COMPARING THE EFFICACY OF LOW-DOSE RADIOTHERAPY IN PATIENTS WITH AGGRESSIVE AND INDOLENT LYMPHOMAS

Carlo Furlan¹, Pietro Bulian¹, Mariagrazia Michieli¹, Michele Spina¹, Anna Ermacora², Marco Trovo¹, Umberto Tirelli¹, and Giovanni Franchin¹

¹National Cancer Institute - Oncologic Referral Center of Aviano, Italy.
²Pordenone General Hospital, Italy

PURPOSE
Low-dose radiotherapy (LDRT) is a highly effective treatment in indolent non-Hodgkin lymphomas (NHLs). However, a reduced efficacy in aggressive lymphomas has never been demonstrated. We aimed to assess the effect of histologic type on disease response to LDRT.

METHODS
Data from a clinical phase-II trial using LDRT for palliation in diffuse large B-cell lymphoma (DLBCL) patients were compared with clinical outcome of patients with follicular lymphoma (FL), marginal zone lymphoma (MZ), and mycosis fungoides (MF) which were treated with LDRT at our Institution in the same period. LDRT consisted of 4 Gy in 2 fractions on symptomatic areas only for both DLBCL and indolent NHLs. Bulky disease was defined as > 5 cm in maximum diameter. Chemoresistance was defined as the failure of chemo to achieve a complete or partial response, or as disease relapse after a complete response. Clinical response was assessed 21 days after LDRT, and was defined as reduction > 50% of maximum diameter of the radiated lesions. Response evaluation was performed with CT-scan or clinical exam for palpable lesion. Toxicity was scored using the CTCAE v3.0.

RESULTS
In all, 35 patients were evaluated. 16 were male; histologies were: 17 DLBCL, 8 FL, 6 MZ, and 4 MF. Characteristics were generally balanced between the two groups. However, DLBCL patients were more likely to have bulky disease and chemoresistance. Median follow up was 7 months (range, 1 – 49 months). No significative difference was noted concerning overall response rate between DLBCL and indolent NHLs (overall response rate was 70% (12/17) and 83% (15/18) for patients with aggressive and indolent forms, respectively; p = 0.39), but indolent forms were associated with a higher rate of complete response (complete response rate was 61% (11/18) and 35% (6/17) for patients with indolent and aggressive NHL, respectively; p = 0.09). Only 1 case of toxicity was noted (grade 2 nausea). The median duration of response was 7 months (range, 1 – 35 months). Among responders, only 2 patients progressed within the radiated field at the time of last follow up visit.

CONCLUSIONS
Efficacy of LDRT for DLBCL and indolent NHL patients resulted comparable in terms of overall response rate. Complete response rate was higher in the indolent NHL population than in the subset of DLBCL patients included in the phase II trial.