

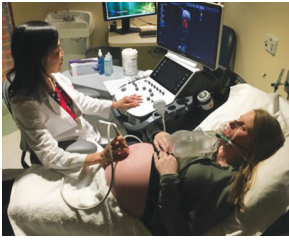


FOCUS ON THE FETUS 2019:

A Unique Course on Fetal Echocardiography,
Diagnosis of Fetal Anomalies and Fetal Treatment

Tuesday — Thursday, Nov. 19 — 21, 2019

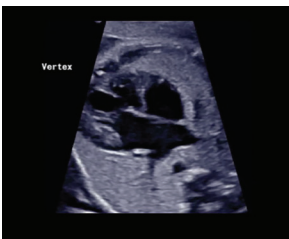
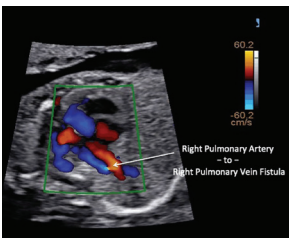
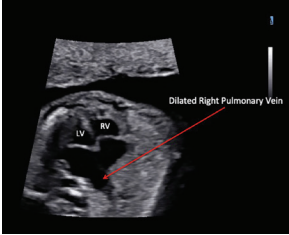
Ruth and Tristram Colket, Jr. Translational Research Building
on the Raymond G. Perelman Campus



COURSE INFORMATION

OVERVIEW

The Fetal Heart Program and Center for Fetal Diagnosis and Treatment at Children’s Hospital of Philadelphia are pleased to host a three-day multidisciplinary educational symposium for pediatric and fetal cardiologists, maternal-fetal medicine specialists, pediatric/fetal surgeons, neonatologists, obstetricians, geneticists, radiologists, midwives, advanced practice nurses, sonographers, genetic counselors and nurses. This unique educational experience will start with a focus on the fetal cardiovascular system. Day 1 will include lectures on the basics of fetal echocardiography imaging and review various forms of fetal cardiovascular disease. The symposium topics for Days 2 and 3 will span the spectrum of care from initial prenatal diagnosis including imaging and genetic testing, counseling, obstetrical management, fetal surveillance, delivery planning, neonatal care, and postnatal surgical options and approaches, as well as long-term outcomes for the fetus with congenital anomalies of a wide variety. Topics related to the heart, lung, genitourinary and neurologic systems, as well as twin gestation and a host of other subjects will be thoroughly covered by world renowned experts in the field. The availability of *in utero* therapy for these conditions will also be reviewed, as well as the impact on maternal outcomes. The emerging identification of the importance of the placenta on these diagnoses and treatment options will be reviewed. Ongoing research related to the impact of the placenta on maternal-fetal and childhood outcomes will be highlighted. However, the program has been designed such that those with a cardiovascular focus may choose to register for Days 1 and 2, while those with a more broad prenatal diagnosis focus may wish to register for Days 2 and 3 alone. Various presentations will include case examples to enhance learning as it relates directly to patient care.



The three days of this unique educational experience will be of great interest and value to all healthcare providers and investigators interested in perinatal medicine. As fetal care today is ideally offered in a blended multidisciplinary manner, we believe all attendees will benefit educationally and thus encourage participation in the full three-day course. However, the program has been designed such that those with a cardiovascular focus may choose to register for Days 1 and 2, while those with a broader prenatal diagnosis focus may wish to register for Days 2 and 3 alone.

GENERAL INFORMATION

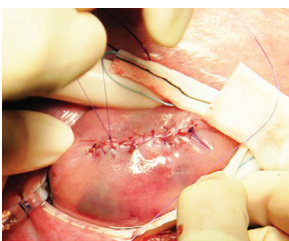
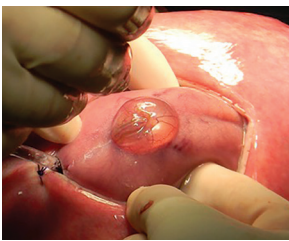
The conference will be held in the Ruth and Tristram Colket, Jr. Translational Research Building at Children’s Hospital of Philadelphia. The registration fees are below, and include continental breakfast, breaks, lunch, parking and syllabus material.

REGISTRATION FEES

Physicians: three days.....	\$400
Other healthcare professionals: three days	\$275
Physicians: two days.....	\$300
Other healthcare professionals: two days	\$225
Physicians: one day.....	\$150
Other healthcare professionals: one day	\$100

COURSE OBJECTIVES

- Discuss the fundamental aspects of fetal echocardiographic imaging – how to do it, the pearls and the pitfalls
- Review the essential elements for patient and family counseling after diagnosis of fetal cardiovascular disease



- Explain the anatomy of congenital heart malformations and their prenatal pathophysiology
- Review the diagnosis and management of fetal arrhythmias, conotruncal anomalies, hypoplastic left heart syndrome, right-sided anomalies, aortic arch anomalies, heterotaxy syndrome and other cardiovascular conditions
- Discuss current ongoing research related to the human placenta, its function and potential future therapeutic options and the impact of abnormal placentation on prenatal diagnosis, fetal therapeutic options and maternal-fetal outcomes
- Describe the available procedures and indications for treatment in cases of complicated monochorionic twins
- Identify maternal and fetal indications for various fetal interventions and associated maternal-fetal outcomes
- List the maternal and neonatal risks and benefits, research and future implications associated with fetal therapy
- Review imaging approaches to diagnosing fetal chest abnormalities, spina bifida, genitourinary abnormalities, neurologic abnormalities and complications of monochorionic twins
- Discuss prenatal counseling, obstetrical management, fetal therapy options, fetal surveillance and delivery planning for fetuses with select fetal anomalies, including the option of perinatal palliative care
- Review long-term outcomes associated with prenatally diagnosed complex conditions
- Describe prenatal genetic screening and testing methods currently available and their appropriate application
- Review the complexity of prenatal diagnosis, pregnancy management and long-term care in 22q11.2 deletion syndrome

ACCME ACCREDITATION STATEMENT

Children's Hospital of Philadelphia is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing education for physicians.

AMA CREDIT DESIGNATION STATEMENT

Children's Hospital of Philadelphia designates this life activity for a maximum of 25.0 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Tuesday, Nov. 19: 8.0 credits

Wednesday, Nov. 20: 9.0 credits

Thursday, Nov. 21: 8.0 credits

CANCELLATION AND REFUND POLICY

Children's Hospital of Philadelphia reserves the right to cancel or postpone any course due to any unforeseen circumstances. In the event of cancellation or postponement, Children's Hospital of Philadelphia will refund any registration fees, less a \$40 service charge, but is not responsible for any related costs, charges or expenses to participants, including cancellation charges assessed by airlines or travel agencies. In order to process refunds for course withdrawals, cancellation must be received in writing by Sunday, Nov. 10, 2019. No refunds will be issued thereafter.

SERVICES FOR PEOPLE WITH DISABILITIES

If special arrangements are required for an individual with a disability to attend this meeting, please contact the Continuing Medical Education Department at 215-590-5263.

HOTEL ACCOMMODATIONS

A block of rooms has been reserved at reduced rates at The Sheraton University City, located just a few blocks from Children's Hospital. The group overnight rate is \$259 single and double occupancy plus a 16.37% room tax. Participants are required to make their own hotel reservations by calling the Inn directly at 215-387-8000. Please mention the name of the conference when making your reservation. The special room rate will be available until Friday, Oct. 18, 2019. After that date, reservations will be accepted on a space and rate availability basis.



PROGRAM • TUESDAY, NOV. 19, 2019

DAY 1 — HEART CARE BEFORE BIRTH: DIAGNOSIS AND MANAGEMENT OF FETAL CARDIOVASCULAR DISEASE

7:45 a.m. **Welcome and Opening Remarks**

Jack Rychik, MD

Session I The Fundamentals

Moderators Anita Szwast, MD; Amanda Shillingford, MD

8 a.m. **Fetal Echocardiography I: Technical Aspects and How to Do It**

CHOP Fetal Heart Program Cardiovascular Imaging Team:

Zhiyun Tian, MD

Margaret McCann, RDMS, RDCS

Debra Soffer, RDMS, RDCS, RVT, RTCR

April Hamilton, RDMS, RDCS

8:45 a.m. **Fetal Echocardiography II: Doppler and the Tools for Characterizing Cardiovascular Physiology**

Anita Szwast, MD

9:15 a.m. **Principles of Fetal Counseling**

Jack Rychik, MD

9:45 a.m. **Faculty Panel and Audience Q & A**

10 a.m. **BREAK**

10:15 a.m. **Conundrums in Counseling: The Team Approach to Comprehensive Care**

CHOP Fetal Heart Program Care Team:

Jill Combs, MSN

Elizabeth Coulter, MSN

Elizabeth Smith, RN

Lucia Figueroa, MSW

11 a.m. **Cardiac Pathology: Defining the Normal and Abnormal**

Lindsay Rogers, MD

11:30 a.m. **Faculty Panel and Audience Q & A**

Noon **LUNCH**

**REGISTER ONLINE:
CHOP.CLOUD-CME.COM**

Session II **The Conditions: Fetal Diagnosis and Management**
Moderators *Christine Falkensammer, MD; Shabnam Peyvandi, MD*

- 1 p.m.** **Fetal Diagnosis and Management of ... Conotruncal Anomalies I: TOF and DORV**
Amanda Shillingford, MD
- 1:20 p.m.** **Fetal Diagnosis and Management of ... Conotruncal Anomalies II: TGA and Truncus Arteriosus**
Michael Quartermain, MD
- 1:40 p.m.** **Fetal Diagnosis and Management of ... Right-sided Heart Lesions: Tricuspid and Pulmonary Valve Abnormalities**
Shobha Natarajan, MD
- 2 p.m.** **Fetal Diagnosis and Management of ... Abnormalities of the Aortic Arch**
Shabnam Peyvandi, MD
- 2:20 p.m.** **Fetal Diagnosis and Management of ... Hypoplastic Left Heart Syndrome**
Jack Rychik, MD
- 2:40 p.m.** **Faculty Panel and Audience Q & A**
- 3 p.m.** **BREAK**
- 3:15 p.m.** **Fetal Diagnosis and Management of ... Heterotaxy Syndrome and its Variable Manifestations**
Karl Degenhardt, MD, PhD
- 3:45 p.m.** **Fetal Diagnosis and Management of ... Cardiovascular Anomalies and Volume Load**
Jill Savla, MD

Session III **Complex Fetal Heart Cases and What We Learned**
Moderators *Jack Rychik, MD; Shabnam Peyvandi, MD*

- 4:05 p.m.** **Complex Fetal Heart Cases and What We Learned ... Case Presentations**
Christine Falkensammer, MD
Al Sarno, MD
Shabnam Peyvandi, MD
Jack Rychik, MD
- 5:30 p.m.** **Adjourn and Reception**

PROGRAM • WEDNESDAY, NOV. 20, 2019

DAY 2 — OF INTEREST TO ALL FETAL SPECIALISTS: FETAL AND CARDIOVASCULAR ANOMALIES

7:45 a.m. Welcome and Opening Remarks

Jack Rychik, MD

Julie S. Moldenhauer, MD

Fetal Conditions and Prenatal Treatment

8 a.m. Current State of Fetal Therapy in the U.S.A.

N. Scott Adzick, MD, MMM

8:25 a.m. Current State of Fetal Therapy – The Global Perspective

Jan Depreest, MD, PhD

8:50 a.m. Could Less Be More in Fetal Therapy?

Mark P. Johnson, MD, MS

9:15 a.m. Fetal Cardiac Intervention: What Have We Achieved and Where Are We Going?

Shabnam Peyvandi, MD

9:40 a.m. Fetal Arrhythmia Treatment: Fast and Slow

Anita Szwast, MD

10:05 a.m. Faculty Panel and Audience Q & A

10:15 a.m. BREAK

The Troubles with Twins

10:30 a.m. Clinical Findings, Treatment Strategies and Outcomes for Twin-Twin Transfusion Syndrome

Juliana Gebb, MD

10:50 a.m. Alphabet Soup of Monochorionic Twins: Deciphering TAPS, TRAP, TTTS and SFGR

Anthony Johnson, DO

11:15 a.m. Monochorionic-Monoamniotic Twins: A Practical Approach

Nahla Khalek, MD, MPH, MSED

11:35 a.m. Cardiovascular Aspects of the Monochorionic Pregnancy

Jack Rychik, MD

11:55 a.m. Management of Selective Fetal Growth Restriction: Laser or Selective Reduction Debate

Nahla Khalek, MD, MPH, MSED

Anthony Johnson, DO

12:20 p.m. Faculty Panel and Audience Q & A

12:30 p.m. LUNCH

What Do I Need to Know About the 22q11 Deletion?

1:30 p.m. 22q11.2DS: A Little Piece Leading to a Big Picture

Donna McDonald McGinn, MS, LCGC

1:55 p.m. Prenatal Diagnosis in 22q11: Extracardiac Manifestations

Erica Schindewolf, MS, LCGC

2:15 p.m. 22q11 and Cardiovascular Aspects

Elizabeth Goldmuntz, MD

2:35 p.m. What Genetic Screening and Testing Do You Offer in the Setting of Fetal Anomalies?

Mark I. Evans, MD

3 p.m. Faculty Panel and Audience Q & A

3:10 p.m. Break

A Focus on the Placenta

3:30 p.m. Examination and Pathology of the Placenta in Fetal Anomalies

Rebecca L. Linn, MD

3:50 p.m. Understanding the Role of the Placenta in Fetal Therapy

Julie S. Moldenhauer, MD

4:10 p.m. New Windows into Imaging and Better Understanding the Human Placenta

Nadav Schwartz, MD

4:30 p.m. The Maternal-Fetal Environment in Congenital Heart Disease

J. William Gaynor, MD

4:50 p.m. The “Artificial” Placenta: Mechanical Support to Extend Fetal Life

Alan W. Flake, MD

5:15 p.m. Faculty Panel and Audience Q & A

5:30 p.m. Adjourn, Reception and

Dinner Tribute: The Career of Mark P. Johnson, MD, MS

Faculty

PROGRAM • THURSDAY, NOV. 21, 2019

DAY 3 — MANAGEMENT OF PREGNANCIES COMPLICATED BY CONGENITAL DIFFERENCES

Genitourinary Abnormalities

- 7:45 a.m.** **Welcome and Opening Remarks**
Julie S. Moldenhauer, MD
- 8 a.m.** **Sonography of Genitourinary Anomalies: A New Era**
Ryne A. Didier, MD
- 8:20 a.m.** **Fetal Therapy for Obstructive Uropathy: Has Anything Changed?**
Mark P. Johnson, MD, MS
- 8:40 a.m.** **Neonatal Dialysis and Transplant: Are We Making Progress?**
Benjamin L. Laskin, MD, MS
- 9 a.m.** **Postnatal Management of Congenital GU Differences**
Dana A. Weiss, MD
- 9:20 a.m.** **Faculty Panel and Audience Q & A**

Neurologic Abnormalities

- 9:30 a.m.** **Screening for Neurologic Differences and When to Refer**
Juliana Gebb, MD
- 9:50 a.m.** **When is MRI Useful?**
Debra Zarnow, MD
- 10:10 a.m.** **Counseling and Long-term Outcomes**
Ana G. Cristancho, MD, PhD
- 10:30 a.m.** **Faculty Panel and Audience Q & A**
- 10:40 a.m.** **BREAK**

Spina Bifida

- 10:50 a.m.** **Prenatal Imaging Evaluation of Spina Bifida**
Edward R. Oliver, MD, PhD
- 11:10 a.m.** **Debate on Fetal MMC Closure: Open Fetal Surgery vs. Fetoscopic Approach**
Jan Deprest, MD, PhD; Julie S. Moldenhauer, MD
- 11:30 a.m.** **Neonatal Management of MMC**
Natalie E. Rintoul, MD
- 11:50 a.m.** **MMC Closure *in Utero* or Postnatal: The Neurosurgical Perspective**
Gregory Heuer, MD, PhD

12:10 p.m. Faculty Panel and Audience Q & A

12:20 p.m. LUNCH

Congenital Diaphragmatic Hernia

1 p.m. Ultrasound of CDH in the Era of FETO: What's Up with That?
Beverly G. Coleman, MD

1:20 p.m. Lung Volumetrics by MRI
Teresa Victoria, MD, PhD

1:40 p.m. To Plug or Not to Plug, That is the Question: Debate on FETO
Jan Deprest, MD, PhD; Holly Hedrick, MD

Lung Lesions

2 p.m. Fetal Lung Lesions: The Common, Uncommon and Strange
Edward R. Oliver, MD, PhD

2:20 p.m. Prenatal Management of Pregnancies Complicated by Fetal Lung Lesions
Shelly Soni, MD

2:40 p.m. Surgical Management of Congenital Lung Lesions
William H. Peranteau, MD

3 p.m. BREAK

Maternal Perspectives in Fetal Therapy

3:10 p.m. Standardizing Perioperative Care in OB/GYN: Can We Do the Same for Fetal Surgery?
R. Douglas Wilson, MD, MSc

3:30 p.m. Anesthesia in Fetal Therapy
Kha Tran, MD

3:50 p.m. Maternal Implications of Fetal Therapy
Christina Paidas Teefey, MD

4:10 p.m. Perinatal Palliative Care: Maternal Perspective
Joanna C.M. Cole, PhD, PMH-C

4:40 p.m. Perinatal Palliative Care: Neonatal Perspective
David A. Munson, MD

5 p.m. Adjourn

COURSE DIRECTORS

Julie S. Moldenhauer, MD

Medical Director, Garbose Family Special Delivery Unit
Director of Obstetrical Services
George Leib Harrison Endowed Chair in Fetal Therapy
Center for Fetal Diagnosis and Treatment
Associate Professor of Clinical Obstetrics and Gynecology in Surgery

Jack Rychik, MD

Associate Chief, Division of Cardiology
Director, Fetal Heart Program
Director, Single Ventricle Survivorship Program
Robert S. and Dolores Harrington Endowed Chair in Pediatric Cardiology
Professor of Pediatrics

FACULTY

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Director of the Center for Fetal Diagnosis and Treatment
Professor of Surgery and Obstetrics and Gynecology

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Manager of Psychosocial Services
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Assistant Professor of Clinical Psychology in Psychiatry

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Emeritus Professor CE of Radiology

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Elizabeth Coulter, MSN

Clinical Nurse Coordinator, Fetal Heart Program

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Instructor of Neurology
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Lead Fetal Therapy Program
University Hospitals Leuven
Chair, Department of Development and Regeneration
KU Leuven, Belgium

Ryne A. Didier, MD

Attending Radiologist
Assistant Professor of Radiology

Mark I. Evans, MD

President, Fetal Medicine Foundation of America
Professor, Obstetrics & Gynecology
Mt. Sinai Ichan School of Medicine

Christine Falkensammer, MD

Attending Physician, Pediatric Cardiology
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Lucia Figueroa, MSW

Social Worker, Fetal Heart Program

Alan W. Flake, MD

Director, Center for Fetal Research
Ruth M. and Tristram C. Colket, Jr. Endowed Chair in Pediatric Surgery
Professor of Surgery, Obstetrics and Gynecology

J. William Gaynor, MD

Attending Cardiothoracic Surgeon
Daniel M. Tabas Endowed Chair in Pediatric Cardiothoracic Surgery
Professor of Surgery

Juliana Gebb, MD

Attending High Risk Obstetrician
Assistant Professor of Clinical Obstetrics and Gynecology in Surgery

Elizabeth Goldmuntz, MD

Attending Physician, Pediatric Cardiology
Professor of Clinical Pediatrics

April Hamilton, RDMS, RDCS (AE, PE, FE)

Fetal Echo Sonographer
Fetal Heart Program

Holly L. Hedrick, MD

Surgical Director, ECMO Center
Co-Director, Neonatal Surgical Team
Director, Pulmonary Hypoplasia Program
Louise Schnauffer Endowed Chair in Pediatric Surgery
Professor of Surgery

Gregory G. Heuer, MD, PhD

Director of Prenatal and Neonatal Neurosurgery
Endowed Chair in Pediatric Neurosurgery
Assistant Professor Neurosurgery, University of Pennsylvania,
Department of Neurosurgery

Anthony Johnson, DO

Professor of Obstetrics, Gynecology and Reproductive Sciences
Professor of Pediatric Surgery
McGovern Medical School at the University of Texas Health Science
Center Houston (UTHealth)
Co-Director, The Fetal Center
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Professor Emeritus of Surgery

Nahla Khalek, MD, MPH, MSED

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Benjamin L. Laskin, MD, MS

Attending Nephrologist
Assistant Professor of Pediatrics

Rebecca L. Linn, MD
Attending Pathologist
Assistant Professor of Pathology & Lab Medicine

Margaret McCann, RDMS, RDCS
Fetal Echo Sonographer
Fetal Heart Program

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Director, 22q and You Center
Associate Director, Clinical Genetics Center

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Senior Medical Director
Harriet and Ronald Lassin Newborn/Infant Intensive Care Unit
Professor of Clinical Pediatrics

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Medical Director, Neonatal ECMO Program
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Lindsay Rogers, MD
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Al Sarno, MD
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Associate Professor of Obstetrics and Gynecology

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Director, Fetal Cardiovascular Imaging
Fetal Heart Program
University Clinical Associate

Kha Tran, MD
Clinical Director, Fetal Anesthesia Team
Attending Anesthesiologist
Associate Professor of Clinical Anesthesiology and Critical Care Medicine

Teresa Victoria, MD, PhD
Attending Pediatric Radiologist
Associate Professor of Radiology

Dana A. Weiss, MD
Attending Physician, Division of Urology
Assistant Professor of Urology in Surgery

R. Douglas Wilson, MD, MSc
Dept OG / Past Department Head
Cumming School of Medicine
University of Calgary
Alberta Health Services Calgary Zone

Deborah M. Zarnow, MD
Attending Pediatric Neuroradiologist
Assistant Professor of Clinical Radiology