2017 RESEARCH FAST FACTS
Immunotherapies and Vaccines

Research Saves Lives

Immunotherapies are a relatively new and promising area of breast cancer treatments that use the body’s own immune system to fight cancer. There are many types of immunotherapies, including the use of vaccines.

Like traditional vaccines used to fight infections such as polio, mumps and measles, breast cancer vaccines activate the body’s own immune system to kill cells that are considered foreign—in this case—breast cancer cells. The vaccines usually contain tumor antigens, which trigger your immune system to make antibodies that attack and destroy the cancer cells. Your immune system also develops a “memory” of those tumor antigens, so that later, if any new cancer cells appear, the antibodies produced from the initial vaccine would also destroy the new cancer cells.

There are two broad types of cancer vaccines: treatment, which are designed to treat cancers that have already developed or that could recur; and preventive, which are intended to prevent cancer from developing.

Researchers have made great progress in the development of breast cancer vaccines, but none have yet been approved by the FDA. One problem is that the tumor antigens in the vaccine often do not elicit a strong enough response to make the vaccine effective. This is why Komen-funded researchers have been working for nearly 20 years on the development, improvement and clinical testing of vaccines and other immunotherapies that will both treat and prevent breast cancer.

Learn more about emerging areas in breast cancer therapy
http://sgk.mn/ZqBVGB

Our Research Investment

More than $42 million in over 120 research grants and 14 clinical trials focused on vaccines and immunotherapy

What We’re Investigating

Using cutting-edge techniques to identify unique tumor antigens that can be used to develop personalized breast cancer vaccines, and testing them in clinical trials

Creating new immunotherapies that can prevent breast cancer from developing, recurring or spreading to other parts of the body

Developing and testing vaccines and other immunotherapies to treat drug resistant and metastatic breast cancer

What We’ve Learned from Komen-funded research

A vaccine that targets a tumor antigen called MUC1 may be effective in treating breast cancer, and when combined with radiation may prevent tumors from recurring.

A novel drug that targets a molecule found in certain immune cells, called CaMKK2, may be effective at treating triple negative breast cancer (TNBC).

Combining radiation with immunotherapy may be more effective than immunotherapy alone at treating breast cancer.

Read how Dr. Susan Thomas and her team at the Georgia Institute of Technology is using nanotechnology to deliver immunotherapies to make them more effective at treating breast cancer and preventing metastasis.

http://sgk.mn/2woGyD4

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