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Forty Years' War

Advances Elusive in the Drive to Cure Cancer

By GINA KOLATA

In 1971, flush with the nation's success in putting a man on the Moon, President Richard M. Nixon announced a new goal. Cancer would be cured by 1976, the bicentennial.

When 1976 came and went, the date for a cure, or at least substantial progress, kept being put off. It was going to happen by 2000, then by 2015.

Now, President Barack Obama, discussing his plans for health care, has vowed to find "a cure" for cancer in our time and said that, as part of the economic stimulus package, he would increase federal money for cancer research by a third for the next two years.

Cancer has always been an expensive priority. Since the war on cancer began, the National Cancer Institute, the federal government's main cancer research entity, with 4,000 employees, has alone spent \$105 billion. And other government agencies, universities, drug companies and philanthropies have chipped in uncounted billions more.

Yet the death rate for cancer, adjusted for the size and age of the population, dropped only 5 percent from 1950 to 2005. In contrast, the death rate for heart disease dropped 64 percent in that time, and for flu and pneumonia, it fell 58 percent.

Still, the perception, fed by the medical profession and its marketers, and by popular sentiment, is that cancer can almost always be prevented. If that fails, it can usually be treated, even beaten.

The good news is that many whose cancer has not spread do well, as they have in the past. In some cases, like early breast cancer, drugs introduced in the past decade have made an already good prognosis even better. And a few rare cancers, like chronic myeloid leukemia, can be controlled for years with new drugs. Cancer treatments today tend to be less harsh. Surgery is less disfiguring, chemotherapy less disabling.

But difficulties arise when cancer spreads, and, often, it has by the time of diagnosis. That is true for the most common cancers as well as rarer ones.

With breast cancer, for example, only 20 percent with metastatic disease — cancer that has spread outside the breast, like to bones, brain, lungs or liver — live five years or more, barely changed since the war on cancer began.

With colorectal cancer, only 10 percent with metastatic disease survive five years. That number, too, has hardly changed over the past four decades. The number has long been about 30 percent for metastatic prostate cancer, and in the single digits for lung cancer.

As for prevention, progress has been agonizingly slow. Only a very few things — stopping smoking, for example — make a difference. And despite marketing claims to the contrary, rigorous studies of prevention methods like high-fiber or low-fat diets, or vitamins or selenium, have failed to find an effect.

What has happened? Is cancer just an impossibly hard problem? Or is the United States, the only country to invest so much in cancer research, making fundamental mistakes in the way it fights the cancer war?

Researchers say the answer is yes on both counts. Cancer is hard — it is not one disease or, if it is, no one has figured out the weak link in cancer cells that would lead to a cure. Instead, cancer investigators say, the more they study cancer, the more complex it seems. Many are buoyed by recent progress in cancer molecular biology, but confess they have a long way to go.

There also are unnecessary roadblocks. Research lurches from fad to fad — cancer viruses, immunology, genomics. Advocacy groups have lobbied and directed research in ways that have not always advanced science.

And for all the money poured into cancer research, there has never been enough for innovative studies, the kind that can fundamentally change the way scientists understand cancer or doctors treat it. Such studies are risky, less likely to work than ones that are more incremental. The result is that, with limited money, innovative projects often lose out to more reliably successful projects that aim to tweak treatments, perhaps extending life by only weeks.

“Actually, that is the biggest threat,” said Dr. Robert C. Young, chancellor of the Fox Chase Cancer Center in Philadelphia. “Every organization says, ‘Oh, we want to fund high-risk research.’ And I think they mean it. But as a matter of fact, they don’t do it.”

A recent New York Times/CBS News poll found the public divided about progress. Older people, more likely to have friends or relatives who had died of cancer, were more dubious — just 26 percent said a lot of progress had been made. The figure was 40 percent for middle-aged people, who may be more likely to know people who, with increased screening, had received a cancer diagnosis and seemed fine.

Yet the grim facts about cancer can be lost among the positive messages from the news media, advocacy groups and medical centers, and even labels on foods and supplements, hinting that they can fight or prevent cancer. The words tend to be carefully couched, but their impression is unmistakable and welcomed: cancer is preventable if you just eat right and exercise. If you are screened regularly, cancers can be caught early and almost certainly will be cured. If by some awful luck, your cancer is potentially deadly, miraculous new treatments and more in the pipeline could cure you or turn your cancer into a manageable disease.

Unfortunately, as many with cancer have learned, the picture is not always so glowing.

Phyllis Kutt, 61, a retired teacher in Cambridge, Mass., believed the advertisements and public service announcements. She thought she would never get cancer — she is a vegetarian, she exercises, she is not overweight, she does not smoke. And only two people in her extended family ever had cancer.

Then, in May 2006, Ms. Kutt’s mammogram showed a foggy spot. The radiologist decided it was insignificant, but six months later, her internist found a walnut-sized lump in her right breast close to her armpit. It was the area that had been foggy on the mammogram.

“I was in real shock,” Ms. Kutt said. “How could this be happening to me?”

Still, it looked as if she would be fine. There was no sign of cancer in her lymph nodes, and her surgeon removed the tumor.

Ms. Kutt, her husband and her oncologist were worried, though, and decided on aggressive treatment — four months of chemotherapy followed by 33 rounds of radiation. When it ended, she thought she was finished with cancer.

“My doctors never used the word ‘cure’ and I bless them for that,” Ms. Kutt said. “But they do celebrate the end of chemo and they celebrate the end of radiation.”

Last May the cancer came back, as a string of tiny lumps under her arm and a lump on her bicep. CT scans revealed she also had tumors in her lungs.

But cancer is curable, she thought. There are amazing new treatments. She found out otherwise.

It turns out that, with few exceptions, mostly childhood cancers and testicular cancer, there is no cure once a cancer has spread. The best that can be done is to keep it at bay for a while.

Last June, Ms. Kutt started a new regimen — three weeks of chemotherapy, followed by a week off. She is also taking a new drug, Avastin.

“I am still on that and will be forever until the cancer progresses and I change to other drugs or some new drugs are developed, or I die,” she said.

The hardest part is explaining to friends and family.

“People will say to me, ‘So when is your treatment going to be over?’ ” Ms. Kutt said. “That’s the perception. You get treated. You’re done. You’re cured.”

“I think some of my family members still believe that,” she added. “Even though I told them, they forget. I get cards from my nieces, ‘How are you doing? You’ll be done soon, right?’ ”

Dr. Leonard Saltz, a colon cancer specialist at Memorial Sloan-Kettering Cancer Center, deals with misperceptions all the time. “People too often come to us expecting that the newest drugs can cure widespread metastatic cancer,” Dr. Saltz said. “They are often shocked to find that the latest technology is not a cure.”

One reason for the misunderstanding, he said, is the words that cancer researchers and drug companies often use. “Sometimes by accident, sometimes deliberately, sometimes with the best intentions, sometimes not, we may paint a picture that is overly rosy,” he said.

For example, a study may state that a treatment offers a “significant survival advantage” or a “highly significant survival advantage.” Too often, Dr. Saltz says, the word “significant” is mistaken to mean “substantial,” and “improved survival” is often interpreted as “cure.”

Yet in this context, “significant” means “statistically significant,” a technical way of saying there is a difference between two groups of patients that is unlikely to have occurred by chance. But the difference could mean simply surviving for a few more weeks or days.

Then there is “progression-free survival,” which doctors, researchers and companies use to mean the amount of time from the start of treatment until the tumor starts growing again. It does not mean that a patient lives longer, only that the cancer is controlled longer, perhaps for weeks or, at best, months. A better term would be “progression-free interval,” Dr. Saltz said. “You don’t need the word ‘survival’ in there.”

As a doctor who tries to be honest with patients, Dr. Saltz says he sees the allure of illusions.

“It would be very hard and insensitive to say, ‘All I’ve got is a drug that will cost \$10,000 a month and give you an average survival benefit of a month or two,’ ” he said. “The details are very, very tough to deal with.”

That does not help Ms. Kutt, who chafes at the way breast cancer is presented — the pink ribbons, the celebration of survivors, the emphasis on early detection, as though that will insure you will never get an incurable cancer.

She knows she frightens people with her bald head, so obviously a cancer patient. When someone is on crutches with a broken ankle, strangers offer condolences and ask about the injury. But people avert their eyes when they see Ms. Kutt. Only once, she said, did a stranger approach, and that was a woman who also had breast cancer.

And in her online discussion group of women with metastatic disease, some said they had been asked to leave breast cancer support groups. Members whose cancer had not spread considered themselves survivors, and those whose cancer had spread were too grim a reminder of what could happen.

“It’s fear,” Ms. Kutt said. “You’re part of the death group.”