



CANCER

VA has a broad array of research on cancers common in the Veteran population. These include diseases such as prostate, lung, colorectal, bladder, kidney, pancreatic, esophageal, and breast cancer, as well as lymphomas and melanomas. VA researchers conduct lab experiments aimed at discovering the molecular and genetic mechanisms involved in cancer; epidemiologic studies looking at the causes of disease; clinical trials to evaluate new or existing treatments; and studies focused on improving end-of-life care. Additionally, researchers are also focusing on how to maintain good health and enhance quality of life for cancer survivors.

EXAMPLES OF VA RESEARCH ADVANCES

MAILED REMINDER BOOSTS CANCER SCREENING—A mailed reminder increases the rate of return of fecal occult blood test (FOBT) cards, which test for colorectal cancer. A study followed 769 patients, all of whom picked up FOBT cards at a clinic. Ten days later, San Diego VA researchers sent a one-page educational reminder to 387 of them. About 65 percent of this group returned their cards, compared with 48 percent of the other group. The mailing cost about \$2.50 per patient, which the authors note is more cost effective than other interventions that have been tested, including telephone calls and letters from physicians.

DUAL VACCINE SHOWS PROMISE—A vaccine against two common prostate cancer antigens seems to stop tumors from growing in a mouse model. VA researchers from Kansas City created a viral vaccine that carried a combination of genes for prostate-specific antigen (PSA) and prostate stem cell antigen (PSCA). When the vaccine was given to mice that had tumors expressing those antigens, they churned out antigen-specific T cells that attacked the tumor cells. As a result, 80 percent of the mice became tumor-free.

FIGHTING CANCER WITH NATURAL PRODUCTS—An ingredient in the Indian spice turmeric is a potent cancer fighter when teamed with chemotherapy. Detroit VA researchers found that a combination of difluorinated curcumin and two chemotherapy drugs—5-fluorouracil and oxaliplatin—inhibited the growth of colon cancer cells that were normally resistant to chemotherapy. The combination also induced cell death. About half of people with colon cancer experience chemotherapy resistance, which leads to cancer recurrence.

FISH OIL FOR PROSTATE CANCER—In a small VA study, a low-fat diet and fatty-acid supplements appeared to slow prostate cancer growth in as little as four weeks. California and North Carolina VA researchers followed 48 men scheduled to have their prostates removed due to cancer. For four to six weeks before surgery, half followed a standard Western diet; the other half ate a low-fat diet and took five grams of fish oil daily. The latter group had reduced proliferation of their cancer cells. However, the diet did not affect blood levels of IGF-1, a hormone that has been shown to promote tumor growth.

★ **FACTS ABOUT CANCER**—*Cancer is a general term that includes more than 200 different diseases. In all forms of cancer, cells in the body grow and multiply abnormally, eventually taking over and destroying normal tissue. Many factors can combine to increase the risk of cancer. These range from family history and genetic makeup to poor diet and exposure to radiation, air pollution, and other toxins. The main types of cancer are leukemias and lymphomas, involving the blood and related tissues; carcinomas, which occur in the skin, glands, and certain organs; and sarcomas, which involve muscles and connective tissue. Common cancer symptoms include weight loss, fatigue, and pain.*