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CONQUEST

Where
there's breath,
there's life



THE UNIVERSITY OF TEXAS
MD Anderson
Cancer Center

Making Cancer History®

MISSION

The mission of The University of Texas MD Anderson Cancer Center is to eliminate cancer in Texas, the nation, and the world through outstanding programs that integrate patient care, research and prevention, and through education for undergraduate and graduate students, trainees, professionals, employees and the public.

VISION

We shall be the premier cancer center in the world, based on the excellence of our people, our research-driven patient care and our science.

We are Making Cancer History®.

CORE VALUES

Caring

By our words and actions, we create a caring environment for everyone.

Integrity

We work together to merit the trust of our colleagues and those we serve.

Discovery

We embrace creativity and seek new knowledge.



On the cover: Many cancer patients are given a chance to breathe easier thanks to pulmonary specialists at MD Anderson, who pay careful attention to their lungs and breathing function — before, during and after treatment.

Illustrator: Dave Cutler

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FRONTLINE

MENDELSON TO LEAVE 'THE BEST JOB'

WILL FOCUS ON RESEARCH PASSION

By Scott Merville

After 15 years as president of MD Anderson, John Mendelsohn, M.D., leaves a legacy of growth and excellence to turn his full focus to targeted cancer therapy research. This is a field he pioneered as a scientist and has championed as a leader.

As co-director of MD Anderson's new Sheikh Khalifa Bin Zayed Al Nahyan Institute for Personalized Cancer Therapy, he will return to clinical and translational research with Director Gordon Mills, M.D., Ph.D., chair of the Department of Systems Biology.



"I'm truly thrilled to step into this new role," Mendelsohn says. "I can again turn to what has been my passion for the past 30 years — working to develop and test new cancer therapies, which target the genetic and molecular abnormalities that cause the disease." Such targeted drugs open the door to customizing treatment based on the factors that drive an individual patient's cancer.

Mendelsohn's groundbreaking research on characterizing growth factor receptors and on blocking their stimulation of cell proliferation launched anti-receptor therapy as a cancer treatment.

By virtually any measure, the institution has more than doubled in size during Mendelsohn's tenure, while aiming for even higher excellence in patient care and research. MD Anderson's inpatient beds, outpatient clinical capacity, lab space, research grants, clinical trials, educational programs, budget and philanthropic donations greatly expanded. New institutes and centers of excellence focus collaborative efforts on vital issues in research and clinical practice.

"John Mendelsohn is the epitome of a visionary leader," UT System Chancellor Francisco G. Cigarroa, M.D., says. "Not only did he lead MD Anderson to be the nation's — and arguably the world's — greatest cancer center, he also brought out the best in the entire MD Anderson community.

"That's why patients, their families and all those whose paths cross MD Anderson will always be grateful to John Mendelsohn. He's an inspiration to The University of Texas System, and we're fortunate that he'll continue to make cancer history."

Mendelsohn will serve as president until a new leader is in place. The University of Texas System Board of Regents has launched a national search.

NOTE: THE SUMMER ISSUE OF CONQUEST WILL FEATURE JOHN MENDELSON'S LEGACY AND THE SIGNIFICANT ACHIEVEMENTS AT MD ANDERSON UNDER HIS LEADERSHIP.

"I've had the best job imaginable, working with amazing faculty, administrators and all employees, along with our many volunteers and supporters in the community.

I am grateful for the opportunity I've had to serve as their leader at MD Anderson, which is now well-recognized as first in the nation in translational and clinical research and the nation's number one hospital caring for cancer patients. I am confident MD Anderson will continue to lead that worldwide effort."

— John Mendelsohn, M.D.

INVESTIGATORS DELVE INTO COMPLICATED MECHANISMS OF CLL

An international team of investigators has discovered that the interplay among a major tumor-suppressing gene, truncated chromosomes and two sets of microRNA provides a molecular basis for explaining the less aggressive form of chronic lymphocytic leukemia.

“Our findings could reveal new mechanisms of resistance to chemotherapy among leukemia patients. This feedback mechanism could help us differentiate between patients with poor or good prognoses,” says George Calin, M.D., Ph.D., associate professor in MD Anderson’s Department of Experimental Therapeutics and co-director of the Center for RNA Interference and Noncoding RNAs.

REPORTED IN THE JAN. 4, 2011, EDITION OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

WHEN ‘INELIGIBLE’ PATIENTS MAY JOIN CLINICAL TRIALS

Newly diagnosed patients with acute myeloid leukemia and myelodysplastic syndrome who have an additional disease or lack good performance status traditionally have been ineligible for clinical trials and often for standard therapies. Now, a two-drug combination — 5-azacitidine and vorinostat — is safe and active in these patients.

“Our findings suggest current eligibility standards that prevent participation by these patients in Phase I and Phase II clinical trials might be inadequate,” says Guillermo Garcia-Manero, M.D., professor in MD Anderson’s Department of Leukemia.

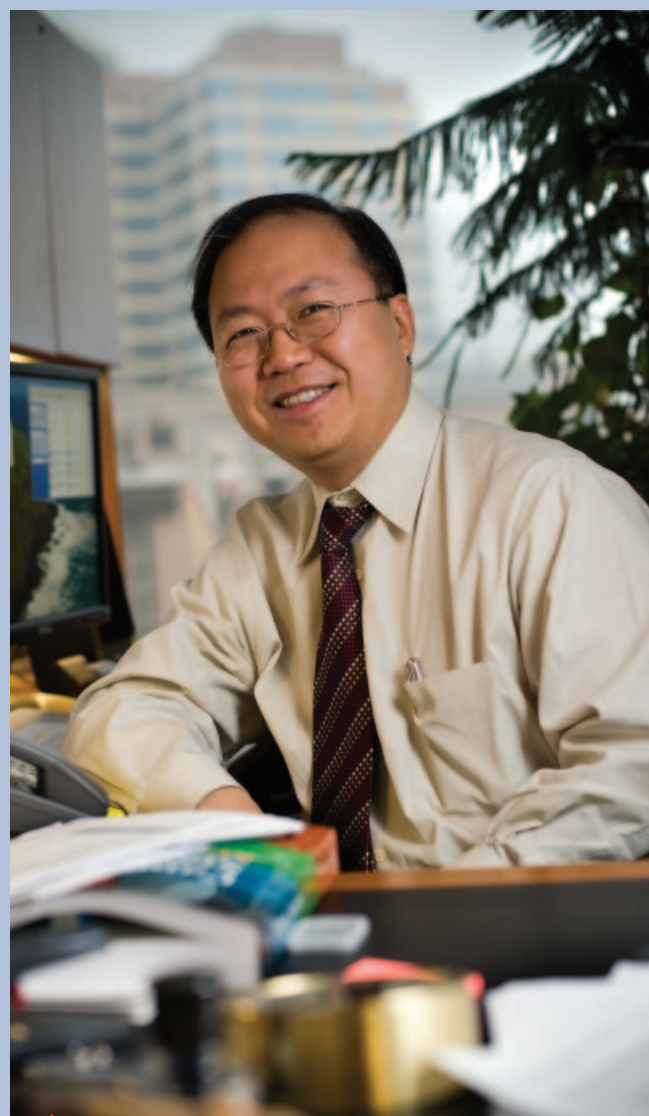
REPORTED IN DECEMBER 2010 AT THE 52ND AMERICAN SOCIETY OF HEMATOLOGY ANNUAL MEETING.

VACCINE TO TARGET GENETIC MUTATION

A vaccine that turns the immune system against certain brain tumor cells improved patients’ survival in a Phase II clinical trial. All these patients carried a genetic mutation that drives the most aggressive form of glioblastoma multiforme.

“This promising targeted therapy, CDX-110, blocks a key molecular signal that drives these tumors’ malignant features,” says Amy Heimberger, M.D., associate professor in MD Anderson’s Department of Neurosurgery and co-lead author on the paper. “The next step for the vaccine is a large Phase III clinical trial, which is in the planning stages.”

REPORTED IN THE OCT. 5, 2010, EDITION OF THE JOURNAL OF CLINICAL ONCOLOGY.



James Yao, M.D., continues to study the effectiveness of everolimus — an immunosuppressant agent used with organ transplants — on its own and in combination with other drugs.

REJECTION DRUG FOR RARE PANCREATIC CANCER

Everolimus, an immunosuppressant agent used to prevent rejection of organ transplants, improves progression-free survival for patients with a rare pancreatic cancer. The agent, also approved for kidney cancer, stops cancer growth. Called pNET, these pancreatic neuroendocrine tumors account for 1% of pancreatic cancers.

“Because treatment options available to patients with pancreatic neuroendocrine tumors are so limited, and the data in terms of the size of the treatment effect is so clear, I believe this research will have immediate clinical applications,” says James Yao, M.D., associate professor in MD Anderson’s Department of Gastrointestinal Medical Oncology.

REPORTED IN THE FEB. 10, 2011, ISSUE OF THE NEW ENGLAND JOURNAL OF MEDICINE.

HIGHER SURVIVAL RATE AT EVERY STAGE OF BREAST CANCER

A review of 60 years of MD Anderson patient records shows dramatic improvement in breast cancer's survival rates. Many research milestones have had an impact, including:

- advances in screening for disease detection,
- better surgical techniques available to more women,
- an increased number of therapies that reduce the risk of relapse,
- combined modality approaches to treatment of the disease,
- use of systemic therapies prior to surgery,
- refinement of chemotherapies, specifically the incorporation of anthracyclines, taxanes and biologics, and
- newer hormonal agents like aromatase inhibitors.

For this retrospective, single-institution study, Aman Buzdar, M.D., professor in MD Anderson's Department of Breast Medical Oncology, and his team reviewed records of 56,864 breast cancer patients seen at the institution between 1944 and 2004. Looking at five- and 10-year survival by stage (local, regional and distant, or metastatic), they found an impressive increase in survival in all three stages, as well as overall.

"In the first decade we tracked, 1944-1954, the 10-year survival of women with metastatic breast cancer was just 3.3%. However, between the decades of 1985-1994 and 1995-2004, the survival gain in the same cohort increased from 11.2% to 22.2%, respectively," Buzdar says.

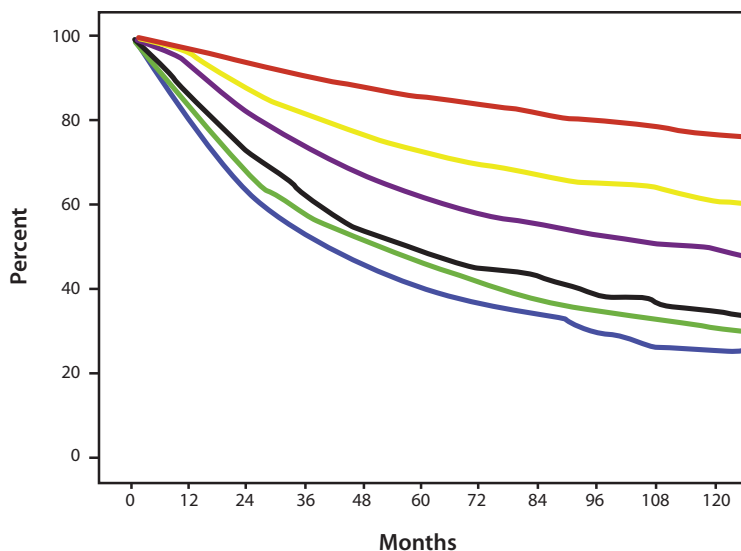
"Now we need to turn our attention to the refinement of breast cancer therapies, to further decrease risk of recurrence and death for our high-risk, early-stage breast cancer patients, and maintain disease control in those with metastatic disease."

REPORTED IN SEPTEMBER 2010 IN ADVANCE OF THE 2010 BREAST CANCER SYMPOSIUM.

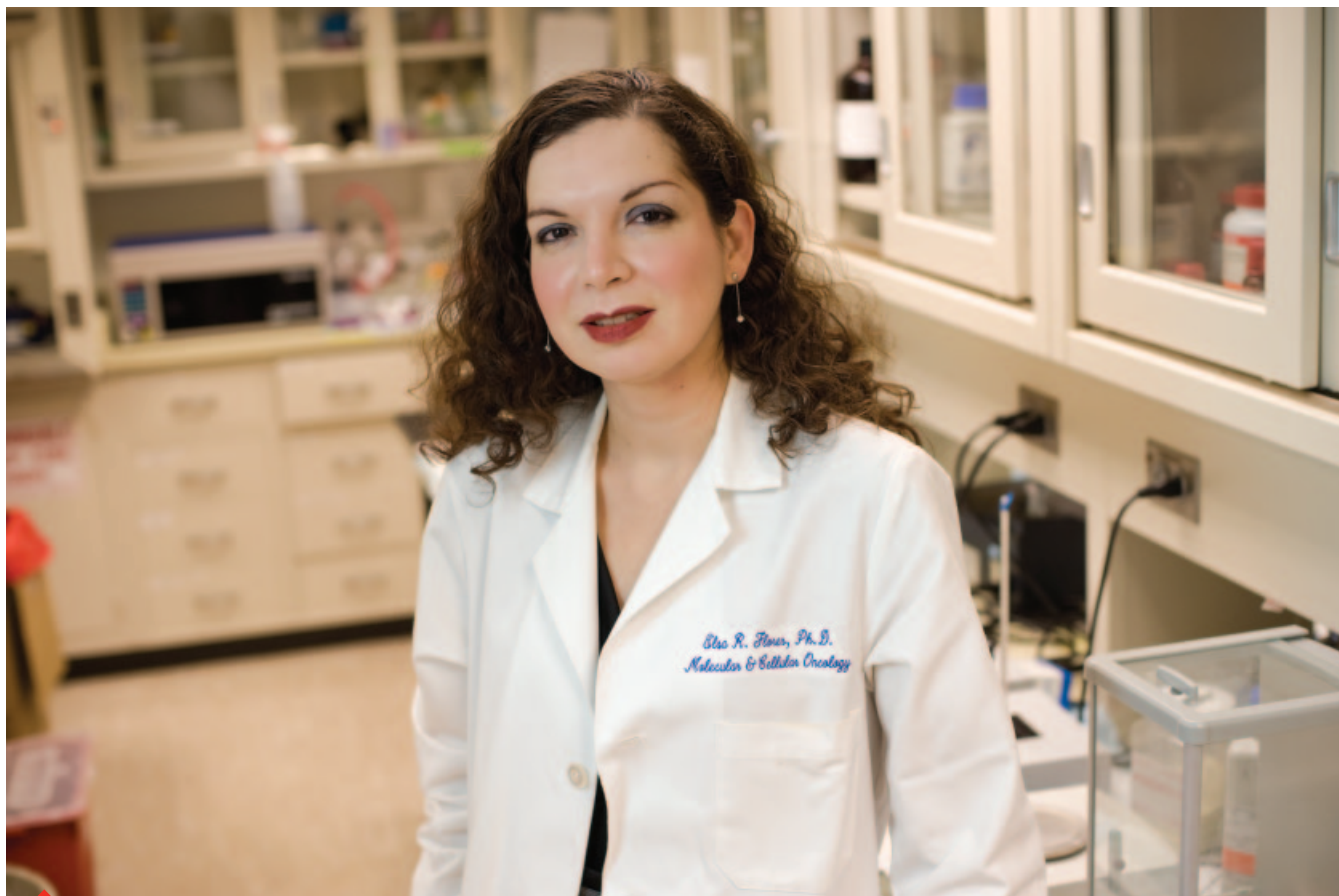


In a single-institution study, Aman Buzdar, M.D., found that survival rates for breast cancer patients increased significantly over the past six decades.

Dramatic improvement in survival rates for women with breast cancer treated at MD Anderson by decade at 60 months (5 years) and 120 months (10 years) ▶



Initial Presentation Year	% Survival at	
	60 Months	120 Months
1944-54	40.0	25.1
1955-64	46.4	30.5
1965-74	48.1	34.6
1975-84	61.8	49.3
1985-94	72.9	61.6
1995-04	85.8	76.5



SISTER GENE SHOWN TO BE MASTER REGULATOR

To understand how a family of genes works as a whole, Elsa Flores, Ph.D., and her colleagues are studying p53 and p63.

Long overshadowed by p53, its famous tumor-suppressing sibling, the p63 gene does the tougher, important job of stifling the spread of cancer to other organs in mice models.

Not only does a specific form of p63 protein block metastasis, but it also does so by activating the enzyme Dicer, which plays a pivotal role in the creation of microRNAs, tiny bits of RNA that regulate a host of cellular processes.

These findings have now been extended to human cancers, including metastatic mammary and lung adenocarcinomas and head and neck squamous cell carcinomas.

“p63 is a master metastasis regulator, an important role in its own right, but before now, no one understood how Dicer was regulated,” says senior author Elsa Flores, Ph.D., associate professor in MD Anderson’s Department of Cellular and Molecular Oncology, who led the basic science study using mice models.

REPORTED IN THE OCT. 21, 2010, ISSUE OF NATURE.

ARMED ANTIBODY FOR HODGKIN’S LYMPHOMA

An antibody loaded with an anti-cancer agent — brentuximab vedotin (SGN-35) — produced complete or partial remissions in 38% of patients with relapsed or therapy-resistant Hodgkin’s lymphoma.

“That level of objective responses to a drug is impressive for a Phase I trial,” says study lead author Anas Younes, M.D., professor in MD Anderson’s Department of Lymphoma/Myeloma. “There hasn’t been a new drug considered for Hodgkin’s lymphoma in 30 years. These encouraging results are being confirmed in a large Phase II trial.”

REPORTED IN THE NOV. 4, 2010, EDITION OF THE NEW ENGLAND JOURNAL OF MEDICINE.

TO FOLATE OR NOT TO FOLATE

Folate’s effect on cancer, once thought to be mainly preventive, has become less clear in recent years, with scientists finding cancer-promoting aspects of folate intake in colorectal, prostate and other cancers.

This discovery has created concern about a naturally occurring B-vitamin found in leafy vegetables, fruits, dried beans and peas. Its synthetic version, folic acid, has been added to breads, cereals, flours, pastas, rice and other grain products under order from the U.S. Food and Drug Administration. It is also taken as a recommended dietary supplement.

REPORTED BY JEAN-PIERRE ISSA, M.D., PROFESSOR IN MD ANDERSON’S DEPARTMENT OF LEUKEMIA, IN THE DECEMBER 2010 ISSUE OF CANCER PREVENTION RESEARCH.



Where there's breath, there's life

A VITAL SIGN GETS CLOSE ATTENTION

By Sandi Stromberg

Rodolfo Morice, M.D., shares the stories of patients and family members when he talks about the role of pulmonary medicine at MD Anderson.

First, he remembers a man with renal cancer who developed tumors in his airway. No treatment worked, but Morice was able to remove the tumors and allow the man to breathe. Three years later, when the cancer metastasized and nothing more could be done, the man thanked Morice, “You’ve given me three good years. In that time, my son got married and my grandson was born.”

And there’s the young woman who wrote him a thank-you letter, saying, “You don’t know me, but years ago, when I was 5 years old, you treated my mother. I’m grateful I had her for another five years.”

Lungs. We take them for granted. Yet, respiratory rate is one of the four vital signs, along with blood pressure, pulse and temperature. Doctors want to know: Are we breathing easy? Or are we laboring for every breath?

“For many years, however, pulmonary specialists in the community didn’t believe there was much for the treatment of lung cancer outside surgery,” says Morice, professor in the Department of Pulmonary Medicine. “In fact, 25 years ago, the American Thoracic Society reported that only 11% of lung cancer patients were even referred to an oncologist because if the disease was too advanced for surgery, there was little hope.

“On the other side, the oncologists were so challenged with treating the cancer that there was not much focus on the side effects of the disease and its treatments.”

Research discoveries over the last quarter century have changed patients’ options.

“Our goal is to improve patients’ quality of life during treatment and to keep them cancer-free and healthy,” he says.

A BROAD SPECTRUM OF PULMONARY CARE

In 1999, Burton Dickey, M.D., joined MD Anderson with a mandate:

- to contribute to the institution’s mission in all four areas: research, patient care, education and prevention, and

- to grow what consisted then of three pulmonologists in the Department of Medical Specialties into the Department of Pulmonary Medicine.

In 12 years, Dickey, professor and department chair, and his colleagues have continued to expand this charge. They perform advanced technological procedures, address sleep disorders and the need for pulmonary rehabilitation, and conduct basic and clinical research to better understand and develop interventions for:

- pneumonia (causes and prevention of this pulmonary infection),
- pleural effusions (the buildup of fluid between the layers of tissue that line the lungs and chest cavity),
- lung injury due to chemotherapy or radiation, which lowers ability to fight infection,
- lung cancer staging and palliation (alleviation of symptoms) and
- hemostasis (stoppage of bleeding) and thrombosis (formation of blood clots).

DOING SOMETHING FOR THE PATIENT

For his part, Morice has witnessed a monumental increase in the knowledge of pulmonary medicine. When he arrived at MD Anderson 26 years ago, he dealt primarily with a patient’s internal medicine issues prior to surgery.

Today, the department has 15 faculty members, who in addition to the list above, actively participate in early detection and lung chemoprevention trials; offer rotations for medical students, a fellowship program and annual training conferences; and study pulmonary complications associated with bone marrow transplantation.

At the end of the day, however, what is most important, he says, is that, “While we can’t always cure patients’ cancer, there are times when we can do something to improve their quality of life. We can help them breathe.”

▶ TECHNOLOGY PROVIDES ANSWERS

INTERVENTIONAL PULMONOLOGY

Rodolfo Morice, M.D., professor in the Department of Pulmonary Medicine, is a leader in the emerging field of interventional pulmonology, which focuses on the use of advanced technologies to diagnose and treat a variety of thoracic disorders.

- With bronchoscopies, interventionalists can diagnose tumors in lungs and airways and sample lymph nodes in the mediastinum (chest) to determine if the cancer has spread. They can also look at gene expression or remove tumors to keep airways open to allow the patient to breathe and undergo definitive cancer treatments or for palliative care.
- With catheters and pleuroscopies, they can drain fluid off the lungs and keep fluid from returning to help patients breathe, as well as provide a diagnostic work-up to determine the correct treatment based on the cause.

Morice, section chief of this specialty, also plays a major role as an educator, helping ensure, through medical rotations and hands-on conferences, that practicing physicians acquire the skills and competency needed to provide these services.



Rodolfo Morice, M.D., is dedicated to improving patients' quality of life through interventional pulmonology.

Vickie Shannon, M.D., recommends her patients to MD Anderson's Rehabilitation Center to help improve their breathing function.



▶ EXERCISE — BEFORE, DURING, AFTER

PULMONARY REHABILITATION

Getting the lungs back in working order is the domain of Vickie Shannon, M.D., professor in the Department of Pulmonary Medicine and director of Pulmonary Rehabilitation (PR).

“Although the majority of our patients are referred to PR for chronic obstructive pulmonary disease (COPD), we have successfully treated many patients with other chronic respiratory conditions. That includes those resulting from primary and metastatic cancers of the lung, thoracic resection and chronic lung injury secondary to cancer therapies, such as stem cell transplantation, radiation and chemotherapy,” Shannon says.

Until several decades ago, physicians thought that patients with severe chronic respiratory conditions such as COPD were incapable of exercise. “That’s been debunked. Patients with all phases of COPD can work out,” Shannon says.

“The impact that shortness of breath, fatigue and reduced ability to exercise have on quality of life is grossly overlooked in patient care. Patients feel empowered when they can engage in activities that they couldn’t do before, such as climbing a flight of stairs or taking a shower.”

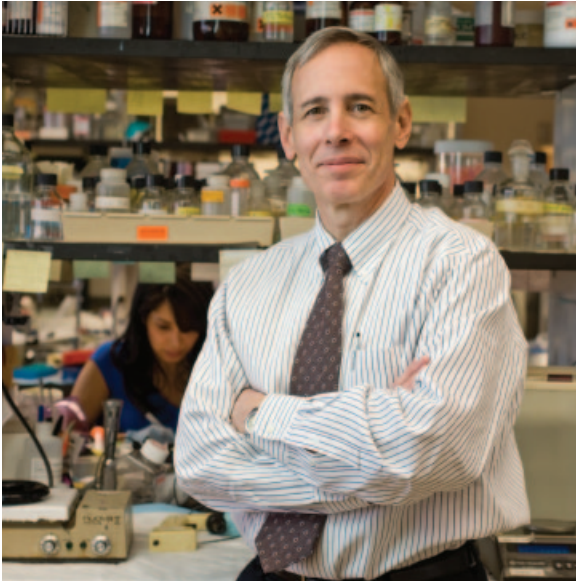
Through the pulmonary clinic, patients undergo a six-minute walk exam, exercise physiology testing and quality-of-life assessments. These are used to evaluate the safety of exercise and factors contributing to exercise limitation, then to develop an individualized exercise prescription.

Afterwards, patients are referred to physical and occupational therapists in the Rehabilitation Center at MD Anderson. The goal is to optimize their pulmonary status so they can more easily enter treatment or continue treatment and regain some quality of life.

RESEARCH IN REHAB

The mainstay of ‘cure’ for early-stage lung cancer is surgery, Shannon says. But certain patients aren’t eligible because of borderline lung function. She is currently investigating whether several weeks of preoperative PR improves surgical eligibility and lung cancer resection outcomes among this group of patients.

“Our investigation will explore the minimum optimum duration of preoperative PR that favorably impacts surgical outcomes in patients anticipating thoracic resection for lung cancer,” she says.



As professor and chair, **Burton Dickey, M.D.**, leads the Department of Pulmonary Medicine's research efforts.

► CLEARING THE AIRWAYS

RESEARCH IMPROVES OUTCOMES

All aspects of airway inflammation are the concern of Burton Dickey, M.D., professor and chair of the Department of Pulmonary Medicine, and his research faculty.

"We're studying molecular mechanisms to understand positive and negative aspects of airway inflammation and developing a clinical therapeutic to prevent pneumonia," he says. "We have tested an aerosol treatment in mice models that delivers molecules to the lung's lining and stimulates the body's defenses to kill invading microbes. We've found that the treatment protects against viruses, fungi and pneumonias, even anthrax — in mice."

The next step is to introduce this treatment, which could be especially important for leukemia patients, into the clinic.

GVHD AND THE SMALL AIRWAYS

Another area of emphasis concerns the pulmonary status of patients receiving stem cell transplants.

"These patients are susceptible to graft-versus-host disease (GVHD), which can lead to bronchiolitis, an inflammation of the small airways," Dickey says. "It can progress rapidly so patients can't breathe, and it looks like asthma."

"Building on the knowledge we are gaining in the laboratory, we've found that inhaled steroids can stop GVHD of the airways. Hypertonic saline aerosols can clear the airways of mucus, the build-up of which can prevent the delivery of anti-inflammatory medicine."

As research expands, Dickey and his group are also looking at how anti-inflammatory drugs can be used in lung cancer chemoprevention.



Diwakar (Dave) Balachandran, M.D., understands the impact of sleep-disordered breathing on the treatment of cancer patients.

► SLEEP DISORDERS BECOME SYMPTOM BURDEN

Yet another area of emphasis is MD Anderson's Sleep Center and Lab, which opened in 2006. Where do sleep and breathing cross paths?

"A lot has to do with sleep apnea, or sleep-disordered breathing, which is absence of breathing during sleep," says Diwakar (Dave) Balachandran, M.D., associate professor in the department and section chief of Sleep Medicine. "That's 80% of what we treat, and across the country it's the ailment that has a significant impact on morbidity and mortality. It also has an effective treatment."

NOT SLEEPING AFFECTS TREATMENT, PAIN

"Poor quality sleep causes a tremendous burden on our patients," Balachandran says. "It can affect their ability to comply with treatment, increase fatigue and lower quality of life. It is under-diagnosed, under-addressed

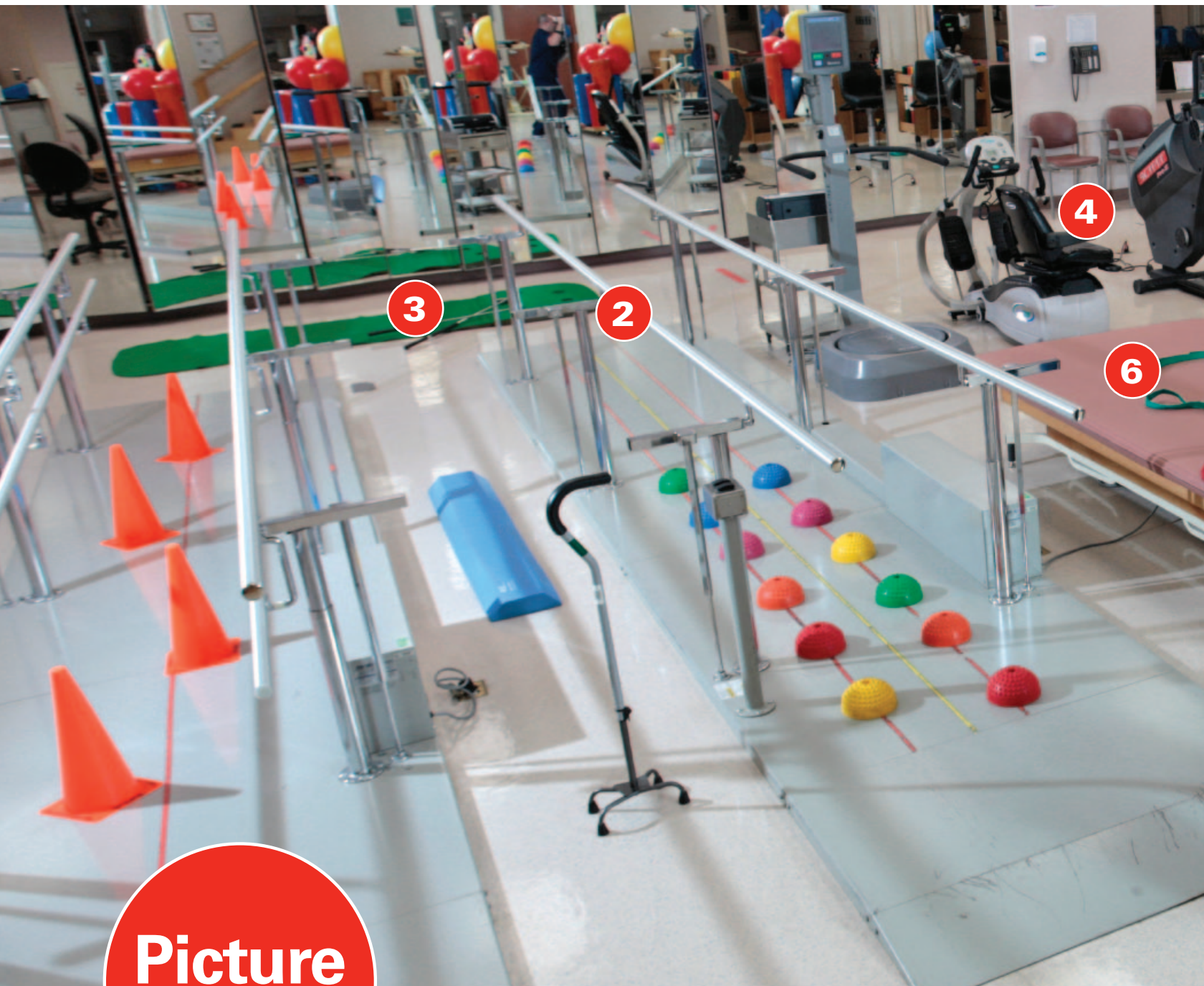
and under-treated, mainly because people don't understand its appearance. MD Anderson is ahead of other cancer centers in addressing this."

In addition, research shows that poor quality sleep increases pain awareness by lowering a person's pain threshold.

In the Sleep Lab, Balachandran and his colleagues use polysomnography, which measures sleep objectively, rather than using subjective patient self-reporting. The electrical signals it puts out evaluate breathing, abnormal movements and quality of sleep. It is being used in two research protocols to study the effect of certain drugs for hyperthyroidism and lymphoma on a patient's sleep.

"Sleep problems impact a large majority of patients with cancer who receive chemotherapy. Researchers found that more than three-quarters of patients have insomnia and other sleep disorders — nearly three times the rate found in the general population. Patients reporting insomnia were also significantly more likely to report depression and fatigue than those without insomnia."

"CLINICAL CANCER ADVANCES 2010," JOURNAL OF CLINICAL ONCOLOGY, DEC. 20, 2010



Picture This

Rehabilitation Services prescribes the right therapy

By David Berkowitz

Cancer and its treatments can sometimes have lasting effects on a patient’s physical and cognitive functions.

To address the needs of patients recovering from surgery or facing challenges related to their treatment, MD Anderson’s Rehabilitation Services team offers a variety of occupational therapy and physical therapy services.

Therapeutic intervention is provided to acute inpatients, acute/chronic outpatients and the inpatient rehabilitation unit. Services are delivered in several locations, including MD Anderson’s regional care centers, with more than half of all inpatients treated at the bedside.

In Fiscal Year 2010, Rehabilitation Services logged 15,524 total inpatient and outpatient visits.

A large facility in the Main Building includes workout equipment, private treatment rooms and a model apartment with a kitchen, laundry room and bathroom for training.



When our photographer stopped by, the clinic was being put to good use:

1. Junichiro Watanabe:

A neurofibromatosis patient, "Juni" was a martial arts enthusiast and practitioner before his diagnosis. He works with Occupational Therapist Jennifer Hughes and Physical Therapist Andrew Christensen to improve his balance and movement.

2. Parallel bars: Used for gait training, the bars provide support if a patient lacks balance. Colored sponges can be stepped on to challenge balance, and orange cones serve as an obstacle course.

3. Putting green: Among functional activities performed or simulated in the clinic, the putting green allows a golfer to practice while increasing standing endurance, whole body strength, eye-hand coordination and balance.

4. Exercise equipment:

A range of equipment includes a Biodex Balance System machine for balance assessment and retraining, NuStep® and treadmills for endurance activities, and ergometers for lower and upper extremities endurance.

5. Skeleton: Therapists use the human skeleton model to educate patients on how the disease process may be affecting their bones and joints.

6. Mat: Patients are placed on this platform for exercises that can't be accomplished while standing. It also is a surface for activities that require sitting balance.

7. Colorful equipment: Large balls help with increased core strength exercises; wedges provide comfort for patients positioned for exercise or to encourage certain movements; target practice helps with eye-hand coordination; and the red round scooter helps pediatric patients with increased trunk extension.



Barbara Summers, Ph.D., vice president and chief nursing officer (left), confers with Patty Johnston, director of clinical nursing, on Floor 16 of the expanded Alkek Hospital. Johnston co-led a multi-year design and activation team that designed new patient floors and rooms to maximize time nurses have with patients.

A formidable **FORCE**

Nurses reach for excellence,
innovation and safety

By Julie A. Penne

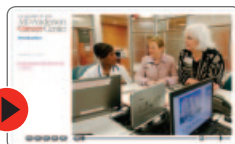
There are many definitions for excellence, but in nursing there is one measure that matters most: Magnet designation.

One of only 378 hospitals worldwide awarded the recognition, MD Anderson has earned the designation from the American Nurses Credentialing Centers three consecutive times.

In fact, with its first designation earned in 2001, the institution is one of the original 50 charter hospitals receiving the Magnet seal.

Magnet designation is one of the many components used by U.S. News & World Report in its annual survey of “Best Hospitals,” in which MD Anderson has been the number one cancer center for the last four years. Less than 7% of U.S. hospitals are Magnet-recognized, according to the American Hospital Association.

In addition to the statement it makes about the institution’s quality of patient care, Magnet also communicates to all levels of nurses who work outside of MD Anderson that the institution values its nurses and the contributions they make.



See more about MD Anderson’s Magnet recognition at www.mdanderson.org/conquest.



Jacqueline Anderson, Ph.D., director of nursing programs (left), and Kimberly Curtin, associate director of nursing programs, check in with clinical nurses Justin Bull (far right) and Rita Joy (middle) and Jessica Herbrich, respiratory therapist.

TWO PROGRAMS GET SPECIAL RECOGNITION

A rigorous process, Magnet re-designation gets more difficult with each renewal, says Jacqueline Anderson, Ph.D., director of nursing programs.

“With each designation renewal, every four years, the bar gets higher, and we’re challenged to show progress, innovation, impact and new goals,” she says. “Our Magnet designation is a great point of pride, but our nursing community never takes it for granted. We treasure it and pursue it because it’s so tough.”

In the completed 2010 application that spanned four large binders, a variety of nursing programs, people and solutions illustrated MD Anderson’s innovative approaches to fundamental issues and needs.

When the Magnet announcement was made, the surveyors cited the Good Catch Program (see pages 16-17) for its impact on patient safety and the Nursing Practice Congress (see pages 14-15) for its open outreach to all nurses to take hold of their practices.

For Barbara Summers, Ph.D., vice president and chief nursing officer the past seven years, the definition of nursing excellence is exceptional practice, transparent and effective governance and empowered nurses at the bedside.

“Individual nurses and the nursing community as a whole are demonstrating and returning, in very tangible ways, the extraordinary investment that MD Anderson has made in nursing education, empowerment, leadership and research programs,” Summers says. “Our nurses have had the power and the autonomy at the bedside all along, but now our community is truly showing its value to the institution, as well as the entire profession.”

“We make Magnet recognition a major goal. This designation recognizes our extraordinary community of nurses, their commitment to their profession and those they care for.”

— **Barbara Summers, Ph.D.,** vice president and chief nursing officer



Monthly meetings of the Nursing Practice Congress allow nurses and their multidisciplinary colleagues the opportunity to address issues from social work to infection control.

OWNING their practice

Congress hears, amplifies and channels the nursing voice

By Julie A. Penne

There's the voice of an MD Anderson nurse, and then there is the voice of nursing at MD Anderson.

To patients navigating their personal cancer journey every day, their nurse's voice is reassuring, confident, strong and compassionate.

As a collective voice of 2,800 professionals who want to improve, update or challenge clinical nursing practice standards, MD Anderson's nursing community speaks openly, autonomously, passionately and authoritatively.

The Nursing Practice Congress is their primary platform.

Established as a formal nursing governance structure in 2006, the Congress is composed of 35 nurses and 21 elected multidisciplinary representatives who are social workers, dietitians, physical therapists, pharmacists, patient advocates, chaplains and infection control specialists.

The Congress began as a nurses-only body but expanded and broadened its representation just two years later.

IT TAKES A VILLAGE

Nancy Tomczak, chair of the Congress, says the group's emphasis always will be on nursing practice, but seldom do nurses work in silos.

"The interdisciplinary work of the Congress is a direct reflection of our collaborative work every day in the clinics and units to provide outstanding daily patient care," says Tomczak, a clinical nurse on the Stem Cell Transplant Unit.

"Nurses are constantly reaching out beyond our ranks, so it's natural that we would extend that reach when we're looking at practice issues or procedures."

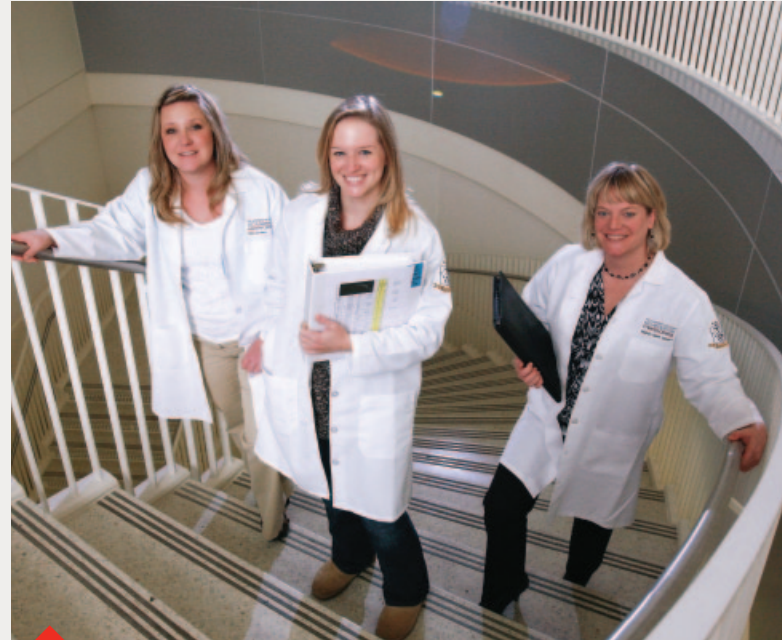
For the Congress, the Professional Action Coordinating Teams (PACTs) are the front line of engagement and action.

Though the makeup of the PACTs depends on the specific issue, the staff member who brings an issue forward to the Congress has the opportunity to chair the group and follow through until resolution. A PACT stays open until the issue is resolved. For some groups, it may be as short as six months, or it may be one to two years.

It is rare that the Congress will not take action on an item, though a PACT is not always the answer.



A PACT team that included Joan Arnim, in Patient Advocacy (left), Karen Whitmore-Radford, in Nursing, and Debbie Wright, with the Welcome Center, created packets for patients in need of emergency clean clothes.



Nancy Tomczak (left), Mary Lohman and Debbie Cline are current, past and first chairs of MD Anderson's Nursing Practice Congress, which received special attention during Magnet nursing recognition.

A CONGRESS THAT WORKS

Last year, the Nursing Practice Congress — mainly through the work of its PACTs — resolved 56% of the issues brought to its attention within the fiscal year when they were identified. Since the Congress began five years ago, 73% of issues have been resolved.

The issues, questions and problems assigned to PACTs by the Congress are primarily clinical practice questions, but they also can include educational or environmental matters that affect patients.

Recently, PACTs have:

- developed a new algorithm and order set for the management of acute chest pain,
- revised, based on current evidence, a new process for off-unit cardiac monitoring, which spurred a new policy and program for outpatients who require personal care items and
- developed a more consistent practice for changing dressings.

PACTs in progress are looking at:

- practices related to diabetes management,
- delirium assessment,
- speech pathology services,
- use of compression stockings and
- securing crash carts.

The PACTs rely on published outcomes and scientific evidence to come to a clinical solution, and the input and expertise of many staff members to move a policy through the institution. Sometimes an issue requires clinical and administrative acumen.

“Nurses now know to bring a problem, challenge or question forward to the Congress, and they’ll be heard,” says Debbie Cline, oncology nurse and the first chair of the Nursing Practice Congress.

Nursing Practice Congress Quick Stats

	FY 2008	FY 2009	FY 2010
Total issues submitted	47	25	21
New PACTs formed	18	15	14
Resolved issues	31	34	6
Resolution rate	53.4%	94.1%	55.9%
Total PACT members	776	655	882

– Nursing Practice Congress Annual Report, 2010

“Congress empowers them to ‘own’ their issue, work through the process and develop a resolution. The experience can teach nurses how to navigate the system and gives them the opportunity to grow professionally, while learning leadership skills.”

Patty Johnston, director of clinical nursing and program director of NPC, supported Cline’s interest in being involved in the Congress when the two worked together in the Stem Cell Transplant Unit. Johnston had been asked to revamp the former council structure into the current Congress after she had successfully developed a floor council to share in management decisions.

“What’s unique about MD Anderson’s Nursing Practice Congress is that it’s fully home-grown, but based on shared governance research,” Johnston says. “It’s a large body of all frontline nurses who work transparently and independently — on top of their own demanding jobs — to improve patient care and nursing practice. It’s the backbone of nursing at MD Anderson because it touches and influences what’s most important to us as nurses. We all can have a hand in it.”

The value of paying **ATTENTION**

Potential errors lead to better practices

By Julie A. Penne

This is the second of a three-part series on nursing. The third part will appear in the summer Conquest.



Jill Galinato Fryer, a clinical nurse, uses George's Velcro, a Good Catch solution to keep patients from tripping over multiple tubing and cables when they walk.

A coffee spill on the floor.

A pair of no-skid socks left behind in a patient's room as he or she takes a walk around the unit.

A set of EKG strips with a patient's private information lying on a worktable.

A prescription left out of a patient's large pharmacy order.

A busy nurse preparing a chemotherapy combination distracted by a nearby conversation.

A label on a drug vial inconsistent with the outside packaging.

Imagine these scenarios and more than 24,500 others like them playing out at MD Anderson this past year.

Fortunately, none of these situations resulted in a fall, medical mistake, patient privacy issue or threat to safety, but any of them easily could have.

Instead, these events were reported to MD Anderson's Good Catch Program. It welcomes, encourages and rewards such filings by staff throughout the institution, and makes changes based on the information.

ACCENTUATE THE POSITIVE

MD Anderson started the Good Catch Program in 2003 as part of The University of Texas System's "close call" reporting initiative for its six health care institutions. It has evolved into a non-punitive change agent for new processes, improved clinical practice standards and renewed the culture of proactive patient safety awareness.



Bob Massey, Ph.D., director of clinical nursing and the Good Catch Program, talks with Marilou Sequitin, assistant nurse manager. Janet Taubert, advanced practice nurse (far left), prepares medication on the red mat, known as the “no interruption zone.”

In the first 2 1/2 years of the program, only 174 events were filed anonymously. Today, between 1,500 and 3,000 reports per month are openly filed and available online.

What turned around the program and made it a source for productive change were simple approaches:

- adopt new and more positive terminology,
- redirect the program tone away from fear and punishment to openness, encouragement and reward and
- report back to the clinical community the steps taken to correct the potential error or risk.

VIGILANT DAILY CARE

Bob Massey, Ph.D., a registered nurse, assistant professor and director of clinical nursing at MD Anderson, says the Good Catch Program has roots in the chemical industry that rigorously analyzes near misses and implements detailed processes to prevent accidents.

“It’s the same concept with the Good Catch Program. We catch potential or actual errors, analyze what happened and then correct the action, process or system — all before it affects the patient.”

For the nurses on one inpatient unit, keeping a close eye out for potential or actual errors is part of their vigilant daily care of patients who have had complicated chest and lung surgeries. Each nurse has a goal to report at least three close calls per shift, and their observations have generated new ideas for safer practices.

SIMPLE SOLUTIONS

For example, Janet Taubert, advanced practice nurse, recommended putting down a spongy red mat designated a “no interruption zone” in her unit’s medication preparation area. Good Catch reports showed that nurses often were interrupted or distracted in the prep area, leading to potential errors. To keep each nurse focused on the job at hand, colleagues may not talk to the nurse working on the red mat unless there is a critical patient care question.

Clinical Nurse George Prado found a simple and inexpensive way to decrease patients’ risk of falls. Many post-surgery patients have multiple chest tubes and IVs. Yet, as part of their recovery, it’s important for them to walk and sit up. With a single Velcro strap, now known as George’s Velcro, the floor nurses bundle the tubing so a patient can move around much more safely. Other inpatient floors have adopted the simple solution.

Prado’s simple find in a hardware store and the Good Catch Program were both highlighted in MD Anderson’s Magnet application, calling out the two as examples of new nursing knowledge, innovations and improvements.

“Just like the skin is the first line of defense against infection, so is Good Catch our opportunity to protect patients from something that’s potentially harmful to them.”

— **Alison Carmichael-Bishop,**
assistant nurse manager

I***CARE**

Building the empathic side of oncology

By Lana Maciel

Conveying bad news to a patient or a patient’s family is one of the most challenging aspects of being a medical doctor, particularly in oncology. It’s an emotional, stressful and sometimes uncomfortable situation for both the patient and physician.

But through MD Anderson’s Interpersonal Communication And Relationship Enhancement (I*CARE) program, doctors have access to numerous educational resources. These are designed to help improve their communication skills and make them more comfortable handling difficult discussions.

Interactive workshops, lectures and online educational courses teach basic and advanced skills for having conversations about end of life, the transition to palliative care, error disclosure and more. The site also addresses how to:

- be sensitive to patients of other cultures,
- provide advice to patients who want to use alternative cancer treatments and
- discuss options when cancer treatments are no longer working.

Led by Program Director Walter Baile, M.D., professor in the departments of Behavioral Science and Faculty Development, and Project Director Cathy Kirkwood, I*CARE offers approximately 90 online educational videos of different scenarios featuring doctor-patient interaction. The modules, available at www.mdanderson.org/icare, also can be used to teach trainees.

Not only do these modules target the development of effective communication skills, but they also promote the physician’s ability to foster supportive relationships with patients.

“Emotions play such a powerful role in our relationship with patients,” Baile says. “There’s a lot of anxiety and sadness in bringing bad news to someone. What these modules teach is how not to let your emotions get in the way, yet still tell the truth.”



▲ **Case Worker Minette Famorca uses what she’s learned through I*CARE to interact more confidently and positively with a patient.**



Walter Baile, M.D. (right), works with Greg West, director of TV Productions for UT Television, to produce videos that demonstrate conversations and encounters between physicians and their patients.

SHRINKING THE BIG ELEPHANT

But it's not just doctors who benefit from the I*CARE program. Other staff members are also encouraged to attend workshops and take the courses that provide free continuing education and risk management education credits.

Module topics include how to:

- disclose abnormal test results,
- explore a patient's concerns when they decline to accept a certain treatment,
- address the question, "How much time do I have?,"
- inform a family member of a patient's death,
- discuss clinical trials,
- handle the situation when asked to continue futile treatment for a hopelessly ill patient and more.

The site has a special module, "On Being an Oncologist," in which actors William Hurt and Megan Cole portray doctors and discuss their feelings about the stressors of caring for patients.

The goal of these videos, Baile says, is to help doctors "take that big elephant in the room and shrink it down" so it's a more comfortable discussion for both parties.

"The scenarios cover a spectrum of conversations one might encounter in oncology," he says. "We try to make it comprehensive by demonstrating effective responses to key communication challenges.

At the same time, we also want the program to be interactive and engaging so that doctors can not only see, but also be encouraged to think and reflect on their communication with their patients."

One of I*CARE's noteworthy productions is the "Crossroads" module, which won three Telly Awards in 2010 for excellence in video and online production. In "Crossroads," Robert Buckman, M.D., Ph.D., adjunct professor in MD Anderson's Department of Behavioral Science, simulates a visit with a patient during which he has to relay news that her cancer has returned.

This series of videos shows different scenarios of the same conversation. Buckman demonstrates how his different responses at certain points in the conversation can affect the quality of the interaction, as well as the patient's emotional reaction and acceptance of the news.

"It's very rewarding to see people learn these skills," Baile says. "It's important for patients to know we're there for them."

THE ROLE OF SIMULATION

Perhaps the most interactive of the program's offerings are I*CARE's workshops. Participants present to the group a communication challenge they are experiencing. Then, they simulate the conversation through an enactment of the encounter by playing the role of the patient.

Dramatic role play helps physicians "stand in the shoes" of patients so they can better understand the patient's feelings and emotional needs. It leads to a more effective approach to the real conversation.

"Putting yourself in the place of another person is very important. It's a powerful teacher," Baile explains. "When you experience what it feels like to be given bad news, it shines a light on the skills that are important to do it compassionately and effectively."

Baile believes that oncologists and oncology staff can be therapeutic with patients beyond their technical expertise. Listening to patients, acknowledging their concerns and being empathic when they receive bad news are methods of support within the scope of skills of every doctor. They enhance trust and confidence in the doctor-patient relationship.



See more about Crossroads online at www.mdanderson.org/conquest.

New programs are closing the gap for young adult patient care



A chef's assistant (far right) at Rice Epicurean Cooking School instructs young cancer patients and caregivers Lori Wangerin (from left), Courtney Scott, Adam Scott, Angelina Esparza, Marisa Mir and Megan Trahan — at a Cancer180 gathering.

Somewhere in between

By Sara Farris

They're too old for the pediatric playroom and too young to relate to a waiting room of older patients. That's the experience felt by many adolescent and young adult (AYA) cancer patients.

Close to 72,000 teens and young adults are diagnosed with cancer each year in the United States, according to the National Cancer Institute. Their particular needs, both medical and developmental, make them misfits in either pediatric or adult centers. But that's all changing, and MD Anderson is one of the leaders ensuring it.

Not only does the institution focus on enhancing the care and experience for AYA patients, but it also works directly with patients and survivors to guide its programs.

HAPPY HOURS AND TALKING CHEMO WITH MOM JUST AREN'T THE SAME

Some of the most common remarks Elsa Morse, child life specialist who also works as a young adult specialist at MD Anderson Children's Cancer Hospital, hears when visiting with young adult patients are that:

- they feel alone;
- they've rarely met or even seen another patient their own age going through what they are;
- they've lost their independence and are relying on their parents again;

- they are isolated from friends due to treatment;
- as survivors, their friendships may have changed through cancer; and
- they find themselves with an experience that few of their peers can understand.

Marisa Mir, program coordinator for the Anderson Network, a program of MD Anderson's Department of Volunteer Services, is a young adult cancer survivor herself, and she understands these feelings. Over the past two years, Anderson Network has designed a special program for young adult patients, survivors and their friends called Cancer180.

MD Anderson-based, the program got its name from a young caregiver who said that when cancer strikes, life does a 180. Activities are open to all young adult patients and survivors, ages 18 to 39, regardless of where treatment is received.

Throughout the year, Mir arranges social events such as bowling, pottery making, cooking classes and other activities to bring young adult patients and survivors together in a fun setting.

"We've found that traditional support groups don't always appeal to some in this age group. Providing the opportunity for them to connect in a more social, non-medical environment allows the story sharing to occur in a fun and natural way," Mir says.

"I like the camaraderie I get when I go to the Cancer180 events," says Mark Gardner, a 28-year-old leukemia survivor. "It gives me a chance to see what other survivors are doing with their lives and catch up outside of the hospital. Plus, many of us share common issues as survivors, so we can discuss how we're handling them."



Kim's Place is a colorful recreation area for anyone 15-30 years old. It offers music, video games, basketball free-throw machines, movies, a mini-kitchen, computers and more. It was established as a tribute to Kim Perrot, a guard for the four-time champion WNBA Houston Comets, who died of lung cancer in August 1999 at the age of 32. She wanted to create a special place where young adults at MD Anderson could just hang out and be themselves.



Anna Franklin, M.D., opened MD Anderson's first fertility clinic in August 2010 to educate young adult cancer patients about cancer treatments and infertility.

'B' IS FOR BASKETBALL, NOT BABY

When a 16-year-old male is diagnosed with cancer, he isn't thinking of what he will name his first child. He just wants to know if he will live and how long it will be before he can return to workouts with his sports team. Fertility is the last thing on his mind, but it's at the forefront of Anna Franklin's.

Franklin, M.D., assistant professor at MD Anderson Children's Cancer Hospital, opened the institution's first fertility clinic in August 2010. She is joined by nurse practitioners, Donna Bell and Nicole Rosipal. Together, they consult with AYA patients about:

- their personal risk of infertility due to cancer treatment,
- options available for fertility preservation and
- financial resources to help with out-of-pocket expenses for fertility preservation.

In addition, Franklin is developing studies that will track patients' fertility status after treatment and investigate which methods prove to be more accurate predictors. By collecting better data, Franklin hopes to form more precise risk assessments for patients before starting treatment.

Recent technology has broadened the fertility opportunities for patients, even those who haven't reached puberty. Although some preservation techniques are still considered experimental, such as ovarian and testicular tissue banking, Franklin wants patients to be able to access those services in the future through referrals from the clinic.



Vocational Counselor Sandra Medina (left) helps patient Claudia Vasquez explore her career options. A series of tests confirmed that Vasquez is a good candidate for a nursing career.

“We hope that every physician initiates a discussion about fertility with a patient before treatment begins,” Franklin says. “Beyond that first conversation, our clinic serves as a resource to help guide patients step by step through the planning process. We want them to know their options and help them make the best choice.”

CT SCANS AND SAT TESTS — MAKING THEM WORK TOGETHER

Planning for the future entails more than fertility preservation. For young adults between the ages of 17 and 25, it centers on college enrollment or searching for a job. A cancer diagnosis can derail patients from achieving their goals, but career and vocational counselors Sujin Ann-Yi and Sandra Medina work to keep patients on track.

“It’s important to keep our patients focused on their goals because it helps motivate them to push through their treatment,” Ann-Yi says. “Cancer can often interrupt schooling or prevent patients from working. Our job is to collaborate with schools, employers and financial aid sources to protect our patients’ rights and help keep them on course.”

Ann-Yi and Medina not only work with patients on active treatment, but also with pediatric cancer survivors.

When Alexandra Saucedo was only 7 years old, she was diagnosed with osteosarcoma. Several years later and cancer-free, she was

referred to Ann-Yi for assistance with college enrollment. The two worked together to prepare Saucedo for college and work through the application process.

After changing majors twice, Saucedo became discouraged with her degree path. Ann-Yi stepped in again and helped Saucedo assess what careers would be best for her. Soon Saucedo enrolled in Houston Community College’s medical assistant program and was joined by Ann-Yi at the program’s orientation. Having finished her medical assistant program, Saucedo is on track to start nursing school at Texas A&M University.

“Working with Sujin has been wonderful. I can truly say she’s an important part of my life,” Saucedo says. “I’m not sure where I would be without her help over the past few years.”

Often patients and parents are surprised at some of the assistance available to them. For instance, Ann-Yi and Medina have researched colleges that cater to students with disabilities. They have negotiated to have scholarships put on hold and academic schedules altered while a patient undergoes treatment. Like with Saucedo, they also help patients and survivors enroll in college, find financial aid, explore career and vocational opportunities and prepare for job interviews.



Began in 2009, the Adolescent and Young Adult Advisory Council is modeled on MD Anderson's success with the Children's Cancer Hospital's Family Advisory Council.

PATIENTS KNOW BEST

Patients and their families are the experts about their bodies and should be viewed as partners, not recipients, when it comes to planning care. Believing in this concept, the Children's Cancer Hospital began an initiative within the Division of Pediatrics and MD Anderson to show the importance of family- and patient-centered care as part of its daily operations.

Led by Patty Wells, director of family-centered care, a Family Advisory Council was formed in 2008 and includes parents of

“Young adult patients may lose some of their independence during treatment, but they still expect respect from their medical team and want to be a part of the decision making.”

— **Elsa Morse**, *child life and young adult specialist, MD Anderson Children's Cancer Hospital*

pediatric cancer patients and hospital staff. The success of that council spurred an idea to create a patient advisory council. The AYA Advisory Council began in 2009 with members — 12 young adult patients and 14 staff — from various areas throughout MD Anderson.

“The AYA Council has been a way for me to explore the survivorship stage of cancer, and the ups and downs that come with it,” says Chad Tremont, a 26-year-old lymphoma survivor and co-facilitator of the council. “I like that our council actually has an impact on what services may be developed. I've also gained a better respect for the staff and what they're trying to do.”

Elsa Morse has been a member of the council since its inception and continues to value the insights she gains at monthly meetings.

“I like to hear the varying perspectives from our patients on active treatment to our survivors who have been off treatment for years,” she says. “When it comes to meeting the needs of this age group, there's no ‘one-size-fits-all’ concept that applies. We must recognize that to develop better patient and survivor programs.”

Although Morse is right that not every AYA program or service will meet every need of MD Anderson's patients, the hospital is moving forward and working hand in hand with patients to create programs and services for this unique age population. The hope: that no AYA patients will feel alone or without support through their cancer journey.

The best line of defense

Prevention studies build an arsenal of knowledge

By Katrina Burton

1. COLON CANCER UNDER THE MICROSCOPE

Translating lab discoveries into early treatment

For a person suffering with metastatic colon cancer, the feeling of hopelessness can be overwhelming. Though there are options for treating colon cancer in its early stages, such as chemotherapy and surgery, there are often few or no options available to cure the disease once the cancer has spread.

Imad Shureiqi, M.D., associate professor in the Department of Clinical Cancer Prevention, knows only too well how devastating this disease can be. As a physician-scientist, his research focuses on colon cancer risk, prevention and treatment.

“We’re looking at ways to end patient suffering through discoveries that will prevent metastatic colon cancer,” he says.

When not seeing patients in the clinic, Shureiqi works with his research team. One area of research focuses on identifying and differentiating cancer cells from normal cells to develop drugs that specifically attack cancer cells — a process known as molecularly targeted treatment.

His innovative idea involves PPAR-Delta, a protein associated with colon cancer development. He hopes to determine whether new drugs can be developed to target this protein to prevent metastatic colon cancer and treat early-stage colon cancer.

Metastatic or late-stage cancer cells can develop resistance to chemotherapy by changing their genetic code. “Treating the cancer cells early helps us stop the development of the tumor before it becomes a resistant tumor,” he says.

As researchers investigate better early-stage treatments, people can reduce their risk for colon cancer. He emphasizes that colon cancer screenings are important especially for those age 50 and older.

Obesity, early detection of colon cancer, toxic environments and genetic predisposition represent just four areas of study in the wide spectrum of research under way in MD Anderson’s Division of Cancer Prevention and Population Sciences.

Carried out by epidemiologists, behavioral scientists, cancer prevention experts and those researching health disparities, these studies focus on prevention and early detection of cancer. The goal: To gain a deeper understanding of risk factors and discover interventions that can prevent disease.



Imad Shureiqi, M.D., focuses on colon cancer risk, prevention and treatment.

This research is made possible by funding from MD Anderson’s Duncan Family Institute for Cancer Prevention and Risk Assessment.

“The support from the Duncan Family Institute is so important. It not only allows us to pursue new research directions, but it also helps to open the door for additional funding for promising new ideas,” Shureiqi says.



Susan Peterson, Ph.D., helped develop a website that educates families with familial adenomatous polyposis, a rare inherited condition.

2. RARE DOES MATTER

Empowering young people with hereditary cancer syndromes

No one, especially a teen or young adult, wants to learn that he carries an inherited gene mutation that puts him at high risk for colorectal cancer.

However, there is a rare inherited condition called familial adenomatous polyposis (FAP) that causes hundreds of polyps to develop in the large intestine, beginning around puberty.

“There’s a 50% chance that children born to a parent with FAP will inherit the same gene mutation,” says Susan Peterson, Ph.D., associate professor in MD Anderson’s Department of Behavioral Science. “Genetic testing is the best way to determine this possibility early on.”

As principal investigator on a study funded by a small business grant from the National Cancer Institute, Peterson has developed MyFAP in collaboration with Radiant Creative Group. A multimedia Internet-based intervention for teens and young adults, it provides education and emotional support for children and young adults living with FAP.

“Teens and young adults face different medical and psychosocial demands,” she says. “The goal is to empower them with skills and information to successfully manage FAP as they transition into adulthood. Although FAP is a rare condition, it’s important to families who are affected by it.”

Children who have FAP are advised to start colon screening around age 10. Preventive surgery to remove the colon is recommended when it becomes too difficult to remove polyps through screening. If left untreated, the polyps almost always develop into colon cancer by age 40.

“This intervention will not only be a resource for people with FAP, but also can be adapted to other hereditary cancer syndromes, too. The interactive elements and social networking really add to MyFAP’s appeal,” Peterson says.

She is also part of MD Anderson’s e-Health Technology, a program supported by the Duncan Family Institute for Cancer Prevention and Risk Assessment.

MD Anderson is one of the leading institutions in the care of families with FAP. The Clinical Cancer Genetics program has a network of physicians, genetic counselors and researchers throughout the institution invested in the detection and treatment of hereditary cancer.

“This rare condition knows no geographic boundaries. MD Anderson sees patients with familial adenomatous polyposis (FAP) from all over the country, so a web-based intervention is an optimal solution for educating patients, family, friends and other health care providers.”

— **Susan Peterson, Ph.D.**, *associate professor, Department of Behavioral Science*



María A. Hernández-Valero, Dr.P.H., worked with families in the Lower Río Grande Valley's Hidalgo County to determine the effect of environment on genetic stability.

3. TOXINS TAKE A TOLL

Home can be hazardous to your health

Living and working in dangerous surroundings can affect your personal safety — just as living and working in environmentally toxic areas can have an effect on your health. Participants in an MD Anderson pilot study are learning firsthand how unhealthy living environments can be.

María A. Hernández-Valero, Dr.P.H., instructor with MD Anderson's Center for Research on Minority Health in the Department of Health Disparities Research, is the lead investigator on this study. In collaboration with Asha Multani, Ph.D., assistant professor in the Department of Genetics, and others, she is working to determine the impact of genetic instability in Mexican-American children exposed to a variety of environmental toxins.

The study includes 60 children from the Lower Río Grande Valley's Hidalgo County. Her goal is to determine if the contaminated surroundings near their homes have an effect on their genetic stability, which is a risk factor for developing disease.

“Exposure may be during pregnancy, at birth or later. The younger the children are the more susceptible they are to chemicals,” Hernández-Valero says. “We’re looking at the number of chromosome breaks because the accumulation of genetic damage is thought to relate to cancer development.”

She hopes that the preliminary data collected from the pilot study will encourage funding agencies to support a bio-monitoring study — to follow the children for a period of five years — and help her develop interventions for those exposed to dangerous environments.

Her current work is funded by the National Institutes of Health's Center for Research on Environmental Disease.

“Long-term exposure to environmental toxics can have a profound effect on your internal system, thus increasing a person's risk to develop cancer.”

— **María A. Hernández-Valero, Dr.P.H.**, instructor, Center for Research on Minority Health

4. A LINK BETWEEN EPIGENETICS AND OBESITY

Does an imprinted gene leave its mark?

Research shows that there are more obese children today than there were 20 years ago.

While it's no secret that diet and physical activity contribute to a person's healthy weight, there also is evidence that genetics plays a role.

Obesity not only increases the risk of cancer, but also opens the door for a host of other diseases — particularly in certain ethnic groups. Preventing childhood obesity may reduce adult obesity.

To better understand this, Olga Gorlova, Ph.D., associate professor in MD Anderson's Department of Epidemiology, is lead investigator on a pilot study focused on discovering the effect on childhood obesity of genetic imprinting — the silencing of one of the parent's genes in the fetus.

“With an imprinted gene under study — insulin-like growth factor II — the father's copy is the one expressed,” Gorlova says. “It contributes to the fetus' size. I specifically chose children before puberty because the effect of this imprinted gene is more important at a young age.”

An organism's development and maintenance is orchestrated by a set of chemical reactions that switch parts of the genome off and on at strategic times and locations. Epigenetics studies these reactions and the factors that influence them.

Gorlova's basic science study involves the epigenetic testing of 100 Mexican-American children, in which normal weight children are compared with an overweight group. Gorlova chose Mexican-American children because there is not much research on this group.

The study also involves Mexican-American adults, in whom the epigenetic comparison is made between blood and saliva, to test how the method works on different cell types.

With funding from the National Institutes of Health's Center for Research on Environmental Disease and the help of collaborators providing the population sample and the epigenetic testing, Gorlova can obtain preliminary data that may help her gain funding for a larger study.

COLLABORATORS: MARSHA FRAZIER, PH.D., MELISSA BONDY, PH.D., MARÍA A. HERNÁNDEZ-VALERO, DR.PH.



Olga Gorlova, Ph.D., is searching for answers to obesity among Mexican-American children.

Cancer Briefings

MD ANDERSON LEVERAGES \$50 MILLION PICKENS GIFT ESTABLISHES \$500 MILLION ENDOWMENT FUND

In 2007, energy industry leader and philanthropist T. Boone Pickens made a \$50 million donation to MD Anderson. At the time, it was the largest single gift in the institution's history.

Terms of the landmark gift dictated that MD Anderson grow the money to \$500 million before the institution could put the funds to use. Pickens gave MD Anderson 25 years to accumulate earnings on the original principal and/or add funds from other sources.

MD Anderson surpassed Pickens' expectations. In just three years, it met the \$500 million mark and established the Pickens Research Endowment to increase the pace of research toward eliminating cancer.

"I'm delighted that MD Anderson has achieved this within only a few years," Pickens says. "I have expressed my desire to build a major legacy that would help ensure the excellence of the institution in the decades to come and make life better for those battling cancer. MD Anderson has done just that, and in a remarkable amount of time."

Endowments provide a permanent source of funding for specific purposes, so these funds will be preserved indefinitely as a stable source of research support. Income from the Pickens endowment will support basic, translational, clinical and population research at MD Anderson to create further progress in cancer prevention, detection, treatment and survivorship.



In 2007, T. Boone Pickens (left) and John Mendelsohn, M.D., president of MD Anderson, toured the institution's new 21-story academic tower that is now fully occupied and bears Pickens' name.

MD ANDERSON MEETS \$1 BILLION GOAL CAMPAIGN TO TRANSFORM CANCER CARE CONTINUES

MD Anderson's largest fundraising campaign ever — Making Cancer History®: The Campaign to Transform Cancer Care — has reached the \$1 billion mark.

This is more than two years ahead of schedule, thanks to the generosity of supporters around the world.

The campaign is raising funds for:

- research initiatives that range from cancer prevention to personalized medicine,
- an endowment aimed to educate and train the next generation of cancer research specialists and
- other research initiatives and philanthropic priorities such as the MD Anderson Children's Cancer Hospital.

The University Cancer Foundation's Board of Visitors, including campaign honorary chairs Barbara and George H.W. Bush and institution leadership, have decided to continue the philanthropic campaign.

To fund areas of most critical need, MD Anderson has increased the goal to \$1.2 billion. The hope is to raise the additional \$200 million by the end of 2011, the institution's 70th anniversary year.

"We are incredibly grateful for the generosity of so many who are helping us in the crucial mission to eliminate cancer, and thankful for the support that's enabling great progress against this disease," says John Mendelsohn, M.D., president of MD Anderson. "Some areas of the campaign remain underfunded, however. Many donors have expressed a continued interest in the opportunity to be part of the campaign."

Officially begun in September 2006, the campaign has received more than 550,000 gifts from individuals, corporations and foundations around the world.

"Funds raised during the campaign are essential to launching pivotal new research and driving concerted progress," says Patrick Mulvey, vice president for development. "MD Anderson is making great strides in the fight against cancer, and much of that progress got its start through philanthropic gifts."

TEXAS CENTER FOR CANCER NANOMEDICINE TWO TOUGH CANCERS TARGETED

New funding allows investigators to explore how innovative nanotechnologies may improve the outcome of patients with ovarian or pancreatic cancers, two of the hardest to detect and most difficult to treat.

With a \$16 million, five-year grant from the National Cancer Institute's nanomedicine initiative, four other research institutions join MD Anderson in this blending of expertise: The University of Texas Health Science Center at Houston, The Methodist Hospital Research Institute, Rice University and Albert Einstein College of Medicine in New York.

With a growing understanding that nanoparticles hold potential for medical use, these team members have adapted a variety of substances. These include gold, silicon and tiny balls of fat called nanoliposomes and chitosan, derived from crustacean shells.

"Our understanding of the natural and physical barriers that impede development of drugs guides the advancement of our nanomedicine approaches for the prevention and personalized treatment of cancer," says Gabriel Lopez-Berestein, M.D., professor in MD Anderson's Department of Experimental Therapeutics, one of the principal investigators and a pioneer in the field.



From left: Albert Black, chairman, Baylor Health Care System Board of Trustees; Victoria Jordan, Ph.D., director for Quality Measurement and Engineering; Joseph Nates, M.D., accepting the award; John Bingham, vice president, MD Anderson's Department of Performance Improvement; Thomas Feeley, M.D., vice president for MD Anderson's medical operations; and Dan Stultz, M.D., president/CEO, Texas Hospital Association.

BILL ASTON AWARD FOR QUALITY

INCIDENCE OF VENTILATOR-ASSOCIATED PNEUMONIA REDUCED TO ZERO

For efforts that have led to reducing the incidence of ventilator-associated pneumonia (VAP) in its intensive care unit (ICU) to zero, MD Anderson received the Texas Hospital Association's inaugural Bill Aston Award for Quality.

VAP is the most lethal health care-associated infection and increases ICU stays by up to 22 days and hospital stays by up to 25 days.

In 2002, Joseph Nates, M.D., joined MD Anderson and learned that the ICU's VAP rate was 34.2 cases per 1,000 ventilator days, double the national average for trauma ICUs. The following year, he and his colleagues implemented aggressive multidisciplinary strategies to reduce the VAP rate. By 2009, that rate had dropped to zero.

"Many of the techniques we're using today had not even been published when we started eight years ago," says Nates, professor in the Department of Critical Care and medical director of the ICU. "That's why you have to keep learning and working on the problem. We haven't eliminated the causes. If we don't continue to work on the factors that lead to VAP, the infections will come back.

"The main reason for achieving a rate of zero for the past year is that we've been persistent. We have a cohesive and aggressive multidisciplinary team that consists of physicians, nurses, respiratory therapists and infection control specialists who work together toward this common goal."

SCOTT MERVILLE, MICHELLE MOORE AND SANDI STROMBERG CONTRIBUTED TO CANCER BRIEFINGS

Moving Forward: Vittorio Alliata di Montereale

By Mary Jane Schier



Vittorio Alliata di Montereale of Honolulu recalls his apprehension after completing chemotherapy for chronic lymphocytic leukemia (CLL) nine years ago.

“I was asking what to expect, but Dr. (Michael) Keating told me not to worry about CLL. He said I should go back to Hawaii and enjoy my life to the fullest,” Alliata says. “And I have done more than that.”

Today, at age 55, Alliata is trim and ready for his next triathlon, including a world championship later this year. He and his wife, Dialta, have five children — two sets of twins in college and a 17-year-old daughter.

The Alliatas were living in Los Angeles when he was diagnosed with CLL in April 1999. He came to MD Anderson after learning that Michael Keating, M.D., was “the best in the world for treating CLL.”

When he met Keating, professor in the Department of Leukemia, Alliata was advised that he didn’t need therapy right away. Keating recommended careful monitoring, explaining that CLL usually progresses slowly and that a more effective combination of drugs was on the horizon.

CLL, the most common type of leukemia in the United States, is an often-silent disorder in which too many white blood cells are produced in the bone marrow and the body’s lymphatic system. Keating’s visionary clinical research over the past three decades has helped make CLL a highly treatable chronic disease.

To live with magnificent sunsets

Before his diagnosis, Alliata and his family had vacationed in Hawaii. “We fell in love with the beautiful scenery, friendly people and great opportunities for a healthy lifestyle,” he explains. In August 1999, they moved to a postcard-perfect area of Honolulu.

“Where else can you see the magnificent sunsets 365 days a year?” he asks. By September 2001, Keating thought Alliaata was ready for the three-drug chemotherapy FCR (fludarabine, cyclophosphamide and rituximab). The patient had his first treatment at MD Anderson, then the next five treatments in Honolulu.

“I had no problems during the treatments,” Alliaata says. Even though he felt great, he was concerned about the future when he saw Keating in early 2002.

“He told me there probably were hundreds of things I could worry about that might kill me, but that list did not include CLL. Then he gave us a big bear hug,” Alliaata remembers fondly.

By the time he celebrated his 50th birthday in 2006, Alliaata had decided “approaching middle age wasn’t so bad, thanks to Dr. Keating ... and I began seriously training for a triathlon.” He placed first in his age group in three local competitions, and then qualified for a national championship last September in Alabama.

Alliaata says the triathlons for his category include swimming 1,500 meters, biking 40 kilometers and running 10 kilometers. He recently qualified for a world championship in Beijing next September.

Prince and princess and five children

Alliaata is an Italian prince whose title dates back to the Holy Roman Empire. His full name: Prince S.R.I. (Sacro Romano Impero) Vittorio Alliaata di Montereale. Many people call him Prince Vittorio and his wife Princess Dialta.

The couple met in Rome, where Alliaata was born. “I thought Dialta, who was from Florence, was ravishing,” he confides.

Not only were they Italian, but they also were in similar professions. Alliaata was publisher of a magazine and a film producer, while his future wife was a magazine director and also a filmmaker. After marrying, they had five children in three years, confronted his CLL and decided to move to Hawaii to provide the best quality of life and education for everyone.

Their children are twin girls, Azzurra and Yana, 20; twins Fabrizio and Mirtila, 19, and daughter Allia, 17. The four oldest attend college, and Allia is a high school senior. All are fluent in multiple languages and have an encyclopedic knowledge of different cultures gained from visiting many parts of the world.

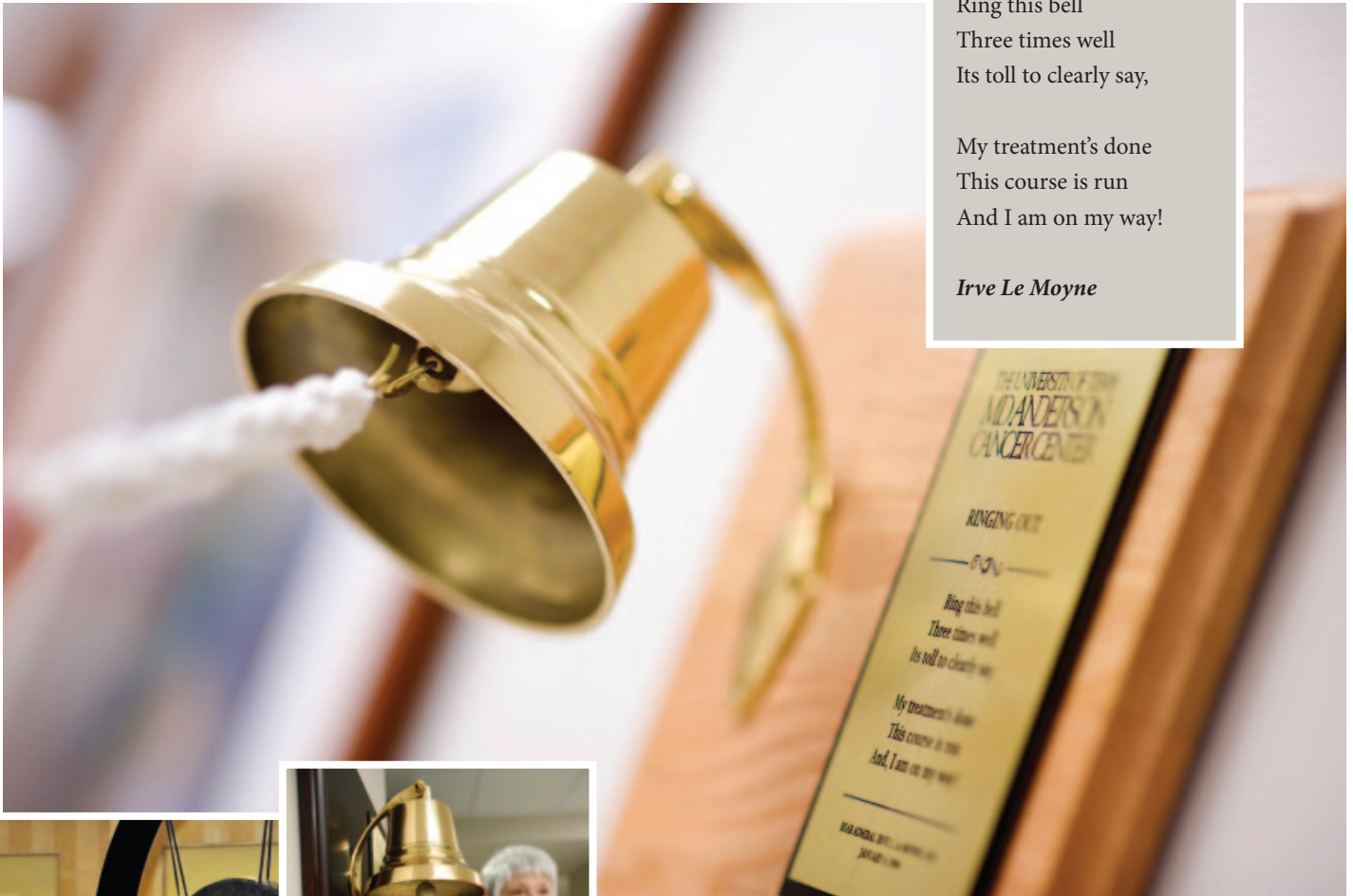


Vittorio Alliaata with his wife, Princess Dialta, who was a magazine director and filmmaker when the two met.

Over the years, summer travels have included sailing in the Mediterranean, exploring Pompeii, hiking on the volcano Stromboli while sailing in the Aeolian Islands, and seeing dozens of art exhibits, musicals and theatrical plays. A frequent favorite trip involves returning to the Palazzo Cini, a museum in Venice founded by Alliaata’s grandfather, Vittorio Cini, and containing a priceless art collection.

“I’m blessed with a wonderful wife and five extraordinary young adult children of whom we are very proud. Not a day goes by that I don’t thank Dr. Keating for helping me live my life to the fullest,” Alliaata says.

Signs of Hope



Ringling out

Ring this bell
 Three times well
 Its toll to clearly say,

 My treatment's done
 This course is run
 And I am on my way!

Irve Le Moyne



RADIATION TREATMENTS RING TRUE

Patients celebrate completion with bells and gongs

MD Anderson's radiation treatment facilities have all the bells and whistles — with emphasis on the bells.

Department of Radiation Oncology faculty and staff used their expertise and the latest technology to treat more than 7,000 cancer patients last year.

When their treatment was completed, many of those patients celebrated by ringing a bell at MD Anderson's centers on the main campus, in the Greater Houston area and in Albuquerque, N.M.

The now-widespread tradition was introduced in 1996 at MD Anderson when U.S. Navy Rear Admiral Irve Le Moyne, a patient with head and neck cancer, installed a brass bell at the main campus Radiation Treatment Center.

Patients who finish treatment at MD Anderson's Proton Therapy Center make a bit louder noise by banging a gong to symbolize the restoration of balance, harmony and life energy.

— David Berkowitz

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LOCATIONS

In addition to MD Anderson's main campus in the Texas Medical Center in Houston and two research campuses in Bastrop County, Texas, the institution has developed a number of local, national and international affiliations.

Houston Area

Regional care centers: Bay Area (Nassau Bay), Bellaire, Katy, Sugar Land, The Woodlands

Outside of Texas

MD Anderson Cancer Center-Orlando (Fla.)

MD Anderson Radiation Treatment Center at Presbyterian Kaseman Hospital (Albuquerque, N.M.)

Banner MD Anderson Cancer Center (Gilbert, Ariz.) opening in 2011

International

Centro Oncológico MD Anderson International España (Madrid, Spain)

MD Anderson Radiation Treatment Center at American Hospital (Istanbul, Turkey)

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