

CONT CAN WAR

the war against cancer won't be won with an end-all cure. That would be unrealistic.

Battles are being fought — and won — however, through prevention and the development of new therapies, said the new director of UNMC's Eppley Cancer Center. Kenneth H. Cowan, M.D., Ph.D., came to UNMC after serving 21 years at the National Cancer Institute in Bethesda, Md.

Dr. Cowan's breast cancer research focuses on the mechanisms of drug resistance, the biology of breast cancer and gene therapy. He orchestrated several clinical trials seeking new therapeutic applications for breast cancer. These clinical trials have focused on developing gene therapy and identifying new agents in the treatment of the disease.

Dr. Cowan's approach to fighting cancer is simple: Why not win the battle before it begins? Focus on prevention and the development of new therapies.

Dr. Cowan discussed the reasons he left NCI to come to UNMC, and his views about the gains being made to eradicate cancer.

What progress has been made in battling cancer?

There finally have been improvements in cancer death rates during the past five years, particularly in breast cancer, which was a disease that for a long time had been relatively stable as far as the number of people who died each year from it. In the past five years, there's been a decrease of about 5 percent in mortality from breast cancer. This is probably due to the successes in getting more screening done, detecting the disease at earlier stages, as well as improvements in therapy.

What about other cancers?

The progress with lymphomas and leukemias during the past 20 years has improved in the overall response rates and survival. Childhood leukemias, in particular, have been treated successfully in increasing numbers. Other diseases probably have shown less noticeable

changes, including lung and gastrointestinal cancer.

What are the challenges in cancer research?

The challenges still are trying to find better ways to



detect the diseases at earlier stages, and better ways to identify how to treat these diseases specifically with less toxicity.

The development of chemotherapy for treatment of leukemia and cancer during the past 30 years mostly has been empirically derived. In other words, agents have been found to be successful in treating tumors in animals and then successful in treating patients, but they were not specifically designed to target tumor cells. They were found to be effective against fast-growing cells, but they eliminated normal, as well as abnormal, fast-growing cells.

The challenge now is to identify targets that only are expressed in tumor cells and then develop small agents that can target those particular proteins, kill the tumor cells, but have little or no toxicity to normal cells.

Will there ever be a cure for cancer?

I think improved ways of preventing cancer will reduce the risk of people getting the disease in the first

MEET KENNETH H. COWAN.

BIRTHPLACE:

New York City.

EDUCATION:

undergraduate, University of Rochester, New York; medical degree and doctorate, Case Western Reserve University, Cleveland.

PROFESSIONAL EXPERIENCE:

National Cancer Institute since 1978, most recently served as chief of the Medical Breast Cancer Section, Medicine Branch and as a captain in the Public Health Service.

PROFESSIONAL AFFILIATIONS:

American Society for Clinical Investigation, American Association of Cancer Research and American Society of Clinical Oncology.

PERSONAL:

Married, with two children.

THE CANCER FRONT

Photos by JoAnn Federick



place. In the past four or five years, the first large prevention trial in breast cancer was performed and it showed that a drug, tamoxifen — which has been around for more than 30 years — was actually effective in reducing the risk of developing breast cancer. I think trials like this are going to become increasingly more important in all types of cancers, not only breast cancer, but lung, gastrointestinal and prostate cancers.

In terms of treatment, we now know that there are proteins, both mutant and novel, that are only expressed in tumor cells. Once we have a complete fingerprint of the types of proteins that are expressed in a patient's cancer, we'll have a better way to identify what agents might be best used in treating that particular cancer.

I think the strategies for the future are to tailor therapy more specifically for a person's cancer. We'll find the fingerprints of the novel proteins being expressed, tailor the therapy, target those proteins by inhibiting them or using them as vaccines against that particular tumor.

What attracted you to UNMC?

The first is UNMC's long-standing tradition of being involved in cancer research from the basic level to the clinical research level. UNMC is an institution that has long been committed to cancer research and to having interactions between clinical and basic science investigators.

The second is the community's commitment to the cancer center. The community interest and involvement in the cancer center is something that is apparent once you visit the institution and visit Omaha. Having a community that's committed to helping a cancer center in its mission of finding new therapies for cancer, for improving cancer therapy in general for all people, is something that captured my attention.

What is your vision for the Eppley Cancer Center?

Our long-term goal is to become a comprehensive cancer center. That's been a goal of the institution for a while and it continues to be my focus. We are an NCI-designated research cancer center, now one of 59 in the United States. We hope to continue to develop the research program so we can apply for comprehensive status.

Do you have a time line?

We hope to reach this goal within the next five years. It takes time. The Eppley Research Institute started out as a basic science cancer center and is almost 40 years old now. If you think back 40 years, Eppley was created when there were very few institutions in the country that even considered starting a cancer research institute within a university.

In the past 15 years, since the clinical program developed, the research institute became incorporated into the UNMC Eppley Cancer Center. This year, we applied as a clinical center. Until now, it has always been an application for a basic science center. With the application, we're recognizing that we have strength in basic and clinical science.

Our cancer research grants and center membership have increased nearly three-fold in the past 10 years. We now have 137 members in the center, including investigators throughout all the UNMC colleges — Medicine, Pharmacy, Nursing and Dentistry. We have seven members at UNL, three members at UNO and two affiliate members at Creighton University. It really is a regional cancer center. *d*