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THE FIELD: MEDICINE**

**SURGEON BETWEEN OVERSPECIALIZATION  
AND MULTIDISCIPLINARITY  
ABSTRACT OF ABILITATION THESIS**

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## ABSTRACT

The paper entitled "The Surgeon between overspecialization and multidisciplinary" is structured in the form of two sections: Section I. refers to the professional and academic career being made up of 2 chapters: Chapter 1. "Brief summary of professional and academic career" and chapter 2 "Scientific, academic and professional achievements". Section II presents landmarks of the research activity, structured in 3 chapters: developed research topics, educational and research projects, plans for the evolution and development of the academic career.

I summarize the information in Chapter 1 as a screenshot of my position in 2022. I'm a primary care physician by competition (WHO 694/1998), with certificates of complementary studies in: general ultrasound (1997); prehospital emergencies (2002); health services management (2002); oncological surgery (2015); laparoscopy - level 1 (2018). In 2022 I attended the laparoscopy courses - level 2 and will take the certificate exam. Since 2019 I am the head of the general surgery 2 discipline UEHB (SUUB). Since 2017 - Vice Dean, UMFCD Faculty of Medicine, currently responsible for issues of institutional strategy, academic evaluation and quality. I occupy various positions in the structures of the UMFCD, the Ministry of Education and the Ministry of Health:

- Chairman of the Commission for the Analysis of Disciplinary Offenses
- President of the Center for Information and Documentation Resources (CRID)
- Chairman of the Equivalence Commission for University Studies
- Expert of the National Center for Recognition and Equivalence of Diplomas (OMENCS no. 4931/2017)
- Member of the Bioethics Commission of the Ministry of Health (WHO no. 99/2019)
- Member of the National Commission for the Resolution of Appeals for the Recognition of Diplomas, Certificates and Qualifications of Specialist Doctors, Issued by a Third State (WHO No. 1281/2019)
- Honorary Adviser to the Office of the Secretary of State in the Ministry of Health (WHO No. 93/2022)

Chapter 2 focuses on the presentation of scientific, academic and professional achievements. My doctoral dissertation is entitled "**Current problems of diagnosis and treatment in rectal cancer**", and the scientific leader was Dr. Radu Palade - "Carol Davila" University of Medicine and Pharmacy, Bucharest. I was confirmed doctor of medicine in 2006, by Order of the Minister of Education and Research no. 5764 / 28.11.2006.

During my career, so far, I have published in 18 books such as monographs or textbooks, as a coordinating author (2) or co-author (16). The works to which I have contributed alone or with fellow surgeons and in other specialties are related to my "long-term" scientific concerns. First of all, textbooks designed to form students and young surgeons (8 in number and covering the last 20 years), an anatomy textbook chapter, collaboration with psychologists and psychiatrists (4 books), given my interest in generating behaviors of addictions and the therapeutic problems they cause, 2 chapters in books in health services management (because I consider that an essential condition of the quality of the medical act is the involvement of the clinician in the management team), and the last paper I will mention belongs to the field of history of medicine and it is a chapter dedicated to SUUB (for over 30 years my place of work and professional life). For the monograph type work in the national publishing house "**Complications of acute pancreatitis**" - edited by Radu Costea, Stefan Neagu, Narcis Zărnescu, Davila "2012 (ISBN 979-973-708-578-0), in **2014 the Romanian Academy awarded the "Iuliu Hațieganu" prize.**

I have published 25 articles in ISI journals with impact factor (16 articles as lead author and 9 co-author), 5 articles in ISI journals without impact factor, 23 articles in journals indexed in international databases, 42 studies published in summary in ISI Thomson Reuters-rated journals (with impact factor), 22 studies published in abstracts in ISI Thomson Reuters-listed journals (without impact factor) and over 130 studies published in abstracts in journals and volumes of scientific events with ISBN / ISSN. Most of these articles were original articles or reviews.

The publications I have contributed to have been **cited 213 times in the ISI Web of Knowledge, 140 times in Scopus and 383 times in Google Scholar, respectively.**

The cumulative impact factor for articles published as lead author in ISI -listed journals (**FCIAP**), which I currently have is **25,854**, and the **Hirsch Index achieved is 7 in ISI journals, 5 in Scopus publications and 9 in Google Scholar.**

Also, during my career I have participated in numerous international and national scientific events and I have made over 40 papers presented at international and national conferences (numerically mentioned above, capitalized in ISI or BDI indexed publications).

In 2012 and 2016 I participated in two exploratory workshops at the Conferences "Diaspora in Scientific Research and Higher Education in Romania - Diaspora and its Friends": **Noncommunicable Diseases - Current Challenge for Health Systems. Modalities of Integrated Approach** - Bucharest, 2012 and **Innovative Transdisciplinary Approaches to Research in the Field of Noncommunicable Diseases, for Improving the Health and Developing the Welfare of Communities** - Timișoara, 2016

I have participated as a member or coordinator in **15 international and national education and research projects**. Some of these projects have been translated into **scientific publications or communications**, some have been used in the form of books or book chapters, and others have remained available in the form of research reports with or without ISBN, the so-called "gray literature ". For the majority of these projects we organized and participated in **workshops, in international or national multi- or transdisciplinary teams**, in which we discussed methodological aspects, results analysis and interpretation. Also, at most of them we organized **workshops / meetings** to present methodology and results for our younger colleagues (teachers, PhD students, resident doctors, members of the Romanian Society of Surgery), both to disseminate the results obtained and to capitalize on project experience and lessons learned at the discipline level.

Regarding the publishing activity, I am, or have been a member of 4 editorial teams, editorial teams and peer-review teams: I am a member of 8 national and international scientific professional structures, a quality that has facilitated my collaboration with colleagues from outside the field of general surgery.

In essence, in my scientific activity there were 8 research directions that were developed during chapter 3 of the paper "**Developed research topics**".

**Colorectal cancer pathology and surgical approaches** represents the main area of research interest in the development of my doctoral thesis. At that time I chose to develop the methodology for using the longitudinal approach, the follow-up survey, calculating the probabilities of survival for different stages of the disease, but also highlighting the impact of risk stratification in the general population. I capitalized on part of the doctoral research in the monograph "**Clinical and epidemiological aspects in rectal cancer**" - edited by

Dr. Radu Costea; "Carol Davila" University Publishing House, 2007. ISBN 978-973-708-262-6. The paper was prefaced by the distinguished professors Ion Vereanu and Dan Enăchescu. During the 6 chapters we adapted a model of risk factors associated with rectal cancer (chapter 1), we continued with presentations of strategies and preventive approaches as foundations for therapeutic clinical guidelines (chapter 2), techniques and surgical treatment in the form of a synthetic reviews focused on essential features (Chapter 3), psychosocial features of patients with rectal cancer in the context of traditions, beliefs and cultural model in Romania (Chapter 4).

Chapter 5 is the one that reflects the interdisciplinary approach, the result of collaboration between a group of university teachers of the Surgery Clinic with colleagues from the discipline of Public Health and Management trained in clinical epidemiology. During this chapter, the most common types of clinical trials in rectal cancer are exemplified. We considered not losing the value of some classic approaches, such as the reported clinical case, which with all the limitations of the method remains a touchstone for the young specialist, the survival analysis of a series of clinical cases, the descriptive method that is of indisputable value in the long-term evaluation of cancer interventions, etc.

Beyond the pyramid of research studies, the clinical decision is customized, and the recommendations in the guidelines are based on the consensus of the results of the intervention on groups of patients, therefore an approach at the base of the pyramid. I appreciate even now that the value of the material is given by the gradual approach of the subject, through information of different level: some purely theoretical - epistemology, taxonomy, research methodology, clinical and surgical technique - which we would call type "hard" and other "soft" meant to exemplify the use of the former in the study of rectal cancer.

Procedures for obtaining results through complex data processing are targeted: calculation of survival probabilities, associated risks, multivariate analysis, meta-analysis. All the material is illustrated with: photographs of pieces belonging to clinical cases, numerous tables and graphs, which exemplify the use of the methods and techniques presented, facilitate the reader's access to understanding the concepts. Since, in the end, I believe that the purpose of medical research should be aimed at medical intervention, we have paid particular attention to screening approaches and therapeutic procedures, as recommended by various practice guidelines (Chapter 6). The bibliography of the paper

includes over 200 titles, reference works in the field, practice guides of some prestigious professional structures from Europe and the USA.

I kept my concern for this topic. continuing with the elaboration of several articles (6 ISI, 5 BDI) and communications with published abstracts

**Pathology of the bile ducts and pancreas** is a subject of major importance both for the surgeon and gastroenterologists alike in an emergency hospital. Symptomatic and syndromic entanglement sometimes makes the presented cases seem like real challenges. I am one of the coordinating authors of the monograph "**Complications of acute pancreatitis**" - edited by Radu Costea, Ștefan Neagu, Narcis Zărnescu, "Carol Davila" University Publishing House, 2012. ISBN 978-973-708-587-0 0. Diagnosis and treatment of acute pancreatitis represented a constant concern of the Surgery Clinic II within the University Emergency Hospital Bucharest (SUUB). Due to the emergency profile of SUUB, the number of cases of acute pancreatitis is high, which is why the experience gained is vast, allowing the outlining of conclusions materialized through diploma papers, doctoral papers, published in the country and abroad. All this naturally led to the outline of the preconditions for the preparation of the material included in the monograph "Complications of acute pancreatitis" (2012).

The composition of the specialties of the editorial team allowed a multidisciplinary approach, which contributed to the increase of the informational level of the paper. The paper has a complex and complete structure, following the topic of complications of acute pancreatitis in eight chapters.

The monograph is opened by a chapter on the anatomy of the pancreas, emphasizing the elements absolutely necessary to understand the diagnosis and treatment of various complications. Elements of embryology, topography, and arterial and venous vascularization are described. The pancreatic ductal system and the sphincter (sphincter of Boyden) are deepened due to the practical aspects of diagnosis and treatment in certain situations (pancreatic pseudocyst, hemosuccus pancreaticus).

Multiple organ dysfunctions are the leading cause of death in acute pancreatitis, which is why an important chapter of the paper is devoted to shock. The chapter begins with essential aspects of pathophysiology and is later completed by the clinical presentation of the shock (hypovolemic shock, septic shock and refractory shock) and treatment principles. At the end of the chapter there is a suggestion of a very useful therapeutic algorithm from a practical point of view.

Hemorrhagic complications in the evolution of acute pancreatitis are rare (2-3%), but the severity is of the most important, which is why a separate chapter is dedicated to them. Endoluminal (digestive) and extraluminal (hemoperitoneum) hemorrhages are widely described both physiologically and therapeutically and therapeutically.

Sepsis continues to be a turning point in the diagnosis and treatment of acute necrotic pancreatitis. Understanding the natural evolution of acute necrotic pancreatitis is critical to understanding the key points in the management of these patients. The mechanisms of bacterial infection of pancreatic necrosis (bacterial translocation from the colon, hematogenous pathway, descending from the gallbladder, ascending from the duodenum) are premises of an effective treatment. An important aspect of the management of acute necrotic pancreatitis is the prophylactic treatment, taking into account the theoretical principles of antibiotic choices and the ability of antibiotics to penetrate the pancreas. Clinical trials have included both intravenous antibiotic prophylaxis and selective decontamination of the digestive tract.

Regarding the surgical treatment of pancreatic necrosis, its indications and the optimal time of performance are presented. Emphasis is placed on the concept that pancreatic necrosectomy is not necessarily a one-stage procedure, sometimes including repeated and planned surgery. At the end of the chapter, the minimally invasive approach is discussed, and at the time of publication of the technical monograph having a limited number of published studies.

Pancreatic fistulas (internal or external) are common in clinical practice. Their importance is reflected in the extensive material on the pathophysiological mechanisms involved in the occurrence of this complication, the key elements of diagnosis and treatment.

The chapter that analyzes the pancreatic pseudocyst is exhaustive, including aspects of classification (Atlanta, the one based on ductal anatomy - Nealon), epidemiology, etiology, pathophysiology and morphopathology. An important part of the chapter on the pancreatic pseudocyst attacks the problem of its treatment: conservative treatment, percutaneous drainage, endoscopic drainage and surgical drainage, each having described indications, contraindications, accidents and results.

Exocrine and endocrine pancreatic functions after acute pancreatitis are treated in a separate chapter, containing aspects frequently overlooked in current practice.

The last chapter of the monograph is a detailed chapter on the intensive therapy of severe acute pancreatitis. An important approach is the definition of severe forms of acute pancreatitis that require admission to the intensive care unit. We insist on the elements of dynamic monitoring of organ dysfunctions (respiratory, cardiovascular, digestive, hepatic, renal, neurological, metabolic, and nutritional). Paraclinical monitoring of these patients requires blood tests (pancreatic enzymes, blood count, ionogram, liver tests, C-reactive protein) and imaging (lung x-rays, ultrasound, computed tomography). The chapter is supplemented by the addition of therapeutic decisions in the initial period (pain control, electrolyte rebalancing, nutrition, and antibiotic treatment) and the various packages of measures needed to be implemented in the intensive care unit relevant to patients with severe acute pancreatitis.

The work "Complications of acute pancreatitis" was considered valuable and received the "Iuliu Hațieganu" award of the Romanian Academy in 2014.

**Various abdominal pathology approached through the prism of special clinical cases**, which remains of interest to the general surgeon, stimulates the interest of young people for the unexpected. These include: appendicular malignancies, atypical hydatid cysts, giant or atypically located liposarcomas, scrotal gangrene, necrotizing fasciitis (2 ISI publications, articles published in BDI, and papers at scientific events with published abstracts).

**Modern paraclinical methods applied in surgical pathology:** personalized medicine is directly associated with morphopathological and immunological methods, identification of genetic profiles and targeted approaches (4 ISI publications).

**Impact of SARS-CoV-2 infection on surgical activity.** In the context of the pandemic we are experiencing, the team I lead had the chance to be co-opted in the research team (prospective longitudinal studies) of the COVID Surg Collaborative group; Global Surg Collaborative, in which 4 ISI articles have been published so far in journals with IF > 6. This research, conducted internationally and aimed at surgical approaches for emergency interventions or chronic pathology in terms of case management in the epidemiological conditions specific to each study participant, transsystemic to health services, will allow us to approach patients similarly with colleagues in other prestigious hospitals. It is a rare opportunity to be able to implement practically, on the fly, the results of clinical research harmonized with the impact of population-level interventions. (I am



referring to the impact of vaccination for SARS-CoV2 on the recommendations for timing elective surgery, stratification of the population according to comorbidities, etc).

**Implications of exposure and addictions** are an area that has attracted me since the beginning of my professional career as a young doctor. Becoming, for a while, the coordinator of the emergency department at SUUB, I noticed the difficulties faced by my colleagues in the emergency department face to face with patients with recognized or unrecognized addictive behaviors. If at that time (1990-2000) the maximum frequency was alcohol consumption, the biggest problems were related to the consumption of other types of substances, mostly illicit, for which there were no rapid tests at that time, whose effects were often vaguely known (synthetic drugs), under which any treatment could lead to additional risks, paradoxical effects for the patient, and forensic implications for the medical staff. This topic continues to concern me because the field of addictions has taken on new dimensions with the free movement of people and products at European level. Collaboration with fellow psychologists, psychiatrists, anesthetists, gastroenterologists helps us, by addressing critical situations in multidisciplinary teams, to more accurately assess the risks associated with exposure in the context of the necessary treatment or to make recommendations. This interest materialized through the participation in the publication of 5 ISI articles and 4 books.

**Population studies and real-life studies.** In this direction I developed my interest in studies based on population approaches, by using information from public databases or by studying subpopulations with increased exposure to behavioral risk factors and reduced access to health services due to a poor level of education, poverty, or socio-economic vulnerabilities. Hence the interests in the in-depth analysis of some determinants of health status, of vulnerable groups from a socio-economic perspective (refugees, people from rural areas), age (especially the elderly) or from a medical perspective (people with disabilities, people with liver or digestive tract cancers, genital cancers in women), capitalized by the publication of 4 ISI articles.

**Assessments of health services in terms of organization, resources, and performance in ensuring a fair response to the need for health care** are generally not of interest to clinicians, much less to surgeons. Personally, I have always wanted to understand the macrosystem in which we carry out medical activity, to find the mechanisms that can give quality to the activity of the care team, streamline processes, and reduce complications. Together with colleagues from the country and abroad, based on my

research, I published 3 ISI articles, 2 BDI, I collaborated on 4 chapters (in 2 different books) and a textbook for 4th year medical students.

Chapter 4 "**Education and research projects**" focuses on the presentation of the second direction of the research activity, participation in the project activity. Over time, this activity has given me opportunities for professional development and training, to work with colleagues from other specialties, to integrate into a team, to lead a team. I consider all the participations valuable because each one contributed to the final image of the puzzle represented by 36 years of professional, medical, educational, managerial activity and to capitalize on all of them through publications. I briefly referred to the main projects carried out: one category is represented by phase III clinical trials in which the clinic staff was invited to participate due to access to study pathology, another category are interdisciplinary projects, especially those aimed at developing new capacities for morphological and immunological high-performance diagnosis, which orient in accordance with the patient's needs the approach to the cases, the third category are the projects for the implementation of new managerial tools and methods for Romania in the general purpose of increasing the quality of the medical act.

The last chapter, 5 is directed towards the future, "**Plans for the evolution and development of the academic career**". I support the openness of the clinic to any collaboration, I support the involvement in academic and research projects, in order to increase the visibility of our team, the Bucharest University Emergency Hospital which is my second home and the "Carol Davila" University of which we are part.

The projects that we have proposed are part of the fields that were the subject of my presentation, but I want my team to surpass me through future achievements.

I strongly believe that the greatest joy of a teacher is when he is surpassed by his students.

I am proud that we are currently carrying out 6 observational studies, in a longitudinal approach, together with international groups (details mentioned in the paper).

The work has iconography from the presented publications and over 200 bibliographical references.