

University of New Mexico Cancer Research & Treatment Center

Novel Research Enriches Cancer Care for a Multi-ethnic Population

The University of New Mexico's (UNM) Cancer Research & Treatment Center (CRTC) has an exceptional double focus on cancer research and patient care.

On the research side, the CRTC conducts a wide variety of basic science investigations supported by grants that totaled \$83 million in 2001. Currently the CRTC has more than 170 open clinical trials, including studies affiliated with the Southwest Oncology Group (SWOG), the National Surgical Adjuvant Breast and Bowel Project (NSABP), the Pediatric Oncology Group (POG), the Gynecologic Oncology Group (GOG), and the Radiation Therapy Oncology Group (RTOG).

In cancer care delivery, a multidisciplinary team provides a full range of diagnosis and treatment options, including specialized clinics for breast diagnostics, stereotactic breast biopsy, prostate cancer, renal carcinoma, and skin cancer. Patients can see a variety of specialists in a

single exam room if they have more than one medical issue to address. A hospice/palliative care program is available, and the radiation oncology department houses a dual energy linear accelerator and an IMRT unit with a multileaf collimator. High-dose brachytherapy is also available.

The cancer center has been approved by the American College of Surgeons and is working toward becoming an NCI-designated Comprehensive Cancer Center within four years.

Since the CRTC is the only academic tertiary care institution in the state, it serves patients with rarer cancers from all of New Mexico's 32 counties. Meeting the needs of a diverse, widely scattered, and economically disadvantaged population means that the staff must constantly address the problems of transportation, housing, reimbursement, and access to follow-up care. To bring services to people in rural areas of the state, the University of New Mexico Health Sciences Center has a strong telemedicine program. Although the program has not yet extended into cancer care, the CRTC may participate in this venture in the future.

Located in the desert, Albuquerque is 5,500 feet above sea level, which creates a unique set of problems for its residents. "Everyone at this altitude and in this climate is at risk for melanoma and other forms of skin cancer, but fair-skinned people are at an even higher risk," said Russell Dilts, chief administrative officer of the Cancer Center and Oncology Programs. The Steve Schiff Center for Skin Cancer addresses the needs of this population, particularly workers who are outside for the majority of their day



The CRTC maintains a vigorous clinical research program and tracks data on all cancer cases affecting the state's diverse population.

PROFILE

and frequently develop basal cell carcinomas around their eyebrows and on their eyelids and the tips of their ears.

The Schiff Center offers minimally disfiguring Mohs surgery to basal cell carcinoma patients. Named for the physician who developed the technique, this microsurgery is done on an outpatient basis and involves the progressive shaving of thin layers of epidermis until clean margins are obtained. The center also partners with the New Mexico Department of Public Health to promote the

Selected Patient Support Services

- “I Can Cope” is offered yearly in April and May.
- A psychologist and social worker are on staff. Support groups run by local organizations for all types of cancer are offered cooperatively at the CRTC and other local hospitals.
- Educational seminars are presented monthly in the community.
- Casa Esperanza houses patients and their families who have traveled long distances to receive treatment.

“Slip, Slap, Slop” program (slip on a shirt, slap on a hat, and slop on some sunscreen).

The Research Facility

New Mexico has large Hispanic and Native American populations, and the cancers seen most frequently in these ethnic groups are different than those found most often in Caucasians. For instance, renal cell carcinoma and gallbladder cancer are common in Native Americans, although they are rare in most other populations, and cervical cancer has been increasing among Hispanic women. Studies on all three malignancies have high priority at the research center. As part of the cervical cancer investigation, the CRTC has a project on human papilloma virus and is developing a vaccine

against the organism. Other research staffs study the respiratory diseases and neoplasms of uranium miners, a large proportion of whom are Navajo men.

The research laboratories, the Epidemiology & Cancer Control Program, and the New Mexico Tumor Registry are housed in a separate building on the University of New Mexico Health Sciences Center campus. The CRTC points to them all with great pride. The Epidemiology & Cancer Control Program uses data from the registry to provide continuous information about the incidence of cancer in New Mexico’s multi-ethnic populations. The reg-

Vital Statistics

- Total hospital bed size: 384
- Dedicated cancer unit beds: 12
- Number of new analytic cancer cases seen per year: 1,400
- Managed care penetration in the state: 40 to 45 percent

istry itself is the largest repository of data on cancers in Hispanic and Native American populations in the United States, and needs 48 employees to manage its caseload. It is also one of the 12 NCI Surveillance, Epidemiology, and End Results (SEER) registries.

The cancer center is developing a gene therapy program, and basic science research is being conducted on gene expression, signal transduction, cell adhesion, viral replication, HTLV-I and -II immune regulation, molecular oncology, and DNA damage repair.

A special \$1 million grant from the W.M. Keck Foundation in California supports cancer research that takes advantage of tools developed through the Human Genome Project. The Keck grant will be used to acquire and produce new equipment for a genome laboratory at the UNM Health Sciences Center, construct new data scanning and imaging tools at Sandia National Laboratories, and apply high-performance computing to cancer research problems.

The work of Cheryl Willman, M.D., director of the CRTC, is a good example of the contributions

this project can make. Willman’s study uses microarray and genomics analysis to evaluate human leukemia. The research group receives leukemia cells from half of all the children in the U.S. with leukemia as well as nearly one-third of the adults with the disease, which gives the CRTC the largest leukemia tissue bank in the world.

“We believe that by using these new genome technologies, we will determine the specific patterns of gene expression in each individual

The University of New Mexico’s Cancer Research & Treatment Center (CRTC) is a freestanding facility located on the campus of the University of New Mexico Health Sciences Center, next to both the hospital and the cancer research facility. The CRTC first opened its doors in 1972, and now has a staff of 240, including more than 100 physicians and research scientists.



who is affected by leukemia, and figure out what causes leukemia in the first place,” said Willman. She added that the data will be used to develop individually tailored and more effective therapies.

The CRTC also maintains a strong relationship with Los Alamos National Laboratory, with which it explores new ways to use radiation in cancer therapy.

By anyone’s standards, the CRTC is doing an outstanding job. It is tackling a number of difficult, cancer-related problems in a challenging economic and cultural setting, and conducting basic research that matches the best investigative efforts in the world. The CRTC provides unmatched clinical services in its state and will produce an invaluable and unique body of research for the rest of us in the future. ☐