

## The John T. Vucurevich Regional Cancer Care Institute at Rapid City Regional Hospital, Rapid City, S.D.

Situated in western South Dakota at the edge of the Black Hills is Rapid City Regional Hospital's John T. Vucurevich Regional Cancer Care Institute. An American College of Surgeons-approved comprehensive community cancer program since 1981, this busy facility sees approximately 1,000 new analytic cases each year. Rapid City Regional Hospital is a not-for-profit hospital that is part of the Regional Health system of hospitals, clinics, and long-term care facilities.

In March 2004, the Cancer Care Institute began offering treatment with the TomoTherapy HI-ART System™, making it one of the few sites worldwide to provide this new radiation modality. With the TomoTherapy system, providers can take a CT image before each radiation treatment, allowing a precise targeting of the tumor. Using a rotating beam, the system delivers small beamlets of radiation accurately shaped to the match the tumor's shape and size and spare surrounding healthy tissue. The TomoTherapy system is totally integrated with all patient position verification, dosimetry planning, and treatment information contained in one unit.

In addition to TomoTherapy, the Cancer Care Institute also offers HDR brachytherapy for breast, prostate, OB/GYN, and lung malignancies. The cancer program often draws patients from the nearby states of Nebraska, Wyoming, and North Dakota, but patients have traveled from as far away as Oregon to receive this advanced cancer treatment. The scope of services offered "aligns us more closely with an academic cancer center model than a community cancer program," said Brad Johnson, executive director of the Cancer Care Institute.

The program serves a 200-mile radius around Rapid City, S.D.,

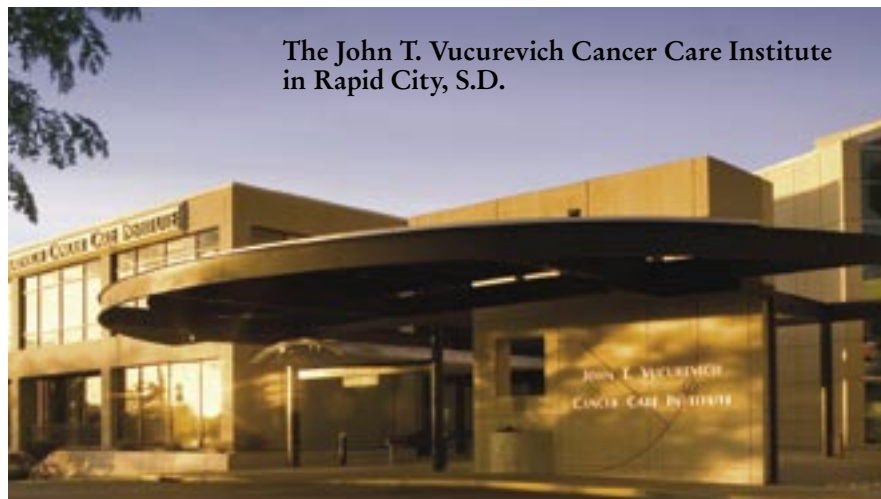
including the historic Black Hills area, with dense pine forests, large granite outcroppings, and home to Mount Rushmore and the Crazy Horse Memorial. The rugged beauty of the region comes at a price, however. Area cancer patients often must travel long distances to receive care.

"Sometimes our biggest competitor is no treatment because of the inconvenience and hardship of the distance," said Johnson.

To help patients overcome this barrier, all cancer programs services—with the exception of surgery—are centrally located in the Regional Cancer Care Institute. The two-story, 21,715-square-foot

facility which adjoins Rapid City Regional Hospital, houses radiation therapy and medical oncology, including physician offices, clinics, treatment, infusion, research, lab and pharmacy. For treatments other than surgery, patients can, in one day, move from an appointment with the primary care physician or surgeon to the Cancer Care Institute and meet with radiation oncology and medical oncology.

For many of the out-of-town patients, the cancer program's technologically advanced treatment options offer the possibility of consolidated treatment regimens that reduce six to eight weeks of



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<p><b>Vital Statistics</b></p> <ul style="list-style-type: none"> <li>■ Total hospital bed size: 417</li> <li>■ Designated inpatient cancer unit</li> <li>■ Number of new analytic cases seen in 2004: 1,028</li> <li>■ Managed care penetration in South Dakota: 10.1 percent</li> </ul>	<p><b>Selected Patient Support Services</b></p> <ul style="list-style-type: none"> <li>■ American Cancer Society <i>Look Good...Feel Better</i> program and Patient Navigator Program</li> <li>■ Rehabilitation Program including a Lymphedema Clinic</li> <li>■ Cancer Resource Library</li> <li>■ "Hand in Healing" program, which provides assistance with housing, transportation, and food for qualified patients</li> <li>■ Hospice in the Hills</li> <li>■ "Loving Laura" volunteer group provides free pedicures, manicures, and massage services for patients at the Cancer Institute.</li> </ul>
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radiation therapy to treatment in one to four weeks. For instance, breast cancer patients who meet the criteria are able to receive interstitial breast brachytherapy treatment two times a day for four days, instead of conventional external beam radiation treatment, which may take up to six to eight weeks. This shortened treatment schedule reduces the amount of time patients must spend away from their homes, jobs, and families.

## Team Work in a Highly Collaborative Setting

Rapid City Regional Hospital holds weekly physician-led multidisciplinary cancer conferences. Typically these are attended by the primary physician, surgeon, radiation oncologist, medical oncologist, and pathologist with specialists attending as needed. All images are viewed via the hospital's picture archival communication system (PACS).

In addition, for each new cancer patient, a "team meeting" is scheduled. The entire interdisciplinary cancer treatment team, including nurses, therapists, social worker, and the case manager meet to introduce the new patient to the care team and ensure that all of the patient's supportive care needs are covered. Describing the treatment process as "very collaborative," Brad Johnson said that high-caliber caregivers set the program apart. "We have an excellent group of physicians and staff—always courteous, compassionate. Everyone goes out of their way to help and have the time to listen."

## Fighting Cancer Health Disparities

At the Cancer Care Institute, among the patients who travel farthest for care are Native Americans who live on three nearby reservations—Pine Ridge, Cheyenne River, and Rosebud. While still a two- or four-hour drive from these sites, the Cancer Care Institute is the nearest comprehensive cancer treatment center for the approximately 100,000 Native Americans in the region. American Indians experience severe cancer

health disparities and have the lowest cancer survival rates of any ethnic group in the United States.

In fact, tumor registry data collected by the Cancer Care Institute demonstrated that Native American patients were first presenting with more advanced stages of cancer than non-Native Americans. Indian Health Service data for the Northern Plains region show that Native American cancer mortality rates are 40 percent higher than any other race in the United States.

Through the leadership efforts of Daniel Petereit, MD, radiation oncologist at the Cancer Care Institute, the cancer program at Rapid City Regional Hospital is leading the fight to reduce cancer health disparities among the American Indian population it serves.

In 2002, the John T. Vucurevich Regional Cancer Care Institute received a five-year, \$5.4 million cancer disparities grant from the National Cancer Institute (NCI) to research methods of improving cancer treatments for this underserved population. The grant is being used to fund the *Walking Forward* program, which aims to improve access to cancer care for the area's Native American population. "Through this research project, we hope to identify those barriers—both real and perceived—and develop some creative and scientifically sound methods to overcome them," said Petereit in a press release. Dr. Petereit wrote the grant and is the principal investigator.

The multi-part grant project began by surveying the local Native American population to identify barriers to cancer diagnosis and treatment as well as to gain an understanding of how cancer is perceived by this population. Researchers theorize that a major barrier may be the distance patients have to travel and the length of time away from home communities that cancer treatment entails.

A second phase is focusing on conducting clinical trials of radiation modalities that shorten the overall length of treatment time.

Another aspect of the NCI grant is the capability for the Cancer Care Institute to participate in the NCI Cancer Disparities Research and Partnership Program (CDRP)

Telesynergy® telemedicine program. A medical consultation workstation, Telesynergy is a PC-based video-conferencing system that allows healthcare providers to collaborate regardless of distance.

At Rapid City Regional Hospital, the Telesynergy suite is located within the Cancer Care Institute and configured so that a physician can see the actual patient in one exam room and within a few steps see a virtual patient in the Telesynergy suite. Using the HIPAA-compliant system, physicians can interact with NCI or one of the other cancer disparity research sites. The telemedicine program allows the sharing of visual images back and forth as well as radiation therapy technical treatment plans.

Yet another phase of the grant work involves education to improve cancer screening so that Native Americans with cancer can be diagnosed earlier. At the Cancer Care Institute, the Native American Patient Navigator Program helps identify and assist cancer patients with diagnosis, treatment, and follow-up care. On each reservation, community research representatives help patients connect with the Rapid City-based Patient Navigator.

In addition to the NCI-grant activities, the Cancer Care Institute participates in numerous clinical trials research groups, including NCCTG, CTSU, RTOG, and GOG.

## Supportive Care

The Cancer Care Institute features a lending library of books, tapes, and pamphlets and offers on-site Internet access. A healing arts foundation is under development. Plans are underway to bring artists to the cancer center to work with patients in various art media. Rapid City Regional Hospital is also working to establish a hospice house on the hospital's campus.

The resources available at the John T. Vucurevich Regional Cancer Care Institute are not usually within the reach of community-based programs, Johnson noted. "We are very fortunate to have these types of services—not just for the people in Rapid City—but basically for people in South Dakota and the other three states that we serve," he said. ☐