**Table S1. Patient characteristics.  AE = t(8:21) and INV = inv(16)**

| Patient Code | Sex/Age | Karyotype | | Time to relapse (months) | % blasts in D/R (Pre-Ficoll) | Germline DNA source[a] |
|---|---|---|---|---|---|---|
| | | At diagnosis | At relapse | | | |
| AET1* | F/36 | 46,XX,t(8;21)(q22;q22)[20] | 45,X,-X, t(8;21)(q22;q22), del(15)(q13q15)[15]/ 46,X,-X, t(8;21)(q22;q22),+15, del(15)(q13q15)[3]/ 46,XX[2] | 6.4 | 36/35 | BS@D |
| AET2 | F/38 | 46,XX,t(8;21)(q22;q22)[2]/ 45,X,-X,t(8;21)(q22;q22)[15]/ 46,XX[3] | 45,X,-X, t(1;17)(q42;p13), t(8;21)(q22;q22)[15]/ 45,X,-X, t(6;12)(p21;p13), t(8;21)(q22;q22)[5] | 6.9 | 58/64 | PB@CR |
| AET3 | M/52 | 45,X,-Y,t(8;21)(q22;q22)[20] | 88<4N>,XX,-Y, add(1)(p36), del(1)(p34),-4,add(4)(q33), -5,+8,t(8;21)(q22;q22)x2,-11, add(17)(p11.2)[14]/ 44,X,-Y, der(1)t(1;10)(p13;q11.2), der(5)ins(5;1)(q35;p36.3p31), t(7;11)(p15;q23), t(8;21)(q22;q22)[5][b] | 5.5 | 68/80 | PB@CR |
| AET4 | M/52 | 46,XY,t(8;21)(q22;q22)[19]/ 46,XY[1] | 46,XY,del(1)(q25q32), add(2)(q24), t(8;21)(q22;q22)[19]/46,XY[1] | 7.8 | 34/71 | PB@CR |
| AET5 | F/22 | 46,XX,t(8;21)(q22;q22)[20] | 46,XX,t(8;21)(q22;q22)[19]/ 46,XY[1] | 8.8 | 53/95 | BM@CR |
| AET7 | M/23 | 46,XY,t(8;21)(q22;q22)[20] | 46,XY,t(3;12)(q21;q24.1), t(8;21)(q22;q22)[19]/ 46,XY[1] | 9.2 | 56/65 | PB@CR |
| INVT1* | M/51 | 46,XY,inv(16)(p13q22)[20] | 46,XY,inv(16)(p13q22)[14]/ 46,XY[6] | 6.4 | 53/77 | BS@D |
| INVT2 | M/52 | 46,XY,inv(16)(p13q22)[3]/ 46,XY,del(7)(q22q34), inv(16)(p13q22)[8]/ 47,XY,inv(16)(p13q22), add(18)(p11),+22[9] | 46,XY,del(7)(q22q34), inv(16)(p13q22)[15]/ 46,XY[7] | 6.8 | 71/24 | BM@CR |
| INVT3 | M/19 | 46,XY,inv(16)(p13q22)[8]/ 47,idem,+8[6]/48,idem,+4, +8[3]/ 48,idem,+2mar[2]/ 46,XY[1] | 49,XY,del(3)(q13.2q25),+8, t(12;15)(q24.3;q15), inv(16)(p13.1q22),+2mar[18]/ 46,XY[1]* | 7.9 | 23/73 | PB@CR |
| INVT4 | M/37 | 47,XY,+8,inv(16)(p13q22)[19]/ 46,XY[1] | 47,XY,+8,inv(16)(p13.1q22)[5]/ 46,XY[15] | 10.6 | 67/40 | PB@CR |
| INVT5 | M/29 | 51,XY,+14,+15, t(16;16)(p13.1;q22),+20,+21, +22[6]/47,XY,t(3;11)(p13;q2?3), t(16;16)(p13.1;q22),+22[2]/ 46,XY[11][b] | 46,XY,t(3;11)(p13;q2?3), t(16;16)(p13.1;q22),+22[12]/ 46,XY,del(3)(q21q21), inv(4)(p13q13),t(7;11)(p15;p12), t(16;16)(p13.1;q22)[2]/46,XY[6] | 8.2 | 52/20 | PB@CR |
| INVT6* | M/47 | 46,XY,inv(16)(p13q22)[20] | 46,XY,inv(16)(p13q22)[29][b] | 13.9 | 59/78 | BS@rx |
| INVT7 | F/26 | 46,XX,inv(16)(p13.1q22)[16]/ 46,XX[4] | 46,XX,inv(16)(p13.1q22)[17]/ 46,XX,inv(16)(p13.1q22), add(16)(q24)[3] | 5.7 | 68/88 | PB@CR |

[a]:  BS@D: buccal smear at diagnosis, BS@rx: buccal smear during treatment, PB@CR: peripheral blood during remission,BM@CR: bone marrow during remission

*: Paired tumor DNAs from diagnosis and relapse  were used in WES and SNP arrays

[b]: One additional cell with nonclonal abnormalities was also detected.