

Study: How some cancers become leukemia

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U.S. researchers say they've found how cancer-triggering oncogenes allow blood cells to self-renew and become leukemia stem cells.

Dr. Scott Armstrong and colleagues at the Harvard Medical School introduced an oncogene into mouse blood-cell producing progenitor cells and then isolated cancer stem cells from the resulting leukemias. Comparing the profile of active genes in those cells with the blood cells from which they had developed showed the oncogene ramps up a specific subset of the genes active also in normal blood stem cells.

Those genes confer on cells the ability to self-renew and a subset of the genes is also expressed in human leukemia associated with certain oncogenes, the researchers said.

Thus, although cancer is thought to start often in normal stem cells, at least some oncogenic events can drive cancer from other cells by switching on stem-cell genes, Armstrong said.

The study appears in the journal Nature.

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