

John Theurer Cancer Center at Hackensack University Medical Center, Hackensack, New Jersey

Exceptional Design in the Service of Exceptional Care

Cancer disrupts lives. But what if the cancer treatment environment was designed to minimize that disruption? What if the design facilitated multidisciplinary, disease-specific, state-of-the-art treatments in a setting that inspired hope and fostered the patients' ability to go on with their lives while receiving optimal care?

The new John Theurer Cancer Center (www.jtcancercenter.org) at Hackensack University Medical Center provides an emphatic answer to these questions. The \$130-million, 155,000-square-foot, five-floor facility unites the cancer center's 14 specialized divisions, research program, and cancer support services—in an environment designed with the mission of providing “extraordinary care” at its core.

“We didn't want people walking into the building and feeling like they were walking into a medical facility,” said Andrew L. Pecora, MD, FACP, CPE, chief innovations officer, professor, and vice president of cancer services at the John Theurer Cancer Center. “We wanted people to have a ‘wow’ moment.” Visitors walk into a grand, four-story atrium awash in natural light. Suspended above is a colorful “flock” of more than 200 Murano blown-glass birds spotlight in flight. The portal through which visitors enter the facility is a “Living Wall,” featuring more than 30 plant species grown hydroponically without soil and a stunning 24-foot waterfall. From a visitor's first steps, the tone is set—a calming, restorative sense of life, hope, and inspiration.

Reducing Footsteps to Care

How patients travel to various services was factored into the cancer center's design. Vertical circulation is located in the center of the building, taking into account how patients enter the facility and the sequence of services they routinely need to



Mehmet Tuna, RT, director of Technical Services, Radiation Oncology, (standing) and staff members examine radiation images from the TrueBeam™ radiotherapy system.

access. The John Theurer Cancer Center's elevator brings patients to the centrally located waiting areas on each floor. All the steps to care: registration, labs, physician visit, and treatments take place on the patient's “home floor.” The patient flow was designed to be especially convenient for those undergoing care that requires multiple visits each week for treatment, monitoring, and support services.

Patients can access Radiation Oncology services, located on the ground floor, directly from the parking garage. Taking advantage of the natural topography—the cancer center is situated on a hill—windows in the radiation oncology waiting area are of graduated length, providing garden views and natural light. Two new Varian TrueBeam™ linear accelerators offer leading-edge treatment options, such as image-guided

Vital Statistics

- Total licensed hospital bed: 775
- Dedicated inpatient cancer unit beds: 60
- Number of new analytic cases seen in 2009: 3,077

Selected Support Services

- Disease-specific support groups
- Survivorship After Treatment Support Group
- Radiation Orientation Support Group
- Nutrition counseling
- *Look Good, Feel Better*
- Psychosocial support services
- Pastoral care
- Maureen Fund for Ovarian Cancer

radiation therapy. Four additional linear accelerators are located in the St. John's Building on the Hackensack University Medical Center campus. Radiation therapy services offered include high dose rate brachytherapy, TomoTherapy®, total body irradiation, radiosurgery, radioisotope therapies, and Contura® accelerated partial-breast irradiation.

Although the first floor of the cancer center includes laboratory space,

a seven-hood oncology pharmacy, and a retail pharmacy, it is primarily a non-clinical floor. Here patients and families can access an array of resources and amenities, including:

- A meditation and tranquility room and Zen labyrinth.
- A yoga and exercise classroom.
- The Patient Resource Library, a web-enabled virtual library with wireless Internet access, equipped with computers for research, reading areas, and staffed by one FTE librarian to help patients access and assess the validity of health information online.
- A non-profit shop offering a variety of items for patients and family members coping with cancer.
- A convenience store and gift shop.
- A business center and cyber café with printers, fax, copiers, and computers—practical resources to help patients and their caregivers stay connected and continue with the business of living their lives.
- The Simply Puur café that offers nutritious breakfast and lunch fare.
- A demonstration kitchen where nutritionists, as well as local chefs, will offer cooking lessons for healthy eating.
- A 425-seat lecture hall that can be divided into two small conference rooms with Internet access and capabilities for medical video-conferencing.

14 Specialized Divisions Under One Roof

The cancer center's 14 specialized disease-site specific divisions are now housed under one roof. The second floor is home to Leukemia, Lymphoma, Skin and Sarcoma, and the Blood and Marrow Transplantation Program. On this floor, patients and staff can access a beautiful roof-top garden with a variety of plantings, walking paths, and benches for quiet reflection.

The third floor includes Thoracic



A roof-top garden enhances the patient experience with walking paths, benches, and an array of plant species.

Oncology, Head & Neck Oncology, Urologic Oncology, Neuro-oncology, and Multiple Myeloma, with dedicated space for swing office and exam rooms for surgeons and other specialists to foster multidisciplinary care.

The fourth floor houses Women's Health (Gynecologic Oncology, Breast Oncology, Surgical Gynecology), Gastrointestinal Oncology, and Geriatric Oncology.

Each floor has dedicated conference room space for tumor boards and multidisciplinary conferences. The facility is designed so that not only are the disease-site-specific team staff all located on one floor, but so are dedicated clinical trial research staff. Currently, the Theurer Cancer Center offers more than 150 actively enrolling clinical trials, and accrues approximately 18 percent of patients to trials annually. In 2010 the cancer center launched its in-house Cancer Outcomes Tracking and Analysis (COTA) software system. Every patient treated at the cancer center will be entered into the COTA system and followed.

Exceptional Amenities

The waiting areas on each floor offer activities for patients and families, including games, puzzles, magazines, and TV. Portable "pagers" will be available so that patients can take advantage of amenities on other floors, such as the roof-top garden or Resource Library. When it's time for their appointment, patients will be buzzed and can return to the appropriate area.

Infusion center pods are located on the second, third, and fourth floors. Here, the facility design incorporates elements that bring the "outside" in.

A "living well," a vertical columnar glass shaft, cuts through the third and fourth floors. At its base is a rock garden with plantings. This "internal skylight" extends up through the roof providing a source of natural light for additional illumination.

Each infusion pod is limited to seven chairs, creating a more intimate care environment for patients. The infusion bays surround the nurses' stations, which are designed with low countertops

enhancing visibility between nurses and patients.

The infusion centers offer a variety of amenities for patients, including:

- Individual, interactive flat-screen TVs equipped with Internet and a selection of movies
- Portable DVD players
- Warm blankets and pantries stocked with beverages, soup, sandwiches, and snacks
- Individual lighting controls in each bay so patients can easily adjust the light for napping.

A skyway connects the fourth floor to the new nearby five-story parking garage. Valet parking is available free of charge to patients and caregivers. Each floor of the new facility has a distinct color palette—amber, pink, sky blue, lavender, and soothing complimentary colors are used throughout the building. The result is aesthetically pleasing, and the color-coded floors help differentiate care areas, which in turn helps patients navigate through the cancer center.

"Fighting cancer is hard enough," said Andre Goy, MD, deputy director and chief, Lymphoma, and director, Clinical and Translational Research. "So while we treat complicated cases using advanced technology, we recognize the need to be both high-tech and high-touch. We know caring for the whole person—not just their disease—is important. This is why we turned to design experts to help us create both a comforting and inspiring place for our patients with resources to help them focus on their lives and an environment for our treatment teams to deliver the excellent care we are known for." 🗣️