Congenital Diaphragmatic Hernia – 25 years of collaboration

Sunday, February 9

4.00pm - 7.00pm – Check-in / Registration / Load Presentations ~ located in front of Live Oak A/B

Monday, February 10 – Introduction, Overview and Long-Term Follow-Up

6.00am – Check-in / Registration / Load Presentations

6.00am – Breakfast ~ Live Oak C/D

7.00am – Welcome and Introduction  Matthew Harting and Kevin Lally ~ Live Oak A/B

7.15am - 9.00am – Case Presentation/Discussion with panel & audience response ~ Live Oak A/B

   Lead: Matthew Harting
   Panel: Kevin Lally, Dick Tibboel, Theresa Grover, Richard Keijzer and Rodrigo Ruano

9.10am - 10.00am – Family perspective/discussion with family & audience response ~ Live Oak A/B

   Leads: Terry Buchmiller and Ashley Ebanks
   Family Panel: Isabel Duque and Brent Wunderlich; Jana and Kris Schneider; Marlen and Kevin Spivey; Josh Hensley

10.00am - 10.15am – Brief break (remain in auditorium)

10.15am - 10.45am – Speaker I ~ Live Oak A/B

   Dick Tibboel – What basic/translational breakthroughs are going to change the way we understand CDH and care for these patients in the future?

10.45am - 11.30am – Research presentations – Podium Day 1 ~ Live Oak A/B

   Moderators: Jay Wilson and Roberta Keller

   Improving exercise capacity following neonatal respiratory failure; a randomized controlled trial
   Presenter: Monique H.M. Van der Cammen (AB41)

   Amniotic fluid stem cell exosomes rescue impaired surfactant expression in hypoplastic fetal lungs through an RNA-mediated mechanism
   Presenter: Lina Antounians (AB19)

   Transplacental delivery of nanoparticles for the prenatal treatment of CDH with miR-200b
   Presenter: Wai Hei “Andrew” Tse (AB14)

   Likely pathogenic de novo variants in congenital diaphragmatic hernia patients are associated with worse clinical outcomes
   Presenter: Julia Wynn (AB33)
11.30am - 12.00pm – Speaker II ~ Live Oak A/B

Kevin Lally – The CDH Registry Study Group – Past, Present and Future

12.00pm - 1.00pm – Lunch ~ Live Oak C/D

1.00pm - 1.45pm – Debate: Timing of repair with ECLS ~ Live Oak A/B

Moderator: Pietro Bagolan
Debaters: Adam Vogel (On ECLS) vs. Erin Perrone (Off ECLS)
Format: 10 min Powerpoint presentation, 5 min rebuttal each, 15 min group discussion

1.45pm - 2.15pm – Speaker III ~ Live Oak A/B

Francesco Morini – Long-term follow-up

2.15pm - 3.15pm – Research Presentations – Long Term Follow Up ~ Live Oak A/B

Moderators: Terry Buchmiller and Priscilla Chiu

The Morbidity of CDH Uncovered by Multidisciplinary Clinic Follow-up
Presenter: Kiloran Metcalfe (AB59)

Longitudinal Analysis of Ventilation Perfusion Mismatch in Congenital Diaphragmatic Hernia Survivors
Presenter: Duy Dao (AB86)

Longitudinal Analysis of Pulmonary Function in Survivors of Congenital Diaphragmatic Hernia
Presenter: Duy Dao (AB83)

Pulmonary complications in Children survivors of Congenital Diaphragmatic Hernia
Presenter: Hina Emanuel (AB69)

"Virtual" long-term outcomes of children with congenital diaphragmatic hernia
Presenter: Gabrielle Derraugh (AB25)

Weight gain velocity and adequate amount of nutrition for infants of congenital diaphragmatic hernia
Presenter: Keita Terui (AB23)

Nutritional outcome at the age of 16 years of infants included in the Northern France CDH Cohort
Presenter: Dyuti Sharma (AB47)

Emergency presentation and hospital re-admission for CDH patients within one year of discharge
Presenter: Vikas Gupta (AB80)

3.30pm - 4.45pm – Breakout Structured/Focused Meetings

LTFU data collection ~ Priscilla Chiu ~ Cedar A/B
Development of CDHSG v5 ~ Matthew Harting and Pam Lally ~ Red Maple
Cardiac dysfunction – the role of the heart in CDH ~ Neil Patel ~ River Birch
Standardization in CDH – should/can we achieve it? ~ Tim Jancelewicz ~ *Winged Elm*

Note: These are the exact same discussions each day so choose 2 of the 4 to attend

5.00pm - 7.00pm – Cocktail reception ~ *Magnolia and Outdoor Terrace*

7.00pm – Dinner – on your own

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**Tuesday, February 11 – Neonatology, ECLS & Surgery**

6.00am - 7.00am – Breakfast ~ *Live Oak C/D*

6.30am - 7.00am – Check-in / Registration / Load Presentations

7.00am - 8.00am – Quick-Shot Breakout Presentations

**Neo+ECLS** – Moderator: Bob DiGeronimo ~ *Cedar A/B*

- **Prognosis of Neonates with Congenital Diaphragmatic Hernia who are Small for Gestational Age: A Multicenter Study**
  Presenter: Julia Wynn (AB32)

- **High Frequency Jet Ventilation for Rescue from High Frequency Oscillatory Ventilation in Congenital Diaphragmatic Hernia**
  Presenter: Michelle Yang (AB26)

- **Morphometric MRI To Evaluate Cortical Thickness In Neonates With Congenital Diaphragmatic Hernia**
  Presenter: Francesco Morini (AB81)

- **Routine intubation in all newborns with congenital diaphragmatic hernia at delivery in the era of advanced prenatal screening: too much too soon?**
  Presenter: Suzan Cochius – den Otter (AB13)

- **Congenital diaphragmatic hernia in southern South America: stratified outcomes in two high volume, ECMO centers**
  Presenter: Matias Luco (AB87)

- **Comparison of two early predictors of mortality for congenital diaphragmatic hernia.**
  Presenter: Matias Luco (AB79)

- **Infant’s First Blood Gas Predicts Required Therapies at 30 Days of Life in Infants with Congenital Diaphragmatic Hernia**
  Presenter: Etze Chotzoglou (AB76)

- **Persistent Pulmonary Hypertension in Congenital Diaphragmatic Hernia: Impact on Postnatal Outcome and Antenatal Prediction**
  Presenter: David Basurto (AB29)

- **Completing the physiological approach to Congenital Diaphragmatic Hernia**
  Presenter: Stephen Keeley (AB94)

- **Impact of time point of ECMO initiation on mortality and morbidity in CDH**
  Presenter: Neysan Rafat (AB3)
Basic science – Moderator: Augusto Zani ~ Red Maple

Cytokeratin Fragment 21-1 is Associated with Mortality and Long-Term Oxygen Therapy in Neonates with Congenital Diaphragmatic Hernia
Presenter: Florian Kipfmueller (AB27)

Activation of aryl hydrocarbon receptor determined by molecular docking suggests a role in CDH pathogenesis
Presenter: Wai Hei “Andrew” Tse (AB44)

Abnormal Lung Development In Congenital Diaphragmatic Hernia Might Be Due To An External Viral Stimulus To The Innate Immune System
Presenter: Wai Hei “Andrew” Tse (AB39)

Maternal vitamin A status and susceptibility to teratogen-induced congenital diaphragmatic hernia
Presenter: Robin Clugston (AB7)

Adult stem cells in newborns with congenital diaphragmatic hernia undergoing ECMO
Presenter: Neysan Rafat (AB2)

Using Bosentan to Treat Pulmonary Hypertension in miR-200b Knockout Mice as a Model of Congenital Diaphragmatic Hernia
Presenter: Chelsea Day (AB45)

Long Term Follow-up – Moderator: Priscilla Chiu ~ Magnolia

Longitudinal follow-up with radiologic imaging is essential to reliably detect recurrence in patients with congenital diaphragmatic hernia
Presenter: Neysan Rafat (AB15)

Long-term neurologic follow-up of CDH-patients with and without ECMO
Presenter: Neysan Rafat (AB24)

Exercise capacity in adolescents born with congenital diaphragmatic hernia
Presenter: Monique H.M. van der Cammen (AB40)

Long-term feeding issues impact on the daily life of congenital diaphragmatic hernia survivors: first patient-led survey of CDH UK
Presenter: Beverley Power (AB64)

Multiple breath washout measurement in patients with CDH at school age compared to Chest CT score and spirometry
Presenter: Anne Debeer (AB97)

Presence of a hernia sac does not impact lung perfusion in CDH
Presenter: Akila Ramaraj (AB54)

25 Year Demographics from CDH International
Presenter: Dawn Ireland (AB18)

Evaluation of Neurologic Morbidity in Neonates with Congenital Diaphragmatic Hernia Using Plasma Biomarkers of Brain Injury
Presenter: Jenifer Cuestas (AB12)
8.15am - 8.45am – Speaker IV ~ Live Oak A/B

Richard Keijzer – miRs in CDH

8.45am - 9.45am – Research Presentations – Podium Day 2 ~ Live Oak A/B

Moderators: Brian Gray and Erik Skarsgard

Early Left Ventricular Dysfunction and Severe Pulmonary Hypertension Predict Adverse Outcomes in “Low-Risk” Congenital Diaphragmatic Hernia
Presenter: Duy Dao (AB88)

Perinatal hypoxia in congenital diaphragmatic hernia pulmonary parenchyma
Presenter: Vikas Gupta (AB85)

Extracorporeal life support is associated with improved survival for newborns with severe congenital diaphragmatic hernia
Presenter: Tim Jancelewicz (AB70)

Neurocardiovascular coupling during surgical repair of congenital diaphragmatic hernia.
Presenter: Sophie Costerus (AB57)

Levosimendan is associated with improvement of cardiac dysfunction and pulmonary hypertension in infants with congenital diaphragmatic hernia
Presenter: Lukas Schroeder (AB51)

The effect of mechanical compression in Ex vivo model of congenital diaphragmatic hernia
Presenter: Soichi Shibuya (AB65)

In vitro cell compression model of congenital diaphragmatic hernia inhibits pulmonary angiogenesis and cell proliferation
Presenter: Kathleen Marulanda (AB74)

Perioperative cerebral autoregulation in congenital diaphragmatic hernia neonates
Presenter: Sophie Costerus (AB56)

9.45am - 10.15pm – Speaker V ~ Live Oak A/B

Neil Patel – The Role of the Heart in CDH

10.15am - 10.45am – Break

10.45am-11.45am – Brief Research Presentations ~ Live Oak A/B

Moderators: Tim Jancelewicz and Kouji Nagata

Elevated proBNP levels are associated with disease severity, cardiac dysfunction, and mortality in CDH
Presenter: Vikas Gupta (AB84)

The aryl hydrocarbon receptor (AHR) is involved in the pathogenesis of CDH
Presenter: Landon Falk (AB37)
Prostaglandin E1 in infants with Congenital Diaphragmatic Hernia (CDH) and life-threatening pulmonary hypertension
Presenter: Kevin Le Duc (AB8)

Administration of amniotic fluid stem cell exosomes promotes mesenchymal maturation of hypoplastic lungs in fetuses with Congenital Diaphragmatic Hernia
Presenter: Lina Antounians (AB20)

GMP-grade exosomes derived from clinically compliant human amniotic fluid stem cells regenerate the lung epithelium in a model of pulmonary hypoplasia
Presenter: Lina Antounians (AB21)

Risk factors for cardiac dysfunction at discharge in congenital diaphragmatic hernia (CDH)
Presenter: Neil Patel (AB43)

Does Left Ventricular Dysfunction Contribute to elevated pulmonary vascular resistance in CDH?
Presenter: Neil Patel (AB48)

Abnormal cardiac function at discharge in infants with congenital diaphragmatic hernia
Presenter: Neil Patel (AB42)

Cytokine Profiles In Fetal Tracheal Fluids Can Distinguish Feto CDH Survivors From Non-Survivors
Presenter: Wai Hei “Andrew” Tse (AB38)

Prenatal miR-200b Treatment in the Nitrofen Rat Model of Congenital Diaphragmatic Hernia normalizes vascular development
Presenter: Chelsea Day (AB36)

Early, Postnatal Pulmonary Hypertension Severity is Predictive of Early Outcomes in Congenital Diaphragmatic Hernia
Presenter: Dalya Ferguson (AB1)

11.45am - 12.45pm – Lunch – Live Oak C/D

1.00pm - 1.30pm – Speaker VI ~ Live Oak A/B

David Kays – ECLS & Surgery: Achieving Optimal Outcomes

1.30pm - 2.30pm – Brief Research Presentations ~ Live Oak A/B

Moderators: Yigit Guner and Natalie Rintoul

Centrifugal Pumps Are the Strongest Predictor of Hemolysis During ECLS for CDH
Presenter: Yigit Guner (AB90)

Increased soluble ST2 concentration in neonates with congenital diaphragmatic hernia and pulmonary hypertension hernia with and without ECMO support
Presenter: Florian Kipfmueller (AB52)
The Canadian Congenital Diaphragmatic Hernia (CDH) Collaborative Smartphone App: A Guideline Uptake and Care Standardization Strategy
Presenter: Kathryn LaRusso (AB53)

Contemporary Cost Trends in the Treatment of Congenital Diaphragmatic Hernia (CDH)
Presenter: Ruth Lewit (AB34)

Congenital Diaphragmatic Hernia: Prevalence and risk factors across the world
Presenter: Lina Antounians (AB22)

Clinical exome sequencing data reveals high diagnostic rates and new susceptibility genes for congenital diaphragmatic hernia plus (CDH+)
Presenter: Tiana Scott (AB6)

2.30pm - 3.00pm – Speaker VII ~ Live Oak A/B

Pramod Pulingandla – Standardization of Care

3.15pm - 4.15pm – Breakout Structured/Focused Meetings

LTFU data collection ~ Priscilla Chiu ~ Cedar A/B
Development of CDHSG v5 ~ Matthew Harting and Pam Lally ~ Red Maple
Cardiac dysfunction – the role of the heart in CDH ~ Neil Patel ~ River Birch
Standardization in CDH – should/can we achieve it? ~ Tim Jancelewicz ~ Winged Elm
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4.30pm - 5.30pm – Update on Current Postnatal Clinical Trials in CDH ~ Live Oak A/B

Resuscitation in CDH ~ Jason Gien
RCT of IV sildenafil vs iNO for PH in CDH - CoDiNos ~ Suzan Cochius and Dick Tibboel
Delayed cord clamping ~ Natalie Rintoul
Intact cord resuscitation in CDH ~ Laurent Storme
Milrinone in CDH ~ Brad Yoder for Satyan Lakshminrusimha
UCB mononuclear cells for hypoxic neurologic injury in infants with congenital diaphragmatic hernia ~ Vikas Gupta/Matthew Harting

6.00pm – Cocktails ~ Live Oak C/D

7.00pm – Dinner ~ Live Oak C/D

Wednesday, February 12 – Fetal diagnosis & Intervention

6.00am - 7.00am - Breakfast ~ Live Oak C/D

6.30am - 7.00am – Check-in / Registration / Load Presentations

7.00am - 8.00am – Quick-Shot Breakout Presentations

Fetal – Moderator: Anthony Johnson ~ Cedar A/B

Physiological-Based Cord Clamping for Infants with Congenital Diaphragmatic Hernia: pinC Trial Study Protocol
Presenter: Philip DeKoninck (AB98)
Prediction of survival in right sided congenital diaphragmatic hernia in the FETO era
   Presenter: Francesca Russo (AB58)

Antenatal sildenafil for congenital diaphragmatic hernia: development of a pharmacokinetic model to predict human fetal exposure
   Presenter: Francesca Russo (AB63)

Variability in antenatal prognostication of diaphragmatic hernia across the North American Fetal Therapy Network
   Presenter: Anthony Johnson (AB101)

Foetoscopic endotracheal occlusion (FETO) for severe congenital diaphragmatic hernia vs expectant management
   Presenter: Vivien Dutemeyer (AB49)

Incidence and impact of prematurity on the clinical course of newborns with CDH
   Presenter: Neysan Rafat (AB4)

General – Moderator: Matias Luco ~ Red Maple

   Congenital Diaphragmatic Hernia and associated Omphalocele: A study from the CDHSG Registry
   Presenter: Carmen Mesas Burgos (AB5)

   Left ventricular parameters from initial ECHO predict survival without ECMO in left-sided congenital diaphragmatic hernia (CDH)
   Presenter: Bradley Yoder (AB28)

   Benchmarking against the CDH Study Group (CDHSG) Database – the first 10 years
   Presenter: Mark Davis (AB60)

   Does the sac correlate to the better prognosis of congenital diaphragmatic hernia with hernia sac?
   Presenter: Takuya Kondo (AB61)

   Right Sided Congenital Diaphragmatic Hernia: The Role of Prenatal Predictors And Perinatal Characteristics On Early Outcomes - A Fourteen-Year Prospective Study
   Presenter: Laura Valfre (AB77)

   Therapy at 30 days of life predicts lung function at 6-12 months in infants with Congenital Diaphragmatic Hernia (CDH)
   Presenter: Etze Chotzoglou (AB75)

   The risk factors of pneumothorax associated with isolated congenital diaphragmatic hernia: results of a Japanese multicenter study
   Presenter: Kazunori Masahata (AB46)

   Novel Decision Aids and Technology in Neonatal Resuscitation
   Presenter: Natalie Rintoul (AB95)
   Presenter: Timothy Crombleholme (AB31)

Hepatopulmonary Fusion: A Rare Variant of Congenital Diaphragmatic Hernia.
   Presenter: Dalya Ferguson (AB50)

Optimal timing of surgery in infants with neonates with left-sided congenital diaphragmatic hernia diagnosed prenatally
   Presenter: Masaya Yamoto (AB10)

Mesh matters: patch material in congenital diaphragmatic hernia affects recurrence rate
   Presenter: Kristin Aigner (AB35)

Surgical Complications In Congenital Diaphragmatic Hernia Survivors: Long-Term Follow-Up
   Presenter: Laura Valfre (AB78)

How to improve long-term outcome after minimal-invasive repair of congenital diaphragmatic hernia – a critical review of all cases in 10 years
   Presenter: Neysan Rafat (AB16)

Does minimal-invasive surgery in neonatal age cause cerebral damage and neurologic deficits?
   Presenter: Neysan Rafat (AB17)

Perioperative Prognostic Factors and Short-Term Outcome in CDH: Application in a Single Centre Population
   Presenter: Camilla Pagliara (AB9)

8.15am - 8.45am – Speaker VIII ~ Live Oak A/B

Alexandra Benachi – Update on fetal diagnosis

8.45am - 10.00am – Research Presentations - Fetal ~ Live Oak A/B

Moderators: Paul Losty and Anthony Johnson

Prenatal brain development is altered in Congenital Diaphragmatic Hernia on ultrasound
   Presenter: Francesca Russo (AB30)

Pharmacokinetics and pharmacodynamics of sildenafil in fetal lambs on extracorporeal support
   Presenter: Felix De Bie (AB67)

Reproducibility of fetal lung-to-head ratio in left diaphragmatic hernia across the North American Fetal Therapy Network (NAFTNet)
   Presenter: Anthony Johnson (AB99)

Inter-rater agreement for sonographic stomach position classification in fetal diaphragmatic hernia across the North American Fetal Therapy Network (NAFTNet)
**Presenter:** Anthony Johnson (AB100)

*Optimal gestational age at delivery for congenital diaphragmatic hernia*

**Presenter:** Hanane Bouchghoul (AB11)

*The effect of tracheal occlusion on lung development pathways and vascular morphology in a rabbit model of congenital diaphragmatic hernia*

**Presenter:** Nathalie Carey (AB82)

*Evaluation of a new balloon for fetal endoscopic tracheal occlusion in the non-human primate model*

**Presenter:** Nicolas Sananes (AB66)

*Safety and efficacy of the “Smart” Tracheal Occlusion™ balloon for congenital diaphragmatic hernia: in-vitro and in-vivo study*

**Presenter:** David Basurto (AB62)

10.00am - 11.00 am – Speaker IX ~ *Live Oak A/B*

*Jan Deprest* – Update on Fetal Therapies and the TOTAL Trial

11.00am - 11.15am – Closing remarks ~ *Live Oak A/B*

**Meeting Concludes**

**Future Meetings**

2022 – Glasgow, Scotland ~ Hosted by Neil Patel, Carl Davis and Gregor Walker

2024 – Lille or Paris, France ~ Alexandra Benachi and Laurent Storme and the Center for Rare Disease for CDH