The SAGE Encyclopedia of Cancer and Society

Chao Family Comprehensive Cancer Center

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In the United States, cancer is the second-most common cause of death. In 2014, approximately 1,665,540 new cancer cases are expected to be diagnosed. Of those cases, 585,720 Americans are expected to die, almost 1,600 people per day. In order to fight and understand this disease, the National Cancer Institute (NCI) designates and partners with comprehensive care centers in order to adequately treat and advance the treatment of many different types of cancer. One of these esteemed centers is the Chao Family Comprehensive Cancer Center (CFCCC) at the University of California, Irvine (UCI) which is located in Irvine, California. Here, the CFCCC translates leading-edge scientific findings into clinical cancer treatment and prevention of cancer on all levels.

The Chao Family Comprehensive Cancer Center

The UCI Cancer Center was established in 1989 as a university-based cancer center. In 1994, it was designated for excellence by the NCI. The center achieved comprehensive cancer center status in 1997, making it one of only 41 in the nation. It was later renamed in honor of the Chao family and is now recognized for excellence in cancer treatment, prevention, research, education, and awareness. The CFCCC is affiliated with the UC Irvine Health School of Medicine and the university's schools of basic sciences.

Located in the UC Irvine Medical Center, the CFCCC integrates research, prevention, and the most advanced diagnostics, treatment, and rehabilitation programs and technologies to provide the best possible care for patients and their families. World-class multi disciplinary teams of UC Irvine Health surgeons, radiation oncologists, medical oncologists, pathologists, nurses, rehabilitation therapists, pharmacists, social workers, and dietitians treat every kind of cancer, including rare and aggressive forms. New patients are offered the best in beginning care, including a comprehensive clinical evaluation with a wide range of diagnostic technologies.

The CFCCC provides the most advanced diagnostic and treatment technologies, including Arc radiotherapy, a groundbreaking method of delivering powerful, targeted



radiation faster and more precisely than with conventional radiotherapy. This therapy advances the standard of care with uncompromised treatment in killing or slowing the growth of cancer cells in two minutes or less. Arc plans were found to be equivalent or better at target coverage for all targets and superior in protecting critical structures including the spinal cord, brain stem, eyes, optic nerve and chiasm, parotid glands, and brain.

The center is funded by the NCI, the National Institute of Health, and other public agencies, in addition to a variety of private sources. The CFCCC also offers eight shared resource facilities to help foster innovative educational clinical and epidemiologic research on the causes, treatments, and effects of cancer and allied diseases. These resources include Biobehavioral Shared Resource Facility, Biostatistics Shared Resource, Experimental Tissue Shared Resource Facility, Genomics High-Throughput Facility, In-Vivo Functional Onco-Imaging, Optical Biology Core, Transgenic Mouse Facility, and the collaboration with the Children's Hospital of Orange County, where an overwhelming amount of children (85 percent) are enrolled in clinical trials at the CFCCC.

Research and Outreach

The CFCCC is at the forefront of research. At any given time, there are approximately 80 to 100 research trials open on the different types of cancer treated at the CFCCC. The purposes of these trials include treatment, prevention, screening, diagnostics, quality of life, and supportive care. Currently, there are 102 open trials with research focusing on cancers such [p. 261] as melanoma, liver, colon, pancreatic, prostate, brain and nervous system, and eye and orbit; however, the most predominant type of cancer being researched in the open trials is breast cancer in females.

Though the CFCCC treats all kinds of cancer, the NCI and its designated comprehensive care centers have made translational research a major focus, meaning the transformation of scientific discoveries made in laboratory, clinical, or populationbased research into clinical applications that can reduce the cancer burden. At CFCCC, their translational research efforts are focused on four areas of strength: skin, prostate, colon, and women's cancers. These teams have led to advancements in cancer

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surveillance, screening and prevention, diagnostics, therapeutics, survivorship and quality of life, and global benchmarks of success.

The CFCCC is also involved in conducting nontraditional research in its effort to find new, effective ways to treat and cure cancer. Notably, the CFCCC's infusion center has implemented a music therapy program to treat pain, anxiety, and nausea in patients undergoing chemotherapy. The benefits of this program have shown to lessen the proposed treatments, including depression. Funded research is focused on conducting innovative studies such as finding the best time of day to receive radiation treatment to reduce hair loss, stem cell research to advance basic studies to improve cancer, and brain disease treatments. There is also a study measuring kava, a plant grown in the South Pacific, and its ability to cure cancer. The efforts of UC Irvine, CFCCC's affiliate, have also resulted in advancements in treatments, specifically funding the development and creation of an ovarian cancer app for tablet computers. This advanced approach to treatment will help newly diagnosed ovarian cancer patients learn about and understand the trade-offs among chemotherapy options.

The CFCCC is also involved in national and international outreach that extends to several countries in the Middle East, Russia, Korea, Japan, and China through sponsorship by the NCI. Through the establishment of consortiums, the CFCCC can work to reduce the incidence and impact of cancer through solicitation and support of collaborative research.

The prevention and treatment of cancer heavily overlaps with the need for advancements in research. As the second-leading cause of death, cancer is a disease that requires time and dedication to find a cure. Through the collaboration of the NCI and designated comprehensive cancer centers like the CFCCC, cutting-edge research can help save lives. By focusing on treatment, prevention, research, education, and awareness, the CFCCC and its partners are able to offer the most-advanced diagnostic and treatment technologies and nontraditional, groundbreaking research as possible cures and preventions for all types of cancer.

See Also:Chemoprevention; National Cancer Institute; University of Southern California/Norris Comprehensive Cancer Center; University of Wisconsin Carbone Cancer Center.

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http://dx.doi.org/10.4135/9781483345758.n132 Further Readings

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