Surgery

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
- Chair wall masses
- Cholelithiasis
- Circumcision
- Congenital cystic adenomatoid malformation
- Cystic disease
- Esophageal atresia
- Ewing sarcoma
- Familial adenomatous polyposis
- Foreign bodies
- Gallstones
- Gastroesophageal reflux
- Gynecomastia
- Hemia [inguinal, umbilical and epigastric]
- Hirschsprung's disease
- Hydrocele
- Hypospadias
- Imperforate anus
- Inguinal hernia
- Liver injuries
- Lumps, bumps and lesions
- Mal-acidotic syndrome
- Maternal obesity
- Molluscum contagiosum
- Necrotizing enterocolitis (NEC)
- Neurofibromatosis
- Perineal and giant hemangioma
- Perinatal asphyxia
- Persistent ductus arteriosus
- Pharyngeal cyst
- Phimosis
- Placental site abnormalities
- Prune belly syndrome
- Prolonged oligohydramnios, pulmonary hypoplasia, diaphragmatic hernia
- Pulmonary atelectasis
- Recurrent respiratory infections
- Rheumatoid arthritis
- Renal anomalies
- Scoliosis
- Spina bifida
- Spina bifida aperta
- Sphenoid sinusitis
- Spina bifida occulta
- Spinal dysraphism
- Thalassemia
- Thrombocytopenia
- Torsion of the appendix
- Traumatic liver injuries
- Tracheoesophageal fistula
- Ureteral injuries
- Vascular anomalies
- Vascular abnormalities

Clinic Locations

Boston Children's Hospital
300 Longwood Avenue, Pegan 3
Boston, MA 02115
617-355-7800
bostonchildrens.org/surgery

Boston Children's at Lexington
482 Bedford Street
Lexington, MA 02420
781-672-2300

Boston Children's at Peabody
10 Centennial Drive
Peabody, MA 01960
978-539-3650

Boston Children's at Waltham
9 Hope Avenue
Waltham, MA 02453
617-355-7800

Boston Children's Physicians
Weymouth
Stepton Medical Center
541 Main Street
Weymouth, MA 02190
617-355-6915

Boston Children's Physicians
North Dartmouth
500 Faunce Corner Road
North Dartmouth, MA 02747
781-216-2400

Boston Children's Norwood
Draper Building, 1st Floor
805 Washington Street
Norwood, MA 02062
781-216-2550

Boston Children's Norwood
Regional Medical Center, 3rd floor
14 Prospect Street
Milford, MA 01757
617-355-0535

Boston Children's at Waltham
9 Hope Avenue
Waltham, MA 02453
617-355-7800

Request an appointment online
Physicians and families may request an appointment online at bostonchildrens.org/appointment.

Urgent appointments
We are happy to accept urgent/same-day appointments. Physicians who urgently need a patient seen should call 617-355-7800.

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:
- Fetal regenerative medicine
- Fetal biology and therapy
- Stem cells
- Tissue engineering
- Surgical metabolism and nutrition
- Short bowel syndrome
- Lung development
- Neonatal surgery
- Vascular aneurysms
- Angiogenesis
- Oncology
- Transplantation
- Device development
- Trauma
- Clinical outcomes
- Quality improvement

Training

Boston Children's Department of Surgery offers several training programs, including:

Pediatric Surgery Fellowship
This 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.

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.

Vascular Anomalies Center
Known internationally as the preeminent site for the care of individuals with vascular anomalies, which include hemangiomomas, vascular malformations and other, less common vascular tumors.

617-355-0536 | bostonchildrens.org/vac

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 obstetric 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/afc

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.

617-355-5257 | bostonchildrens.org/crir

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 eye stricture and hiatal hernias.

617-355-3038 | bostonchildrens.org/esat

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 transplants 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
Care 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.


617-355-0536 | bostonchildrens.org/vac

bostonchildrens.org/surgery
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.

Meet our team

TERRY L. BUCHMILLER, MD | 617-355-8445
Locations: Boston, Weymouth
Clinical Interests: Neonatal Surgery, Gastrointestinal Motility Disorders, Minimally Invasive Surgery
Board Certification: General Surgery, Pediatric Surgery

Catherine C. Chen, MD, MPH | 617-355-0535
Locations: Boston, Peabody
Clinical Interests: Neonatal Surgery, Pediatric General Surgery, Thoracic Surgery
Board Certification: General Surgery, Pediatric Surgery

Benjamin Zendeh-Mumert, MD | 617-355-7800
Locations: Boston, Weymouth
Clinical Interests: Prenatal Counseling, Fetal and Neonatal Surgery, Gastrointestinal Motility Disorders, Minimally Invasive Surgery
Board Certification: General Surgery, Pediatric Surgery

Steven J. Fishman, MD | 617-355-3040
Chief, Department of Surgery/Co-director, Vascular Anomalies Center
Locations: Boston
Clinical Interests: Pediatric General Surgery, Motility Disorders, Thoracic Surgery, Vascular Anomalies
Board Certification: General Surgery, Pediatric Surgery

Thomas E. Hamilton, MD | 617-355-3038
Locations: Boston
Clinical Interests: Esophageal Atresia, Pediatric Surgical Oncology, Neonatal Surgery, Pediatric General Surgery
Board Certification: General Surgery, Pediatric Surgery

Alex Cuenca, MD, PhD | 617-355-9871
Locations: Boston
Clinical Interests: Pediatric General Surgery, Minimally Invasive Surgery, Surgical Critical Care
Board Certification: American Board of Surgery, General Surgery, Pediatric Surgery

Benjamin Zendeh-Mumert, MD | 617-355-7800
Locations: Boston, Weymouth
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Cathrine C. Chen, MD, MPH | 617-355-0535
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Board Certification: General Surgery, Pediatric Surgery

Thomas E. Hamilton, MD | 617-355-3038
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Belinda Shi Dickie, MD | 617-355-7800
Locations: Boston
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Heung Bae Kim, MD | 617-355-8544
Director, Pediatric Transplant Center
Location: Boston
Clinical Interests: Liver, Intestine and kidney transplantation, Malnutrition, Minimally Invasive Surgery, Neonatal Surgery, Pediatric General Surgery, Thoracic Surgery
Certification: American Society of Transplant Surgeons
Board Certification: General Surgery, Pediatric Surgery, Transplantation

Craig W. Lillehei, MD | 617-355-5039
Location: Boston, Norwood, North Dartmouth
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Board Certification: General Surgery, Pediatric Surgery, Surgical Critical Care

Biren Modi, MD | 617-355-2458
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Board Certification: General Surgery, Pediatric Surgery

David P. Mooney, MD, MPH | 617-355-0535
Director, Trauma Center
Locations: Boston, Milford, Waltham
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Board Certification: General Surgery, Pediatric Surgery

Konstantinos "Gus" Papakakis, MD | 617-355-6936
Locations: Boston, Weymouth
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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, Pediatric
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Board Certification: General Surgery, Pediatric Surgery

Benjamin Zendeh-Mumert, MD | 617-355-7800
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Board Certification: General Surgery, Pediatric Surgery

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

Khashayar Vakil, MD | 617-355-8544
Clinical Interests: Liver, Kidney and Intestine Transplantation, Vascular Surgery
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Board Certification: Surgery, Pediatric Surgery

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Board Certification: General Surgery, Pediatric Surgery, Surgical Critical Care

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Board Certification: General Surgery, Pediatric Surgery, Surgical Critical Care

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Locations: Boston
Clinical Interests: Neonatal Surgery, Pediatric General Surgery, Minimally Invasive Surgery, Thoracic Surgery
Board Certification: American Board of Surgery, General Surgery