Update on

Fetal Diagnosis and Treatment

May 14 – 16, 2015

A course for physicians, advanced practice nurses, registered nurses, genetic counselors, sonographers and social workers.

Sponsored by the
Center for Fetal Diagnosis and Treatment and
the Division of Pediatric General, Thoracic and Fetal Surgery

Since its inception in 1995, the mission of the Center for Fetal Diagnosis and Treatment at The Children's Hospital of Philadelphia has been to provide comprehensive, state-of-the-art care for both mother and fetus.

www.chop.edu/cme
Course Description

In celebration of the Center for Fetal Diagnosis and Treatment’s 20th anniversary, the 2015 course continues the tradition of comprehensive education with an emphasis on outcomes and long-term prognosis for select birth defects. Didactic lectures, interactive case presentations and concurrent sessions are practical and pertinent to healthcare professionals seeking to improve maternal and neonatal care of pregnancies complicated by birth defects. General session topics include comprehensive reviews for select congenital anomalies, such as myelomeningocele, congenital diaphragmatic hernia, genitourinary and renal defects, chest masses, congenital heart disease, and complications of twin pregnancies. Lectures address key concepts in prenatal counseling, fetal surgery, perinatal surveillance, obstetrical care, postnatal surgical management and neonatal care pathways. Additional sessions cover advances in genetic testing such as NIPT and microarray, as well as tips for improving diagnostic skills in prenatal imaging. A unique patient care session focuses on challenges in care coordination and support that patient coordinators and counselors encounter when managing families with complex pregnancies.

The course will be held on Thursday, May 14, Friday, May 15, and Saturday, May 16, 2015, at The Union League of Philadelphia (www.unionleague.org). Following the sessions on Thursday, May 14, all attendees are invited to attend a cocktail reception. The registration fee includes continental breakfasts, luncheons, breaks, syllabus materials and the cocktail reception. Registration will begin at 7 a.m. each day.

Hotel Information

Downtown hotels will be in high demand and selling out well in advance of this week because of a number of large events occurring in Philadelphia, so please make your hotel reservations as soon as possible.

The Union League • Rooms have been reserved at the historic Inn at The Union League (www.unionleague.org) located at 1450 Sansom St., Philadelphia, Pa. 19102. The group rates are $219 single and double occupancy plus a 15.5 percent local tax. The room rate includes a full breakfast and high-speed Internet. This rate will be available until Wednesday, April 22, 2015. Rooms may not be available after that date. To make reservations, call the Inn directly at 215-587-5570. Please mention the Fetal Diagnosis and Treatment Conference.

Hyatt at The Bellevue • Rooms have been reserved at the Hyatt (www.philadelphia.bellevue.hyatt.com) located at 200 South Broad St., Philadelphia, Pa. 19102. The group rates are $235 single and double occupancy plus a 15.5 percent local tax. This rate will be available until Thursday, April 23, 2015. Rooms may not be available after that date. To make reservations, call the Hyatt directly at 888-421-1442. Please mention the Fetal Diagnosis and Treatment Conference.

Marriott • Rooms have been reserved at the Downtown Marriott (www.marriott.com) located at 1201 Market St., Philadelphia, Pa. 19107. The group rates are $199 single and double occupancy plus a 15.5 percent local tax. This rate will be available until Thursday, April 23, 2015. Rooms may not be available after that date. To make reservations, call the Marriott directly at 800-228-9290 or 215-625-2900. Please mention the Fetal Diagnosis and Treatment Conference.
Learning Objectives
Upon completion of this live activity, participants should be able to:
• Describe advances in prenatal genetic technologies such as NIPT, microarray and maternal serum screening
• Demonstrate enhanced knowledge of fetal imaging techniques, including calculation of anomaly-specific prognostic indicators such as the LHR and CVR measures
• Identify current maternal and fetal indications and outcomes for various fetal interventions
• Discuss prenatal counseling, obstetrical management, fetal surveillance and delivery planning for fetuses with select anomalies
• Describe neonatal challenges, care pathways, surgical options and outcomes for select defects
• Summarize multidisciplinary support, mental health needs, bereavement services and counseling methods for families with complex prenatal diagnoses

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

AMA Credit Designation
The Children’s Hospital of Philadelphia designates this live activity for a maximum of 21.75 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Nursing Accreditation
This activity has been submitted to the PA State Nurses Association for approval to award contact hours. The PA State Nurses Association is accredited as an approver of continuing nursing education by the American Nurses Credentialing Center’s Commission on Accreditation.

Genetic Counseling Accreditation
This event has been submitted to the National Society of Genetic Counselors (NSGC) for approval of Category 1 CEUs. The American Board of Genetic Counseling (ABGC) accepts CEUs approved by the NSGC for purposes of recertification. Approval for the requested CEUs and Contact Hours is currently pending.

Ultrasound Accreditation
An application has been submitted to SDMS for CME credit.

Services for the Disabled
Please contact the Continuing Medical Education Department at The Children’s Hospital of Philadelphia at 215-590-5263 if you or anyone attending the conference requires special arrangements.

Cancellation and Refund Policy
The 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, The Children’s Hospital of Philadelphia will refund any registration fees, 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 registration withdrawals, cancellations must be received in writing by Monday, May 4, 2015. No refunds will be issued thereafter. Refunds will be issued for the amount of the registration minus a $50 service charge.

Register online at www.chop.edu/cme

< Roberto Jr., CCAM, the Center’s first fetal surgery patient, pictured during his fetal surgery (left) and now (right), age 18 and a freshman in college.
Thursday, May 14 • Concurrent Sessions All Day

Concurrent Session IA • Prenatal Genetics

7 a.m.  Registration and Continental Breakfast
7:45 a.m.  Welcome and Announcements
8 a.m.  The Fetal Genetic Sonogram
    Alfred Z. Abuhamad, M.D.
8:30 a.m.  Maternal Serum Screening in the Age of Non-invasive Prenatal Testing (NIPT)
    Mark I. Evans, M.D.
9 a.m.  Understanding Non-invasive Prenatal Testing (NIPT)
    Lorraine Dugoff, M.D.
9:45 a.m.  Role of Microarray Analysis in Prenatal Diagnosis
    Ronald J. Wapner, M.D.
10:30 a.m.  Break/Visit Exhibits
11 a.m.  Anomaly-specific Gene Panels
    Sara L. Reichert, M.S., M.P.H., L.C.G.C.
11:30 a.m.  What’s New with 22q?
    Donna McDonald-McGinn, M.S., C.G.C.
Noon  Putting It All Together: What Should We Use and When?
    Panel — Mark I. Evans, M.D.; Ronald J. Wapner, M.D.; Nahla Khalek, M.D., M.P.H.
12:45 p.m.  Lunch
1:30 p.m.  Beyond Prenatal Diagnosis: Fetal Personalized Medicine
    Diana W. Bianchi, M.D.

Concurrent Session IIB • Genitourinary Tract Anomalies

2:15 p.m.  CHD: Prenatal Diagnosis, Postnatal Management and Outcomes
    Anita L. Szwast, M.D.
3 p.m.  CHD: Fetal Interventions and Outcomes
    Jack Rychik, M.D.
3:30 p.m.  Break/Visit Exhibits
4 p.m.  Cardiac Arrhythmias: Prenatal Diagnosis, Management and Outcomes
    Anita L. Szwast, M.D.
4:30 p.m.  The Cardiac Neuroprotection and Neuroplasticity Program
    J. William Gaynor, M.D.
5 p.m.  Concurrent Session I Ends

Concurrent Session IIA • Multidisciplinary Care for Prenancies Complicated by Fetal Anomalies

7 a.m.  Registration and Continental Breakfast
7:45 a.m.  Welcome and Announcements
8 a.m.  Choreographing the Multidisciplinary Delivery
    Julie S. Moldenhauer, M.D.
8:45 a.m.  Team Training: Education, Simulation and Safety
    Michelle Oltkola, R.N., M.S.N.; Jodi E. Slepian, M.D.; Karen C. Pesta, M.S.N., C.N.M.; Peggy S. Batt, M.S.N., C.N.M.
9:15 a.m.  Lactation Support in the High-risk Setting
    Diane L. Spatz, Ph.D., R.N.—B.C.
10 a.m.  Support for the SDU Family
    Elizabeth A. Shaughnessy, M.S., C.C.L.S.
10:30 a.m.  Break/Visit Exhibits
11 a.m.  Psychological Support for the At-risk Pregnant Mother
    Joanna C.M. Cole, Ph.D., C.D.(DONA)
11:45 a.m.  Impact of Palliative Care and Bereavement Programs
    Panel — David A. Munson, M.D.; Joanna C.M. Cole, Ph.D., C.D.(DONA); Elizabeth A. Shaughnessy, M.S., C.C.L.S.; Jennifer Dien-Inglis, M.S.W., L.S.W.; Laura Palmer, M.Div.; Kendall and Michael Heath
1 p.m.  Lunch

Thursday Evening, May 14

Introduction to Fetal Therapy: Where Are We Now?

5 p.m.  Fetal Surgery Scorecard: 1995 vs. 2015
    N. Scott Adzick, M.D., M.M.M.
5:30 p.m.  Future of Fetal Therapy Centers
    Mark P. Johnson, M.D., M.S.
6 p.m.  Adjourn
6 – 7:30 p.m.  Reception
### Friday, May 15

#### Management of Common Anomalies

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 a.m.</td>
<td>Registration and Continental Breakfast</td>
</tr>
<tr>
<td></td>
<td>Visit Exhibits</td>
</tr>
<tr>
<td>7:45 a.m.</td>
<td>Announcements</td>
</tr>
<tr>
<td>8 a.m.</td>
<td>Sonographic and MRI Prenatal Diagnosis of Fetal Chest Masses</td>
</tr>
<tr>
<td></td>
<td>Steven C. Horii, M.D.; Ann M. Johnson, M.D.; Teresa Victoria, M.D., Ph.D.</td>
</tr>
<tr>
<td>8:45 a.m.</td>
<td>Prenatal Management of Fetal Chest Masses</td>
</tr>
<tr>
<td></td>
<td>Nahla Khalek, M.D., M.P.H.</td>
</tr>
<tr>
<td>9:15 a.m.</td>
<td>Fetal Chest Masses: Postnatal Surgical Management and Outcomes</td>
</tr>
<tr>
<td></td>
<td>Alan W. Flake, M.D.</td>
</tr>
<tr>
<td>9:45 a.m.</td>
<td>Prenatal Management of Congenital Diaphragmatic Hernia (CDH)</td>
</tr>
<tr>
<td></td>
<td>Julie S. Moldenhauer, M.D.</td>
</tr>
<tr>
<td>10:15 a.m.</td>
<td>Break/Visit Exhibits</td>
</tr>
<tr>
<td>10:45 a.m.</td>
<td>CDH: Prenatal Treatment with Fetal Tracheal Occlusion (FETO)</td>
</tr>
<tr>
<td></td>
<td>Jan Deprest, M.D., Ph.D.</td>
</tr>
<tr>
<td>11:15 a.m.</td>
<td>CDH: Postnatal Acute Care and Surgery</td>
</tr>
<tr>
<td></td>
<td>Holly L. Hedrick, M.D.; Natalie E. Rintoul, M.D.</td>
</tr>
<tr>
<td>11:45 a.m.</td>
<td>The Pulmonary Hypoplasia Program: Tracking Long-term Outcomes</td>
</tr>
<tr>
<td></td>
<td>Holly L. Hedrick, M.D.; Lisa M. Herkert, M.S.N., C.R.N.P.</td>
</tr>
<tr>
<td>12:15 p.m.</td>
<td>Lunch</td>
</tr>
<tr>
<td>1 p.m.</td>
<td>Neural Tube Defects (NTD): Diagnosis with Ultrasound and MRI</td>
</tr>
<tr>
<td></td>
<td>Steven C. Horii, M.D.; Deborah M. Zarnow, M.D.</td>
</tr>
<tr>
<td>1:45 p.m.</td>
<td>NTD: Genetics, Counseling and Obstetrical Management</td>
</tr>
<tr>
<td></td>
<td>Mark P. Johnson, M.D., M.S.</td>
</tr>
<tr>
<td>2:15 p.m.</td>
<td>NTD: Fetal Surgery Experience and Outcomes</td>
</tr>
<tr>
<td></td>
<td>N. Scott Adzick, M.D., M.M.M.</td>
</tr>
<tr>
<td>2:45 p.m.</td>
<td>NTD: Neonatal Care Protocols</td>
</tr>
<tr>
<td></td>
<td>Natalie E. Rintoul, M.D.; Anne M. Ades, M.D.</td>
</tr>
<tr>
<td>3:15 p.m.</td>
<td>NTD: Neurosurgical Repair and Long-term Challenges</td>
</tr>
<tr>
<td></td>
<td>Gregory G. Heuer, M.D., Ph.D.</td>
</tr>
<tr>
<td>3:45 p.m.</td>
<td>Break/Visit Exhibits</td>
</tr>
<tr>
<td>4 p.m.</td>
<td>Prenatal Diagnosis and Management of Omphalocele</td>
</tr>
<tr>
<td></td>
<td>Juan Martinez-Poyer, M.D.</td>
</tr>
<tr>
<td>4:30 p.m.</td>
<td>Prenatal Diagnosis and Management of Gastrochisis</td>
</tr>
<tr>
<td></td>
<td>Julie S. Moldenhauer, M.D.</td>
</tr>
<tr>
<td>5 p.m.</td>
<td>Surgical Management of Abdominal Wall Defects</td>
</tr>
<tr>
<td></td>
<td>William H. Peranteau, M.D.</td>
</tr>
<tr>
<td>5:30 p.m.</td>
<td>Fetal Therapy Research Networks</td>
</tr>
<tr>
<td></td>
<td>Julie S. Moldenhauer, M.D.</td>
</tr>
<tr>
<td>6 p.m.</td>
<td>Adjourn</td>
</tr>
</tbody>
</table>

Stella and Olivia, TTTS, Hoboken, N.J., now 6 years old.

---

### Saturday, May 16

#### IUGR and Complications of Twins

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 a.m.</td>
<td>Registration and Continental Breakfast • Visit Exhibits</td>
</tr>
<tr>
<td>7:45 a.m.</td>
<td>Announcements</td>
</tr>
<tr>
<td>8 a.m.</td>
<td>Singleton IUGR: Prenatal Diagnosis, Etiology and Management Strategies</td>
</tr>
<tr>
<td></td>
<td>Edgar Armando Hernandez-Andrade, M.D., Ph.D.</td>
</tr>
<tr>
<td>8:45 a.m.</td>
<td>Singleton IUGR: Neonatal Challenges in Survivors</td>
</tr>
<tr>
<td></td>
<td>Natalie E. Rintoul, M.D.; Maria V. Fraga, M.D.</td>
</tr>
<tr>
<td>9:15 a.m.</td>
<td>Singleton IUGR: Future Risks for Adult Disease</td>
</tr>
<tr>
<td></td>
<td>Rebecca A. Simmons, M.D.</td>
</tr>
<tr>
<td>9:45 a.m.</td>
<td>Twins: Uncomplicated Monochorionic vs. Dichorionic Pregnancies</td>
</tr>
<tr>
<td></td>
<td>Nahla Khalek, M.D., M.P.H.</td>
</tr>
<tr>
<td>10:15 a.m.</td>
<td>Break/Visit Exhibits</td>
</tr>
<tr>
<td>10:45 a.m.</td>
<td>Complicated MC/DA Twins: Twin to Twin Transfusion Syndrome (TTTS)</td>
</tr>
<tr>
<td></td>
<td>Jan Deprest, M.D., Ph.D.</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>Complicated MC/DA Twins: Selective Intrauterine Growth Restriction (sIUGR)</td>
</tr>
<tr>
<td></td>
<td>Nahla Khalek, M.D., M.P.H.</td>
</tr>
<tr>
<td>12:15 p.m.</td>
<td>Lunch</td>
</tr>
<tr>
<td>12:45 p.m.</td>
<td>Fetal Membrane Pathophysiology in TTTS</td>
</tr>
<tr>
<td></td>
<td>Ramesh Papanna, M.D., M.P.H.</td>
</tr>
<tr>
<td>1:15 p.m.</td>
<td>Cardiovascular Complications of the Monochorioangiopagus</td>
</tr>
<tr>
<td></td>
<td>Jack Rychik, M.D.</td>
</tr>
<tr>
<td>1:45 p.m.</td>
<td>Complicated MC/DA Twins: TAPS and TRAPS</td>
</tr>
<tr>
<td></td>
<td>Nahla Khalek, M.D., M.P.H.</td>
</tr>
<tr>
<td>2:15 p.m.</td>
<td>The Future: Fetal Stem Cell/Gene Therapy and the Artificial Placenta</td>
</tr>
<tr>
<td></td>
<td>Alan W. Flake, M.D.</td>
</tr>
<tr>
<td>3 p.m.</td>
<td>Adjourn</td>
</tr>
</tbody>
</table>
Course Faculty

The Children’s Hospital of Philadelphia and the Perelman School of Medicine at the University of Pennsylvania

Course Directors

N. Scott Adzick, M.D., M.M.M.
Surgeon-in-Chief
Director, Center for Fetal Diagnosis and Treatment
C. Everett Koop Endowed Chair in Pediatric Surgery
Professor of Pediatrics, and Obstetrics and Gynecology

Mark P. Johnson, M.D., M.S.
Director, Obstetrical Services
Center for Fetal Diagnosis and Treatment
George Leuk Harrison Endowed Chair in Fetal Therapy
Professor of Surgery, Obstetrics and Gynecology, and Pediatrics

Julie S. Moldenhauer, M.D.
Medical Director, Garbose Family Special Delivery Unit
Attending Physician, Maternal-Fetal-Medicine and Reproductive Genetics
Assistant Professor of Clinical Obstetrics and Gynecology in Surgery

Center for Fetal Diagnosis and Treatment and Division of Pediatric General, Thoracic and Fetal Surgery

Beverly G. Coleman, M.D.
Director, Fetal Imaging Center
Professor of Radiology

Alan W. Flaxe, M.D.
Director, Center for Fetal Research
Director, General Surgery Fellowship Program
Ruth M. and Tristram C. Colket Jr. Endowed Chair in Pediatric Surgery
Professor of Surgery, and Obstetrics and Gynecology

Holly L. Hedrick, M.D.
Director, Pulmonary Hypoplasia Program
Surgical Director, ECMO Program
Louise Schnauffer Endowed Chair in Pediatric Surgery
Associate Professor of Surgery

Lisa M. Herbert, M.S.N., C.R.N.P.
Surgical Advanced Practice Nurse
Coordinator, Pulmonary Hypoplasia Program

Nahla Khalek, M.D., M.P.H.
Attending Physician, Maternal-Fetal Medicine and Reproductive Genetics
Assistant Professor of Clinical Obstetrics and Gynecology in Surgery

Juan Martinez-Poyer, M.D.
Attending Physician, Maternal-Fetal Medicine
Assistant Professor of Clinical Obstetrics and Gynecology in Surgery

William H. Peranteau, M.D.
Attending Surgeon
Assistant Professor of Surgery

Sara L. Reichert, M.S., M.P.H., L.C.G.C.
Licensed Genetic Counselor

The Lynne and William Garbose Family Special Delivery Unit

Peggy S. Batt, M.S.N., C.N.M.
Certified Nurse Midwife

Joanna C.M. Cole, Ph.D., C.D.(DONA)
Licensed Clinical Psychologist

Michelle Oldkola, R.N., M.S.N.
Nurse Manager, Garbose Family Special Delivery Unit

Laura Palmer, M.Div.
Chaplain

Karen C. Pesta, M.S.N., C.N.M.
Certified Nurse Midwife

Elizabeth A. Shaughnessy, M.S., C.C.L.S.
Child Life Specialist

Jodi E. Slepian, M.D.
Attending Physician, Obstetrics

Hospital of the University of Pennsylvania

Lorraine Dugoff, M.D.
Chief, Division of Reproductive Genetics
Associate Professor of Obstetrics and Gynecology

Steven C. Horii, M.D.
Modality Chief, Ultrasound
Clinical Chief, Medical Informatics
Professor of Radiology

Continued >
Guest Faculty — National

Alfred Z. Abuhamad, M.D.
Mason C. Andrews Professor and Chair, Department of Obstetrics and Gynecology
Associate Dean for Clinical Affairs
Eastern Virginia Medical School

Diana W. Bianchi, M.D.
Executive Director, Mother Infant Research Institute
Vice Chair for Research, Department of Pediatrics
Flooding Hospital for Children
Natalie V. Zacker Professor of Pediatrics, Obstetrics and Gynecology
Tufts University School of Medicine

Mark J. Evans, M.D.
President, Fetal Medicine Foundation of America
Director, Comprehensive Genetics, LLC
Professor of Obstetrics, Gynecology and Reproductive Science
Mount Sinai School of Medicine

Ronald J. Wapner, M.D.
Director, Reproductive Genetics
Vice Chair of Research, Department of Obstetrics and Gynecology
Professor of Maternal-Fetal Medicine
Columbia University Medical Center

Guest Faculty — International

Jan Depres, M.D., Ph.D.
Centre for Surgical Technologies
Professor in Obstetrics and Gynecology
University Hospital Gasthuisberg
Leuven, Belgium

Planning Committee – The Children's Hospital of Philadelphia

Maria Elena Galie, M.A.M.S.
Obstetric Outreach and Sr. Physician Liaison
Center for Fetal Diagnosis and Treatment

Lori J. Howell, R.N., M.S.
Executive Director, Center for Fetal Diagnosis and Treatment
Clinical Associate, University of Pennsylvania School of Nursing

Suzanne D. Iyoob, B.S., R.D.M.S., R.V.T.
Team Leader, Fetal Ultrasound
Department of Radiology

Sara L. Reichert, M.S., M.P.H., L.C.G.C.
Licensed Genetic Counselor
Center for Fetal Diagnosis and Treatment

Sara S. Spinar, R.N., M.S.N.
Advanced Practice Nurse
Lead Fetal Therapy Coordinator
Center for Fetal Diagnosis and Treatment

Registration • Deadline Monday, May 4, 2015 • Register online at www.chop.edu/cme

Name __________________________________________________________________________________________________________

Credentials/Degree _________________________________________________________________________________________________

Hospital/Institution/Affiliation ________________________________________________________________________________________

Specialty _________________________________________________________________________________________________________

Home Address _____________________________________________________________________________________________________

City _____________________________________ State/Province ____________ ZIP/Postal Code ____________

Phone ___________________________________ Fax ________________________________

Email (Required) __________________________________________________________________________________

☐ Yes, I will attend the cocktail reception/tour on Thursday, May 14, 2015

Registration Fees • Full Conference (Thursday through Saturday: 3 days)

☐ $595 Physicians
☐ $375 Residents/Fellows and Other Healthcare Professionals

☐ Additional $25 fee for Genetic Counselors applying for NSGC CEUs.

Method of Payment

☐ Personal Check ☐ Institutional Check
(Please make all checks payable to The Children’s Hospital of Philadelphia.)

☐ MasterCard ☐ VISA ☐ American Express ☐ Discover

Credit Card # ________________________________ Exp. Date ________________

Mail/fax the completed registration form and payment to: Ms. Micah Holliday, Continuing Medical Education Department
The Children’s Hospital of Philadelphia
34th Street and Civic Center Boulevard, Philadelphia, PA 19104-4399
Telephone: 215-590-5263 • Fax: 215-590-4342 • Email: hollidaydm@email.chop.edu

Concurrent Sessions: (Please choose two sessions.)

Thursday, May 14, 2015

☐ IA Prenatal Genetics
☐ IB Cardiac Anomalies
☐ IIA Multidisciplinary Care for Preganancies Complicated by Fetal Anomalies
☐ IIB Genitourinary Tract Anomalies
Update on

Fetal Diagnosis and Treatment

May 14 – 16, 2015 • The Union League of Philadelphia