

Radiology advancements provide better outcomes for children

FAST FACTS

The X-ray

- An X-ray machine is a kind of camera that takes pictures of the inside of the body. The camera will not touch or hurt your child.
- Be sure to tell the technologist if you're pregnant. You'll be asked to wait outside of the room.
- Explain to your child what will happen during the test in a way he or she will understand.
- You may go back to the X-ray room with your child. If your child needs your help or wants you to be near, you will be given a lead apron to wear.
- If your child is old enough to hold very still without help, he or she will be asked to stand, sit or lie down and hold very still. A technologist will line up the camera and then step into the next room to take the picture.
- If a child does not hold very still during the X-ray, the picture may not be good and it may have to be done again. Infants and very young children cannot always hold still on their own. For this reason, a Columbus Board may be used.
- After the X-ray, there will be a short wait time for the picture to be processed. Your child's doctor will tell you what the X-ray picture showed. If you have any questions, be sure to ask the technologist who X-rays your child.

Matthew's Story

Innovative procedure removed Matthew's facial tumor; left no scars

Matthew Sexton loves to play sports. But, something unseen took this 13-year-old out of the game. It all started with a common symptom: nosebleeds that, according to Matthew, could be compared to a running faucet.

Matthew's mom, Tammy, turned to specialists at Columbus Children's Hospital. There, pediatric radiologists were able to quickly reveal the cause of the nosebleeds: a golf-ball-sized tumor.

"The tumor was in Matthew's nose and sinuses," said Columbus Children's Chief of Radiology and Interventional Radiologist William Shiels, DO. "It is known as a juvenile nasal angio-fibroma."

It's a rare diagnosis found only in teenage males. The traditional treatment meant extensive facial surgery with a risk of great blood loss. But, Columbus Children's innovative team approach would provide Matthew with the best possible outcome. Dr. Shiels had a plan to treat Matthew's tumor.

First, Dr. Shiels used a very small catheter to navigate through Matthew's neck and facial arteries to the tumor site. Once the catheter was located in just the right position, tiny beads of silicone were injected to plug up the tumor's blood supply and shrink it. This allows the rest of the tumor to be removed with minimal blood so the surgery can be done

with no scar. The next day, Columbus Children's ENT Surgeon Richard Kang removed the remaining tumor with an endoscope and a laser-surgery procedure — all without placing one scar on Matthew's face.

"It is a significant benefit to remove facial tumors this way as opposed to traditional methods," said Dr. Kang. "Every physical scar is an emotional scar. If we can remove potential scarring that may be permanent, it may change the child's life."

But even more remarkable than the innovative teamwork at Columbus Children's was Matthew's post-surgery reaction.

"When Matthew woke up, he started to cry," said Tammy. "I was scared something was wrong. But, he was crying tears of joy and said it was awesome; he could breathe through his nose!"

STORIES OF COURAGE



Photo courtesy of Columbus Children's Hospital
This scan, looking down on Matthew's head, shows how large the facial tumor was prior to the procedure. The tumor is identified in white.

PEDIATRIC ADVANCEMENTS

Columbus Children's creates new solution to uncomfortable procedure

Performing an X-ray on a typical 6-month-old child isn't easy. One wiggle or slump and the result is a blurred image. In a blurred image, the technologist cannot tell if the blur is something serious or just simply the result of patient movement.

In the past, few options existed for keeping young patients still during an X-ray. One of those options was the Pigg-O-Stat, a hard, plastic restraint device that immobilizes children in an upright sitting position with their arms over their heads and their chests compressed.

The device was uncomfortable and frightening for many children. While the Pigg-O-Stat did not hurt a child, it often created a traumatizing experience for both the patient and parent. That is why a team of radiologic technologists at Columbus Children's Hospital created a new, more child-friendly device that's known as the Columbus Pediatric Radiography Board.

With the new Columbus Board, patients, ages birth to 4 years, are positioned once and remain in one place during the exam while equipment is moved around them for multiple film exposures. Parents are involved in every step of the



Photos courtesy of Columbus Children's Hospital

Compared to the old X-ray device, the Pigg-O-Stat (left), the Columbus Board is more comfortable and more visually appealing to patients and their families. It also allows for a more efficient exam of higher quality films.

process while the child is placed on the padded board with their legs secured and their arms loosely held to help them hold as still as possible. The Columbus Board is not only more comfortable and more visually appealing to patients and their families but also allows for a more efficient exam of higher quality films.



Each month, Pediatric HealthSource will share the latest treatment and research advancements from Columbus Children's Hospital. This column is part of an ongoing community education project brought to you by

