Assessment of Therapy Response by ^{18}F -FDG PET/CT for a Patient with Cutaneous and Subcutaneous *Mycobacterium* Infection and Coexisting Lymphoma

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In follow-up FDG PET/CT scans for our patient (A1, B1, C1: PET maximum intensity projection images; A2, B2, C2: corresponding axial PET/CT fusion images), most of the disseminated FDG-avid *Mycobacterium abscessus* infection resolved over time (short arrows). A biopsy confirmed a left posterior pleural lymphoma lesion (long arrows) and first demonstrated increased FDG avidity when chemotherapy for lymphoma was held off (SUVmax 14.8 on Fig. 1B1, B2; compared to SUV 8.3 on earlier PET/CT of Fig. 1A1, A2), then showed slightly decreased FDG avidity with resumed lenalidomide chemotherapy (SUVmax 10.0 on Fig. 1C1, C2).

Other than being used for diagnosing, staging and monitoring cancer therapy, F-18 FDG PET/CT can also play a major role in the diagnosis and therapeutic assessment of patients with suspected infection and inflammation [1]. Disseminated mycobacterial infection may mimic malignancy on PET/CT scans [2–5]. However, FDG PET findings in disseminated cutaneous and subcutaneous mycobacterial infection have rarely been reported [6, 7]. Moreover, this is the first report on serial FDG PET/CT findings in disseminated cutaneous and subcutaneous *Mycobacterium abscessus* infection coexisting with lymphoma.

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Fig. 1 A 62-year-old male with marginal zone lymphoma who was on chemotherapy. After two cycles of chemotherapy, the patient developed innumerable cutaneous and subcutaneous nodules all over his body, with symptoms of fever ($<39^{\circ}\text{C}$) and a general feeling of illness. Biopsy and blood culture confirmed a *Mycobacterium abscessus* infection. After

discussion at a multidisciplinary tumor board meeting, chemotherapy for lymphoma was temporarily stopped, and the patient was treated with a four-drug regime (amikacin, clarithromycin, cefoxitin and tigecycline) for the *Mycobacterium abscessus* infection

Disclosure

Conflict of Interest Yang Lu declares that he has no conflict of interest.

Informed Consent The manuscript does not contain clinical studies. There is no identifiable patient information in this manuscript. It is merely a case report. Based on our institutional policy, neither IRB approval nor patient's informed consent was needed for this publication.

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