

SEPTINTOJI TARPTAUTINĖ KONFERENCIJA

THE 7<sup>th</sup> INTERNATIONAL CONFERENCE

2026 m. liepos mėn. 7-10 d., Vilniaus universitetas, LIETUVA

7<sup>th</sup>-10<sup>th</sup> of July, 2026, Vilnius University, LITHUANIA

**EVOLIUCINĖ MEDICINA:  
ŽMOGAUS RAIDOS PERSPEKTYVOS IR SVEIKATA  
BESIKEIČIANČIOJE APLINKOJE**

---

**EVOLUTIONARY MEDICINE:  
PERSPECTIVES ON HUMAN DEVELOPMENT AND HEALTH  
CONSEQUENCES IN A CHANGING ENVIRONMENT**

Rengėjas:

Vilniaus universiteto Medicinos ir sveikatos mokslų  
Doktorantūros mokykla, VU Medicinos fakultetas

Organized by

the Doctoral School of Medicine and Health sciences  
at Vilnius University, VU Faculty of Medicine

## **INTERNATIONAL SCIENTIFIC COMMITTEE**

Karolis AŽUKAITIS (Vilnius University, Lithuania)  
Noël CAMERON (Loughborough University, UK)  
Janet CARTON (University College Dublin, Ireland)  
Dalius JATUŽIS (Vilnius University, Lithuania)  
Maria KACZMAREK (Adam Mickiewicz University, Poland)  
Sylvia KIRCHENGAST (University of Vienna, Austria)  
Lawrence M. SCHELL (University at Albany, S.U.N.Y, USA)  
Wojciech ŚLUSARCZYK (Nicolaus Copernicus University in Torun, Poland)  
Janina TUTKUVIENĖ (Vilnius University, Lithuania)  
Aistis ŽALNORA (Vilnius University, Lithuania)

## **LOCAL ORGANIZING COMMITTEE**

(Faculty of Medicine, Vilnius University)

### **Chair:**

Janina TUTKUVIENĖ

### **Conference booklet coordinator:**

Rūta MORKŪNIENĖ

### **Conference Secretary:**

Eglė Marija JAKIMAVIČIENĖ

### **Members:**

Justina ALČAUSKAITĖ  
Arūnas BARKUS  
Elvin Francišek BOGDZEVIČ  
Ramunė ČEPULIENĖ  
Airida DOSINAITĖ  
Rasa JANULIONIENĖ  
Kristupas KURMINAS  
Rūta MORKŪNIENĖ  
Laura NEDZINSKIENĖ  
Juozapas RYLIŠKIS  
Evita ŠEIKOVAITĖ  
Mindaugas SMETANINAS  
Eglė STUKAITĖ-RUIBIENĖ  
Sofija ŠESTAK  
Renata ŠIMKŪNAITĖ-RIZGELIENĖ  
Rūta VOSYLIŪTĖ  
Violeta ŽALGEVIČIENĖ

# PREVALENCE, RISK FACTORS AND PHYSICAL STATUS OF NEWBORNS WITH CONGENITAL ANOMALIES (ACCORDING TO LITHUANIAN MEDICAL BIRTH DATA FROM 1997 TO 2020)

**Guste SULIAUSKAITE<sup>1</sup>, Egle Marija JAKIMAVICIENE<sup>2</sup>, Jelena ISAKOVA<sup>3</sup>, Janina TUTKUVIENE<sup>2</sup>**

<sup>1</sup>Faculty of Medicine, Vilnius University, Vilnius, Lithuania

<sup>2</sup>Department of Anatomy, Histology and Anthropology, Faculty of Medicine, Vilnius University, Vilnius, Lithuania

<sup>3</sup>Health Information Centre, Institute of Hygiene, Vilnius, Lithuania

Contact e-mail: [guste.suliauskaite@mf.stud.vu.lt](mailto:guste.suliauskaite@mf.stud.vu.lt)

**Background and Aim:** Congenital anomalies remain an important public health issue. This study aimed to evaluate the prevalence of congenital anomalies in Lithuania during 1997–2020, compare the physical status of affected and unaffected newborns, and identify maternal factors associated with congenital anomalies.

**Materials and Methods:** A population-based descriptive study was performed using data from the Lithuanian Medical Birth Register. Information on 32,656 newborns with congenital anomalies was compared with data on 713,037 unaffected newborns. The prevalence and distribution of congenital anomalies, neonatal characteristics, and maternal demographic, social, reproductive, and health-related factors were analysed using MS Excel and SPSS software.

**Results:** The prevalence of congenital anomalies increased from 2.92% in 1997 to 5.65% in 2020. Cardiovascular, musculoskeletal, and urogenital anomalies were the most common anomaly groups, with cardiovascular defects showing the greatest increase over time (from 13.35% to 25.98%). The highest relative prevalence of congenital anomalies was observed in Siauliai (8.8%) and Kaunas (6.7%). Compared with unaffected newborns, newborns with congenital anomalies were more frequently born preterm (boys: 16.3% vs. 5.3%; girls: 16.0% vs. 4.6%) and from multiple pregnancies (4.3% vs. 2.4%). They also had significantly lower mean gestational age, birth weight, length, and head circumference ( $p < 0.05$ ). Mothers of affected newborns were more likely to be older than 30 years, have lower educational attainment, be unmarried, be of non-Lithuanian ethnicity, have a history of adverse pregnancy outcomes, and report smoking or alcohol consumption during pregnancy.

**Conclusions:** The prevalence of congenital anomalies in Lithuania increased during the study period and was accompanied by changes in the dominant anomaly groups. Congenital anomalies were associated with less favourable neonatal outcomes and several maternal risk factors, including advanced maternal age, lower education, adverse reproductive history, smoking, and alcohol consumption during pregnancy.

**Keywords:** congenital anomalies, Lithuania, maternal risk factors, neonatal outcomes, prevalence