# THESIS SUMMARY

This habilitation thesis represents a synthesis of my professional, teaching and research activity after obtaining the title of doctor of medicine.

In my thesis, it was difficult to refer strictly to my work using the first person singular. Surgery means teamwork and team research. Therefore, I referred to the work of the team in which I had an important contribution, moreover, since 2004 I am the head of a general surgery clinic in Targu-Mures and I have the responsibility of being a team leader and a trainer of surgery school. As a surgeon of general surgery, I had available a wide range of pathology, so that activity fields to which I have referred are diverse. I have chosen just a few of them and I have detailed only those aspects in which I had concerns and an outstanding contribution. Precisely because of the diversity of addressed pathology, my habilitation thesis title does not refer strictly to a specific field or a pathology, but it refers to my personal contribution to the progress of my specialty.

I have structured the habilitation thesis according to the CNATDCU's indicative guide.

In the first section, that of scientific, professional and academic achievements, I made a very brief introduction presenting my evolution in the predoctoral stage. The more important aspect of this stage is that being the head of the class I had the chance to work in the medical research center of Targu Mures where I have started and developed my work as a researcher.

In the chapter of the postdoctoral stage, I chose the following topics of reference: colorectal cancer, anoperineal pathology, breast pathology, gastric cancer, thyroid cancer, minimally invasive surgery and metabolic surgery.

Colorectal cancer has preoccupied me since my studentship performing my license thesis on this subject, and later the doctoral thesis. I have studied many aspects of colorectal cancer epidemiology, my studies showing the upward trend in incidence mainly because of the old age that turns colorectal surgery into a real geriatric surgery. My major contribution to the treatment of the colorectal cancer was the introduction in my clinic of the laparoscopic approach, and by studies, I have shown the advantages and limitations of this approach in colorectal cancer surgery. Factors influencing the occurrence of colorectal anastomotic fistula have been extensively studied and I proposed in my works measures that could limit the incidence of this serious complication. Mechanical colorectal anastomosis was another major contribution having one of the greatest experiences in the country in this area. Through my works, I showed the benefits of mechanical sutures. I have developed experimental work and a grant in this area, and several postgraduate courses.

In the anoperineal pathology, I have introduced new modern methods of treatment of hemorrhoids using the DG-HAL and LigaSure techniques, our results being presented and published.

The breast pathology was the second major area of concern, where I had a special activity of training, research, and teaching. I started first with a collaboration with an NGO dedicated to women with breast cancer by performing charity activities of breast screening, education, and mass popularization. Then, I have implemented new methods of diagnosis and treatment that were not applied at that time only sporadically in the hospital and even in the country. Of these, the Tru-Cut ultrasound guided biopsy and the sentinel lymph node detection using methylene blue and Technețiu$^{99m}$ radiotracers. We developed a close collaboration with a breast center from the US where we have improved our experience and which has donated us the equipment necessary for these procedures. I was the coordinator of several postgraduate courses and a member of several grants on this topic. Our professional and research activity has resulted in several works presented and published including in ISI journals. Breast conservative

surgery was a priority and we introduced into our practice the oncoplastic procedures. I was concerned about the postoperative health status of our patients with breast cancer and I have done several studies regarding the quality of life and the late complications after surgery to have a better feedback regarding our work.

Studies on gastric cancer started in the predoctoral stage and I have continued them afterward. Prognostic factors for gastric cancer have been the subject of several studies and publications.

Regarding the thyroid cancer, I have studied several aspects of the epidemiology and histopathological forms. I have introduced in practice the preoperative histopathological diagnosis by fine needle aspiration biopsy (FNAB) and conducted several postgraduate courses on the subject. The first true neck dissection operation was performed by me and now it has become a current method applied in the clinic where necessary.

I have performed the first operations of advanced laparoscopic surgery in the clinic, some even for the first time in my country, and I can say that I have formed a team of surgeons with an extensive experience in this field. The results of our concerns in this field were presented at scientific conferences both at home and abroad and have been published. In the thesis, some of the areas with more experience are detailed.

Metabolic surgery is a new field where the bariatric operations have achieved excellent results and we have one of the greatest experiences in the country. Almost all these operations have been carried out by me.

In the second section of the thesis addressed to plans of evolution and development of professional, scientific and academic career, I have shown that from professional point of view I intend to continue to implement in the clinic the latest surgical techniques including robotic surgery but also to improve our current procedures to reduce as much as possible the postoperative morbidity and mortality. I will continue to guide the surgical team members to narrower fields of specialization and even overspecialization in surgery.

Regarding teaching activity, I will continue to develop and refine the new educational methods based on team and practical work, to develop new courses adapted to the international requirements, to prepare further new generation of residents, to attract more students in research, to fight for the endowment with simulators specific for our activity, to intensify the activity of postgraduate courses and to attract new young doctors in the academic field of the discipline that I am leading.

Research work will remain an integral part of my work continuing the ongoing studies in colorectal cancer, breast cancer, and minimally invasive techniques. I also intend to initiate new studies on metabolic surgery, especially its effects on diabetes and cardiovascular disease.

The third section includes the references cited in the text of the habilitation thesis including titles of my reference works.