

## Division Introduction

UT Southwestern Medical Center is widely recognized as one of the nation’s leading centers for neonatal–perinatal care, teaching, and research. The Division is dedicated to providing exceptional care for the most critically ill patients and is committed to the training of outstanding physicians and scientists. Through the continued discovery of new knowledge, division faculty and staff strive to help tomorrow’s patients as well as improve outcomes for the vulnerable population for whom we care.

Directed by Lina Chalak, M.D., M.S.C.S., the [Division of Neonatal-Perinatal Medicine](#) is comprised of a large group of nationally and internationally recognized faculty members with expertise in virtually all aspects of modern neonatal-perinatal care and state-of-the-art research.

We at UT Southwestern currently serve four hospitals across Dallas (Parkland, Clements University Hospital, Children’s Medical Center Dallas, and Texas Health Dallas), accounting for 20,000 births each year, the largest delivery program in Texas. During the COVID-19 pandemic, through the highly collaborative establishment of protocols and procedures, we have managed over 2,000 deliveries of SARS-CoV-2-positive mothers in our four hospitals. The effectiveness of these specific protocols is borne out by the fact that not a single member of the team contracted the disease while providing care on our units.

The Division’s mission is to positively impact the health of neonates in our community, our nation, and worldwide through excellence in patient care, research, and education. That mission is three-fold:

### **Excellence in Neonatal Care**

Through multidisciplinary and family-centered care, we will strive to improve the standard of practice and ensure the highest quality of care for neonates in our hospitals and around the world. We will care for neonates with the highest respect for their precious lives in a compassionate and caring environment and will utilize evidence-based approaches to clinical care that are regularly evaluated and updated.

### **Leadership in Research**

We will pursue new knowledge through high-quality research that explores unanswered questions as well as tests and refines previously established ideas in neonatal-perinatal care. As global leaders in research, we will work collaboratively inside and outside our institution in order to generate important discoveries that will lead to improvements in the care that is provided for neonates worldwide.

### **Education of Future Leaders**

We will impart knowledge, instill excitement for learning, and translate these into focused areas of research for our neonatal medicine trainees, pediatric residents, medical students, and advanced practice providers. We will train future leaders in neonatal medicine, who will in turn impart the knowledge and values obtained during their training to those with whom they interact during their careers.



**Lina Chalak, M.D., M.S.C.S.**  
**Professor, Interim Division Chief**

## Faculty

The Division consists of neonatologists and pediatricians who are committed to providing the highest level of clinical care to the infants they treat, to conducting cutting-edge research, and to the education of postdoctoral and advanced practice trainees. The Division faculty's research interests span a wide range of topics, including pulmonary and vascular biology, neonatal resuscitation, hypoxic ischemic encephalopathy, clinical informatics, and long-term follow-up care. The faculty are also involved in extensive quality improvement projects that aim to improve care and efficiency. In addition to its own databases, the Division participates in both The Vermont Oxford Network and The Children's Hospital Neonatal Consortium, as well as the databases for the National Institute of Child Health and Human Development (NICHD) Neonatal Research Network.

We were thrilled to welcome five new faculty members to the Neonatal-Perinatal Medicine team in 2022.

### **Maryam Ali, M.D.**

Assistant Professor



#### **M.D.**

Geisel School of Medicine at Dartmouth, Hanover, NH, 2013

#### **Postdoctoral Training**

Residency, Pediatrics

University of Massachusetts Memorial Medical Center, Worcester, MA, 2014 - 2016

#### **Interests**

Newborn pediatrics

### **Nicole Bailey, M.D.**

Clinical Associate Professor



#### **M.D.**

Tufts University School of Medicine, Boston, MA, 2005

#### **Postdoctoral Training**

Residency, Pediatrics

Rainbow Babies and Children's Hospital, Cleveland, OH, 2006-2009

Fellowship, Neonatology

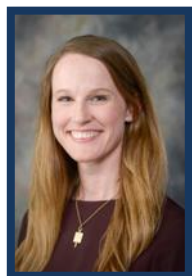
Children's Hospital of Philadelphia, Philadelphia, PA, 2009– 2012

#### **Interests**

Patient centered care and quality initiatives

### **Margaret Hoge, M.D.**

Assistant Professor



#### **M.D.**

Wake Forest University, Winston-Salem, NC, 2014

#### **Postdoctoral Training**

Residency, Pediatrics

UT Southwestern, 2014-2017

Fellowship, Neonatal-Perinatal Medicine

UT Southwestern, 2017– 2020

Fellowship, Developmental/Behavioral Pediatrics

UT Southwestern, 2019– 2022

#### **Interests**

Neonatal follow up and vulnerable child syndrome

**Athra Kaviani, M.D.**  
Assistant Professor



**M.D.**  
UT Southwestern, 2013  
**Postdoctoral Training**  
Residency, Pediatrics  
UT Southwestern, 2013-2016  
Chief Resident, Pediatrics  
UT Southwestern, 2016 – 2017  
**Interests**  
Newborn pediatrics

**Marina Santos Oren, M.D.**  
Assistant Professor



**M.D.**  
Universidade do Estado do Para, Belem, Brazil, 2008  
**Postdoctoral Training**  
Fellowship, Neonatal-Perinatal Medicine  
University of New Mexico of Medicine, Albuquerque, NM, 2016 - 2019  
Residency, Pediatrics  
Tufts Medical Center, Boston, MA, 2019 - 2021  
**Interests**  
Patient centered care and quality initiatives

## Honors / Awards

### **Noorjahan Ali**

- Promoted to Associate Professor

### **Erin Gordon**

- Patient and Family Recognition Award – UT Southwestern Medical Center

### **Jawahar Jagarapu**

- Texas Super Doctors – Texas Monthly Magazine

### **Mambarambath Jaleel**

- Promoted to Professor

### **Rashmin Savani**

- Texas Super Doctors – Texas Monthly Magazine

### **Jack Seidel**

- Texas Super Doctors – Texas Monthly Magazine

### **Myra Wyckoff**

- Mentoring Award – UT Southwestern Medical Center
- Pediatric Educator Award – Southern Society of Pediatric Research

### **Sushmita Yallapragada**

- Texas Rising Star Doctors – Texas Monthly Magazine

## **Invited Lectures**

### **Lina Chalak**

- Department of Psychiatry Grand Rounds, UT Southwestern/Children’s Health, Dallas, TX, February 2022
  - *“Biomarkers of Fetal-Neonatal Brain Health”*
- International Perinatal Consortium, Iceland, June 2022
  - *“Role of parents and stakeholders in trials development”*
- AAP 100<sup>th</sup> Perinatal & Developmental Medicine Symposium (50<sup>th</sup> Anniversary), Clearwater, FL, November 2022
  - *“Two decades progress Improving Asphyxia Outcomes: A Physician Scientist Inspired Journey”*
- Department of Neurology Grand Rounds, UT Southwestern/Children’s Health, Dallas, TX, December 2022
  - *“A scholar Clinical translational journey in neonatal asphyxia”*

### **Becky Ennis**

- THR THD Neonatal Grand Rounds – Dallas, TX, June 2022
  - *“Cognitive Biases: The Choice is Up to You. . . or is it?”*

### **Vishal Kapadia**

- 2022 Annual International Neonatal Conference, Middlesbrough, United Kingdom, June 2022
  - *“Heart Rate Monitoring in the Delivery Room: Current State of Evidence and Implications for Your Clinical Practice”*
- Research Conference, University of Oklahoma, OK, February 2022
  - *“Optimal Oxygen Saturation Targets: The Goldilocks Rule”*

### **Christoph Lehmann**

- Frank – van Swieten Lectures on Strategic Information Management, University of Heidelberg, Germany, June 2022
  - *“The Future and Challenges of E-Health”*

### **Imran Mir**

- Perinatal Research Group, Columbia University, New York City, NY, February 2022
  - *“Fetal Inflammatory Response and Placental Clearance in Clinical Chorioamnionitis”*
- Grand Rounds Presentation by Department of Obstetrics and Gynecology and Neonatology at Texas Health Presbyterian Hospital, Dallas, TX, March 2022
  - *“Placental Pathology, FIRS and Neonatal Morbidities”*

### **Julie Mirpuri**

- Texas Health Dallas Neonatal Grand Rounds, Dallas, TX, January 2022
  - *“The neonatal microbiome: influence of pre- and post-natal exposures that affect health and susceptibility to NEC.”*
- Columbia University Neonatology Research Conference, New York City, NY, March 2022
  - *“Maternal diet, offspring innate immunity and necrotizing enterocolitis”*
- Smithsonian Museum, Arts and Science, Washington, DC, March 2022
  - *“Do what you love, Love what you do. Tips from my STEM journey.”*

### **Shalini Ramachandran**

- Latifa Hospital, Dubai, United Arab Emirates, March 2022
  - *“International Neonatal Resuscitation Program (NRP) sessions”*
- Corniche Hospital, Abu Dhabi, United Arab Emirates, June 2022
  - *“International Neonatal Resuscitation Program (NRP) sessions”*

### **Rashmin Savani**

- Johns Hopkins University Clinic K12 Glycoscience Training Program Seminar Series, Cleveland, OH, February 2022
  - Invited Speaker
- Federation of European Biochemistry Societies, (FEBS) 8<sup>th</sup> Advanced Lecture Course, Crete, Greece, May 2022
  - *“Matrix Pathobiology, Signaling & Molecular Targets”*
- International Perinatal Collegium, Reykjavik, Iceland, June 2022
  - *“Matrix Pathobiology, Signaling & Molecular Targets”*
- Proteoglycans Gordon Conference, Andover, NH, July 2022
  - Invited Speaker
- Matrix Biology Europe, Florence, Italy, September 2022
  - *“Matrix Pathobiology, Signaling & Molecular Targets”*

### **Elizabeth Stehel**

- Academy of Breastfeeding Medicine, European Association of Breastfeeding Medicine, Virtual, February 2022
  - *“ABM Protocol 2: Guidelines for Birth Hospitalization Discharge of Breastfeeding Dyads.”*

### **Katherine Stimpf**

- Southern Society for Pediatric Research, New Orleans, LA, February 2022
  - *“Growth failure in preterm infants is associated with a decrease in Enterococcus and Clostridia”*

### **Myra Wychoff**

- International Symposium on Neonatal Resuscitation, Brazilian Pediatric Society, Salvador, Brazil, 2022
  - *“ILCOR Neonatal Life Support Task Force role in guiding neonatal resuscitation in the World.”*
  - *“Controversies in cord clamping management and in the initial steps.”*
  - *“What is the evidence for chest compressions and medication use in neonatal resuscitation at birth?”*
  - *“Knowledge gaps in neonatal resuscitation.”*

### **Sushmita Yallapragada**

- Surgical Grand Rounds, Children’s Health Dallas, TX 2022
  - *“Persistent Pulmonary Hypertension of the Newborn”*

## Conference Presentations

### **Western Conference on Perinatal Research, Indian Wells, CA, January 2022**

Saha S, Wickland J, Brennan S, Gant T, Lee D, **Brion LP, Dariya V**

Oral Presentation, *“Improving Intubations at Children’s Medical Center, Dallas (CMCD) Using an Intubation Bundle.”*

Sanchez-Rosado M, Reis J, **Jaleel M**, Mangona K, Burchfield PJ, Mathai D, Moore V, Lair C, Petrosyan E, Pedroza A, Boren M, Clipp K, **Brion LP**

Oral Presentation, *“Quality Improvement (QI) Project to Decrease Necrotizing Enterocolitis (NEC) Stage≥II by Increasing Administration of Breastmilk (BM) Among Very Low Birth Weight (VLBW) and/or ≤32 Weeks (wks) Gestational Age (GA) Infants.”*

### **International Newborn Brain Conference, Clearwater Beach, FL, Virtual, February 2022**

**Angelis, D**

Abstract, *“Using a bundle of care to improve rates of intraventricular hemorrhage (IVH) in Extremely Low Birth Weight infants (ELBW)”*

**Chalak, L**

Oral Presentation, *“Role of parents and stakeholders in trials development”*

### **Pediatric Academic Societies, Denver, CO, April 2022**

**Babata KL**, Yeo KT, Sultana R, Chan CS, **Mazzarella K**, Adhikari EH, Kong JY, Hascoët J, **Brion LP**

Poster Presentation, *“Feeding strategies to prevent neonatal SARS-CoV-2 infection in term or late preterm babies born to mothers with confirmed COVID-19.”*

Brown LC, Roblyer L, Sanghavi R, **Ortigoza E**

Poster Presentation, *“Preterm Infants with Feeding-Associated Cardiorespiratory Events Have Transient Dysmotility During Postnatal Development”*

**Chalak, L**

State of the Art Plenary, *“Hot Debate Cooling in Mild HIE: Bridging Bench to Bedside”*

Abstract, *“Randomized Controlled Trial of Erythropoietin for Neonatal Hypoxic-Ischemic Encephalopathy”*

Abstract, *“Placental Vascular Malperfusion Lesions in Fetal Congenital Heart Disease”*

Abstract, *“Placental Pathology in SARS-CoV-2 Infected Pregnancies: Single-Institution Retrospective Cohort Analysis”*

Chawla S, **Wyckoff MH**, Rysavy MA, Patel RM, Chowdhury D, Lakshminrusimha S, Das A, Greenberg RG, Bell EF, Ambalavanan N, Younge NE, Natarajan G, Shankaran S, Lupton AR, Pavlek LR, Backes C, Van Meurs KP, Werner EF, Carlo WA for the National Institute of Child Health and Human Development (NICHD) Neonatal Research Network.

Platform Presentation, *“Length of Exposure to a Single Dose of Betamethasone: Infant Mortality and Morbidity Outcomes.”*

Chiu M, Tolentino-Plata K, **Heyne R**, Brown S, **Kakkilaya V**

Oral Abstract, *“Identifying Risk Factors and Associated Outcomes Among Preterm Infants with Admission Hyperthermia”*

**Hu, J**

Poster Presentation, *“Practice Variation for Fetal and Neonatal Congenital Heart Disease within the Children’s Hospital Neonatal Consortium”*

**Kakkilaya, V**, Weydig H, **Kapadia V**, **Stumpf K**, Saha S, Kurepa D, Pulju M, Simcik V, Garcia K, White M

Workshop Presentation, *“Say No to Mechanical Ventilation – Strategies to Optimize Non-Invasive Respiratory Support in Preterm Infants”*

**Kapadia V**

Workshop, *“Say No to Mechanical Ventilation - Getting the Beginning Right from the First Breath”*

**Kapadia V**, Brown S, Burchfield P, **Kakkilaya V**

Poster Presentation, *“Effectiveness of CPAP Optimization and Less Invasive Surfactant Administration (LISA) Strategy in 35-38 Weeks GA Infants”*

**Leon RL**, **Sharma K**, **Mir IN**, **Chalak LF**

Poster Presentation, *“Placental Vascular Malperfusion Lesions in Fetal Congenital Heart Disease.”*

**Leon RL**, **Chalak L**, **Mir IN**, **Sharma K**

Poster Presentation, *“Practice Variations for Fetal and Neonatal Congenital Heart Disease within the Children’s Hospitals Neonatal Consortium.”*

**Maddox K**, Kissel AM, **Francis J**, Diaz MD, **Sanghavi R**, **Rao D**, Menzies C, **Lehmann C**.

Poster Presentation, *“Effects of the Electronic Health Record on Job Satisfaction of Academic Pediatric Faculty.”*

**Mir IN**, Frost M, **Brion LP**

Poster Presentation, *“Correlation between In-Training Examination Scores and Neonatal-Perinatal Medicine Boards Pass Rate.”*

**Mirpuri J**, Niu X, Lu D

Oral Presentation, *“Amniotic fluid metabolites mediate maternal high fat diet expansion of group 3 innate lymphoid cells and susceptibility to NEC in offspring”*

**Ortigoza E**, Chaudhari AV, Roblyer L, Sanghavi RM, Wang X, Liu H

Poster Presentation, *“Electrogastrography as a Non-Invasive Tool to Measure Gastrointestinal Maturity in Preterm Infants”*



Reis JD, Sanchez-Rosado M, Mathai D, Kiefaber I, **Brion LP**

Poster Presentation, *“Time of Initiation of Pumping vs Breastfeeding at Discharge of Preterm Infants”*

Reis JD, Hagan T, **Heyne R**, Tolentino-Plata K, Clarke R, Brown S, **Brion LP**

Poster Presentation, *“Relationship between ventricular size on latest ultrasonogram and Bayley scores in extremely low gestational age neonates (ELGANS).”*

Reis JD, Tolentino-Plata K, Caraig M, **Heyne R**, Rosenfeld CR, Brown LS, **Brion LP**

Oral Poster Symposium, *“Double-Blinded Randomized Controlled Trial (RCT) of Optimizing Nutrition in Preterm (PT) Very Low Birth Weight Infants: Bayley Scores at >18 Months of Age.”*

Sanchez-Rosado M, Lair C, Edwards A, Jacob T, Brown S, **Heyne R**, **Brion LP**

Poster Presentation, *“Growth, Zinc Deficiency and Mortality to Discharge after Implementing a Donor Breast Milk (DBM) Program in Neonates <33 weeks Gestational Age and Birthweight <1500.”*

Sanchez-Rosado M, Reis J, **Jaleel M**, Mangona KL, Nelson DB, Burchfield PJ, Mathai D, Moore V, Lair C, Petrosyan E, Pedroza A, Boren M, Clipp K, Brown S, **Brion LP**

Oral Presentation, *“A QI Project to Decrease Necrotizing Enterocolitis (NEC) by Increasing Administration of Breastmilk (BM) Among Very Low Birth Weight (VLBW) and/or ≤32 weeks Gestational Age (GA) Infants.”*

Sanchez-Rosado M, Reis JD, Verma D, Kiefaber I, Burchfield, Brown S, **Brion LP**

Poster Presentation, *“Necrotizing enterocolitis in small for gestational age (GA) (SGA) vs appropriate for GA (AGA) infants.”*

**Savani RC**, Liao J, Longoria CL, Cheong N, Coutavas E, Kim S, Lee P, Luyt L, Turley E, Garantziotis S

Poster Presentation, *“The Hyaluronan Receptor RHAMM is Critical for Toll-Like Receptor 7- and SARS-CoV-2-Mediated Increases in Lung Cytokines and Inflammation”*

Schlegel A, **Nayak SP**, Black A, Fry JT, Ling CY Leuthner SR, Sullivan KM

Workshop, *“Life-Limiting Diagnosis in the Level IV NICU: Communication with Families facing Complex Decision-Making”*

Shukla VV, Carper BA, Rysavy MA, Bell EF, Das A, Patel RM, D’Angio CT, Watterberg KL, Cotton CM, Merhar SL, **Wyckoff MH**, Sanchez PJ, Ambalavanan N, and Carlo WA, for the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) Neonatal Research Network.

Poster Presentation, *“Association of Social Distancing with Extremely Preterm Live Births and Intrapartum Stillbirths in the Initial COVID-19 Pandemic Period.”*

**Sisman J**, Brown LS, **Mir IN**

Poster Presentation, *“The Association of Placental Pathology and Lenticulostriate Vasculopathy (LSV) in Preterm Infants.”*



**Sivarajan M, Schneider JH**

Poster Presentation, *“Utility of routine hematocrit screening in large and small for gestational age newborns”*

Stavroudis T, Wolbrink T, Halamek LP, White MLL, Lopreiato JO, **Ali N**, Weiner DL, Didaz R, Moussa A, Afonso N

Workshop, *“Clinical Event Debriefing: How to Build and Operationalize Patient Safety-Focused Clinical Event Debriefing Programs”*

**Wyckoff M**

Postgraduate Course - Chest Compressions in Neonatal Resuscitation, *“Neonatal Pulmonology and Resuscitation: What is new in newborn resuscitation?”*

Younge NE, Saha S, Brumbaugh JE, Klein JM, Bell EF, Colaizy T, Hughes BL, Malcolm WF, **Wyckoff MH**, van Meurs KP, Walsh MC, Das A, Cotten CM, for the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) Neonatal Research Network.

Poster Presentation, *“Outcomes of Extremely Preterm Infants Exposed to Prolonged Preterm Prelabor Rupture of Membranes Before 24 Weeks of Gestation.”*

**American Medical Informatics Association (AMIA) Clinical Informatics Conference, Houston, TX, May 2022**

Saleh SN, Turer RW, Pickering M, Lanier HD, Diaz MI, Casazza JA, Ho M, Hanna JJ, **Most ZM**, **Lehmann CU**, Medford RJ

Poster Presentation, *“Using an Organic Apprenticeship Model to Incorporate Data Science into Medical Education.”*

Turer RW, Martin KR, Ramello N, Jackson A, Chu L, Willett DL, Thakur B, **Lehmann CU**, McDonald SA

Abstract Presentation, *“The 21<sup>st</sup> Century Cures Act Information Blocking Rule’s Effect on Real-Time Emergency Department Patient Access to Results via Patient Portal.”*

**Association of Pediatric Program Directors (APPD) 2022 Annual Spring Meeting, San Diego, CA, May 2022**

**Mir I, Frost M, Brion LP**

Poster presentation, *“Correlation between In-Training Examination Scores and Neonatal-Perinatal Medicine Boards Pass Rate.”*

**American Academy of Pediatrics National Conference, Anaheim, CA, October 2022**

Ho M, **Most ZM**, Perl TM, Diaz MI, Casazza JA, Saleh SN, Pickering M, Radunsky AP, Hanna JH, Thakur B, **Lehmann CU**, Medford RJ, Turer RW

Poster Presentation, *“Identifying Risk Factors for Severe Clinical Outcomes in Pediatric COVID-19 Patients In a National Electronic Health Record Repository.”*

## Kapadia V

NRP Live Webinar, *“Start at the beginning: Tips for Effective Newborn Resuscitation”*

## American Medical Informatics Association (AMIA) Annual Symposium 2022, Washington, DC, November 2022

Furmaga F, Turer RW, Reeder J, Thakur B, **Lehmann CU**, O’Connell E, McDonald SA.

Abstract Presentation, *“Computer Aided Documentation: Better Than Dictation.”*

Knake LA, Alrifai MW, McCoy AB, Wanderer JP, Johnson KB, **Lehmann CU**, Wright A, Hatch LD.

Abstract Presentation, *“Lessons Learned from Implementing Clinical Decision Support for Neonatal Ventilation.”*

## Lehmann C

Oral Presentation, *“Primum non Nocere: Challenges and Strategies for Protecting Privacy for Adolescent Patients in the 21<sup>st</sup> Century Cures Act Setting”*

Oral Presentation, *“A debate on the extension of the Practice Pathway for ABMS clinical informatics board certification for physicians in the United States”*

## Other Conferences

Hanna J, Nijhawan A, **Lehmann CU**, Medford J.

29<sup>th</sup> Conference on Retroviruses and Opportunistic Infections, Denver, CO, February 2022

Poster Presentation, *“Facebook Advertisement Cost per New HIV Diagnosis using Routine and Targeted Models.”*

## Education and Training

The Neonatal–Perinatal Medicine Division provides educational opportunities for medical students and pediatric residents in addition to our fully accredited fellowship program. Our goal is to impart knowledge, instill excitement for learning, and translate questions into focused areas of research.

### Third-Year Medical Students

During their pediatrics rotation at UT Southwestern, third-year medical students spend time in the Newborn Nursery at Parkland Hospital.

### Fourth-Year Medical Students

Students in their fourth year at UT Southwestern may elect to spend time in the Newborn Nursery or the Neonatal Intensive Care Units (NICU) at Parkland Hospital and Children’s Medical Center Dallas.

### Residents

The design of the Pediatric Residency Program at UT Southwestern and Children’s Medical Center Dallas allows for exposure to Neonatal-Perinatal Medicine at Parkland Hospital and elective exposure at Children’s throughout the three-year training program.

## Elective Rotations for Pediatric Residents from External Programs

The Division offers the following elective rotations to residents from other programs:

- Children’s Neonatal Intensive Care Unit
- Parkland Neonatal Intensive Care Unit
- Texas Health Dallas Presbyterian Hospital NICU
- Parkland Newborn Nursery
- Children’s Thrive Clinic
- Neonatal Neurology
- Research

## Fellows

**Vision** –We envision that our graduates will positively impact the health of neonates through their leadership, research, and excellence in patient care.

**Mission** –We have three missions:

- **Patient Care:** We will strive to improve the standard of practice and ensure the highest quality of care for neonates in our hospitals and around the world. We will care for neonates with the highest respect for their precious lives in a family-centered, compassionate, and caring environment, utilizing evidence-based approaches to treatments that are regularly evaluated and updated.
- **Research:** We will pursue new knowledge through high-quality research that explores unanswered questions and tests and refines previously established ideas in developmental biology and neonatal-perinatal care. We will engage in world-class clinical, translational, and basic science research aimed at improving babies’ lives throughout their lifespan. We will work collaboratively within and outside our institution to generate important discoveries that will enhance medical practice and inform the medical community and the public of evidence-based approaches to neonatal-perinatal medicine.
- **Education:** We will impart knowledge, instill excitement for learning, and translate and refine questions into focused areas of research for our trainees. We will train future leaders in neonatal medicine who will work in an academic or private setting and deliver the highest quality care to their patients. We will accomplish this by:
  - Allowing fellows to pursue their interests in a structured manner in order to produce quality research addressing significant questions in neonatal-perinatal medicine.
  - Promoting a collegial environment that provides ample opportunity for fellows to grow and learn from their own and others’ experiences.

## Research Activities

The following are representative of various research activities occurring in the Division of Neonatal-Perinatal Medicine at UT Southwestern. The division held \$1.4 million in direct funding in 2021 as of August 22, 2022. This amount includes sponsored egrants and non-egrants data.

### Clinical Research

- **NIH Neonatal Network for Clinical Trials:** The Division of Neonatal-Perinatal Medicine is an active participant in the Neonatal Network clinical studies and has been since its inception in 1986.
- **Treatment of chorioamnionitis-exposed neonates:** Several alternative diagnostic tests and therapies have been promoted for the neonate whose mother is diagnosed with chorioamnionitis.

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*The faculty and fellows of the  
Division of Neonatal-Perinatal  
Medicine published 90  
peer-reviewed papers in 2022*

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- **Follow-up care** for very low birth weight and high-risk infants, including neurodevelopment, chronic disease, and nutrition, is part of our ongoing study of these babies.
- **Neonatal resuscitation:** Randomized trials (e.g., temperature control, oxygen delivery, and resuscitation educational interventions), observational studies (ETCO<sub>2</sub> guidance of CPR, effectiveness of epinephrine dosing), as well as other observational studies using the resuscitation database, which includes detailed information about all resuscitation team calls since 2003.
- **Hypoxic-ischemic encephalopathy:** Mechanism of injury; assessment of tools such as the amplitude electroencephalogram (EEG); translational research utilizing a piglet model of asphyxia; optimizing neuro-protection offered by hypothermia; rewarming after hypothermia; cerebrovascular hemodynamic modulation of asphyxiated infants; neuroimaging; neurodevelopment.
- **Studies in the newborn nursery:** Late preterm infants, hypoglycemia, transcutaneous bilirubin
- **Observational studies using available databases:** Several research studies and quality improvement projects use information from available databases, including: the neonatal resuscitation database (Parkland, see above), the NICU databases at Parkland or Children’s Medical Center (CMC), the NICHD Neonatal Research Network Databases (Generic Database, Follow-up Database, and Moderate Preterm Registry), the Vermont-Oxford Network (Parkland NICU), and the Child Health Neonatal Consortium Database (CMC NICU).
- **Early evidence suggesting potential risk of metabolic syndrome in infancy among very low birth weight infants:** Evidence for abnormal weight-to-length ratio, increased adiposity, glomerular hyperfiltration, and high blood pressure in very low birth weight infants followed at the low-birth-weight clinic.
- **Nutritional and growth studies:** Optimizing Individual Nutrition in Preterm Very Low Birth Weight Infants: Randomized clinical trial comparing individualized versus optimized supplementation of human milk; Quality improvement in nutrient administration and linear growth assessment.
- **Weaning continuous positive airway pressure (CPAP) in preterm infants:** randomized study comparing two modes of weaning CPAP: from five centimeters vs. decreasing from five to four and three centimeters.
- **Optimization of CPAP in the delivery room and decreasing CPAP failure in the NICU**
- **Less Invasive Surfactant Administration**

## Laboratory Research

- Maternal and fetal cardiovascular physiology and development
- Animal models relating to neonatal resuscitation and gestational hypertension
- Pathogenesis of bronchopulmonary dysplasia/chronic lung disease and novel therapies
- Molecular basis of vascular disease
- Pulmonary endothelial function, nitric oxide, persistent pulmonary hypertension, and calcium metabolism
- The roles of hyaluronan (hyaluronic acid) and its receptors in inflammation, endothelial function, and COVID-19
- Gut microbiome and its effects on immune responses in the developing gut and risks for necrotizing enterocolitis (NEC)

## Clinical Activities

The Division of Neonatal-Perinatal Medicine has provided care for normal newborns and newborns with complex medical and surgical problems for more than 45 years. Faculty offer clinical services at four distinct institutions with a total of 18,000-20,000 births and 250 NICU beds.

### Parkland Health and Hospital System

- **Neonatal Intensive Care Unit:** Since 1974, the NICU at Parkland Memorial Hospital has been providing exceptional and comprehensive care to critically ill newborns. This was the first NICU in Dallas County and is the largest Level III unit in the region. The 96-bed unit averages about 1,800 admissions annually, or about 150 admissions a month. Our staff consists of a collaborative team of physicians, advanced practice providers, nurses, and support staff who are all highly experienced in caring for a wide array of neonatal disorders both medical and surgical. Working closely with our highly skilled colleagues in the maternal-fetal medicine department, we

are able to provide exceptional care both before and after birth. This teamwork has resulted in some of the lowest mortality and morbidity rates in the country. This unit achieved Level III designation by the state in 2018 and again in 2021.

- **Newborn Nursery:** With more than 12,000 deliveries a year, the newborn nursery at Parkland Hospital is one of the busiest in the country. Under the supervision of pediatric faculty from the Neonatal-Perinatal Division, pediatric residents and pediatric advanced practice providers provide comprehensive care for both term and near-term infants from birth through discharge.
- **Labor and Delivery:** We provide a unique and highly trained neonatal resuscitation team that attends more than 300 high-risk deliveries a month and have the capability to deliver cutting-edge delivery room care in even the most complex cases, including Ex Utero Intrapartum Treatment (EXIT) procedures. Under the direction of Myra Wyckoff, M.D., an internationally acclaimed physician in neonatal resuscitation research, the labor and delivery faculty provide a very unique resuscitation rotation for fellows, residents, and medical students, which includes exposure to a computerized patient simulator, participation in resuscitation research, review of the literature, and attendance at high-risk deliveries.

## Children's Health System of Texas

- **Level IV Neonatal Intensive Care Unit:** The NICU at Children's combines advanced technology with highly trained healthcare professionals to provide comprehensive care for critically ill newborns. This state-of-the-art, 47-bed NICU opened in 2007 as the premiere referral unit in North Texas. The NICU staff, under the supervision of faculty members from the Division of Neonatal-Perinatal, is experienced in caring for a wide-array of neonatal disorders, both medical and surgical. Through an integrated collaboration between Children's and an extensive network of pediatric subspecialists from UT Southwestern, this NICU is able to provide exceptional care tailored to the specific needs of each individual patient, serving over 800 infants in 2021. This NICU achieved Level IV designation by the state in 2016 and re-designation as a Level IV NICU in 2020.
- **Thrive at Children's:** The Thrive Clinic provides comprehensive medical and psychosocial treatment through intensive intervention, education, social services, and developmental testing for high-risk infants from birth to age five.
- **The Fetal Evaluation and Treatment Alliance (FETAL) and The Fetal Center:** Established in 2008, this program has grown substantially and culminated in the opening of a dedicated Fetal Center in 2014. FETAL was the first program in North Texas offering a full continuum of specialized care for pregnant women diagnosed with a fetal anomaly. Patient families and their referring providers receive prenatal conferences with a highly specialized multidisciplinary team, all in one location, that brings the expertise of UTSW subspecialists to the affected baby at risk. A personalized approach addresses each in utero diagnosis to determine the best strategy for pregnancy, delivery, and continuity of care after birth. Receiving care through the FETAL Center provides access to maternal fetal medicine specialists, a world-renowned neonatal resuscitation team, and a complete range of pediatric and surgical subspecialists who work together to deliver the highest level of comprehensive care.
- **TeleNICU:** In 2013, in collaboration with Children's Health, we launched TeleNICU, the state's first dedicated neonatal telemedicine service and one of the most sophisticated systems of its kind in the U.S. TeleNICU links specially trained, board-certified UT Southwestern neonatologists at Children's Health to physicians at other hospitals' NICUs to consult and assist in the management of the sickest and most fragile infants. Using specialized equipment and secure broadband transmission, our dedicated neonatologists are able to communicate with doctors at other facilities 24/7. Using two-way, real-time interactive communication, virtual examination of newborns at distant-site NICUs is achieved. Participating hospitals connect with UTSW neonatologists using a mobile equipment cart with medical-quality videoconferencing capabilities, secure data transfer, and digital equipment that permits diagnostic testing. Our physicians are able to use specialized cameras to perform high-definition visual examinations and a high-tech stethoscope to listen to the baby's heart, lungs, and abdomen. *Information Week* named TeleNICU as one of the Elite 100 Information Technology Innovations in 2015. We have since established TeleTransport, where our transport teams have telemedicine capabilities to allow neonatologists direct ability to examine and manage patients with the transport team, TeleFETAL,

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*US News & World Report ranked the Neonatal Program at Children's Health in the top 50 of all programs in the United States in 2022*

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which allows fetal consultations to be done remotely, as well as TeleCooling for infants that have suffered hypoxic-ischemic encephalopathy (HIE) at outside hospitals.

### William P. Clements Jr. University Hospital

- **Level III NICU:** The William P. Clements Jr. University Hospital features 30 single-patient NICU rooms. State-of-the-art neonatal care, including conventional and high-frequency mechanical ventilation, inhaled nitric oxide therapy, and outstanding nursing care, is provided to fragile infants. Parents can sleep in the room overnight with their newborns – enabling parents to focus on their infant and build bonds that will help the baby grow stronger. This NICU received Level III designation from the state in 2018 and redesignation in 2021. The quality improvement work in the unit has received several awards for innovation and excellent outcomes.
- **Newborn Nursery:** The Labor, Delivery, and Recovery rooms combine modern technology with a warm, home-like environment to provide a safe and comfortable experience for mothers and families. Our highly experienced newborn physicians provide state-of-the-art care for the newborn infant. We also have lactation consultants to provide breastfeeding assistance. UT Southwestern is a member of the Texas Ten Step Program to improve maternity care practices. Policy development, education of staff, and provision of discharge resources for breastfeeding mothers are key initiatives of the program.

### Southwestern Health Resources – Texas Health Dallas (Presbyterian) Hospital (THD)

The UT Southwestern Division of Neonatal-Perinatal Medicine assumed care of the newborn infants in the NICU and Special Care Nursery at THD in September 2015, marking the beginning of Southwestern Health Resources, a close affiliation between UT Southwestern and Texas Health Resources.

- **Level III NICU:** Located on the third floor of the Margo Perot Center at Texas Health Dallas, a 47-bed Level III NICU provides 24-hour comprehensive care to premature, high-risk, and ill infants. The self-contained program offers therapies, equipment, and an experienced multidisciplinary specialist team that includes UTSW neonatologists, medical subspecialists, and surgeons, as well as excellent neonatal nurses, respiratory therapists, pharmacists, and occupational therapists. This NICU received Level III designation from the State in 2018 and again in 2021.
- **Special Care Nursery:** The Special Care Nursery provides specialized services and medical monitoring for infants who have graduated from the NICU but still require additional care. The nursery is staffed by board-certified UT Southwestern neonatologists who provide around-the-clock expert care for premature and special-needs infants. This 44-bed nursery is the only Level II nursery in the Dallas area that offers private rooms. Parents are able to room with their infants in hotel-like surroundings that include a refrigerator, granite countertops, a flat-screen TV, and a private bath, thereby encouraging parents to spend as much time with their babies as possible.
- **Thrive at THD:** As an extension of the Thrive program at Children’s, Thrive at THD has skilled developmental specialists and pediatricians to provide comprehensive developmental testing for high-risk infants that have graduated from THD and surrounding NICUs.
- **FETAL at THD:** The Fetal Evaluation and Treatment Alliance (FETAL) provides fetal consultations at the Children’s Health Specialty Center Park Cities located in the Margot Perot Center for Women & Infants at THD. Staffed by UT Southwestern neonatologists, pediatric subspecialists, and surgical specialists, this program extends the continuum of specialized care for pregnant women diagnosed with a fetal anomaly.

## Patient Statistics

### Parkland Health & Hospital System

	2016	2017	2018	2019	2020	2021	2022
Births	12,441	12,424	12,563	12,574	12,600	12,600	12,535
NICU Admissions	1,639	1,822	1,960	1,803	1,813	1,647	1,758

Average Length of Stay (days)	20.1	21.0	18.8	17.6	14.0	15	15.75
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#### William P. Clements Jr. University Hospital

	2016	2017	2018	2019	2020	2021	2022
Births	1,899	2,122	1,941	2,055	1,978	2,000	2,256
NICU Admissions	450	479	430	461	410	372	495
Average Length of Stay (days)	12.6	15.6	16.6	15.7	11.6	10.6	10.6

#### Children's Medical Center

	2016	2017	2018	2019	2020	2021	2022
Admissions	642	706	669	736	560	691	740
Average Length of Stay (days)	21.7	20.6	21.3	19.7	21.3	21.2	20

#### Texas Health (Presbyterian) Dallas – NICU & Special Care Nursery

	2016	2017	2018	2019	2020	2021	2022
Births	5,144	5,008	4,859	4,496	4,977	5,125	4,443
NICU Admissions	688	728	833	842	705	711	681
Average Length of Stay (days)	22.6	21.8	17.3	20.3	23.2	17.8	57.38

#### FETAL Program

	2016	2017	2018	2019	2020	2021	2022
PHHS Referrals	219	174	238	219	311	342	147
UTSW Referrals	--	--	--	--	--	--	108
THD Referrals	--	--	30	38	37	298	30

## Current Grant Support

### Noorjahan Ali

**Grantor:** The International Network for Simulation-based Pediatric Innovation, Research and Education

**Title of Project:** Implementation of a resuscitation bundle for neonatal resuscitation

**Role:** Principal Investigator

**Dates:** 07/2020 – 12/2022

### Luc Brion

**Grantor:** UT Southwestern Internal

**Title of Project:** Optimizing Individual Nutrition in Preterm Very Low Birth Weight Infants

**Role:** Principal Investigator

**Dates:** 12/2021 – 12/2022

**Grantor:** Children's Health Foundation

**Title of Project:** Optimizing Individual Nutrition in Preterm Very Low Birth Weight Infants: Randomized Clinical Trial

**Role:** Principal Investigator

**Dates:** 12/2021 – 12/2022

### Lina Chalak

**Grantor:** University of California, San Francisco



**Title of Project:** HEAL – High Dose Erythropoietin for Asphyxia and Encephalopathy – Year 6

**Role:** Principal Investigator

**Dates:** 07/2018 – 06/2022

**Grantor:** NIH-National Inst of Neuro Disord & Strk

**Title of Project:** A Novel Wavelet Neurovascular Bundle for Real Time Detection of Injury in Neonatal Encephalopathy

**Role:** Principal Investigator

**Dates:** 07/2017 – 06/2022

**Grantor:** Washington University in St. Louis

**Title of Project:** NIRS Monitoring to Stop Injury

**Role:** Principal Investigator

**Dates:** 04/2021 – 03/2023

**Grantor:** UT Southwestern

**Title of Project:** Safeguarding the Brain of Our Smallest Children – an open-label phase-III randomized trial of cerebral oximetry combined with a treatment guideline versus treatment as usual in premature infants.

**Role:** Principal Investigator

**Dates:** 01/2020 – 01/2023

**Grantor:** Cerebral Palsy Alliance Research Fndt

**Title of Project:** An investigator-initiated, pragmatic, multi-site single-arm phase II clinical trial evaluating neuroprotective treatment for preterm infants based on near-infrared spectroscopy monitoring in premature infants. BOx-II

**Role:** Principal Investigator

**Dates:** 01/2020 – 01/2023

**Grantor:** Patient Centered Outcomes Research Institute (PCORI)

**Title:** COOL PRIME (Cooling Comparative Effectiveness Prospective Study In Infants with Mild Encephalopathy)

**Role:** Principal Investigator

**Dates:** 11/2022 – 10/2027

### Venkatakrishna Kakkilaya

**Grantor:** Chiesi USA Inc

**Title of Project:** Less Invasive Surfactant for Extremely Preterm Neonates in the Delivery Room: randomized controlled trial (DRLISA study)

**Role:** Principal Investigator

**Dates:** 06/2021 – 06/2024

**Grantor:** Chiesi USA Inc

**Title of Project:** Use of Premedication for Less Invasive Surfactant Administration: A Randomized Control Trial

**Role:** Principal Investigator

**Dates:** 04/2022 – 04/2024

**Grantor:** Spark Biomedical, Inc.

**Title of Project:** Delivering Transcutaneous Auricular Neurostimulation as an Adjunct Treatment for Neonatal Opioid Withdrawal Syndrome

**Role:** Principal Investigator

**Dates:** 07/2022 – 06/2024

### Vishal Kapadia

**Grantor:** NIH – National Institute of Child Health & Human Development – K23

**Title of Project:** Low versus High Transitional Oxygen Saturation Targets for Preterm Resuscitation in the Delivery Room: A Randomized Controlled Trial  
**Role:** Principal Investigator  
**Dates:** 05/2016 – 11/2022  
**Grantor:** American Academy of Pediatrics  
**Title of Project:** Delivery Room Intervention and Evaluation (Drive) Network  
**Role:** Principal Investigator  
**Dates:** 09/2022 – 12/2023

#### **Christoph Lehman**

**Grantor:** NCCN/Pfizer  
**Title of Project:**  
**Role:** Co-Investigator  
**Dates:** 02/2021 – 01/2022

**Grantor:** NIH/NCATS  
**Title of Project:** Clinical and Translational Science Awards (CTSA)  
**Role:** Co-Investigator  
**Dates:** 04/2021 – 03/2026

#### **Rachel León**

**Grantor:** NIH-National Heart, Lung and Blood Inst  
**Title of Project:** Placental hemodynamic effects on brain development in infants with congenital heart disease  
**Role:** Principal Investigator  
**Dates:** 09/2022 – 08/2023

#### **Imran Mir**

**Grantor:** Children's Health Foundation  
**Title of Project:** Brain Injury in Extremely Preterm Infants – Role of Exposure to Intrauterine Inflammation  
**Role:** Principal Investigator  
**Dates:** 08/2020 – 12/2022

#### **Julie Mirpuri**

**Grantor:** NIH-National Institute of DDK Diseases  
**Title of Project:** Mechanisms of maternal high fat diet induced susceptibility to gut inflammation in offspring  
**Role:** Principal Investigator  
**Dates:** 03/2022 – 02/2023

**Grantor:** NIH-National Institute of Children Health & Human Development  
**Title of Project:** The role of diet and dietary metabolites in directing ILC3 lineage commitment in the fetus and newborn  
**Role:** Principal Investigator  
**Dates:** 07/2022 – 06/2023

**Grantor:** Children's Health Foundation  
**Title of Project:** Mechanisms of maternal high fat diet induced susceptibility to gut  
**Role:** Principal Investigator  
**Dates:** 12/2019 – 12/2022

**Grantor:** American Association for the Advancement of Science  
**Title of Project:** Walls can Talk: Creation of the IF/THEN Female Leaders Advancing Medicine, Education and Science (FLAMES)

**Role:** Principal Investigator  
**Dates:** 10/2020 – 12/2022

### Eric Ortigoza

**Grantor:** Children’s Medical Center Foundation, Children’s Clinical Research Advisory Committee (CCRAC)  
**Title of Project:** Gut Motility and the Microbiome in Preterm Infants  
**Role:** Principal Investigator  
**Dates:** 11/2018 – 11/2022

**Grantor:** NIH/NCATS UT Southwestern CTSA Pilot Grant Program  
**Title of Project:** Biomarkers of Feeding Intolerance in Preterm Infants  
**Role:** Principal Investigator  
**Dates:** 02/2022 – 04/2022

**Grantor:** NIH/NCATS KL2 Clinical Scholars Program  
**Title of Project:** Biomarkers of Feeding Intolerance in Preterm Infants  
**Role:** Principal Investigator  
**Dates:** 09/2021 – 09/2023

### Myra Wyckoff

**Grantor:** RTI International  
**Title of Project:** NICHD Neonatal Research Network Capitation Funding  
**Role:** Principal Investigator  
**Dates:** 04/2011 – 03/2023

**Grantor:** NIH – National Institute of Child Health & Human Development  
**Title of Project:** NICHD Cooperative Multicenter Neonatal Research Network  
**Role:** Principal Investigator  
**Dates:** 04/2022 – 03/2023

### Sushmita Yallapragada

**Grantor:** Mallinckrodt Pharmaceuticals  
**Title of Project:** Multicenter; Prospectively defined observational registry with retrospective data collection, evaluating premature and term-near-term neonates with pulmonary hypertension receiving inhaled nitric oxide via invasive or noninvasive ventilator support at US  
**Role:** Principal Investigator  
**Dates:** 04/2018 – 04/2023

## Peer-Reviewed Publications

1. Abbey NV, Mashruwala V, Weydig HM, Steven Brown L, Ramon EL, Ibrahim J, **Mir IN, Wyckoff MH, Kapadia V.** [Correction: Electrocardiogram for heart rate evaluation during preterm resuscitation at birth: a randomized trial.](#) *Pediatr Res.* 2022 May;91(6):1624. PMID:34921215
2. Abman SH, Armstrong S, Baker S, Bogue CW, Carlo W, **Chalak L**, Daniels SR, Davis S, Debaun MR, Fike C, Frazer L, Gibson K, Gill M, Glass H, Gordon CM, Goyal M, Hirschhorn J, Holtz L, Hunstad DA, Leonard MB, Maitre N, Markham L, McAllister-Lucas L, Orange J, Shah P, Simon T, Steinhorn RH, Tarini B, Walker-Harding LR. [Correction: The american pediatric society and society for pediatric research joint statement against racism and social](#)

[injustice](#). *Pediatr Res*. 2022 Jan;91(1):264. PMID:34389800

3. Adhikari EH, MacDonald L, SoRelle JA, **Morse J**, Pruszynski J, Spong CY. [COVID-19 Cases and Disease Severity in Pregnancy and Neonatal Positivity Associated With Delta \(B.1.617.2\) and Omicron \(B.1.1.529\) Variant Predominance](#). *JAMA*. 2022 Apr 19;327(15):1500-1502. PMID:35325015
4. Ahmad I, Premkumar MH, Hair AB, Sullivan KM, Zaniletti I, Sharma J, **Nayak SP**, Reber KM, Padula M, Brozanski B, DiGeronimo R, Yanowitz TD, Children's Hospitals Neonatal Consortium NEC Focus Group. [Variability in antibiotic duration for necrotizing enterocolitis and outcomes in a large multicenter cohort](#). *J Perinatol*. 2022 Nov;42(11):1458-1464. PMID:35760891
5. **Ali N**, Sawyer T. [Special consideration in neonatal resuscitation](#). *Semin Perinatol*. 2022 Oct;46(6):151626. PMID:35738945
6. Arvisais-Anhalt S, Lau M, **Lehmann CU**, Holmgren AJ, Medford RJ, Ramirez CM, Chen CN. [The 21st Century Cures Act and Multiuser Electronic Health Record Access: Potential Pitfalls of Information Release](#). *J Med Internet Res*. 2022 Feb 17;24(2):e34085. PMID:35175207
7. Arvisais-Anhalt S, **Lehmann CU**, Bishop JA, Balani J, Boutte L, Morales M, Park JY, Araj E. [Searching Full-Text Anatomic Pathology Reports Using Business Intelligence Software](#). *J Pathol Inform*. 2022;13():100014. PMID:35251753
8. Arvisais-Anhalt S, Ravi A, Weia B, Aarts J, Ahmad HB, Araj E, Bauml JA, Benham-Hutchins M, Boyd AD, Brecht-Doscher A, Butler-Henderson K, Butte A, Cardillo AB, Chilukuri N, Cho MK, Cohen JK, Craven CK, Crusco SJ, Dadabhoy F, Dash D, DeBolt C, Elkin PL, Fayanju OA, Fochtman L, Graham JV, Hanna J, Hersh W, Hoffard MR, Hron J, Huang SS, Jackson BR, Kaplan B, Kelly W, Ko K, Koppel R, Kurapati N, Labbad G, Lee J, **Lehmann CU**, Leitner S, Liao ZC, Medford RJ, Melnick ER, Muniyappa AN, Murray S, Neinstein A, Nichols-Johnson V, Novak L, Ogan WS, Ozeran L, Pageler N, Pandita D, Perumbeti A, Petersen C, Pierce L, Puttagunta R, Ramaswamy P, Rogers KM, Rosenbloom T, Ryan A, Saleh S, Sarabu C, Schreiber R, Shaw KA, Sim I, Sirintrapun SJ, Solomonides A, Spector JD, Starren JB, Stoffel M, Subbian V, Swanson K, Tomes A, Trang K, Unertl KM, Weon JL, Whooley M, Wiley K, Williamson DF, Winkelstein P, Wong J, Xie J, Yarahuan JKW, Yung N, Zera C, Ratanawongsa N, Sadasivaiah S. [Paging the Clinical Informatics Community: Respond STAT to Dobbs v Jackson's Women's Health Organization](#). *Appl Clin Inform*. 2022 Dec 19. doi: 10.1055/a-2000-7590. PMID: 36535703
9. Arvisais-Anhalt S, Wickenhauser KA, Lusk K, **Lehmann CU**, McCormack JL, Feterik K. [Direct Secure Messaging in Practice-Recommendations for Improvements](#). *Appl Clin Inform*. 2022 May;13(3):767-773. PMID:35926794
10. Bell EF, Hintz SR, Hansen NI, Bann CM, **Wyckoff MH**, DeMauro SB, Walsh MC, Vohr BR, Stoll BJ, Carlo WA, Van Meurs KP, Rysavy MA, Patel RM, Merhar SL, Sánchez PJ, Laptook AR, Hibbs AM, Cotten CM, D'Angio CT, Winter S, Fuller J, Das A, Eunice Kennedy Shriver National Institute of Child Health and Human Development Neonatal Research Network. [Mortality, In-Hospital Morbidity, Care Practices, and 2-Year Outcomes for Extremely Preterm Infants in the US, 2013-2018](#). *JAMA*. 2022 Jan 18;327(3):248-263. PMID:35040888
11. Bell EF, Stoll BJ, Hansen NI, **Wyckoff MH**, Walsh MC, Sánchez PJ, Rysavy MA, Gabrio JH, Archer SW, Das A, Higgins RD. [Contributions of the NICHD neonatal research network's generic database to documenting and advancing the outcomes of extremely preterm infants](#). *Semin Perinatol*. 2022 Nov;46(7):151635. PMID:35835615

12. Best K, **Wyckoff MH**, Huang R, Sandford E, **Ali N**. [Pulseless electrical activity and asystolic cardiac arrest in infants: identifying factors that influence outcomes](#). *J Perinatol*. 2022 May;42(5):574-579. PMID:35177792
13. Bonifacio SL, **Chalak LF**, Van Meurs KP, Laptook AR, Shankaran S. [Neuroprotection for hypoxic-ischemic encephalopathy: Contributions from the neonatal research network](#). *Semin Perinatol*. 2022 Nov;46(7):151639. PMID:35835616
14. Bordier E, Stumpf K, **Ortigoza EB**. [Deglutition-related cardiorespiratory events](#). *Early Hum Dev*. 2022 Aug;171():105602. PMID:35749800
15. Bouey NJ, Saha S, Wilson-Costello DE, Rysavy MA, Walsh M, **Wyckoff MH**, Hibbs AM. [Delayed-interval delivery in multiple gestation pregnancies: neonatal mortality, morbidity, and development](#). *J Perinatol*. 2022 Dec;42(12):1607-1614. PMID:35906282
16. Brumbaugh JE, Bell EF, Do BT, Greenberg RG, Stoll BJ, DeMauro SB, Harmon HM, Hintz SR, Das A, Puopolo KM, Eunice Kennedy Shriver National Institute of Child Health and Human Development Neonatal Research Network. [Incidence of and Neurodevelopmental Outcomes After Late-Onset Meningitis Among Children Born Extremely Preterm](#). *JAMA Netw Open*. 2022 Dec 1;5(12):e2245826. PMID:36480199
17. **Chalak L**. [New Horizons in Mild Hypoxic-ischemic Encephalopathy: A Standardized Algorithm to Move past Conundrum of Care](#). *Clin Perinatol*. 2022 Mar;49(1):279-294. PMID:35210007
18. **Chalak LF**. [Identification and Treatment of Neonatal Seizures During Therapeutic Hypothermia and Rewarming-Reply](#). *JAMA Neurol*. 2022 May 1;79(5):530-531. PMID:35377417
19. Chaudhari A, Wang X, Roblyer L, Sanghavi R, Liu H, **Ortigoza EB**. [Frequency-specific electrogastrography as a non-invasive tool to measure gastrointestinal maturity in preterm infants](#). *Sci Rep*. 2022 Dec 1;12(1):20728. PMID:36456633
20. Chawla S, **Wyckoff MH**, Rysavy MA, Patel RM, Chowdhury D, Natarajan G, Laptook AR, Lakshminrusimha S, Bell EF, Shankaran S, Van Meurs KP, Ambalavanan N, Greenberg RG, Younge N, Werner EF, Das A, Carlo WA, Eunice Kennedy Shriver National Institute of Child Health and Human Development Neonatal Research Network. [Association of Antenatal Steroid Exposure at 21 to 22 Weeks of Gestation With Neonatal Survival and Survival Without Morbidities](#). *JAMA Netw Open*. 2022 Sep 1;5(9):e2233331. PMID:36156145
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22. Chuo J, Makkar A, Machut K, Zenge J, **Jagarapu J**, Azzuqa A, **Savani RC**. [Telemedicine across the continuum of neonatal-perinatal care](#). *Semin Fetal Neonatal Med*. 2022 Oct;27(5):101398. PMID:36333212
23. **Dariya V**, Moresco L, Bruschetti M, **Brion LP**. [Cuffed versus uncuffed endotracheal tubes for neonates](#). *Cochrane Database Syst Rev*. 2022 Jan 24;1(1):CD013736. PMID:35073407

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## **Book Sections**

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