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POSTER ABSTRACTS

723.ALLOGENEIC TRANSPLANTATION: LONG-TERM FOLLOW-UP AND DISEASE RECURRENCE

Outcomes of Allogeneic Hematopoietic Cell Transplantation in Patients with Active Primary Malignancy at HCT - a Bi-Institutional Retrospective Cohort Analysis

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Background: Patients diagnosed with hematologic malignancies may be candidates to proceed to allogeneic hematopoietic cell transplantation (HCT). In those with active solid malignancy, given the cumulative toxicity associated with additional chemotherapy and the intensive immunosuppression required after HCT, there has been a concern that outcomes of HCT would be suboptimal. Specifically, prior malignancy may relapse early after HCT or transform to a more aggressive phenotype. We aimed to evaluate the bi-directional relationship between HCT and active solid malignancy. **Methods:** We retrospectively reviewed charts of patients in 2 large transplant centers who received first allogeneic HCT between 2012 and 2022 with concurrent active solid malignancy (defined as receiving any treatment for solid malignancy within 5 years prior to HCT). Hematologic relapse was treated as a competing event in time-to-event analyses of graft vs. host disease (GVHD) and non-relapse mortality (NRM). Analysis of chronic GVHD was performed only among patients who survived more than 3 months post HCT. Mortality was treated as a competing event in the analysis of relapse of solid malignancy. Modified GVHD-relapse free survival (mGRFS) was defined as survival with no prior GVHD and/or relapse of either solid or hematology malignancies. This trial was approved by the hospital ethic committee. **Results:** Between 01/2012 and 12/2022 we identified 45 patients (females, 62%) who fulfilled the eligibility criteria. Median age was 63 (range, 21-74) years and median post HCT follow-up was 41 (range, 7.1-122.5) months. Acute myeloid leukemia (AML) and myelodysplastic syndrome (MDS) (n=35 and n=6, respectively) were the most common hematologic malignancies. Status of hematologic malignancy at HCT was complete remission (n=27, 60%), partial remission (n=1, 2%) and stable/progressive disease (n=17, 38%). Most common diagnoses of active solid malignancies were breast cancer (n=22, 49%) and colon cancer (n=6, 13%) with 24% patients receiving active treatment at HCT and 7% with progressive disease at HCT. HCT comorbidity index (HCT-CI) was 3-5 in 82% (>5, 18%). Majority received reduced intensity conditioning (n=29, 64%) with an allograft mainly derived from unrelated donors (n=31, 69%). Early HCT complications included severe mucositis (16%), bacteremia (20%), and invasive fungal infections (4%). There were no cases of sinusoidal obstruction syndrome. 27% resumed maintenance treatment for solid malignancies post HCT with no significant toxicity. Incidences of grade 2-4 and 3-4 acute GVHD at day 200 were 48% and 3%, respectively. Incidences of overall and moderate-severe chronic GVHD at 3 years were 53% and 24%, respectively. Hematologic relapse incidence at 6 months, 1 and 3 years were 31%, 37%, and 48%, respectively with no impact of conditioning intensity (p=.95). Incidences of NRM at 3 months, 1 and 3 years were 7%, 15%, and 25%, respectively. Cumulative progression of solid malignancies at 3 years was 12%, **Figure 1A**. Incidence of mRGFS at 1 year was 16%. Overall survival at 3 years was 53% in all cohort, 54% in patients with AML/MDS and 61% in patients with concomitant breast cancer, **Figure 1B**. Cox regression model identified both progressive solid and hematologic malignancy to be associated with increased risk of mortality (HR=4.3, p=.049 and HR=1.8, p=.028, respectively), while sex, age, conditioning intensity and HCT-CI did not impact survival. **Conclusions:** HCT is safe and efficacious in patients with active solid malignancy. However relapse incidence of hematologic malignancy is high and mGRFS is low. Progression of the solid malignancy after HCT is in fact uncommon. Therefore in this specific patient cohort, improved transplantation

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techniques to better control the hematologic disease post-transplant are warranted to make HCT more effective and long lasting.

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Figure – A) Progression of primary solid malignancy and B) Overall survival in all cohort, patients with AML/MDS and patients with active carcinoma of breast

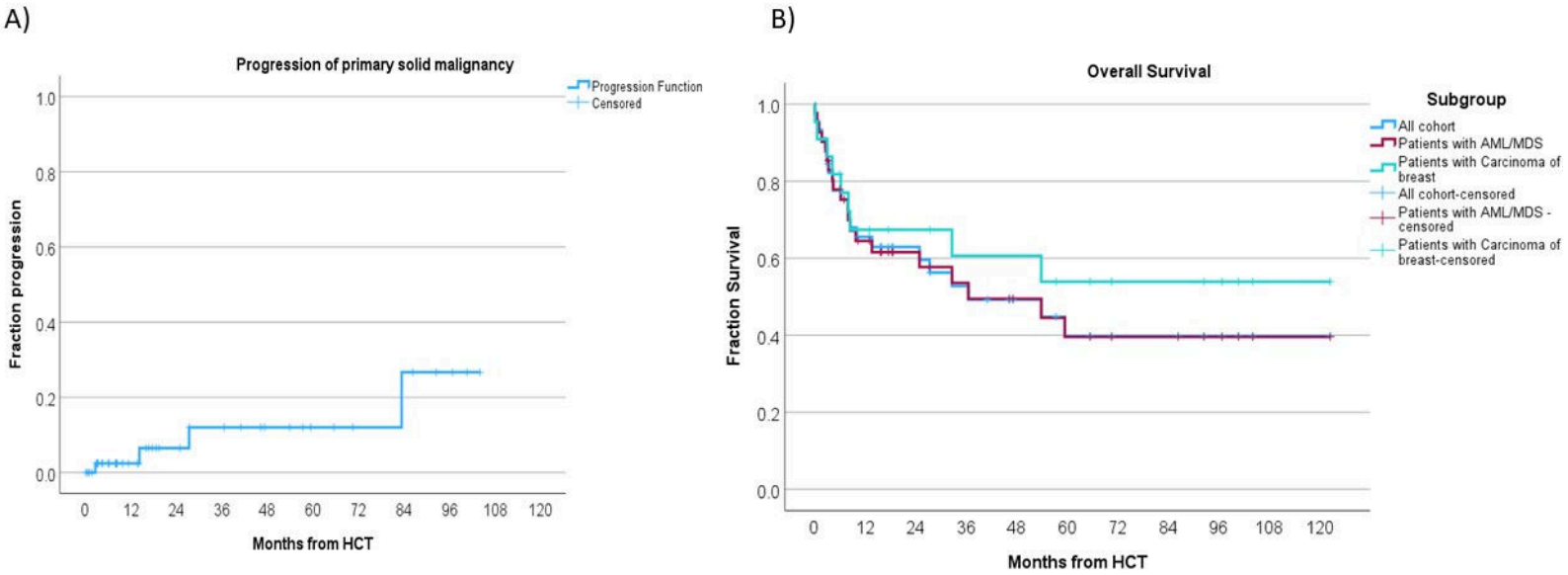

Figure 1