

DNA-methylation regulatory gene mutation is an important unfavorable prognostic factor in acute myeloid leukemia



308 patients with acute myeloid leukemia



next-generation sequencer Ion PGM™



DNA-methylation regulatory gene mutation analysis



43.8%

cases with mutations in DNA-methylation regulatory genes
(135/308)

- More frequent in older patients ($p < 0.0001$)
patients with intermediate cytogenetic risk ($p < 0.0001$)
patients with high white blood cell count ($p = 0.0032$)
- 26.7% of patients have two or more DNA-methylation regulatory gene mutations
prognosis worsened with increasing number of mutations
- Unfavorable prognostic factor for overall survival in cases overall ($p = 0.0018$)
in patients aged ≤ 70 years, with intermediate cytogenetic risk, and in FLT3-ITD-negative ($p = 0.0409$)
- Independent unfavorable prognostic factor for overall survival ($p = 0.0424$)