Supplementary Table 1. Characteristics of the study population.

Characteristics	N (%)
Diagnosis	
De novo AML	150 (85.2)
Secondary AML, including therapy-related AML	26 (14.8)
Sex	
Female	73 (41.5)
Male	103 (58.5)
Median age at diagnosis (years)(range)	59 (16-82)
Blood counts at diagnosis:	
Leukocytes per µL (mean)(range)	6900 (900–412000)
Hemoglobin g/dL (mean)(range)	8.8 (1.8–14.4)
Platelets per µL (mean)(range)	82474 (2200–1150000)
Blasts in peripheral blood (%)(range)	36 (0–100)
Blasts in bone marrow (%)(range)	57 (14–99)
LDH µ/L (mean)(range)	600 (97–3842)
Cytogenetic risk	
Low	13 (7.4)
Intermediate	122 (69.3)
High	38 (21.6)
Unknown	3 (1.7)
ELN risk category	
Low	37 (21.0)
Intermediate	66 (37.5)
High	57 (32.4)
Unknown	16 (9.1)
NPM1	
Wild type	128 (72.7)
Mutated	41 (23.3)
Unknown	7 (4)
***FLT3*-ITD**	
Wild type	139 (79)
Mutated	31 (17.6)
Unknown	6 (3.4)
Treatment	
Intensive induction therapy: anthracycline + cytarabine (7+3)	166 (94.3)
Other	9 (5.1)
Exitus prior to induction	1 (0.6)
Response to induction *	
Complete remission	89 (50.6)
Primary refractory disease	67 (38.1)

Did not receive induction	10 (5.7)
Allogeneic HCT in consolidation *	
No	92 (55.4)
Yes	74 (44.6)
Relapse	
No	119 (67.6)
Yes	57 (32.4)
Survival indicators:	
Progression-free survival, months (median)(range)	12.5 (0.0–147.0)
Event-free survival, months (median)(range)	13.3 (0.1–148.2)
Survival, months (median)(range)	14.8 (0.2–147.0)
Alive at 1-year (n)(%)	101 (57.4)
Exitus	117 (66.5)

N: number of observations considered in each analysis; AML: acute myeloid leukemia; ELN: European LeukemiaNet; HCT: hematopoietic cell transplantation.

* 10 patients died during induction

Supplementary Table 2. Correlation between gene expression and clinical variables at diagnosis.

Clinical variable	Gene	r	p-value
Age	-	-	ns
Leucocyte count	-	-	ns
Hemoglobin	-	-	ns
Creatinine	-	-	ns
LDH	-	-	ns
Platelets	*BCL2* *ASXL1*	-0.16 0.16	0.06 0.08
Blasts in PB	*BRD4* *EZH2* *ASXL1*	-0.26 -0.27 -0.2	**0.01** **0.01** **0.04**

R: Pearson coefficient; ns, not significant; LDH: lactate dehydrogenase; PB: peripheral blood.

Supplementary Figure 1. Prediction of blasts in (A) peripheral blood (PB) according to *EZH2* and *BRD4* expression, and (B) bone marrow (BM) according to *EZH2* and *ASXL1* expression at diagnosis. Variables selected as predictors of blasts using the Genetic Algorithm model.