Cell of origin is not associated with survival after DLBCL relapse

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OBJECTIVES

- Patients with untreated non-GCB DLBCL carry an inferior prognosis compared with GCB-type DLBCL when treated with anthracycline based immunochemotherapy as their first treatment
- The prognostic value of DLBCL cell of origin at relapse is less well defined
- This study aimed to identify if cell of origin as determined by Hans algorithm is prognostic in relapsed DLBCL

METHODS

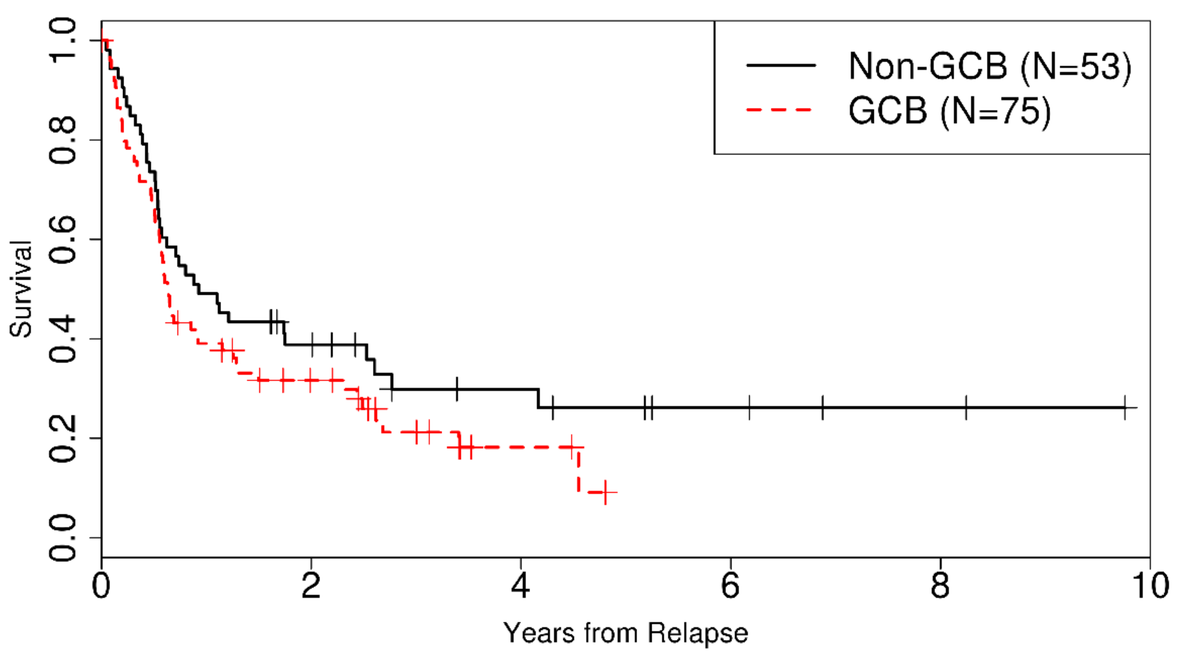
- Newly diagnosed patients with DLBCL were prospectively enrolled in the University of Iowa/Mayo Clinic SPORE Molecular Epidemiology Resource (MER) from 2002-2012
- Initial therapy and post relapse management of the patients was per the treating physician
- Patients were followed for outcome events including relapse, retreatment, and death
- Cell of origin information per Hans algorithm at initial diagnosis was abstracted from the medical record where available or assessed using available research tissue

RESULTS

- 985 patients with DLBCL treated with anthracycline based immunochemotherapy were enrolled in the MER from 2002-2012; cell of origin per Hans algorithm was available on 583 (59%)
- At a median follow-up of 59 months (range 1-148) from diagnosis, 221 of the 583 patients (38%) had a relapse, retreatment or death during follow-up
- After excluding patients who died without relapse (N=69), low-grade relapse (N=14), and patients receiving consolidation therapy for equivocal disease status after initial immunochemotherapy (N=10), 128 patients with relapsed DLBCL and available cell of origin data were assessed for survival post-relapse.
- Median age at diagnosis for the 128 patients was 62 years (range 20-89) and 78 (61%) were male
- The median time from diagnosis to relapse or retreatment was 7 months (range 1-148)
- IPI at diagnosis was 0-1 in 27 patients, 2 in 33 patients, 3 in 38 patients, and 4-5 in 30 patients
- 75 (59%) patients had GCB tumors and 53 (41%) had non-GCB by Hans algorithm
- At a median follow-up of 30 months (range 0-117) after relapse, 93 (73%) patients had died

- Median survival after relapse was 8.2 months (95% CI: 7.0-14.5)
- Cause of death was almost exclusively due to lymphoma (94%) with only 2% due to therapy and 4% from other (non-lymphoma) causes
- There was no difference in survival of patients with GCB (median survival 7.6 months, 95% CI: 6.6-15.1; HR = 1.35, 95% CI: 0.89-2.06; p=0.16) compared to patients with non-GCB tumors (median survival 11.1 months, 95% CI: 6.9-31.2)

Overall Survival after Relapse



CONCLUSIONS

- Survival of patients with DLBCL relapse remains poor in the immunochemotherapy era
- Cell of origin as assessed by Hans algorithm at diagnosis was not associated with survival after DLBCL relapse
- Further studies using gene expression profiling (GEP) of relapsed DLBCL are warranted to evaluate if cell of origin classification has prognostic implications in the relapsed setting

References

Lenz G et al. Stromal gene signatures in large-B-cell lymphomas. N Engl J Med. 2008 Nov 27;359(22):2313-23.

Nyman H et al. Impact of germinal center and non-germinal center phenotypes on overall and failure-free survival after high-dose chemotherapy and auto-SCT in primary diffuse large B-cell lymphoma. Bone Marrow Transplant. 2008 Jul;42(2):93-8.

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