

Supplementary Table 1. Correlation between clinical parameters and venetoclax AUC

| Category | Person r | P (two-tailed) | P (Multi-test Corrected) | Case number |
|------------------------------|----------|----------------|--------------------------|-------------|
| Age | 0.068 | 0.307 | 6.14 | 229 |
| %Monocytes in PB | 0.436 | 6.89E-09 | 1.38E-07 | 162 |
| %Blasts in BM | -0.406 | 3.7E-07 | 7.4E-06 | 146 |
| %Blasts in PB | -0.351 | 7.42E-06 | 0.000148 | 132 |
| %Neutrophils in PB | 0.346 | 1.32E-05 | 0.000264 | 151 |
| %Eosinophils in PB | 0.221 | 0.00739 | 0.1478 | 146 |
| MCV | 0.207 | 0.0208 | 0.416 | 125 |
| %Immature Granulocytes in PB | 0.203 | 0.0502 | 1.004 | 94 |
| Platelet Count | 0.134 | 0.0744 | 1.488 | 179 |
| Hematocrit | 0.137 | 0.0886 | 1.772 | 156 |
| %Nucleated RBCs in PB | -0.168 | 0.103 | 2.06 | 95 |
| Hemoglobin | 0.124 | 0.124 | 2.48 | 156 |
| Age at diagnosis | 0.068 | 0.307 | 6.14 | 226 |
| %Basophils in PB | 0.078 | 0.371 | 7.42 | 132 |
| WBC Count | -0.062 | 0.394 | 7.88 | 194 |
| %Lymphocytes in PB | 0.063 | 0.442 | 8.84 | 152 |
| FAB | NA | 0.0001 | 0.002 | 226 |
| sample type | NA | 0.3348 | 6.696 | 226 |
| gender | NA | 0.1008 | 2.016 | 226 |
| disease stage | NA | 0.0031 | 0.062 | 226 |
| ELN2017 | NA | 0.2018 | 4.036 | 226 |

Significance was determined using either two tailed Mann-Whitney or Kruskal-Wallis tests (for categorical variables) or two tailed Pearson correlations (for continuous variables), and corrected for multiple comparisons (Bonferroni correction). PB: peripheral blood. BM: bone marrow. MCV: mean corpuscular volume. RBC: red blood cell. WBC: white blood cell. FAB: French-American-British classification. ELN: European LeukemiaNet.

Supplementary Table 6. Custom capture genotyping gene list

| | | | | | | | |
|--------|--------|-------|--------|--------|--------|-------|-------|
| ABL1 | ARID1A | ASXL1 | ATM | ATRX | BCOR | CBL | CCND3 |
| CEBPA | CSF3R | CTCF | DIS3 | DNMT3A | EGFR | EPHA3 | ETV6 |
| EZH2 | FBXO11 | FLT3 | GATA2 | IDH1 | IDH2 | IKZF1 | JAK2 |
| JAK3 | KDM6A | KIT | KRAS | LAMA5 | MAU2 | MED12 | MLL2 |
| MPL | MYC | NF1 | NOTCH1 | NOTCH2 | NPM1 | NRAS | PBRM1 |
| PDGFRB | PHF6 | PLCE1 | PTCH1 | PTEN | PTPN11 | RAD21 | RUNX1 |
| SEMA3A | SETBP1 | SETD2 | SF3B1 | SMC1A | SMC3 | SRSF2 | STAG2 |
| SUZ12 | TET1 | TET2 | TP53 | U2AF1 | WT1 | ZRSR2 | |

This table is associated with Supplementary Data 4.