might benefit from a longer and higher cumulative pre-transplant chemotherapy as was actually given to group A patients.

5 Conclusion

In conclusion, the use of monoclonal chimeric or humanized anti-CD25 in pediatric allogeneic stem cell transplantation is efficacious in receptor blockade and safe with regard to drug toxicity. In addition, CD25 antibodies did not impair engraftment.
The incidence of acute and chronic GVHD in chimeric or humanized anti-CD25 receiving patients (group A) was not lowered compared to patients receiving murine (group B) or no anti-CD25 (group C) after allogeneic transplants. Moreover, a significantly higher incidence of limited chronic GVHD was seen in chimeric or humanized anti-CD25 receiving patients in comparison to patients receiving murine anti-CD25 but not in comparison to patients without anti-CD25 at all. The higher incidence of limited chronic GVHD was probably caused by the higher rate of mature T cells transplanted with the peripheral blood in chimeric or humanized anti-CD25 receiving patients as compared to bone marrow in patients receiving murine anti-CD25. However, overall incidence of chronic GVHD and of extensive chronic GVHD was not significantly higher in the peripheral stem cell receiving group A as compared to the bone marrow transplanted groups B or C.
Although overall survival and leukemia free survival was not significantly different between all three groups, we observed a trend towards superior EFS in groups B and C. More cumulative chemotherapy in group B and C due to longer treatment before transplant as well as more immunosuppressive treatment due to chronic GVHD in group A may have contributed to this trend.

Our findings may suggest an importance of CD25 positive T cells in the balance of achieving tolerance and leukemia control. The complex role of CD25 in regulatory and effector T cells of allo-recognition and leukemia recognition warrants further investigation.