

CDH22 **Congenital Diaphragmatic Hernia International Symposium 2022**

Technology and Innovation Centre, University of Strathclyde,
99 George Street, Glasgow, G1 1RD

Workshop and Abstract programme

WORKSHOP/ BREAKOUT SESSIONS

WEDNESDAY 27 th April 2022 14.00 – 15.00		
	<u>14.00 – 14.30</u>	<u>14.30 – 15.00</u>
Main Auditorium	Parallel Abstract Presentations. Moderators: Terry Buchmiller and Rene Wijnen	
Conference Room	Technical considerations for surgical CDH repair Facilitators: Mr Carl Davis & Dr Katrin Zahn	
Conference Room	Postnatal Risk Assessment Facilitators: Dr Florian Kipfmueller & Dr Tim Jancelewicz,	Draft update to <i>Postnatal Discharge Follow-Up Statement</i> from CDH International Study Group - Dr Tim Jancelewicz
Conference Room	Early cardio-respiratory monitoring and management strategies Facilitators: Natalie Rintoul and Anne Ades	

THURSDAY 28 th April 2022 14.00 – 15.00		
	<u>14.00 – 14.30</u>	<u>14.30 – 15.00</u>
Main Auditorium	Parallel Abstract Presentations Moderators Natalie Rintoul and Sarah Keene	
Conference Room	<i>Fetal Assessment in CDH, for Everyone</i> Facilitators: Prof Alexandra Benachi and Dr Gregoire Dumery	
Conference Room		Postnatal Risk Assessment Facilitators: Dr Florian Kipfmueller & Dr Tim Jancelewicz
Conference Room	6 months old and still in the NICU – what now? Facilitators: Neil Patel and Matt Harting	

PLENARY SESSION ABSTRACT PRESENTATIONS

Session 1: Models, Mechanisms and Experimental therapies Chairs: Matt Harting and Richard Keijzer 27th April 08.45 – 11.00	
10.05 – 10.11	102 Amniotic fluid stem cell extracellular vesicles restore normal vascular development in a novel human fetal model of pulmonary hypoplasia <u>Dr. Rebeca Figueira</u>
10.11 – 10.17	109 Transcriptome Analysis of Umbilical Vein Endothelial Cells: A Patient-Derived Cellular Model of Studying CDH Endothelial Dysfunction <u>Dr. Walker Short</u>
10.17 – 10.23	107 In vivo administration of amniotic fluid stem cell extracellular vesicles rescues the transcriptomic profile of fetal lungs in rats with CDH <u>Lina Antounians</u>
10.23- 10.29	65 SIN3A is required for epigenetic regulation of diaphragm and lung development <u>David McCulley</u>

Session 2: What Matters to Us, Personalising support for people with CDH Chairs: Laurent Storme and co-chair 27th April 11.30 – 13.15	
12.30- 12.37	132 The CDH Patient Journey <u>Mrs Beverley Power¹</u>
12.37 – 12.43	55 Prenatal Counseling for Congenital Diaphragmatic Hernia: A Qualitative Study of Provider Perspectives <u>Dr. Howard Jen¹</u>
12.43 – 12.50	92 Congenital Diaphragmatic Hernia: Patient Parents As Partners <u>Ms Dawn Ireland</u>

Session 3: The Fetus with CDH Chairs: Alexandra Benachi and Anthony Johnson 27th April 15.30 – 17.30	
16.30 – 16.36	127 Prenatal Brain Maturation in Neonates with Congenital Diaphragmatic Hernia (CDH) <u>Sandy Johng</u>
16.36 – 16.42	115 Fetoscopic Endoluminal Tracheal Occlusion Balloon Related Complications <u>David Basurto¹</u>
16.42 - 16.48	
16.48 - 16.54	84 Ultrasound prediction of survival in CDH: validation of the current algorithm in the TOTAL trial population <u>Dr Francesca Russo</u>
16.54 – 17.00	8 A core outcome set for perinatal interventions for congenital diaphragmatic hernia <u>Dr. Simen Vergote</u>

Session 4: The First Minutes	
Chairs: Natalie Rintoul & Anne Ades	
28th April 08.30 – 10.30	
09.40 – 09.46	104 Umbilico-placental hemodynamics and transplacental O2 exchanges during Intact Cord Resuscitation in newborn lambs with congenital diaphragmatic hernia (CDH) <u>Dr Dyuti Sharma</u>
09.46 – 09.52	12 Spontaneous Breathing Approach in Mild Congenital Diaphragmatic Hernia <u>Denise Oudshoorn</u>
09.52 – 09.58	32 Spontaneous breathing during delivery room management in CDH neonates with very mild CDH – a case-control study <u>Dr. Florian Kipfmüller</u>
09.58 – 10.04	10 Lung Recruitment After Birth in Infants with Congenital Diaphragmatic Hernia <u>K. Taylor Wild</u>
10.04 – 10.10	54 Delivery Room Resuscitation of Neonates with Congenital Diaphragmatic Hernia; Lessons Learned through Video Review <u>K. Taylor Wild</u>

Session 5: Pathophysiological Phenotypes	
Chairs: Florian Kipfmüller and Co-Chair	
28th April 11.00 – 13.00	
12.10 – 12.16	37 Ductus arteriosus flow pattern and outcome prediction in CDH neonates. <u>Bartolomeo Bo</u>
12.16 – 12.22	47 Pathophysiological phenotypes in CDH: frequency and relationship to disease severity <u>Dr Abhijit Bhattacharya</u>
12.22 – 12.28	121 Clinical and Cellular Sexual Dimorphism in Congenital Diaphragmatic Hernia <u>Oluyinka Olutoye II</u>
12.28 – 12.34	26 Impact of Early Echocardiographic Characteristics on Survival and Extracorporeal Life Support Utilization in Neonates with Congenital Diaphragmatic Hernia <u>Caroline Yeon-Kyeong Noh</u>
12.34 – 12.40	38 Left ventricular hypoplasia and ventricular disproportion in neonates with congenital diaphragmatic hernia <u>Flaminia Pugnali</u>

Session 6: Optimising Surgical and Intensive Care Chairs: Irma Capolupo and Krisa Van Meurs (Kouji Nagata virtual) 28th April 15.30 – 17.30	
17.10 – 17.16	28 UTILITY OF NEURALLY ADJUSTED VENTILATORY ASSIST (NAVA) IN WEANING AND EXTUBATION OF NEONATES WITH CONGENITAL DIAPHRAGMATIC HERNIA (CDH) <u>Dr Ana María Sánchez Torres</u>
17.16 – 17.22	134 Treprostinil in children with congenital diaphragmatic hernia-related pulmonary hypertension <u>Felix R DeBie</u>
17.22 – 17.28	49 Heart rate control with landiolol hydrochlorid in CDH infants with ventricular dysfunction. <u>Dr. Lukas Schroeder</u>
17.28 – 17.34	23 Early pre- and postoperative enteral nutrition in infants with symptomatic congenital diaphragmatic hernia. <u>MD Ulla Lei Larsen</u>
17.34 – 17.40	128 Anti-reflux surgery in children with congenital diaphragmatic hernia: A prospective cohort study on a controversial practice <u>Dr Louise Montalva</u>

Session 7: Transition to Adulthood and Long term care Chairs: Hanneke Ijsselstijn & Jonathan Coutts 29th April 09.00 – 11.15	
10.10 – 10.16	22 High Altitude Simulation Testing in Patients with Congenital Diaphragmatic Hernia <u>Dr. Terry L Buchmiller</u>
10.16 – 10.22	81 Longitudinal evaluation of health status and quality of life in school-aged children with congenital diaphragmatic hernia <u>Isabel Sreeram</u>
10.22 – 10.28	59 Self-Reported Respiratory and Gastrointestinal Outcomes in Children Managed at Fetal Treatment Centers with Isolated Congenital Diaphragmatic Hernia <u>Dr Patrice Eastwood</u>
10.28 – 10.32	71 Cardio-pulmonary Exercise Testing in Scottish children and adolescents with repaired congenital diaphragmatic hernia <u>Mr Paul Burns</u>
10.32 – 10.38	88 Neuropsychological outcome at five years of age in survivors of congenital diaphragmatic hernia <u>Sophie De Munck De Munck</u>
10.38 – 10.44	

WORKSHOP SESSION PARALLEL ABSTRACT PRESENTATIONS

Main Auditorium, live streamed with recording

Wednesday 27th April 14.00 – 15.00	
Live Abstract Presentations (with recording) in Main Auditorium	
5 mins presentation. Terry Buchmiller & Rene Wijnen	
	Abstract
14.00 – 14.05	
14.05 – 14.10	99 The Role of Endothelial to Mesenchymal Transition in Congenital Diaphragmatic Hernia Pulmonary Hypertension <u>Jamie Gilley</u>
14.10 – 14.15	52 LONP1 is a novel gene causing congenital diaphragmatic hernia with primary effects on lung development and mortality <u>Wendy Chung and Rebecca Hernan</u>
14.15 – 14.20	106 Brain development is altered in fetuses with congenital diaphragmatic hernia in the rabbit model <u>Dr Lennart Van Der Veecken</u>
14.20 – 14.35	Questions for presenters
14.35– 14.40	77 ROLE OF MAJOR CARDIAC ABNORMALITIES IN HIGH-RISK CONGENITAL DIAPHRAGMATIC HERNIA INFANTS <u>MD Laura Valfre</u>
14.40 - 14.45	24 Syndromic CDH: current incidence and outcome. Analysis from the CDHSG Registry data <u>Dr Carmen Mesas Burgos</u>
14.45 – 14.55	Questions for presenters

Thursday 28th April 14.00 – 15.00	
Live Abstract Presentations (live streamed with recording) in Main Auditorium	
4 mins presentation. Natalie Rintoul and Sarah Keene	
	Abstract
14.00 – 14.05	69 Dynamics of pulmonary hypertension severity in the first 48 hours in neonates with prenatally diagnosed CDH <u>Judith Leyens</u>
14.05 – 14.10	100 Effect of PDA ligation on Morbidity and Mortality in CDH neonates: A propensity score matched retrospective analysis Dr. Dan Robie
14.10 – 14.15	25 Early Use of Inhaled Nitric Oxide in Neonates with Congenital Diaphragmatic Hernia: Which Echocardiographic Subgroups Benefit? <u>Caroline Yeon-Kyeong Noh</u>
14.15 – 14.25	Questions for presenters
14.25 – 14.30	48 CDH pathophysiological phenotypes and ECMO <u>Dr Abhijit Bhattacharya</u> ¹ , Dr AC Massolo ² , Dr Sandy Kirolos ¹
14.35– 14.40	29 Free hemoglobin, hemolysis, and mortality in CDH neonates receiving venovenous ECMO: a prospective observational study <u>Lotte Lemloh</u>
14.40 - 14.45	85 Impact of repeat extracorporeal life support on mortality and short-term in-hospital morbidities in neonates with congenital diaphragmatic hernia <u>Dr. Enrico Danzer</u>
14.45 – 14.55	Questions for presenters

LUNCHTIME PARALLEL PRESENTATION SESSIONS

Wednesday 27th April

Wed 27th April 13.30 – 13.55	
Live Abstract Presentations in <u>MAIN AUDITORIUM</u>, live streamed with recording	
5 mins presentation. Dr. Morag Campbell	
	Abstract
13.30 – 13.35	86 Trends Over Time: What has 25 years of collaboration revealed in the Congenital Diaphragmatic Hernia Study Group? <u>Ashley Ebanks</u>
13.35 – 13.40	39 Has Survival Improved for Congenital Diaphragmatic Hernia? A 25-Year Review of over 5000 Patients from the CDH Study Group <u>Dr. Vikas Gupta</u>
13.40 – 13.45	57 Persistent health issues beyond childhood affect quality of life of CDH survivors <u>Dr Louise Montalva</u>
13.45 – 13.50	94 Surveillance endoscopy in CDH – is it indicated? <u>Miss Gerlin Naidoo</u>
13.50 – 13.55	6 Multiple breath washout measurement in patients with CDH at school age compared to Chest CT score and spirometry. <u>Prof Dr Marijke Proesmans</u>

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Wed 27th April 13.30 – 13.55	
Live Abstract Presentations in <u>CONFERENCE ROOM (no stream or recording)</u>	
5 mins presentation. Laurent Storme	
	Abstract
13.30 – 13.35	13 Continuous oxygen saturation index measurements as early predictor of outcomes in congenital diaphragmatic hernia <u>Denise Oudshoorn</u>
13.35 – 13.40	126 SEX DIFFERENCES AND MORTALITY IN CONGENITAL DIAPHRAGMATIC HERNIA <u>Dr. Shelby Sferra</u>
13.40 – 13.45	5 Standardizing clinical practice guidelines to manage infants with congenital diaphragmatic hernia can reduce ECMO need, improve clinical outcomes and survival at discharge: a single center experience <u>Dr. Katrin Lichtsinn</u>
13.45 – 13.50	62 A Review of COVID-19 Infections Identified in a CDH Multidisciplinary Clinic <u>Dr. Catherine A. Sheils</u>
13.50 – 13.55	Questions for Presenters

Thursday 28th April

Thursday 28th April 13.30 – 13.55	
Live Abstract Presentations in <u>MAIN AUDITORIUM, live streamed with recording</u>	
5 mins presentation. James Andrews	
	Abstract
13.30 – 13.35	34 The predictive scoring system of small diaphragmatic defect in infants with congenital diaphragmatic hernia. <u>Dr. Keita Terui</u>
13.35 – 13.40	42 Small Bowel Obstruction after neonatal repair of Congenital Diaphragmatic Hernia – results from a large longitudinal cohort-study <u>Dr Terry Buchmiller</u>
13.40 – 13.45	58 Impact of bowel rotation and fixation on obstructive complications in congenital diaphragmatic hernia <u>Dr Terry Buchmiller</u>
13.45 – 13.55	Questions for presenters

Thursday 28th April 13.30 – 13.55	
Live Abstract Presentations in <u>CONFERENCE ROOM (no stream or recording)</u>	
5 mins presentation. Carmen Mesas Burgos	
	Abstract
13.30 – 13.35	
13.35 – 13.40	40 Neonatal rodent ventilation and clinical correlation in congenital diaphragmatic hernia – defining “gentle” ventilation <u>Dr. Vikas Gupta</u>
13.40 – 13.45	93 METABOLIC AND LIPIDOMIC PROFILING OF THE EFFECTS OF TRACHEAL OCCLUSION IN A RABBIT MODEL OF CONGENITAL DIAPHRAGMATIC HERNIA <u>Dr Andreana Butter</u>
13.45 – 13.55	Questions for presenters

LUNCHTIME E-POSTER PRESENTATIONS IN FOYER

Wednesday 27th April

Wednesday 27th April 13.30 – 13.55	
Poster Screen 1: Philip De Koninck	
3 mins presentation.	
	Abstract
13.30 – 13.33	91 Prenatal repeated measurements of pulmonary vascular function in fetuses with left-sided congenital diaphragmatic hernia and moderate to mild pulmonary hypoplasia <u>MD Katinka Weller</u>
13.33 – 13.36	116 LUNG RESPONSE AFTER FETOSCOPIC ENDOLUMINAL TRACHEAL OCCLUSION IN RIGHT-SIDED AND LEFT-SIDED CONGENITAL DIAPHRAGMATIC HERNIA <u>Dr. Kanokwaroon Watananirun</u>
13.36 – 13.39	
13.39 – 13.42	78 MEDIASTINAL SHIFT ANGLE IN CONGENITAL DIAPHRAGMATIC HERNIA: PERINATAL AND SHORT-TERM OUTCOMES <u>MD Laura Valfre</u>
13.42 – 13.45	80 Image-based prenatal predictors of survival, extracorporeal life support, and defect size in right-sided congenital diaphragmatic hernia <u>Dr. Enrico Danzer</u>
13.45 – 13.48	79 Image-based prenatal predictors correlate with postnatal survival, extracorporeal life support use, and defect size in left congenital diaphragmatic hernia <u>Dr. Matthew Harting</u>

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Wednesday 27th April 13.30 – 13.55

Poster Screen 2:

3 mins presentation. Dr Neysan Rafat

	Abstract	
13.30 – 13.33	46 Left ventricular rotational mechanics in CDH <u>Dr Abhijit Bhattacharya</u>	
13.33 – 13.36	17 Ex utero intrapartum therapy in infants with congenital diaphragmatic hernia <u>Li-Shuang Ma</u>	
13.36 – 13.39	114 The utility of serial echo parameters in the management of newborns with congenital diaphragmatic hernia (CDH) <u>Dr Kiran More</u>	
13.39 – 13.42	50 Cardiac ventricular wall thickness in fetuses with congenital diaphragmatic hernia (CDH). <u>Dr Anita Romiti</u>	
13.42 – 13.45	136 Brain natriuretic peptide levels in children with congenital diaphragmatic hernia-related pulmonary hypertension treated with Treprostinil <u>Felix DeBie</u>	
13.45 – 13.48	76 Prophylactic administration of prostaglandin E1 is associated with a reduced risk of death in the first year of life in neonates with moderate to severe left congenital diaphragmatic hernia (CDH) <u>Dr Sebastian Murr</u>	
13.48 – 13.51	51 Fetal cardiac dimensions in congenital diaphragmatic hernia: relationship with gestational age and postnatal outcomes <u>Dr Anita Romiti</u>	

Thursday 28th April

Thursday 28th April 13.30 – 13.55	
<u>Poster Screen 1:</u>	
3 mins presentation. Dr Jonathan Coutts	
	Abstract
13.30 – 13.33	14 Association between prenatal ultrasound parameters and survival in very preterm infants with congenital diaphragmatic hernia <u>Denise Oudshoorn</u>
13.33 – 13.36	129 Prenatal brain development is altered in Right Congenital Diaphragmatic Hernia on ultrasound <u>Dr Lennart Van Der Veeke</u>
13.36 – 13.39	122 Single center genetic evaluation in Congenital Diaphragmatic Hernia patients <u>Dr. Alessandra Di Pede</u>
13.39 – 13.42	73 PREGNANCY IN CONGENITAL DIAPHRAGMATIC HERNIA (CDH) SURVIVORS: A PILOT STUDY <u>Dr Rebecca Pulvirenti</u>
13.42 – 13.45	35 Postnatal Prediction Models in Newborns with Congenital Diaphragmatic Hernia: A Literature Review <u>Mrs Jasmin Heath</u>
13.45 – 13.48	120 Heritable disorders of fibrous connective tissues in patients with Diaphragmatic Herniae: The relevance of genetic evaluation. <u>Dr. Alessandra Di Pede</u>
13.48 – 13.51	125 The impact of the perinatal care setting on survival after fetoscopic tracheal occlusion for severe congenital diaphragmatic hernia: a systematic review and individual participant analysis <u>Dr. Shelby Sferra</u>

COFFEE BREAK E-POSTER PRESENTATIONS

Wednesday 27th April

Wednesday 27th April 11.10 – 11.25	
Poster Screen 1:	
3 mins presentation. Dr Anne Marie Heuchan	
	Abstract
11.10 – 11.13	130 Bronchoenteric fistula in a patient with chronic recurrent congenital diaphragmatic hernia <u>Dr. Alicia Eubanks</u>
11.13 – 11.16	113 Do we still need the oxygenation index in the NICU? A comparative analysis of different oxygenation indices in congenital diaphragmatic hernia neonates. <u>Lennart Hale</u>
11.16 – 11.19	119 Pulmonary hypertension in congenital diaphragmatic hernia: impact on the post-natal outcome and antenatal prediction. <u>David Basurto</u>
11.19 – 11.22	56 Risk factors for delayed oral feeding autonomy in left CDH patients <u>Dr Dyuti SHARMA</u>

Wednesday 27th April 15.10 – 15.25	
Poster Screen 1: Lukas Shroeder	
3 mins presentation.	
	Abstract
15.10 – 15.13	131 Long Term Functional Outcomes in Critically Ill Neonates with Congenital Diaphragmatic Hernia <u>Ben Albert</u>
15.13 – 15.16	123 Perinatal factors associated with mortality in Congenital Diaphragmatic Hernia: The Yorkshire Experience <u>Dr Amy Young</u>
15.16 – 15.19	70 Pulmonary Function in Scottish children and adolescents with severe congenital diaphragmatic hernia <u>Dr Emma Box</u>
15.19 – 15.22	9 Hidden cardiovascular morbidity in children and young adults born with Congenital diaphragmatic hernia: A Population-based study <u>MD Katarina Övermo</u>

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Thursday 27th April

Thursday 28th April 10.40 – 10.55	
Poster Screen 1:	
3 mins presentation. Gregor Walker	
	Abstract
10.40 – 10.43	110 Guideline revision and care standardization results in improved survival and decreased ECMO utilization for congenital diaphragmatic hernia (CDH) patients Patrick Sloan¹ , NNP-BC Kristen Bagby ² , Dr. Nathalie El Ters ¹
10.43 – 10.46	74 Congenital Diaphragmatic Hernia: What can the National Congenital Anomaly and Rare Disease Registration Service (NCARDRS) tell us? Dr Kathryn Johnson² , Jennifer Brougham ² , Corinne Mallinson ² , Steven Hardy ²
10.46 – 10.49	
10.49 – 10.52	
10.52 – 10.55	