



▼ A FIRSTHAND LOOK: John Zimmer, PhD, CMC-NorthEast medical physicist, discusses the CyberKnife with Jesse Carson High School students.



WHO CAN BE TREATED BY THE CYBERKNIFE?

- Patients with tumors otherwise diagnosed as inoperable
- Patients who are too young for frame-based surgery
- Those who want or need an alternative to traditional open surgery
- Patients who have already received the maximum allowable dosage of radiation
- Those who would like to avoid treatment with a stereotactic frame
- Patients who don't want to undergo an additional operation to remove recurrent or residual tumors

TARGETINGTUMORS

CyberKnife delivers leading-edge cancer treatment

llied health students from Jesse Carson High School in China Grove recently learned about radiation therapy in a unique way: Instead of watching videos and having classroom discussions, they saw firsthand the advanced CyberKnife® system during a tour at Carolinas Medical Center-NorthEast.

The CyberKnife is the first radiosurgery system designed to treat tumors anywhere in the body with sub-millimeter accuracy. Because of its extreme precision, the system can continuously track, detect and correct for tumor and patient movement throughout the treatment.

HOW THE CYBERKNIFE WORKS

"A very small beam of high-energy radiation comes out of the CyberKnife's robotic arm," explains John Zimmer, PhD, the CMC-NorthEast medical physicist who explained the different parts of the CyberKnife to the students during their visit. Doctors can adjust the size of the beam depending on the size of the tumor and the dose of radiation.

The CyberKnife's ability to rotate and treat patients at multiple angles also helps doctors tailor the shape of the radiation. The CyberKnife can direct the radiation almost as an outline around the shape of the tumor. That technology allows doctors to treat tumors near critical organs that were previously diagnosed as inoperable.

DID YOU KNOW?

MC-NorthEast is one of only three hospitals in North Carolina to offer CyberKnife treatment for cancer patients.

A HOST OF BENEFITS

Since the CyberKnife delivers radiation at high intensity, a maximum of five treatments are needed, as opposed to weeks

of normal radiation treatments. Dr. Zimmer adds that some of the negative symptoms patients have with traditional radiation don't occur with the CyberKnife because it affects less of the healthy tissue around the tumor.

John Konefal, MD, CMC-Northeast's medical director of radiation oncology, says the first patient who was treated using the CyberKnife was a young woman with breast cancer that had spread to her liver.

"Using the CyberKnife, doctors were able to eliminate the lesion on her liver. Without this technology, she wouldn't have had hope," Dr. Konefal says.

ADVANCED CANCER CARE, RIGHT HERE

Denise Noonan, PhD, CMC-NorthEast medical physicist, used the CyberKnife software to show students how the radiation beams target tumors. Dr. Noonan put the pictures in motion and students watched how the beams would rotate to treat all areas of the tumors.

Jesse Carson High School teacher Mary Welch says she wanted to bring her students to see the CyberKnife because it's leading-edge technology. Welch, who has taught allied health students for 18 years, says that while she could show her class videos and explain different concepts to them, getting to see the technology in person offers students a more indepth understanding of how the system operates.

"I was really excited about coming," says Welch. "This is just an excellent opportunity for our students."

Welch's students were just as awed as she was by the CyberKnife. "It's awesome," says student Kaylee Rayfield. "It was a great experience to be able to see something so cool."

Happy and health

Thanks to the expert team at CMC-NorthEast



n a sunny October afternoon in Salisbury, Destiny Tucker runs through the back door after school to lift her baby brother, Landon Jo, from his mother's arms. "He's the best," says Destiny, clearly a proud big sister. "I prayed for a little brother for years ... and here he is!"

Destiny isn't the only one whose prayers were answered on Aug. 11, 2007, the day Landon was born. Landon's arrival marked the culmination of many months of anxiety, research, prayers, a mother's love and the collaboration of physicians from three states, four hospitals and multiple medical specialties.

A MYSTERIOUS PROBLEM

Landon's mom, Jody, was five months pregnant when she became very sick after experiencing a fever for more than a month. The 40-year-old was considered to be in a high risk category for carrying and delivering a baby, so her husband, Archie, arranged for Jody to see Jill Wagner, MD, at Concord Women's Specialty Center at Carolinas Medical Center-NorthEast.

Dr. Wagner asked Susan Garwood, MD, a physician specializing in the field of infectious diseases, to join her in examining Jody. The original diagnosis

was Rocky Mountain spotted fever, but as the subsequent days passed, Jody showed no signs of improvement. The fever, accompanied with nearly constant nausea, continued.

In early July, Jody and Archie sat down with Dr. Garwood, who gave Jody a new diagnosis: cytomegalovirus (CMV)—a disease that can attack and affect the developing baby prior to and following birth. "As a mother, you have a better chance of being struck by lightning than contracting this disease for the first time when pregnant," Dr. Garwood says. "Less than 1 percent of all pregnancies are impacted."

WHAT IS CMV?

CMV is a viral disease caused by a member of the herpes virus family. It is very common; between 50 percent and 85 percent of all people in the United States have a CMV infection before they turn 40. Such infections are rarely serious in healthy children and adults, with symptoms similar to mononucleosis lasting a few weeks.

"However, unborn babies whose mothers have a first-time CMV infection early during their pregnancy can be at very high risk," says Tom Stubbs, MD, who, along with Ogi Mitra, MD, continued Jody's treatment at Carolinas Medical Center's Women's Institute.





HAPPY FAMILY: (I-r) Archie, Jody, Landon Jo and Destiny Tucker; Landon Jo is ready for his close-up; Destiny shows off her little brother.

After additional testing confirmed Dr. Garwood's diagnosis, and after his first meeting with Jody and Archie, Dr. Mitra contacted Stuart Adler, MD, who has specialized in CMV infections among women and children for the last 28 years at Virginia Commonwealth University. He is regarded by Dr. Mitra as one of the leading experts in the treatment of women infected during pregnancy with CMV.

Dr. Mitra's conversations with Dr. Adler reinforced his recommendation to the Tuckers to undergo an amniocentesis. This test would determine if the CMV infection had gone from Jody's bloodstream through the placenta and into the bloodstream of her unborn child. The amniocentesis confirmed that the baby had indeed developed this in-utero infection. It is

very rare for CMV to be diagnosed prenatally.

Following multiple conversations with Dr. Adler, Dr. Mitra arranged for a special antiviral drug containing immunoglobulins to be administered to Jody through an intravenous drip over several hours. Five weeks later. ultrasound results looked much more

Landon arrived—much to the relief and joy of his parents.

promising than those taken earlier. A few days later,

A SKILLED TEAM

"The entire medical team was amazingly responsive to the medical issues surrounding this case," says Dr. Garwood. "We worked together and challenged each other for what, in the end, was a successful outcome, as shown by the arrival of a healthy baby."

"This is a great example of healthcare professionals working together to benefit the total care of both mother and baby," says Dr. Mitra. "Thanks to Dr. Garwood's initial diagnosis, we were able to treat this infection before birth instead of waiting to discover it at a later date."

> "The ability of so many physicians to research and respond as a unified team reflects the positive connections and resources we now have available for our patients as a dynamic, 21-hospital organization with a national healthcare reach," adds Dr. Garwood. "I'm very proud to be one member of that team."

LEARN MORE!

or more information about the advanced services and expert physicians at CMC-NorthEast, visit www.cmc-northeast.org.

Making the holidays happy



he most wonderful time of the year? Not to the people who use these words to describe the holidays: high-tension, high-cost and high-obligation. In fact, when asked to rank the stress of the season, 40 percent of respondents to one recent poll put the holidays in the same league as asking the boss for a raise. Still, it's possible to recapture the meaning of the holidays. Here's how:

- **Pooh-pooh perfection.** Dashed expectations can cause a holiday crash, so keep them reasonable.
- Stay healthy. Holiday season is an open invitation to de-stress the wrong way. Too much food and drink and too little sleep can take a toll. So continue to be mindful of your mental and physical well-being.
- **Go with the flow.** Holiday traditions evolve over the years. While you may be disappointed if you can't quite reenact your celebrations of yore, find pleasure in creating and sharing new traditions.
- Make room for sadness. Or loneliness. Sometimes unpleasant memories or the loss of a loved one puts a damper on the season. Jot those feelings down in a journal or confide in a close friend. Take solace in religious rites or community events you find significant.
- Accept family members for who they are. Holiday gatherings are not the time to refuel arguments or rehash political differences. Instead, cherish the opportunity to be together.
- De-emphasize the material. Give more gifts that don't necessarily come off a store shelf: babysitting time for your niece, a homemade object for your son, a trip to the museum with your grandchildren. And make it known that you don't expect expensive gifts yourself.

MEET OUR NEW DOCTORS

oin us as we welcome the following physicians who have recently joined the NorthEast Physician Network. To find a physician near you, call ASK FIRST at 1-800-575-1275 or visit www.cmc-northeast.org.

KERRY ROTONDI BIANCHI, MD Kannapolis Internal Medicine

ESTHER BLANKS, MDArdsley Internal Medicine

MARK BRAUN, MD Ardsley Internal Medicine

ERIN HARRIS, MDPiedmont Pediatrics

SHELLEY HOUSTON, MD
Suburban Pediatrics

LYN NUSE, MD
Piedmont Pediatrics

Don't let the flu bug bite this season

Do you know the flu facts?

hat you don't know about the flu can be enough to make you sick—literally! How much do you know about the flu? See whether you've got the know-how to fight influenza by taking this true-or-false quiz.

Since the flu season runs from November to April, begins.

FALSE. While it's best to get vaccinated in the fall, a shot in January can still help keep you healthy, especially during the flu's peak in February.

Getting the flu can make you seriously ill. **TRUE.** Influenza can lead to pneumonia and other life-threatening complications. About 36,000 Americans—most ages 65 and older—die each year from the flu.

Once you get a flu shot, you've done all you can to orevent the flu.

FALSE. You can enhance your immune system's ability to fight influenza by eating a diet rich in fruits and vegetables, exercising moderately, managing stress and avoiding drugs, alcohol and tobacco.

Taking a multivitamin is the best thing you can do to avoid getting the flu.

FALSE. Getting vaccinated is your best flu-prevention strategy, reducing your chances of catching the flu by up to 80 percent.

Flu is most often spread by intimate contact, Ulike kissing.

FALSE. Flu is generally spread when people cough or sneeze virus-infected droplets into the air.

Antibiotic medications aren't helpful in treating flu symptoms.

TRUE. Influenza is a viral infection, so it can't be treated with antibiotics.

The flu shot can actually cause you to get the flu. **FALSE.** You won't get the flu, but you may have minor side effects like a runny nose, headache, sore throat or cough.

O You don't need to get a flu shot every year.

OFALSE. You need a flu vaccination every year, since a shot's ability to protect you wears off. Plus, the vaccine is updated annually to include the most current strains of the flu.

Not everyone should get a flu shot.

TRUE. The flu shot isn't safe for people who are sick with a fever, who have egg allergies, who've had past severe reactions to flu shots and who have Guillain-Barré syndrome.

You can only spread the flu when you have symptoms.

FALSE. You can spread the flu to others before your symptoms show and for another three to four days after they appear.





Results from HealthGrades, a leading independent healthcare quality data ratings company, show that Carolinas Medical Center–NorthEast is number one in North Carolina in overall cardiac services, cardiology services and coronary interventional procedures for 2008.

So, when it comes to decisions of the heart, make your choice the recognized leader in heart care, CMC–NorthEast.



www.cmc-northeast.org • 1-800-575-1275 • I-85, Exit 58, Concord



Carolinas Medical Center NorthEast

Carolinas Health Magazine c/o CHS Marketing PO Box 32861 Charlotte, NC 28232-2861 PRSRT STD U.S. POSTAGE PAID Lebanon Junction, KY Permit 19



■ The magazine of Carolinas Medical Center-NorthEast ■

920 Church St. N, Concord, NC 28025

Carolinas Health is published for Cabarrus and Rowan County residents as a community service of Carolinas Medical Center-NorthEast. There is no fee to subscribe.

The information contained in this publication is not intended as a substitute for professional medical advice. If you have medical concerns, please consult your healthcare provider.

Copyright © 2007 Carolinas HealthCare System