

# CRANIOFACIAL PROGRAM AT CHOP

When a child has a complex craniofacial condition, Children's Hospital of Philadelphia (CHOP) provides family-centered care from diagnosis through surgery and long-term care. Ours is one of the largest single centers of its kind, with more than 1,200 admissions for surgical procedures each year. This means our team is highly experienced in treating every kind of craniofacial difference, from the common to the rare.

## A COMPREHENSIVE PROGRAM

We offer the highest level of care. Our world-renowned pediatric craniofacial surgeons have pioneered surgical techniques such as cranial distraction, facial bone reconstruction and minimally invasive tumor removal. Our team members have the highly specialized knowledge needed to perform surgery on children and adolescents who are still growing, and we understand the optimal times in a child's life that surgeries should be performed. Our surgeons work closely with partners in anesthesia, neurosurgery, fetal surgery, otolaryngology — colleagues who are also world-renowned experts in their respective fields. This highest level of collaborative expertise converges to optimize the care for every child and family.

Psychosocial support is a vital component of what we offer. Because it can be challenging for a child to deal with a visible difference, our psychologist and social worker ensure that each child and their entire family receive ongoing support and guidance.

We also conduct cutting-edge research that is transforming the field. Our care plans are informed by the latest evidence-based advances, as our team members are also the leaders advancing clinical care, driving innovations and making discoveries that will transform care for future patients. *See side 2 for details about our research program.*

## HOW WE'RE DIFFERENT

Our extensive program offers some treatments and services that other programs might not have. We treat every type of craniofacial condition in children of all ages, including newborns — and we even perform fetal surgery. We are experts in treating facial differences related to:

- Congenital malformations (cleft lip and/or palate, craniosynostosis, hemifacial/craniofacial microsomia)
- Overgrowth syndromes
- Atrophic conditions
- Craniofacial tumors

When a child is prenatally diagnosed, we work together with the experts at CHOP's Richard D. Wood Jr. Center for Fetal Diagnosis and Treatment and the Garbose Family Special Delivery Unit to monitor the pregnancy and help the family plan for the arrival of their baby and postnatal treatment options.



**Children's Hospital  
of Philadelphia**

Division of Plastic,  
Reconstructive & Oral Surgery

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## CONDITIONS WE TREAT

Apert syndrome	Deformational plagiocephaly	Muenke syndrome	Rare craniofacial clefts
Beckwith-Wiedemann syndrome	Dermoid cyst	Non-syndromic craniosynostosis	Saethre-Chotzen syndrome
Binder syndrome	Encephalocele	Opitz syndrome	Scleroderma
Cleft lip and palate	Fat atrophy	Orbital hypertelorism	Stickler syndrome
Complex cutis aplasia	Fibrous dysplasia	Oromandibular limb hypoplasia	Syndromic craniosynostosis
Craniofacial fibrous dysplasia	Hemifacial microsomia	Parry-Romberg syndrome	Tongue-based obstruction
Craniosynostosis	Hemihyperplasia	Pfeiffer syndrome	Treacher Collins syndrome
Crouzon syndrome	Micrognathia	Pierre Robin syndrome	Van der Woude syndrome

## A RESEARCH POWERHOUSE

Our team members conduct cutting-edge research in many areas, such as the long-term results of surgery and the development of devices specifically for children. Our Center for Craniofacial Innovation houses research teams that leverage advances in human genomics and gene therapy to better diagnose and treat craniofacial conditions. We constantly strive to make discoveries that advance knowledge and improve the quality of life for children everywhere.

## AN ELITE DESIGNATION

At CHOP, a select group of programs are designated as Frontier Programs. They conduct visionary research that translates to lifesaving treatment and cures, and they offer answers often not available anywhere else in the world.

The Craniofacial Program includes one of these elite Frontier Programs. The Advancing Craniofacial Treatment with Genomics & Gene Therapy (ACTG) Frontier Program leverages genomic medicine to improve diagnosis and treatment of craniofacial anomalies. The ACTG Frontier Program will enable improved care for craniofacial patients and create exciting new opportunities for genomic medicine.

## HARNESSING THE POWER OF GENOMICS AND GENE THERAPY

The ACTG Frontier Program is relentlessly focused on three key efforts:

1. Systematic deep phenotyping and biospecimen collection of patients with craniofacial anomalies
2. Multi-modal and functional analysis of the genes and gene variants associated with craniofacial anomalies
3. Development of molecular therapies to directly treat craniofacial conditions

By integrating deep phenotyping, imaging and advanced omics, ACTG is determined to answer a question regularly posed by families: “Why did this happen to my child?” Uncovering the causes of cleft, craniosynostosis, hemifacial microsomia and other conditions will lead to new and revolutionary treatment options such as gene therapies. In the process, ACTG will help deliver consensus in treatments and outcome measures across the field of craniofacial conditions.

## LEARN MORE AND PARTNER WITH US

Scan the QR code,  
call **215-590-2208** or visit  
**[www.chop.edu/craniofacial-program](http://www.chop.edu/craniofacial-program)**  
for more information.



CHOP patient Oliver, 2