

**"VICTOR BABEȘ" UNIVERSITY OF  
MEDICINE AND PHARMACY TIMIȘOARA  
DOCTORAL SCHOOL  
MEDICINE**



**Women's Health Challenges in the Era of COVID-19:  
Breast Cancer Detection, Maternal Health Risks, and  
Reproductive Health Awareness**

**ABSTRACT**

**LECTURER. DR. DUMITRU CATALIN**

**Timișoara  
2024**



## ABSTRACT

My career trajectory within the field of Obstetrics and Gynecology, from my initial steps as a medical intern to my current role at the "Victor Babeș" University of Medicine and Pharmacy in Timișoara, Romania, embodies a deep-seated dedication to advancing women's health. My focus areas have included breast cancer detection and risk stratification, the impact of SARS-CoV-2 infection on maternal and pediatric health, and the pandemic's effects on mental health, contraceptive awareness, and family stress dynamics.

Beginning in 1998 as a medical intern at the County Clinical Emergency Hospital No. 1 in Timișoara, I immersed myself in various medical disciplines, gaining invaluable practical experience that laid the foundation for my subsequent clinical and academic pursuits. This early stage of my career was crucial for developing a profound understanding of patient care, surgical skills, and the complexities of women's health.

Advancing to a Specialist in Obstetrics and Gynecology in 2005, I honed my clinical skills and began making significant contributions to the field, particularly in diagnostic imaging and minimally invasive surgical techniques. My dedication to patient care and medical innovation was evident through my active participation in clinical practice and research, contributing to advancements in gynecologic oncology and reproductive health.

In 2009, I earned my Doctorate in Medicine with a specialization in Assisted Human Reproduction. This achievement deepened my expertise in reproductive medicine and provided a solid foundation in both clinical and research methodologies related to this complex field. It reinforced my commitment to advancing reproductive health practices informed by cutting-edge scientific insights and tailored to the needs of my patients.

Since 2019, my academic career has taken on a new dimension as a Senior Lecturer, furthering my involvement in education and research within the discipline of Obstetrics and Gynecology. This role has allowed me to significantly contribute to the academic community, mentoring students and junior doctors, leading research projects

in areas such as breast cancer detection, maternal health during the pandemic, and the psychosocial impacts of COVID-19.

Throughout my career, my scientific achievements have significantly advanced the field of Obstetrics and Gynecology, particularly focusing on breast cancer detection and risk stratification. My dedication to enhancing diagnostic accuracy has led to notable contributions that have reshaped current practices and opened new avenues for research and care in gynecologic oncology.

One of my significant contributions lies in investigating factors associated with false-positive breast cancer results in real-time sonoelastography evaluations of solid breast lesions. This research has enhanced the precision of diagnostic tools, reducing unnecessary interventions and the emotional burden on patients. By refining risk stratification algorithms, my work has aided clinicians in making more accurate diagnoses, ultimately improving patient outcomes and quality of care.

Furthermore, my research on breast cancer risk factors among women with solid breast lesions has provided valuable insights into patient risk profiles. By identifying and analyzing these factors, I have contributed to the development of personalized screening strategies and early detection methods, which are critical in improving survival rates and reducing the impact of breast cancer on women's lives.

In the context of the COVID-19 pandemic, I have extensively researched its impact on maternal and pediatric health. My studies on NT-proBNP levels in pregnant patients with and without SARS-CoV-2 infection have provided critical insights into how the virus affects cardiovascular function during pregnancy and its consequences for newborns. This work has been instrumental in developing protocols for monitoring and managing pregnant women infected with SARS-CoV-2, ensuring better outcomes for both mothers and their infants.

Additionally, my research on the pandemic's impact on patients undergoing radiation therapy for advanced cervical cancer highlighted the challenges faced by these patients during global health crises. By analyzing treatment delays and their effects on patient outcomes, this work underscores the necessity for resilient healthcare systems that can maintain essential services even amidst a pandemic.

A significant aspect of my recent research has delved into the pandemic's impact on mental health, contraceptive awareness, and family stress dynamics. I investigated how the shift to remote learning affected teenagers' and young adult women's mental well-being and contraceptive knowledge. This three-year cross-sectional analysis offered invaluable insights into the importance of accessible reproductive health education and mental health support during crises.

Furthermore, my work comparing mental health and contraceptive knowledge among high schoolers during remote and in-person learning highlighted the significant impact educational settings have on adolescents' well-being and awareness. By focusing on the intersection of education, mental health, and reproductive health, this research advocates for comprehensive strategies that integrate health education into various learning environments.

My longitudinal assessment of stress dynamics in families with children with neuropsychiatric disorders during the COVID-19 pandemic shed light on the compounded challenges these families faced. Understanding these stressors emphasizes the need for targeted mental health support and interventions tailored to the unique pressures experienced during prolonged crises.

Moreover, my involvement in international collaborations and contributions to obstetric and gynecologic literature have provided platforms for sharing knowledge and best practices in these critical study areas. By actively participating in global discussions, publishing my findings, and contributing to groundbreaking research, I have helped advance the broader understanding and improvement of women's health care. This exchange of ideas has been crucial in fostering innovation and adopting new approaches that benefit patients worldwide.

As I look forward to the future, I am driven by the challenges and opportunities that lie ahead in Obstetrics and Gynecology. My commitment to research, education, and patient care remains unwavering, as I continue to seek innovative solutions that improve the health and well-being of women and their families worldwide. The integration of technological advancements into clinical practice, along with a continuous focus on the mentorship of future medical professionals, will be paramount in advancing the field.

In conclusion, my journey as an Obstetrician and Gynecologist in the academic field has been marked by a steadfast dedication to improving breast cancer detection, advancing maternal and pediatric health during the COVID-19 pandemic, and understanding the pandemic's psychosocial impacts. Through a blend of research, education, and clinical practice, I have sought to push the boundaries of what is possible in Obstetrics and Gynecology, ultimately aiming to enhance the well-being of women and their families around the globe.

Transitioning from residency to a broader clinical and academic role, I have embraced the multifaceted challenges of Obstetrics and Gynecology with a commitment to continuous learning and advancement. My involvement in specialized training and workshops, such as those focusing on laparoscopic surgery, maternal-fetal medicine, and reproductive health, expanded my expertise and enabled me to adopt cutting-edge techniques and approaches. These experiences have been vital in my pursuit of excellence in obstetric and gynecologic care, allowing me to provide my patients with the most effective, evidence-based treatments and compassionate care.

My professional development was further enriched by active participation in esteemed obstetric and gynecologic societies and continuous postgraduate training, which kept me at the forefront of the latest advancements in the field. Achieving competencies in areas like advanced ultrasound techniques, maternal-fetal medicine, and the management of complex gynecological conditions have been key milestones in my career. These endeavors underscore my dedication to mastering a comprehensive range of skills and offering state-of-the-art care to my patients.

The milestones I've achieved—including significant contributions to breast cancer detection and risk stratification, advancing our understanding of the impact of SARS-CoV-2 on maternal and pediatric health, and exploring the pandemic's effects on mental health and contraceptive awareness—reflect not just personal achievement but also the progression of practices within the institutions I serve. These accomplishments highlight my commitment to innovation, excellence in patient care, and the ongoing quest to improve women's health outcomes.

Therefore, my professional journey in Obstetrics and Gynecology has been a testament to the power of dedication, continuous learning, and the pursuit of clinical and

academic excellence. From my early days as a medical student to my current roles as a clinician, researcher, and educator, each step of my career has been driven by a desire to advance the field and enhance the well-being of women and their families. My ongoing commitment to professional development, coupled with a steadfast focus on patient-centered care, continues to guide my contributions to Obstetrics and Gynecology and the broader medical community.

Looking ahead, I am inspired by the potential to further advance the field of Obstetrics and Gynecology, patient care, and medical education. My dedication to integrating cutting-edge research, innovative clinical techniques, and comprehensive interdisciplinary studies is steadfast, aimed at broadening the scope of women's health and enhancing patient outcomes. As I continue to pursue the highest standards of academic and clinical excellence, my focus is on spearheading impactful research, mentoring the next generation of obstetricians and gynecologists, and making significant contributions to the global medical community.

In conclusion, my career in Obstetrics and Gynecology has been a profound journey characterized by an unwavering pursuit of excellence, a dedication to lifelong learning, and a collaborative ethos in advancing healthcare. The breadth and depth of my contributions—from enhancing patient care protocols to leading advancements in women's health research—underscore my deep commitment to elevating the standards of care in Obstetrics and Gynecology. As I look to the future, I am energized by the prospect of continuing to innovate, inspire, and leave a lasting legacy that not only advances women's health but also profoundly impacts the lives of women and families, shaping the future direction of the medical community at large.