



**CAROL DAVILA UNIVERSITY OF MEDICINE
AND PHARMACY, BUCHAREST
DOCTORAL SCHOOL
MEDICINE DOMAIN**

**CHRONIC KIDNEY DISEASE - FROM EVOLUTION
PARTICULARITIES TO MULTIDISCIPLINARY
PERSONALIZED MANAGEMENT**

SYNOPSIS OF THE HABILITATION THESIS

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SYNOPSIS

The habilitation thesis entitled: "**Chronic kidney disease - from evolution particularities to multidisciplinary personalized management**" presents my entire scientific, academic and professional activity, as well as future directions of academic career development.

It is structured in four main chapters and presents my professional evolution starting with the period when I achieved the highest academic degree, that of Doctor of Medicine in 2013.

In the first part of the habilitation thesis - Introduction - I briefly present some biographical data and I remember proudly the years spent at the Faculty of Medicine in Craiova, when I met my first mentors: Professor Maria Moța, MD (then university assistant), Professor Letiția Streba, MD (then university assistant), Professor Petre Georgescu, MD, each of them knew how to instill to me the desire to become a doctor and an ambitious and responsible teacher.

Further, I present the years of my residency training (held in Bucharest) and express my gratitude to those who contributed to my academic and professional training and development, especially to Prof. Dr. Alexandru Ciocâlțeu.

Chapter 1 presents the evolution of my scientific interests at various stages. The research activity conducted from the beginning of my academic career until now has mainly focused on the field of Nephrology –one of the main branches of Internal Medicine, but due to the various clinical situations managed over time in an emergency hospital where I worked as a resident doctor, then as a nephrologist MD, the studies published during last years had a multidisciplinary character, which is actually an essential aspect for the quality of medical and research activity. Chronic kidney disease was the core and the main topic of my research activity and the topic of my PhD research. The PhD studies with the final PhD thesis entitled: "Chronic renal failure in elderly –particularities of etiology and treatment" addressed a subject of continuous interest, also an important public health problem, that of chronic kidney disease, a clinical entity with an increasing prevalence. Moreover, being a disease with systemic effects, it represents a consistent source of morbidity and mortality among the general population. Chronic kidney disease is an „umbrella term” that covers a wide range of pathological pathways, all of which have in common the evolution towards the gradual or

rapid loss of kidney structure and functions. Renal disease of the elderly is most often the result of other age-related conditions and comorbidities. Thus, atherosclerotic disease of the renal vasculature with renovascular hypertension and ischemic nephropathy, diabetes, hypertension, chronic glomerulonephritis, especially the secondary forms, prostate hypertrophy are examples of diseases whose systemic effects are leading to advanced stages of chronic kidney disease in an aged population.

Although the number of peritoneal dialysis patients has decreased a lot, especially during the COVID-19 pandemic, the continuous ambulatory peritoneal dialysis procedure needs to be brought back into focus and this need is supported by the results of my PhD research, as well as by the studies published in the recent literature. The simplicity of peritoneal dialysis procedure which could be performed easily by the patients itself, including both forms of peritoneal dialysis: continuous ambulatory peritoneal dialysis or automatic peritoneal dialysis, brings important benefits to the patient which counterbalance the risks. The most significant risks and complications of peritoneal dialysis are increased cardiovascular risk and the risk of infectious complications, mainly peritonitis. New statistical data reveals geographic variability in price, but in developed countries the costs for peritoneal dialysis are lower than for hemodialysis.

The results of the PhD study were presented at several national and international scientific events and published in medical journals as in-extenso articles or abstracts in conference papers: presented abstract at the 49th ERA-EDTA Congress, Paris 2012, research article in Romanian Journal of Infectious Diseases, 2011 and the second research article in The Medical-Surgical Journal of the Society of Physicians and Naturalists of Iași 2012.

After defending my PhD thesis, it followed a period during which I continuously combined clinical practice with teaching, and of course, with research activity, and I can say with certainty that the last five years have been the most prolific in this regard. Chronic kidney disease, especially advanced stages chronic kidney disease, including the entire spectrum of associated complications, represented a key research topic of the Nephrology and Dialysis Clinic, Saint John Emergency Clinical Hospital, and respectively, research directions for me. Working in a multidisciplinary emergency hospital, I developed a special interest in correlations and collaborations between nephrology and other specialties, this is how I have studied and approached various interdisciplinary topics throughout my career, today outlined under the umbrella of the organ crosstalks concept, such "heart-kidney crosstalk", "brain-

kidney crosstalk", "gut-kidney crosstalk", "liver-kidney crosstalk", etc. In the same chapter, we addressed topics related to CKD as a risk factor for a series of clinical conditions and its multifactorial etiologies.

By corroborating all the data obtained from the research carried out, we were able to conclude that we can identify patients with CKD and increased risk to develop end-stage kidney disease by establishing a predictive model that incorporates independent risk factors for diagnosis and progression, as well to establish new research directions that aim to reduce CKD progression.

Also, in Chapter 1 I presented all the books to the publication of which I contributed as a co-author, as well as the medical studies in which I participated as investigator.

In Chapters 2 and 3 of the habilitation thesis, I presented my professional and academic development during the last 30 years since graduating from medical school.

In Chapter 4, I presented the main actual and future research directions. For this purpose, I will try to include as much as possible young team members, in order to offer them training for this type of activity, and those with notable results will be able to present them to the scientific community. The team will also be the driving force behind these projects, and I believe that interdisciplinary collaboration remains the key to success in achieving all these goals.