(PS2346) CAR T-CELL THERAPY FOR POST-TRANSPLANT LYMPHOPROLIFERATIVE DISEASE, A REAL-WORLD ANALYSIS ON BEHALF OF THE EBMT LYMPHOMA WORKING PARTY

Topic: 26. Gene therapy, cellular immunotherapy and vaccination - Clinical

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Background

Post-transplant lymphoproliferative disease (PTLD) is a rare and difficult to manage condition occurring in immunosuppressed patients after solid organ transplantation or allogeneic stem cell transplantation. PTLD management relies on reduction of immunosuppressive therapy when feasible, administration of rituximab with or without chemotherapy and, more recently, treatment with tabelecleucel in EBV positive cases. In CD19-positive PTLD, anti-CD19 CAR T-cell treatment is emerging as a therapeutic option. However, due to exclusion from clinical trials and rarity of condition, data on CAR T-cells treatment in PTLD are scarce. With this work, we aimed at assessing outcomes in PTLD patients treated with anti-CD19 CAR T-cells.

Methods

We retrospectively collected all adults patients with a diagnosis of PTLD and who underwent CAR T-cell therapy, reported to the EBMT registry between 2019 and 2025.

Results

A total of 23 patients were identified. Median age was 41.85 years and most of patients were females (14 out of 23). Fifteen patients had a prior history of solid organ transplantation, including 7 kidney, 2 lung and 2 heart transplantation. CAR T-cell product was autologous in 19/23 cases and allogeneic in remaining 4. At CAR-T infusion, 1 patient was in complete remission, 4 in partial response, 3 had a stable disease, while 13 had refractory disease.
After a median follow up of 1 year, 1year overall survival (OS), progression free survival (PFS), relapse incidence (RI), non-relapse mortality (NRM) were 74.7% (48 - 89), 62.4% (35.7 - 80.5), 32.2% (11.9 - 54.8), 5.4%(0.3 - 22.7), respectively.

Summary/Conclusion

In this analysis, patients treated with anti-CD19 CAR T-cells showed encouraging 1-year survival rates, with relatively low relapse/progression incidence and non-relapse mortality. These findings suggest that CAR T-cell therapy represents a feasible and potentially effective option for PTLD patients failing standard therapies.

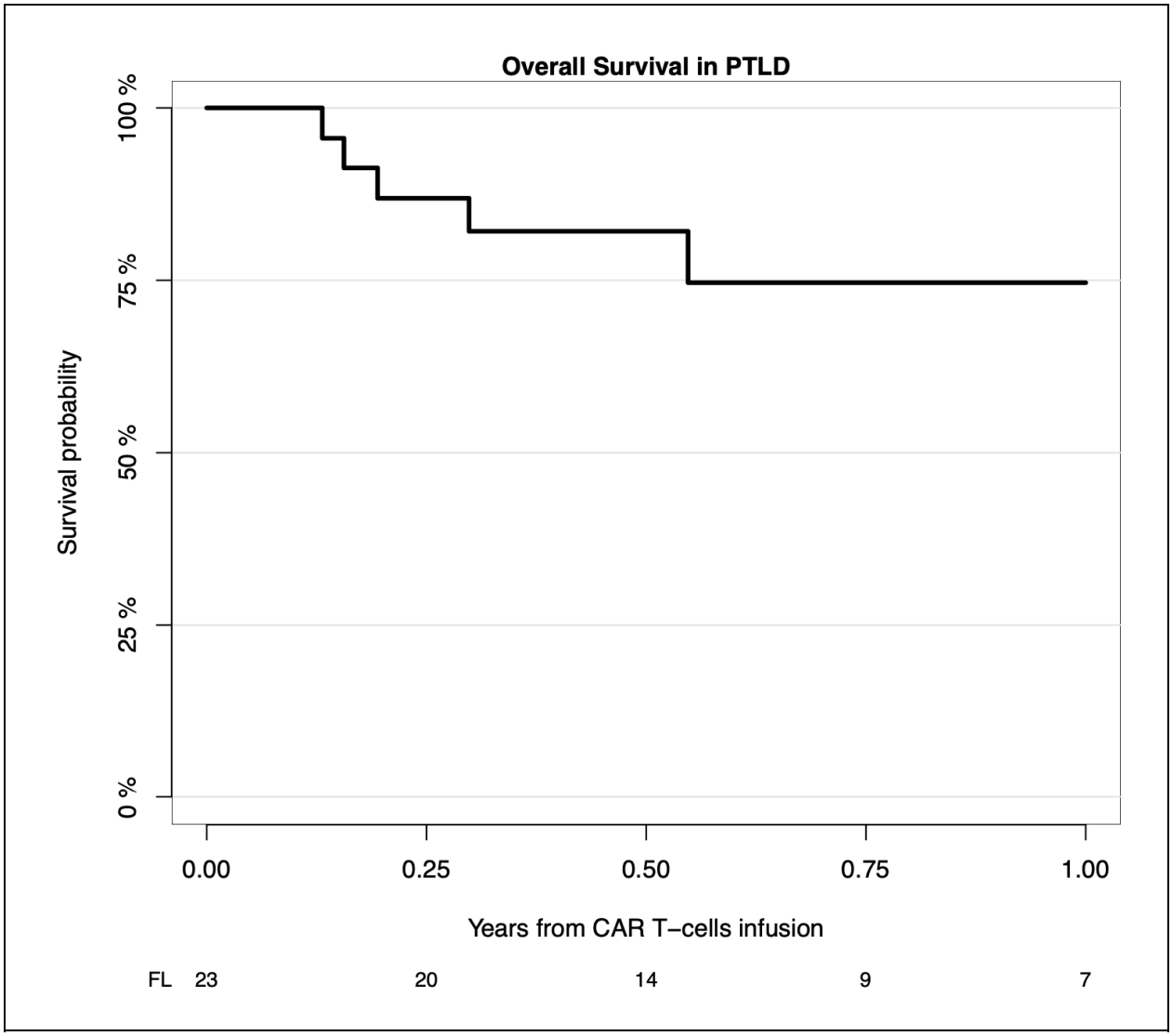

Figure 1 - Overall Survival courbe for patients with post-transplant lymphoproliferative disease after CAR T-cells administration. PTLD- Post-transplant lymphoproliferative disease, FL - follow-up