



The Hong Kong Society of Haematology Annual Scientific Meeting 2024 Call for Abstracts

Title	Prospective study on pembrolizumab in relapsed/refractory NK/T cell malignancies
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Abstract	
Background	
<p>Pembrolizumab, a monoclonal antibody against programmed death 1 receptor (PD-1) has been shown highly effective in relapsed/refractory (R/R) extranodal NK/T cell lymphoma (ENKTL) failing L-asparaginase, with an overall response rate (ORR) of 57-100%^{1, 2}. In R/R mature T cell lymphoma, the use of pembrolizumab also results in an overall response rate of 33%³. In this prospective phase II study, we aim to evaluate the efficacy of pembrolizumab in a consecutive cohort of patients with R/R ENKTL or peripheral T-cell lymphoma (PTCL).</p>	
Methods	
<p>This was a phase II prospective study. The primary endpoints were the efficacy and safety of pembrolizumab in patients with R/R ENKTL and PTCL. Consecutive patients of age ≥ 18 with ENKTL and PTCL with measurable lesions on positron emission tomography/computerized tomography (PET/CT), who failed at least one line of prior therapies were recruited. Pembrolizumab was administered at 200mg intravenously every three weeks for up to two years (35 cycles) unless there was intolerable toxicity or disease progression. Survival was analyzed using Kaplan-Meier method. Statistical calculations were performed with SPSS Statistics version 28.</p>	
Results	
ENKTL cohort:	
<p>Ten women and six men at a median age of 57 (range: 41-83 years) were included. Fourteen patients had been treated with L-asparaginase-containing regimens. Ten patients (62.5%) had relapsed disease while six patients (37.5%) had refractory disease. Response assessments were performed in all patients, and their best responses were as below: complete response (CR), N=7, 44%; partial response (PR), N=1, 6%; indeterminate response (IR), N=2, 13%; stable or progressive disease (SD/PD), N=6, 38%. At a median follow-up of 24 months (range 1-51 months), the median progression-free survival (PFS) was 10 months and the median overall survival (OS) was 25 months.</p>	
PTCL cohort:	
<p>Four men and four women at a median age of 60 (range: 22-80 years) were included. Underlying diseases were peripheral T cell lymphoma, not otherwise specified (PTCL-NOS) (N=4, 50%), angioimmunoblastic T-cell lymphoma/PTCL with T-follicular helper phenotype (AITL/PTCL-TFH) (N=2, 25%), hepatosplenic T-cell lymphoma (HSTCL) (N=1, 12.5%) and systemic Epstein-Barr Virus (EBV)-positive T cell lymphoma of childhood (N=1, 12.5%). All patients had advanced-stage diseases (stage 3, N=1, 12.5%; stage 4, N=7, 87.5%). The median line of the prior regimens was 2 (range: 1-3). At a median follow-up period of nine months, the progression-free survival was 5 months and overall survival was 7 months (Figure 2). Toxicity included IRAE in two patients (endocrine, N=1, grade 1; pulmonary, N=1, grade 4) and haematological toxicity in three patients (37.5%) (anaemia, N=1, grade 2; neutropenia, N=1, grade 1; thrombocytopenia, N=1, grade 1).</p>	
Conclusion	
<p>Pembrolizumab is a safe and effective rescue therapy for R/R ENKTL with potentially durable remission. A subgroup of patients with PTCL (e.g. systemic EBV-positive T-cell lymphoma of childhood) may also benefit from pembrolizumab therapy.</p>	