CAROL DAVILA UNIVERSITY OF MEDICINE AND PHARMACY, BUCHAREST
DOCTORAL SCHOOL
OBSTETRICS - GYNECOLOGY

PLACENTAL VASCULAR REMODELING IN FETO-MATERNAL PATHOLOGY
SUMMARY OF THE DOCTORAL THESIS

Doctoral Supervisor:
PROF. UNIV. DR. RUSSU MANUELA-CRISTINA

Student:
GHELMENE ELENA-ADRIANA

2024

TABLE OF CONTENTS

SUMMARY

Placental vascular remodeling is a crucial aspect of placental development and is essential for ensuring adequate perfusion of the fetus during pregnancy. In maternal-fetal pathology, this vascular remodeling can be altered, leading to significant clinical complications. Therefore, understanding the mechanisms underlying placental vascular remodeling in the context of maternal-fetal pathology is essential for developing strategies for early diagnosis, intervention, and prenatal management. This doctoral thesis aims to explore and deeply analyze these mechanisms, with the ultimate goal of contributing to the improvement of maternal-fetal healthcare and reducing the incidence of pregnancy-associated complications.

Research in the field of maternal-fetal pathology began to take shape more systematically starting in the 19th century, with advances in the understanding of the physiological processes of pregnancy and fetal development. Significant contributions from Franz Karl Naegele, who formulated the well-known "Naegele's rule" for calculating the probable date of delivery, and Eduard Heinrich Henoch, who described various pregnancy-related conditions, marked the initial steps in understanding and diagnosing maternal-fetal pathology. However, it is important to emphasize that research in this field has continued to develop and diversify over time, with technological advancements and the evolution of medical knowledge. Thus, while early contributions, such as those by Bumm in 1893, were fundamental to the development of maternal-fetal pathology, research in this field has continued to progress and expand in subsequent centuries.

The physiological changes that occur in the uterine vascular system during pregnancy are a crucial aspect of gestational physiology and have a significant influence on maternal-fetal health. Karl Bumm was a German physician who made significant contributions to understanding the physiological changes that occur in the uterine vascular system during pregnancy. In his 1893 work titled "Beitrag zur Kenntniss der Uterusgefässe während der Schwangerschaft" ("Contributions to the Knowledge of Uterine Vessels During Pregnancy"), Bumm documented his observations regarding the vascular changes that take place in the uterus throughout pregnancy. He described the increase in the number and diameter of uterine blood vessels, as well as changes in their histological structure, which are essential for ensuring adequate perfusion of the placenta and fetus. Bumm's work was an important

step in understanding the physiology of pregnancy and contributed to the foundation of medical knowledge in the field of maternal-fetal pathology.

In recent decades, research on placental vascular remodeling in maternal-fetal pathology has seen significant growth, benefiting from technological advances and a better understanding of the molecular and cellular mechanisms involved in this complex process. Numerous experimental models have been developed to investigate and elucidate the factors influencing placental vascular remodeling, including in vitro models, animal models, and advanced imaging techniques. These models have facilitated the study of interactions between various cells and environmental factors at the placental level and have allowed researchers to evaluate the impact of different interventions and treatments on the vascular remodeling process. However, despite the progress made, many aspects of this field remain unexplored and require further in-depth and detailed investigation. This doctoral thesis aims to contribute to this research effort by developing an innovative model from the perspective of integrated factors, both risk and imaging, and by investigating key aspects of placental vascular remodeling in maternal-fetal pathology.

The doctoral thesis proposes an innovative approach by integrating a complex model that takes into account the relevant risk factors for maternal-fetal pathology along with advanced imaging investigations. By combining these two fundamental elements, new perspectives are opened in understanding placental vascular remodeling and its impact on maternal-fetal health. The integration of risk factors into the proposed model allows for a more complete and accurate assessment of pregnancy-associated risk, while the use of advanced imaging investigations adds an additional dimension of detail and clarity in the analysis of vascular phenomena. This synergistic combination represents a significant step forward in maternal-fetal pathology research and promises to provide valuable tools for early diagnosis, prognosis, and management of this complex condition.

Placental vascular remodeling is the complex process by which the vascular network of the placenta forms and develops during pregnancy. The placenta plays a vital role in providing oxygen and nutrients to the fetus throughout embryonic and fetal development. Placental vascular remodeling is essential for ensuring efficient circulation between the placenta and the fetus, and dysfunctions in this process can have severe consequences on fetal development and maternal-fetal health. This process involves a series of changes in the placental blood vessels, including growth, branching, and vascular remodeling to ensure adequate perfusion and efficient exchange of substances between the mother and the fetus. Additionally, placental vascular remodeling is crucial for establishing and maintaining an

effective interface between maternal and fetal circulation, ensuring harmonious fetal development and preventing complications associated with placental insufficiency.

Preeclampsia is the most common and serious medical disorder that occurs during human pregnancy. This condition is found almost exclusively in humans, and childbirth remains the only effective treatment. Especially during the first pregnancy, pregnant women may experience high blood pressure, kidney dysfunction leading to proteinuria, and swelling in the hands, feet, and face. In severe cases, dizziness, headaches, and vision problems may occur. These symptoms are characteristic of preeclampsia. Without treatment, preeclampsia can progress to eclampsia, which is associated with seizures and other severe complications that threaten the lives of both the mother and the unborn fetus. Early diagnosis and effective management of this condition are crucial for preventing complications and ensuring a positive pregnancy outcome for both the mother and the fetus.

Preeclampsia is a condition that occurs exclusively during pregnancy, and currently, the only cure is the termination of the pregnancy, even if the fetus is not yet ready for birth. Preeclampsia and its associated complications account for a significant proportion of direct maternal mortality and perinatal mortality, contributing to 15% and 10% of these statistics, respectively. Preeclampsia is the indication for approximately 20% of labor inductions and 15% of cesarean sections. Additionally, this condition is responsible for 5-10% of spontaneous or iatrogenic preterm births.

Fetal growth restriction (FGR) is a complication diagnosed in approximately 10% of pregnancies and is associated with significant perinatal mortality and morbidity. It remains a pathology without antenatal treatment, where prenatal diagnosis and fetal monitoring are the only options to reduce stillbirth rates. If FGR is not diagnosed prenatally, the risk of intrauterine death is eight times higher. An estimated fetal weight below the 10th percentile is the definition for FGR. This single criterion is not specific as it does not differentiate between pathological fetal growth and a constitutionally small fetus. The International Society of Ultrasound in Obstetrics and Gynecology (ISUOG) includes in the definition of fetal growth restriction the abnormal pulsatility index of the uterine artery and umbilical artery (> 95th percentile) along with estimated fetal weight or abdominal circumference below the 3rd percentile (Ghelmene, et al., 2024).

Both the diagnosis and proper management of intrauterine growth restriction (IUGR) cases remain a challenge for modern obstetrics. The variability in diagnostic criteria, monitoring methods, and the uncertain impact of various factors at each gestational age make this statement true; the obstetrician's challenge lies in accurate diagnosis with proper

gestational age assessment and, in accordance with these parameters, timing the birth for the best foreseeable neonatal outcome. Iatrogenic prematurity, superimposed on cases of intrauterine growth restriction due to uncertainty in fetal status assessment, significantly increases the mortality and morbidity associated with these cases.

The postnatal impact of IUGR should not be overlooked. Among preterm births, which are sometimes preferred to prevent intrauterine death, infants with IUGR have a difficult transition at birth when hypoxic stress is added due to uterine contractions. Common complications in babies with intrauterine growth restriction include poor thermoregulation, hypoglycemia, hypocalcemia, hyperbilirubinemia, polycythemia and hyperviscosity, feeding difficulties, and impaired immune function, necessitating close monitoring during the neonatal period and after discharge (Ghelmene, et al., 2024).

The doctoral thesis was based on studies conducted by Gyokova et al. (2024), Figueras et al. (2021), and Maher et al. (2013), which correlate risk factors in placental disorders with Doppler imaging investigations. The study by Maher et al. (2013) highlights the utility of transvaginal ultrasound, which helps establish a significant correlation between identified risk factors for placental disorders and improves the effectiveness of screening and diagnostic methods (Ayati et al., 2017).

Moving forward, in this context, the doctoral thesis aims to evaluate risk factors from the perspective of existing literature, investigate the presence of these risk factors within the Romanian population, and determine how they interact with each other in the first stage. It is important to note that these factors and the outcome of their interactions vary from country to country. Thus, based on available data, and in line with the findings of research (Yingying et al., 2021; Saito, 2018) which reveal that these factors and their interactions differ significantly between countries, remarkable differences have been observed in the association with known risk factors between populations, triggering factors, risk factors, etiology, severity, and early diagnostic signs. The implications for preeclampsia may differ for the Romanian population compared to other regions of the world.

The ultimate goal of the second stage of the research is to correlate the clinical utility of uterine artery Doppler velocimetry as a predictor of adverse pregnancy outcomes. By integrating risk factors, imaging investigations, and their impact on pregnancy progression, this thesis aims to provide new insights and make significant contributions to the understanding and management of maternal-fetal pathology in the specific context of the Romanian population. Ultimately, all these factors will form a model that offers predictions regarding the future of the pregnancy and its outcomes.

From a methodological perspective, the research involved two stages: a stage of knowledge review and a descriptive quantitative study.

For the first stage of the research, secondary information sources were studied—specifically, specialized literature. This stage is represented by a knowledge review through which the factors that can impact placental vascular remodeling, manifested through the two clinical entities—preeclampsia and intrauterine growth restriction—were identified. Furthermore, scientific articles and guidelines from major representative bodies and professional associations worldwide were studied.

In the second stage, through quantitative research, demographic, medical, and imaging data were collected using a mixed tool—a questionnaire-observation sheet—completed during routine consultations, on the occasion of first and second trimester morphological ultrasounds, and based on the completion of data following imaging investigations, specifically Doppler ultrasound of the uterine arteries.

The aim of this doctoral thesis is to identify the risk factors influencing changes in placental vascular circulation and to correlate them with Doppler ultrasound of the uterine arteries in the first and second trimesters. The goal is to integrate these findings into a model that can be clinically applied to predict adverse pregnancy outcomes in low-risk women.

The proposed model aims to assess the risk of complications during pregnancy, based on two main components: risk factors and imaging factors obtained through ultrasonography, specifically the pulsatility index (PI) and the resistance index (RI).

Improving the prognosis of pregnancies complicated by the effects of deficient vascular remodeling depends on optimizing the development of screening tests and the ability of clinicians to early detect pregnant women at risk of developing complications specific to placental vascular remodeling. This phenomenon occurs early in pregnancy and its impact becomes apparent only when intervention methods are extremely limited. Currently, according to the ASPRE study, there are validated screening models for preeclampsia and early intrauterine growth restriction.

Thus, based on the available data and the fact that research such as (Yingying, et al., 2021) and (Saito, 2018) reveals that these factors and the results of their interactions differ from country to country, remarkable differences have been observed in the association with known risk factors between populations, the triggering factors, risk factors, etiology, severity, and early diagnostic signs. The consequences of preeclampsia may differ for the population of Romania compared to other regions of the world.

Considering that in Romania, the analysis of PLGF, which can refine the risk calculation for preeclampsia, is not reimbursed and is not accessible to the majority of the population, it is deemed necessary to validate and compare combined screening methods. This includes the possibility of evaluating high-risk pregnancies through easily accessible and reproducible means in centers where first-trimester screening and second-trimester morphological ultrasound are performed.

Current screening methods for preeclampsia rely on identifying maternal risk factors, biochemical markers, and Doppler imaging evaluations. However, there is no consensus for identifying the risk of intrauterine growth restriction (IUGR), as it is often implicitly assumed that IUGR will develop within the context of the preeclampsia syndrome (Poon, et al., 2019).

Regarding the methodology, a total of 203 pregnant women with singleton pregnancies were included in this prospective observational study and were evaluated for basic demographic and obstetric data.

These women underwent ultrasound evaluations during the first and second trimesters, including Doppler assessment of the uterine arteries bilaterally to determine pulsatility index (PI) and resistance index (RI) values, as well as the presence of a protodiastolic notch.

From a methodological perspective, the research consisted of two stages:

I. The qualitative research stage, involving a review of the specialized literature

II. Quantitative research based on the observation sheet instrument

1. Research from the Specialized Literature

For the first stage of the research, secondary information sources were studied. This stage involved a literature review, consisting of an analysis of the current state of knowledge, which helped identify factors that can impact placental vascular remodeling, manifested through two clinical entities: preeclampsia and intrauterine growth restriction (IUGR). Scientific articles and guidelines from major representative bodies and professional associations worldwide were studied.

This research had a predominantly exploratory role, aiming to determine all factors influencing the occurrence of intrauterine growth restriction from multiple perspectives. Only organizations offering relevant and detailed studies and information on the studied topic were selected, including ISUOG, ESOG, ACOG, FMF, AAP, and WHO. Information sources retained in the work were considered reliable and valid, with validity and reliability determined by the recognition of the institutions/authors.

The studies considered are as follows: ASPRE: Analyzing target values for Doppler velocimetry, TRUFFLE: Staging of IUGR, ISUOG: Reference model and quality criteria for Doppler measurements, FMF: Establishing percentiles, Perinatology: Calculator section, Articles published in scientific journals and specialized literature

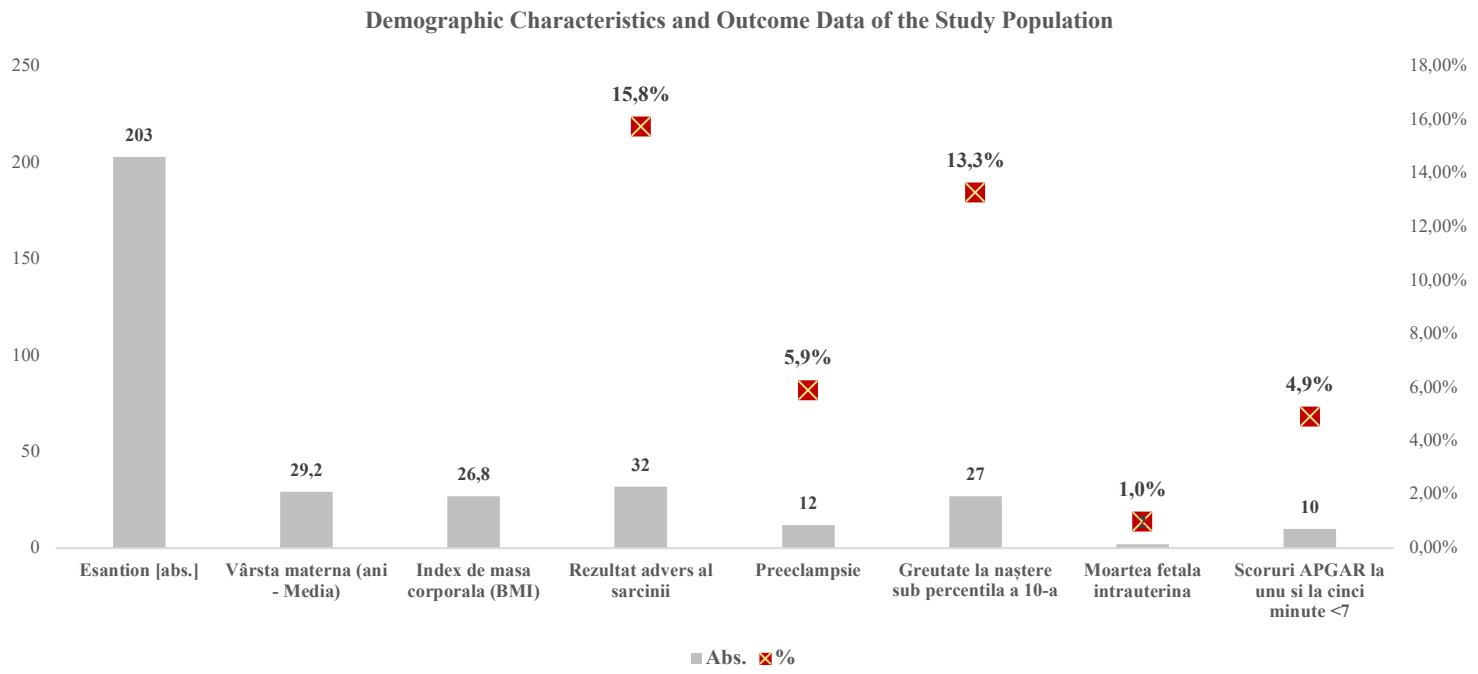
2. Quantitative Research

In the second stage, quantitative research was conducted to collect demographic, medical, and imaging data using a structured questionnaire – an observation sheet. This was filled out during routine consultations, specifically during first and second trimester morphology ultrasounds, and supplemented with data from imaging investigations, particularly Doppler ultrasound of the uterine arteries.

Research Objectives

1. Determining the factors that influence the prognosis of fetal growth restriction;
2. Evaluating the importance of the factors that influence the prognosis of fetal growth restriction;
3. Determining the specific methods, techniques, and tools that can be used in the management and improvement of the prognosis in fetal growth restriction;
4. Determining early detection and management strategies that can be successfully applied to improve the prognosis;
5. Integrating information and determining the scheme and conceptual model for the diagnostic strategy;
6. Representativeness of the Resistance Index (RI) and the Pulsatility Index (PI) in establishing the risk of adverse pregnancy outcomes.

The mean PI and RI in the analyzed population were 1.7 and 0.81, respectively, from the first trimester and the second trimester. The uterine artery PI and RI values for evaluations from the first and second trimesters were significantly higher in patients who developed pregnancy complications compared to normal women. The mean PI > 95th percentile for gestational age at 11-13 weeks of gestation and at 20-24 weeks of gestation were present in 43 (21%) and 19 (9.5%) of the patients, respectively. The 90th and 95th percentiles of the uterine artery RI were calculated to be 2.6 and 2.2, and 0.76 and 0.80, respectively, for the first trimester.



In this research, a mathematical and graphical model was developed to evaluate the risk of pregnancy complications associated with specific risk factors. The proposed model uses two main functions ("f" and "F") to quantify the risk:

- The first function, f(x,y,z,w,u,v)=ax+by+cz+dw+eu+fv, integrates the values of the risk factors, while the second function,
- F=PI×RI

combines the pulsatility index (PI) with the resistance index (RI). Within each category of risk factors, an average value was established, above which the risk is considered high. The coefficients (a, b, c, d, e, f) are calibrated based on these average values, having a value of 1 for risk factors below the established average and a value determined by the formula for those exceeding the average. Thus, the model provides a robust and accurate method for risk assessment, allowing personalized and preventive interventions in patient management.

Within each category, for each risk factor, there is an average value, above which the risk is increased. Thus, the value of the coefficient (a, b, c, d, e, f) for values below the average is 1 (1x), meaning these coefficients do not impact the function score. If the coefficient value is above the average, its value is the one resulting from the research

conducted. Specifically, if the patient exceeds the average in a risk factor, the coefficient taken will be the one that indicates a higher risk of complications.

The model is graphically represented in an XoY coordinate system, with the origin at point (0,0), where the X and Y coordinates represent the values of the variables obtained from the research. The X-axis (OX) and the Y-axis (OY) will be configured to reflect the full range of possible values for the respective scales.

Detailing the Coordinate System

1. Origin of the Coordinate System

The origin of the graph is set at point (0,0), meaning that both the OX and OY axes start from the value of 1. This choice of origin is used to avoid zero values and to ensure better visualization of the data, especially in cases where values can be very small. The maximum values of the X and Y axes will be determined based on the highest values observed in the research for “f” and “F”, so the graph covers the entire range of possible results.

2. OX Axis

On the OX axis, the results of applying the model for each individual will be noted in relation to the risk factors and the function “f”. The results will be calculated using the formula. The values on the OX axis will vary depending on the maximum possible values obtained from the research. Thus, on the OX axis, the results of applying the model for each individual will be noted, corresponding to the risk factors and the function “f” as defined above.

3. OY Axis

On the vertical axis (OY) of the graph, the results of the function “F” will be represented, which combines the two important variables in the evaluation of imaging investigations: PI (Pulsatility Index) and IR (Resistance Index).

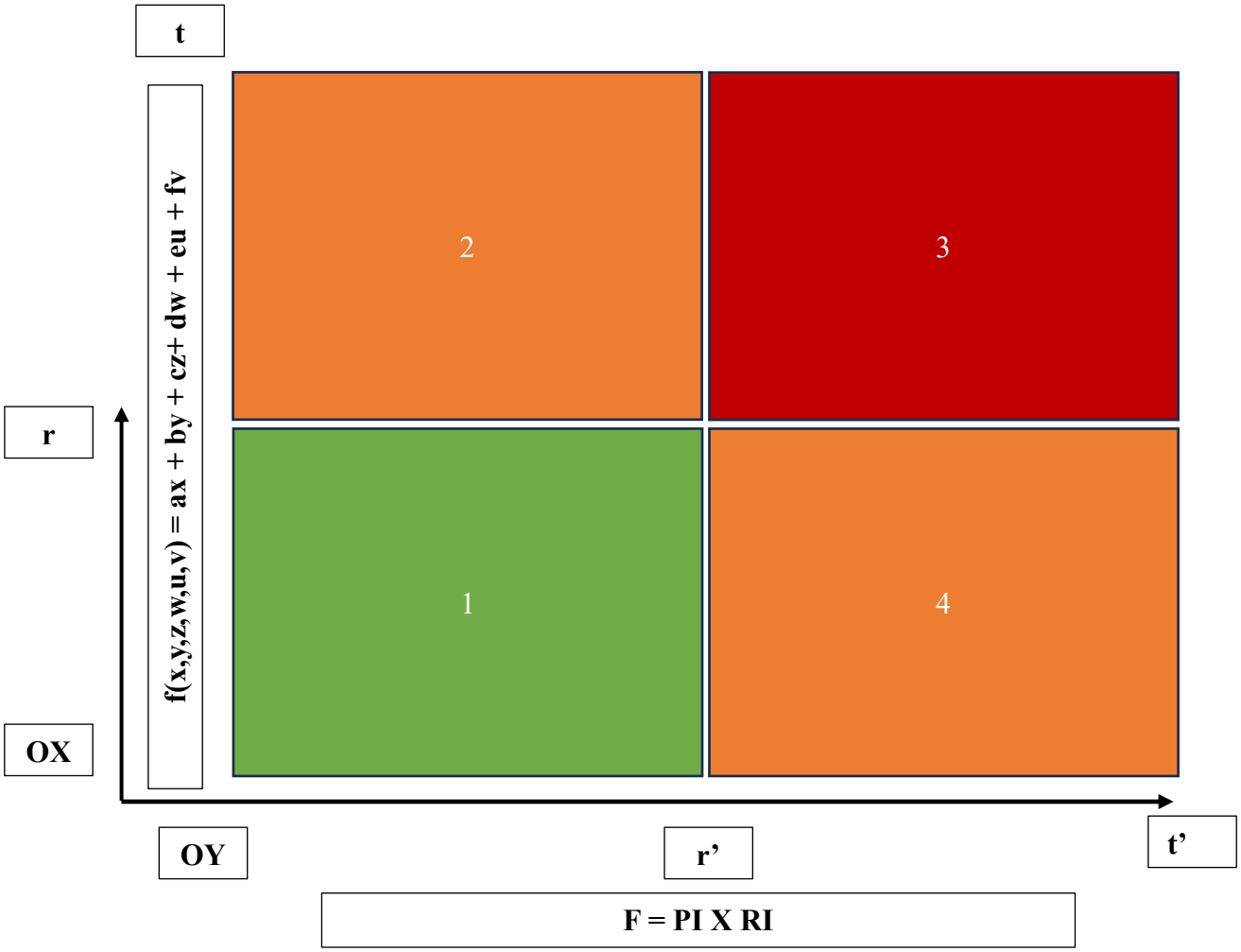
Since the OY axis can represent only one value at a time, the function “F” is defined as the product of PI and IR, i.e., \(F = PI \times IR \). The choice of this product as a graphical representation has significant meaning. Essentially, multiplying these two factors allows for the simultaneous capture of each one's influence on the final outcome, reflecting how abnormal values of one factor can impact the prognosis.

By using the product of PI and IR, it is highlighted that each factor, when exhibiting abnormal values, negatively influences the overall outcome. Moreover, if both factors present abnormal values, the combined effect is amplified, having a more significant impact on the prognosis and interpretation of imaging investigations. This approach allows for an

integrated and detailed assessment, ensuring that both individual and combined influences of abnormal values are adequately considered for precise diagnosis and effective risk management.

Thus, graphs utilizing the function \(F = PI \times IR \) provide a clear and efficient visualization of how abnormal values of both variables contribute to prognostic determination, aiding in the identification and interpretation of the clinical significance of imaging results.

Proposed Model (graphic)



Quadrants and Risk Interpretation:

Quadrant I (bottom left): LOW RISK

- Position:Values on both axes are low.

- Interpretation: Both the function f(x,y,z,w,u,v) and the function F are low. This quadrant suggests low risks, indicating that the values of risk factors are low and that the product of

PI and RI does not significantly contribute to risk. It is a positive sign for evaluating low risks of complications.

Quadrant II (top left): MODERATE-HIGH RISK (factors)

- Position: Values on the X-axis are high, while values on the Y-axis are low.
- Interpretation: In this case, the values of the function \(f(x,y,z,w,u,v) \) are high, but the function \(F \) is low. This suggests that individual risk factors are elevated, but the product PI × RI is not large enough to significantly amplify the risk. The risk may be heightened due to individual factors, but the combined effect is not sufficient to indicate a high overall risk.

Quadrant III (top right): HIGH RISK

- Position: Values on both the X-axis and Y-axis are high.
- Interpretation: In this quadrant, both the values of the function f(x,y,z,w,u,v), which integrates all risk factors, and the function F, which reflects the product of PI and RI, are high. The risk in this quadrant is considered very high, indicating a significant impact of both functions on the total risk of complications. This suggests the presence of elevated values for all risk factors and a high combined predisposition, reflecting an amplified risk.

Quadrant IV (bottom left): HIGH RISK (Imaging)

- Position: Values on the X-axis are low, and values on the Y-axis are high.
- Interpretation: In this quadrant, the function \(F \) is high, while the values of the function \(f(x,y,z,w,u,v) \) are low. This may indicate that although the individual risk factors are relatively low, their combination (PI × RI) has a significant impact on the risk. This suggests that the combined effect is more important than the individual value of the factors.

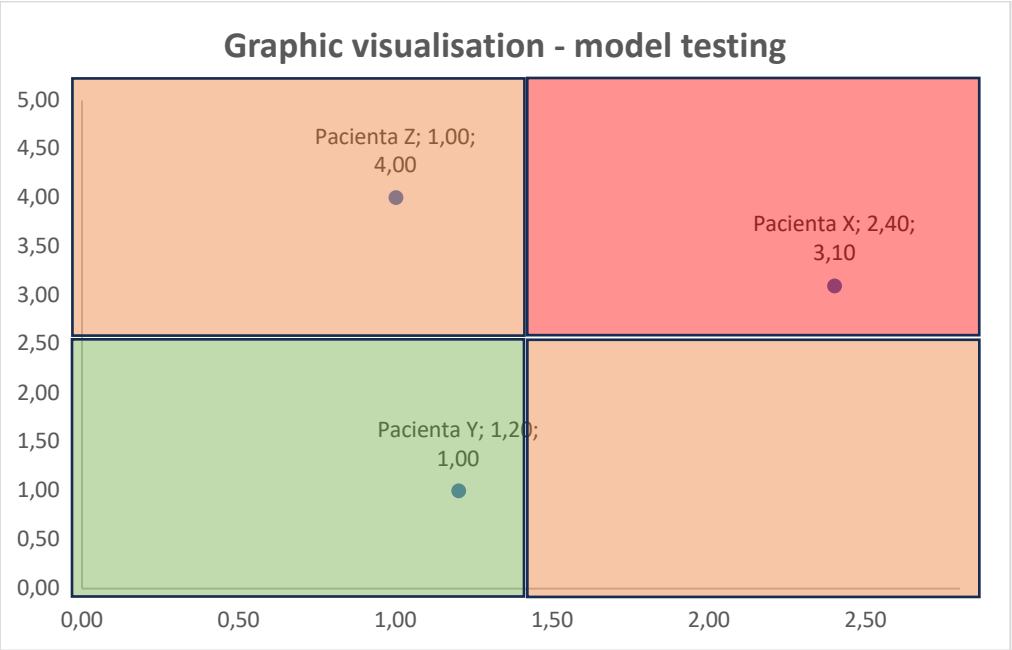
To validate and verify the developed model, tests were conducted on a sample of three pregnant women, referred to as X, Y, and Z. The purpose of these tests was to evaluate the efficiency and accuracy of the proposed mathematical and graphical model, which integrates specific risk factors and the functions \(f(x,y,z,w,u,v) \) and \(F = PI \times RI \) - pulsatility index (PI) and resistance index (RI).

Validation of Model Functionality

The tests conducted on the three pregnant women demonstrated that the algorithm operates as expected, accurately indicating the risk level associated with each patient. The results confirmed that the model can be used to evaluate the risks of complications in pregnancy, effectively integrating specific risk factors and their combination.

Efficiency and Precision. The model has shown that it can provide accurate risk estimates, correctly reflecting the risk level based on the input values. This suggests that the model is well-calibrated and can be used for clinical evaluations in the context of pregnancy risks.

Graphical Visualization of Model Testing



Placental vascular remodeling is a crucial aspect of placental development, having a direct impact on fetal perfusion during pregnancy. In cases of maternal-fetal pathology, this process can undergo changes that contribute to significant complications. Therefore, a detailed understanding of the mechanisms involved in placental vascular remodeling in the context of maternal-fetal pathology is essential for the development of advanced strategies for early diagnosis, intervention, and prenatal management. This doctoral thesis has thoroughly investigated and analyzed these mechanisms, contributing to improved maternal-fetal medical care and the reduction of pregnancy-related complications in clinical practice.

Nevertheless, there are still many unexplored aspects and challenges that require deeper and more detailed investigation in future research. This doctoral thesis aims to contribute to this ongoing research effort by developing an innovative model that integrates risk factor perspectives and advanced imaging technologies. A detailed investigation of the key aspects of placental vascular remodeling in the context of maternal-fetal pathology represents an essential direction for improving medical management and reducing the negative impact of pregnancy-related complications.

In conclusion, moving forward, this doctoral thesis succeeded in evaluating risk factors from the perspective of existing literature and investigating their presence among the Romanian population by analyzing their interactions. The ultimate goal of the research was to assess the clinical utility of uterine artery color Doppler ultrasound as a predictor of adverse pregnancy outcomes. By integrating risk factors, imaging investigations, and their impact on pregnancy progression, this thesis brings new perspectives and significant contributions to the management of maternal-fetal pathology in the specific context of the Romanian population. The proposed model allows for more accurate prediction of pregnancy progression and outcomes, with the potential to improve prenatal management and reduce the risks associated with placental complications.

The proposed model aims to assess the risk of complications during pregnancy, based on two main components: risk factors and imaging factors obtained through ultrasonography, specifically the parameters PI (prenatal indicator) and RI (imaging indicator).

In the context of future developments, the proposed model can be improved by including other relevant pregnancy risk factors, such as the patient's medical history and other family antecedents. Additionally, advanced statistical analysis and machine learning can be utilized to optimize the model and identify complex interactions between different risk factors. Continuous validation of the model based on current clinical and research data is essential to ensure its accuracy and relevance in various medical contexts. Integrating longitudinal data, i.e., collecting information throughout the entire pregnancy and postpartum period, can provide a more comprehensive risk assessment and more precise adaptation of prenatal management. Furthermore, advances in imaging technology may allow for the development of more precise methods for evaluating the fetus's condition and for completing and enhancing the existing model. Implementing this model in clinical practice could support physicians in assessing and managing pregnancy-related risks, providing personalized guidelines for each patient.

In the future, artificial intelligence (AI) can also be used to analyze and interpret complex medical data, including patients' medical histories and genetic data, to identify new risk factors and improve the accuracy of predictions. By utilizing machine learning algorithms, AI can uncover patterns and correlations between different risk factors, thus providing a deeper understanding of pathological mechanisms and pregnancy-associated risks. AI can also be involved in the development of more precise and faster screening and diagnostic imaging tools, which can detect abnormalities and pregnancy complications early on. By integrating longitudinal data and continuously updating the model, AI can offer more

rigorous monitoring of pregnancy progression and adapt risk management strategies in real-time. Ultimately, AI can facilitate communication and collaboration between doctors, researchers, and patients, contributing to the overall improvement of maternal-fetal healthcare.

List of Published Scientific Papers

1. Elena-Adriana Ghelmene, Nastasia Serban, Manuela Cristina Russu, *Sonographic Placental Aspects in Fetal Growth Restriction*, Modern Medicine, 2024, Vol. 31, No. 1, https://medicinamoderna.ro/wp-content/uploads/2024/03/Sonographic-Placental-Aspects-in-Fetal-Growth-Restriction.pdf, https://doi.org/10.31689/rmm.2024.31.1.7

2. Elena-Adriana Ghelmene, Nastasia Serban, Manuela Cristina Russu, *Fetal Growth Restriction in Patients with Adenomyosis. Incidence and Mechanism*, Modern Medicine, 2024, Vol. 31, No. 2, file:///Users/i/Documents/Teza%20de%20doctorat%20Adriana%20Ghelmene/Fetal-Growth-Restriction-in-Patients-with-Adenomyosis.-Incidence-and-Mechanism.pdf, *https://doi.org/10.31689/rmm.2024.31.2.113*

3. Manuela Russu, Adriana Ghelmene, Daniela Degeratu, Şerban Nastasia - Diagnosis and treatment difficulties in a recurrent non- gestational primary breast abscess due to Mycobacterium tuberculosis infection. Case Report. Literature Review.

4. Ilinca Gussi, Adina Diaconescu, Adriana Ghelmene, Amalia Stanescu, *Metabolic disruption unchanged by current parental care strategies in neonates from preexisting diabetic mothers: Data from a 3rd level reference center in Bucharest Romania,* European Journal of Obstetrics and Gynecology and Reproductive Biology 234 (2019): e60.

5. Manuela Cristina Russu, Ruxandra Viorica Stănculescu, Adriana Elena Ghelmene, Ş. Nastasia, "Catastrophic Morbidly Adherent Posterior Placenta: Case Reports, Literature Review Current Through at Long Time Since Cases Registration." *J Clin Rev Case Rep* 9.3 (2024): 01-16.

6. Ionescu, Angelica Nicoleta, Cristina Ghiță, Andreea Maria Stoean, I. F. Achim, A. Constantin, Adriana Ghelmene, M. Gheorghe, Adelina Birceanu, and S. Constantinoiu. "MINIMALLY INVASIVE ESOPHAGECTOMY THROUGH MODIFIED MCKEOWN TRIPLE APPROACH WITH ESOPHAGEAL RECONSTRUCTION AND GASTRIC PULL-UP FOR THORACIC ESOPHAGEAL CARCINOMA." *Journal of Surgical Sciences Vol* 3, no. 2 (2016).

7. Bacalbasa, Nicolae, Irina Balescu, Andreea Mereuta, Alina Tanase, Adriana Ghelmene, Mihaela Vilcu, and Iulian Brezean. "Gracilis myocutaneous flap for perineal defect reconstruction after left hemivulvectomy for locally invasive vulvar cancer–A case report and a literature review." *Journal of Mind and Medical Sciences* 6, no. 1 (2019): 176-180.

8. Russu Manuela, Ghelmene Adriana, Speriatu Cristina, Degeratu Dana, Nastasia S-Sister Mary Joseph Nodule or Umbilical Cutaneous Metastasis Coexisting with Medium Differentiated Endometrioid Endometrial Carcinoma., British Journal of Medical & Health Sciences. Vol 1, issue 1, 31 July 2019; .ISSN 2394-2947; Doi 1021276.;bjmhr; www.jmhsci.org
9. ”SPRIRIT OLE- Extension” MVT 601-3103 - Studiu international randomizat, dublu orb, controlat cu placebo de fază, de evaluare a eficacităţii şi sigurantei

relugolix administrat cu şi fără estradiol si acetat de noretindrona în doze mici la femei cu dureri asociate endometriozei." EudraCT Number # 2019 MYSCI1200017 Sursa: MYOVANT Sciences GmbH, Elveţia Investigator principal: Russu Manuela Echipa de cercetare: Nastasia Serban, Ghelmene Adriana, Speriatu Cristina

10. "SPRIRIT 2" MVT 601-3102 - Studiu international randomizat, dublu orb, controlat cu placebo de fază, de evaluare a eficacităţii şi sigurantei relugolix administrat cu şi fără estradiol si acetat de noretindrona în doze mici la femei cu dureri asociate endometriozei." EudraCT Number #2017-001632-19 Sursa: MYOVANT Sciences GmbH, Elveţia Investigator principal: Russu Manuela Echipa de cercetare: Nastasia Serban, Ghelmene Adriana, Speriatu Cristina

11. 1.Nastasia Şerban, Ghelmene Adriana, Russu Manuela Cristina Pregnancy outcome in the dual endocrinopathy diabetes mellitus and hypothyroidism – a 5-years retrospective study. Ginecologia.ro, 2018, 19 (1), pp.65

12. Serban Nastasia, Adriana Ghelmene, Ilinca Lucia Gussi, Alina Ursuleanu, Manuela Cristina Russu. Pregnancy outcome in the dual endocrinopathy diabetes mellitus and hypothyroidism. 5 years retrospective study. P190. ID 7575. Volum proceeding ISGE, Florence 2018.

13. Serban Nastasia, Adriana Ghelmene, Manuela Cristina Russu. The use of deepithelialized vaginal flap, associated with synthetic mesh fixation at sacrospinous ligaments, for grade 3-4 genital prolapse surgical treatment. P347. ID 7707. Volum proceeding ISGE, Florence 2018.

14. Serban Nastasia, Adriana Ghelmene, Manuela Cristina Russu. Sacrosuspension vs fixation at sacrospinous ligaments in pelvic organ prolapse treatment. P348. ID 7710. Volum proceeding ISGE, Florence 2018.

15. Şerban Nastasia, Adriana Ghelmene, Ruxandra Dumitrescu, Manuela Russu. Diagnostic şi tratament în mamela sângerândă. Ginecologia.ro; pg. 99, Anul V, Nr. 15 (1/2017). ISSN 2344 – 2301.

16. Nastasia Şerban, Adriana Ghelmene, Russu Manuela Cristina. Sarcina spontană după trachelectomie radicală – prezentare de caz. Volum de rezumate. Zilele Anuale ale Institutului Naţional pentru Sănătatea Mamei şi Copilului "Alessandrescu-Rusescu", 23-25 octombrie 2017, Bucureşti, pg 18. ISBN 978-973-0-25907-0

17. Nastasia S., Ghelmene A., Briceag I., Maniu A., Russu M. Metachronous squamous neoplasias of the cervix and vulva. Forum Ginecologia.ro, 22-23 mai 2015, Bucureşti

18. Adriana Ghelmene, erban Nastasia, Ilinca Gussi, Manuela Russu, Ş Spitalul Clinic "Dr. I. Cantacuzino", UMF "Carol Davila", Bucure tiAl 13-lea Congres Na ional de Medicină Perinatală, Cluj, 2019, Restrictie de crestere fetală in utero prin remodelare vasculară placentară. Serie de cazuri, Al 13-lea, Congres National de Medicină Perinatală, Cluj, 2019

19. Adriana Ghelmene, Ilinca Gussi, erban Nastasia, Alina Ursuleanu, Manuela Cristina Russu, Spitalul Clinic "Dr. I. Cantacuzino", UMF "Carol Davila", Bucuresti,

Remodelarea Vasculara Placentara in sarcini complicate cu cardiopatie materna severa operata, Al 13-lea Congres Na ional de Medicină Perinatală, Cluj, 2019

20. Manuela Cristina Russu, Adriana Elena Ghelmene, Gabriela Predescu, Daniela Degeratu, S.Nastasia**.** Sister Mary Joseph Nodule, Umbilical Sentinel for an Endometrioid Endometrial Carcinoma in Postmenopause-Challenges for a Multidisciplinary Approach. Journal of Clinical Review and Case Reports. 2023, vol 8, issue 6, pages: 167-170; ISSN: 2573-9565 **https://opastpublishers.com**

21. Manuela Cristina Russu, Ruxandra Stănculescu. Adriana Ghelmene, S Nastasia. Catastrophic Morbidly Adherent Posterior Placenta: Case Reports, Literature Review Current Through at Long Time Since Cases Registration. Journal of Clinical Review and Case Reports. 2024, *9*(3), 01-16. (ISI) cu Factor impact:1,825 ISSN: 2573-9565**,** https://opastpublishers.com

22. Manuela Cristina Russu, Adriana Ghelmene, Ruxandra Stănculescu, S Nastasia „Abnormal Cervical Remodeling Early Depiction by Ultrasound Elastography: Potential Opportunities for Preterm Birth Prevention and Delay" Capitol în cartea" Childbirth- Clinical Assessment, methods, and Management" (2024) la Editura Intech Open (Londra-UK, Zagreb- Croaţia), editor Prof Panagiotis Tsikouras. ISBN:978-0-85014-175-7/2024.www.intechopen.com/books'childbirth-clinical-assessment- method and management

Bibliography

1. Abuzzahab, J. M. & et. al., 2003. IGF-I Receptor Mutations Resulting in Intrauterine and Postnatal Growth Retardation. The New England Journal of Medicine, Volumul 349, pp. 2211-2222.
2. de Souza Rugolo, L. M. S., bentlin, M. R. & Trindade, C. E. P., 2012. Preeclampsia: Early and Late Neonatal Outcomes. Neoreviews , 13(9), pp. e532-e541.
3. Hamidi, O. P. și alții, 2023. Umbilical Venous Volume Flow in Late-Onset Fetal Growth Restriction. Journal of Ultrasound in Medicine, 42(1), pp. 173-183.
4. Hladunewich, M., Karumanchi, A. S. & Lafayette, R., 2007. Pathophysiology of the Clinical Manifestations of Preeclampsia. Pathophysiology of the Clinical Manifestations of Preeclampsia, 2(3), pp. 543-549.
5. Power, C. E., Levine, R. . J. & Karumanchi, A. S., 2011. Preeclampsia, a Disease of the Maternal Endothelium. The Role of Antiangiogenic Factors and Implications for Later Cardiovascular Disease. Circulation, Volumul 123, p. 2856–2869.
6. Rymer-Haskel , N. și alții, 2018. Characteristics and severity of preeclampsia in young and elderly gravidas with hypertensive disease. European Journal of Obstetrics & Gynecology and Reproductive Biology, Volumul 228, pp. 120-125.
7. AbdelMaboud, N. M. & Elsaid, . H. . H., 2015. Role of venous Doppler evaluation of intrauterine growth retardation. The Egyptian Journal of Radiology and Nuclear Medicine, 46(1), pp. 167-174.
8. Adeyomoye, A. A. O. și alții, 2006. Comparison of the accuracy of trans-abdominal sonography (TAS) and transperineal sonography (TPS) in the diagnosis of Placenta Praevia. Nigerian Postgraduate Medical Journal, 13(1), pp. 21-25.
9. Aditya, I. și alții, 2016. Use of Doppler velocimetry in diagnosis and prognosis of intrauterine growth restriction (IUGR): A Review. Journal of Neonatal-Perinatal Medicine, 9(2), pp. 117-126.
10. Alberry, . M. & Soothill, . P., 2007. Management of fetal growth restriction. Archives of Disease in Childhood-Fetal and Neonatal, 92(1), pp. F62-F67.
11. Albert Einstein College of Medicine, 2024. Severe Headache in Pregnant Women: When to Worry. [Interactiv], Available at: https://einsteinmed.edu/news/releases/1109/severe-headache-in-pregnant-women-when-to-worry/, [Accesat 05 01 2024].
12. Albu, A., Horhoianu, V. & Horhoianu, I., 2014. Predictive factors for intrauterine growth restriction. Journal of Medicine and Life, 7(2), pp. 165-171.
13. Ali, S. și alții, 2022. Middle cerebral arterial flow redistribution is an indicator for intrauterine fetal compromise in late pregnancy in low-resource settings: A prospective cohort study. BJOG: An International Journal of Obstetrics & Gynaecology, 129(10), pp. 1712-1720.
14. Al-Rubaie, Z. T. A. și alții, 2020. Prediction of pre-eclampsia in nulliparous women using routinely collected maternal characteristics: a model development and validation study. BMC Pregnancy and Childbirth, 20(23).
15. Alves, Á. L. L., da Silva, L. B., da Silva Costa, F. & de Castro Rezende, G., 2021. Management of placenta accreta spectrum. 43(9), pp. 713-723.
16. American College of Obstetricians and Gynecologists, 2024. Low-Dose Aspirin Use During Pregnancy, s.l.: American College of Obstetricians and Gynecologists.

17. Anon., 2024. Placenta praevia. [Interactiv], Available at: https://www.betterhealth.vic.gov.au/health/healthyliving/placenta-praevia, [Accesat 13 02 2024].
18. Ashraf, J. și alții, 2013. Multicenter screening for adverse pregnancy outcomes by uterine artery Doppler in the second and third trimester of pregnancy. Medical ultrasonography, 15(2), pp. 95-100.
19. Atallah, A. și alții, 2017. Aspirin for Prevention of Preeclampsia. Drugs, Volumul 77, pp. 1819-1831.
20. Ayati, S. și alții, 2017. Accuracy of color Doppler ultrasonography and magnetic resonance imaging in diagnosis of placenta accreta: A survey of 82 cases. Int J Reprod Biomed., 15(4), pp. 225-230.
21. Baha , S. M., Mabie, B. C., Harvey, C. J. & Gonzalez, A. R., 1987. Pulmonary edema in severe preeclampsia-eclampsia: Analysis of thirty-seven consecutive cases. American Journal of Obstetrics and Gynecology, 156(5), pp. 1174-1179.
22. Bakker, R. și alții, 2024. Placenta Previa. Medscape, pp. https://emedicine.medscape.com/article/262063-overview?form=fpf.
23. Balest, A. L., 2023. Small-for-Gestational-Age (SGA) Infant. University of Pittsburgh, School of Medicine, pp. https://www.msdmanuals.com/professional/pediatrics/perinatal-problems/small-for-gestational-age-sga-infant.
24. Balest, A. L., 2024. Small-for-Gestational-Age (SGA) Newborns. University of Pittsburgh, School of Medicine.
25. Bamfo, J. E. A. K. & Odibo, A. . O., 2011. Diagnosis and Management of Fetal Growth Restriction. Journal of pregnancy.
26. Bärebring, L. și alții, 2018. Trajectory of vitamin D status during pregnancy in relation to neonatal birth size and fetal survival: a prospective cohort study. BMC Pregnancy and Childbirth, 18(51).
27. Belfort, M. A., 2010. Placenta accreta." American journal of obstetrics and gynecology. Publications Committee, & Society for Maternal-Fetal Medicine, 203(5), pp. 430-439.
28. Bell, D. J., 2023. Fetal ductus venosus flow assessment. [Interactiv], Available at: https://radiopaedia.org/articles/fetal-ductus-venosus-flow-assessment, [Accesat 29 03 2024].
29. Bendix, I., Miller, S. L. & Winterhager, E., 2020. Causes and Consequences of Intrauterine Growth Restriction. Frontiers in Endocrinology, Volumul 11, p. 536757.
30. Berkley, E., 2012. Doppler assessment of the fetus with intrauterine growth restriction. American journal of obstetrics and gynecology, 206(4), pp. 300-308.
31. Bilardo, C. M. & Baschat, A. A., 2005. The role of venous Doppler studies in the monitoring of growth-restricted fetuses. International Congress Series, Volumul 1279, pp. 302-309.
32. Bindal, J. & Chung, N., 2016. Utility of uterine artery Doppler and pulsatility index at 11-14 weeks of normal pregnancy in prediction of preeclampsia in third trimester. Int J Med Res Rev, 4(3), pp. 432-436.
33. Bisson, C. și alții, 2023. Preeclampsia pathophysiology and adverse outcomes during pregnancy and postpartum. Frontiers in Medicine , Volumul 10, p. 1144170.
34. Bowman, Z. . S. și alții, 2014. Risk Factors for Placenta Accreta: A Large Prospective Cohort. American journal of perinatology, 31(09), pp. 799-804.
35. Braga, M., Moleiro, M. L. & Guedes-Martinsa, L., 2018. Clinical Significance of Ductus Venosus Waveform as Generated by Pressure-volume Changes in the Fetal Heart. Current cardiology reviews, 15(3), pp. 167-176.

36. Breeze, A. C. & Lees , C. C., 2007. Prediction and perinatal outcomes of fetal growth restriction. Seminars in Fetal and Neonatal Medicine, 12(5), pp. 383-397.
37. Brodsky, D. & Christou, . H., 2004. Current concepts in intrauterine growth restriction. Journal of intensive care medicine, 19(6), pp. 307-319.
38. Brosens, I. și alții, 2019. Preeclampsia: the role of persistent endothelial cells in uteroplacental arteries. American Journal of Obstetrics and Gynecology, 221(3), pp. 219-226.
39. Brosens, I., Puttemans, P. & Benagiano, G., 2019. Placental bed research: I. The placental bed: from spiral arteries remodeling to the great obstetrical syndromes. s.l.:American Journal of Obstetrics & Gynecology.
40. Brosens, I., Puttemans, P. & Benagiano, G., 2019. Placental bed research: I. The placental bed: from spiral arteries remodeling to the great obstetrical syndromes. s.l.:American journal of obstetrics and gynecology.
41. Brosens, I., Robertson, W. B. & Dixon, H. G., 1967. The physiological response of the vessels of the placental bed to normal pregnancy. The Journal of Pathology and Bacteriology, 93(2), pp. 569-579.
42. Brown, M. A., Magee, L. A., Kenny, L. C. & Karumanchi, S. A., 2024. Hypertensive Disorders of Pregnancy ISSHP Classification, Diagnosis, and Management Recommendations for International Practice. [Interactiv], Available at: file:///Users/i/Documents/FINAL%20TEZA%20DE%20DOCTORAT%20GHELMENE/Alte%20articole/brown-et-al-2018-hypertensive-disorders-of-pregnancy.pdf, [Accesat 2024 01 12].
43. Bumm, U. E., 1893. Die Entwicklung des mütterlichen Blutkreislaufes in der menschlichen Placenta. s.l.:s.n.
44. Burton, G. J. & Fowden, . A. L., fără an The placenta: a multifaceted, transient organ. 370(663), p. https://royalsocietypublishing.org/doi/10.1098/rstb.2014.0066.
45. Burton, G. J., Woods, A. W., Jauniaux, E. & Kingdom, J. C., 2009. Rheological and Physiological Consequences of Conversion of the Maternal Spiral Arteries for Uteroplacental Blood Flow during Human Pregnancy. Science Direct, 30(6), pp. 473-482.
46. Burton, J. G., 2015. What is the placenta?. p. https://www.sciencedirect.com/science/article/abs/pii/S0002937815008510.
47. Campbell, B. A., 1998. UTILIZING SONOGRAPHY TO FOLLOW FETAL GROWTH. Obstetrics and Gynecology Clinics of North America, 25(3), pp. 597-607.
48. Campbell, S., 1974. Fetal Growth. Clinics in Obstetrics and Gynaecology, 1(1), pp. 41-65.
49. Castagno, M. și alții, 2019. Small-for-gestational-age birth is linked to cardiovascular dysfunction in early childhood. American Heart Journal, Volumul 217, pp. 84-93.
50. Cetin, I. și alții, 2004. Fetal growth restriction: a workshop report. Planceta, 25(8-9), pp. 753-757.
51. Chang, K. J., Seow, M. K. & Chen, H. H., 2023. Preeclampsia: Recent Advances in Predicting, Preventing, and Managing the Maternal and Fetal Life-Threatening Condition. Int. J. Environ. Res. Public Health, 20(4), p. 2994.
52. Charishma, C. S. & Agarwal, K., 2022. Risk factors for fetal growth restriction in preterm births: a retrospective case control study. International Journal of Reproduction, Contraception, Obstetrics and Gynecology, 11(10), pp. 2734-2740.
53. Chauhan, S. P., Gupta, L. M., Hendrix, N. W. & Berghella, V., 2009. Intrauterine growth restriction: comparison of American College of Obstetricians and

Gynecologists practice bulletin with other national guidelines. American Journal of Obstetrics & Gynecology, pp. e1-409.e6..
54. Chelbi, S. T. & Vaiman, D., 2008. Genetic and epigenetic factors contributes to the onset of Preeclampsia. Molecular and Cellular Endocrinology, 282(1-2), p. 120.
55. Chew, L. C. & Verma., R. P., 2024. Fetal Growth Restriction. [Interactiv], Available at: https://www.ncbi.nlm.nih.gov/books/NBK562268/[Accesat 2024].
56. Chew, L. C. & Verma, R. P., 2024. Fetal Growth Restriction. [Interactiv], Available at: Available from: https://www.ncbi.nlm.nih.gov/books/NBK562268/[Accesat 03 2024].
57. CHOI, C. K. & TO, W. W., 2009. Umbilical Venous Doppler Velocimetry to Supplement Conventional Arterial Doppler to Assess Third Trimester Fetal Growth Restriction. Hong Kong Journal of Gynaecology, Obstetrics and Midwifery, 9(1).
58. Cirkovic, A. și alții, 2020. Systematic review supports the role of DNA methylation in the pathophysiology of preeclampsia: a call for analytical and methodological standardization. Biology of Sex Differences, 11(36), pp. 1-17.
59. Cleveland Clinic , 2024. Intrauterine Growth Restriction. [Interactiv], Available at: https://my.clevelandclinic.org/health/diseases/24017-intrauterine-growth-restriction, [Accesat 01 03 2024].
60. Cleveland Clinic, 2022. Placenta Previa. [Interactiv], Available at: https://my.clevelandclinic.org/health/diseases/24211-placenta-previa, [Accesat 02 03 2024].
61. Cleveland Clinic, 2024. Placenta Accreta. [Interactiv], Available at: https://my.clevelandclinic.org/health/diseases/17846-placenta-accreta, [Accesat 12 03 2024].
62. Cleveland Clinic, 2024. Uterine Atony. [Interactiv], Available at: https://my.clevelandclinic.org/health/diseases/24010-uterine-atony, [Accesat 23 02 2024].
63. Cleveland Clinic, 2024. Vasa Previa. [Interactiv], Available at: https://my.clevelandclinic.org/health/diseases/23465-vasa-previa, [Accesat 04 03 2024].
64. Cnattingius, S., Reilly, M., Pawitan, Y. & Lichtenstein, P., 2004. Maternal and fetal genetic factors account for most of familial aggregation of preeclampsia: a population-based Swedish cohort study. American journal of medical genetics Part A,, 130(4), pp. 365-371.
65. Cohen, E., Wong, . F. Y., Horne , R. S. & Yiallourou , S. R., 2016. Intrauterine growth restriction: impact on cardiovascular development and function throughout infancy. Pediatric research, 79(6), pp. 821-830.
66. Collins, S. și alții, 2023. Oxford Handbook of Obstetrics and Gynaecology, 4th Edition. s.l.:Oxford University Press.
67. Columbia University Irving Medical Center, 2024. Intrauterine Growth Restriction (Fetal Growth Abnormality). [Interactiv], Available at: https://www.columbiadoctors.org/treatments-conditions/intrauterine-growth-restriction-fetal-growth-abnormality, [Accesat 21 02 2024].
68. Crispi, F., Miranda, J. & Gratacos, E., 2018. Long-term cardiovascular consequences of fetal growth restriction: biology, clinical implications, and opportunities for prevention of adult disease. American journal of obstetrics and gynecology, 218(2), pp. S869-S879.
69. D'Agostin, M., Di Sipio Morgia, C., Vento, G. & Nobile, S., 2023. Long-term implications of fetal growth restriction. World Journal of Clinical Cases, 11(13), p. 2855.

70. Dall'Asta,, A. și alții, 2017. Early onset fetal growth restriction. Maternal health, neonatology and perinatology, Volumul 3, pp. 1-12.
71. Dapkekar, P., Bhalerao, A., Kawathalkar, A. & Vijay, N., 2023. Risk Factors Associated With Intrauterine Growth Restriction: A Case-Control Study. Cureus, 15(6), p. e40178.
72. Dapkekar, P., Bhalerao, A., Kawathalkar, A. & Vijay, N., 2023. Risk Factors Associated With Intrauterine Growth Restriction: A Case-Control Study. Cureus, 15(6), p. e40178.
73. Darcia, S. Á., Moya, T. A. & Soriano, J. O., 2016. TEMA 2016: Generalidades sobre placenta previa y acretismo placentario. Revista Clínica de la Escuela de Medicina UCR – HSJD, 6(III), pp. 11-20.
74. Dekker, G., Robillard, P. Y. & Roberts, C., 2011. The etiology of preeclampsia: the role of the father. Journal of Reproductive Immunology, 89(2), pp. 126-132.
75. Demirci, O. și alții, 2015. Maternal and fetal risk factors affecting perinatal mortality in early and late fetal growth restriction. Taiwanese Journal of Obstetrics & Gynecology, 54(6), pp. 700-704.
76. Demuth, B. & Bujold, E., 2023. Optimal dose of aspirin for the prevention of preterm preeclampsia. American Journal of Obstetrics & Gynecology, 229(5), pp. 574-575.
77. dexonline, 2024. https://dexonline.ro/. [Interactiv], Available at: https://dexonline.ro/definitie/etiologie, [Accesat 16 03 2024].
78. Dimitriadis, E. și alții, 2023. Pre-eclampsia.. Nature reviews Disease primers, 9(1), p. 8.
79. Dong, X. și alții, 2021. Dong, Xin, et al. "Active Management Reduces the Incidence of Recurrent Pre-eclampsia and Improves Maternal and Fetal Outcomes in Women with Recurrent Pre-eclampsia. Frontiers in Medicine, Volumul 8.
80. Dulay, A. T., 2024. Placenta Previa, s.l.: Main Line Health System.
81. Dulay, A. T., 2024. Preeclampsia and Eclampsia. Main Line Health System.
82. Easter, ,. S. R. și alții, 35. Fetal growth restriction: Case definition & guidelines for data collection, analysis, and presentation of immunization safety data. Vaccine, 48(Part A), p. 6546.
83. Egbor, M. și alții, 2006. Pre-eclampsia and Fetal Growth Restriction: How Morphometrically Different is the Placenta?. Placenta, 27(6-7), pp. 727-734.
84. Elmakaty, I. și alții, 2023. Perinatal factors impacting echocardiographic left ventricular measurement in small for gestational age infants: a prospective cohort study. BMC pediatrics, 23(1), p. 393.
85. Encyclopedia of Endocrine Diseases, 2004. Small for Gestational Age. [Interactiv] , Available at: https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/small-for-gestational-age, [Accesat 02 02 2024].
86. English, F. A., Kenny, L. C. & McCarthy, F. P., 2015. Risk factors and effective management of preeclampsia. Integrated Blood Pressure Control, pp. 7-12.
87. Enomoto, N. și alții, 2023. Accurate evaluation of the progress of delivery with transperineal ultrasound may improve vaginal delivery: a single-center retrospective study. Scientific Reports, 13(1), p. 20945.
88. Erez, O. și alții, 2022. Preeclampsia and eclampsia: the conceptual evolution of a syndrome. American Journal of Obstetrics & Gynecology, pp. S786-S803.
89. ERIC, J., BURTON, F. & GRAHAM , J., 2018. Pathophysiology of Placenta Accreta Spectrum Disorders: A Review of Current Findings. Clinical obstetrics and gynecology, 61(4), pp. 743-754.

90. Erlandsson, L. și alții, 2023. Preliminary evidence that blocking the uptake of placenta-derived preeclamptic extracellular vesicles protects the vascular endothelium and prevents vasoconstriction.. Scientific Reports , 13(1), p. 18425.
91. Espinoza , J. și alții, 2006. Espinoza, Jimmy, et al. "Normal and abnormal transformation of the spiral arteries during pregnancy.. Journal of perinatal medicine, 34(6), pp. 447-458.
92. Fafoula, O., Alkhayyat, H. & Hussain, K., 2006. Prolonged hyperinsulinaemic hypoglycaemia in newborns with intrauterine growth retardation. Arch Dis Child Fetal Neonatal Ed., 91(6), p. F467.
93. Faiz, A. S. & Ananth, C. V., 2003. Etiology and risk factors for placenta previa: an overview and meta-analysis of observational studies. The journal of maternal-fetal & neonatal medicine, 13(3), pp. 175-190.
94. familydoctor.org, 2024. Fetal Growth Restriction. [Interactiv], Available at: https://familydoctor.org/condition/intrauterine-growth-restriction/[Accesat 24 03 2024].
95. Fan, D. și alții, 2021. Anesthetic management in cesarean delivery of women with placenta previa: a retrospective cohort study. BMC Anesthesiology, Volumul 21, pp. 1-7.
96. Fan, D. și alții, 2021. Anesthetic management in cesarean delivery of women with placenta previa: a retrospective cohort study. BMC anesthesiology, Volumul 21, pp. 1-7.
97. Farsetti, D. și alții, 2021. Fetal Umbilical Vein Flow in the Classification of Fetuses with Growth Restriction. Reproductive medicine, 2(1), pp. 50-56.
98. Fick, T. A. & Backes, C. H., 2016. Cardiovascular Remodeling in the Small for Gestational Age Infant. Circulation Journal Official Journal of the Japanese Circulation Society, 80(10), pp. 2096-2097.
99. figo.org, 2024. [Interactiv], Available at: https://www.figo.org/, [Accesat 02 04 2024].
100. figo.org, 2024. [Interactiv], Available at: https://www.figo.org/figo-releases-new-guidelines-combat-pre-eclampsia,[Accesat 03 02 2024].
101. Figueras, F. și alții, 2018. Diagnosis and surveillance of late-onset fetal growth restriction. American Journal of Obstetrics and Gynecology, 218(2), pp. S790-S802.
102. Figueras, F. & Gatacós, E., 2014. Update on the Diagnosis and Classification of Fetal Growth Restriction and Proposal of a Stage-Based Management Protocol. Fetal Diagnosis and Therapy, 36(2), pp. 86-98.
103. Figueras, F. & Gratacós , E., 2014. Update on the Diagnosis and Classification of Fetal Growth Restriction and Proposal of a Stage-Based Management Protocol. Fetal diagnosis and therapy, 36(2), pp. 86-98.
104. Figueras, F. & Gratacos, E., 2017. An integrated approach to fetal growth restriction. Best Practice & Research Clinical Obstetrics & Gynaecology, Volumul 38, pp. 45-58.
105. Figueras, F. și alții, 2021. Doppler studies of placental function. Placenta, Volumul 108, pp. 91-96.
106. Finken, M. J. J. și alții, 2018. Children Born Small for Gestational Age: Differential Diagnosis, Molecular Genetic Evaluation, and Implications. Endocrine reviews, 39(6), pp. 851-894.
107. Flint, E. J., Cerdeira, S. A., Redman, C. W. & Vatish, M., 2019. The role of angiogenic factors in the management of preeclampsia. Acta obstetricia et gynecologica Scandinavica, 98(6), pp. 700-707.

108. Foisy, M.-A., Kingdom, J. C. & Bujold, E., 2022. Optimal Timing and Aspirin Dose for the Prevention of Preeclampsia. Journal of Obstetrics and gynaecology Canada, 44(11), pp. P1131-1132.
109. Gairabekova, D., van Rosmalen, J. & Duvekot, J. J., 2021. Outcome of early-onset fetal growth restriction with or without abnormal umbilical artery Doppler flow. Acta Obstetricia et Gynecologica Scandinavica, 100(8), pp. 1430-1438.
110. Gandhi, S. și alții, 2014. The Pulmonary Edema Preeclampsia Evaluation (PEPE) Study. The Pulmonary Edema Preeclampsia Evaluation (PEPE) Study, 36(12), pp. 1065-1070.
111. Ghavidel, A. L., Mousavi, F., Bagheri, M. & Asghari, S., 2018. Preeclampsia Induced Ocular Change. International Journal of Women's Health and Reproduction Sciences, 6(2), pp. 123-126.
112. Ghelmene, E. A., Nastasia, S. & Russu, M. C., 2024. Fetal Growth Restriction in Patients with Adenomyosis. Incidence and Mechanism. Moden Medicine, 31(2).
113. Ghelmene, E. A., Nastasia, S. & Russu, M. C., 2024. Sonographic Placental Aspects in Fetal Growth Restriction. Moden Medicine, 31(1).
114. Górczewski, W. și alții, 2023. Role of First Trimester Screening Biochemical Markers to Predict Hypertensive Pregnancy Disorders and SGA Neonates—A Narrative Review. Healthcare, 11(17), p. 2454.
115. Gordijn, S. J., Beune, I. M. & Ganzevoort, W., 2018. Building consensus and standards in fetal growth restriction studies. Best practice & research Clinical obstetrics & gynaecology , Volumul 49, pp. 117-126.
116. Gordjin, S. J. și alții, 2016. Consensus definition of fetal growth restriction: a Delphi procedure. Ultrasound in Obstetrics & Gynecology, 48(3), pp. 333-339.
117. Gouhar, G. K., Sadek, S. M., Siam, S. & Ahmad, R. A., 2012. Role of transperineal sonography in diagnosis of placenta previa/accreta: A prospective study. The Egyptian Journal of Radiology and Nuclear Medicine, 43(4), pp. 637-645.
118. Gray, K. J., Saxena, R. & Karumanchi, A. S., 2018. Genetic predisposition to preeclampsia is conferred by fetal DNA variants near FLT1, a gene involved in the regulation of angiogenesis. American journal of obstetrics and gynecology, 218(2), pp. 211-218.
119. Guerby, P. și alții, 2021. Role of oxidative stress in the dysfunction of the placental endothelial nitric oxide synthase in preeclampsia. Redox Biology, 40(101861).
120. Guttmacher, A. E. & Spong, C. Y., 2015. The human placenta project: it's time for real time. The human placenta project: it's time for real time, pp. S3-S5.
121. Guzmán, Y. N., Uriel, M., Ramírez, A. P. & Romero, X. C., 2021. Uterine Artery Pulsatility Index as a Preeclampsia Predictor in the 3 Trimesters in Women with Singleton Pregnancies. Revista Brasileira de Ginecologia e Obstetrícia, 43(12), pp. 904-910.
122. Gyokova, E., Hristova-Atanasova, E. & Iskrov, G., 2024. Fetal Cardiovascular MR Imaging. J. Clin. Med. , 13(4), p. 950.
123. Gyselaers, W., 2020. Preeclampsia Is a Syndrome with a Cascade of Pathophysiologic Events. Journal of Clinical Medicine, 9(7), p. 2245.
124. Hall, M. E., George, E. M. & Granger, J. P., 2011. The Heart During Pregnancy. Rev Esp Cardiol., 64(11), pp. 1045-1050.
125. Handa, S. & Pujar, Y., 2019. Evaluation of Uterine Artery Doppler at 11–13+6 Weeks of Gestation for Prediction of Preeclampsia: A Descriptive Observational Study. Journal of South Asian Federation of Obstetrics and Gynaecology, 11(5), p.

https://www.jsafog.com/abstractArticleContentBrowse/JSAFOG/19096/JPJ/fullTex t.
126. healthline, 2019. Growth Retardation (Delayed Growth). [Interactiv], Available at: https://www.healthline.com/health/delayed-growth ,[Accesat 28 01 2024].
127. Henderson JT, Thompson JH, Burda BU, et al., 2017. Screening for Preeclampsia: A Systematic Evidence Review for the U.S. Preventive Services Task Force [Internet].. Preventive Services Task Force [Internet], Agency for Healthcare Research and Quality (US), 148(4).
128. Hibbard, J. . U., Shroff, S. G. & Lang, R. . M., 2004. Cardiovascular changes in preeclampsia. Seminars in nephrology, 24(6), pp. 580-587.
129. Hodgins, S., 2015. Open Access Pre-eclampsia as Underlying Cause for Perinatal Deaths: Time for Action. Global Health: Science and Practice, 3(4), pp. 525-527.
130. Hokken-Koelega, A. C. S. și alții, 2023. International Consensus Guideline on Small for Gestational Age: Etiology and Management From Infancy to Early Adulthood. Endocrine Reviews, 44(3), pp. 539-565.
131. Hong, S. și alții, 2020. Severe early-onset PE with or without FGR in Chinese women. Placenta, Volumul 101, pp. 108-114.
132. Horgan, R. și alții, 2023. Low-dose aspirin therapy for the prevention of preeclampsia: time to reconsider our recommendations?. American Journal of Obstetrics and Gynecology, 229(4), pp. 410-418.
133. Hudson Institute of Medical Research, 2024. Fetal growth restriction (FGR). [Interactiv], Available at: https://www.hudson.org.au/disease/newborn-health/fetal-growth-restriction-fgr/[Accesat 09 02 2024].
134. Hunkapiller, N. M. & Fisher, S. J., 2008. Placental remodeling of the uterine vasculature. s.l.:Methods Enzymol.
135. Huppertz, B. și alții, 2013. Placental protein 13 (PP13): a new biological target shifting individualized risk assessment to personalized drug design combating pre-eclampsia. Human Reproduction Update, 19(4), pp. 391-405.
136. International Vasa Previa Foundation, 2024. Vasa Previa Fact Sheet. [Interactiv], Available at: https://vasaprevia.com/Vasa-Previa-Fact-Sheet[Accesat 05 04 2024].
137. isuog.org, 2020. ISUOG Practice Guidelines: diagnosis and management of small-for-gestational-age fetus and fetal growth restriction, s.l.: Ultrasound Obstet Gynecol.
138. isuog.org, 2021. ISUOG Practice Guidelines (updated): use of Doppler velocimetry in obstetrics, s.l.: Ultrasound Obstet Gynecol.
139. ISUOG, 2018. Ghidurile ISUOG de practică medicală: Rolul ecografiei în screening-ul și monitorizarea preeclampsiei, s.l.: s.n.
140. Ives, C. W. și alții, 2020. Preeclampsia—Pathophysiology and Clinical Presentations: JACC State-of-the-Art Review. Journal of the American College of Cardiology, 76(14), pp. 1690-1702.
141. Jaatinen, N., Jääskeläinen, T., Ekholm, E. & Laivuori, H., 2022. Searching for a paternal phenotype for preeclampsia. Acta Obstetricia et Gynecologica Scandinavica, 101(8), pp. 862-870.
142. Jain, V., Bos, H. & Bujold, E., 2020. Guideline No. 402: Diagnosis and Management of Placenta Previa. Journal of Obstetrics and Gynaecology Canada, 42(7), pp. 906-917.

143. Jauniaux, E. & Burton, G. J., 2018. Pathophysiology of Placenta Accreta Spectrum Disorders: A Review of Current Findings. Clinical obstetrics and gynecology, 61(4), pp. 743-754.
144. Jenabi, E. și alții, 2022. The risk factors associated with placenta previa: An umbrella review. Placenta, Volumul 117, pp. 21-27.
145. Johnson, P., Stojilkovic, T. & Sarkar, P., 2001. Middle cerebral artery Doppler in severe intrauterine growth restriction. Ultrasound in Obstetrics and Gynecology: The Official Journal of the International Society of Ultrasound in Obstetrics and Gynecology, 17(5), pp. 416-420.
146. Johnson, T. C., 2024. Placenta Previa. [Interactiv], Available at: https://www.webmd.com/baby/what-is-placenta-previa, [Accesat 27 01 2024].
147. Jost, K. și alții, 2017. Dynamics and complexity of body temperature in preterm infants nursed in incubators. PLoS One, 12(4), p. E0176670.
148. Kaponis, A. și alții, 2011. The importance of venous Doppler velocimetry for evaluation of intrauterine growth restriction. Journal of ultrasound in medicine, 30(4), pp. 529-545.
149. Karumanchi, A. S. și alții, 2005. Preeclampsia: a renal perspective. Kidney international, 67(6), pp. 2101-2113.
150. Kayem, G. și alții, 2024. Risk factors for placenta accreta spectrum disorders in women with any prior cesarean and a placenta previa or low lying: a prospective population-based study. Scienfici Reports, 14(6564).
151. Khalil, G. & Hameed, A., 2017. Preeclampsia: Pathophysiology and the Maternal-Fetal Risk. Journal of Hypertension and Management, 3(1), pp. 1-5.
152. Khurana, A., 2017. Placenta and Transvaginal Sonography. J Ultrasound Obstet Gynecol , 11(2), pp. 107-114.
153. Kilcoyne, A. și alții, 2016. MRI of Placenta Accreta, Placenta Increta, and Placenta Percreta: Pearls and Pitfalls. American Journal of Roentgenology, 2018(1).
154. King, V. J. și alții, 2022. Fetal growth restriction and stillbirth: Biomarkers for identifying at risk fetuses. Frontiers in Physiology, Volumul 13, p. 959750.
155. King, V. J. și alții, 2022. Fetal growth restriction and stillbirth: Biomarkers for identifying at risk fetuses. Frontiers in Physiology , Volumul 13, p. 959750.
156. Kobayashi, H., Ichikawa, M., Akasaka, J. & Sado, T., 2019. Immune related pathophysiological causes relevant to a subset of patients with preeclampsia (Review). [Interactiv], Available at: https://www.researchgate.net/figure/The-three-stage-model-of-preeclampsia-hLA-human-leucocyte-antigen-EVT-extravillous_fig1_332491732, [Accesat 03 2024].
157. Kosmeri, C. și alții, 2023. Classification and Special Nutritional Needs of SGA Infants and Neonates of Multiple Pregnancies. Nutrients, 15(12), p. 2736.
158. Kosmeri, C. și alții, 2023. Classification and Special Nutritional Needs of SGA Infants and Neonates of Multiple Pregnancies. Nutrients , 15(12), p. 2736.
159. Koulouraki, S. și alții, 2023. Short- and Long-Term Outcomes of Preeclampsia in Offspring: Review of the Literature. Children , 10(5), p. 826.
160. Koulouraki, S. și alții, 2023. Short- and Long-Term Outcomes of Preeclampsia in Offspring: Review of the Literature. Children, 10(5), p. 826.
161. Labarrere, C. A. și alții, 2017. Labarrere, Carlos A., et al. "Failure of physiologic transformation of spiral arteries, endothelial and trophoblast cell activation, and acute atherosis in the basal plate of the placenta. American journal of obstetrics and gynecology, Volumul 216.3, pp. 287-e1.
162. Lailler, G. și alții, 83. Aspirin for the Prevention of Early and Severe Pre-Eclampsia Recurrence: A Real-World Population-Based Study. Drugs, 5(429-437).

163. Lamminpää, R., Vehviläinen-Julkunen, K., Gissler, M. & Heinonen , S., 2012. Preeclampsia complicated by advanced maternal age: a registry-based study on primiparous women in Finland 1997–2008. BMC Pregnancy and Childbirth, 12(47).
164. Leaños-Miranda, A. și alții, 2020. Usefulness of the sFlt-1/PlGF (Soluble fms-Like Tyrosine Kinase-1/Placental Growth Factor) Ratio in Diagnosis or Misdiagnosis in Women With Clinical Diagnosis of Preeclampsia. Hypertension, 76(3), pp. 892-900.
165. Lees, C., Stampalija, T. & Hecher, K., 2021. Diagnosis and management of fetal growth restriction: the ISUOG guideline and comparison with the SMFM guideline. Ultrasound in Obstetrics & Gynecology, 57(6), pp. 884-887.
166. Leipälä, J. A. și alții, 2003. Cardiac Hypertrophy and Altered Hemodynamic Adaptation in Growth-Restricted Preterm Infants. Pediatric research, 53(6), pp. 989-993.
167. Leite, D. F. B. & Cecatti , J. G., fără an Fetal Growth Restriction Prediction: How to Move beyond. The Scientific World Journal, Volumul 2019.
168. Lie, R. T. și alții, 1998. Fetal and Maternal Contributions to Risk of Pre-Eclampsia: Population Based Study. BMJ: British Medical Journal, 316(7141), pp. 1343-1347.
169. Logue, O. C., George, E. M. & Bidwell, G. L., 2016. Preeclampsia and the brain: neural control of cardiovascular changes during pregnancy and neurological outcomes of preeclampsia. Preeclampsia and the brain: neural control of cardiovascular changes during pregnancy and neurological outcomes of preeclampsia , 130(16), pp. 1417-1434.
170. MA'AYEH, M. & COSTANTINE, M. M., 2020. Prevention of Preeclampsia. Semin Fetal Neonatal Med., 25(5), p. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8236336/.
171. Maeda, Y. și alții, 2021. The effect of parity, history of preeclampsia, and pregnancy care on the incidence of subsequent preeclampsia in multiparous women with SLE. Modern Rheumatology, 31(4), pp. 843-848.
172. Maged, A. M. și alții, 2023. Diagnostic accuracy of ultrasound in the diagnosis of Placenta accreta spectrum: systematic review and meta-analysis. BMC Pregnancy and Childbirth, 23(1), p. 354.
173. Maher, M. A., Abdelaziz, A. & Bazeed, M. F., 2013. Diagnostic accuracy of ultrasound and MRI in the prenatal diagnosis of placenta accreta. Acta obstetricia et gynecologica Scandinavic, 92(9), pp. 1017-1022.
174. Maksym, K. și alții, 2023. Maternal PlGF and umbilical Dopplers predict pregnancy outcomes at diagnosis of early-onset fetal growth restriction. The Journal of Clinical Investigation , 133(18), pp. e169-199.
175. Malhotra, A. și alții, 2019. Neonatal Morbidities of Fetal Growth Restriction: Pathophysiology and Impact. Frontiers in endocrinology, Volumul 10, p. 433458.
176. Malone, S., Woodrow, N. & Palma-Dias, R., 2017. EP15.14: An optimal timing of Caesarean delivery in placenta previa. Ultrasound in Obstetrics & Gynecology, Volumul 50, pp. 331-331.
177. Manandhar, T., Prashad, B. & Pal, M. N., 2018. Risk Factors for Intrauterine Growth Restriction and Its Neonatal Outcome. Gynecol Obstet, 8(2), p. 1000464.
178. Marchofdimes, 2024. Placenta previa. [Interactiv], Available at: https://www.marchofdimes.org/find-support/topics/pregnancy/placenta-previa

179. Marinescu, I. P., Foarfă, M. C., Pîrlog, M. C. & Turculeanu, A., 2014. Prenatal depression and stress - risk factors for placental pathology and spontaneous abortion. J Morphol Embryol, 55(3 Suppl), pp. 1155-1160.
180. Markestad, T. și alții, 1997. Small-for-gestational-age (SGA) infants born at term: growth and development during the first year of life. Acta obstetricia et gynecologica Scandinavica. Supplement, Volumul 165, pp. 93-101.
181. Martins, L. și alții, 2020. Uterine vascular resistance and other maternal factors associated with the risk of developing hypertension during pregnancy. Journal of Medical and Biological Research, Volumul 54.
182. Mashiah, S. R. & Belfort, M. A., 2005. Preeclampsia Is Associated With Global Cerebral Hemodynamic Changes. The Journal of the Society for Gynecologic Investigation: JSGI, Volumul 12, pp. 253-256.
183. Maulik, D., Mundy, D., Heitmann, E. & Maulik, D., 2011. Umbilical artery Doppler in the assessment of fetal growth restriction. Clinics in perinatology, 38(1), pp. 65-82.
184. Maynard, S. E. & Karumanchi, . S. A., 2011. Angiogenic Factors and Preeclampsia. Seminars in nephrology, 31(1), pp. 33-46.
185. Maynard, S. E. și alții, 2003. Excess placental soluble fms-like tyrosine kinase 1 (sFlt1) may contribute to endothelial dysfunction, hypertension, and proteinuria in preeclampsia. The Journal of clinical investigation, 111(5), pp. 649-658.
186. Mayo Clinic, 2023. Placenta previa, s.l.: Mayo Clinic.
187. Mayo Clinic, 2024. Placenta accreta. [Interactiv], Available at: https://www.mayoclinic.org/diseases-conditions/placenta-accreta/symptoms-causes/syc-20376431,[Accesat 12 03 2024].
188. Mayo Clinic, 2024. Preeclampsia. [Interactiv], Available at: https://www.mayoclinic.org/diseases-conditions/preeclampsia/symptoms-causes/syc-20355745,[Accesat 29 03 2024].
189. McMillen, C. I. și alții, 2001. Fetal growth restriction: adaptations and consequences. Reproduction, Volumul 122, pp. 195-204.
190. Medicins Sans Frontieres, 2024. Placenta praevia. [Interactiv], Available at: https://medicalguidelines.msf.org/en/viewport/ONC/english/3-1-placenta-praevia-51416266.html,[Accesat 3 02 2024].
191. Medline Plus, 2024. Intrauterine growth restriction. [Interactiv], Available at: https://medlineplus.gov/ency/article/001500.htm, [Accesat 14 02 2024].
192. MedlinePlus, 2024. Placenta previa. [Interactiv], Available at: https://medlineplus.gov/ency/article/000900.htm, [Accesat 12 02 2024].
193. Medscape, 2024. medscape.com. [Interactiv], Available at: https://emedicine.medscape.com/article/261226-overview?form=fpf, [Accesat 02 04 2024].
194. Melchiorre, . K., Rajan, S. & Basky, T., 2012. Cardiac structure and function in normal pregnancy. Current Opinion in Obstetrics and Gynecology, 24(6), pp. 412-421.
195. Mendoza, . M. și alții, 2020. Pre-eclampsia-like syndrome induced by severe COVID-19: a prospective observational study. BJOG: An International Journal of Obstetrics & Gynaecology, 127(11), pp. 1374-1380.
196. Miller, S. L., Huppi, P. S. & Mallard, C., 2016. The consequences of fetal growth restriction on brain structure and neurodevelopmental outcome. The Journal of physiology, 594(4), pp. 807-823.

197. MINISTERUL SĂNĂTĂŢII, 2024. GHID din 9 august 2019, s.l.: MONITORUL OFICIAL nr. 738 bis din 10 septembrie 2019.
198. Min, Z. și alții, 2013. Placental expression of VEGF is increased in pregnancies with hydatidiform mole: Possible association with developing very early onset preeclampsia. Early Human Development, 89(8), pp. 583-588.
199. Mires, G. J., Patel, N. B., Forsyth, J. S. & Howie, P. W., 1994. Neonatal cerebral Doppler flow velocity waveforms in the uncomplicated pre-term infant: reference values. Early human development , 36(3), pp. 205-121.
200. Monash Health Women's, 2024. Preventing pre-eclampsia. [Interactiv], Available at: https://monashwomens.org/health-information/first-trimester-pregnancy/preventing-pre-eclampsia/, [Accesat 31 01 2024].
201. Morin, L. și alții, 2011. Ultrasound in twin pregnancies. Journal of obstetrics and gynaecology Canada, 33(6), pp. 643-656.
202. Mossman, H. W., 1991. Classics Revisited: Comparative Morphogenesis of the Fetal Membranes and Accesso& Uterine Structures. Placenta, Volumul 12, pp. 1-5.
203. Mount Sinai, 2024. Placenta previa. [Interactiv], Available at: https://www.mountsinai.org/health-library/diseases-conditions/placenta-previa, [Accesat 23 01 2024].
204. Murthi, P. & Vaillancourt, C., 2018. Preeclampsia. Methods and Protocols. Laval, QC, Canada: Springer Science+Business Media.
205. Myatt, L. L. & Roberts, J. M., 2015. Preeclampsia: Syndrome or Disease?. SpringerLink, 17(83).
206. Naeh, A. și alții, 2022. Preeclampsia-Like Syndrome in a Pregnant Patient With Coronavirus Disease 2019 (COVID-19). Journal of Obstetrics and Gynaecology Canada, 44(2), pp. 193-195.
207. Nardozza, L. M. M. și alții, 2017. Fetal growth restriction: current knowledge. Archives of gynecology and obstetrics, Volumul 295, pp. 1061-1077.
208. National Library of Medicine, 2024. Intrauterine growth restriction. [Interactiv], Available at: https://medlineplus.gov/ency/article/001500.htm, [Accesat 12 02 2024].
209. Neerhof, m. G., 1995. Causes Of Intrauterine Growth Restriction. Clinics in Perinatology, 22(2), pp. 375-385.
210. NHS, 2024. NHS. Pre-eclampsia. [Interactiv], Available at: https://www.nhs.uk/conditions/pre-eclampsia/symptoms/, [Accesat 08 02 2024].
211. NIH, 2024. What are the risks of preeclampsia & eclampsia to the fetus?. [Interactiv]
212. Available at: https://www.nichd.nih.gov/health/topics/preeclampsia/conditioninfo/risk-fetus, [Accesat 23 02 2024].
213. Nikuei, P. și alții, 2020. Diagnostic accuracy of sFlt1/PlGF ratio as a marker for preeclampsia. BMC pregnancy and childbirth, Volumul 20, pp. 1-6.
214. Nounemi, K. N., Sando, Z., Mbu, R. E. & Mbede, J., 2015. Risk factors and placental histopathological findings of term born low birth weight neonates. Placenta, 36(2), pp. 138-141.
215. O'Donoghue, K. și alții, 2014. Fetal growth restriction and the risk of perinatal mortality–case studies from the multicentre PORTO study. BMC pregnancy and childbirth, Volumul 14, pp. 1-6.
216. Odegård, R. A., Vatten, L. J., Salvesen, K. A. & Austgulen, R., 2000. Preeclampsia and fetal growth. Obstet Gynecol., 96(6), pp. 950-5.

217. O'Gorman, N. și alții, 2016. Study protocol for the randomised controlled trial: combined multimarker screening and randomised patient treatment with ASpirin for evidence-based PREeclampsia prevention (ASPRE). BMJ open , 6(6), p. e0111801.
218. Ohkuchi, A. și alții, 2021. Short-term prediction of preeclampsia using the sFlt-1/PlGF ratio: a subanalysis of pregnant Japanese women from the PROGNOSIS Asia study. Hypertension Research, 44(7), pp. 813-821.
219. osmosis.org, 2021. Uterine Atony What Is It, Risk Factors, Treatment, and More. [Interactiv], Available at: https://www.osmosis.org/answers/uterine-atony, [Accesat 19 03 2024].
220. Osuchukwu, O. O. & Reed., D. J., 2020. Small for Gestational Age. National Center for Biotechnology Information, p. https://www.ncbi.nlm.nih.gov/books/NBK563247/.
221. Oyelese, Y., Javinani, A. & Shamshirsaz, A. A., 2024. Vasa Previa. Obstetric Anesthesia Digest , 44(1), pp. 13-14.
222. Oyelese, Y. & Smulian, J. C., 2006. Placenta Previa, Placenta Accreta, and Vasa Previa. Obstetrics & Gynecology, 107(4), pp. 927-941.
223. Padhan, S. C. și alții, 2023. Risk Factors of Pre-eclampsia: A Hospital-Based Case-Control Study. Cureus, 15(7), p. e42543.
224. Paranavitana, L. și alții, 2021. Sex differences in uterine artery Doppler during gestation in pregnancies complicated by placental dysfunction. Biology of sex Differences, Volumul 12, pp. 1-6.
225. Patel, O., Pradhan, P., Das, P. & Mishra, S. K., 2023. Placental Pathology and Maternal Risk Factors for Stillbirth: A Case-Control Study. Cureus, 15(5).
226. Patey , O., Carvalho, J. S. & Thilaganathan, B., 2019. Perinatal changes in cardiac geometry and function in growth-restricted fetuses at term. Ultrasound in Obstetrics & Gynecology, 53(5), pp. 655-662.
227. Pedroso, M. A. și alții, 2018. Uterine Artery Doppler in Screening for Preeclampsia and Fetal Growth Restriction. Revista brasileira de ginecologia e obstetricia, Volumul 40, pp. 287-293.
228. Pedroso, M. A. și alții, 2018. Uterine Artery Doppler in Screening for Preeclampsia and Fetal Growth Restriction. Revista brasileira de ginecologia e obstetricia, Volumul 40, pp. 287-293.
229. PELEG, D., KENNEDY,, C. M. & HUNTER, S. .. K., 1998. Intrauterine Growth Restriction: Identification and Management. American Family Physician, 58(2), pp. 453-460.
230. PELEG, D., KENNEDY, . C. . M. & HUNTER, S. K., 1998. Intrauterine Growth Restriction: Identification and Management. Am Fam Physician., 58(2), pp. 453-460.
231. Peng, F. și alții, 2019. Using transperineal ultrasound to predict labor onset. Annals of Translational Medicine, 7(23).
232. Pijnenborg, R., Vercruysse, L. & Hanssens, M., 2006. The Uterine Spiral Arteries In Human Pregnancy: Facts and Controversies. Elsevier, 27(9-10), pp. 939-958.
233. Poon, L. C. & Nicolaides, K. H., 2014. Early Prediction of Preeclampsia. Obstet Gynecol Int..
234. Poon, L. C. și alții, 2019. The International Federation of Gynecology and Obstetrics (FIGO) initiative on pre-eclampsia: A pragmatic guide for first-trimester screening and prevention. International journal of gynaecology and obstetrics: the

official organ of the International Federation of Gynaecology and Obstetrics, 145(1), pp. 1-33.
235. Poon, L. C. și alții, 2017. ASPRE trial: effect of aspirin in prevention of preterm preeclampsia in subgroups of women according to their characteristics and medical and obstetrical history. American Journal of Obstetrics and Gynecology.
236. Portelli , M. & Baron, B., 2018. Clinical Presentation of Preeclampsia and the Diagnostic Value of Proteins and Their Methylation Products as Biomarkers in Pregnant Women with Preeclampsia and Their Newborns. Journal of Pregnancy.
237. Poston, L., 1997. The control of blood flow to the planceta. Experimental Physiology, Volumul 82, pp. 377-387.
238. Preeclampsia Foundation, 2024. 2,400 YEARS OF PREECLAMPSIA HISTORY. [Interactiv], Available at: https://www.preeclampsia.org/the-news/health-information/history-of-preeclampsia, [Accesat 05 04 2024].
239. Putra , I. W. A., 2022. Molecular Development of Placenta and Its Relationship with Preeclampsia and Fetal Growth Restriction. European Journal of Medical and Health Sciences, 4(4), pp. 38-42.
240. Rafique, Z. și alții, 2021. The Ability of Ultrasound Sonography (USG) to Detect Intrauterine Growth Restriction (IUGR) in the Third Trimester of Pregnancy With the Gold Standard of IUGR (Parameters by USG Hadlock) as a Diagnostic Criterion. Cureus, 13(12), p. e20523.
241. Ramesh, P. & Sumathy, S., 2022. Role of Routine Mid-Trimester Uterine Artery Doppler for Surveillance of Placental Mediated Disorders in a Low-Risk Population. Cureus, 14(10).
242. Rana, S., Lemoine, . E., Granger, J. P. & Karumanchi, A. S., 2019. Preeclampsia Pathophysiology, Challenges, and Perspectives. Circulation Research, Volumul 124, pp. 1094-1112.
243. Redman, C. W., Bchir, M., Staff, a. C. & Roberts, J. M., 2022. Syncytiotrophoblast stress in preeclampsia: the convergence point for multiple pathways. American Journal of Obstetrics & Gynecology, pp. S907-S927.
244. Redman, C. W. & Sargent, I. L., 2005. Latest advances in understanding preeclampsia, Oxford: University of Oxford.
245. Regina Maria, 2023. reginamaria.ro. [Interactiv], Available at: https://www.reginamaria.ro/articole-medicale/preeclampsia, [Accesat 04 02 2023].
246. Regnault, T. R. H., Galan, H. L., Parker, T. A. & Anthonya, . R. . V., 2002. Placental Development in Normal and Compromised Pregnancies— A Review. Placenta, 23(16), pp. S119-S129.
247. Ren, Y. și alții, 2023. Application of low dose aspirin in pre-eclampsia. Frontiers in Medicine, Volumul 10, p. 1111371.
248. Rescinito, R., Ratti, M., Payedimarri, A. B. & Panella, M., 2023. Prediction Models for Intrauterine Growth Restriction Using Artificial Intelligence and Machine Learning: A Systematic Review and Meta-Analysis. Healthcare, 11(11), p. 1617.
249. Reynolds, L. P. și alții, 2013. Maternal Stress and Placental Vascular Function and Remodeling. s.l.:Current Vascular Pharmacology,.
250. Roberts, J. M. & Escudero, C., 2012. The placenta in preeclampsia. Pregnancy Hypertension: An International Journal of Women's Cardiovascular Health, 2(2), pp. 72-83.
251. Roberts, J. M. & Escudero, C., 2012. The placenta in preeclampsia. Pregnancy Hypertens, 2(2), pp. 72-83.

252. Roberts, J. M. & Hubel, C. A., 2009. The Two Stage Model of Preeclampsia: Variations on the Theme. Placenta, Volumul Placenta, pp. S32-S37.
253. Roberts, M. J. & Gammill, S. H., 2005. Preeclampsia. Hypertension, Volumul 46, p. 1243–1249.
254. Robertson, W. B., 1976. Uteroplacental vasculature. Journal of Clinical Pathology, 29(10), pp. 9-17.
255. Robertson, W. B., Dixon, A. G. & Dixon, H. G., 1973. Placental bed vessels. s.l.:American journal of obstetrics and gynecology.
256. Rolnik, D. L., Nicolaides, K. H. & Poon, L. C., 2020. Prevention of preeclampsia with aspirin. American Journal of Obstetrics & Gynecology, p. https://fetalmedicine.org/var/pdf/publications/1241.pdf.
257. Rolnik, D. L., Nicolaides, K. H. & Poon, L. C., 2022. Prevention of preeclampsia with aspirin. American journal of obstetrics and gynecology , 226(2), pp. S1108-S1119.
258. Rolnik, D. L. și alții, 2017. ASPRE trial: performance of screening for preterm pre-eclampsia. Ultrasound in obstetrics & gynecology, 50(4), pp. 492-495.
259. Ross, M. . G., 2020. Fetal Growth Restriction. Medscape, pp. https://emedicine.medscape.com/article/261226-overview?form=fpf.
260. Ross, M. G. & Smith, C. V., 2020. Fetal Growth Restriction. [Interactiv], Available at: https://emedicine.medscape.com/article/261226-overview?form=fpf, [Accesat 30 01 2024].
261. Royal College of Obstetricians & Gynaecologists, 2014. The Investigation and Management of the Small–for–Gestational–Age Fetus, s.l.: Royal College of Obstetricians & Gynaecologists.
262. Ruffin, J. D., Pearson, J. & Woods, T., 1992. The fundamentals of Transperineal Ultrasound. JDMS, Volumul 8, pp. 188-192.
263. Saint Luke's, 2024. Small for Gestational Age (SGA). [Interactiv], Available at: https://www.saintlukeskc.org/health-library/small-gestational-age-sga, [Accesat 05 02 2024].
264. Saito, S., 2018. Preeclampsia. Basic, Genomic, and Clinica. s.l.:Springer Nature Singapore Pte Ltd. .
265. Sanchez, S. E. și alții, 2008. Headaches and Migraines Are Associated With an Increased Risk of Preeclampsia in Peruvian Women. Headaches and Migraines Are Associated With an Increased Risk of Preeclampsia in Peruvian Wome, 21(3), pp. 360-364.
266. Schiffer, V. și alții, 2020. Spiral artery blood flow during pregnancy: a systematic review and meta-analysis. BMC Pregnancy and Childbirth, 20(680), pp. 1-15.
267. ScienceDirect, 2020. Intrauterine Growth Retardation. [Interactiv], Available at: https://www.sciencedirect.com/topics/medicine-and-dentistry/intrauterine-growth-retardation, [Accesat 02 2024].
268. Seravalli, V., Miller, J. L., Block-Abraham, D. & Baschat, A. A., 2016. Ductus venosus Doppler in the assessment of fetal cardiovascular health: an updated practical approach. Acta obstetricia et gynecologica Scandinavica, 95(6), pp. 635-644.
269. Serrano, B. și alții, 2023. Confirmation of preeclampsia-like syndrome induced by severe COVID-19: an observational study. Original Research, 5(1).
270. Shahid, N. și alții, 2021. Role of Uterine Artery Doppler Ultrasound in Predicting Pre-Eclampsia in High-Risk Women. Cureus, 13(7).

271. Shainker,, S. & Golen, T., 2021. Preventing preeclampsia may be as simple as taking an aspirin. [Interactiv], Available at: https://www.health.harvard.edu/blog/preventing-preeclampsia-may-be-as-simple-as-taking-an-aspirin-202111092634, [Accesat 12 2023].
272. Sharma, D., Shastri, S. & Sharma, P., 2016. Intrauterine Growth Restriction: Antenatal and Postnatal Aspects. Clinical Medicine Insights: Pediatrics, Volumul 10, pp. 67-83.
273. Sheikh , Y., 2021. Abnormal ductus venosus waveforms. [Interactiv], Available at: https://radiopaedia.org/articles/abnormal-ductus-venosus-waveforms, [Accesat 31 03 2024].
274. Sherman, S. J., Carlson, D. E., Platt, L. D. & Medearis, A. L., 1992. Transvaginal ultrasound: does it help in the diagnosis of placenta previa?. The Official Journal of the International Society of Ultrasound in Obstetrics and Gynecology, 2(4), pp. 256-260.
275. Sherman, S. J., Carlson, D. E., Platt, L. D. & Medearis, A. L., 1992. Transvaginal ultrasound: does it help in the diagnosis of placenta previa?. The Official Journal of the International Society of Ultrasound in Obstetrics and Gynecology, 2(4), pp. 256-260.
276. Sibai, B. M., 2003. Diagnosis and Management of Gestational Hypertension and Preeclampsia. The American College of Obstetricians and Gynecologists, 102(1), pp. 181-192.
277. Siepmann, T. și alții, 2017. Long-term cerebral white and gray matter changes after preeclampsia. Long-term cerebral white and gray matter changes after preeclampsia, 88(13), pp. 1256-1264.
278. Singh, M., Sharma, A. & Singh, P., 2013. Role of Doppler indices in the prediction of adverse perinatal outcome in preeclampsia. National journal of medical research, 3(04), pp. 315-318.
279. Sławek-Szmyt, S. și alții, 2022. Preeclampsia and Fetal Growth Restriction as Risk Factors of Future Maternal Cardiovascular Disease—A Review. Journal of Clinical Medicine, 11(20), p. 6048.
280. Smith, R. S. și alții, 1997. Transvaginal ultrasonography for all placentas that appear to be low-lying or over the internval cervical os. Ultrasound Obstetrical Gynecol, Volumul 9, pp. 22-24.
281. Societatea de Obstetrica si Ginecologie din Romania, 2011. BIOMARKERI ÎN DEPISTAREA PRECLINICĂ A PREECLAMPSIEI. [Interactiv], Available at: https://sogr.ro/revista-sogr/biomarkeri-in-depistarea-preclinica-a-preeclampsiei/, [Accesat 02 03 2024].
282. Society for Maternal-Fetal Medicine, 2012. smfm.org. [Interactiv], Available at: https://www.smfm.org/publications/289-smfm-consult-series-52-diagnosis-and-management-of-fetal-growth-restriction, [Accesat 16 03 2024].
283. Society for Maternal-Fetal Medicine, 2018. Placenta Accreta Spectrum. Obstetric Care Consensus, 132(6).
284. Springer, S. și alții, 2020. Notching and Pulsatility Index of the Uterine Arteries and Preeclampsia in Twin Pregnancies. Journal of Clinical Medicine, 9(8), p. 2653.
285. Staff, A. C., 2019. The two-stage placental model of preeclampsia: An update. Journal of Reproductive Immunology, Volumul 134-135, pp. 1-10.
286. Staff, A. C. și alții, 2013. Redefining Preeclampsia Using Placenta-Derived Biomarkers. Hypertension, Volumul 61, pp. 932-942.

287. Stanford Medicine, 2024. Fetal Growth Restriction. [Interactiv], Available at: https://www.stanfordchildrens.org/en/topic/default?id=fetal-growth-restriction-90-P02462,[Accesat 02 03 2024].
288. Steinthorsdottir, V. & et. al., 2020. Genetic predisposition to hypertension is associated with preeclampsia in European and Central Asian women. Nature Communications, 11(1), p. 5976.
289. Stillman, I. E. & Karumanchi, A. S., 2007. The Glomerular Injury of Preeclampsia. Journal of the American Society of Nephrology , 18(8), pp. 2281-2284.
290. Stöppler, M. C. & Shiel, W. C., 2024. Placenta Previa: Symptoms, Types, Causes, Risks, & Treatment. MedicineNet, p. https://www.medicinenet.com/stages_of_pregnancy_pictures_slideshow/article.htm .
291. Suekane, T. și alții, 2021. Time interval analysis of ductus venosus and cardiac cycles in relation with umbilical artery pH at birth in fetal growth restriction. BMC Pregnancy and Childbirth, Volumul 21, pp. 1-7.
292. Suhag, A. & Berghella, V., 2014. Intrauterine Growth Restriction (IUGR): Etiology and Diagnosis. Curr Obstet Gynecol Rep, Volumul 2, pp. 102-111.
293. Takahashi, M. și alții, 2021. Fetal growth restriction as the initial finding of preeclampsia is a clinical predictor of maternal and neonatal prognoses: a single-center retrospective study. BMC Pregnancy and Childbirth, Volumul 21.
294. Tang, Y. și alții, 2021. Poor sleep is associated with higher blood pressure and uterine artery pulsatility index in pregnancy: a prospective cohort study. Journal of Obstetrics & Gynaecology, 128(7), pp. 1192-1199.
295. teachmeobgyn.com, 2024. teachmeobgyn.com. [Interactiv], Available at: https://teachmeobgyn.com/pregnancy/antenatal/small-gestational-age/, [Accesat 09 02 2024].
296. TeachMeObGyn, 2024. Placenta Praevia. [Interactiv], Available at: https://teachmeobgyn.com/pregnancy/medical-disorders/placenta-praevia/, [Accesat 17 02 2024].
297. The American Colege og Obstetricians and Gynecologists, 2024. Low-Dose Aspirin Use for the Prevention of Preeclampsia and Related Morbidity and Mortality, s.l.: The American Colege og Obstetricians and Gynecologists.
298. The American College of Obstetriciand and Gynecologists, 2024. Preeclampsia and Pregnancy, s.l.: The American College of Obstetriciand and Gynecologists.
299. The American College of Obstetricians and Gynecologists, 2012. Placenta Accreta Spectrum. Obstetric Care Consensus, 7(Opinion no. 529).
300. The American College of Obstetricians and Gynecologists, July 2012. (Mayo Clinic, 2024), s.l.: The American College of Obstetricians and Gynecologists.
301. Thekkedathu, V. C., 2015. Maternal and Placental Risk Factors associated with Intrauterine Growth Restriction and the Perinatal Outcomes. Journal of South Asian Federation of Obstetrics and Gynaecology, 7(3), pp. 176-181.
302. Theophilus , K. A.-B.și alții, 2022. A simple guide to ultrasound screening for placenta accreta spectrum for improving detection and optimizing management in resource limited settings. International Journal of Gynecology and Obstetrics, 160(3), pp. 732-741.
303. ThermoFisherSCIENTIFIC, 2022. Pre-eclampsia: First Trimester Screening. [Interactiv], Available at: https://www.brahms.de/en-gb/products/prenatal-screening/first-trimester-screening.html, [Accesat 29 04 2024].

304. Tian, Y. & Yang, X., 2022. A Review of Roles of Uterine Artery Doppler in Pregnancy Complications. Frontiers in Medicine, Volumul 9, p. 813343.
305. Tidy, C., 2022. Small for gestational age. [Interactiv], Available at: https://patient.info/doctor/small-for-gestational-age-babies, [Accesat 23 03 2024].
306. Tomimatsu, T. și alții, 2019. Preeclampsia: Maternal Systemic Vascular Disorder Caused by Generalized Endothelial Dysfunction Due to Placental Antiangiogenic Factors. International journal of molecular sciences , 20(17), p. 4246.
307. Tousty, P. și alții, 2023. Low-Dose Aspirin after ASPRE—More Questions Than Answers? Current International Approach after PE Screening in the First Trimester. Biomedicines, 11(6), p. 1495.
308. Townsend, R., O'Brien, P. & Khalil, A., 2016. Current best practice in the management of hypertensive disorders in pregnancy. Integr Blood Press Control, Volumul 9, pp. 79-94.
309. Turpin, C. A. și alții, 2015. Association between adverse pregnancy outcome and imbalance in angiogenic regulators and oxidative stress biomarkers in gestational hypertension and preeclampsia. BMC Pregnancy Childbirth, 15(189), pp. 1-10.
310. Tyrmi, J. S. și alții, 2022. GWAS of preeclampsia and hypertensive disorders of pregnancy uncovers genes related to cardiometabolic, endothelial and placental function. medRxiv, Volumul 05, pp. 2022-05.
311. University of Cincinnati College of Medicine, 2022. Fetal Growth Restriction, s.l.: University of Cincinnati College of Medicine.
312. US Preventive Services Task Force, 2021. Aspirin Use to Prevent Preeclampsia and Related Morbidity and Mortality. Jama, 326(12), pp. 1186-1191.
313. Uzan, J. și alții, 2011. Pre-eclampsia: pathophysiology, diagnosis, and management. Vascular health and risk management, pp. 467-474.
314. Vakil, P., Henry, A., Craig, M. E. & Gow, M. L., 2022. A review of infant growth and psychomotor developmental outcomes after intrauterine exposure to preeclampsia. BMC Pediatrics , 22(513).
315. Valensise, H., Vasapollo, B., Gagliardi, G. & Novelli, G. . P., 2008. Early and Late Preeclampsia. 52(5), pp. 873-880.
316. Van Doorn, R. și alții, 2021. Dose of aspirin to prevent preterm preeclampsia in women with moderate or high-risk factors: A systematic review and meta-analysis. PLoS One, 16(3), p. e0247782.
317. van Esch, J. J. A., van Heijst, A. F. & de Haan, A. . F., 2017. Early-onset preeclampsia is associated with perinatal mortality and severe neonatal morbidity.. The Journal of Maternal-Fetal & Neonatal Medicine, 30(23), pp. 2789-2794..
318. VANDENBOSCHE, R. C. & KIRCHNER, J. T., 1998. Intrauterine Growth Retardation. Am Fam Physician., 58(6), pp. 1384-1390.
319. Vieira Leal, C. R. și alții, 2023. Comparison between Protocols for Management of Fetal Growth Restriction. Revista Brasileira de Ginecologia e Obstetricia, 45(2), pp. 096-103.
320. Vinayagam, L. . D., Khalil, . K. & Thilaganathan, B., 2015. Preeclampsia-What is to blame? The placenta, maternal cardiovascular system or both?.. World Journal of Obstetrics and Gynecology, 4(4), pp. 77-85.
321. Vorherr, H., 1982. Factors influencing fetal growth. American journal of obstetrics and gynecology, 142(5), pp. 577-588.
322. Wagner, L. K., 2004. Diagnosis and Management of Preeclampsia. Am Fam Physician, 70(12), pp. 2317-2324.

323. Wales Maternity and Neonantal Network, 2021. Small for Gestational Age and Fetal Growth Restricted Babies – Antenatal Management, s.l.: Wales Maternity and Neonantal Network.
324. Wardinger, J. . E. & Ambati., S., 2022. Placental Insufficiency. [Interactiv], Available at: https://www.ncbi.nlm.nih.gov/books/NBK563171, [Accesat 27 04 2024].
325. webmd.com, 2024. Placenta previa. [Interactiv], Available at: https://www.webmd.com/baby/what-is-placenta-previa, [Accesat 02 03 2024].
326. WESTBY, A. & MILLER, L., 2021. Fetal Growth Restriction Before and After Birth. American Family Physician, 104(5), pp. 486-492.
327. Wetta, L. A. și alții, 2013. Risk Factors for Uterine Atony/Postpartum Hemorrhage Requiring Treatment after Vaginal Delivery. American journal of obstetrics and gynecology, 209(1), pp. 51-e1.
328. Wetta, L. A. și alții, 2013. Risk Factors for Uterine Atony/Postpartum Hemorrhage Requiring Treatment after Vaginal Delivery. American journal of obstetrics and gynecology, 209(1), pp. 51-e1.
329. Wilcox, M. . A. și alții, 1995. The effect of social deprivation on birthweight, excluding physiological and pathological effects. BJOG: An International Journal of Obstetrics & Gynaecology, 102(11), pp. 918-924.
330. Williams, P. J. & Broughton Pipkin, F., 2011. The genetics of pre-eclampsia and other hypertensive disorders of pregnancy. Best practice & research Clinical obstetrics & gynaecology, 25(4), pp. 405-417.
331. Wójtowicz, A. și alții, 2019. Early- and Late-Onset Preeclampsia: A Comprehensive Cohort Study of Laboratory and Clinical Findings according to the New ISHHP Criteria. International journal of hypertension.
332. Wright , D. și alții, 2017. ASPRE trial: effect of aspirin in prevention of preterm preeclampsia in subgroups of women according to their characteristics and medical and obstetrical history, s.l.: https://fetalmedicine.org/var/pdf/publications/1093.pdf.
333. Wu, J.-l.și alții, 2019. Placental Origins of Preeclampsia: Potential Therapeutic Targets. Current Medical Science, Volumul 39, pp. 190-195.
334. Wu, Y., Yang, L. & Ding, Y., 2021. Predictive Performance of Placental Protein 13 for Screening Preeclampsia in the First Trimester: A Systematic Review and Meta-Analysis. Frontiers in medicine, Volumul 8, p. 756383.
335. www.marchofdimes.org, 2024. Placenta Previa. [Interactiv], Available at: https://www.marchofdimes.org/find-support/topics/pregnancy/placenta-previa, [Accesat 24 03 2024].
336. www.preventaccreta.org, 2024. www.preventaccreta.org. [Interactiv], Available at: https://www.preventaccreta.org/[Accesat 05 03 2024].
337. Yale Medicin, 2024. Placenta Previa. [Interactiv], Available at: https://www.yalemedicine.org/conditions/placenta-previa, [Accesat 10 02 2024].
338. Yingying, T. & Yang, X., 2022. A Review of Roles of Uterine Artery Doppler in Pregnancy Complications. Frontiers in Medicine, Volumul 9.
339. Yingying, Y. și alții, 2021. Preeclampsia prevalence, risk factors, and pregnancy outcomes in Sweden and China. JAMA Network Open, 4(5), pp. e218401-e218401.
340. Youssef, L. și alții, 2021. Paired maternal and fetal metabolomics reveal a differential fingerprint in preeclampsia versus fetal growth restriction. Scientific Reports, 11(1), p. 14422.

341. Zeisler, H. și alții, 2016. Predictive Value of the sFlt-1:PlGF Ratio in Women with Suspected Preeclampsia. New England Journal of Medicine, 374(1), pp. 13-22.
342. Zeve, D., Regelmann, . M. . O., Holzman, I. R. & Rapaport, R., 2016. Small at Birth, but How Small? The Definition of SGA Revisited. Hormone research in paediatrics, 86(5), pp. 357-360.
343. Zhu, C. și alții, 2023. Association between abnormal uterine artery pulsatility index and the risk of fetal congenital heart defects: a hospital-based cohort study. SCIENTIFIC REPORTS, 13(1), p. 22924.
344. Zunaira, . R. și alții, 2021. The Ability of Ultrasound Sonography (USG) to Detect Intrauterine Growth Restriction (IUGR) in the Third Trimester of Pregnancy With the Gold Standard of IUGR (Parameters by USG Hadlock) as a Diagnostic Criterion. Cureus, 13(12).