of survival at 5 years without requiring HSCT was only 28.1+/−
8.8%. We conclude that only a minority of patients with CBF leu-
kemia will be long term survivors relying exclusively on conventional
chemotherapy. Early use of HSCT for high-risk CBF-AML should
be pursued in clinical trials.

266 COMPARISON OF CONDITIONING REGIMENS BU-CY AND FLU-BU12-TG
USED IN THE PATIENTS UNDERGOING ALLOGENIC STEM CELL
TRANSPLANTATION (SCT) FOR ACUTE MYELOID LEUKEMIA (AML)
Radka, L.1, Tucek, P.2, Vondrakova, J.3, Roznakova, Z.1, Faber, E.2, 
Indrak, K.1 1 University Hospital, Olomouc, Czech Republic; 2 Faculty 
of Science, Olomouc, Czech Republic

Introduction: Standard myeloablative conditioning combined bu-
sulphan (16 mg/kg) and cyclophosphamide (120 mg/kg) (BU-CY)
is associated with high non-hematologic toxicity, significant morbid-
ity and mortality. Regimen combined fludarabin (125 mg/m2), bu-
sulphan (12 mg/kg) and thymoglobin (6 mg/kg) (FLU-BU12-
TG) might be less toxic and safer despite the myeloablative dose of
bsulphan. Retrospective study compared the results of allogeneic
SCT after those two regimens in the patients with AML.

Patients and Methods: 21 patients with AML were allografted after
BU-CY and 10 ones after FLU-BU12-TG. There were no differ-
ces between those groups in: the number of patients allografted in
complete remission of AML, gender and age of patients and do-
nors, the quality of graft and follow-up period. Significantly more
patients in the group of FLU-BU12-TG were allografted from un-
related (90% vs. 19%; P0.00018) and HLA mismatched donor
(50% vs. 0%; P0.0004). The incidence and risk of acute and chronic
graft versus host disease (GVHD), AML relapse, non-relapse
(NRM) and overall mortality; the probability of event-free (EFS)
and overall survival (OS) were analysed and compared in both con-
ditioning groups.

Results: No significant differences were found between the BU-CY
and FLU-BU12-TG in the incidence of acute (38% vs. 50%; P0.53)
or chronic GVHD (44% vs. 33%; P0.38), AML relapse (24% vs. 11%;
P0.4), NRM (33% vs. 10%; P0.17), overall mortality (52% vs.
20%; P0.087), the probability of 2-year EFS (50% vs. 89%;
P0.19) and OS (53% vs. 80%; P0.28).

Conclusion: Regimen FLU-BU12-TG seems to be a feasible
alternative approach to the patients allografted for AML and requir-
ing pretransplant cytoreduction but standard myeloablative condi-
tioning would be associated with the significant risk of severe
complications.

LYMPHOMA/MULTIPLE MYELOMA

267 MAINTENANCE THERAPY WITH LOW DOSE THALIDOMIDE, DEXAMETH-
ASONE AND CLARITHROMYCIN (BLT-D) FOLLOWING AUTOLOGOUS TRANSPLANT
(ASCT) FOR MULTIPLE MYELOMA (MM)
Holmberg, L.1,2, Gooley, T.1, Becker, P.1,2, Benninger, W.1,2 1 Fred Hutch-
inson Cancer Research Center, Seattle, WA; 2 University of Washington, 
Seattle, WA

Since relapse remains a major cause for treatment failure after
ASCT for MM, the role of maintenance therapy has been studied.
Neither the best maintenance regimen nor optimal duration of ther-
apy post ASCT has been established. Niesvizky R et al (Blood 111: 
1101-09, 2008) reported on the efficacy of BIRD as front-line ther-
apy for MM, with 90% objective response rate and manageable tox-
icities. Thus, it seemed reasonable to study such a regimen as
maintenance therapy post ASCT. Thirty-one patients (Stage I/II,
n=13 and stage III, n=18 by Durie-Salmon criteria) were treated.
Before ASCT, 81% received Thalidomide, 23% Lenalidomide, and
45% Bortezomib; 58% were treated with >1 regimen (range 1–4)
before mobilization. Cytogenetic abnormalities included: poor
prognosis (23%), del13 by FISH (13%), t11/14 (10%), and tris 11/
11q (10%). PBSC were collected in 80% of patients off chemother-
yapy/growth factor. At ASCT, 42% of patients were in PR, 6.5% had
SD, and 6.5% had progressive disease. All patients were conditioned
with melphalan 200mg/m2; one patient was treated after planned
tandem. At median of 113 days (range 49-133) and after recovery
from acute toxicity of ASCT, patients were treated with Clarithro-
ymycin 250 mg po bid, Dexamethasone 20 mg po weekly, and Len-
alidomide 25 mg po daily days 1-14 every 21 day cycles. After one
year of combination therapy, dexamethasone was tapered off and Clari-
thromycin was stopped. Lenalidomide was continued as long as tol-
erated until disease progression. All patients were treated daily with
coated aspirin (325 mg) for DVT prophylaxis. One patient developed
DVT/PE. Five patients stopped therapy for disease progres-
sion and 11 stopped for significant toxicity (protracted > 30 days
peripheral neuropathy grade 3 (n=2), VZV/PCP/viral pneumonia
(n=3), protracted neutropenia (n=1), MDS 5q (n=1), cellulitis
(n=1), and leukocytic vasculitis (n=1)). Peripheral neuropathy
and neutropenia were most common non-infectious toxicities. As of 9/
2010, all patients remain alive and twenty patients (65%) remain
alive without disease progression; with median follow-up of 36
months (range 20-48) from transplant. In summary, BIRD can be
given post ASCT. Peripheral neuropathy and neutropenia are
most common non-infectious toxicities. With median follow-up of
33 months, all patients remain alive and 65% remain alive without
progressive disease. A randomized trial comparing different maintenance regimens post ASCT is needed to determine best regimen.

269 PROGNOSTIC SIGNIFICANCE OF PRE-TRANSPLANTATION FDG-PET/CT IN PATIENTS WHO UNDERGO ALLOGENIC STEM CELL TRANSPLANTATION FOR LYMPHOMA

Kudo, M., Tada, K., Tajima, K., Aksutera, Y., Kim, S.-W., Hirama, N., Ueno, N., Mori, S.-I., Tanaka, R., Heke, Y., Yano, T., Takesu, Y., Fukuda, T., National Cancer Center Hospital, Tokyo, Chuo-ku, Japan; 2 Tokyo National Medical Center, Tokyo, Meguro-ku, Japan

A positive scan in pre-transplantation fluorine-18 fluorodeoxyglucose positron emission tomography (FDG-PET) has been shown to be associated with a poor prognosis in patients with malignant lymphoma (ML) undergoing high-dose chemotherapy followed by autologous stem cell transplantation (SCT). However, it remains unclear with allogeneic SCT. Therefore, we conducted a retrospective analysis of 52 consecutive patients with ML who had undergone FDG-PET scan before allogeneic SCT at our institution from January 2005 to July 2010. The median age was 52 years (range: 20-64), and the median follow-up after allogeneic SCT was 475 days (range: 46-1553). Twenty-three patients were FDG-PET-negative and nineteen were positive with a median SUV of 7.23 (range: 2.7-17.82). Nine indolent lymphomas and 14 aggressive lymphomas were PET-negative, while 14 indolent and 15 aggressive lymphomas were PET-positive (p = 0.52). Among the PET-negative patients, 5 and 18 received myeloablative and reduced-intensity conditioning respectively. On the other hand, 9 of the 20 PET-positive patients received myeloablative conditioning (p = 0.54). Other characteristics (age, serum LDH, extranodal sites, donor source) were not significantly different between the PET-positive and PET-negative groups. Although the cumulative incidence of progression at 1 year was lower in the PET-negative patients, there was no statistical significance (15% vs 31%, p = 0.35). Although overall survival (OS) and progression-free survival (PFS) rate at 3 years after allogeneic SCT were higher in the PET-negative patients, there were no statistical significances (OS 83% vs 58%, p = 0.21; PFS 67% vs 53%, p = 0.22). Median survival time was not reached in either PET-negative or -positive patients. A multivariate analysis by Cox regression analysis showed that high serum LDH was associated with an increased risk of poor OS (HR 4.11, 95% CI 1.23-13.78, p = 0.02). On the other hand, a positive PET finding did not significantly affect the OS (HR 1.80, 95% CI 0.46-6.96, p = 0.40). In conclusion, our study suggested that, in contrast to the setting of autologous SCT, a positive pre-transplant PET finding may not be a predictor of poor OS in patients with lymphoma who underwent allogeneic SCT.

270 AUTOLOGOUS STEM CELL TRANSPLANTATION IN LYMPHOMA PATIENTS: THE IRANIAN EXPERIENCE


Background: Autologous hematopoietic stem cell transplantation (HSCT) is a potentially curative treatment in patients with lymphoma including Hodgkin’s disease (HD) and non-Hodgkin’s lymphoma (NHL).

Patients and Methods: 416 lymphoma patients (209 male and 147 female) with a median age of 25 years (range: 12-60 years) in 204 HD patients and a median age of 33 years (range: 8-62 years) in 206 NHL patients. We retrospectively reviewed the medical records of 357 patients with primary diagnosed aggressive NHL from January 2002 to December 2009. Among them, we select patients who achieved to complete or partial remission after first induction chemotherapy at the time of diagnosis was 46 years (range, 15-64). Diffuse large B-Cell lymphoma (DLBCL, 48%), T-cell lymphoma (38%), lymphoblastic lymphoma (7%) was included. The proportion of Rituximab adding regimen for induction chemotherapy was 90%. The five-year overall survival rate was 78.8% and 63.3%, respectively. The three years overall survival (OS) for HD and NHL patients was 91.8% and 71.4 %. Acute and chronic GVHD occurred in 16 (53.3%) and 7 (23.3%) of NHL patients with Allogeneic HSCT. The three years, DFS for autologous and allogeneic transplantation in NHL patients was 64.9% and 56.3% (p = 0.543). The three years, OS for autologous and allogeneic transplantation in NHL patients was 72.2% and 68.5 %, (p = 0.843).

Conclusion: Our results confirm that autologous HSCT is a suitable treatment in patients with NHL and relapsed HD. More importantly, there is no significant difference between autologous and allogeneic HSCT in NHL patients.

271 AUTOLOGOUS STEM CELL TRANSPLANTATION AS FRONT LINE THERAPY DOES NOT IMPROVE THE OUTCOME OF HIGH RISK AGGRESSIVE NON-HODGKIN’S LYMPHOMA: A SINGLE CENTER STUDY


Background: The role of high dose therapy (HDT) followed by autologous stem cell transplantation (ASCT) as front-line therapy in the high risk aggressive non-Hodgkin’s lymphoma (NHL) patients is still a matter of debate, but several studies demonstrated the efficacy of HDT. Since Rituximab added to CHOP chemotherapy, OS and PFS were significantly improved. Therefore, we analysed to compare conventional chemotherapy with HDT followed by ASCT in aggressive NHL.

Patients and Methods: We retrospectively reviewed the medical records of 357 patients with primary diagnosed aggressive NHL from January 2002 to December 2009. Among them, we select patients who achieved to complete or partial remission after first induction chemotherapy or had ≥ 3 International Prognostic Index (IPI) scores or stage III, IV. Among 357 patients, 42 patients younger than 65 years were enrolled and categorized to two groups: conventional chemotherapy group (n = 33, 79%) and HDT followed by ASTC group (n = 9, 21%).

Results: The median age at the time of diagnosis was 46 years (range, 15-64). Diffuse large B-Cell lymphoma (DLBCL, 48%), T-cell lymphoma (38%), lymphoblastic lymphoma (7%) was included. The proportion of Rituximab adding regimen for induction chemotherapy was 49%. The five-year overall survival rate was not significantly different between two groups (72% in chemotherapy group vs. 70% in HDT group, P = 0.73). And the estimated progression free survival at five years was not significantly different between two groups (51% in chemotherapy group vs. 53% in HDT group, P = 0.63).

Conclusion: The efficacy of HDT followed by ASTC during first-line treatment in patients with aggressive NHL does not improve the outcome and should be evaluated in randomized trials.

272 TRANSPLANT OUTCOMES IN MULTIPLE MYELOMA PATIENTS YOUNGER VERSUS OLDER THAN 60 YEARS OF AGE IN THE ERA OF NEWER TARGETED AGENTS

Naik, S., Shoep, D., Allbright, C., Graham, R., Leitman, D., Zamkoff, K., D’Agostino R Jr., Jr., Hard, D. Wake Forest Hospital Medical Center, Winston-Salem, NC

Introduction: Various newer agents are available recently and revolutionized treatment of myeloma and are used with intention to overcome the adverse influence of cytogenetic abnormalities. We were