

## GOOD GENERAL MEDICAL CONDITION IN LONG TERM SURVIVORS OF ADULT ACUTE LYMPHOBLASTIC LEUKEMIA (ALL): FIRST RESULTS OF A SYSTEMATIC ANALYSIS OF GMALL STUDIES

Guter Gesundheitszustand bei Langzeitüberlebenden der akuten lymphatischen Leukämie (ALL) des Erwachsenen: Erste Ergebnisse einer systematischen Analyse der GMALL-Studien

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Since 1981 the majority of adult pts with ALL in Germany was treated in 7 consecutive trials of the German Multicenter Study Group for Adult ALL (GMALL). Survival was step-wise improved to 40-45%; thus the number of long-term survivors is increasing. However so far there is no evaluation of health status and/or late effects in survivors of adult ALL.

Therefore the GMALL initiated a systematic retrospective analysis of pts from studies 2/84 - 6/99 alive more than 5 yrs after diagnosis. The questionnaire covered 8 organ systems and 1 category of "specific syndromes", known as potential late-effects of chemotherapy; it was directed to treating physicians. It covered all diseases, appearing after end of therapy. In parallel health-status and quality of life was evaluated by a patient-questionnaire.

286 questionnaires were evaluable. Median age was 40 (21-74) yrs. Pts were included in GMALL-study 2/84 (11%), 3/87 (4%), 4/89 (16%), 5/93 (50%) and 6/99 (19%). 14% had received stem cell transplantation. The median observation time after diagnosis was 98 (60-186) months.

In 96% of the pts the ECOG status was 0 (74%) or 1 (22%). 39% of the pts were disease-free, 38% showed  $\geq$  one syndrome (table 1): 10% infection, 8% GVHD/sicca, 8% fatigue, 4% secondary malignancies and 9% osteonecrosis. 25% presented a disease in  $\geq$  one organ system; most frequently in neurologic system (e.g. 8% mood alteration, 5% neuropathy), and endocrinium (e.g. 4% osteoporosis); cardiovascular diseases consisted mainly of hypertension (9%); only 3 pts had developed heart failure. Fertility was evaluated by the patient-questionnaire (N=152). 50% of the pts with desire to have children could realise this wish (medical intervention in 21%).

This so far largest data set of medical conditions and late effects in long-term survivors after adult ALL shows overall favourable results. The observed diseases had only in part a potential correlation to previous ALL therapy (e.g. GVHD, sec. malignancies, osteonecrosis, neurologic diseases). Compared to childhood ALL, the rate of secondary leukemias is remarkably low so far. Aftercare should consider specifically the most frequent late-effects i.e. osteonecrosis, fatigue, endocrinology and impaired fertility. These may be cumbersome in individual pts. It remains open whether late effects will be more frequent after more recent, intensified therapies. Therefore the analysis will be carried on.

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**Table1: Most frequently involved organs/syndromes in long-term survivors of adult ALL**

Patients	N=286	%
<b>No diseases</b>	<b>115</b>	<b>39</b>
<b>Organ systems with pathologic findings</b>	<b>63</b>	<b>23</b>
Neurologic system	70	24
Endocrinium	49	17
Skin and mukosa	32	11
Cardiovascular system	35	12
<b>Syndromes</b>	<b>108</b>	<b>38</b>
Infections within last 12 months	28	10
Graft versus host disease / sicca syndrome	23	8
Fatigue	23	8
Osteonecrosis	24	9
Secondary malignancies	10	4