Taking Control

UConn Health is the first hospital in New England to use new robotic technology to diagnose lung cancer sooner, increasing patients’ chances of survival. p.8

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Program Promises Speedy Evaluation for Cranial Nerve and Brainstem Disorders 6

Making the Connection to Help hATTR Sufferers 12
In her first year as dean of the UConn School of Dental Medicine, Dr. Sharon Gordon seeks to apply the concept of interprofessional learning to shape the future of health care.

Forming Alliances to Build a Better Care Model

As medicine moves toward an integrated approach to care, UConn’s new dental dean sees a greater role for dental medicine in the delivery of that care, and a strong foundation already in place to make that happen.

Dr. Sharon Gordon, who arrived from the East Carolina School of Dental Medicine last summer, says it’s part of what drew her to UConn: the rich history of partnership between the medical and dental schools, but notably the basic sciences curriculum they share in the first two years, focusing on interprofessional training.

“We’re perfectly poised to move to the next steps, which would be providing clinical care together,” she says. “The idea is students moving into the clinics together, learning how to take care of patients together, so when they graduate they will be prepared for interprofessional practice.”

Health care financing already is trending toward a more holistic view of the patient and greater emphasis on outcomes, a next step is recognition of the connection between oral health and overall health, Gordon says. “Thinking about dentistry and where it is on the spectrum of reimbursement, if we don’t embrace that, we’re going to be left behind.” Gordon says. “But more importantly, the evidence shows that more comprehensive care of the patient gives better health outcomes overall.”

To help UConn Health get there, Gordon wants to continue building on the concept of students working in group-practice clusters in the clinic. A program fittingly known as CONNcept (Connecticut Comprehensive Education and Practice Team), established under the leadership of Gordon’s predecessor, Dr. R. Lamont “Monty” MacNeil, aims to simulate a true practice setting. As part of this, Gordon’s vision also includes incorporating nursing students, students from Tunxis Community College’s dental hygienist program, and, eventually, expanded-function dental assistants. Collectively, these disciplines can train together and, ultimately, practice together, improving patient outcomes through this new model of care.
Research doesn’t stop when we report it. Here are updates on past UConn Health Journal stories:

**Hearing Loss**

UConn Health otolaryngologist Dr. Kourosh Parham and his colleagues are collaborating with French pharmaceutical company Sensonor to develop a blood test that can warn patients and their doctors of early damage to the inner ear, before hearing loss is noticeable. Parham and his colleagues report in Hearing Research that levels of prestin, a protein found only in cells in the inner ear, rise sharply when those cells are damaged and start to die. Currently, hearing loss can only be identified after it has occurred.


**Health Disparities**

Men and boys of color in Connecticut are less likely to have health insurance, more likely to be victims of violence, and more likely to die early from preventable diseases than their non-Hispanic white counterparts, UConn’s Health Disparities Institute reports in its inaugural Connecticut Report Card on Health Equity Among Men and Boys of Color. The report identifies social experiences that can negatively impact health in the population, as well as actions the state can take to address the disparities.

Summer 2016, “Bringing the Health Care Gap”

Visit healthjournal.uconn.edu/archive to read the original stories.

**Old Drug, New Hope for Pediatric Brain Cancer**

Some drugs for heart disease might also work against brain cancer, according to an analysis by researchers from The Jackson Laboratory (JAX), Connecticut Children’s Medical Center, and UConn Health. The researchers used a new approach to identify five heart medicines that might also be effective at fighting the most common type of childhood brain cancer, they report in Science Translational Medicine.

Medulloblastoma is the most common malignant brain tumor in children, according to an analysis of childhood brain cancer, they report in Science Translational Medicine. Medulloblastoma is the most common malignant brain tumor in children, accounting for 20 to 25 percent of pediatric brain tumors. Current treatments have significantly increased the survival rate, but many children face difficult side effects that impact their brains, hormones, and fertility for the rest of their lives. There are also a handful of patients who either don’t respond to available treatment options or suffer and die from relapses. To quicken the long route to developing cancer drugs, the research team used a process called drug repositioning, reanalyzing drugs previously approved by the FDA and looking for crossover among the diseases that a drug is likely to treat. Using computational modeling methods, they compared approved drugs’ effects on gene expression profiles — that is, what genes they work with or against — to the genes active in patients with various diseases.

But medulloblastoma tumors are complex and often very different from patient to patient, and even internally in a single patient. Dr. Ching C. Lau thought drug repositioning could work to find better drugs for medulloblastoma, but suspected the technique could be improved. Lau, who is jointly appointed as a professor at JAX, UConn Health, and Connecticut Children’s Medical Center, heads the division of pediatric hematolymphology at UConn Health and is the medical director of hematology-oncology at Connecticut Children’s. Lau worked with a team of researchers from those institutions, as well as from Houston Methodist Research Institute and Texas Children’s Hospital, to devise a new integrated drug repositioning method that could work against something as complicated as medulloblastoma.

Their new method has identified eight drugs as possible medulloblastoma-fighting agents, including three already used as chemotherapy against other cancers and five previously used to treat heart failure.

The researchers also showed that one of the heart drugs, digoxin, helped mice with medulloblastomas live longer. The mice survived even longer when digoxin was combined with radiation.

“This is exciting because not only can we potentially improve overall survival of medulloblastoma patients with digoxin, but the results also suggest that we could potentially reduce the dose of radiation necessary when combined with digoxin, and thereby minimize long-term side effects of radiation among the survivors,” said Lau. “Because digoxin has been used for so many years to treat heart failure, its potential side effects are well known, and could potentially help speed up the subsequent clinical trial.”

**School of Medicine Reaccredited**

Through a vote at an October 2018 meeting, the Liaison Committee on Medical Education (LCME) accredited the University of Connecticut School of Medicine education program for another eight-year term. The School of Medicine was deemed satisfactory in 92 of the 93 elements and compliant with all 12 standards of the accreditation criteria by the LCME, which is recognized by the U.S. Department of Education as the authority for the accreditation of medical education programs. “We are pleased with this positive outcome and would like to thank the various faculty and staff members who were so instrumental in this remarkable achievement,” says Dr. Bruce T. Liang, dean of the School of Medicine, who directed the effort to prepare for the accreditation of the medical education program. “Since a new curriculum was recently introduced, there are several elements that will continue to be monitored, but we are committed to working diligently toward strengthening the program even further.”

Spring 2019
New Program Promises Speedy Evaluation for Cranial Nerve and Brainstem Disorders

UConn Health this winter established New England’s first Cranial Nerve and Brainstem Disorder Program, bringing together a multidisciplinary team of experts to streamline care for patients with such conditions.

Led by esteemed neurosurgeon Dr. Ketan R. Bulsara and ear, nose, and throat specialist Dr. Daniel Roberts, the team collaborates with specialists from nearly a dozen departments and will encompass clinical care, research, and teaching.

“One of the core principles of patient care at UConn Health is a multidisciplinary approach to providing personalized care to optimize patient outcomes,” Bulsara says. “The Cranial Nerve and Brainstem Disorder Program extends that core principle by bringing together world-renowned experts in their fields. We are fortunate at UConn Health to have such an accomplished team across so many different specialties that is willing to work together to provide the best care for our patients.”

The program guarantees rapid evaluation of patients, regardless of whether they were diagnosed recently or long ago. Patients or practitioners can submit a request through the center referral portal, which is staffed by Bulsara and Roberts. For neurological or ear, nose, and throat issues, the patient will be offered an initial evaluation appointment that is within a week of their request.

If the cranial nerve or brainstem issue is not related to the ear, nose, and throat or a neurosurgical issue, the patient is not related to the neurosurgical or ear, nose, and throat issues, the patient will be offered an initial evaluation appointment that is within a week of their request.

“This program brings together world-renowned experts.”

— Dr. Ketan Bulsara, neurosurgery chief

STEALTH CONDITION RISKIER THAN PREVIOUSLY THOUGHT

The Western world’s most common genetic disorder is a “stealth condition” that causes far more death and disability than previously thought. Hemochromatosis, which causes people to absorb too much iron from their food, quadruples the risk of arthritis, doubles the risk of liver disease, and causes a higher risk of heart disease and chronic pain, report researchers at UConn Health and the University of Exeter.

It’s thought that the extra iron absorption was advantageous for northern European women during the iron-rich food supply. Although more than 1 million Americans have hereditary hemochromatosis, few doctors are taught to look for the condition in the early stages of joint pain and tiredness, when it can be easily treated.

TARGETING TRICKY TUBERCULOSIS

Tuberculosis is a sneaky disease. The bacteria that cause it allow themselves to be eaten by the immune cells sent to destroy them. But instead of dying, mycobacterium tuberculosis sets up housekeeping and multiplies before busting out to infect more cells. Antibiotics can’t find the bacteria, so the only time the mycobacterium are vulnerable are when they hide, where they hide, or are cruising for a new cell to infect.

Areas of care include neurology, psychological disorders, and anorexia nervosa, anorexia nervosa, anorexia nervosa, and related disorders.

“Brainstem and cranial nerve disorders are quite rare, and often require experts from different areas for complicated issues.”

Alcoholics and drug addiction can also be treated.

“With patients being able to access care in a very timely and expedited fashion is key,” Roberts says. “A patient can call us and we’ll say, ’We’ll see you within a week’ to get the ball rolling and help direct them through this complicated process.”

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“The future of this.”
UConn Med Students First to Learn With New Handheld Ultrasound

"It’s totally intuitive," says third-year medical student Sam Southgate. "It’s like a modern tech device rather than a piece of medical equipment."

Third-year medical student Zach Bovin agrees: "The first thing I noticed was that the [image] quality was as if I had the big ultrasound machine next to me."

First- and second-year medical students are using devices in their anatomy lessons. Herbert says, and fourth-year students recently used them during a four-hour ultrasound session as part of their preparation to transition to residency.

Butterfly Network aims to democratize health care, marketing director Guru Sundar says, whether that means providing devices to physicians in underserved areas or to students who might not have previously had the opportunity for such hands-on ultrasound experience.

"I hope to incorporate ultrasound into the first- and second-year Delivery of Clinical Care course, where they can ‘see the heart after learning how to listen to it, or ‘see the liver and thyroid after learning how to examine these organs," Herbert says. "I also hope to have some of the fourth-year students independently scan while on certain clerkships, such as emergency medicine and critical care."

The units are also being used in the Emergency Medicine Residency Program, where they allow students to get hands-on experience.

"It’s been very exciting," says Dr. Meghan Herbst. "I also hope to have some of our UConn Husky athletes having scans done on the outside. But then their docs could bring the scans to us for a second read because they trusted us," says Dr. Leo Wolansky, head of radiology at UConn Health. "It’s our moral obligation to take care of our own people, but it was a lot of unpaid work too, he observes.

Wolansky worked with the team at BIRC, along with regulatory and business development staff at UConn Health, to get permission from the state to use the center’s machine for medical imaging. The machine was set up to run clinical scans, and hardware was installed to transmit medical data securely from the BIRC, which is located in the Phillips Communication Sciences Building in Storrs, to UConn Health in Farmington.

UConn Health doctors can now schedule MRIs for their patients at the BIRC in Storrs for Monday and Wednesday afternoons as easily as if they were going to the imaging center in Farmington. Urgent scans can be squeezed in at other times on a case-by-case basis. The BIRC’s capacity will free up some space at UConn Health, bringing new patients into the system, and is not expected to impact research done at the center at all.

"The biggest benefit is the integration between campuses. It’s a huge success for us to do this," says Pamiko Hoeft, director of BIRC, noting that revenue from the scans will enhance the financial stability of the center.

Wolansky, who is based in Farmington, agrees.

"Even though [patients] may be 40 minutes away by car, when we read the scans [at the imaging center in Farmington], it’s no different than if the patients were down the hall," says Dr. Leo Wolansky, chair, UConn Radiology.

UConn Health patients in eastern Connecticut will now be able to get MRI scans done in Storrs just as if they were at UConn Health in Farmington, thanks to a collaboration between doctors and researchers at the two campuses.

UConn’s Brain Imaging Research Center (BIRC) houses a powerful 3 Tesla Magnetic Resonance Imaging (MRI) scanner that was installed in 2015 and originally dedicated purely to research. The BIRC’s machine can take detailed pictures of fine structures in the brain, do functional MRI, and spot tiny flecks of blood that might signal a concussion or spine injuries. But the state had not previously licensed the BIRC’s machine to perform medical work.

"Soon after I started as chair, it became clear we had a long history of our UConn Husky athletes having scans done on the outside. But then their docs would bring the scans to us for a second read because they trusted us," says Dr. Leo Wolansky, head of radiology at UConn Health. "It’s our moral obligation to take care of our own people, but it was a lot of unpaid work too, he observes.

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Supporters of U.S. Supreme Court Justice Ruth Bader Ginsburg breathed a collective sigh of relief this winter after two cancerous nodules were successfully removed from her left lung through a lobectomy. Ginsburg’s cancer was found during the routine testing done after the fit 85-year-old fractured several ribs in a fall, and for a moment the diagnosis cracked the seemingly invincible façade of the octogenarian icon.

Although Ginsburg’s cancer was found by chance, her story is a great example of how early detection and swift action can improve the likelihood of survival for lung cancer, the deadliest cancer for both men and women in the U.S. by a wide margin. More people die of lung cancer each year than of colon, breast, and prostate cancers combined, and more than half of people with lung cancer die within a year of being diagnosed, according to the American Lung Association.

But when the cancer is detected early, before it spreads beyond the lungs, the five-year survival rate jumps from 5 percent to 56 percent. The
A revolutionary precision technology now at UConn Health is making early diagnosis easier than ever.

“...the accuracy of this is going to pan out to be second to none. I think this is the tip of the iceberg in diagnosis.”

UConn Health is the first hospital in New England and among the first in the nation to offer robotic bronchoscopy on the Monarch platform from Auris Health, allowing physicians to quickly diagnose lesions detected through low-dose CT scans, including those that are small or in hard-to-reach parts of the lung.

“Before this technology, the targets would’ve had to be bigger. I wouldn’t be able to make certain angles without the robotic arm to navigate,” says Dr. Omar Ibrahim, UConn Health director of thoracic oncology and interventional pulmonology. “I have a higher degree of confidence and accuracy with this than with prior equipment.

“The ability to diagnose the cancers at an earlier stage will allow us to surgically manage the disease,” he says. “This is the only chance for a cure.”

With its user-friendly, video-game-style controller, the Monarch platform allows the physician to move the endoscope up and down, left and right, forward and backward through a lung and its bronchi. Buttons on the controller make the scope of view bigger or smaller, while others control suction or irrigation.

Procedures are done in the operating room under general anesthesia. Within about an hour, the doctor will biopsy the suspicious nodule and a lymph node for analysis by a pathologist. The patient can go home the same day.

If cancer is confirmed in the lung, it will then be staged to see how far it has advanced. A team of cancer specialists then develops an individualized treatment plan that is ideal for the patient and their specific type and stage of cancer. A patient’s treatment plan might include surgery to remove a small portion of the lung or the entire lung, radiation therapy, chemotherapy, medications, and immunotherapy.

Not only does earlier diagnosis improve patients’ chances for survival, but it also helps reduce unnecessary stress, says Wendy Thibodeau, the lung cancer nurse navigator at UConn Health’s Carole and Ray Neag Comprehensive Cancer Center.

“We have had patients where initial and subsequent biopsies are inconclusive. A decision then has to be made: remove the nodule surgically, or watch it for growth,” Thibodeau says.

“This can be stressful on a patient. They either have to go through a significant procedure they may not have needed or wait to see if the nodule gets worse. This technology will give us better accuracy for appropriate tissue sampling, making the decision more clear.”

Routine screenings of high-risk patients — those with histories of smoking, especially — using low-dose CT scans and minimally invasive techniques help detect lesions and diagnose more people all the time. The Monarch platform is the next step in improving outcomes for lung cancer patients, and Ibrahim sees even more groundbreaking advances on the horizon.

“Within the next year or two, this technology should allow us to treat lesions with radiofrequency ablation [a minimally invasive procedure that uses heat to destroy cancer cells],” Ibrahim says. “Diagnosis and treatment could be done all at the same time.”

In his time at UConn Health, Ibrahim has worked to improve the experience of UConn Health’s lung cancer patients, particularly through a multidisciplinary team that allows patients to come to one clinic to see a variety of doctors.

“Since we’ve enhanced and personalized the way we care for lung cancer, the number of lung cancer patients at UConn Health has quickly increased,” says Ibrahim. “Time to diagnosis and treatment is tremendously shorter, and patients are happier with the quality of their care.”

He believes the robotic bronchoscopy technology will allow the team to deliver even better results.

“The accuracy of this is going to pan out to be second to none,” says Ibrahim. “I think this is the tip of the iceberg in diagnosis, and the therapeutic aspect of it, which will evolve over time, is really exciting. Being at the forefront of that is amazing.”

To make an appointment for a lung cancer screening scan, call 844-777-LUNG. If you or your patient has a lung nodule or mass, call the hematology/oncology nurse navigator at 860-692-8455.
A rare but debilitating condition, hereditary amyloidosis (hATTR) presents as seemingly unrelated illnesses that mask the root cause. But increased awareness and new treatment options bring hope for sufferers of this devastating genetic condition.

By Stacey Mancarella
Illustrations by Yesenia Carrero
Hereditary amyloidosis is a rare, debilitating disease that affects an estimated 50,000 people worldwide. But because of seemingly unrelated symptoms tied to an array of illnesses, experts believe many more people are misdiagnosed or undiagnosed. If a patient is experiencing two or more of the following symptoms, they may be a candidate for hATTR screening tests:

- Carpal tunnel
- Cardiomyopathy
- Nausea
- Weight loss
- Dizziness
- Shortness of breath
- Atrial fibrillation
- Chest pain
- Congestive heart failure
- Peripheral neuropathy symptoms such as tingling, numbness, and burning in the feet and hands
- Kidney problems including nephritic syndrome and renal failure

To refer a patient for a free hereditary amyloidosis screening, call 860-679-7505.

Hereditary amyloidosis is a genetic disease that results from a mutation in the TTR gene, which codes for a protein called transthyretin (TTR). Normally, this protein transports thyroxine and vitamin A in the body, but when the mutation occurs, it causes amyloid deposits in the heart, nerves, muscles, and other organs. These deposits can lead to heart disease, peripheral neuropathy, and other health problems. Hereditary amyloidosis is often called hATTR amyloidosis, where ATTR stands for amyloidosis due to transthyretin.
Treating Traumatized Immigrant Children

Q&A with Julian Ford, Ph.D., Director, Center for Trauma Recovery and Juvenile Justice

How is trauma impacting these young people?

They are impacted by violence in their countries of origin and on the journey to the U.S., as well as by race-related and institutional trauma in this country. Many develop a sense of fear, distrust, and even hopelessness that interferes with their relationships, school, adjustment to new communities, and their physical health. These problems can persist for many years.

How can physicians provide the best care to these patients?

Immigrant youths and their families, especially recent newcomers, have come to the United States in a period of turmoil and controversy that has heightened the stress they face in coming to a new country and new community. Many may feel reluctant to seek health care for fear of facing prejudice or discrimination. Providing a clear message of welcome and acceptance, in addition to showing interest in learning and respect for their culture and traditions, is essential to forging a positive treatment relationship — and can reduce patients’ anxieties and contribute to better health outcomes.

What behaviors do they exhibit as a result?

These youth are often distrustful as a result of trauma, and can be very withdrawn or impulsive in their attempts to protect themselves. This is a form of “survival coping,” which results from further trauma. This is a form of “survival coping,” which results from further trauma. This is a form of “survival coping,” which results from further trauma. This is a form of “survival coping,” which results from further trauma. This is a form of “survival coping,” which results from further trauma. This is a form of “survival coping,” which results from further trauma.

Is there a plan in place to help youths who suffer from this type of trauma?

The National Child Traumatic Stress Network has established more than 15 programs nationally for these youths. The Center for Treatment of Developmental Trauma Disorders and The Center for Trauma Recovery and Juvenile Justice, of which Ford is the director, are members of the network. This network was established by the federal government in 2001, and its centers provide public education, counseling, advocacy, and behavioral health treatment services for children and families, as well as consultation to community leaders and policymakers.

Benign Breast Disease Specialist Provides Follow-Up and Reassurance

While it would be a huge relief for a patient to find out a growth in her breast is noncancerous, she might still require follow-up care. That’s where Dr. Dana Scott comes in.

Scott, who recently joined UConn Health’s obstetrics and gynecology team at the Charlotte Johnson Hollifelder Center for Women’s Health, specializes in breast health and cancer genetics. In addition to providing routine OB/GYN care, Scott is referred patients who have breast issues that aren’t cancer.

These might include breast pain, breast infections, noncancerous lumps, and fibroadenomas. Some patients with benign breast disease may need an excision while others simply need continuing check-ups. Additionally, she sees patients at high risk for breast and gynecologic malignancies due to their family history and/or a genetic mutation.

“Benign breast disease is a common issue that arises, but it’s not something that typically has received a lot of focus in medical care,” Scott says.

Being able to develop a benign breast disease program, which is unique in the area, drew Scott to UConn Health, she says. “The chair of my department [Dr. Molly Brewer] was very open-minded and eager to have someone with a different background and training. The surgical oncologist [Dr. Christina Stevenson] was very open to working with me and developing a mechanism for women with benign breast diseases to receive care.”

As part of an American College of Obstetrics and Gynecology committee, Scott is working to develop new screening guidelines for those at risk for early-onset breast cancer, with funding from the National Cancer Institute and Prevention.

Scott stresses that it is important for OB/GYN and primary care doctors to get good family histories from patients. They should also lower their threshold for referring patients to a genetic counselor. “Genetic testing for risks of breast, ovarian, and other cancers has become a lot more accessible and affordable,” she says.

In addition to her unique background, patients will find a listening ear in Scott. “I try to really listen to my patients and spend the appropriate amount of time with them to hear their concerns,” she says. “Especially with the breast patients, a lot of them are really worried that they have breast cancer, and when they learn they don’t, having someone who can listen to them, thoroughly examine them, and provide follow-up and reassurance is really important.”

How is trauma impacting these young people? They are impacted by violence in their countries of origin and on the journey to the U.S., as well as by race-related and institutional trauma in this country. Many develop a sense of fear, distrust, and even hopelessness that interferes with their relationships, school, adjustment to new communities, and their physical health. These problems can persist for many years.

How can physicians provide the best care to these patients? Immigrant youths and their families, especially recent newcomers, have come to the United States in a period of turmoil and controversy that has heightened the stress they face in coming to a new country and new community. Many may feel reluctant to seek health care for fear of facing prejudice or discrimination. Providing a clear message of welcome and acceptance, in addition to showing interest in learning and respect for their culture and traditions, is essential to forging a positive treatment relationship — and can reduce patients’ anxieties and contribute to better health outcomes.

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Dedicated Line for Referring Physicians 860.679.5555

- Make patient appointments
- Arrange patient admissions
- Engage in physician-to-physician consultation
- Obtain general information and assistance

Contact practicerelations@uchc.edu for general information or for assistance regarding the resources, education, and referral information UConn Health requires.

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