
# ABS N. 003

06 Acute Leukemias

## LONG-TERM OUTCOME OF A LARGE COHORT OF PATIENTS WITH ACUTE PROMYELOCYTIC LEUKEMIA FROM THE HARMONY PROJECT

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Introduction| Acute promyelocytic leukemia (APL), is now curable in 75-90% of patients using targeted agents [All-transretinoic acid (ATRA)/Arsenic Trioxide (ATO) or ATRA combined with chemotherapy (ATRA+Idarubicin, AIDA-based)]. Despite significant advances, many questions remain unanswered, such as the optimal setting of chemo-free regimens and the prevention of long-term relapses.

Methods| We analyzed a large cohort of newly diagnosed patients with APL included in the HARMONY Platform (derived from APL0406 and AML17 clinical trials, and Study Alliance Leukemia, Swedish Cooperative Group or AML study Group registries). After acquisition from the sources, data were harmonized and transformed using an Observational Medical Outcomes Partnership Common Data Model, and registered in the HARMONY Platform.

Results| Of 1296 patients (pts), 562 were treated with ATRA-ATO (median age 51y, range 16-94; M 50%), and 605 with AIDA (median age 50y, range 17-86; M 50% ratio 1). 250 pts (44%) were low-risk (LR) according to Sanz risk score, 258 (46%) intermediate-risk (IR), and 50 (9%) high-risk (HR) in the ATRA-ATO cohort. The AIDA cohort included 191 LR (31. 5%), 235 IR (39%), and 171 HR (28%) pts (p for risk

groups according to treatment| <0. 001). Treatment data not available in 8 pts (1%). The 10-year overall survival (OS) was 90% and 77% in ATRA-ATO vs AIDA cohorts, respectively (p<0. 001, figure 1), while event-free survival (EFS) was 86% and 67%, respectively (p<0. 001). At a median follow-up of 4. 5 y (range 0. 02–10. 2), OS and EFS in pts treated with ATRA-ATO was consistent across the three Sanz-risk classes (OS| LR 95%, IR 91%, HR 86%, p=0. 233, EFS| LR 93%, IR 89%, HR 86%, p=0. 319). Pts treated with AIDA, at a median follow-up of 6y (range| 0-14. 2) presented an OS of 88% in LR, 83% in IR, and 75% in HR (p=0. 004), while EFS was 72% in LR, 75% in IR, and 67% in HR (p=0. 102). Age was significantly correlated with OS and EFS both p<0. 001). Pts treated outside the clinical trial context had inferior outcomes when compared to clinical trials in both AIDA (8-year OS| 74%vs88%, p<0. 001, EFS| 69%vs72%, p=0. 291) and ATRA-ATO cohorts (8-year OS| 88%vs93%, p=0. 010, EFS| 81%vs92%, p<0. 001). The multivariate analysis for OS showed that age (50-69 vs <50 y, p<0. 001, HR4. 2; >70vs<50y p<0. 001, HR8. 9), Sanz-risk score (High vs Low/Intermediate p<0. 001, HR2), treatment type (AIDA vs ATRA-ATO p=0. 001, HR1. 9) and treatment context (clinical trial vs non-clinical trial p=0. 005, HR1. 7) were independent predictors of OS. The multivariate analysis for EFS showed an independent correlation with type of treatment (AIDA vs ATRA-ATO, p<0. 001 HR2. 6), age (50-69vs<50 y, p<0. 001, HR2. 1; >70vs<50y p<0. 001, HR4. 8) and Sanz-risk score (High vs Low/Intermediate p=0. 005, HR1. 5).

Conclusions| The analysis of the HARMONY APL registry at long-term, showed a survival advantage in pts treated with ATRA-ATO vs AIDA regimens, irrespective of Sanz-risk score

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