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New drug therapy for elderly patients with acute myeloid leukemia

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Seventy percent of elderly patients with acute myeloid leukemia (AML) who were treated with a combination of drugs aimed to make chemotherapy treatments effective and less toxic achieved remission or a slowing of disease progression, according to research at the University of Pittsburgh Cancer Institute (UPCI), partner with UPMC CancerCenter. The findings were presented Sunday at the 56th American Society of Hematology Annual Meeting in San Francisco.

The research is important because most elderly patients diagnosed with AML can't tolerate the aggressive chemotherapy needed and tend to have more aggressive disease than younger patients, making prognosis poor. So researchers, led by UPCI's Annie Im, M.D., an assistant professor of medicine in Pitt's Division of Hematology/Oncology, examined whether an epigenetic strategy using the drugs decitabine followed by cytarabine would help make other treatments more tolerable by reactivating genes that had previously been silenced by the malignancy.

"Outcomes are really poor in elderly patients who have AML because the only therapies we have are often too toxic to offer as treatment options, and the unmet need for novel therapies is dire," Dr. Im said. "But we have shown that using this therapy in this patient population is safe and effective."

In the study, 23 patients were evaluated after receiving what's called an induction therapy of decitabine intravenously for five days followed by a

standard dose of cytarabine intravenously for five days. Fourteen patients had complete remission and five patients had a complete remission with delayed bone marrow recovery. All patients except for two received two cycles of induction.

Researchers believe the drugs work because they help reactivate genes that had been silenced by the malignancy. In addition, evidence suggests that epigenetic priming by decitabine enhances the efficacy of cytarabine. The next phase of the trial will examine overall survival and the rate of adverse events, and include epigenetic correlative studies.

Provided by University of Pittsburgh