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APPEAL

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Experts: Climate clock ticking

Global warming talks look ever more crucial

By Charles J. Hanley
Associated Press

As the world warms and scientists' warnings grow urgent, climate negotiators are counting down toward make-or-break talks later this year, hoping for progress on a long-term deal to sharply reduce greenhouse-gas emissions.

But experts are beginning to fear that as time runs down the best that can be hoped for may be an extension of the relatively weak Kyoto Protocol, due to expire in 2012. The alternative is a world without any carbon-reduction rules at all.

The year's bad news on climate change is coming in installments.

In February, a U.N.-sponsored scientific network reported that unabated global warm-

Please see **CLIMATE, A9**

CT test gets docs pumped

'Heart scan' can be savior for patients

By Lisa Marshall
Scripps Howard News Service

On paper, Lisa Goldstein was a cardiologist's dream: She had low cholesterol, healthy blood pressure, a good diet and a regular exercise program — essentially zero risk factors for heart disease, aside from family history, and the 51-year-old marathon runner was confident she had that beat.

"My lifestyle is so much different than my family's, I figured I had a pretty big leg up on it," says Goldstein, a mother of two.

Thanks to a gift certificate for a heart scan she bought at a school fund-raiser and left tucked in a drawer for five months, Goldstein recently learned otherwise — and she believes it saved her life.

While training for the New York Marathon, she dusted off the coupon, went in for her scan, and discovered that her presumably healthy arteries were actually so clogged with calcified plaque that only 3 percent of women her age scored worse. She went on medication and kept training anyway, but this time she took care to wear a heart rate monitor, limit her

Please see **SCAN, A11**

Young patients endure ordeal of surgery, sometimes repeatedly

A childlike faith

Leia Fraley, 8, inhales sweetly scented gas as a nurse comforts her in the operating room at Le Bonheur Children's Medical Center before her third brain surgery. Leia and her mother traveled to Memphis from Virginia after the second-grader's malignant tumor returned.

Story by **Mary Powers**
Photography by **Karen Pulfer Focht**

BY THE TIME volunteers with the Starbucks cart arrive on 5 South at Le Bonheur Children's Medical Center on Wednesday morning, Anna Ives has been up and moving for more than three hours.

The last best
HOPE
Le Bonheur brain surgery program

She colored. She played with a Thomas the Train set. She crawled around on the quilts and blankets brought from home to cushion her falls. Two days earlier doctors spent the morning removing a brain tumor growing into her frontal lobes, and she's slowly recovering her balance. She and her father, Zac, a freelance copy writer and co-owner of Goner Records, managed to walk a lap around the unit.

As the surgeons and nurses gather for morning rounds, Anna's mother is outside the nurse's station, leaning over the counter in search of a tool to fix a toy.

Anna's eyes are still swollen. Her surgical incision is beginning to itch. She is still being weaned off morphine. But when morning rounds arrive and Dr. Frederick Boop steps into her room shortly before 8, the news is good.

Patients like Anna, who just want to get well so they can start playing again, first drew Boop to pediatric neurosurgery.

"We've seen some real signs of independence this morning," says Amy Ives, Anna's mother and a Cargill Cotton futures trader. "She's telling us, 'I do it myself,' and 'I strong.' "

Please see **HOPE, A6**

An incision etched across her crown, Anna Ives, 2, plays with her mother, Amy, at Le Bonheur the day after her surgery. When brain tumors are first identified, treatment nearly always begins with surgery.

IN THIS SERIES

SECOND OF THREE PARTS

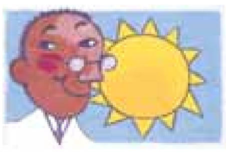
SUNDAY: Uncertainty and hope surround Anna, 2. Dr. Boop doesn't know what kind of tumor has grown in her frontal lobe, but he and his team will remove it.

TODAY: Leia is no stranger to surgery. At age 8, this is her third operation on a malignant tumor that keeps growing back.

TUESDAY: Gabriel, 11, is battling the same cancerous tumor that first threatened his life before kindergarten. This time he's in Dr. Sanford's skilled hands, but the surgery is extremely risky.

ON THE WEB: View a photo slide show and watch an AppealTV segment on the series at commercialappeal.com.

If it were not for hopes, the heart would break. — THOMAS FULLER



Here comes the heat

Looking for a high of 87 with clear skies.

DETAILS, C14

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A complete index to today's newspaper appears on page A2

EM
MD
WS

WITHOUT WARNING

Children's brain tumors have no apparent cause

This year about 3,000 U.S. families will learn that a brain tumor is to blame for their child's headache or lethargy or clumsiness.

There are about 25 different kinds, with names reflecting their location, origin or target cells. Ten of them account for nearly 75 percent of those that strike children and teenagers.

The tumors are rare. This year, 10 times more young people will be diagnosed with heart defects or epilepsy. Four times as many will learn they have Type 1 diabetes.

Unlike certain adult cancers, brain tumors strike those too young to be suffering the fallout of bad habits. They arise without reason or warning in apparently healthy young people.

"Most brain tumors in children occur sporadically, with no identifiable cause," said Dr. Larry Kun, chairman of radiological sciences at St. Jude Children's Research Hospital.

There's a genetic or family link in less than 5 percent of cases. Symptoms often mimic benign problems, and a correct diagnosis often takes months. Sometimes it doesn't come until a parent agrees to foot the bill for diagnostic brain scans, which can run as much as $3,000.

Once diagnosed, treatment, whenever possible, begins with surgery. Completely removing the tumor will cure some patients and in others increase the chances for long-term survival. At Le Bonheur, hospital charges average about $55,000 per patient. But surgery's not an option for up to 20 percent of patients because of the tumor's location or how far it's spread.

If it is malignant, surgery is usually followed by irradiation and sometimes chemotherapy.

About 60 to 65 percent of young brain tumor patients become long-term survivors.

Dr. Maryam Fouladi says saving more lives requires new therapies. That realization, coupled with advances in understanding how tumors are made, is fueling work to create anti-cancer drugs.

No drugs are proven effective against brain tumors in children. Fouladi is part of St. Jude's division of neuro-oncology, which is working to change that.

— Mary Powers

Photos by Karen Pulfer Focht/The Commercial Appeal

Rehab therapists Sarah Turner (left), Reeni Lynn, Fawn Galvan and Erica Patrikios coax a giggle from Leia Fraley at Le Bonheur the night before her operation for a recurring brain tumor. The therapists make the session as fun and playful as possible to fully evaluate patients' pre-surgery capabilities.

The waiting game begins

HOPE, *continued from A1*

Boop regards his young patient, who is the silent center of attention in a room that is even more jammed with balloons, containers of home-cooked food, toys and cards than when the family arrived in the predawn darkness just two days earlier. Although there was still no diagnosis, there was good news from radiology the previous afternoon. Anna's MRI showed no signs of tumor. The surgery was successful.

"When do you want to go home?" Boop asks.

"Today," Zac says immediately.

"OK," says Boop. "Let's see how she does this morning."

■

Three doors down in room 5615, the wait is just beginning for Leia Fraley.

This morning Leia's eyes are fixed on the Lilo & Stitch cartoon on the television. If Anna looks like a battered Christmas angel, 8-year-old Leia, with freckles and big brown eyes fringed with thick dark lashes, looks like a favorite kid sister, someone perfect for the role of Scout in Harper Lee's "To Kill a Mockingbird."

Leia doesn't talk much when she doesn't feel well. She's been largely silent since arriving at Le Bonheur the previous afternoon. This morning she's not even talking to Boop, her surgeon.

Unlike the Ives family, Leia and her mother, Deanna Fraley, are surgery veterans. They traveled to Memphis from Clintwood, Va., after the second-grader's malignant brain tumor made a third appearance.

She's the second of four young brain tumor patients who had surgery the week of March 5 at Le Bonheur, home of the nation's busiest pediatric brain tumor surgery program.

Leia suffered a seizure two years ago and was diagnosed with an ependymoma, a malignant brain tumor. She's had so many brain scans, she's learned to lie perfectly still for the test and doesn't need sedation. She shakes her head no when offered anti-anxiety medication before surgery.

This morning Leia is scheduled to undergo surgery again to remove the tumor growing in her frontal lobe, dangerously close to the cells responsible for movement. Leia ordered a late-night hamburger and onion rings from the hospital kitchen the night before. Even if surgery goes well, she probably won't eat again until Thursday.

It is shortly before 10:30 a.m. in the crowded waiting area when Leia picks cherry for her anesthesia flavor. Boop appears, dressed in surgical scrubs.

"You all set?" he asks, clasping Leia's hands in his and asking what she's named the plush stuffed dog she picked out in the pre-op toy room. Getting no reply, Boop turns to Deanna, "If all goes well, she'll be up with you (in the room) tonight."

Minutes later, Deanna leans over to kiss her daughter. "It won't be so long. Remember what I told you," she says, a reminder that her father sent his love from his home in Kentucky.

Then the nurses push Leia's gurney through the double doors and down the trail of brightly colored butterflies and flowers painted on the ceiling tiles that lead to operating room 7.

By 11:06 a.m., nurse anesthetist Shelly Hood is smoothing Leia's curls and

Please see **HOPE, A7**

Dr. Frederick Boop peers through a high-powered surgical microscope as he operates to help him see as much detail as possible. Doctors strive to remove every bit of the tumor, even microscopic grains.

Doctors hope that with Leia's tumor removed, an experimental anti-cancer agent administered by St. Jude might show some benefit. "We'll try anything to get her better," said her mother, Deanna Fraley.

Hope is like the sun, which, as we journey toward it, casts the shadow of our burden behind us. — SAMUEL SMILES

Gabriel's grandmother, Tania Parrish, traveled from Arizona to be with him for his operation. His tumor returned despite the use of two experimental drugs.

Photos by Karen Pulfer Focht/The Commercial Appeal

Surrounded by family, Estella Gomez (third from right) listens to the risks of the delicate procedure her son, Gabriel Valladee, 11, will undergo. "It makes him feel better to have all his grandparents and family here," she said. The brain surgery will be the boy's seventh.

HOPE, *continued from A6*

fitting the anesthesia mask over her nose and mouth. "Happy dreams, honey."

The surgery could take six hours. It's the first time mother and daughter have gone through it alone.

■

Wednesday is when Dr. Robert A. Sanford holds his weekly clinic at St. Jude Children's Research Hospital. Last year more than 80 percent of the 168 brain and spinal tumors Sanford and Boop removed at Le Bonheur involved St. Jude patients. The brain tumor program is a partnership between the two hospitals.

Today he will meet Gabriel Valladee, 11, and his family for the first time. Like Leia, Gabriel is battling an ependymoma. Like Leia, he is here because his doctors at another medical center had run out of treatments.

But unlike Leia, Gabriel's tumor has continued to grow despite treatment with two experimental drugs. The new plan is for him to undergo his seventh surgical procedure and then try a new drug. His family, including his two younger siblings as well as three sets of grandparents, have all traveled to Memphis from their Phoenix-area homes to be with him.

"It makes him feel better to have all his grandparents and family here," explains Estella Gomez, 27, his mother.

Moments before Sanford meets Gabriel, he's seated in front of a computer studying images from the sixth-grader's latest MRI. "Every case has particular difficulties. This one will be extremely difficult and dangerous," he says. "I'm trying to figure out what structures I can get in trouble with."

"I need to make sure you understand how dangerous it is. Every time we do this, the chance of a cure gets less."

DR. ROBERT A. SANFORD
On the risks involved in Gabriel's surgery

He's quiet a moment. Then he stands, takes several long strides, gives a quick knock and enters the exam room extending his hand. "Hey buddy, how you doing?" he asks Gabriel.

Sanford does a quick exam, asks a few questions and then pauses.

"Have they shown you the latest films? No? Let's go look at the films."

Sanford, Estella, her youngest daughter and fiance step out of the exam room and retrace the surgeon's steps back to the screen where Gabriel's latest brain scans are still displayed.

"The tumor has gone through the bone and out into the canal where the nerve for hearing runs. But the nerve is already gone. The new problem is that the tumor is growing out of the skull," he says, gesturing toward a screen filled with black and white images of Gabriel's brain from different angles.

Gabriel's 12th birthday is less than a week away. He hadn't even celebrated his second birthday when the malignant brain tumor was first diagnosed. Surgeons at Phoenix Children's Hospital have removed it again and again, but it keeps growing back. Sanford is scheduled to try for the first time the next morning.

"Now it is coming up under the thinking part of the brain," Sanford continues. "This is a large blood vessel right here that we have to watch out for."

"Oh, wow. Wow," Estella repeats softly, again and again.

There's a pause. Sanford removes his glasses. "We need to talk. Is there someone who can watch the kids?"

■

At Le Bonheur, Boop begins the step-by-step process of finding and removing Leia's tumor. Deanna will begin her wait with calls to her ex-husband and her mother in Virginia. Late last spring she quit her job as a legal secretary and moved back home. Although she feels guilty about not working, Deanna says the move's eased her stress and made life easier for both her mother and her daughters.

From her mother today, she'll hear about the nightmare her 10-year-old daughter had the night before. "It's probably because she's worried about Leia," Deanna says.

Next she'll sneak a cheeseburger in the hospital cafeteria, catch a nap on the sleeper sofa in Leia's room and then try to lose herself in the Dean Koontz book she picked up before leaving the Ronald McDonald House.

Please see **HOPE, A8**

Gabriel and his mother's fiance, Eric Mendoza (rear), get some badly needed rest. Gabe was only 1 when his malignant brain tumor was originally diagnosed. This time, said Dr. Robert Sanford, the tumor is growing out of the boy's skull.

Hope is important because it can make the present moment less difficult to bear. If we believe that tomorrow will be better, we can bear a hardship today. — *THICH NHAT HANH*

A GLIMMER OF OPTIMISM

PERILOUS PROCEDURE: At 11, six operations on a brain tumor have damaged Gabriel Valladee's hearing, left him weak and unsteady and, for years, using a feeding tube, When Phoenix Children's Hospital doctors said they had no more options, his mother Googled "ependymoma" and that led to Memphis. But doctors here warn that removing the tumor is very risky.

Parents of afflicted children face wrenching decisions

HOPE, *continued from A7*

When Leia's tumor returned, her family suddenly faced decisions her St. Jude doctor described as the kind no parent should have to make.

Tracy Tidwell, nurse practitioner for Le Bonheur's program, describes them as decisions parents must make now and live with five years from now.

Although Anna Ives is still in limbo, when she has a diagnosis her treatment options likely will be clear-cut. When brain tumors are first identified, treatment nearly always begins with surgery. If it is malignant, it will be followed by radiation.

But Leia's tumor has returned despite those treatments. This time Leia's tumor grew back just five months after being removed by surgeons in Lexington, Ky. She's here because after 18 months of treating her, Leia's doctors at the University of Kentucky had run out of options.

Even if Boop is successful this morning, it's unlikely Leia will be cured.

And each surgery brings added risk. Leia's tumor is growing near the brain cells that control movement. They arc in a C shape across the top of each hemisphere. Previous surgeries already have left Leia a little wobbly.

She's in Memphis to participate in the St. Jude arm of a national study of an experimental anti-cancer agent. The drug hasn't cured any children, but in a small safety study, about 8 percent of patients showed some benefit.

"We'll try anything to get her better," Deanna explains. "We've got to do something."

■

In the fourth-floor therapy department, occupational therapist Erica Patrikios is watching Anna Ives lean over and scoop dried pinto beans into a bucket. There is a small bandage on her left hand where the IV was just removed.

"She's showing good balance," Patrikios says. "I'm not going to recommend any therapy. Her home program for me will be play."

As the Ives family packs for home and gets the pain medicine, steroid and antacid Anna will continue to take after she leaves the hospital, it's a little past 1:30 p.m.

■

At St. Jude, Gabriel and his younger brother and sister are settled in the clinic waiting room with one grandmother. The other five grandparents join Estella and Eric Mendoza, her fiance, in the clinic's small exam room. They all stare straight ahead. No one talks."The doctors here have asked me to go in and take out the tumor again," Sanford begins when the last family member finds space against the wall.

"This will be the 50th time I've performed surgery on this kind of tumor. Most surgeons have done two or three. But you do not know what you are going to get into until you are there."

Along with a major blood vessel, he tells them, the tumor is dangerously close to the nerves that control swallowing and breathing. The route in is likely blocked with scar tissue.

"If it goes perfectly well, he'll wake up and we'll take the (breathing) tube out," he says. If it doesn't, Gabriel might suffer a stroke and never wake up, or he could be left dependent on a tube for nutrition and a machine to keep him breathing.

"I need to make sure you understand how dangerous it is," Sanford continues. "Every time we do this, the chance of a cure gets less. But we'll try to get this down to microscopic disease again and give the chemotherapy a chance to work."

Estella's eyes are dry when she thanks him, but she's focused on holding back her tears. Tears will just scare the children and they are already scared enough.

She'll cry tonight after Gabriel is asleep and again tomorrow when she prays by telephone with her pastor.

The immediate question is whether there's time for a boat ride on the Mississippi River before they meet Emily Snider, the nurse coordinator, in Le Bonheur's lobby late that afternoon.

"He's been through so much," Estella says. "We just want to have some fun."

■

Leia is out of surgery and awake. It went well. The tumor came out in one piece.

With the hospital's intensive care unit still full, mother and daughter will spend the afternoon and evening in the surgical recovery unit. They'll spend the night back up on 5 South.

By then, Deanna will give up finding the tacos Leia had wanted for her first post-surgery meal. She eats a few bites of ham instead.

■

From the clinic, Sanford heads to the St. Jude conference room, where more than 30 physicians, researchers, nurses and others gather every Wednesday to discuss young brain tumor patients. Last year they reviewed about 200 cases.

A week earlier they'd discussed Gabriel. The resulting treatment plan begins tomorrow, when Sanford makes an incision along the scar that begins halfway down the sixth-grader's neck and then curls like the letter J.

Sanford regularly tells parents it is time to stop. That there is nothing left to do. That there is no reason to travel to Memphis because he won't be able to remove the tumor or improve upon another surgeon's efforts.

"My faith is such that it is more about accepting what life is going to deal you. Children have an unbelievable way of accepting these horrible fates they are facing. It is the families who have a hard time," he explains.

"But I don't often say no if there is hope."

— Mary Powers: 529-2383

Photos by Karen Pulfer Focht/The Commercial Appeal

Dr. Robert Sanford (making rounds with Dr. Marike Zwienenberg-Lee) often has to counsel parents that nothing more can be done for their children. "My faith is such that it is more about accepting what life is going to deal you," he said.

In this uncertain space between birth and death ... we need hope as surely as we need food and water, love and friendship. — DEAN KOONTZ