A 59-year-old woman developed a cutaneous reaction after prolonged immunotherapy for treatment of metastatic high-grade serous and endometrioid endometrial cancer. Following her 17th cycle of pembrolizumab therapy, the patient developed 1-cm, tender, erythematosus nodules on the right calf and ankle of 2 weeks’ duration (Figure 1). The differential diagnosis included erythema nodosum, infection, vasculitis, and autoimmune or metastatic disease. Histopathological examination revealed a predominantly lobular panniculitis (Figure 2A) with acute and chronic focally granulomatous inflammation (Figure 2B and C), without evidence of vasculitis. Periodic acid-Schiff and Wade-Fite stains were negative for microorganisms. Erythema nodosum was excluded because the pathology was predominantly lobular and not septal. Clinical presentation and histopathological findings of the lesion were most consistent with pembrolizumab-associated panniculitis. The patient was started on prednisone while she continued to receive pembrolizumab. Clinical improvement of the skin nodules was noted 5 weeks later.

Pembrolizumab is a humanized monoclonal antibody, which targets programmed cell death protein-1 and enhances T-cell-mediated antitumor response, leading to prolonged survival in patients with recurrent malignancies. Emerging novel immunotherapies broaden treatment options for patients with cancer but are also associated with adverse reactions, which often remain unrecognized or misdiagnosed. Skin toxicities following treatment with immune checkpoint inhibitors have been described and include morbilliform, 1 eczematous, 2 and lichenoid 1,2 reactions, bullous pemphigoid, 2,3 vitiligo, 1,2 pustular eruptions, and neutrophilic dermatoses. In rare occasions, granulomatous panniculitis is reported. 3 Early recognition and management of adverse events associated with novel immune system modulators is important to maximize the benefits and minimize morbidities related to immunotherapy.

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FIGURE 2. Histopathology of an erythematous nodule demonstrating lobular panniculitis (A) with acute and chronic inflammation (B, C) [hematoxylin and eosin stain, original magnification ×20 (A), ×200 (B), and ×400 (C)].

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