FIRST-LINE EXTRACORPOREAL PHOTOPHERESIS PLUS INTERFERON-A IN SÉZARY SYNDROME: REAL-WORLD SURVIVAL AND EXPLORATORY BLOOD BIOMARKERS

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Background. Sézary syndrome (SS) is a rare and aggressive leukemic variant of cutaneous T-cell lymphoma, characterized by erythroderma, peripheral blood involvement by malignant Sézary cells[1,2] Management usually requires multimodal strategies. Extracorporeal photopheresis (ECP), alone or combined with interferon-α (IFN-α), is widely used as a first-line option in erythrodermic CTCL, although outcomes are heterogeneous and reliable prognostic biomarkers remain insufficiently defined. The aim is evaluate overall survival (OS) in patients with SS treated with first-line ECP plus IFN-α, and to explore whether blood clonality and Sézary cell immunophenotype are associated with distinct survival patterns.

Materials and Methods. We conducted a retrospective single-center survival analysis of 72 consecutive patients with SS treated with first-line ECP plus IFN-α between 2000 and 2023. Patients were stratified according to extreme survival outcomes. Blood tumor burden was assessed by flow cytometry using a TCR Vβ repertoire kit combined with anti-CD3 and anti-CD4 antibodies. When applicable, Sézary cells were also identified by the aberrant immunophenotypic profile.[3]

Results. The cohort included 72 patients, with a median age at diagnosis of 69 years; 39 were female and 33 male. Median treatment duration with ECP plus IFN-α was 18 months. Kaplan–Meier analysis showed a median OS of 59 months and a 5-year survival rate of 44.9%. Thirteen long survivors, defined by OS >80 months, and 13 poor survivors, defined by OS <30 months, were identified. Long survivors showed an early and statistically significant reduction of the expanded TCR Vβ clone after treatment initiation, suggesting rapid decline of circulating clonal tumor burden. They also more frequently achieved normalization of the TCR Vβ repertoire during follow-up, whereas poor survivors more often showed persistent clonal expansion.

Conclusions. In this real-world cohort, first-line ECP combined with IFN-α was associated with meaningful long-term survival in SS. The 5-year OS observed appears to lie at the upper end of previously reported ranges, possibly reflecting the role of tertiary-care management, careful blood monitoring and timely treatment initiation. Early reduction of the expanded TCR Vβ clone and subsequent normalization of the TCR Vβ profile may represent practical candidate biomarkers of sustained benefit and prolonged survival, although confirmation in larger prospective cohorts is required.

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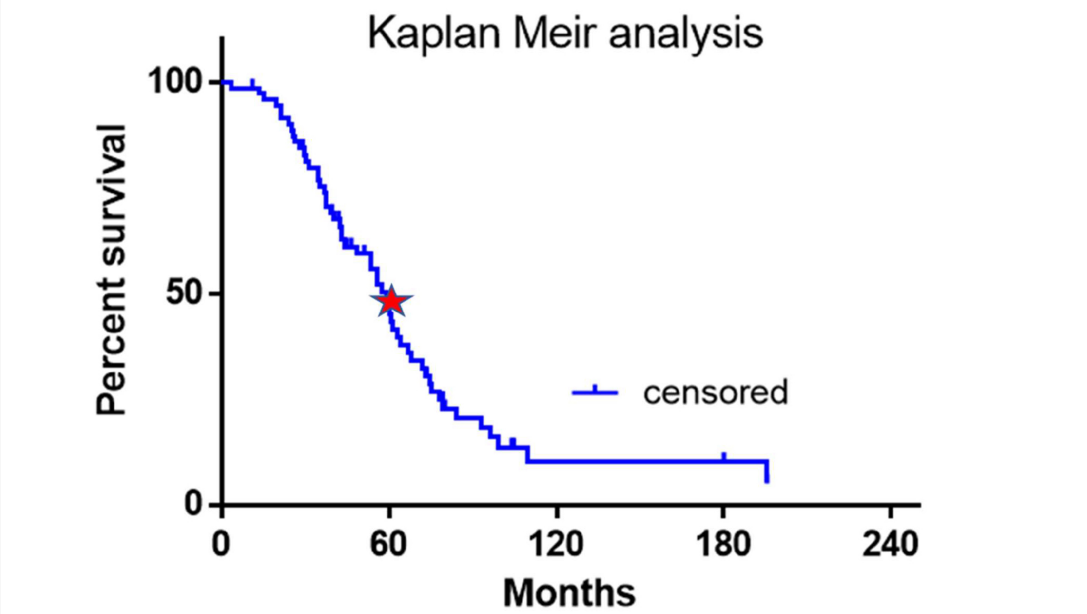

Figure 1. Retrospective survival analysis performed using the Kaplan–Meier estimator in a cohort of 72 patients with Sézary syndrome treated at IDI-IRCCS, Rome, with first-line ECP plus IFN-α between 2000 and 2023, showing a median overall survival of 59 months and a 5-year survival rate (60 months, marked with an X) of 44.9%.