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MEETING ABSTRACTS Open Access

# Pooled analysis of AIDS Malignancy Consortium (AMC) trials evaluating rituximab plus either CHOP or infusional EPOCH chemotherapy in HIV-associated non-Hodgkin's lymphoma

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## Background

Two consecutively performed randomized studies by the AMC evaluating chemoimmunotherapy for the treatment of HIV-associated NHL include AMC010 [1] (Concurrent Rituximab [R] + CHOP vs. CHOP, N=150) and AMC034 [2] (Concurrent R+EPOCH vs. Sequential EPOCH →R; N=106). In AMC010, the addition of Rituximab to CHOP was associated with an increased risk of infectious death (15% vs. 2%, p=0.035) without a significant improvement in complete response (CR) rate (58% vs. 47%; p=0.147), event-free survival (EFS), or overall survival (OS). In AMC034, the CR rate met its primary efficacy endpoint in the concurrent arm (73%; 95% confidence intervals [CI] 58%, 85%) but not the sequential arm (55%; 95% CI 41%, 68%).

## Methods

We performed a pooled analysis of these two consecutive trials including patients treated with R-CHOP and concurrent R-EPOCH in order to determine the influence of the age-adjusted International Prognostic Index (aaIPI), CD4 count (<100/μL vs. >100/μL), and treatment (CHOP vs. EPOCH) as variables.

## Results

The characteristics and outcomes of the study populations are shown in table 1. Patients treated with R-EPOCH tended to have better outcomes in both the low and high-risk IPI groups.

**Table 1 Patient characteristics and outcomes**

| | R-CHOP | R-EPOCH |
|---|---|---|
| No. | 99 | 51 |
| CD4<100/μL | 41% | 31% |
| High aaIPI risk (2-3 factors) | 59% | 69% |
| Mean age (years +/- standard deviation) | 43.5 (+ 8.3) | 42.6 (+8.4) |
| CR rate | | |
| Low risk aaIPI (0-1 factors) | 76% (60%, 88%) | 88% (62%, 98%) |
| High risk aaIPI (2-3 factors) | 45% (32%, 58%) | 60% (42%, 76%) |
| 2 year EFS | | |
| Low risk aaIPI (0-1 factors) | 57% (36%, 73%) | 81% (51%, 93%) |
| High risk IPI (2-3 factors) | 30% (18%, 43%) | 59% (41%, 74%) |
| 2 year OS | | |
| Low risk aaIPI (0-1 factors) | 66% (43%, 82%) | 87% (57%, 97%) |
| High risk aaIPI (2-3 factors) | 36% (23%, 50%) | 62%, (44%, 76%) |

In a multivariate analysis that included pooled data from both consecutive studies, features that were significantly associated with improved EFS, OS, and CR rate included low aaIPI score and baseline CD4 count of at least 100/μl. Additionally patients treated with concurrent R-EPOCH exhibited improved EFS and OS even when adjusted for prognostic covariates including aaIPI score and CD4 count (Table 2).

## Conclusions

These findings suggest that treatment outcomes may be superior with concurrent R-EPOCH compared with R-CHOP, and support the design of an ongoing Phase III

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**Table 2 Multivariate analysis regarding the outcomes event-free survival (EFS), overall survival (OS) and rate of complete or unconfirmed complete remission (CR/CRu)**

| | EFS p-value HR (95% CI) | OS p-value HR (95% CI) | CR/Cru p-value OR (95% CI) |
|---|---|---|---|
| aaIPI score (0-1 vs. 2-3) | <0.001 0.32 (0.17, 0.57) | <0.001 0.28 (0.14, 0.56) | <0.001 4.58 (1.96, 10.69) |
| CD4 (≥100 vs. < 100/μL | <0.001 0.42 (0.26, 0.69) | <0.001 0.37 (0.22, 0.63) | <0.05 2.70 (1.26, 5.79) |
| R-EPOCH vs. R-CHOP | <0.01 0.40 (0.23,0.69) | <0.01 0.38 (0.21, 0.69) | 0.117 1.90 (0.85, 4.22) |

trial comparing concurrent R-EPOCH with R-CHOP in immunocompetent patients with diffuse, large B-cell lymphoma (NCT00118209). This analysis provides additional level 2 evidence supporting the use of concurrent R-EPOCH in patients with HIV-associated lymphoma.

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