

Clinical impact of *FLT3* mutation load in acute promyelocytic leukemia with *t(15;17)/PML-RARA*

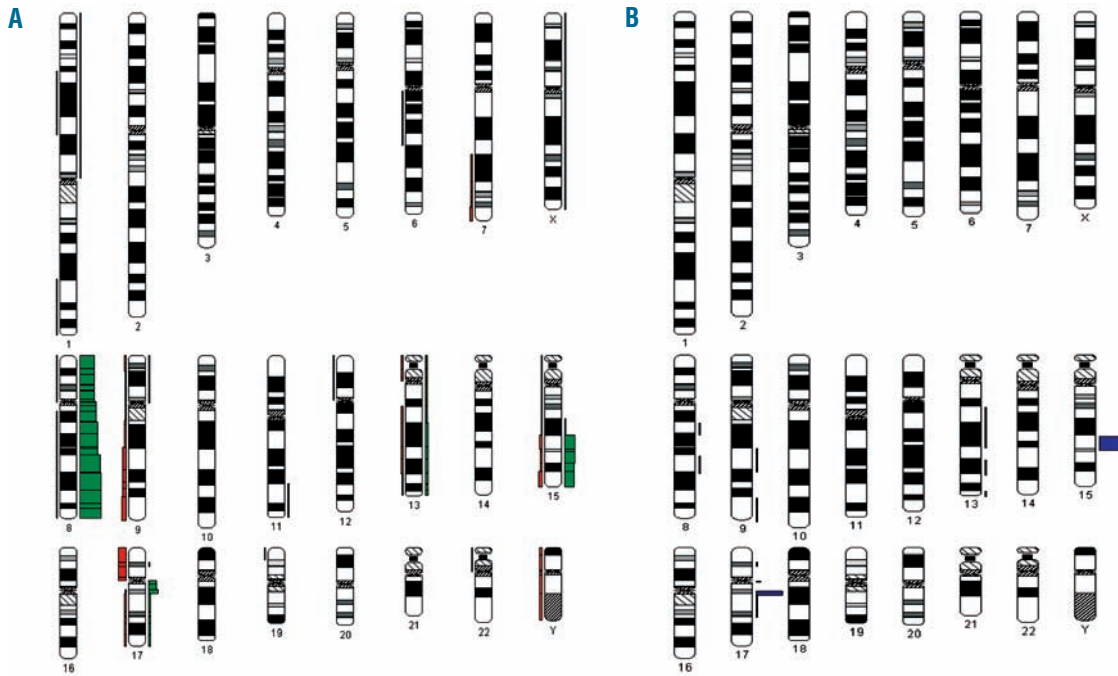
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Online Supplementary Table S1. Characteristics of 147 patients with acute promyelocytic leukemia with *t(15;17)/PML-RARA*. *One patient had a concurrent *FLT3*-ITD and *FLT3*-TKD mutation. Frequencies were compared by χ^2 analysis.

| Parameter | Total cohort n=147 (100.0%) | <i>FLT3</i> -mut n=65 (44.2%) | <i>FLT3</i> -wt n=82 (55.8%) | <i>FLT3</i> -mut. vs. wt (P) | <i>FLT3</i> -ITD* n=47* (32.0%) | <i>FLT3</i> -ITD* n=100 (68.0%) | ITD* vs ITD- (P) | ITD** (n=46) vs. wt (n=82) (P) | <i>FLT3</i> TKD* n=19* (12.9%) | <i>FLT3</i> TKD- n=128 (87.1%) | TKD* vs. TKD- (P) | TKD** (n=18) vs. wt (n=82) (P) | ITD* vs. TKD* (P) |
|--|-----------------------------------|-------------------------------------|------------------------------------|------------------------------------|---------------------------------------|---------------------------------------|------------------------|---|---|---|-------------------------|---|-------------------------|
| Biological features | | | | | | | | | | | | | |
| Males: females (ratio) | 62:85 (0.7) | 29:36 (0.8) | 33:49 (0.7) | n.s. | 21:26 (0.8) | 41:59 (0.7) | n.s. | n.s. | 9:10 (0.9) | 53:75 (0.7) | n.s. | n.s. | n.s. |
| Mean age, years (\pm SD) | 53.9 (\pm 16.9) | 52.9 (\pm 17.6) | 54.6 (\pm 16.3) | n.s. | 52.5 (\pm 16.9) | 54.5 (\pm 16.9) | n.s. | n.s. | 53.6 (\pm 19.2) | 53.9 (\pm 16.6) | n.s. | n.s. | n.s. |
| APL history (n=147) | | | | | | | | | | | | | |
| De novo APL | 136/147 (\pm 92.5%) | 60/65 (92.3%) | 76/82 (92.7%) | n.s. | 43/47 (91.5%) | 76/82 (92.7%) | n.s. | n.s. | 18/19 (94.7%) | 118/128 (92.2%) | n.s. | n.s. | n.s. |
| Therapy-related APL | 11/147 (\pm 7.5%) | 5/65 (7.7%) | 6/82 (7.3%) | n.s. | 4/47 (8.5%) | 6/82 (7.3%) | n.s. | n.s. | 1/19 (5.3%) | 10/128 (7.8%) | n.s. | n.s. | n.s. |
| Peripheral blood counts | | | | | | | | | | | | | |
| Mean WBC count, 10 ⁹ /L (\pm SD) (n=127) | 14.6 (\pm 31.9) | 26.8 (\pm 43.4) | 4.7 (\pm 10.6) | <0.001 | 33.2 (\pm 47.8) | 5.2 (\pm 11.0) | <0.001 | <0.001 | 9.3 (\pm 14.6) | 15.4 (\pm 33.5) | n.s. | n.s. | 0.001 |
| WBC count $\geq 10 \times 10^9$ /L (n=127) | 31/127 (24.4%) | 23/57 (40.4%) | 8/70 (11.4%) | <0.001 | 20/43 (46.5%) | 11/84 (13.1%) | <0.001 | <0.001 | 4/15 (26.7%) | 27/112 (24.1%) | n.s. | n.s. | <0.001 |
| Mean platelet count, 10 ⁹ /L (\pm SD) (n=114) | 53 (\pm 52) | 30 (\pm 25) | 71 (\pm 60) | <0.001 | 30 (\pm 25) | 63 (\pm 58) | <0.001 | <0.001 | 30 (\pm 28) | 56 (\pm 54) | 0.006 | <0.001 | n.s. |
| Mean Hb, g/dL (\pm SD) (n=114) | 9.6 (\pm 2.1) | 8.9 (\pm 1.7) | 10.2 (\pm 2.3) | 0.001 | 9.0 (\pm 1.8) | 10.0 (\pm 2.3) | 0.027 | 0.008 | 8.8 (\pm 1.7) | 9.8 (\pm 2.2) | n.s. | 0.029 | n.s. |
| FAB M3: M3v ratio (\pm SD) (n=115) | 68:47 (1.4) | 20:29 (0.7) | 48:18 (2.7) | 0.001 | 9:25 (0.4) | 59:22 (2.7) | <0.001 | <0.001 | 11:5 (2.2) | 57:42 (1.4) | n.s. | n.s. | 0.004 |
| Mean %PML-RARA/ABL1 (\pm SD) (n=147) | 25.8 (\pm 21.9) | 27.9 (\pm 21.5) | 24.2 (\pm 22.3) | n.s. | 27.8 (\pm 19.9) | 24.9 (\pm 22.9) | n.s. | n.s. | 27.2 (\pm 25.3) | 25.6 (\pm 21.5) | n.s. | n.s. | n.s. |
| PML-RARA fusion type (n=147) | | | | | | | | | | | | | |
| bcr1 | 89/147 (60.5%) | 26/65 (40.0%) | 63/82 (76.8%) | <0.001 | 14/47 (29.8%) | 75/100 (75.0%) | <0.001 | <0.001 | 12/19 (63.2%) | 77/128 (60.2%) | n.s. | n.s. | 0.011 |
| bcr2 | 6/147 (4.1%) | 1/65 (1.5%) | 5/82 (6.1%) | | 1/47 (2.1%) | 5/100 (5.0%) | | | 1/19 (5.3%) | 5/128 (3.9%) | | | |
| bcr3 | 52/147 (35.4%) | 38/65 (58.5%) | 14/82 (17.1%) | | 32/47 (68.1%) | 20/100 (20.0%) | | | 6/19 (31.6%) | 46/128 (35.9%) | | | |
| ACA (n=147) | 57/147 (38.8%) | 26/65 (40.0%) | 31/82 (37.8%) | n.s. | 15/47 (31.9%) | 42/100 (42.0%) | n.s. | n.s. | 11/19 (57.9%) | 46/128 (35.9%) | 0.080 | n.s. | 0.050 |
| Recurrent ACA | 41/147 (27.9%) | 20/65 (30.8%) | 21/82 (25.6%) | n.s. | 12/47 (25.5%) | 29/100 (29.0%) | n.s. | n.s. | 8/19 (42.1%) | 33/128 (25.8%) | n.s. | n.s. | n.s. |
| Non-recurrent and complex ACA | 16/147 (10.9%) | 6/65 (9.2%) | 10/82 (12.2%) | | 3/47 (6.4%) | 13/100 (13.0%) | | | 3/19 (15.8%) | 13/128 (10.2%) | | | |



Online Supplementary Figure S1. (A) Gains and losses due to additional chromosomal abnormalities (ACA) using the CyDAS method. Chromosomal gains are depicted in green on the right side, losses in red on the left side of the affected chromosomal region. (B) The breakpoints from the different ACA are shown ("CyDAS Online Analysis Site", <http://www.cydas.org/OnlineAnalysis/>).

References

1. Hiller B, Bradtke J, Balz H, Rieder H. CyDAS: a cytogenetic data analysis system. *Bioinformatics*. 2005;21(7):1282-3.