ELSEVIER

Blood 142 (2023) 1708–1710

The 65th ASH Annual Meeting Abstracts

POSTER ABSTRACTS

624.HODGKIN LYMPHOMAS AND T/NK CELL LYMPHOMAS: CLINICAL AND EPIDEMIOLOGICAL

Intent to Treat Allogeneic Stem Cell Transplantation Outcomes in Relapsed/Refractory T-Cell Lymphomas

Christina Poh, MD[1,2], Xinyi Fan[1], Jenna M Voutsinas, MPH[1], Qian Wu[1], Michi M Shinohara, MD[1,3], Phuong T Vo, MD[2,1], Mazyar Shadman, MD MPH[1,2], Chaitra S Ujjani, MD[2,1], Ryan C Lynch, MD[2,1], Brian G Till[2,1], Stephen D Smith, MD[1,2], David G Maloney, MD PhD[2,1], Ajay K Gopal, MD[1,2]

[1] Fred Hutchinson Cancer Center, Seattle, WA
[2] Division of Hematology and Oncology, University of Washington, Seattle, WA
[3] Division of Dermatology, University of Washington, Seattle, WA

Introduction
T-cell lymphomas (TCL) are a heterogeneous group of lymphoproliferative malignancies with an overall poor prognosis. Despite aggressive first-line therapy, most patients experience disease relapse or progression. Allogeneic stem cell transplant (AlloSCT) is a standard of care for relapsed/refractory (R/R) TCL. However, many patients do not receive this potentially curative therapy. There is a paucity of data regarding the frequency of and barriers to undergoing AlloSCT in R/R TCL. To address this knowledge gap, we conducted a retrospective analysis of R/R TCL patients intending to undergo AlloSCT and hypothesized the primary barrier to AlloSCT to be lack of effective disease control.
Methods
We identified patients with a primary diagnosis of R/R TCL seen at the University of Washington/Fred Hutchinson Cancer Center (UW/FHCC) between 1/2008 and 6/2023 and linked these patients with the UW/FHCC bone marrow transplant (BMT) database to identify those who were intended for transplant. Intention to transplant (ITT) was defined as undergoing human leukocyte antigen (HLA) typing for purposes of AlloSCT. Patients with T-cell lymphoblastic leukemia/lymphoma were excluded. The primary endpoint was the rate of patients who underwent AlloSCT. Secondary endpoints included progression-free (PFS) and overall survival (OS) in patients who underwent AlloSCT and specific barriers to AlloSCT.
Results
Overall, 163 patients met ITT criteria. Males comprised 66% of patients. Median age was 65 (range 34-81) years and the median number of treatment regimens prior to HLA typing was 3 (range 1-10). The majority of patients (60%) were non-Hispanic whites (NHW), with Asians/Pacific Islanders (API), Hispanics/Latinos (HL), African Americans (AA) and Alaskan Natives/American Indians (ANAI) contributing 17%, 12%, 7% and 4%, respectively. Sixty-four patients (39%) had peripheral T-cell lymphoma, not otherwise specified (PTCL-NOS), 23 (14%) had angioimmunoblastic TCL (AITL), 17 (10%) had anaplastic large cell lymphoma (ALCL; 6 with ALK+), 16 (10%) had NK/TCL, 11 (7%) had hepatosplenic TCL, 12 (7%) had T-cell prolymphocytic leukemia, 5 (3%) had adult T-cell leukemia/lymphoma and 12 (7%) had primary cutaneous TCL. Twenty-two (13%) patients had secondary CNS involvement and 27 (17%) had previous autologous stem cell transplant. Of all patients who received HLA typing, 154 (94%) had a transplant consult, 54 (33%) initiated pre-AlloSCT workup and 51 (31%) underwent AlloSCT. Barriers to AlloSCT included progressive disease, patient preference, inability to identify a donor, indolent disease, poor functional status/multiple comorbidities and lack of a caregiver in 55%, 9%, 8%, 5%, 3% and 1%, respectively (Figure 1A). Six (5%) patients are currently receiving salvage therapy with plans for subsequent AlloSCT. AlloSCT occurred in NHW, API, HL, AA and ANAI patients at rates of 35%, 11%, 26%, 36% and 50%, respectively. All patients who were unable to undergo transplant due to lack of a donor were from groups other than NHW. AlloSCT rates were 30%, 39% and 17% in PTCL-NOS, AITL and ALCL, respectively. At a median follow-up time of 24.2 months, 101 (63%) patients are deceased with 83 (82%) due to disease. Twenty (39%), 17 (33%), 11 (22%) and 3 (6%) patients received an AlloSCT with a matched unrelated, matched related, mismatched unrelated and haploidentical donor, respectively. Fifteen (29%) patients underwent a myeloablative while 36 (71%) underwent a reduced intensity conditioning regimen. None of the 51 patients who underwent AlloSCT had pre-transplant measurable disease. Of transplanted patients, median PFS was 55.7 months and OS was 62.4 months (Figure 1B). Sixteen (31%) patients had eventual disease relapse. Eighty percent of relapses occurred within 3 months after AlloSCT. Seven (13%) and 6 (12%) of the transplanted patients were deceased within 12 months after AlloSCT due to disease relapse and complications of AlloSCT, respectively.

Conclusions
Although AlloSCT may be highly effective for R/R TCL achieving a CR, only a small minority of patients are able to undergo AlloSCT and the outcomes for the ITT population is dismal. Common barriers to undergoing AlloSCT include progressive disease and inability to identify suitable donors, particularly in minority populations. More effective pre-transplant salvage therapies and alternative AlloSCT donors are greatly needed.

Disclosures Poh: *Acrotech:* Consultancy; *Incyte:* Research Funding; *BeiGene:* Consultancy; *Seattle Genetics:* Consultancy. **Shinohara:** *Cabaletta Bio:* Research Funding; *Kyowa Kirin:* Research Funding; *Aztex:* Research Funding. **Shadman:** *AstraZeneca:* Consultancy, Research Funding; *Janssen:* Consultancy; *ADC therapeutics:* Consultancy; *BeiGene:* Consultancy, Research Funding; *Eli Lilly:* Consultancy; *Vincerx:* Research Funding; *MorphoSys/Incyte:* Consultancy, Research Funding; *MEI Pharma:* Consultancy; *Pharmacyclics:* Consultancy, Research Funding; *AbbVie:* Consultancy, Research Funding; *Genmab:* Consultancy, Research Funding; *Fate Therapeutics:* Consultancy; *Kite, a Gilead Company:* Consultancy; *Bristol Myers Squibb:* Consultancy, Research Funding; *Mustang Bio:* Consultancy, Research Funding; *Genentech:* Consultancy, Research Funding; *Regeneron:* Consultancy; *TG Therapeutics:* Research Funding. **Ujjani:** *PCYC:* Research Funding; *Kite, a Gilead Company:* Consultancy, Other: Travel expenses , Research Funding; *Abbvie:* Consultancy, Honoraria, Research Funding; *Astrazeneca:* Consultancy, Honoraria, Research Funding; *Epizyme:* Consultancy; *Lilly:* Consultancy, Honoraria, Research Funding; *Janssen:* Consultancy, Honoraria; *Pharmacyclics:* Consultancy, Honoraria, Research Funding; *Genentech:* Consultancy, Honoraria; *Beigene:* Consultancy, Honoraria; *Atara:* Consultancy. **Lynch:** *Merck:* Research Funding; *Abbvie:* Consultancy; *Foresight Diagnostics:* Consultancy; *SeaGen:* Consultancy; *Cancer Study Group:* Consultancy; *Rapt:* Research Funding; *SeaGen:* Research Funding; *Genentech:* Research Funding; *Cyteir:* Research Funding; *Bayer:* Research Funding; *Incyte:* Research Funding; *TG Therapeutics:* Research Funding. **Till:** *Proteios Technology:* Consultancy, Current holder of *stock options* in a privately-held company; *BMS/Juno Therapeutics:* Research Funding; *Mustang Bio:* Consultancy, Patents & Royalties, Research Funding. **Smith:** *BeiGene:* Membership on an entity's Board of Directors or advisory committees; *ADC Therapeutics, AstraZeneca, Ayala (spouse), Bayer, BeiGene, Bristol Myers Squibb (spouse), De Novo Biopharma, Enterome, Genentech, Inc., Ignyta (spouse), Incyte Corporation, Kymera Therapeutics, Merck Sharp and Dohme Corp., MorphoSys, Nanjing Pharmaceu:* Research Funding; *ADC Therapeutics, AstraZeneca, BeiGene, Epizyme, Karyopharm, KITE pharma, Incyte, Numab Therapeutics AG, Abbvie, Coherus Biosciences, advisory board (spouse) Genentech, Inc.:* Consultancy. **Maloney:** *Navan Technologies:* Consultancy, Honoraria, Other: Member of the Scientific Advisory Board; *Mustang Bio:* Consultancy, Honoraria; *MorphoSys:* Consultancy, Honoraria; *Legend Biotech:* Consultancy, Honoraria, Research Funding; *Kite, a Gilead Sciences:* Consultancy, Honoraria, Research Funding; *Juno Therapeutics:* Consultancy, Honoraria, Patents & Royalties: Rights to royalties from Fred Hutch for patents licensed to Juno Therapeutics/BMS, Research Funding; *Janssen:* Consultancy, Honoraria; *Incyte:* Consultancy, Honoraria; *Gilead Sciences:* Consultancy, Honoraria, Other: Member, Scientific Review Committee, Research Scholars Program in Hematologic Malignancies; *Genentech:* Consultancy, Honoraria, Other: Chair and Member of the Lymphoma Steering Committee; *Celgene:* Consultancy, Honoraria, Membership on an entity's Board of Directors or advisory committees, Other: Participation on a Data Safety Monitory Board , Research Funding; *Bristol Myers Squibb:* Consultancy, Honoraria, Other: Member of the JCAR017 EAP-001 Safety Review Committee and Member, CLL Strategic Council, Member of the JCAR017-BCM-03 Scientific Steering Committee under BMS, Research Funding; *Amgen:* Consultancy, Honoraria; *A2 Biotherapeutics:* Consultancy, Current holder of *stock options* in a privately-held company, Honoraria, Other: Member of the Scientific Advisory Board; *Novartis:* Consultancy, Honoraria; *Pharmacyclics:* Consultancy, Honoraria; *Umoja:* Consultancy, Honoraria; *Bioline Rx:* Consultancy, Membership on an entity's Board of Directors or advisory committees, Other: Participation on a Data Safety Monitory Board ; *Fred Hutch:* Other: rights to royalties for patents licensed to Juno; *Navan Technologies:* Current holder of *stock options* in a privately-held company; *Chimeric Therapeutics:* Other: Member of the Scientific Advisory Board; *ImmPACT Bio:* Other: Member, Clinical Advisory Board, CD19/CD20 bi-specific CAR-T Cell Therapy Program; *Interius:* Other: Member, Clinical Advisory Board; *Lyell Immunopharma:* Other: Member, CAR T Steering Committee. **Gopal:** *Incyte, Kite, Morphosys/Incyte, ADCT, Acrotech, Merck, Karyopharm, Servier, Beigene, Cellectar, Janssen, SeaGen, Epizyme, I-Mab bio, Gilead, Genentech, Lilly, Caribou, Fresenius-Kabi:* Consultancy; *Merck, I-Mab bio, IgM Bio, Takeda, Gilead, Astra-Zeneca, Agios, Janssen, BMS, SeaGen, Teva, Genmab:* Research Funding; *Compliment Corporation:* Current holder of *stock options* in a privately-held company.

Figure 1A: Barriers to allogeneic stem cell transplantation in relapsed/refractory T-cell lymphoma patients

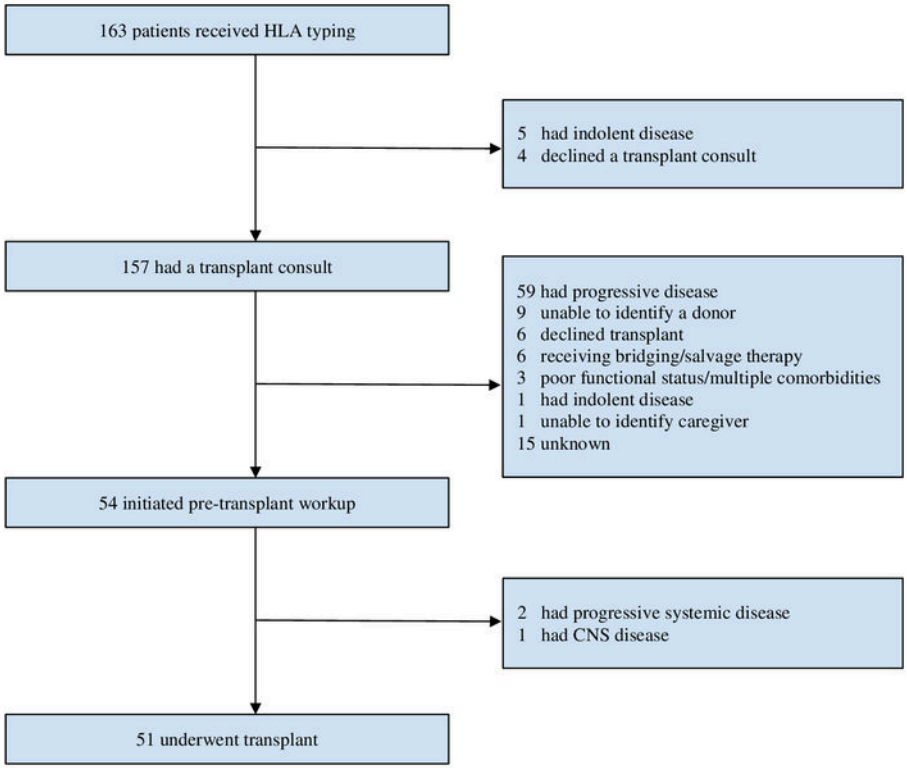

Figure 1B: Progression-free and overall survival of relapsed/refractory T-cell lymphoma patients who received allogeneic stem cell transplant

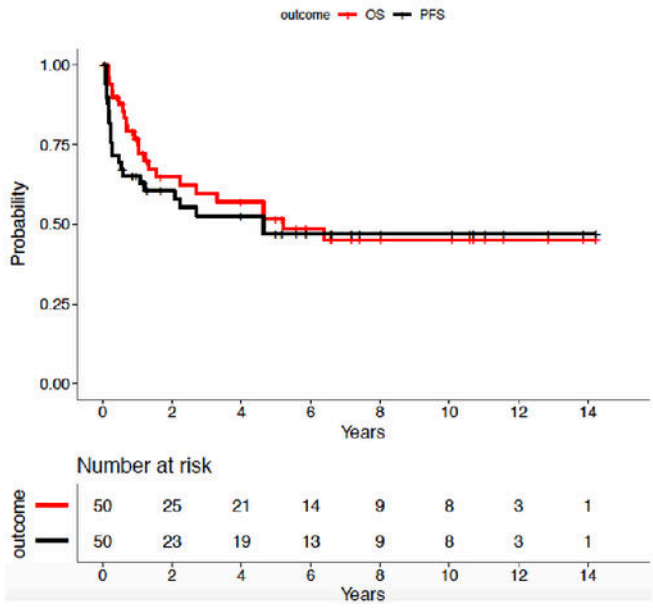

Figure 1

https://doi.org/10.1182/blood-2023-184314