

Breakthroughs Have Changed The Way Cancer Is Treated

By Otesa Middleton

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WASHINGTON -(Dow Jones)- Seven years ago when doctors diagnosed Carolyn Brown-Davis with early-stage breast cancer, she was treated with radiation and given the drug tamoxifen for five years.

Two years ago, she learned the cancer had spread to her sternum and she has been undergoing chemotherapy and radiation treatment.

If she were diagnosed today, Brown-Davis believes her story would be different.

"Now patients are being treated so much more aggressively," said Brown-Davis, executive director of the Washington-based Breast Cancer Resource Committee. "Several physicians have told me I would have been given chemotherapy. Now when women come through, everyone is on chemotherapy even in the early stages."

Dr. David W. Golde, physician-in-chief of Memorial Sloan-Kettering Cancer Center's hospital, said the way cancer is treated has continued to evolve as more research and data are collected.

Information - that was just recently confined to the laboratory - is now being applied in medical practice with patients being treated more aggressively, new types of drugs coming to market and different combinations being used.

Last year there were 354 new cancer drugs in development, almost quadruple the 92 in drug company pipelines 10 years earlier, according to industry trade group Pharmaceutical Research and Manufacturers of America.

Sales for cancer therapies have also grown exponentially.

In 1999, sales for all cancer drugs totaled \$4.8 billion, more than double 1994 sales of \$2.3 billion, according to IMS Health.

Translating Accumulated Knowledge Into Practice

"There has been a vast accumulation of biologic knowledge over the last two decades," Golde said. "It has occurred at a logarithmic pace. What we are seeing now and what we are about to see over the next five to 10 years is the translation into the practical treatment of cancer."

"There has been a lot of optimistic discussion regarding new therapies for cancer," Golde said. "Optimism is very reasonable at this juncture."

In the past, major advancements in cancer treatments happened once, maybe twice a decade.

"What we'll see in this century is a veritable explosion of new and effective treatments for cancer," Golde said.

Researchers and physicians are looking at and attacking cancer in different ways as more is learned about the different forms of disease through biotechnology, bioengineering, genetics and genomics.

Fewer side effects and prevention will be common themes as new products are developed, Golde said.

"The nice thing about these new drugs is that most are not very toxic and don't overlap with existing therapies, which allow for more combinations to be used," he said. "And chemo-prevention is a world where we haven't been. In people who are at high risk for certain diseases we will be able to prevent the occurrence."

In some regards, the medical community's entire approach to treating patients with cancer is undergoing a metamorphosis.

Joann Schellenbach, spokeswoman for the American Cancer Society, said the old method was simply to "destroy the cancer itself by poisoning it."

This, in turn, killed healthy cells as well, which caused serious side effects.

Safeguarding Healthy Cells

"Now the emphasis is on interfering in what goes on in cells to develop the cancer in the first place," Schellenbach said. "The tendency is to zone in on mechanisms that go wrong and prevent them from happening and do less harm to healthy cells."

One popular area of this type of research is antiangiogenesis, which cuts off the blood supply to cancer cells.

"Also there is the development of biological products that imitate the body's own immune system," she said.

In cancers like breast and prostate, which are often related to the body's hormones, Schellenbach said drugs are being developed that act like the hormones in some instances and block the hormones in other situations. One such drug already on the market is Genentech's Herceptin, which was approved in September 1998 for the treatment of a particularly aggressive form of breast cancer.

"This is often called the Golden Age of cancer research because we're poised to move what has been in the laboratory to the bedside," Schellenbach said. "There is a potential explosion of many, many new approaches."

However, new drugs are usually costlier, which Schellenbach said leaves the uninsured and underinsured out of the good news.

And the cost of caring for cancer patients will likely continue to rise as the population ages and the disease is treated more chronically as a long-term illness, she said.

"Patients who may have died in the past don't die but may become chronic patients and cancer may become a disease that is treated lifelong like hypertension or diabetes," Schellenbach said.

Also contributing to this increased pace is a speedier Food and Drug Administration. The agency, responsible for reviewing and approving new drugs, has added medical officers and dramatically cut its review time.

"The FDA is assisting by being more responsive and getting more drugs to the market for serious, unmet needs," said David Saks, pharmaceutical analyst at Gruntal & Co.

"FDA cut its approval time by one-third to 50%. It's extraordinary," Saks said. "The pace of innovation is startling and the dollars spent on innovation is greater, while the time from discovery to market is condensed. It has never been so good for the human race."

"As an analyst of 35 years, this is so exciting," he said. "This is not just one drug being launched. This is like a domino, it's incredible because it's happening so fast. Innovation has never been so rampant."

Brown-Davis, the breast cancer survivor, said she hopes this pace continues and reaches into all communities.

What doctors are now discovering is not only how to fight early-stage cancers with more weapons, but to especially treat African-American women more aggressively.

"I'm a prime example of that, because technically it shouldn't have come back," said Brown-Davis, who also sits on the FDA's mammography-standards advisory panel. The medical community "seems to be acknowledging that different populations need to be treated differently. Age and race certainly play a part in treatment."

Brown-Davis said education is crucial for prevention and even after diagnosis.

"Education is really, really, really important."

-Otesa Middleton, Dow Jones Newswires