Solid Tumor Oncology's Remarkable Evolution

Levine Cancer Institute has made a name for itself due to its state-of-the-art research facility and exceptional staff and expertise. The rapid evolution of leading-edge programs and services, however, prove that the Institute is on its way to changing the game for cancer care in the region.

With the recent development of subspecialty sections, physicians focus on specific cancer types. “Levine Cancer Institute is structured similarly to what you’d expect from large, comprehensive cancer institutes like MD Anderson, Memorial Sloan Kettering or Dana- Farber,” said Edward Kim, MD, chair of the Department of Solid Tumor Oncology and Investigational Therapeutics. “We are developing specific disease-site expertise,” said Dr. Kim. “In solid tumor oncology, in addition to multidisciplinary tumor boards, monthly disease-specific section meetings are held, which include these subspecialty areas to enhance our clinical pathways, discuss current research protocols and develop new studies.” Subspecialty sections in hematologic oncology also have been formed with the hiring of subspecialists in leukemia, myeloma and lymphoma.

CHANGING THE COURSE OF CLINICAL RESEARCH

A new approach to clinical research will bring Levine Cancer Institute to the forefront of drug development and testing. Typically, research studies are initiated by pharmaceutical companies and then tested in clinical research units. “We are going to develop, initiate and lead our own research to test drugs in different patient populations,” said Dr. Kim. “We have been approved and funded, and have started work on numerous new studies as a direct result of the establishment of our disease-site sections.”

Current ongoing studies focus on diseases such as glioblastoma, non-small cell lung cancer, pancreatic...
Bringing Quality Cancer Care Close to Home

SPECIALTY SERVICES ENHANCE PROGRAMS IN CABARRUS COUNTY

Outside Charlotte, in Cabarrus County, patients with cancer can find the same quality of care at Carolinas HealthCare System’s Levine Cancer Institute-Concord, a facility of Carolinas Medical Center, as they would receive at the research and administrative headquarters in Charlotte. “Our founding philosophy is cancer care without walls,” said Deborah Barton RN, assistant vice president of Levine Cancer Institute’s northern region.

SYSTEM-WIDE PROTOCOLS
Treatment pathways, standardizing policies and procedures established by Levine Cancer Institute specialty physicians, are followed throughout Carolinas HealthCare System. Clinical trials will be available to eligible patients and will be listed within those pathways. Currently, at our NorthEast Institute location (Levine Cancer Institute-Concord), 35 patients are enrolled in clinical trials.

Eight medical oncologists, a gynecological oncologist and an oncology-certified general surgeon are on staff in Concord, providing both medical and surgical services. A robust patient navigator program offers individualized assistance and education to patients, family members and caregivers. Four patient navigators in Concord assist patients who have breast, lung, gynecologic/colorectal, or hematology/genitourinary cancer, and two in Albemarle help those with breast or lung cancer. We have plans in place to expand those services over time.

LEADING-EDGE THERAPIES
Specialty services enhance the clinical offerings at Levine Cancer Institute-Concord. In May 2013, the first patient in Concord was treated with high-dose radiation brachytherapy for breast cancer. “The benefit of this approach is that it shortens the duration of overall treatment without the loss of anti-cancer effects,” Barton said. “To date, 19 patients have been evaluated for eligibility, and nine have been treated with high-dose brachytherapy.”

PATIENT SUPPORT
• A full-time, on-site genetics counselor works at both locations to provide free genetic counseling to patients, as well as family members who are concerned about cancer risk. Testing is available, for a fee, to determine if a family member carries an inherited cancer gene or if a patient is at risk for another type of cancer. We’re currently working to develop a funding mechanism for patients who need financial assistance.

• Levine Cancer Institute offers a new quarterly series of Survivorship 101 classes for patients finishing treatment, wondering “What do I do now?” “Survivorship 101 teaches them about self-care, prevention of recurrence, nutrition and stress management,” Barton said. “The response has been phenomenal. After the classes are completed, many patients continue in support groups because of the strong relationships they have formed.”

CONNECT WITH OUR CARE
For more information about the services provided at Levine Cancer Institute-Concord, a facility of Carolinas Medical Center, visit CarolinasHealthCare.org/levine-cancer-institute-concord or call 704-403-1370.

“CURRENTLY, 35 PATIENTS AT LEVINE CANCER INSTITUTE-CONCORD ARE ACTIVELY ENROLLED IN CLINICAL TRIALS, PRIMARILY IN GYNECOLOGIC AND BREAST CANCER STUDIES.”
Symposium Highlights Updates in Breast Cancer Treatment

On February 22, Carolinas HealthCare System’s Levine Cancer Institute hosted a Breast Symposium, with experts in surgery, radiation therapy, endocrine therapy, cytotoxic chemotherapy and leading-edge molecular-based therapies providing insight into the optimal management of patients with breast cancer and its application to practice.

Richard L. White Jr., MD, FACS, chair of Surgical Oncology at Levine Cancer Institute, chaired the conference. Internationally renowned guest speakers included:

- Lori J. Pierce, MD, vice president for Academic and Faculty Affairs, professor of Radiation Oncology, University of Michigan.
- Julie R. Gralow, MD, director, Breast Medical Oncology, Seattle Cancer Care Alliance, Clinical Research Division; Member, Fred Hutchinson Cancer Research Center; professor, Medical Oncology Division, University of Washington School of Medicine.
- Terry Mamounas, MD, MPH, FACS, medical director, Comprehensive Breast Program, University of Florida Health Cancer Center at Orlando Health.

The multidisciplinary event offered updates in breast cancer treatment, such as:

- Incorporating current guidelines and recent data on local therapy, as well as including new strategies for surgical and radiation therapy into the treatment of patients with breast cancer
- Integrating biomarkers, molecular assays and other risk-assessment tools
- Evaluating emerging clinical data regarding new agents and evolving strategies for the treatment of breast cancer, as well as applying clinical trial data appropriately to optimize the outcomes of individual patients
- Using strategies for preventing and treating breast cancer therapy-related side effects

Visit CarolinasHealthCare.org/lci-physicians for more information about this event.

AURA Trial Enrollment Underway

Carolinas HealthCare System’s Levine Cancer Institute is one of only eight cancer centers in the United States enrolling patients in the AURA trial. Researchers are studying the effectiveness of the first of a new class of medication, AZD 9291, in treating patients with non-small cell lung cancer (NSCLC). AZD 9291 battles genes that are resistant to
New Programs, Staff and Research Signal Rapid Growth

UPDATES ON THE DEPARTMENT OF HEMATOLOGIC ONCOLOGY AND BLOOD DISORDERS

At Carolinas HealthCare System’s Levine Cancer Institute, the Department of Hematologic Oncology and Blood Disorders is expanding in three major areas, including:
- Development of subspecialty sections led by expert clinicians
- An array of leading-edge clinical trials for the treatment of hematologic malignancies
- Opening of a state-of-the-art blood and marrow transplantation and hematologic malignancies unit.

EXPERT LEADERS IN SUBSPECIALTY AREAS

“We’re expanding, and our intention is to supplement the excellent work in hematologic oncology already provided by the general oncologists in this region and beyond, so that we develop subspecialty expertise in collaboration with fine general oncology care close to home,” said Belinda Avalos, MD, vice chair of the Department of Hematologic Oncology and Blood Disorders.

In the last year, the formation of a leukemia program was realized with the hiring of section leader Jonathan Gerber, MD, and Michael Grunwald, MD, both from the Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins. They have done basic and translational work in leukemia stem cells and FLT3 inhibitors, respectively, in addition to extensive clinical research and practice.

Ifeyinwa Osunkwo, MD, was recruited from Emory University and is leading the sickle cell program. Nilanjan Ghosh, MD, from Johns Hopkins, recently arrived as the head of the lymphoma program. Dr. Ghosh is developing clinical trials using novel agents, such as ibrutinib, for lymphoma.

The new section head for plasma cell disorders is Saad Usmani, MD, FACP, who trained under Bart Barlogie, MD, one of the world’s leading experts in these disorders. “Dr. Usmani already has several multiple myeloma trials up and running,” said Edward Copelan, MD, FACP, chair of the Department of Hematologic Oncology and Blood Disorders. “In one study, he is looking at treatment with a monoclonal antibody combined with traditional approaches to find more effective treatments without increased toxicity.”

Omotayo Fasan, MD, who was recruited from the Fox Chase Cancer Center in Philadelphia, has also joined the expanding Hematology Department as director of apheresis for the new blood and marrow transplant program.

IMPRESSIVE ADVANCES IN CLINICAL RESEARCH

The Department’s number of clinical trials has rapidly increased under the direction of Drs. Copelan and Avalos, who just published a study from the Center for International Blood and Marrow Transplant Research. This retrospective study of more than 1,200 patients from more than 100 centers worldwide with acute myeloid leukemia analyzed outcomes in patients in first complete remission, using cyclophosphamide in combination with either busulfan or total body radiation, and found busulfan to be superior.

Dr. Gerber is building on previous work he began at Hopkins on detection of leukemia stem cells, the cells responsible for initiation and relapse of leukemia. “When we treat patients with acute myelogenous leukemia with chemotherapy, we’re treating every cell, both normal and malignant,” said Dr. Avalos. “Dr. Gerber has developed a unique assay that can detect leukemia stem cells that...
survive after chemotherapy, and he has shown that this assay predicts for relapses before patients experience overt clinical relapse. We’re hoping to use this assay to further define the molecular characteristics of leukemia stem cells to develop better prognostic and novel therapeutic approaches for our patients.”

“We have found both the cooperative groups and industry are interested in working with us,” said Dr. Copelan. “I believe this is because of the high quality of care and size of Carolinas HealthCare System, as well as the fact that our electronic guidelines include our clinical trials, showing that we work as a single entity to bring these trials to our patients.”

Within the last six months, the number of acute leukemia patients has more than tripled, with an even larger increase in the number of myeloma patients, according to Dr. Copelan. “I think patients are coming to us not only for clinical care, but because they know we have access to these important trials.”

NEW STATE-OF-THE-ART TRANSPLANT UNIT
On January 22, an adult blood and bone marrow transplant unit, as well as an adjacent apheresis unit and stem cell processing lab, opened. The first adult transplant took place in early March. Although a pediatric bone marrow transplant program is already available at Levine Children’s Hospital, donors for pediatric patients had to go to the local American Red Cross to have peripheral blood stem cells harvested. Within the next year, children will be able to have apheresis performed on-site, while adults are currently being pheresed on-site in the new apheresis unit.

Four of the 16 beds in the new unit are designated as critical care beds, allowing patients requiring intensive care to remain on the unit. “One of the unique features will be our ability to do virtual medicine,” Dr. Avalos said. “A Carolinas HealthCare System critical care specialist will be able to remotely view a patient around the clock as a second set of eyes in addition to the transplant physicians directly caring for the patient.” This is part of a unique approach to virtual critical care developed by Scott Lindblom, MD, and his team from Carolinas HealthCare System.

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Tarceva, which is frequently used to treat NSCLC. This group of patients has few good choices available.

“Early results of this study are extremely promising and demonstrate the effectiveness of a new class of drugs that could potentially save the lives of lung cancer patients,” said Daniel Haggstrom, MD, medical oncologist at Carolinas HealthCare System’s Levine Cancer Institute.

Updated Mobile App Offers Clinical Trials Search Functionality

Carolinas HealthCare System recently launched a Cancer Clinical Trials search feature to its existing Carolinas mobile app, which provides users with access to more than 164 active clinical trials at the System’s Levine Cancer Institute. The app is free to physicians, patients and the general public, and contains information about each trial, including eligibility, disease site, lead physicians/investigators, drugs or devices used, participating locations, and contact information.

“This user-friendly, searchable app is constantly updated with live trial availability,” said Mark King, assistant vice president of Clinical Trials at the Institute. “Patients and referring physicians across the country should find it helpful in identifying a cancer trial from our portfolio.”

Visit CarolinasHealthCare.org/carolinas-mobile-app to download the updated app.
Innovative Integrative Oncology Clinic Augments Conventional Therapies

PATIENTS BENEFIT FROM EVIDENCE-BASED COMPLEMENTARY THERAPIES

Results from the Centers for Disease Control and Prevention’s 2007 National Health Interview Survey showed that 64 percent of Americans who have had a cancer diagnosis used complementary therapy. Chasse Bailey-Dorton, MD, MSPH, co-medical director of the Integrative Oncology Clinic at Carolinas HealthCare System’s Levine Cancer Institute, suggests the clinic’s purpose rests in the answer to a single question: When patients with cancer turn to complementary therapies, what are they seeking? That initial question leads to others that help define the clinic’s goals:

- What can be done to reduce a patient’s cancer progression or the chance of a recurrence?
- What can be done to increase tolerance and support the efficacy of conventional cancer treatment?
- How can complications be prevented and quality of life maintained for people with cancer?

SUPPORTING PATIENTS AND IMPROVING OUTCOMES

Some patients seek out the clinic on their own; physicians or patient navigators refer others. In each case, the first visit consists of a meeting with either Dr. Bailey-Dorton, who is trained in both family medicine and integrative oncology, or Dr. Wendy Brick, co-medical director of the Integrative Oncology Clinic, who is trained in integrative oncology and medical oncology with a focus on breast cancer and survivorship. The physicians will inquire about the patient’s treatment, as well as any prior experience with integrative therapies. After completing a physical examination and necessary lab work, she develops an individualized treatment plan that includes nutrition, dietary supplements, exercise, spirituality, stress reduction and participation in one or more of the complementary therapies offered at the clinic. (See Evidenced-based Complementary Therapies).

“We ask if there is anything we can do to support the efficacy of conventional therapy and reduce stress. Everyone with cancer experiences stress,” Dr. Bailey-Dorton said. Referrals to the deep relaxation/mindfulness class help minimize anxiety and enable faster healing. Massage therapy and healing touch are also available. For some patients, meeting with a counselor or social worker is helpful.

“All services, with the exception of acupuncture, are offered at no charge to our patients,” she said. “Patients who may benefit from acupuncture, but can’t afford it, can apply for a scholarship.”

When needed, patients are referred to a pharmacist, trained in the use of dietary supplements, to check possible interactions between supplements they are taking and their cancer medications. “For example, drinking green tea may have beneficial effects, but green tea pills contain high concentrations of the polyphenol EGCG. This can block the effect of one of the chemotherapies used for multiple myeloma,” said Dr. Bailey-Dorton.

WORKING HAND-IN-HAND

The survey also found that among patients with cancer who use complementary therapy, only about 23 percent

REFER YOUR PATIENT

For more information or to refer a patient to Levine Cancer Institute’s Integrative Oncology Clinic, call 980-442-6344.
tell their healthcare providers about it. “Our goal is to be a safe place where patients can feel comfortable telling us about these things so we can work out a plan for them,” Dr. Bailey-Dorton said. “In addition to helping our patients, this also helps our physicians, because patients are asking about these therapies. Physicians know we offer reliable information. I’ve had several patients who were not even considering chemotherapy, but once they spoke with us, they were ready to do what their oncologist recommended.”

The integrative oncology team uses information from current research to create individualized care plans that complement patients’ cancer treatment plans. The goal is to have patients feel empowered, knowing they have the information and strategies they need to achieve the best possible outcomes. And, referring oncologists know that their patients are receiving exceptional evidence-based cancer care.

Evidence-based Complementary Therapies

According to Chasse Bailey-Dorton, MD, director of the Integrative Oncology Clinic at Carolinas HealthCare System’s Levine Cancer Institute, complementary therapies provide many benefits for patients with cancer. For example, acupuncture can reduce or alleviate the following side effects:

- Hot flashes in breast cancer survivors
- Pain from chemotherapy-induced peripheral neuropathy
- Swallowing difficulties and lack of saliva following chemotherapy and surgery in patients with head and neck cancer
cancer and bladder cancer. Several others are in various stages of development.

Equally significant is the opening of a 14-chair, phase I clinical trials unit, joining a handful of select sites across the United States that engage in the early testing of new cancer drugs.

Following the standard process for clinical research, protocols are available in acute leukemia employing immunologic approaches. One innovative study under way uses an assay for leukemia stem cells left behind after treatment to determine whether patients are likely to relapse and require additional treatment, such as bone marrow transplantation. When transplantation is required, patients will benefit from our new blood and marrow transplantation unit. (For more information, see page 4.)

TECHNOLOGY FOSTERS COMMUNICATION

Technology is central to our commitment to enhance staff collaboration and deliver superior patient care. Video links allow staff to participate in meetings regardless of their location. Clinical pathways for solid tumors and hematologic malignancies and non-malignant disorders are available electronically, enabling treatments to become more unified across the System.

BUILDING A WORLD-CLASS CANCER INSTITUTION

The inception of Carolinas HealthCare System’s Levine Cancer Institute was marked by the announcement of a $20 million gift from the Leon Levine Foundation in October 2010. At the research and administrative headquarters’ groundbreaking ceremony in March 2011, Carolinas HealthCare System officials described their vision of integrated cancer care with affiliated hospitals and recognized experts bringing innovations, quality and convenience to the diagnosis and treatment of complex and rare cancers.

With the opening of Levine Cancer Institute in October 2012, that vision unfolded into a fully functioning reality with nine cancer clinics, an infusion center, a phase I unit, a palliative care program, a teleconference center, a rooftop healing garden, a patient and family resource center, classrooms and consult rooms.

“Using this technology, physicians can gain access to how we treat specific cancers at various stages and new clinical trials across the network,” said Edward Copelan, MD, chair of the Department of Hematologic Oncology and Blood Disorders.

Carolina’s HealthCare System’s Levine Cancer Institute was recently presented with the 2013 Outstanding Achievement Award by the American College of Surgeons’ (ACS) Commission on Cancer (CoC). Levine Cancer Institute is one of a select group of only 74 U.S. healthcare facilities with accredited cancer programs to receive this national honor for surveys performed last year. The award acknowledges cancer programs that achieve excellence in providing quality care to cancer patients.

The purpose of the award is to raise awareness on the importance of providing quality cancer care at healthcare institutions throughout the U.S. In addition, it is intended to:

• Motivate other cancer programs to work toward improving their level of care.
• Facilitate dialogue between award recipients and healthcare professionals at other cancer facilities for the purpose of sharing best practices.
• Encourage honorees to serve as quality-care resources to other cancer programs.
• Educate cancer patients on available quality-care options.