Role of Radiotherapy and Dose-Densification of R-CHOP in Primary Mediastinal B-Cell Lymphoma: A Subgroup Analysis of the UNFOLDER Trial of the German Lymphoma Alliance (GLA).

Gerhard Held¹, Lorenz Thurner², Viola Poeschel², Christian Berdel³, German Ott⁴, Christian Schmidt⁵, Andreas Viardot⁶, Walburga Engel-Riedel⁷, Peter Borchmann⁸, Ofer Shpilberg⁹, Mathias Witzens-Harig¹⁰, Norbert Frickhofen¹¹, Maike Nickelsen¹², Frank Griesinger¹³, Beate Krammer-Steiner¹⁴, Andreas Neubauer¹⁵, Massimo Federico¹⁶, Peter de Nully Brown¹⁷, Stephan Stilgenbauer², Niels Murawski², Bettina Altmann¹⁸, Lorenz Truemper¹⁹, Heinz Schmidberger²⁰, Christian Ruebe³, Jochen Fleckenstein³, Norbert Schmitz²¹, Markus Loeffler¹⁸, Marita Ziepert¹⁸

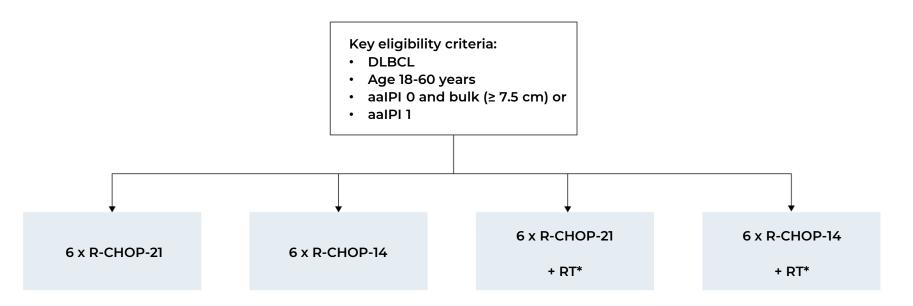
 ¹Internal Medicine I, Westpfalzklinikum Kaiserslautern, Kaiserslautern, ²Internal Medicine I, ³Department of Radiooncology, Saarland University Medical School, Homburg/Saar, ⁴Institute of Pathology, Robert-Bosch-Krankenhaus, Stuttgart, ⁵Department of Medicine III, University Hospital Grosshadern/LMU, Munich, ⁶Department of Internal Medicine III, University Hospital of Ulm, Ulm, ⁷Pulmonary Clinic, Krankenhaus Köln-Merheim, Köln, ⁸Department of Hematology, University Hospital of Cologne, Cologne, Germany, ⁹Institute of Hematology, Assuta Medical Centers, Tel Aviv, Israel, ¹⁰Department of Internal Medicine V, University of Heidelberg, ¹¹Department of Internal Medicine III, Dr Horst-Schmidt-Kliniken,
¹⁴Departament of Internal Medicine III, Klinikum Südstadt, Rostock, ¹⁵Department of Hematology, Oncology and Immunology, University Hospital Marburg, Germany, ¹⁶Department of Diagnostic, Clinical and Public Health Medicine, University of Modena and Reggio Emilia, Modena, Italy, ¹⁷Department of Hematology, Rigshospitalet, Copenhagen, Denmark, ¹⁸Institute for Medical Informatics, Statistics and Epidemiology, University of Leipzig, Leipzig, ¹⁹Department of Hematology and Oncology, Georg August University of Goettingen, ²⁰Department of Radiooncology, University Medical Center, Mainz, ²¹Department of Internal Medicine A, University Medical School, Muenster, Germany





UNFOLDER - Study Design:

2 x 2 factorial Design

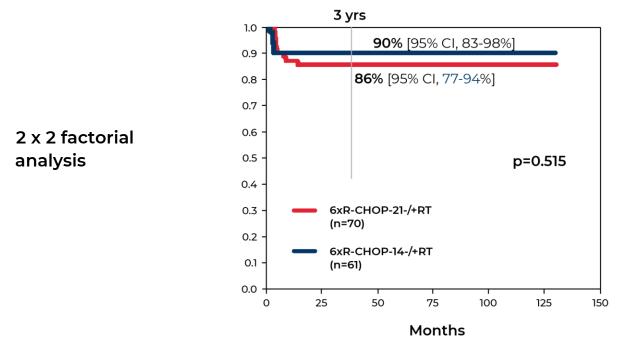


* Only pts. with bulky disease and extralymphatic involvement have been randomized to these arms



EFS, primary endpoint:

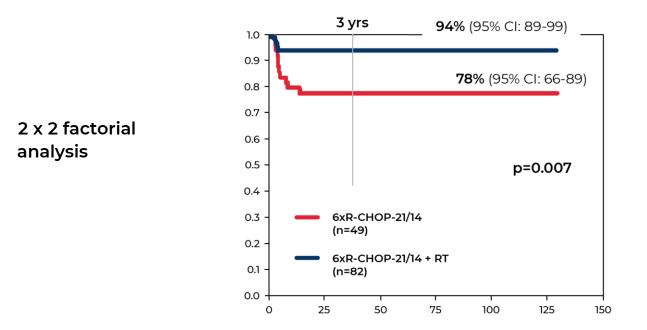
R-CHOP-21 vs R-CHOP-14





EFS, primary endpoint:

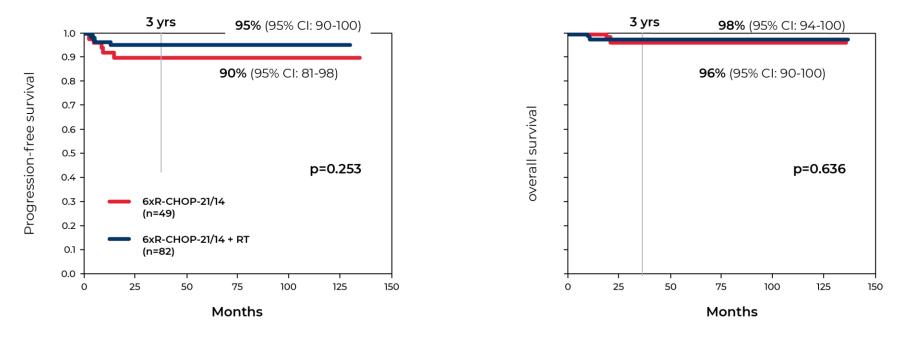
Radiotherapy vs. observation





PFS and OS:

Radiotherapy vs. observation



2 x 2 factorial analysis



Conclusions:

- To our knowledge, this is the largest series of PMBCLs so far, which have been treated in a prospective, randomized trial in the Rituximab era.
- Our results indicate a very favorable 3-year OS of 96% in PMBCL pts treated with R-CHOP.
- Pts assigned to RT had a superior EFS mostly due to a higher PR rate in the no RT arm triggering RT, with no differences in PFS and OS.
- The results suggest a benefit of RT only for pts, who are responding to R-CHOP with PR according to International Standardized Response Criteria (Cheson 1999). Testing RT in PET-positive residual tumors in a randomized trial can solve the question, while RT in PET-negative pts is studied in the ongoing randomized IELSG 37 trial.
- No differences in outcome between R-CHOP-14 and R-CHOP-21.

