Promising drug combination may help those with ocular melanoma that has spread

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A combination of two drugs shows promise in treating a rare and therapy-resistant type of melanoma that originates in the eye and spreads to other organs, according to a new study led by Duke University Comprehensive Cancer Center researchers.

The drugs -- decitabine, which can turn on certain genes in cancer cells, and interferon gamma, an immune system protein -- may work together to cause cancer cell death.

“Metastatic uveal melanoma, or melanoma that originates in the eye and spreads to other parts of the body, has been very difficult to treat, in fact there have been no effective therapies to date,” said Jared Gollob, M.D., a medical oncologist at Duke and lead investigator on the study. “This study could lead to a very promising new therapy for patients who previously had very little hope.”

The researchers published their findings in the September 1, 2007 issue of the journal *Clinical Cancer Research*. The study was funded by the National Institutes of Health.

This pre-clinical study came on the heels of previous lab work examining proteins called interferons, which originate from immune system cells. These proteins were shown to boost immune function and directly affect melanoma cells, inhibiting their growth and accelerating their death, Gollob said.

“We also knew that a drug called decitibine could turn on genes that had been turned off in cancer cells, so we speculated that if we combined decitabine and interferon gamma, we might see heightened cell death, and that’s exactly what happened,” Gollob said. Decitabine may turn on a certain gene, called S100A2, that is, in turn, able to increase the sensitivity of cancer cells to interferon gamma, he said.

Researchers used human cell lines, derived from patients who had been diagnosed with uveal melanoma, for this study. The next step will be a clinical study looking at the effectiveness of this drug combination in human subjects, Gollob said.

Uveal melanoma affects about 5,000 to 10,000 people each year in the United States. Unlike its counterpart on the skin, there are no known risk factors, Gollob said.

“There are really no truly effective treatments for this devastating disease,” he said. “So this study really is a promising step toward finding a therapy that can really help these patients.”

Uveal melanoma originates in the colored part of the eye, and symptoms include changes in vision, such as blurriness. If found early, it can be treated with radiation or with removal of the eye. When it spreads, uveal melanoma is typically unresponsive to standard treatment regimens, such as chemotherapy, Gollob said. Life expectancy once the disease has spread is about six to ten months, on average, he said.

Source: Duke University Medical Center