Aspirin has the potential to block tumor growth in certain patients with colorectal cancer, according to an editorial in the Oct. 25, 2012 issue of the *New England Journal of Medicine* by a UAB oncologist. In a study that appears in the same issue, researchers examined the use of aspirin in the treatment outcomes of patients with colorectal cancer.

Researchers collected experimental data from 964 patients with colorectal cancer, separating them into two groups based on the presence or absence of a mutation within the PIK3CA gene. The authors found that the use of aspirin after diagnosis in patients with the gene mutation was associated with a 46 percent reduction in overall mortality and an 82 percent reduction in colorectal cancer-specific mortality. In contrast, aspirin use in patients without the mutation did not affect either overall or colorectal-specific mortality.

“Approximately 17 percent of patients with colorectal cancer have a tumor that carries a mutated PIK3CA gene,” says Boris Pasche, M.D., Ph.D., director of the UAB Division of Hematology and Oncology
. “Hence, more than one in every six patients with locally advanced colorectal cancer may benefit from this therapy.”

Every year, more than 140,000 Americans are diagnosed with colorectal cancer, and more than 50,000 people die from the disease. Colorectal cancer is the third most common cause of death from cancer in the United States and the fourth worldwide.

Over the past decade, little progress has been made in the treatment of locally advanced colorectal cancer, which is defined as cancer that has spread to nearby tissue or lymph nodes but has not metastasized, or spread to other organs. “While several new drugs have proven useful in the treatment of metastatic colorectal cancer, only one of them has demonstrated efficacy in locally advanced colorectal cancer,” Pasche says.

Pasche notes that the sample size for the current study was small. Only 66 patients with the PIK3CA mutation used aspirin after being diagnosed with colorectal cancer and only three of them died of colorectal cancer during the follow-up. “Although we are intrigued about these findings, they are still preliminary, and larger prospective studies need to be conducted,” says Pasche.

One cause of concern is that aspirin is known to increase the risk of gastrointestinal bleeding and hemorrhagic strokes, Pasche notes. Although many Americans use baby aspirin daily to reduce their risk of heart disease, patients are generally only advised to do so when their cardiac risk is presumed to outweigh the risk of taking aspirin.

“We haven’t reached the point where we can make a big leap and advise patients to take aspirin to prevent cancer recurrence after surgery, but we are accumulating more information that helps us understand the role that aspirin can potentially play in cancer,” says Pasche. “As it is with any type of cancer treatment, we need to examine the benefits against the risks, but aspirin may well become one of the oldest drugs to be used as a 21st-century targeted therapy.”