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Findings Measure Impact of Fat on Cancer

The Purdue College of Science "Insights" magazine recently showcased research in progress by [Ji-Xin Cheng](#), an assistant professor in the Weldon School of Biomedical Engineering and Department of Chemistry.



Cheng, along with other Purdue researchers, has precisely measured the impact of a high-fat diet on the spread of cancer, finding that excessive dietary fat caused a 300% increase in metastasizing tumor cells in laboratory animals.

The researchers used an imaging technique to document how increasing fat content causes cancer cells to undergo changes essential to metastasis. Then they used another technique to count the number of cancer cells in the bloodstream of mice fed a high-fat diet compared to animals fed a lean diet. The findings suggest that the combined tools represent a possible new diagnostic technique to determine whether a patient's cancer is spreading.

"It is generally accepted that diet and obesity are accountable for 30% of preventable causes of cancer, but nobody really knows why," Cheng says. "These findings demonstrate that an increase in lipids leads directly to a rise in cancer metastasis."

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