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THEME : 3 A Immune system Série S

Sujet n°9

THEME: IMMUNOLOGY

A New Ally against Cancer: vaccines.

The Food Drug Administration recently approved the first therapeutic cancer vaccine, and other drugs that help the immune system against tumors are under study.

5 For decades cancer specialists have offered patients three main therapies: surgery, chemotherapy and radiation. (Some cancer survivors pointedly refer to this harsh trinity as “slash, poison and burn.”) Over the years continual improvements in these instruments have made the more severe side effects increasingly manageable. At the same time, effectiveness has improved noticeably. And new, very targeted drugs have become available for a few specific cancers. All told, the average five-year survival rate for some cancers has risen from 50 percent to 66 percent in the past 30 years. In spite of these gains, many cancer survivors will not have a normal life span.

10 Researchers have long suspected that they could add a weapon that would dramatically increase cancer survival rates without producing serious side effects if they could just figure out how to help the body’s own immune system to do a better job of fighting tumors. But nothing seemed to be working. In the 1980s, for example, high hopes that an immune system molecule called interferon would stimulate the body’s defenses to cure all or most cancers were destroyed after a few more
15 years of research. Today interferon has a place but is not the cure-all once envisioned.

It was starting to look as though the long-hoped-for general weapon against a broad range of tumors would never materialize. But it seems to be changing. A cancer vaccine for treating prostate cancer has been approved, and a new generation of therapeutic cancer vaccines is now being tested.

Adapted from the article written by Eric VON HOFFE, *Scientific American*, Oct.12, 2011.

Sum up this article and explain the main ideas using your scientific knowledge.