The paint had dried, the lights were on and the last hard-hatted worker had left the building. After four years of construction, UAB's gleaming new Hazelrig-Salter Radiation Oncology Facility was ready for the movers.

But the work was just beginning for administrator Mark Bassett, Ph.D., M.B.A., and his colleagues in the UAB Comprehensive Cancer Center's Department of Radiation Oncology. They faced a monumental challenge, because this would be no ordinary move. How do you relocate an entire department from its longtime home into a brand new building while providing uninterrupted, high-quality care to cancer patients? And how exactly do you move a 20,000-pound machine?

Illuminating the Rays of Hope

A Move in the Right Direction

The answer is plenty of planning. In fact, the department has been developing and refining relocation plans for years while the new facility has been under construction.

Everyone involved agrees that the move is a step forward. Each year, UAB's radiation oncologists handle nearly 30,000 adult and pediatric patient visits from across Alabama and the Southeast. Until recently, those patients received their treatments in the 30-year-old Wallace Tumor Institute (WTI), a facility offering expert care but limited space and capabilities to handle the evolving needs of an active, vital clinical enterprise and the patients it serves.

Located across from UAB Hospital at 18th Street and 6th Avenue South, the new Hazelrig-Salter Radiation Oncology Facility covers 50,000 square feet on two floors. The spacious, state-of-the-art building is designed to house nearly all patient-care, research and administrative activities related to radiation oncology.

Cycles and Concrete

The relocation into the new facility is a staged move involving four cycles, Dr. Bassett says. The first cycle, in late February, moved the radiation oncology faculty and related administrative personnel, along with all their furniture, books, files and other necessary items. The second cycle, which began a week later, marked the beginning of the most crucial aspect of the move—the relocation of clinical care.

The Cancer Center delivers most of its radiation therapy with linear accelerators, high-tech machines that use electricity to form a stream of fast-moving subatomic particles, thus creating high-energy radiation for cancer treatment. The plans called for moving two of the linear accelerators from WTI to join a new one already installed in the Hazelrig-Salter facility.

Moving a linear accelerator is no easy task, however. First of all, the machines at WTI were buried several feet deep in concrete bunkers in order to fully absorb the radiation beams. Secondly, the walls of the treatment vaults surrounding them, also concrete, were five to six feet thick.

“We can’t just pick up the machine and move it,” Dr. Bassett says. “Chipping out the concrete takes a lot of careful work so that we don’t damage the machine. It also has to be done after hours and on weekends so that we don’t affect patient care.”

Workers began moving the first linear accelerator one Friday at 5:00 p.m. They removed the concrete and then disassembled the machine into several pieces—each one still weighing thousands of pounds. The pieces were then loaded onto trucks to make the X-block trip to the Hazelrig-Salter facility.

“Getting the linear accelerators out of the old building was tricky,” says Dr. Bassett. “Fortunately, WTI was built with a false floor by the loading dock, which allowed us to take out the ceiling grid and remove the machine. The new building has easy access in that the treatment vaults for the linear accelerators are at the street level.”

Each linear accelerator can be moved and reassembled in a weekend, although that is only the first step in relocating them. The radiation oncology department’s team of medical physicists must then realign and test the machines to make sure everything works perfectly and is exactly on target. This process takes about two months to complete for each machine, Dr. Bassett says.

Once the linear accelerators were secure in their new home, the second and third cycles of the departmental move were complete. The fourth and final phase, which is currently under way, involves moving the staff and equipment that remain at WTI. The entire four-month moving process will be finished by June 30 of this year.

Radiation Relocation

In addition to the linear accelerators, hundreds of other pieces of technology must be shuttled over to the Hazelrig-Salter facility from WTI. One group of items in particular has received a lot of attention and care: the department’s radioactive materials.

While linear accelerators generate their own radioactivity, other machines and radiotherapy techniques require separate radioactive sources. One example of this is brachytherapy, in which a radiation source is placed close to or inside a tumor so that it can administer radiation to cancer cells gradually.

Some of UAB's radioactive sources date back to the early 1970s. To ensure that safety standards are met, the department's physicists work with UAB's Division of Radiation Safety in the Department of Occupational Health and Safety to move these materials. Each source is transported separately in its own special container, accounted for and transferred into the new facility's "hot lab," a giant, concrete desk with tubes specifically designed to hold the containers.

Innovative and Inviting: Features of the New Facility

Seamless Care

Relocating a major cancer-treatment facility carries some unique challenges. "Usually when you have a giant moving weekend, there's a day or two afterward when issues come up, like the phones not working, but by the end of the week, everything has been ironed out," Dr. Bassett says. "But our situation is a bit different," with no opportunity for downtime, he adds.

Most radiation oncology patients require daily treatment, which means the department needs to have at least one linear accelerator up and running at all times. To ensure seamless care, UAB's radiation oncologists will treat patients in both the new facility and WTI until the final cycle of the move is complete.

"We have a lot of foot traffic between the two sites—doctors, residents, staff, etc.," Dr. Bassett says. "We have to staff two areas—two reception areas and two valet services, in addition to the clinical areas. Above all, we have to communicate with our patients. I want to make sure they are in the right place."

Where patients go for treatment during the move depends on which machine is used to deliver their treatment—though about a third of the department's patients already are receiving care at the new facility. "While it's tricky, having two sites allows us some flexibility so that we're always able to treat patients, especially if the move were to go off schedule," Dr. Bassett says.

Meeting the Challenge

The Hazelrig-Salter Radiation Oncology Facility is the culmination of several years of planning and fundraising by the Department of Radiation Oncology as well as the Cancer Center. After spending many years cramped in WTI, the department eagerly anticipates providing top-notch treatment to patients in a new, spacious facility—even with the daunting tasks and trials that come with moving into it.

“It’s a challenge to think of as many details as possible and be prepared for just about anything,” Dr. Bassett says. “We’ve been planning this for so long that there couldn’t be anything we haven’t thought of by now—though invariably something else will come up. It’s all worth it though.”