cancers

MDPI

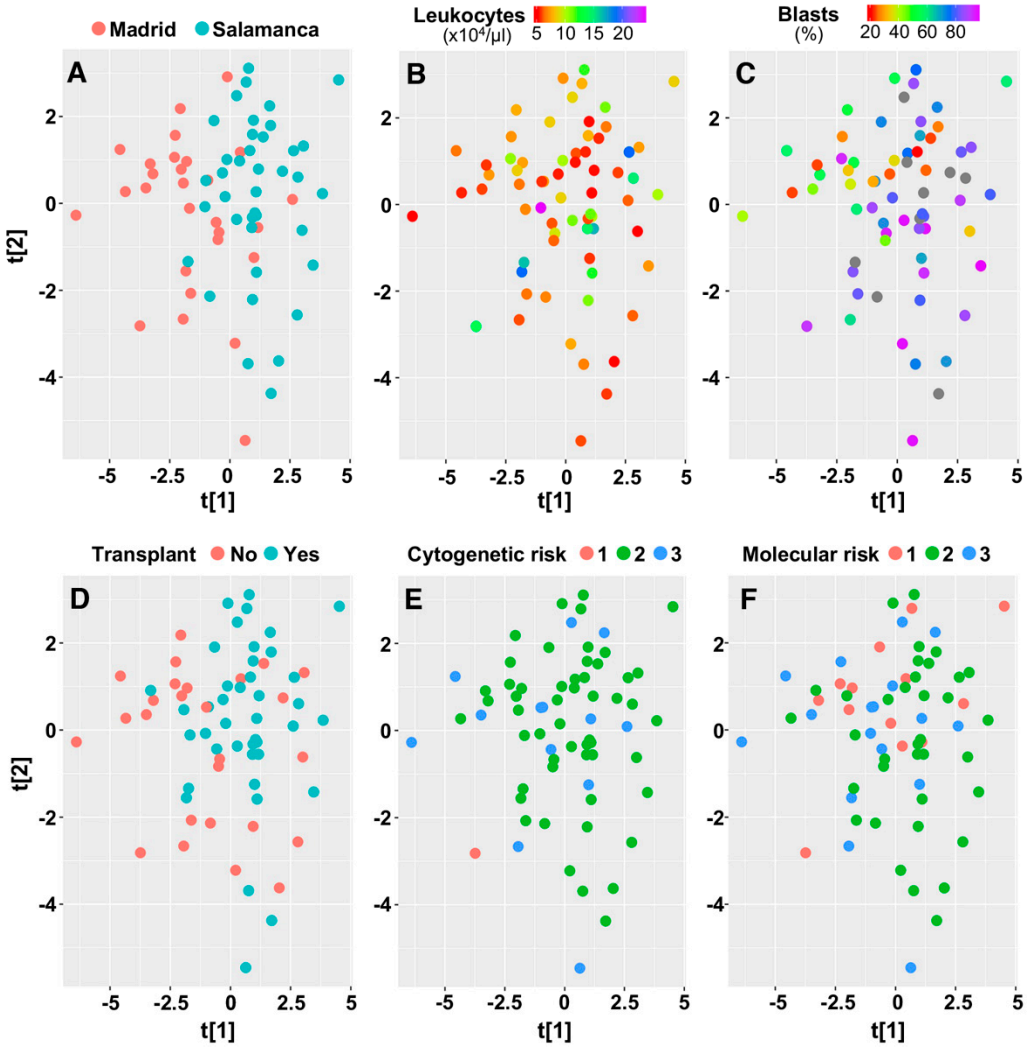
Article

Role of Intracellular Drug Disposition in the Response of Acute Myeloid Leukemia to Cytarabine and Idarubicin Induction Chemotherapy

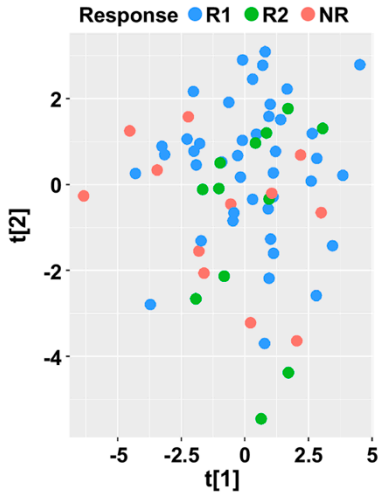
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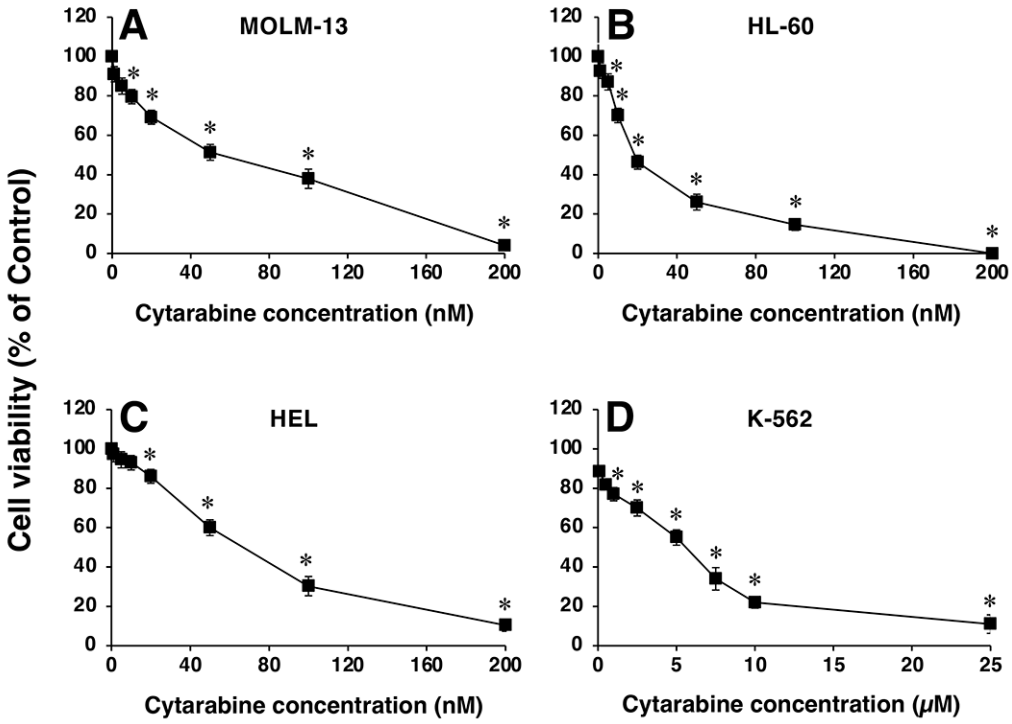
Supplementary information



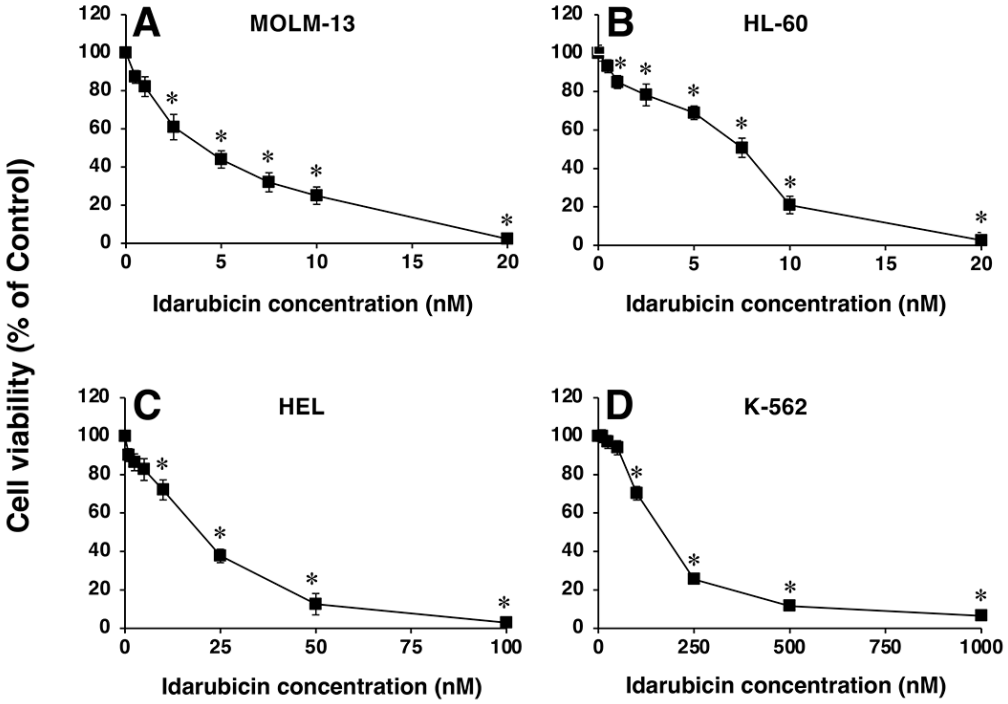
Supplementary Figure S1. Principal component analysis (PCA) score plots of selected 12 genes expression in Ficoll-concentrated human blast samples of patients with AML. Colors represent the origin of the samples (**A**), leukocyte count (**B**), percentage of blasts at diagnosis (**C**), patients receiving transplant (**D**), cytogenetic risk (1: favorable; 2: intermediate; 3: adverse) (**E**), and molecular risk according to NPM1/FLT3-ITD mutational status (1: low; 2: intermediate; 3: unknown) (**F**). Each dot represents one sample.



Supplementary Figure S2. Principal component analysis (PCA) score plots of selected 12 genes expression in Ficoll-concentrated human blast samples of patients with AML. Colors represent the response to induction therapy; complete response even with incomplete recovery after one cycle (R1) of induction therapy with cytarabine and idarubicin 7+3, after two cycles of treatment (R2), or no response after two cycles of treatment (NR).



Supplementary Figure S3. Effect of cytarabine on viability of MOLM-13 (**A**), HL-60 (**B**), HEL (**C**) and K-562 (**D**) cell lines. Cells were incubated with increasing concentrations of the drug for 72 h and cell viability was determined by the MTT test. Values are means ± SEM of 3 independent experiments performed in triplicate. *, $p < 0.05$, compared with non-treated cells by Student's *t*-test.



Supplementary Figure S4. Effect of idarubicin on viability of MOLM-13 (**A**), HL-60 (**B**), HEL (**C**) and K-562 (**D**) cell lines. Cells were incubated with increasing concentrations of the drug for 72 h and cell viability was determined by the MTT test. Values are means ± SEM of 3 independent experiments performed in triplicate. *, $p < 0.05$, compared with non-treated cells by Student's *t*-test.

Supplementary Table S1. Collinearity exploratory analysis. Correlations over 0.75 or under −0.75 are highlighted in red.

	ENT1	ENT2	CNT3	MDR1	BCRP	MRP1	MRP4	MRP5	MRP8	DCK	5-NT	CDA
ENT1												
ENT2	0.30											
CNT3	-0.05	-0.16										
MDR1	0.09	0.14	-0.10									
BCRP	0.30	0.20	-0.05	0.14								
MRP1	0.20	0.59	-0.20	0.21	0.24							
MRP4	-0.05	0.22	-0.07	-0.04	-0.14	0.64						
MRP5	0.22	0.17	-0.06	-0.03	0.08	0.28	0.15					
MRP8	0.17	0.02	-0.06	-0.13	0.02	-016	-0.05	0.14				
DCK	0.22	0.46	-0.14	0.14	0.43	0.66	0.36	0.52	0.05			
5-NT	0.27	0.52	-0.13	0.04	0.32	0.55	0.25	0.69	0.04	**0.80**		
CDA	0.27	0.23	-0.05	0.002	0.50	0.11	-0.20	0.28	0.05	0.45	0.51	

5-NT, 5′-nucleotidase; BCRP, breast cancer resistant protein; CDA, cytidine deaminase; CNT, concentrative nucleoside transporter; DCK, deoxycytidine kinase; ENT, equilibrative nucleoside transporter; MDR, multidrug resistance protein; MRP, multidrug resistance-associated protein.