

**ESOPHAGICAL RECONSTRUCTION IN POSTCAUSTIC ESOPHAGEAL  
STENOSIS - DIAGNOSTIC, PATHOGENIC, CLINICAL AND THERAPEUTIC  
PERSPECTIVE**

**ABSTRACT**

The habilitation thesis with the title "*Esophageal reconstruction in postcaustic esophageal stenoses - diagnostic, pathogenic, clinical and therapeutic perspectives*" includes the professional, academic and scientific achievements after conferring the title of "Doctor of Medicine". According to the legal regulations in force, I structured the thesis in four parts.

**Part 1** – includes the summary of the thesis in Romanian and English

**Part 2** – presents the professional, academic and scientific achievements

**2.1. Professional achievements** - are presented following the professional course, the activity in professional societies and specialized commissions, the patient care activity, the professional experience and elements of recognition of the professional activity.

I graduated the University of Medicine and Pharmacy "*Carol Davila*" Bucharest in 1995, with an average of 9.62. In the same year, I passed the residency exam, with the option to specialize in general surgery, resident activity starting on January 1, 1996 in the Surgery Clinic, Grivița Clinical Hospital, later "*Sf. Maria*". I became a specialist doctor after taking the specialist exam in the October 2000 session (general average 9.14 - OMS 1049/23.01.2001) occupying the first position in the Bucharest university center and later, as a primary general surgery doctor by promoting also as the first position of the exam from the June 2005 session (general average 9.88 – OMS 971/17.11.2005).

The continuous updating and improvement of professional knowledge represented a permanent concern and included numerous activities, the most important being three training courses in laparoscopic surgery carried out at the IRCAD Center (Prof. Jacques Marescaux), Strasbourg, France - Advanced course in laparoscopic gastric surgery , April 2000, Advanced course in laparoscopic hernia repair, May 2000, Advanced course in laparoscopic digestive surgery, March 2003, as well as a scholarship dedicated to superspecialization in minimally invasive colorectal surgery at University Hospital Rijeka, Croatia (Prof of surgery Uravic Miljenko and Marko Zelic) April 2014. A special mention is the participation in an in-depth IUD superspecialization internship in esophageal surgery - DIU Chirurgie oeso-gastro-

duodénale (Prof. Denis Collet) Université Paris DESCARTES, Faculté de Médecine, Paris (2018-2020).

It is worth mentioning the participation in all editions of the National Congress of Surgery since 1995, of the national profile conferences as well as in a large number of national and international scientific events in the specialty or related - gastroenterology, oncology, thoracic surgery, ENT, etc.

I am a member of several professional societies: the Romanian Surgical Society since 1995 (member of the National Office of the Romanian Surgical Society – 2014-2016, 2016-2018, member of the Board of Directors of the SRC, 2019-2020), Scientific Referent in the surgical specialties of the Journal CHIRURGIA, ISSN: 1221-9118, ISSN on line: 1842-368X, since 2016 Editorial members and currently Associate Secretary Editors of this journal, Editorial board member – Journal of Surgical Sciences (2014) – ISSN 2360-3038, Scientific referent in specialties of the Hospital Magazine, Scientific Referent in the surgical specialties of the SURGERY, GASTROENTEROLOGY AND ONCOLOGY Magazine Print ISSN: 2559 - 723X, ISSN online: 2601 – 1700, member of European Digestive Surgery since 1998, Romanian Association for Endoscopic Surgery and other interventional techniques (ARCE ), member since 2003, Romanian Society of Gastroenterology, member since 2000, European Association for Endoscopic Surgery (EAES), member since 2008, me founding member of the Association of Esophageal Surgery “*Sf. Maria*”, Member of the European Association for Diseases of the Esophagus (ESDE) (2012-present), Scientific referent in surgical specialties of MDPI: JOURNAL OF CLINICAL MEDICINE EISSN 2077-0383, Impact Factor: 4,964 Web of Science, JOURNAL OF PERSONALIZED MEDICINE, ISSN: 2075-4426, Impact Factor 3,508 Web of Science, BIOMEDICINES, EISSN 2227-9059 Impact Factor Web of Science.

My entire professional activity was carried out in the General and Esophageal Surgery Clinic of “*Sf. Maria*” from Bucharest, one of the most important specialized medical units in the country. The fact that I carried out my professional activity here for almost 30 years, allowed me professional training in an elite unit of Romanian medicine, a tertiary center for the pathology of the upper pole of the digestive tube, particularly for that of the esophagus and the eso-gastric junction, and in general for the whole range of both oncological and non-neoplastic surgical therapeutic assistance. An important element of professional progress has been the acquisition of additional credentials such as Competence in Advanced Laparoscopic Surgery (2005) and Competency in Oncological Surgery (2014). I was and am involved in the care of a large number of patients, and the experience gained gave me confidence in my

professional ability, in the ability to manage in good conditions the most difficult cases in general surgery, so I consider that I have reached a certain professional maturity.

A recognition of my professional activity was represented by the "TOMA IONESCU" award of the Romanian Surgical Society, Sinaia 2002 of the Romanian Surgical Society.

**2.2. Academic achievements** - are presented following: the academic course and the main didactic responsibilities, the activity of guiding students and residents, participation in entrance exams, license, promotion, didactic materials developed, administrative and managerial activities.

I started my teaching activity as a volunteer trainer in the Department of Anatomy of UMF "*Carol Davila*", under the guidance of Prof. Dr. Radu Dimitriu and, later, Prof. Dr. Cezar Niculescu. Later, in February 1998, I became a preparator at the Surgery Discipline, Surgery Clinic, "*Sf. Maria*" (UMF Decision 21054/10.03.1998), in 2001 I was confirmed as a university assistant (UMF Decision 6550/01.10.2001), in 2012 I obtained the position of Head of Works, (UMF Decision 18347/01.10.2012), and from 2020 until now I hold the position of university lecturer (UMF decision 3013/01.10.2020). My teaching activity included all aspects of the educational process that takes place in the General and Esophageal Surgery Clinic "*Sf. Maria*": the activity with students from the IV and V years of the Faculty of General Medicine, within the surgery module (courses, micro-courses for each module, presentations of clinical cases, practical activity at the sick bed or in the operating room), coordination of works of diploma. It should be mentioned the attributions regarding the activity with general surgery residents or other specialties during the professional training courses or of the specialists on the occasion of the postgraduate courses organized in the clinic, as well as the coordination and participation in dedicated educational events of the students (congresses and student conferences) , of medical assistants.

I was a member of the organizing committee and a lecturer at several national and international scientific events, on which occasion I held conferences in the field of professional competence (the Congresses and Conferences of the Romanian Society of Surgery in the period 2010-2022, of the Romanian Society of Radiotherapy and CECOG , of the Romanian Society of Gastroenterology, ARCE & European Association for Endoscopic Surgery, Confer, etc).

I participated in 32 examination committees (admission, bachelor's degree, bachelor's degrees, specialty, mayor's office) and 5 commissions for writing contest theses for residents, in 5 consecutive years 1997 - 2001.

The published didactic materials addressed to students are numerous because, as the years go by, they have experienced an update necessary for an update to the latest data from

the specialized literature: Surgical Pathology, edited by Prof Dr S Constantinoiu, "*Carol Davila*" University Edit, Buc, 2000, ISBN 973-8047-02-1, Surgical pathology, edited by I N Mateş, "*Carol Davila*" University Publishing House, Buc, 2003, ISBN 973-7918-06-01, Surgery manual for students, edited by Prof Dr Eugen Brătucu, Publishing House "*Carol Davila*" University Edition, Bucharest 2009, ISBN 978-973-708-377-7, Surgical Pathology, edited by Prof Dr S Constantinoiu, revised and added edition, "*Carol Davila*" University Edition, Buc, 2007, "*Carol Davila*" University Edition , ISBN 978-973-708-276-3, Surgical pathology, edited by I N Mateş, revised and added edition, "*Carol Davila*" University Publishing House, Book, 2009, ISBN 973-7918-06-01, Surgery course - for students year IV and V, edited by Mircea Beuran, Vol I and II, 2013, 2014, Edit ILEX, Buc, ISBN 978-973-7928-90-0, Manual of semiology and practical surgery works for fourth and fifth year students – edited by Mircea Beuran, Traean Burcoş Vol I and II, 2015, *Edit ILEX*, Buc, ISBN 978-973-7928-96-2, Surgery course - for IV and V year students – II edition, edited by Mircea Beuran, Traian Pătraşcu Vol I and II, 2020, Edit Universitară "*Carol Davila*", Buc, ISBN 978-606-011-139-9. For foreign students attending the UMF courses, we have contributed an English language edition - Course of surgery for the 4th and 5th year students - coordinator Mircea Beuran, Vol I & 2, ISBN 978-973-708-882-6, Ed Universitară "*Carol Davila*" , 2016.

I have contributed as sole author or co-author to numerous specialized books and treatises: Pregnancy and cancers: from diagnosis to treatment - under the coordination of Anca Simionescu, Dragoş Median, *Editura Medicală* - 2015, ISBN 978-973-39-0780 -0, Treatise on Surgery – 2nd edition, under the editorship of Irinel Popescu, Constantin Ciuce, Vol. VII, under the coordination of Constantin Ciuce, *Edit. "Academiei Române"*, 2015, Bucharest, ISBN 978-973-27-2488-0, Treatise on esophageal pathology and surgery - edited by coordinator Silviu Constantinoiu, *Edit. "Academiei Române"*, Bucharest, 2017 ISBN 978-973-27-2782-9, Treatise of surgery, under the editorship of Prof Dr Irinel Popescu, Vol VIII, Part IB, General Surgery - Surgical Pathology of the Esophagus, *Romanian Academy Publishing House*, Bucharest 2008, ISBN 978-973-27-1679-3, Acute pancreatitis – clinical-paraclinical approach on the basis of determining factors, under the editorship of Daniel Cochior, Silviu Constantinoiu, Edit Universitară "*Carol Davila*", Buc, 2014, ISBN 978-973-708-757-7, Acute Pancreatitis – Clinical and paraclinical approach based on determinant factors under the editorship of Daniel Cochior, Silviu Constantinoiu "*Carol Davila*" University Publishing House, Buc, 2015, ISBN 978-973-708-848-2, Surgery of the esophagus - coordinator Silviu Constantinoiu, *Romanian Academy Publishing House*, Bucharest, 2019, ISBN 978-973-27-3093-5

### 2.3. Scientific achievements

We divided the scientific achievements into three distinct categories in relation to the title of the proposed habilitation thesis: fundamental research in the field of diagnosis and pathogenesis of postcaustic esophageal strictures, research and studies in the field of elaboration and evaluation of parameters derived from the patient, research in the field of treatment, with possible options as well as the subsequent consequences depending on these decisions in terms of the patients' quality of life. It should be mentioned from the beginning, that outside the field of excellence of the clinic - the pathology of the upper digestive pole - the area of interest also included other attractive areas due to scientific, a fact amply proven by the numerous works published in ISI Thomson journals, with or without an impact factor, respectively BDI - 51 scientific articles with approx. 300 citations at this moment, as well as the numerous conference-type communications, oral communications or posters at various international congresses and conferences – 43 - respectively 70 at the national ones. Presentations at conferences and congresses have been published in abstracts in ISI Thomson journals with or impact factor, respectively ISBN/ISSN.

The starting point of the fundamental research was the doctoral thesis with the title: "*Coloesophagoplasty in esophageal stenoses*" (Order of the Minister of Education, Research, Youth and Sports no. 6697 of 21.12.2011, diploma Series H, no. 0011811). A part of this doctoral thesis was carried out within the research project (Responsible Grant): "*Identification and characterization of a subpopulation of cells with properties of tumor stem cells in hepatomas and esophageal cancers and the correlation with the mechanisms of resistance to treatment*", Center National Management Programs CNMP, Program 4, Partnerships in priority areas 2008-2012, Partner 4 respectively collaborator in Research Grant: "*Signal transduction abnormalities with implications in the pathogenesis of adenocarcinoma of the eso-gastric junction; clinical-morphological, immunohistochemical and molecular studies*", CEEX, 2007-2008. The research carried out within this project was continued after the completion of the doctoral thesis.

The activity within these research projects has materialized through the completion of several doctoral theses, each addressing a distinct, particular component, as well as numerous papers presented at national and international scientific events, articles published in ISI and CNCSIS B+ and B rated journals (exhibited extensively in thesis and list of relevant works).

Between 2018-2020, with the establishment of the Center of Excellence in esophageal surgery in the Surgery Clinic, "Sf. Maria" Hospital, I benefited from a over-specialization in the extremely complex and difficult pathology of the esophagus - DIU Chirurgie oeso-gastro-

duodenale Universite Paris Descartes, Faculté de Médecine, 15, rue de l'Ecole de Médecine, 75006 PARIS, where I learned complex elements, both theoretical and practical, of this, I can say with all my might, of this extremely elitist over-specialization. The following was realized through new projects of educational and scientific activity: conferences, papers at congresses, scientific articles (presented in the habilitation thesis).

Another area of research I deal was the development and evaluation of patient-derived parameters. Thus, we set as an objective the creation of new scores based entirely on the patients' perception of the post-therapeutic impact of esophageal reconstruction, a field that has not been thoroughly researched in Romania. This personal contribution regarding the establishment of a "postoperative functional assessment score and quality of life" for patients with esophageal reconstructions has a unique character in our country, being an absolutely necessary approach of the connection between the doctor - the therapeutic option - the patient - the result functional and quality of life. The study, materialized through a scientific paper, allowed us to draw conclusions that modulated the operative gesture, allowing a significant reduction of complications and morbidities, both immediate but, above all, at distance, when obtaining the best possible functional result, with reasonable comfort and the highest possible quality of life following esophageal reconstructive surgical therapy. Predescu I, Predescu D, Constantinoiu S. - Postoperative Functional Result and Quality of Life after Oesophageal Reconstruction based on the Type of Cervical Anastomosis, "Chirurgia" (2015) 110: 109-116 No. 2, March – April, ISSN: 1221-9118 , PMID: 26011831 ISSN on line: 1842-368X

As a connection, a consequence of the emergence of the Center of Excellence in Esophageal Surgery in the "Sf. Maria" Surgery Clinic, I took part as an investigator in a large, international, multicenter project, Oesophago-Gastric Anastomotic Audit (OGAA) Collaborative, under the auspices of The Association for Cancer Surgery, and the European Society of Surgical Oncology, which took place in 137 hospitals in 41 countries regarding post-esophagectomy morbidity and mortality. Subsequently, a consistent scientific material was published: Mortality from esophagectomy for esophageal cancer across low, middle, and high-income countries: An international cohort study Oesophago-Gastric Anastomotic Audit (OGAA) Collaborative: Writing Committee, Steering Committee, National Leads, Site Leads, Collaborators, two: 10.1016/j.ejso.2020.12.006.

An interesting perspective, with many opportunities in therapeutic decisions in patients with post-caustic strictures, which can be integrated and applied in other groups of reconstructive esophageal pathology, for example cancer but not only, were (1) studies investigating motor activity of the respective esophageal substitute (2) selective arteriography

study of the upper and lower mesenteric arteries. The first of them is an experimental study and it involved the study on animal material (dog) and followed a protocol carried out within the Research Center of the Department of Anatomy of UMF "Carol Davila" Bucharest, in collaboration with the Department of Cell Biology. The second study consisted in an investigation of the vascular pattern of the two main sources participating through emerging vessels in the arterial irrigation of the colon: the superior mesenteric artery (AMS) and the inferior mesenteric artery (AMI), with a decision-making impact in the use of the large intestine as a visceral replacement material for the esophagus. Both studies were published in high impact journals and were well cited.

An association on a new field of neoplastic pathology was our joining, as collaborators, to a European study, the PersoTher project, under the direction of Prof. Dr. G.Bussolati. It focused on the implementation of tissue molecular testing for cancer in Romania, as well as on high-level research oriented towards personalized oncology, in particular on the sequencing of stromal tumors - GIST. More precisely, through this project, carried out during 36 months, it was possible to increase the efficiency and precision in the diagnosis of cancer patients in Romania. The analysis of biopsies with modern methods of immunophenotyping and molecular biology would allow not only a more precise specification of the evolution of tumors, but also the type of optimal treatment for each type of tumor. The perspectives of personalized therapy (the study object of the PersoTHER Project) depend primarily on a rigorous laboratory analysis, carried out with the help of a dedicated device and on the adaptation of some genetic analysis techniques, which were successfully applied for the first time in Romania. The possibility of personalized analysis of GIST tumors in Romania has thus allowed the implementation of effective selective therapies at the level of those practiced in the European Union states. The PersoTher project, started in 2010 and completed in 2013, was financed through Priority Axis 2. A series of elements of this study were made concrete through 2 doctoral theses and several works published in renowned specialized journals.

**Part 3** includes the plans for the evolution and development of the professional, academic and scientific career. On a professional level, the continuation and improvement of one's own **professional** training, the institutional interdisciplinary collaboration, the development of collaborations with personalities of the surgical world but also of related specialties from other European countries and not only with which I have worked in the past, but also the creation of new collaborations, constitute the main perspectives of evolution.

On the **academic** level, I propose to diversify the ways of presenting courses for students and residents in an interactive multimedia format, I will propose optional courses on fields of

interest that exceed the level of knowledge accumulated during the surgery internship. We should not neglect the current situation that required the implementation of a digitized, online education, and which forced the adjustment of the teacher-student relationship, both in terms of human and university relations. On the same note, the provision of information and training materials obliges to upload them to a cloud-type work platform, dedicated to education in the "Sf. Maria" clinic and made available by the university, permanently accessible, permanently updated, with high visibility and feed -back from the students regarding the quality of the posted materials. I also intend to develop my scientific and didactic skills with a related web page, where I will post the courses, audio courses, lectures, conferences, undergraduate assignments, editorial news, symposia and congresses, etc. An important axis of development is the relationship between university staff, especially since they are teaching staff, and students interested in a professional surgical perspective. I can mention in support of this conduct my association with student scientific works, published or communicated at congresses or symposia. I propose to coordinate a scientific circle of surgery with students to develop papers that will be presented at national or international student congresses and that will be published in the student magazine "*Spitalul*" or "*Journal of Surgical Sciences*" ISSN 2360-3038, ISSN Online 2457-5364 where I am scientific referent in the editorial board. A sustained activity will be to continue the guidance and assistance of students assigned to various training internships, including summer, in our clinic or abroad through inter-university student exchanges. For the profile residents, I will continue to deal with the theoretical and practical training through presentations of clinical cases, by offering bibliographic material to acquire the necessary theoretical knowledge, as well as a direct activity of guidance in the operating room, to acquire the basic techniques of classical surgery , laparoscopic, oncological and, in particular, esophageal surgery.

I will continue the involvement of younger colleagues in the department in scientific projects and publishing activity. I will pay special attention to doctoral students who require a special preparation of the subject, the research methodology and, finally, the publication of the obtained data. I propose to strengthen the collaboration with the young specialists in the territory, to stimulate and support them in the activity of early diagnosis and treatment of surgical patients with the most modern and adapted therapeutic methods available. Postgraduate courses organized in the clinic will therefore continue to be a solid option for them.

The plans for the development of research activity are related to the continuation of previous collaborations that have proven to be successful, as well as the initiation of new



projects and directions: the continuation of collaboration with the anatomy-pathology, cell biology, oncology and gastroenterology clinics of the UMF "Carol Davila", in the direction of the development of new studies related to the treatment of cancer, in particular of the esophageal and esophago-gastric junction. On this foundation, with these directions, establishing research contacts in fields of interest with prestigious clinics is and will always be a priority. The obtained results can have an important potential in the establishment of therapeutic protocols, medical practices and their implementation customized to the case.

Another direction of research that I propose, bearing in mind that I come from the Center of Excellence in Esophageal Surgery, is precisely related to this over-specialization in diseases of the esophagus, both benign and neoplastic pathology. The lack of a Romanian Register of Esophagus Diseases is a serious incentive to try to develop such an approach.

Continuing to participate in international clinical studies with an impact on medical practice is a way of certifying the quality and complexity of the clinical research activity that I wish to continue, as well as participating as a partner or coordinator in competitions for domestic and international research projects in areas of interest in my field of expertise (general surgery).

**The 4th part** of the qualification thesis includes the cited bibliography, representing the most relevant scientific works in which I was an author/co-author.