Meet our team

The Department of Pediatric Surgery strives to provide premier clinical care to children in both outpatient and inpatient settings. Caring for an average of 8,600 outpatient annually and performing more than 4,000 operative procedures each year, Boston Children's is one of the largest pediatric surgery programs in the world. Our team listens to you and your child. We work collaboratively with you to design a plan of treatment appropriate to your child’s condition and unique circumstances. We’re constantly engaged in clinical research designed to come up with new strategies for diagnosis and treatment.
BIHEN MODI, MD | 617-355-2458
Locations: Boston, Waltham
Clinical Interests: Endocrine Surgery, Neonatal and Pediatric General Surgery, Intestinal Failure and Short Bowel Syndrome, Thoracic Surgery
Board Certification: General Surgery, Pediatric Surgery

DAVID P. MOONEY, MD, MPH | 617-355-9535
Director, Trauma Center
Locations: Boston, Milford, Waltham
Clinical Interests: Abdominal Surgery, Pediatric General Surgery, Thoracic Surgery, Trauma Surgery
Board Certification: General Surgery, Pediatric Surgery

KONSTANTINOS “GUS” PAPADAKIS, MD | 617-355-6915
Locations: Boston, Weymouth
Clinical Interests: Minimally Invasive Surgery, Pediatric General Surgery, Oncology, Thoracic Surgery, Genitourinary Surgery
Board Certification: General Surgery, Pediatric Surgery

MARK PUDER, MD, PHD | 617-355-1838
Locations: Boston, Andover, Lawrence
Clinical Interests: Neonatal Surgery, Pediatric General Surgery, Short Bowel Syndrome, Thoracic Surgery
Board Certification: General Surgery, Pediatric Surgery

SHAWN J. RANGEL, MD, MSCE | 617-355-6915
Locations: Boston, Peabody
Clinical Interests: Neonatal Surgery, Pediatric General Surgery, Thoracic Surgery, Anorectal Malformations, Surgical Duality & Safety
Board Certification: General Surgery, Pediatric Surgery

ROBERT C. SHAMBERGER, MD | 617-355-8326
Chief, Department of Surgery
Locations: Boston, Waltham, Lexington
Clinical Interests: Pediatric Oncology, Inflammatory Bowel Disease, Chest Wall Deformities, Thoracic Surgery, Minimally Invasive Surgery
Board Certification: General Surgery, Pediatric Surgery

C. JASON SMITHERS, MD | 617-355-3038
Location: Boston
Clinical Interests: Pediatric General and Thoracic Surgery, Minimally Invasive Surgery, Esophageal Atresia, Surgical Critical Care, Congenital Diaphragmatic Hernia, Vascular Anomalies, Global Health
Board Certification: General Surgery, Pediatric Surgery, Surgical Critical Care

SAM RICE-TOWNSEND, MD | 617-355-6915
Locations: Boston
Clinical Interests: Pediatric General Surgery, Surgical Critical Care
Board Certification: General Surgery, Pediatric Surgery

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Locations: Boston, Weymouth
Clinical Interests: Minimally Invasive Surgery, Pediatric General Surgery, Oncology, Thoracic Surgery, Genitourinary Surgery
Board Certification: General Surgery, Pediatric Surgery

KHASYAR VAKILL, MD | 617-355-8544
Location: Boston
Clinical Interests: Liver, Kidney and Intestine Transplantation, Vascular Surgery
Certification: American Society of Transplant Surgeons
Board Certification: General Surgery

BRENT WEIL, MD | 617-355-3039
Locations: Boston, Waltham
Clinical Interests: Pediatric Surgical Oncology, Pediatric General Surgery, Inflammatory Bowel Disease, Minimally Invasive Surgery
Board Certification: Surgery, Pediatric Surgery

CHRISTOPHER B. WELDON, MD, PHD | 617-355-4503
Locations: Boston, Waltham
Clinical Interests: Pediatric Surgical Oncology, Pediatric Surgery, General Surgery, Critical Care
Board Certification: General Surgery, Pediatric Surgery, Surgical Critical Care

JILL ZALIECKAS, MD | 617-355-6019
Locations: Boston, Brockton
Clinical Interests: Neonatal Surgery, Pediatric General Surgery, Surgical Critical Care, Trauma Surgery, Inflammatory Bowel Disease
Board Certification: General Surgery, Pediatric Surgery, Surgical Critical Care

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**Surgery**

**Programs and services**

**Adolescent Bariatric Surgery Program**
For teens whose weight exceeds the 99th percentile, surgery may be part of the long-term (indeed, lifelong) treatment plan. Our program provides education, nutritional planning and psychosocial support as necessary adjuncts to minimally invasive weight loss surgery.
617-355-2458 | bostonchildrens.org/bariatric

**Advanced Fetal Care Center**
This program is a collaborative effort between Boston Children’s Hospital, its Harvard-affiliated hospital neighbors and their respective departments of Obstetrics, Maternal-Fetal Medicine and Diagnostic Imaging. The program provides evaluation, genetic and obstetrical counseling, imaging, invasive diagnostics and in utero or peripartum therapy to mothers carrying children with an illness diagnosed in pregnancy.
1-866-FETALCARE (1-866-338-2522) | bostonchildrens.org/afcc

**Center for Advanced Intestinal Rehabilitation**
Specialists in gastroenterology, nutrition and surgery—together with nurses, nurse practitioners, dietitians, a social worker and a pharmacist—collaborate to provide a range of treatment options for short bowel syndrome. Care may involve nutritional management, medical services and/or surgical treatment, such as the serial transverse enteroplasty procedure for bowel lengthening.
617-355-6275 | bostonchildrens.org/cair

**Congenital Diaphragmatic Hernia (CDH) Program**
Provides multidisciplinary treatment of CDH and long-term follow-up care for children born with this complex health concern.
617-355-6019 | bostonchildrens.org/cdh

**Esophageal Advanced Treatment Program**
Performs the Foker technique for esophageal atresia, wherein traction sutures are used to stimulate growth of truncated esophageal segments prior to anastomosis. Our program also cares for children with lye strictures and hiatal hernias.
617-355-3038 | bostonchildrens.org/eat

**Pediatric Transplant Center**
Transplantation at Boston Children’s Hospital is an interdisciplinary effort between medical and surgical programs. Programs for heart, lung, kidney, liver, intestine and multivisceral, and stem cell transplant actively share knowledge and best practices to optimize outcomes for patients and their families.
1-877-TX4-PEDS (1-877-894-7337) | bostonchildrens.org/ptc

**Trauma Center**
Cares for more infants, children and adolescents seriously injured in accidents than any other hospital in New England. Beginning at the accident scene, a multidisciplinary team of pediatric experts coordinates the trauma patient’s care from emergency room through the inpatient stay and rehabilitation (when indicated). In addition, the team supports a child advocacy program for injury prevention in order to reduce the number of childhood traumatic injuries. Our center is one of the few in the nation that has received designation from the Committee on Trauma of the American College of Surgeons as a Regional Pediatric Trauma Center, the highest level awarded.
617-355-5400 (1-866-771-5437) | bostonchildrens.org/trauma

**Vascular Anomalies Center**
Known internationally as the preeminent site for the care of individuals with vascular anomalies, which include hemangiomas, vascular malformations and other, less common vascular tumors.
617-355-5226 | bostonchildrens.org/vac

**Research**
The Department of Surgery is committed to advancing the understanding and practice of pediatric surgery through research. We are one of the largest research departments at Boston Children’s. We are host to world-renowned laboratories involved in angiogenesis research and tissue engineering. Our extensive research initiatives are both laboratory- and clinic-based, providing research training opportunities to a large number of students and fellows.

Current research areas include:
- Angiogenesis
- Biology of cancer
- Cancer and bowel surgery
- Cell mechanics and structure
- Fetal gut development
- Fetal tissue engineering
- Lung growth
- Maternal-fetal treatment
- Neonatal surgery
- Prostate cancer
- Repair of congenital defects
- Transplantation and tissue engineering
- Trauma care
- Vascular anomalies and malformations

**Training**
Boston Children’s Department of Surgery offers several training programs, including:

**Pediatric Surgery Fellowship**
The department has a proud tradition of training tomorrow’s leaders in pediatric surgery. This two-year fellowship offers exposure to a large volume of complex cases with liberal use of minimally invasive techniques. Our outpatient clinic is an integral component of the program, providing preoperative evaluation and postoperative care for many patients.

**Surgical Critical Care Fellowship**
The fellowship is designed for individuals who are interested in obtaining formal training in pediatric surgical critical care medicine and who wish to augment this experience with a one- to two-year clinical research experience.

**Two-year positions in surgical research**
Trainees will learn the latest scientific methods while working with established investigators in areas such as vascular biology, transplantation tolerance, organ regeneration, fetal therapy, tissue engineering, vascular anomalies, surgical nutrition and the treatment of short bowel syndrome.
bostonchildrens.org/fellowship
Boston Children’s Hospital’s Department of Surgery provides both general and specialized surgical services to infants, children and adolescents living with a wide range of congenital and acquired conditions. Over the last decade, the use of minimally invasive surgery has redefined pediatric operations, combining safety, reduced post-operative pain and faster recovery. From tumors to transplants, hernias to hydroceles, we specialize in the timely evaluation and resolution of all pediatric surgical concerns.

Highlights

Surgical care firsts:
- Successful infant lung transplant in New England
- Use of the combination of a peripartum ex utero intrapartum treatment procedure and extracorporeal membrane oxygenation to treat an infant with critical airway obstruction
- Organized training program for trainees in pediatric surgery
- Published textbook in pediatric surgery in the Western world: Ladd and Gross’s Abdominal Surgery of Childhood
- Definition of the research field of angiogenesis
- Successful application of angiogenesis inhibitors to treat a childhood tumor
- Description of tracheal occlusion to facilitate development of the “hypoplastic” lung
- Development and use of the serial transverse enteroplasty procedure as a treatment for short bowel syndrome

Areas of expertise

Our team treats a wide range of conditions and performs a variety of procedures:

- Abdominal masses
- Appendicitis
- Branchial cleft cyst
- Bariatric (adolescent) weight loss surgery
- Chest wall masses
- Choledochal cyst
- Circumcision
- Congenital cystic adenomatoid malformation
- Crohn’s disease
- Esophageal atresia
- Ewing sarcoma
- Familial adenomatous polyposis
- Foreign bodies
- Gallstones
- Gastroesophageal reflux
- Gynecomastia
- Hernia (inguinal, umbilical and epigastric)
- Hirschsprung’s disease
- Hydrocele
- Hypospadias
- Imperforate anus
- Inguinal hernia
- Liver injuries
- Lumps, bumps and lesions
- Mid-aortic syndrome
- Morbid obesity
- Motility disorders
- Pectus carinatum
- Pectus excavatum
- Phimosis
- Pilonidal cyst
- Renal artery stenosis
- Short bowel syndrome
- Soft tissue lesions
- Spleen injuries
- Splenectomy and spherocytosis
- Thoracic outlet syndrome
- Thyroglossal duct cyst
- Thyroid nodules
- Ulcerative colitis
- Undescended testes
- Vascular anomalies
- Wilms’ tumor