthokeratotic epidermal layer with intraepidermal pagetoid migration of lymphoid cells, band-like lichenoid lymphocytic infiltrate in the papillary dermis with pigmentary incontinence and melanophage (Fig. 3), which confirmed the diagnosis. Abemaciclib was suspended due to the rapidly extensive lesions and digestive toxicity, and the lichenoid drug reaction started to decay after 15 days. Treatment was then switched to ribociclib with the use of topical betamethasone for about a month. The patient stopped using topical corticoids as the hyperpigmented lesions lessened. She has since been treated with ribociclib without any extension of the remaining lesions.

Lichen planus pigmentosus inversus is a rare variant of lichen planus that presents as an acquired symmetrical macular hyperpigmentation featuring gray or blue-brown lesions with erythematous borders in flexural and intertriginous areas, sparing sun-exposed areas. Skin toxicities with CDK4/6 inhibitors consist mostly of alopecia, rash, and pruritus according to a recent review of the US FDA Adverse Event Reporting System by Raschi et al.<sup>1</sup> To date, only one case of lichen planus pigmentosus has been reported with ribociclib by Mariano et al.,<sup>2</sup> and one case of hyperpigmentation with abemaciclib by Salusti-Samson et al.<sup>3</sup> Lichen and lichenoid eruptions have also been described with letrozole, but it

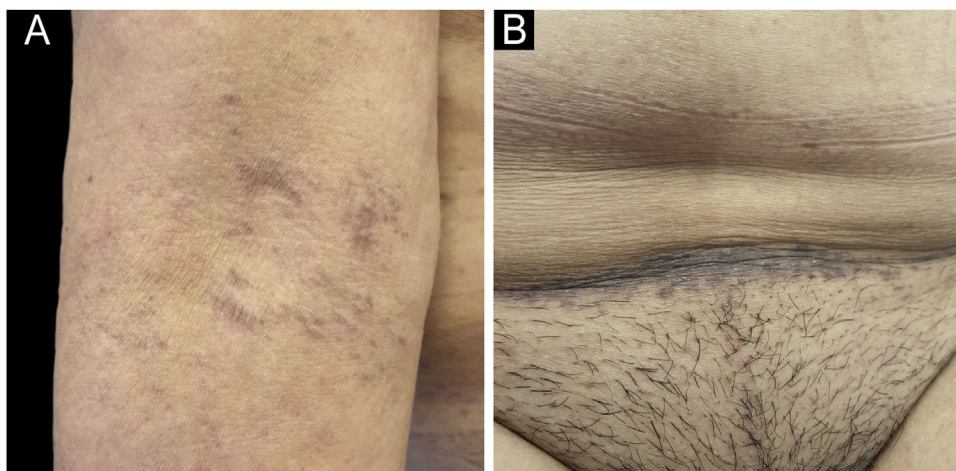
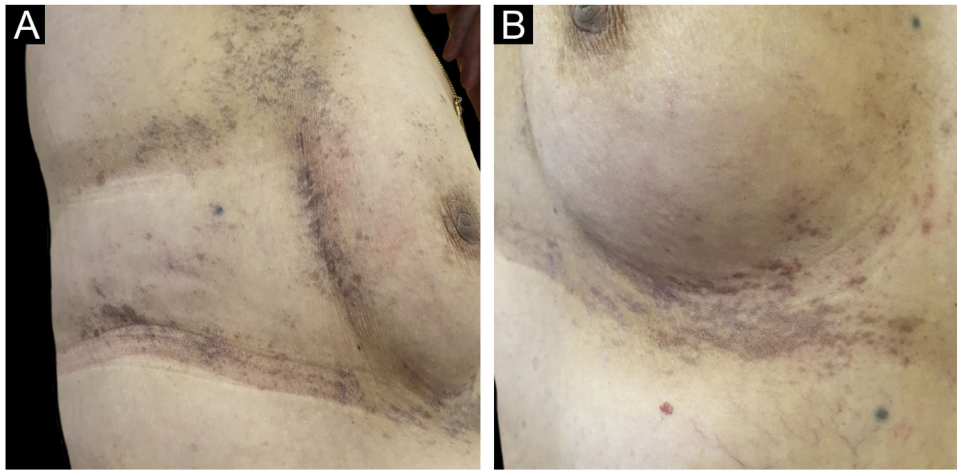
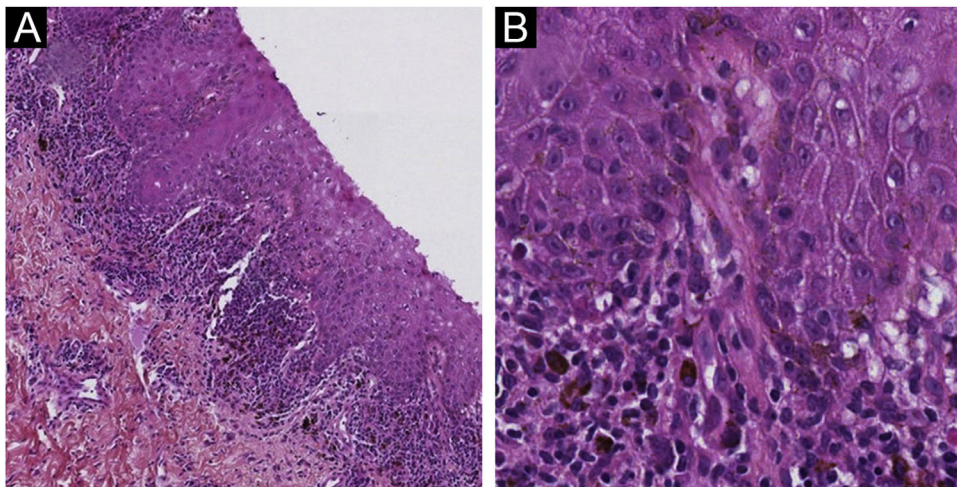


Fig. 1 Gray hyperpigmented lesions with papules and desquamation in the cubital (A), and lower abdominal fold (B).

<sup>☆</sup> Study conducted at the Institut de Cancérologie de l'Ouest, Angers, France.



**Fig. 2** Bilateral submammary reticular gray hyperpigmented lesions with papules and desquamation (A, B).



**Fig. 3** Histopathological findings. Lymphohistiocytic infiltrate with dermal melanin incontinence, lichenoid band-like of the papillary dermis with intraepidermal pagetoid migration and acanthotic epidermal layer. Hematoxylin & eosin  $\times 100$  (A) and  $\times 400$  (B).

was excluded in this case because of the improvement without discontinuation of the treatment. LPPi involves cytotoxic T-lymphocytes, but its pathogenesis remains unknown.

It has been reported in association with mechanical trauma, hepatitis C virus, and after COVID-19 vaccination by Chaima et al.,<sup>4</sup> which was not the case with our patient. To our knowledge, it is the first reported case of LPPi induced by a CDK4/6 inhibitor that improved after switching to another one. This could be linked to the greater selectivity for CDK4 than CDK6 of abemaciclib versus the others. This suggests that the lichenoid-drug reaction is not a class effect and that a change in the CDK4/6 inhibitor could be a viable option.

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### Authors' contributions

Antoine Communie: Approval of the final version of the manuscript; preparation and writing of the manuscript; data collection, analysis, and interpretation; critical literature review; manuscript critical review.

Isabelle Valo: Approval of the final version of the manuscript; preparation and writing of the manuscript; intellectual participation in the propaedeutic and/or therapeutic of the studied case; manuscript critical review.

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## Conflicts of interest

None declared.

## References

1. Raschi E, Fusaroli M, La Placa M, Ardizzoni A, Zamagni C, Poluzzi E, et al. Skin toxicities with cyclin-dependent kinase 4/6 inhibitors in breast cancer: signals from disproportionality analysis of the FDA adverse event reporting system. *Am J Clin Dermatol.* 2022;23:247-55.
2. Mariano M, Donati P, Cameli N, Pigliacelli F, Morrone A, Cristaudo A. Ribociclib-induced erythema dyschromicum perstans (ashy dermatosis)-like pigmentation in a metastatic breast cancer patient. *J Breast Cancer.* 2021;24:117-21.
3. Salusti-Simpson M, Porter H, Morley K. A likely case of abemaciclib-induced hyperpigmentation in a patient with metastatic breast cancer. *Cureus.* 2022;14:e28948.

4. Chaima K, Fatma H, Nadine K, Chahir K, Emna B, Khadija S, et al. Lichen planus pigmentosus post COVID-19 vaccination: a case report with literature review. *Dermatol Ther.* 2022;35:e15891.

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## Nodular scleroderma partially controlled with tofacitinib<sup>☆</sup>



Dear Editor,

A 48-year-old man presented to the dermatology clinic with a 1-year history of systemic sclerosis (SSc) and was given a low-dose steroid of 20mg prednisone orally per day for treatment of the disease. He presented clinically with diffuse skin hardening and tightening, as well as Raynaud's phenomenon and fulfilled the diagnostic criteria of the ACR criteria. Three months ago, he developed multiple indurated and exophytic nodules over the trunk, scattered over the lower and upper extremities, with sparing of the face. The lesions became progressively harder and more numerous and increased in size. The physical examinations demonstrated multiple, firm, raised, skin-colored nodules on the chest, abdomen, and back, and scattered over extremities (Fig. 1). The laboratory tests revealed an elevated erythrocyte sedimentation rate (ESR, ESR 46 mm/1 h). He had a positive antinuclear antibody (titer 1:640) and SCL70 antibodies with a decreased serum complement Component 3 (C3, 0.78 g/L), while anti-Smith autoantibody titers were at a normal level. Cardiovascular, respiratory and esophagus examinations were unremarkable. His liver and kidney functions were normal and there were no signs of scleroderma renal crisis. The clinical diagnosis of nodular scleroderma was corroborated by a biopsy specimen that revealed a proliferation of myofibroblasts and thickened sclerotic collagen bundles in the dermis (Fig. 2A-B). Besides, the van Gieson

stain showed preservation of elastic fibers, while the crystal violet stain was negative.

Initial treatment with methotrexate at a dose of 15mg/week was discontinued after three months, as the disease progressed, and new nodules appeared. Thereafter, mycophenolate mofetil at a dosage of 1g twice daily was started. Three months later, the patient still had no observable effect. Thus, he was switched from prior treatment to tofacitinib. At the outpatient follow-up, the patient had not developed new lesions, while the pre-existing nodules were found to be smaller and less firm with continuous effects after eight months of treatment with tofacitinib (Fig. 3). He is still being followed up and has not experienced any adverse side effects.



Fig. 1 Clinical presentation before treatment with tofacitinib.

<sup>☆</sup> Study conducted at the Department of Dermatology, The First Affiliated Hospital of Chongqing Medical University, Chongqing, China.