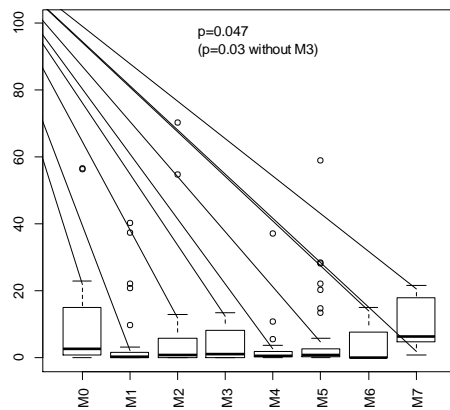
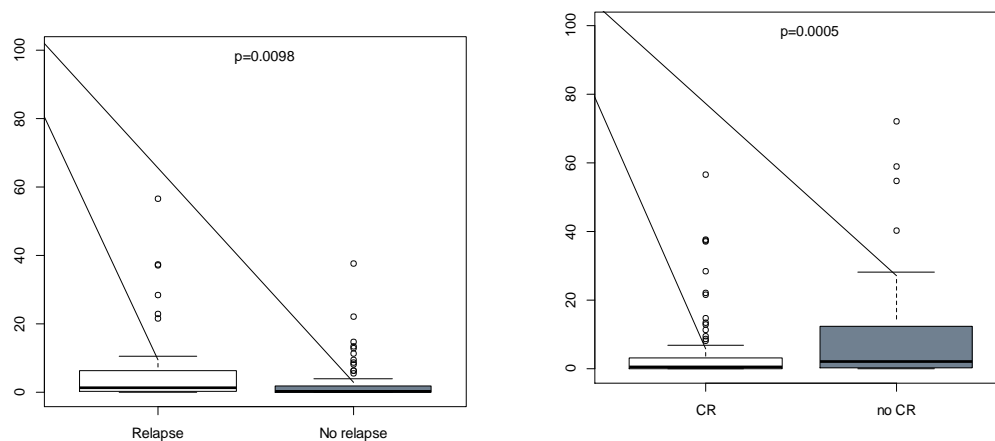


Supplementary Material

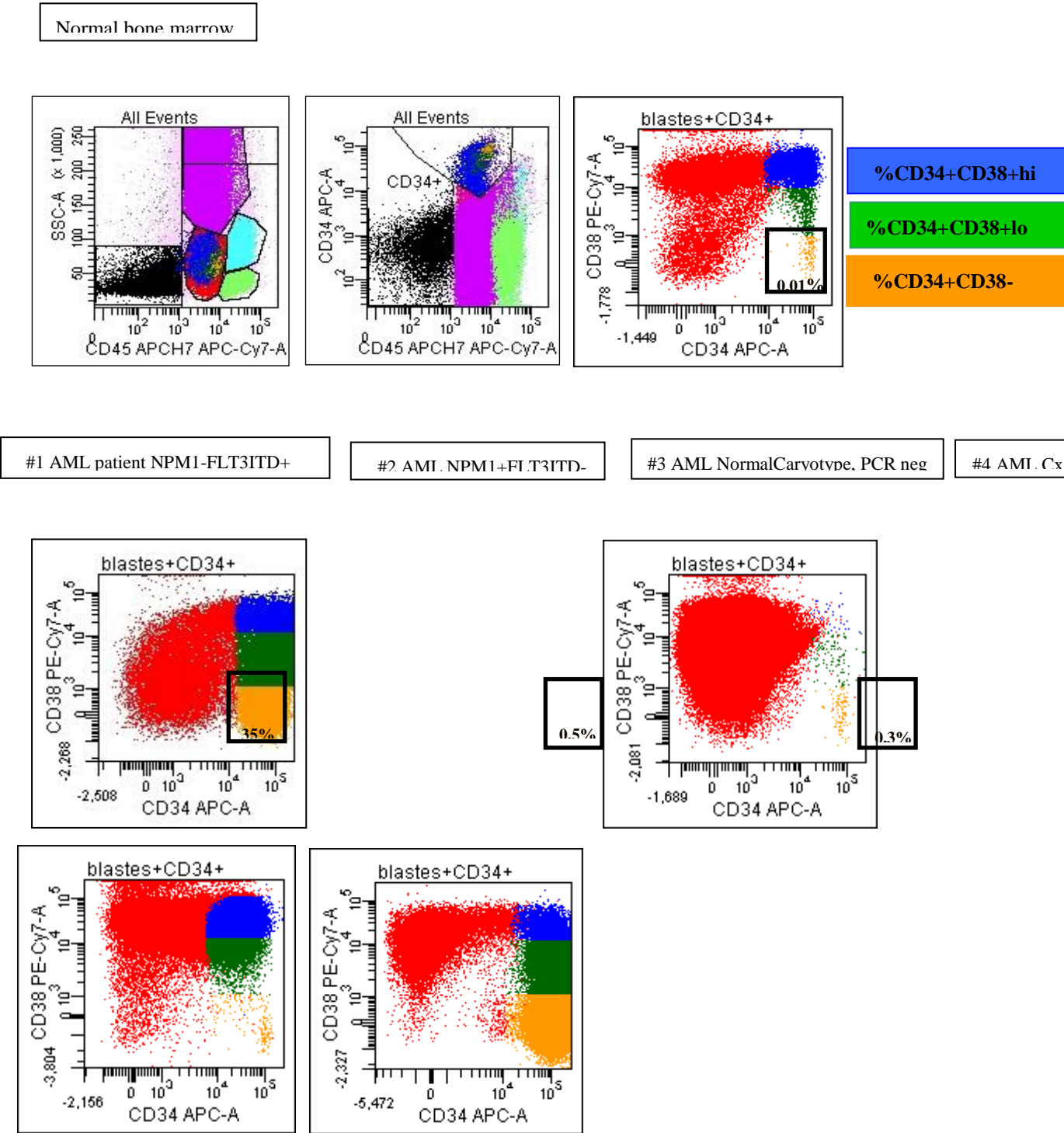
Supplemental Figure 1a. Distribution of CD34+/CD38-% population according to FAB subtype



Supplemental Figure 1b. CD34+CD38-% in relapsed vs no-relapsed and CR1 vs no-CR1 patients



Supplemental Figure 1c. Strategy of gating in blasts analysis and CD34+ subpopulations- Multicolour Flow cytometry in normal BM and four examples of AML



	All patients	% CD34+CD38- of blasts>1%	% CD34+CD38 of blasts<1%
No of patients (Adults vs children)	200 (187 vs 13)	98(49%) (93 vs5)	102(51%) (94 vs 8)
Male/Female,n	117/83	57/41	59/43
Age at diagnosis, years, mean (range)	56 (2-89)	60 (4-87)	53 (2-89)
WBC count at diagnosis, 10 ⁹ /L, mean (range)	22,1 (0,5-233)	19,9 (0,6-152)	24,2 (0,5-233)
AMLde novo (with MDS),n(%)	56(28%)	27(28%)	29(28%)
AML secondary,n(%)	64(32%)	41(42%)	23(23%)
AML de novo (w/o MDS),n	80(40%)	30(30%)	50(49%)
FAB classification, n M0/M1/M2/M3/M4/M5/M6/M7/ Not classified	17/31/31/10 / 21/44/4/5/3 7	10/9/15/5/ 6/20/1/4/28	7/22/16/5/ 15/24/3/1/9
Treatment type,n(%) Intensive chemotherapy Alternative chemotherapy Palliatives APL 2006	124(62%) 29(15%) 37(18%) 10(5%)	51(52%) 20(21%) 22(22%) 5(5%)	73(72%) 9(9%) 15(15%) 5(5%)
Cytogenetic risk group,n(%) Favourable Intermediate 1 Intermediate 2	190 14(7,4%) 31(16,4%) 58(30,7%)	93 5(5%) 11(12%) 25(27%)	97 9(9%) 20(21%) 33(34%)

Unfavourable	76(40,2%)	47(51%)	29(30%)
Failed/ND	11(5,5%)	5(5%)	6(6%)
Allogeneic - SCT, n(%)	41(20,5%)	21(21%)	20(20%)
NPM1+	29(21,5%)	5(8,3%)	24(32%)
FLT3ITD+	19(14,2%)	8(13,3%)	11(15%)
EVI1+	18(13,5%)	10(17%)	8(11%)

Supplemental Table 1. Patient characteristics

MDS : myelodysplastic syndrome w/o : without ; SCT : stem cell transplantation ; WBC : white blood cell

	Median of %CD34+CD38- in blasts	p-value
favourable	0,68 [0,03-5,16]	<0,001
intermediate 1	0,19 [0,04-1,4]	
intermediate 2	0,65 [0,01-56,8]	
unfavourable	2,9 [0,01-72,2]	
Normal karyotype but no molecular biology data	1,5 [0,04-24,3]	
NPM1+FLT3ITD- 16/135	0,19 [0,02-1,43]	0,002
NPM1+FLT3ITD+ 13/135	0,65 [0,07-28,5]	
NPM1-FLT3ITD+ 6/135	1,66 [0,04-37,5]	

NPM1-FLT3ITD- 100/135	1,08 [0,01-72,2]	
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Supplemental Table 2. Univariate analyse of % CD34+CD38- levels in different cytogenetic and NPM1/FLT3ITD groups

Related Patients # 33	Sex	Age	FAB	Cytogenetic risk groups**	karyotype	Molecular profile
1	F	59	M2	1	45,X,-X,t(8;21)(q22;q22)[20]/46,XX[3]	Wt1+
2	F	50	M2	1	46,XX,t(8;21)[20]	neg
3	M	26	M4eo	1	46,XY,inv(16)(p13q22)[14]/46,XXY6]	Wt1+
4	F	52	M4eo	1	46,XX, inv(16)(p13q22) [10] / 46,XX [11].	Wt1+
5	M	4	M1	1	45,X,-Y,t(8;21)(q22;q22)[10]/87-91,XX,-Y,-Y,t(8;21)(q22;q22)x2[cp5]/46,XY[5]	Neg AML1/ETO+
6	F	11	M2	1	46,XX [28] [t(8 ;21) variant]	Neg AML1/ETO+
7	F	25	M1	2	46,XX[10]	Flt3 : D835,Wt1RQ, ,NPM
8	M	69	M(nc)	3	46,XY[20]	neg
9	F	57	M1	3	46,XX[25]	Wt1+, Flt3mut+
10	F	60	M1	3	46,XX[20]	neg
11	M	60	M2	3	46,XY,t(1;3)(p36;q21)[19]/46,XY[2]	Wt1RQ+
12	F	62	M4	3	46,XX[20]	Wt1RQ+ Flt3RQ
13	M	56	M4	3	46,XY[20]	neg
14	M	71	M7	3	46,XY[12]	Wt1RQ
15	F	55	M5	3	49,XX,+4,+6,+8[20]	Hoxa9-RQ+ Flt3RQ

16	F	57	M6	3	echec	Wt1RQ
17	M	65	M5	3	46,XY[20]	neg
18	F	60	M5	3	46,XX[20]	Flt3ITD+hoxa9+,Wt1RQ+ NMP+
19	F	72	M0	3	46,XX[18]	neg
20	M	33	M(nc)	5	46, XY[15]	ND
21	F	60	M(nc)	4	45,XX,-5,add(7)(q21)?der(7)t(5;7)(q13;q21),-12,del(15)(q?15q23),+mar[11]/45,idem,del(6)(q13q15)[9]/46,XX[8]	neg
22	M	55	M0	4	46,XY,20q-[15]	neg
23	M	63	M4	4	46,XY[20]	EVI1+(dg)/-(relaps)
24	M	51	M7	4	43,XY,add(5)(q15),-7,-11,dic(12;18)(p12;p12),-13,add(14)(p11),-15,-16,-17,-18,-21,+8mars[c p20]	Evi1RQ+
25	M	33	M0	4	46,XY,del(5)(q14q34)ish(EGR1-),?t(12;21)(p12;q22)[3]/46,XY[3]	Wt1RQ+Flt3-RQ
26	M	60	M0	4	45,XY,-7[17]/45,idem,+mar[3]	Evi1RQ+ Wt1+
27	F	56	M1	4	47,XX,+8,del(20)(q11q13)[20]	Flt3 ITD+.
28	M	15	M5	4	46,XY,del(7)(q11q32)[16]	FLT3ITD+
29	M	64	M(nc)	4	44,XY,+X,add(3)(q27),add(4)(q23),-6,del(6)(q23q25),-7,-12,del(13)(q14q22),add(15)(p11),i(21)(q10)[19]/46,XY[2]	Evi1+, JAK2-
30	M	70	M2	4	48,XY,-1,del(6)(q21q24),+8,+9,-13,-15,+3mars[5]/46,XY[15]	neg
31	M	44	M5	4	48,XY,del(1)(?q22q23),dup(1)(q12q21),add(2)(q35),+13,+13[6]/	Flt3-RQ+

					96,idemX2,del(5)(q23q31),-7,del(10)(q22 q23),-14,-15,+19,+20, +mar(?der(7))[cp10]/ 46,XY[4]	
32	F	60	M5	4	51,XX,+X,+5,+8,+10,+13[15]/46,XX[5]	Flt3 ITD+ W Hoxa9+, NPM1+
33	M	56	M5	5	46,XY[20]	ND

Supplemental Table 3. Relapsed patient's characteristics

***NPM1/FLT3ITD Groups:** 1) NPM1+/FLT3ITD-; 2) NPM1+/FLT3ITD+; 3) NPM1-/FLT3ITD+; 4) NPM1-/FLT3ITD-

****Cytogenetic Risk Groups:** 1) Favourable; 2) Intermediate1; 3) Intermediate2; 4) Unfavourable; 5) Normal karyotype but no molecular data available.

	All patients	% CD34+CD38- of blasts>1%	% CD34+CD38- of blasts<1%	p-value
Complete Response,n(%)	109/163(67%)	40/76(52%)	69/87(79%)	p=0,0005
Relapse,n(%)	33/109(30%)	19/40(47%)	14/69(20%)	p =0,006
DFS, (Median follow up in months)	101(10,4)	12,7	NA	p =0,0005
OS, (Median follow up in months)	153 (7,6)	14	NA	p=0,0001

Supplemental Table 4. Patient outcome according to CD34+/CD38- population

