FREQUENT DELETIONS OF JARID2 IN LEUKEMIC TRANSFORMATION OF CHRONIC MYELOID MALIGNANCIES.


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SUMMARY:

A small percentage of patients with chronic myeloproliferative neoplasms and myelodysplastic syndromes may progress to acute leukemia, but the molecular mechanisms underlying this evolution are not yet known. In this study, samples from 517 patients in chronic-phase and 77 evolved to acute leukemia were studied. A region of chromosome 6p involving the JARID2 gene was found deleted in cases of evolution to acute leukemia. The JARID2 gene is particularly interesting because it is part of the PRC2 complex, to which also the gene EZH2, previously shown to be mutated and correlated with prognosis in patients with myelofibrosis, belongs. The researchers have analyzed also other genes part of the complex PRC2, finding frequent deletions involving the genes EZH2, AEBP2 and SUZ12. Point mutations were infrequent. This study suggests that JARID2, and other PRC2 members, represent important tumor suppressors playing a crucial role in the leukemic transformation of chronic myeloid malignancies.

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