Molecular minimal disease in remission predicts AML relapse

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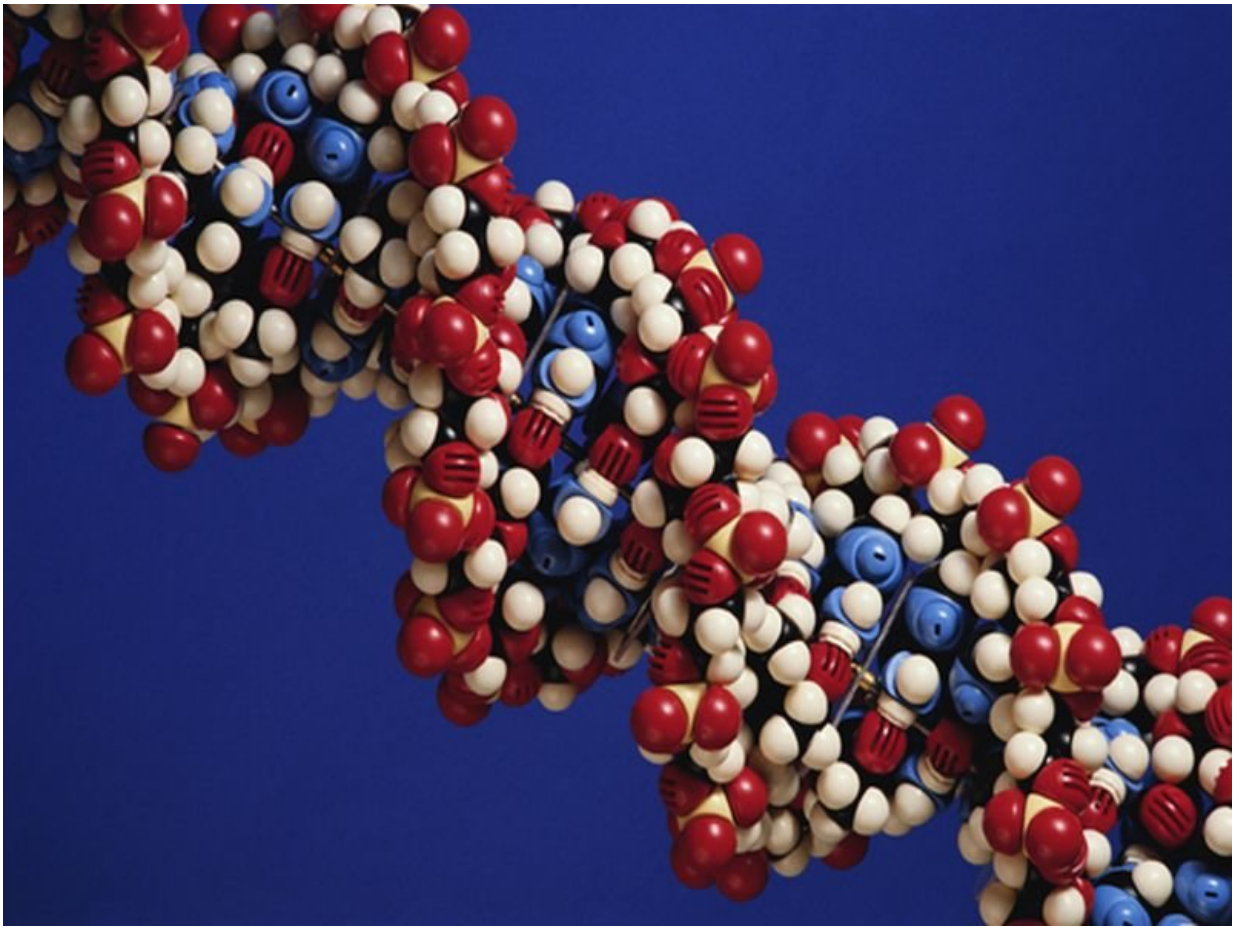

(HealthDay)—The detection of molecular minimal residual disease is

associated with increased relapse rates in acute myeloid leukemia (AML), according to a study published in the March 29 issue of the *New England Journal of Medicine*.

Mojca Jongen-Lavrencic, M.D., Ph.D., from the Erasmus University Medical Center in Rotterdam, Netherlands, and colleagues performed targeted next-generation sequencing at diagnosis and after induction therapy during complete remission among patients aged 18 to 65 years with newly diagnosed AML.

The researchers found that 89.2 percent of the 482 patients had at least one mutation. In 51.4 percent of those patients, mutations persisted during complete remission. There was no correlation for the detection of persistent *DTA* mutations with an increased rate of relapse. The detection of molecular minimal residual disease was correlated with a significantly higher relapse rate than no detection, after exclusion of persistent *DTA* mutations (55.4 versus 31.9 percent; hazard ratio, 2.14), and with lower rates of relapse-free (36.6 versus 58.1 percent; hazard ratio for relapse or death, 1.92) and overall survival (41.9 versus 66.1 percent; hazard ratio for death, 2.06). The persistence of non-*DTA* mutations during complete remission conferred significant independent prognostic value with respect to rates of relapse, relapse-free survival, and overall survival (hazard ratios, 1.89, 1.64, and 1.64, respectively), in multivariate analysis.

"Among patients with AML, the detection of molecular minimal residual disease during complete remission had significant independent prognostic value with respect to relapse and survival rates," the authors write.

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