

UCI cancer center's new director pushes for fast treatments

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Dr. Richard "Rick" Van Etten was a medical resident when researchers first identified a genetic abnormality in a human cancer.

The abnormal chromosome created fusion between two genes, causing production of an abnormal protein in leukemic cells.

"This was very exciting to me because I was convinced this protein might be the direct cause of leukemia," Van Etten said. He's the new director of Chao Family Comprehensive Cancer Center at UC Irvine Medical Center.

The discovery led Van Etten to specialize in hematology, the study of blood and blood diseases, in the lab of Nobel laureate Dr. David Baltimore at Massachusetts Institute of Technology.

"My hunch was correct," Van Etten said. "We went on to prove that this protein caused the leukemia."

His research on chronic myeloid leukemia led to the development of the current treatment for the cancer with drugs such as Gleevec that target the abnormal protein. Before this, the fatal disease could be cured only through a bone marrow transplant.

Targeting cancer cells with drug treatments, rather than blasting all cells with chemotherapy, is the future of treating cancer, Van Etten said.

His plans for the UCI cancer center call for establishing a formal experimental therapeutics program to allow more Orange County residents access to new cancer drugs through participation in early-phase clinical trials.

"We're taking diseases that used to be fatal and turning them into treatable conditions," Van Etten said. "More cancer drugs were approved last year than in the (previous) three years combined," he said. "It's an extraordinary and exciting time to be doing cancer research and taking care of patients."

Van Etten came to UCI in October from the Cancer Center at Tufts Medical Center in Boston, where as the director he launched a similar experimental therapeutics program. "I'm just re-creating that here."

His aim is to increase the breadth of cancer treatments and boost the survivor rate for Orange County residents.

Van Etten, a hematologist and oncologist, specializes in blood cancers – leukemia, myeloma and lymphoma – which affect the production and functioning of blood cells. Blood cells develop from stem cells in bone marrow, the soft tissue in the center of bones.

Within the next two years, the center will re-establish a transplant program that can treat and cure bone marrow cancers.

It's not well known, but UCI's is one of only 41 National Cancer Institute-designated "comprehensive" cancer centers in the nation. Comprehensive centers do research, prevention and treatment. It is the national institute's highest designation.

The designation means UCI's cancer center in Orange has resources that community hospitals and other cancer centers might not have, such as the ability to translate the latest scientific research into treatment and cures. It also means the center can better manage difficult and unusual cancers.

"I think a lot of people don't even know they have an NCI cancer center here. It's a precious thing," Van Etten said. "It's just an amazing resource that I think is being underutilized."

UCI's National Cancer Institute designation is in part what lured Van Etten to UCI. "There was the structure and the commitment of the administration here to put cancer as a priority," he said.

As a comprehensive cancer center, UCI is receiving grants totaling \$10 million to \$12 million over five years. The cancer center is up for renewal next year, and maintaining the NCI designation is one of Van Etten's top priorities.

Ralph Stern and his wife, Sue, of Newport Beach recently donated \$5 million to establish the Sue and Ralph Stern Center for Cancer Clinical Trials.

"UCI's on the move with respect to its cancer center," Ralph Stern said. "This could be a ray of hope and shining star within UCI's healthcare system."

The retired couple made the donation after Sue Stern had a positive outcome on the surgery of a spinal cord tumor done by UCI's Dr. Mark Linskey. He removed most of the tumor and treated the rest with radiation. There was no need for chemotherapy, Ralph Stern said.

"Everything's going great," he said of his wife's health. "She's the grandmother of 10 grandkids, so she's very busy."

The Sterns were grateful and asked Dr. Ralph Clayman, the dean of the medical school, what they could give to show their gratitude. Clayman told them about plans for the cancer center.

"He shared with us that the cancer center needed a new director," Ralph Stern said. The Sterns met Van Etten before they made their donation.

"Just meeting him and hearing what he had done and what his vision is impressed us greatly," Ralph Stern said. "One of our hopes is more cancer patients can be treated in Orange County, just like Sue was," Stern said.

With the establishment of formal Phase 1 clinical trials at UCI's cancer center, experimental cancer treatments will be tested for the first time on people, who may also fare better with these targeted treatments.

Cancer isn't one disease. It's about 150 diseases, each affecting different parts of the body such as lung, breast and ovary. Each has a different set of causes, diagnoses and treatments.

The primary goal of first-phase trials is to test a drug's safety and the degree to which humans can tolerate the drug, Van Etten said.

He also aims to improve the translation of research at UCI into medicine and treatments by recruiting more medical doctors who also have scientific training in breast, prostate, colorectal, lung, brain, blood, bone marrow and skin diseases. "If you have a cancer physician who can talk the language of scientists, they can form a bridge." he said.

Van Etten is recruiting nationally recognized leaders to head the clinical trials and bone marrow transplant programs. "These recruitments take a while," he said. At Tufts, he recruited 17 people in seven years. "I know how to do it, and how long it takes."

He has candidates in mind. "These people are highly sought after," he said. "What tends to happen is they get trained in academia and then they get hired in industry for five times the salary," he said. So he has to find someone who isn't primarily motivated by salary. "A lot of us" aren't motivated by salary, he said.

Within two years, Van Etten aims to re-establish the bone marrow transplant program, which ended at UCI about a decade ago. "We had a transplant program here and it never achieved the volumes of patients needed to flourish," he said. Right now, the center refers patients to UCLA's Jonsson Comprehensive Cancer Center or City of Hope in Duarte.

"Having a transplant program is part of having a full-fledged cancer center program in blood cancer," Van Etten said. UCI is aided by the fact that its partner, CHOC, already does these transplants for children.

Children's Hospital of Orange County has experience and expertise in blood-banking and processing stem cells.

Dr. Leonard Sender, director of the Adolescent and Young Adult Cancer Programs at CHOC, is also director of clinical operations and program development at UCI's cancer center. "He's a world renowned transplanter," Van Etten said.

Transplants can cure people who have diseases such as aplastic anemia, a condition in which the bone marrow doesn't make enough new blood cells. People with this condition have life-threatening low cell counts and become dependent on transfusions for red blood cells, which last a week, and platelets (three months).

But neutrophils, one of the most important kinds of infection-fighting white blood cells, can't be transfused because they last only 12 hours. People with aplastic anemia need a transplant or they'll likely die of infection.

These patients are matched with a sibling or a "matched unrelated donor" from a bone marrow registry. Transplantation is the treatment for bone marrow failure and the cure for some bone marrow cancers, Van Etten said.

There is another form of transplant called autologous transplantation in which patients receive high-dose chemotherapy and then get their own bone marrow back. It doesn't cure blood cancer, but it can dramatically prolong survival.

"As we cure more cancer patients, they finish their treatment and they are left to deal with long-lasting and sometimes lifelong side effects of treatment," Van Etten said. That is an area where UCI's cancer center can greatly benefit Orange County residents, because rather than traveling far distances for treatment, they can be treated right here.

"The biggest thing I want to do is extend the benefits of the NCI center to the citizens of Orange County in a way that hasn't been done before."

UCI cancer center's service area is primarily Orange County and some of southern Los Angeles County and the Inland Empire. About 12,000 people annually are diagnosed with cancer in Orange County, according to the California Cancer Registry. About 4,200 people die of cancer annually in the county.

The top three diagnosed cancers in the county, respectively, are breast, prostate and lung. They make up nearly half of the cancers in Orange County, according to the California Cancer Registry. Also, greater sun exposure makes skin and related cancers more prevalent in Orange County than in other areas in the nation.

In a year, 140 to 150 adults in Orange County are diagnosed with acute leukemia. "That's a disease that I personally believe is best cared for in an academic medical center because it is a potentially lethal disease that requires very intensive treatment, often with transplant as part of the equation," Van Etten said.

"We don't want to replace community oncology care," Van Etten said. But in relapsing or hard to manage cancers, UCI has a role to play. "We have the experts. We have access to the latest treatments," he said. "I

see us partnering with the community for shared treatment plans."

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