INNOVATIONS IN CANCER TREATMENT

MEN'S HEALTH SPOTLIGHT

New weapons in the war on prostate cancer

Robotic surgery was initially developed to target prostate cancer — and today four in five prostatectomies are performed by this revolutionary system, according to the National Cancer Institute.

Although robotics — the pioneering da Vinci Surgical System in particular — is today employed to treat a wide range of cancers, it remains an especially effective way to deal with the specific challenges of prostate cancer. Robotic surgery has also been shown to minimize recovery time, pain and side effects.

"Many of our prostate cancer patients are concerned about the side effects of treatment impacting their lives, robbing them of their vitality," said Dr. Timothy Wilson, head of urology at City of Hope, a leading cancer treatment and research center in Duarte. "We are helping develop new techniques with the da Vinci that allow for even greater precision during surgery, as well as conducting clinical trials and a prostate cancer survivorship clinic that addresses quality-of-life issues after treatment."

But robotic surgery is just one of many new options for prostate cancer. A host of cutting-edge treatments are available at leading Southern California medical centers.

Loma Linda University Cancer Center, in Loma Linda, is the only facility in the western U.S. to offer da Vinci robotic surgery alongside advanced proton radiation therapy, a noninvasive process that precisely targets cancerous tumors. Unlike traditional radiation, proton therapy spares surrounding healthy tissue.

As one of the world's most prominent centers for prostate cancer treatment, Loma Linda also offers a range of progressive procedures such as cryotherapy, which uses inserted probes to freeze the prostate and kill cancer cells.

St. Joseph Hospital in Orange and Hoag Family Cancer Institute in Newport Beach recently joined forces to provide a comprehensive array of many of the most innovative and advanced prostate-cancer treatments and technology, including the latest generation da Vinci Si HD Surgical System for minimally invasive radical prostatectomies using a high-definition optical magnification system.

Hoag's radiation oncology program delivers state-of-the-art therapy including seed-implant brachytherapy, in which small probes are placed alongside or inside tumors to continually impart high doses of radiation without harming healthy tissue. For more advanced prostate cancers, tomotherapy combines high doses of radiation with the accuracy of a CT scan.

When cancer is found to have spread (metastasized) beyond the prostate, hormonal therapy is available, as well as systemic chemotherapy for certain forms of hormone-refractory prostate cancer. Increasingly localized treatments — some of which employ radiofrequency ablation and freezing techniques — are used to eliminate sites of metastatic prostate cancer with minimized side effects.

With the availability of all these treatment options, the outlook for patients with prostate cancer is more hopeful than ever — but as always, early detection is key. Hoag and St. Joseph are leading proponents of prostate specific antigen (PSA) tests to screen for prostate cancer — a method that leads to the earliest possible diagnosis.

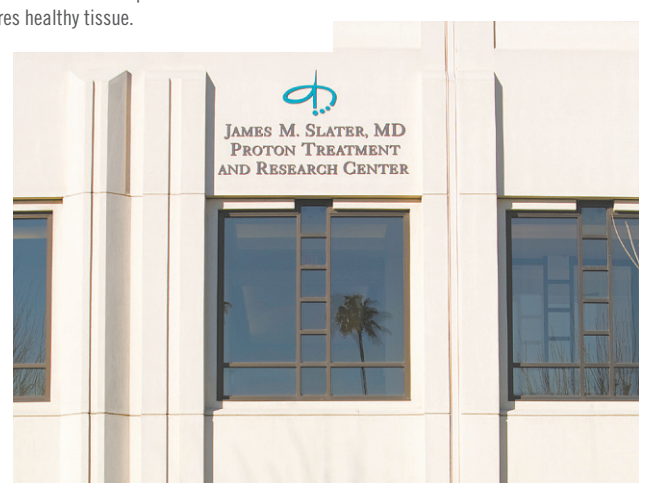
As a result of PSA screenings, more than 90% of Hoag's patients have only localized, contained disease when diagnosed. The five-year survival rate of Hoag prostate cancer patients, since the early 1990s, has been 100%.

The collaboration of Hoag with the Center for Cancer Prevention and Treatment at St. Joseph Hospital brings a synergy that provides Southern California with convenient access to the most advanced treatments, preventive and diagnostic services, and clinical trials, said Deborah Proctor, president and CEO of St. Joseph Health.

"This affiliation is a catalyst to extend our mission and make a real difference in healthcare delivery by assuring a system of highly connected, quality services," she said.

—Bob Young
Custom Publishing Writer

The Loma Linda University Cancer Center offers advanced proton radiation therapy, a noninvasive process that spares healthy tissue.



BEYOND CHEMOTHERAPY

Southland researchers pioneer new methods of targeted treatment

Fighting cancer has never been easy. But new research — much of it being done in Southern California — is pointing toward a future in which patients will receive precisely targeted treatments that are more effective and have fewer side effects.

"The biggest advance is the move away from traditional chemotherapy, which is very difficult for the patient, and which not everyone will respond to," said Judith Gasson, director of UCLA's Jonsson Comprehensive Cancer Center. "We are moving toward the use of more therapies targeted against the DNA mutations driving the tumor's growth. Typically these therapies have few side effects that are mostly mild, and many can be taken as a pill."

Researchers at USC's Norris Comprehensive Cancer Center and the Loma Linda Cancer Center are finding ways to zero in on specific types of cancer with specialized treatments, ranging from new drugs to robotic surgical procedures.

For the past 20 years, Loma Linda has been at the forefront of a technology called proton therapy, said Dr. Mark Evan Reeves, director of the Loma Linda Cancer Center. Proton therapy's ability to target specific cells has been useful in treating cancers that were once difficult to isolate.

"Radiation is actually a very useful treatment for liver tumors, but the problem has been that it destroys too much of the normal liver, so that it can't be used in most patients," Reeves said.

A similar approach is practiced at the USC Norris Comprehensive Cancer Center, where doctors look at the mutational signature of each patient's tumor to find the right treatment. Dr. Stephen Gruber, director of the Norris Center, said the next step will be dynamic tumor monitoring that will enable doctors to pick the most effective drug for each patient. Such research will help develop new drugs and limit drug resistance.

"We have many studies going on right now to help understand why tumors become resistant to particular drugs and that will allow us to preemptively avoid tumor resistance with combination therapy," Gruber said.

Reeves said investments in basic research (like mapping the human genome) have allowed doctors to better understand how cancers work. This understanding has resulted in the formulation of new drugs that can target specific cancers like gastrointestinal stromal tumors, which, until recently, were almost always fatal. They can now be treated with an 80% to 90% success rate.

At UCLA, researchers are testing therapies that use patients' own immune systems to identify and destroy tumors. "This is a broadly collaborative effort involving faculty across campus and at our partner institutions," Gasson said.

Doctors expect more success stories in the years ahead. "There are cancers right now that are almost certain death sentences," Reeves said. "They are the ones that we have not made any good progress on, and that in 10 years will absolutely have high success rates of treatment."

—Thomas McLean
Custom Publishing Writer

A researcher at the USC Norris Comprehensive Cancer Center