

**”VICTOR BABEŞ” UNIVERSITY OF
MEDICINE AND PHARMACY TIMIŞOARA
DOCTORAL SCHOOL
MEDICINE**



**Advancements in Oncologic Management and
Postoperative Care of Patients with Gynecological and
Endocrine Neoplasms**

ABSTRACT

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ABSTRACT

Throughout my career, my scientific achievements have significantly advanced the fields of thyroid cancer diagnosis, breast cancer management, pelvic oncosurgical techniques, and the broader spectrum of surgical innovations and postoperative care. My dedication to improving diagnostic precision and surgical outcomes has led to notable contributions that have shaped current practices and offered new pathways for treatment and recovery.

In the field of thyroid cancer, I have significantly contributed to the improvement of diagnostic methodologies and surgical innovations that have improved the accuracy of cancer detection and the effectiveness of surgical interventions. My work has focused on refining diagnostic criteria through the use of advanced imaging techniques and integrating cutting-edge surgical technologies, such as autofluorescence imaging, to enhance the precision of thyroidectomies. These contributions have not only improved patient outcomes but also minimized the risks associated with thyroid surgery, setting new standards of care in the field.

My scientific achievements have contributed significantly to the advancement of thyroid cancer diagnosis and surgical innovation. The publication "Improvement in Central Neck Dissection Quality in Thyroid Cancer by Use of Tissue Autofluorescence" illustrates a novel approach to enhancing the accuracy of surgical interventions in thyroid cancer through the use of autofluorescence, leading to improved patient outcomes and reduced postoperative morbidity. Additionally, "Differentiating thyroid nodules parathyroid lesions using 2D-shear-wave elastography" introduces a novel method for improving diagnostic accuracy, distinguishing between thyroid nodules and parathyroid lesions with enhanced precision. These contributions underscore my commitment to integrating innovative technologies and methodologies to advance thyroid cancer care.

My scientific achievements in breast cancer surgical management have been equally impactful, emphasizing personalized diagnostic and treatment approaches. Specifically, my research work has focused on addressing critical issues such as the impact of economic crises on the diagnosis of breast cancer and the importance of ultrasound pretreatment lymph node evaluation. The study "Economic Crisis: A Factor for the Delayed Diagnosis of Breast Cancer" highlights the socio-economic factors influencing breast cancer diagnosis,

emphasizing the need for policies that ensure timely access to diagnostic services. "Ultrasound Pretreatment Lymph Node Evaluation in Early-Stage Breast Cancer" examines the potential benefits of a more standardized ultrasound evaluation and the actual need for biopsy in high-suspicion nodes, suggesting a shift towards more targeted and efficient diagnostic strategies that could lead to a more accurate staging of breast cancer and improved patient management.

In the area of pelvic oncosurgery, my contributions have addressed complex surgical techniques and the management of postoperative complications. Through the development of innovative surgical approaches and the implementation of meticulous postoperative care protocols, I have worked to better understand the risk factors and mechanisms of postoperative complications in the setting of pelvic surgeries, in an effort to reduce the incidence of these complications such as pelvic lymphocele. My research and clinical practices in this field have enhanced the safety and efficacy of pelvic oncological surgeries, contributing to better outcomes for patients undergoing these complex procedures.

My contributions to pelvic oncosurgical techniques and postoperative complications have focused on optimizing surgical outcomes and minimizing complications. For example, "Total Colpectomy Increases the Risk of Postoperative Hydronephrosis in Vaginal Cancer Patients" provides vital insights into the risks associated with total colpectomy in vaginal cancer patients, guiding surgeons in making informed decisions to mitigate postoperative complications. Similarly, the study on the "Use of methylene blue in the prevention of recurrent intra-abdominal postoperative adhesions" presents an innovative approach to reducing the incidence of adhesions, a common and challenging issue in abdominal surgeries, thereby improving patient recovery and reducing the need for subsequent interventions. My research further extended to the examination of pre-operative anemia's impact on the prognosis of endometrial cancer patients. My most recent publication, the study titled "Predictive Role of Pre-Operative Anemia in Early Recurrence of Endometrial Cancer: A Single-Center Study in Romania" provides compelling evidence that anemia, identified during preoperative evaluations, significantly correlates with an increased risk of early recurrence. By acknowledging anemia not just as a condition but as a prognostic factor, the study advocates for enhanced postoperative monitoring and individualized patient care strategies.

Lastly, my work in surgical innovation and postoperative care spans a range of conditions and procedures, demonstrating a broad impact on improving surgical practices and patient quality of life. From the diagnosis and management of rare conditions like

Elastofibroma Dorsi to the development of new techniques for decreasing chronic post-operative pain, such as in thoracotomy closure, these contributions highlight my dedication to enhancing surgical care across different medical fields. Each publication, whether focusing on the assessment of quality of life after treatment for chronic anal fissures or exploring nerve changes associated with post-thoracotomy pain syndrome, reflects a commitment to advancing our understanding and management of postoperative care, aiming to offer patients a better quality of life and recovery experience.

Moreover, my work in surgical innovations and postoperative care extends beyond specific cancer types, embodying a holistic approach to surgery that encompasses a broad range of disciplines. By advocating for the adoption of minimally invasive surgical techniques and enhancing postoperative recovery protocols, I have contributed to the field's evolution towards safer, more effective surgical practices. This commitment to innovation and patient care has not only improved surgical outcomes but also influenced the training and mentorship of the next generation of surgeons.

Collectively, my scientific achievements reflect a career dedicated to advancing surgical practice and patient care. Through a relentless pursuit of innovation, coupled with a deep commitment to improving diagnostic accuracy and surgical outcomes, my contributions have had a lasting impact on the fields of thyroid and breast cancer treatment, pelvic oncosurgery, and the broader landscape of surgical innovations. As I continue to explore new avenues of research and clinical practice, my goal remains to further the boundaries of medical science, enhancing the lives of patients worldwide.

My academic journey has been marked by significant milestones and contributions to the medical field, particularly in the realm of surgical sciences. Beginning with the attainment of my Doctorate in Medical Sciences from the "Victor Babeş" University of Medicine and Pharmacy in Timișoara, Romania, in 2009, my academic career has been a testament to my dedication to advancing medical knowledge and patient care. My doctoral research on the surgical treatment outcomes for colorectal cancer not only deepened my expertise in this area but also set the stage for my future academic and professional endeavours, establishing a solid foundation for my commitment to improving surgical methodologies and patient outcomes.

Further enriching my academic portfolio, I obtained a Psychopedagogical Training Certificate from the West University of Timișoara, which equipped me with the essential skills for effective teaching and mentorship in the medical sciences. This certification highlighted my dedication to the educational advancement of future medical professionals, marrying

pedagogical proficiency with clinical expertise to elevate the quality of medical education and training. My tenure as a laboratory assistant at the "Victor Babeș" University further allowed me to engage directly with the practical aspects of medical education, shaping my approach to teaching and emphasizing the importance of hands-on learning and the application of theoretical knowledge in clinical settings.

Ascending to the roles of Assistant Professor and then Senior Lecturer at the "Victor Babeș" University of Medicine and Pharmacy, I have dedicated myself to bridging the gap between academic knowledge and clinical practice. My focus on cultivating a deep understanding of surgical principles among medical students and my active participation in research projects have reinforced my commitment to surgical innovation and the improvement of patient care. These roles have enabled me to influence the next generation of surgeons, instilling in them a profound respect for patient care and the dynamic nature of surgical science.

In March 2023, I advanced to the position of Associate Professor, broadening my contributions to surgical education and research. This role has allowed me to lead more complex studies and influence the curriculum at a strategic level, further expanding my research interests and mentoring responsibilities. My involvement in broader university activities, emphasizing international collaboration and educational innovation, reflects my commitment to enhancing the global standing of our institution and ensuring a diverse and globally informed educational experience for our students and faculty.

Throughout my academic career, I have also made significant scholarly contributions, authoring numerous publications that have shared my research findings with the broader medical community. My active participation in national and international conferences, alongside my affiliations with esteemed scientific societies, underscores my dedication to continuous professional development and the advancement of medical science. Guiding graduate students through their licensure theses and contributing to the development of the next generation of medical practitioners and researchers represent key aspects of my journey, underscoring my belief in the transformative power of education and research in improving patient outcomes and advancing the field of medicine.

My professional journey in general surgery is distinguished by a profound commitment to excellence, patient-centered care, and continual advancements in surgical practices. Starting with a solid foundation in medical science and patient care from the "Victor Babeș" University of Medicine and Pharmacy in Timișoara, Romania, my career has been a testament to my dedication to mastering the complexities of general and oncological surgery.

Early experiences as a surgical intern and then as a resident provided me with invaluable hands-on experience and deepened my understanding of patient-centric care, laying the groundwork for my evolution into a skilled and compassionate surgeon.

Throughout my career, I have achieved significant professional milestones, including becoming a specialist and then an attending surgeon within the Clinic of General Surgery II and Oncology. These roles have allowed me to lead complex surgical procedures, innovate surgical techniques, and contribute significantly to the field through research, education, and mentorship. My pursuit of excellence in surgery has been complemented by a dedication to improving patient outcomes and advancing the practice of surgery through continuous learning and application of the latest surgical advancements.

My commitment to professional development and staying at the forefront of surgical innovation is evidenced by my participation in specialized training and certifications, such as the Coaching on Breast Cancer Certification and the European Masterclass for Nutrition in Surgery. These programs have equipped me with advanced knowledge and skills, enabling me to integrate cutting-edge techniques and comprehensive care strategies into my practice. Furthermore, my engagement in autofluorescence imaging technology and ultrasound diagnostics underscores my dedication to incorporating state-of-the-art technologies to enhance diagnostic accuracy and surgical outcomes, as attested by my participation in the Autofluorescence Masterclasses.

Assuming leadership roles, such as the Director of the Breast Surgery Research Center, has allowed me to spearhead initiatives focused on advancing breast cancer surgery and patient care. My work in this capacity highlights my commitment to pushing the boundaries of surgical science and contributing to the development of innovative techniques that balance oncological control with quality-of-life considerations. Additionally, my tenure as a Senior Lecturer and involvement in significant projects, such as the EU-funded cross-border project entitled "Common approaches to enhanced early diagnosis and treatment of thyroid cancer in the population of partner areas – RORS-350", reflect my dedication to education, research, and collaborative healthcare improvement efforts.

My career in general surgery is further enriched by my linguistic competencies and involvement in international collaborations, enabling me to contribute to a globally interconnected medical community. Whether through teaching, research, or clinical practice, I have consistently strived to enhance the quality of patient care and advance surgical practices. My journey reflects a relentless pursuit of new challenges and opportunities to

shape the future of general surgery, underscored by a commitment to excellence, innovation, and the compassionate care of patients.

As I look towards the future of my career in surgical oncology and general surgery, the horizon is broad with the potential for significant advancements in patient care, surgical techniques and multidisciplinary collaboration. The evolving landscape of medicine, particularly with the advent of personalized medicine and minimally invasive surgical technologies, offers a promising avenue for enhancing patient outcomes and quality of life. My commitment to integrating these innovations into clinical practice, coupled with a focus on rigorous scientific research, positions me to contribute meaningfully to the advancement of surgical practices. The pursuit of excellence in surgery is an ongoing journey, one that requires continuous learning, adaptation, and the willingness to embrace new challenges.

Regarding the academic achievements, I envision expanding my contributions to surgical education through the development of comprehensive training programs that incorporate the latest research findings and technological advancements. By fostering an environment of curiosity, innovation, and critical thinking, I aim to inspire the next generation of surgeons to push the boundaries of what is possible in cancer treatment and surgery. The integration of multidisciplinary approaches into the curriculum will prepare students to work effectively in team-based settings, ensuring that patient care is holistic, collaborative, and informed by the best available evidence.

Scientifically, my future perspectives include deepening my research into the mechanisms of cancer progression and the development of novel surgical interventions that minimize invasiveness while maximizing efficacy. Collaborating with researchers from diverse fields, including genetics, immunology, and biomedical engineering, will be crucial in advancing our understanding of cancer and translating these insights into clinical practice. By leading and participating in international research projects, I aim to contribute to the global effort to improve cancer care, sharing knowledge and innovations that can benefit patients worldwide. Moreover, the importance of global collaboration and intercultural competence in healthcare cannot be overstated. As the medical community becomes increasingly interconnected, leveraging my linguistic skills and international networks will enable me to facilitate cross-border collaborations that enhance the exchange of ideas, practices, and technologies. Engaging with healthcare professionals and researchers from various backgrounds will enrich my professional experience and contribute to the development of a more inclusive, effective and compassionate approach to patient care.

In conclusion, the future of my career in surgical oncology and academia is guided by a commitment to excellence, innovation, and collaboration, and I will continue to engage in my clinical practice and research in the fields of thyroid and breast cancer, gynecological surgery, and surgical innovation. By embracing the challenges and opportunities presented by the rapidly evolving medical landscape, I am dedicated to advancing the field of surgery, improving patient care and mentoring the next generation of healthcare professionals. Through continued research, education and international collaboration, I look forward to contributing to the collective effort to enhance the lives of patients facing surgical and oncological challenges.