

New drugs being tested to engage the immune system to fight deadly cancers



For patients with advanced cancer whose tumors are not responding to other therapies such as radiation, hormone therapy and chemotherapy, immunotherapy is a treatment that works by triggering the body's natural defenses to fight cancer cells. Immunotherapy is currently being studied at UCLA and other cancer centers around the world.

Cancers often exploit checkpoint proteins that ordinarily restrain the body's defenses toward normal, healthy cells and prevent immune system over-activation. This mechanism can also prevent the body's immune system from detecting and attacking cancer cells.

Immunotherapy checkpoint blockers are a new class of drugs that help the body recognize cancer cells as the invaders they are and release the restraints on the immune system.

FDA approves UCLA-led "breakthrough therapy"

In 2014, after UCLA-led worldwide testing in the largest Phase I study in the history of oncology, the checkpoint blocker pembrolizumab gained first-of-its-kind U.S. Food and Drug Administration (FDA) approval for immunotherapy treatment of advanced melanoma.

New therapies represent paradigm shift in cancer treatment

Immune-based therapy is offering hope to people facing the challenges of advanced or metastatic cancer. "There is a paradigm shift in the treatment of these cancers from where we were just a few years ago," says Juan M. Alcantar, MD, assistant clinical professor of medicine, UCLA Department of Medicine, Division of Hematology and Medical Oncology.

"Immunotherapy represents a completely new approach to cancer treatment. By participating in an immunotherapy clinical trial, patients with advanced cancer have the opportunity not only to access a potentially lifesaving treatment, but also to help advance this new method and bring immunotherapies to more patients in the future.

"Immune-based cancer research is moving faster and faster and showing great promise," says Dr. Alcantar. "Our specialists at UCLA Hematology/Oncology in Porter Ranch work closely with each patient's referring physician and their treatment team to keep them informed of their patient's progress for follow-up care."

The study showed consistent tumor shrinkage with a complete disappearance of tumors on imaging studies in a small fraction of patients. The treatment was also durable, with 80 percent of responses being maintained for up to 2½ years of follow-up.

Additional pembrolizumab clinical testing in 2015 resulted in FDA “breakthrough therapy” status and fast-tracking for the drug’s use in Stage IV lung cancer.

Researchers are hoping to find similar success with other promising checkpoint blockers across a wide range of cancers.

UCLA is currently seeking participants for clinical studies of other cancer immunotherapy agents. Clinical trials currently available at the Porter Ranch office include the MYSTIC and WO29636 studies.

MYSTIC: A clinical trial for Stage IV non-small-cell lung cancer

Lung cancer is the leading cause of cancer deaths in the U.S. The five-year overall survival rate is just 17 percent and even lower for those with the metastatic form of the disease. Non-small-cell lung cancer (NSCLC) will account for 85 percent of the 225,000 Americans projected to be diagnosed with lung cancer in 2016.

Once thought of as a type of cancer that was poorly recognized by the immune system, lung cancer is emerging as an exciting new target of immune-based therapies.

MYSTIC is a Phase III global study seeking 700 Stage IV NSCLC patients to compare the new immunotherapy treatment with standard chemotherapy. The effectiveness of two checkpoint blockers, durvalumab (MEDI4736) and tremelimumab, will be compared to standard-of-care chemotherapy in treating newly diagnosed, advanced NSCLC.

WO29636: A clinical trial for bladder cancer amenable to surgical resection

Approximately 75,000 new cases of bladder cancer were diagnosed in the U.S. last year. Although the Stage I survival rate is close to 90 percent, survival drops to 15 percent for patients diagnosed with Stage IV bladder cancer despite treatment with chemotherapy.

The WO29636 study is enrolling 440 patients worldwide to assess the efficacy and safety of the immune-based drug atezolizumab when compared to observation in patients who are at high risk for recurrence following cystectomy.

Eligible patients include those who have received standard pre-operative chemotherapy followed by surgical resection. Patients who are not candidates for pre-operative chemotherapy are also able to participate in the study.

In addition to bladder cancer, there are ongoing or planned UCLA Phase III studies of atezolizumab in treating lung, kidney and breast cancers.

Excellence in research, education and patient care

UCLA Hematology/Oncology in Porter Ranch is a satellite of UCLA’s Jonsson Comprehensive Cancer Center, whose designation as a Comprehensive Cancer Center, awarded by the National Cancer Institute to only 45 centers nationwide, acknowledges excellence in cancer research, education and patient care.



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For referrals and a list of current clinical trials as well as information on inclusion and exclusion criteria, please call the UCLA Health clinical trials office in Porter Ranch at (818) 271-2500. For a list of current trials within the UCLA network, visit: cancer.ucla.edu/findatrial

uclahealth.org/PRanchOncology