## Abstract Only:

# Prognostic significance of flow cytometric residual disease, dysregulated neutrophils/monocytes, and hematogones in adult acute myeloid leukemia in first remission

Chu, SC., Wang, TF., Su, YC. et al. Int J Hematol (2014) 99: 296. DOI: 10.1007/s12185-014-1525-y

International Journal of Hematology
March 2014, Volume 99, Issue 3, pp 296–304 | Cite as

## Abstract

Fifty-one consecutive non-M3 acute myeloid leukemia (AML) patients who had achieved morphologic complete remission (mCR) after induction chemotherapy were enrolled in the present study. Three characteristics of bone marrow (BM) composition analyzed by flow cytometry were combined to determine the prognostic impact. A standardized panel of reagents was used to detect residual disease of aberrant myeloid progenitor cells (RD), identify neutrophils/monocytes with dysregulated immunophenotype (dysregulated neutro/mono) and quantify the appearance of $CD34^+$ B-progenitor-related cluster (hematogones) simultaneously in post-induction BM of adult AML patients. Patients who had detectable RD ≥0.2 % exhibited significantly lower median leukemia-free survival (LFS) than those who did not (13.5 vs. 48.0 months; $P = 0.042$). Dysregulated neutro/mono abnormalities assessed by this flow cytometric scoring system (FCSS ≥2) predicted shorter LFS (8.0 vs. 39.0 months; $P = 0.008$). While B-progenitor-related cluster size ≥5 % predicted improved outcome, with longer LFS (not reached vs. 13.5 months; $P = 0.023$) and better overall survival (not reached vs. 24.0 months; $P = 0.027$). The proposed RD/dysregulated neutro/mono/hematogones score showed a new risk groups with different LFS in the overall patients ($P = 0.0006$) as well as in the subgroup of intermediate cytogenetic risk ($P = 0.001$). The RD/dysregulated neutro/mono/hematogones score assessed by flow cytometry for adult AML in mCR may offer a rapid and practical risk assessment providing better refinement in risk-adapted management after induction