

CANCER PREVENTION RESEARCH

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Sai Yendamuri and Konstantin H. Dragnev

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- 401** **Lung Microbiome in Lung Cancer: A New Horizon in Cancer Study**
Pragya Kashyap, Naveen Dutt, Dinesh K. Ahirwar, and Pankaj Yadav

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- 415** **Diet Modulates the Gut Microbiome, Metabolism, and Mammary Gland Inflammation to Influence Breast Cancer Risk**

Alana A. Arnone, Adam S. Wilson, David R. Soto-Pantoja, and Katherine L. Cook

Our study demonstrates the impact of diet on breast cancer risk, focusing on the interplay between diet, the gut microbiome, and mammary gland inflammation.

- 429** **Effect of Clonal Hematopoiesis Mutations and Canakinumab Treatment on Incidence of Solid Tumors in the CANTOS Randomized Clinical Trial**

Janghee Woo, Tingting Zhai, Fang Yang, Huilei Xu, Margaret L. Healey, Denise P. Yates, Michael T. Beste, and David P. Steensma

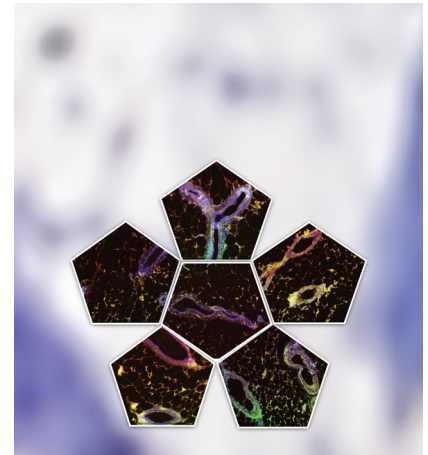
We reveal that administering canakinumab is associated with a decrease in non-hematological malignancies among patients with clonal hematopoiesis (CH) mutations. These findings underscore canakinumab's potential in preventing cancer and provide proof of IL1 β blockade collaborating with CH mutations to enhance its clinical benefits.

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ABOUT THE COVER

Obesity and poor diet are modifiable risk factors for breast cancer. In the study starting on page 415, Arnone and colleagues investigated the impact of key nutritional factors by modifying fat source (lard, coconut oil, safflower oil, or flaxseed oil) or dietary sugar content on the gut microbiome, mammary gland inflammation, and carcinogen-induced mammary carcinogenesis risk in preclinical murine models. The cover image is adapted from Fig. 3D, showing consumption of a high-fat lard-based diet increased M1-like macrophages within the mammary gland tissue, which was not observed in animals consuming a high-fat lard + flaxseed oil diet. These data suggest that the addition of n-3 PUFA into a high-fat diet reduces mammary gland inflammation and potentially attenuates tumor formation.

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