



ADVANCED FETAL CARE CENTER

About Us

The Advanced Fetal Care Center (AFCC) at Children's Hospital Boston offers comprehensive, specialized care to women carrying a baby with complex birth defects that may require treatment before or after birth. Our center supports the needs of families and referring physicians at every step of care—from diagnosis and counseling, through treatment and follow-up. Our staff of specialists represents all pediatric subspecialty areas and works with a wide range of babies with congenital anomalies. Together, we have developed ground-breaking procedures in fetal medicine and surgery and have made a commitment to provide the very best in fetal and pediatric care.

Initial Referral

Patients are referred to the AFCC from all over the world for diagnostic imaging and specialist consultation. Appointments are coordinated by our staff to ensure the most timely and appropriate scheduling.

Diagnostics

Members of the AFCC team are experienced in caring for babies with medical challenges that others may see only occasionally, if at all. Our team's expertise, coupled with state-of-the-art technologies, enables us to provide an accurate and targeted diagnosis of complex fetal anomalies. This helps families and referring physicians determine the most appropriate course of care. Diagnostic tests may include a fetal ultrasound, fetal magnetic resonance (MR) imaging or fetal echocardiogram (fetal echo).

Pediatric Specialist Consultation

After patients undergo diagnostic imaging, the family will meet with the multidisciplinary clinical team to review findings, confirm the diagnosis and discuss the impact this may have on the pregnancy and the baby's life.

AFCC Conference

Each week, the AFCC holds a conference attended by more than 80 health care professionals from the Harvard consortium of hospitals representing more than 20 disciplines, including obstetrics, neonatology, radiology, pediatric sub-specialties, nursing and genetic counseling. Cases are presented to discuss their management, treatment options and outcomes.

Support

Compassion is a guiding principle throughout the care process. We believe in honest and open discussions about test findings and treatment options. Our clinical staff includes nurse practitioners, a nurse and a genetic counselor that provide ongoing education, support and communication to parents and referring providers through pregnancy and after delivery. Our clinical social worker is available for confidential supportive counseling and resource assistance, including providing information about travel accommodations, arranging tours of the hospital and connecting parents to the hospital's family-to-family network and Center for Families, a much-used resource at Children's.

At a Glance

- Only comprehensive fetal care center in New England and one of only three in the United States to offer a full spectrum of fetal diagnosis, treatment and counseling.
- Multidisciplinary team of 40 clinicians representing all pediatric subspecialties provide consultation at every step of pregnancy.
- Since the center opened in 2000:
 - 2,400 pregnant women have been seen.
 - 1,800 babies have received medical and surgical treatments after delivery.
 - 130 highly advanced fetal interventions have been performed, including EXIT and EXIT to ECMO procedures.
- World's first and most experienced center in performing successful fetal cardiac interventions treating abnormalities *in utero*.
- First successful cardiac stent placement *in utero*.
- First successful laser separation in Massachusetts for twin-twin transfusion syndrome.
- Unrivaled results in treating congenital diaphragmatic hernia.
- Consultation and collaboration with maternal fetal medicine specialists from Brigham & Women's Hospital, Beth Israel Deaconess Medical Center and Caritas St. Elizabeth's Medical Center.

Contact Us

For more information or to schedule an appointment, visit www.childrenshospital.org/afcc and click on Request an Appointment or call 617-355-3896.

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Surgery and Interventions

Fetal intervention may be recommended prior to delivery when a specialist believes that it is in the best interest of a fetus's survival or it may improve long term outcomes. If there is a need for a fetal intervention, the AFCC team will discuss options with the parents, including risks and long-term outcomes based on our experience and the most current data. All necessary services are centrally coordinated by our team. New treatments and supportive care through the AFCC are improving the quality of life for this special group of newborns through their first years and throughout childhood.

Interventions performed by the AFCC include:

- Laser separation for twin-twin transfusion syndrome
- Fetal cardiac intervention procedures
- EXIT (Ex utero intrapartum treatment) delivery for airway obstruction or complex congenital diaphragmatic hernia (CDH)
- Vesico-amniotic shunts for bladder outlet obstruction

After Delivery

Many of our patients at the AFCC deliver their babies at two of America's top ranked hospitals, Brigham and Women's Hospital or Beth Israel Deaconess Medical Center. Both are located contiguously to Children's Hospital Boston and are teaching affiliates of Harvard Medical School. Many patients deliver and continue care in their local community hospital with follow up from an AFCC specialist after birth.

Research and Publications

In addition to the study of advances in clinical care, our staff members are conducting basic research to examine and understand the cellular origins of fetal anomalies. The goal is to continue to find ways to detect and treat fetal disorders as early as possible, often through minimally invasive surgical techniques. Researchers are also studying the disease processes of various fetal anomalies *in utero* and developing intervention strategies with cellular, biological and/or genetic solutions.

AFCC-affiliated staff have published numerous textbook chapters and articles in peer-reviewed medical journals. Our specialists are regularly invited to give lectures and presentations nationally and internationally about advances in research and clinical care at the AFCC. Our team is recognized for their leadership in general fetal surgery, anesthesiology and diagnosis of fetal abnormalities.

Conditions Treated

Our team treats a wide range of conditions, including:

- Airway obstruction
- Bladder exstrophy
- Cervical teratoma
- Cleft lip and palate
- Cloacal anomalies
- Congenital brain anomalies
- Congenital cystic adenomatoid malformation (CCAM)
- Congenital diaphragmatic hernia (CDH)
- Congenital heart defects
- Congenital high airway obstruction (CHAOS)
- Congenital orthopedic anomalies
- Conjoined twins
- Fetal tumors/masses
- Gastroschisis
- Hydrocephalus/ventriculomegaly
- Hydronephrosis
- Intestinal obstruction/atresia
- Kidney, bladder and genital abnormalities
- Limb deficiencies
- Lymphatic malformations (cystic hygroma)
- Myelomeningocele (spina bifida)
- Obstructive uropathies (hydronephrosis)
- Omphalocele
- Pleural effusion (hydrothorax)
- Posterior urethral valves
- Pulmonary sequestration
- Sacrococcygeal teratoma
- Skeletal dysplasias
- Twin reversed arterial perfusion (TRAP)
- Twin-twin transfusion syndrome (TTTS)
- Vascular malformations and hemangiomas

AFCC Clinical Leadership

Alan B. Retik, MD, FAAP, FACS

Executive Director of the AFCC, Surgeon-in-Chief, Urologist-in-Chief

Russell W. Jennings, MD

Program Director of the AFCC, Fetal and Pediatric Surgeon

For a complete list of our multidisciplinary clinical staff, visit www.childrenshospital.org/afcc and click on Meet the Team.