Abstract: S245

Title: OUTCOMES OF AUTOLOGOUS AND ALLOGENEIC STEM CELL TRANSPLANTATION FOR T-CELL LYMPHOMA: AN UPDATED ANALYSIS OF THE EBMT LYMPHOMA WORKING PARTY

Abstract Type: Oral Presentation

Session Title: T cell lymphoma from biology to clinic

Background:

Autologous and allogeneic stem cell transplantation (auto- and allo-SCT) represent potentially curative approaches for patients (pts) with T-cell lymphoma. Large-scale outcome data on auto- and allo-SCT for major T-cell entities, peripheral T-cell lymphoma not otherwise specified (PTCL NOS), angioimmunoblastic T-cell lymphoma (AITL), anaplastic large cell lymphoma (ALCL), anaplastic lymphoma kinase (ALK)-negative, and ALCL, ALK-positive, differentiating between pts treated for consolidation or relapsed/ refractory disease have not been reported.

Aims:

Based on data reported to the lymphoma working party (LWP) registry we aimed to describe the evolution of auto- and allo-SCT in pts with T-cell lymphoma over the last 20 years.

Methods:

We analysed auto- and allo-SCT activities in Europe and other countries reporting to EBMT in pts with T-cell lymphoma treated between 2002 and 2022. Pts meeting the following criteria were included: age≥18 years (yrs), diagnosis of PTCL NOS, AITL, ALK+ and ALK- ALCL, auto-SCT as first SCT or allo-SCT either as first SCT or after auto-SCT.

Results:

In total, 6992 pts received an auto-SCT and 1233 an allo-SCT between 2002 and 2022. Patients` diagnosis was PTCL NOS (n=3285 vs n=649), AITL (n=2338 vs n=394), ALK - ALCL (n=968 vs n=106), and ALK + ALCL (n=331 vs n=84), respectively.

With a median follow-up (FU) of 4.0 and 4.4 yrs for PTCL NOS pts treated with auto- or allo-SCT, 2-yr progression-free survival (PFS) and 2-yr overall survival (OS) were 49.7% and 65.6%, and 52.0% and 67.7%, respectively. Auto- and allo-SCT pts transplanted in first CR/PR (CR/PR1) showed superior outcomes compared to pts treated in second/later CR/PR (CR2+/PR2+) or progressive disease (PD) [auto-SCT: 2-yr PFS 54.9% vs 45.6% vs 25.6%; 2-yr OS: 70.7% vs 61.7% vs 41.1%; allo-SCT: 2-yr PFS 57.1% vs 46.7% vs 31.5%; 2-yr OS: 74.1% vs 57.8% vs 46.7%]. In AITL treated with auto- or allo-SCT, with a median FU of 3.3 and 3.9 yrs, 2-yr PFS and OS were 51.1% and 69.7% and 57.0% and 60.5%, respectively. The survival outcomes among CR1/PR1, CR2+/PR2+ and PD pts prior SCT were as following: auto-SCT 2-yr PFS 54.4% vs 45.5% vs 30.5%; 2-yr OS: 72.4% vs 65.4% vs 51.4%; allo-SCT 2-yr PFS 63.4% vs 55.0% vs 37.5%; 2-yr OS: 68.6% vs 57.0% vs 40.0%. In ALK- (median FU 2.1 yr) and ALK+ (median FU 2.2 yr) ALCL pts undergoing auto-SCT, 2-yr PFS and OS were 69.8% and 84.2% and 65.5% and 85%, accordingly. After allo-SCT, ALK- ALCL pts (median FU 2.1 yr) showed 2-yr PFS of 49.4% and 2-yr OS of 64.2% while ALK+ ALCL pts (median FU 3.3 yr) had PFS and OS of 69.7% and 80.4%, respectively.

The 2-yr incidence of relapse (RI) post-auto-SCT was 43.9% in PTCL NOS, 43.6% in AITL, 26.3% in ALK- and 31.7% in ALK+ ALCL pts. After allo-SCT, RI was 42.4% (PTCL NOS), 13.3% (AITL), 35.8% (ALK-) and 21.7% (ALK+ ALCL).

2-yr non-relapse mortality (NRM) post-auto-SCT was 6.4%, 5.2%, 3.9% and 2.8% in PTCL NOS, AITL, ALK- and ALK+ ALCL, while 20.8%, 29.7%, 14.8% and 8.7% post-allo-SCT, accordingly.

Summary/Conclusion:

With 8225 transplants analyzed, we provide large scale real-world data on outcomes of auto-SCT and allo-SCT in major T-cell entities. Our data show substantial differences in PFS and OS for major T-cell entities calling into question if these entities should continue to be analysed together. We differentiated between patients autografted for consolidation or for relapsed/refractory disease demonstrating superior results for pts autografted for consolidation. Overall, transplantation resulted in excellent long-term survival after auto- or allo-SCT, also for relapsed T-cell lymphoma. The survival rates reported here corroborate findings of 2 small prospective studies (Schmitz et al. Blood 2021; Glass et al. ASH 2023) and demonstrate that transplantation remains the promising treatment for pts with r/r T-cell lymphoma.

Keywords: Autologous hematopoietic stem cell transplantation, Peripheral T-cell lymphoma, Allogeneic hematopoietic stem cell transplant