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ELEVENTH ANNUAL MEETING

Ph-negative acute lymphoblastic leukemia in adolescent and young adults: long-term outcomes after treatment according to the adult strategy RALL protocol

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INTRODUCTION

In 2006, the National Cancer Institute Adolescent and Young Adult (AYA) Oncology Progress Review Group identified and focused on individuals diagnosed with cancer from age 15 to 39 years. The isolation of this group is of upmost importance, since tumors in this group often differ from children and adults in their biological and clinical characteristics. The outcomes of AYA with ALL age 15-39 years remain markedly worse than those of their younger counterparts. Comparisons of the outcomes of adolescents treated in pediatric and adult trials in different countries have drawn the same conclusion: adolescents with Ph–negative ALL have better outcomes when treated according to pediatric strategies.

AIM

To compare the results of therapy in AYA and adult with Ph-negative ALL treated by the adult RALL trial protocol.

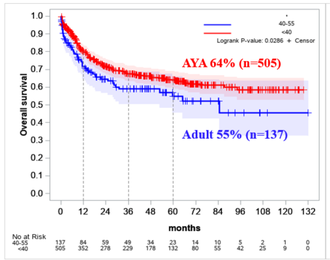
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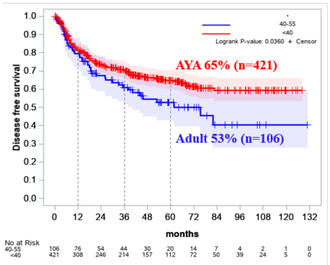
RALL trial based on non-intensive but non-interruptive treatment with fewer allo-HSCTs (RALL-2009(NCT01193933) and RALL-2016(NCT03462095) protocols. The trail from 2009 until 2023 included 642 Ph-negative ALL patients aged 15-55: 505 AYA and 137 adult patients aged 40-55 years.

RESULTS

The main clinical characteristics for patients aged 15-39 and 40-55 years: sex m/f 62%/38% vs 48%/52% (p=0,0042), ALL type B-cell/T-cell/MPAL 55%/42%/3% vs 70%/26%/4% (p=0,0077), ETP T-ALL 8% vs 0% (p=0,0218), CNS involvement in 12% vs 12% (p=0,8837), lymphoblastic lymphoma 8% vs 5% (p=0,3534). We didn't detect any significant differences by cytogenetic type ALL in AYA and adult.

CR was detected in 88% of AYA and in 85% of adult ALL patients(p=0,0848). Early mortality was 6% in AYA and 13% in adult (p=0,0197), and refractory diseases was detected in 6% of AYA and 2% of adult patients(p=0,0673). 5y OS and DFS in AYA and adult patients were 64% vs 55%(p=0,0286) and 65% vs 53%(p=0,036), respectively.





Feature	AYA (15-39) n=505	Adult (40-55) n=147	p
Gender: m/f	62%/38%	48%/52%	0,0042
B-ALL/T-ALL/MPALL	55%/42%/3%	70%/26%/4%	0,0077
CNS involvement	12%	12%	0,8837
LBL (BM blasts < 25%)	8%	5%	0,3534
Karyotype:			
Complex karyotype	10%	10%	0,8734
Hypo-	4%	5%	0,8827
MLL	5%	6%	0,5575
t(1;19)	2%	2%	0,6182
Hyper-	18%	23%	0,3641
Normal	46%	54%	0,1852

CONCLUSIONS

We uncovered that AYA ALL patients compared with adults had significant biological (by frequency in man, T-cell and B-cell ALL, probability of ETP type ALL) and clinical differences (OS and DFS). The results in AYA ALL treated by the RALL protocol (adult trial) are comparable with the results for AYA ALL patients in the EUROCARE-5 (pediatric trial).

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