

The Chest Wall Center



Cincinnati Children's Hospital Medical Center has been caring for patients with chest wall abnormalities since 1993. The Chest Wall Center is known for its carefully crafted, holistic system geared toward optimal, individualized patient experiences and outcomes. Our overall strategy includes streamlined, multidisciplinary team evaluation and treatment, state-of-the-art pain management, ionizing radiation-free imaging, and minimally invasive surgical options.

CONTACT US

For patient referrals and non-urgent consultation during business hours, contact the program directly at:

Phone: **513-803-1062**

Email: chest-wall-center@cchmc.org

[www.cincinnatichildrens.org/
chestwall](http://www.cincinnatichildrens.org/chestwall)

HOW WE'RE DIFFERENT

By striving constantly to improve procedural efficiency and safety, decrease pain, and maintain focus on the entire family, we are creating a paradigm shift in the care of patients with chest wall conditions.

- Our program, embraced by both patients and parents alike, is one of the **largest and most experienced in the nation**. We are seeing ever-increasing numbers of complex cases, including adults and revisions. In the past year, over 20% of our patients were adults.
- A **multidisciplinary approach** to chest wall abnormalities and associated conditions results in comprehensive pre-visit planning as well as streamlined testing, evaluation and treatment by a collaborative team of relevant specialists.
- The **personalized, premier pain management program** is run by top anesthesiologists and nurse practitioners who provide 24/7 pain management coverage. Non-pharmacological therapies, including mindfulness techniques, are employed with the goal of opioid minimization and enhancing recovery.
- Our experienced team is **dedicated** to caring specifically for patients with chest wall conditions, both inpatient and outpatient.
- Liberal use of technology such as **telemedicine** eases pre- and post-operative care for patients, many of whom come from afar.
- Our surgeons serve as **educational specialists** for the manufacturer of surgical bars used in pectus excavatum repair.

CONDITIONS TREATED

Our team treats chest wall conditions of all kinds, in both children and adults up to age 35 years old. Typical conditions include:

- Pectus excavatum
- Pectus carinatum
- Pectus arcuatum
- Thoracic dystrophies such as Jeune syndrome
- Revisions of previous corrective surgery
- Suboptimal and unsuccessful pectus excavatum repairs



Cincinnati Children's is ranked #3 in the nation among Honor Roll hospitals.



TREATMENT TEAM

Rebeccah Brown, MD

Co-Director

Victor Garcia, MD

Co-Director

Plastic Surgery

Brian Pan, MD

Ann Schwentker, MD

Orthopedic Surgery

Peter Sturm, MD, MBA

Nursing

Christina Bates, MSN, APRN, CPNP

Audrey Hill, RN II, BSN, CPN

Emily McKenna, MSN, APRN, CFNP

Aimee Kraemer, RN III, BSN, CPN

Abigail Sester, RN II, BSN, CPN

Perioperative Pain Management

Vidya Chidambaran, MD, MS, FASA

2 days

Average length of stay

1,045+

Surgical cases performed in the last five years

For urgent issues, or to speak with the specialist on call 24/7, call the Physician Priority Link® at 1-888-987-7997.

TREATMENT APPROACH

We have found that a holistic approach works best. We provide every known resource to optimize outcomes so patients experience a better quality of life prior to recommending surgery.

- In a single preplanned visit, patients are seen and tested by a team of specialists and all relevant caregivers—including cardiologists, orthopaedic plastic and cardiothoracic surgeons, and geneticists—who collaborate for the most efficient evaluation and management possible.
- Pectus excavatum is often treated surgically. However, our new Vacuum Bell Treatment Plan Program is now being offered as a non-surgical option for select, very young patients.
- Pectus carinatum is generally treated with bracing. We recently became one of the first hospitals in the country to offer a new bracing system called the FMF Dynamic Compressor: a custom-fitted, expandable, low profile, hypoallergenic, ultra-light aluminum brace designed to deliver the precise amount of pressure needed to gradually reshape the chest wall with minimal discomfort. We use a state-of-the-art 3D scanning device to measure patients for the FMF brace and document their progress with bracing.
- Personalized pain management includes genetic testing when relevant, preoperative optimization for better pain coping, close collaboration with chronic pain clinic, behavioral medicine, integrative care and physical therapy. We use nerve catheters and multimodal opioid minimizing analgesia regimens with in-home transition plans to manage pain.
- Families and patients are included as members of the post-operative care team, ensuring they are actively involved with recovery for an improved quality of life. The result is earlier than average discharge.
- We use cardiac MRI (cMRI) for radiological evaluation rather than CT/ECHO, as cMRI delivers no ionizing radiation and provides a more in-depth analysis of the condition.

RESEARCH

Ongoing research at Cincinnati Children's ensures progress in the treatment and management of chest wall conditions. Our work includes:

- Pre- and post-operative comparison studies to evaluate changes in cardiopulmonary function on cardiac MRI, cardiopulmonary exercise tests, and pulmonary function tests. We are finding that the Haller Index, often used to quantify severity, is not always a reliable indicator of a given condition's functional significance.
- Development and refinement of minimally invasive surgical techniques to treat chest wall conditions.
- Research into the association of chest wall conditions with connective tissue diseases such as Ehlers-Danlos and Marfan's syndromes.
- International collaboration to learn about and incorporate new surgical and dynamic compression bracing techniques for treating pectus carinatum.
- Multicenter research to identify psychologic, genetic and epigenetic factors influencing postoperative pain and recovery after spine/pectus surgery.
- Research to pursue how training the mind can reduce the physiologic and psychological stress in the surgical patient. We are also evaluating the use of mindfulness and virtual reality as interventions to help alleviate pain.
- Collaboration with Brigham Young University to use biomimicry, imitating the models, systems and elements of nature, to develop a less painful, safer method to correct pectus excavatum.