Dokumenttyp: journal article

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Titel des Beitrags: Myeloablative Anti-CD20 Radioimmunotherapy +/- High-Dose Chemotherapy Followed by Autologous Stem Cell Support for Relapsed/Refractory B-Cell Lymphoma Results in Excellent Long-Term Survival.

Abstract: Background: Radioimmunotherapy (RIT) has been used to treat relapsed/refractory CD20+ Non-Hodgkin lymphoma (NHL). Myeloablative anti-CD20 RIT followed by autologous stem cell infusion (ASCT) enables high radiation doses to lymphoma sites. We performed a phase I/II trial to assess feasibility and survival. Methods: Twenty-three patients with relapsed/refractory NHL without complete remission (CR) to salvage chemotherapy were enrolled to evaluate RIT with Iodine-131 labelled rituximab (131I-rituximab) in a myeloablative setting. Biodistribution and dosimetric studies were performed to determine 131I activity required to induce a total body dose of 21-27Gy to critical organs. In 6/23 patients RIT was combined with high-dose chemotherapy. 8/23 patients received a sequential high-dose chemotherapy with a second ASCT. The median follow-up is 9.5 years. Results: 6,956-19,425GBq of 131I was delivered to achieve the limiting organ dose to lungs or kidneys. No grade III/IV non-hematologic toxicity was seen with RIT alone. Significant grade III/IV toxicity (mucositis, fever, infection, one therapy related death) was observed in patients treated with RIT combined with high-dose...
chemotherapy. The overall response rate was 87% (64% CR). The median progression-free (PFS) and overall survival (OS) is 47.5 and 101.5 months. An international prognostic index score >1 was predictive for OS. Conclusion: Myeloablative RIT with 131I-rituximab followed by ASCT is feasible, well-tolerated and effective in high risk CD20+ NHL. Combination of RIT and high-dose chemotherapy increased toxicity significantly. Long-term results for PFS and OS are encouraging.