

# Postgraduate Diploma

Revision Surgery, Metabolic Surgery and  
Special Situations after Bariatric Surgery



## Postgraduate Diploma Revision Surgery, Metabolic Surgery and Special Situations after Bariatric Surgery

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-revision-surgery-metabolic-surgery-special-situations-bariatric-surgery](http://www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-revision-surgery-metabolic-surgery-special-situations-bariatric-surgery)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 26*

05

Methodology

---

*p. 32*

06

Certificate

---

*p. 40*

# 01

# Introduction

Update your knowledge in Organization and Management of Multidisciplinary Obesity Units, with this training program of high scientific rigor, meticulously designed by professionals with years of experience in the field.

Throughout these months of training you will learn about the history, concept and indications for metabolic surgery; you will delve into the general criteria for revision surgery in each of the bariatric surgical techniques and you will learn to evaluate the current recommendations for bariatric surgery in patients who are candidates for solid organ transplantation or with associated cardiological, renal or psychiatric diseases, among other issues of great interest.







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*The Postgraduate Diploma was created to take the professional through the essential knowledge in each and every one of the areas that make up a high-level Bariatric Unit”*

Obesity is the most common metabolic disease in the western world and one of the most important health problems in developed countries. Nowadays, surgery is considered to be the only treatment capable of offering a substantial and sustained weight loss over time, reducing comorbidities and improving patient quality of life.

In the last decade, the number of annual bariatric procedures has skyrocketed exponentially, leading to an increase in the creation of multidisciplinary bariatric surgery units throughout the world. This has generated a greater demand for healthcare professionals involved in the treatment of this pathology, and training and accreditation programs in bariatric surgery have increased.

Bariatric surgery has undergone a spectacular development in recent years, the expansion of surgical indications hand in hand with metabolic surgery, technological and robotic innovation, the emergence of new surgical techniques and the exponential growth of vertical gastrectomy, the difficulty to standardize the most effective treatment for weight regain and recurrence of comorbidities, all these factors force both the general and digestive surgeon as well as the specialist in bariatric surgery to update their knowledge, study the available evidence, and develop new skills that will allow them to keep up with the changes and continue to offer good quality treatment to their patients.

The Postgraduate Diploma in Revision Surgery, Metabolic Surgery and Special Situations after Bariatric Surgery has been conceived to offer medical professionals the necessary training to practice as a bariatric surgeon. This training is a unique opportunity as it contains the most complete and up-to-date scientific program on the market. Its topics allow specialists to access all the necessary knowledge based on scientific evidence and adapt their training process to their personal and professional needs.

Our teaching staff is integrated by different medical professionals of recognized prestige belonging to the field of Obesity (surgeons, endocrinologists, nutritionists, psychologists, gastroenterologists, etc.), who are also references in the field of bariatric surgery. A multidisciplinary team of experienced professionals who will faithfully develop theoretical knowledge and apply their practical experiences to the service of the student, one of the differential qualities of this Postgraduate Diploma.

This **Professional Diploma in Revision Surgery, Metabolic Surgery and Special Situations After Bariatric Surgery** offers you the advantages of a high-level scientific, teaching, and technological course. These are some of its most notable features:

- ♦ Latest technology in online teaching software.
- ♦ Highly visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand.
- ♦ Practical cases presented by practising experts.
- ♦ State-of-the-art interactive video systems.
- ♦ Teaching supported by telepractice.
- ♦ Continuous updating and recycling systems.
- ♦ Self-regulating learning: full compatibility with other occupations.
- ♦ Practical exercises for self-evaluation and learning verification.
- ♦ Support groups and educational synergies: questions to the expert, debate and knowledge forums.
- ♦ Communication with the teacher and individual reflection work.
- ♦ Content that is accessible from any fixed or portable device with an Internet connection.
- ♦ Supplementary documentation databases are permanently available, even after the course.



*A unique training program  
with which you can achieve  
professional success”*

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*The teachers of this Postgraduate Diploma have been selected based on two criteria: the excellence of their medical practice in the field of the creation, promotion and maintenance of bariatric units, and their proven didactic capacity. All in order to offer you the high quality training program that you need”*

*With a methodological design based on proven teaching techniques, this Postgraduate Diploma will take you through different teaching approaches to allow you to learn in a dynamic and effective way.*

Our teaching staff is composed of medical professionals, practising specialists. In this way, we ensure that we provide you with the training update we are aiming for. A multidisciplinary team of professors with training and experience in different environments, who will develop theoretical knowledge effectively, but, above all, will bring their practical knowledge derived from their own experience to the course: one of the differential qualities of this program.

This mastery of the subject is complemented by the effectiveness of the methodology used in the design of this Postgraduate Diploma. Developed by a multidisciplinary team of e-learning experts, it integrates the latest advances in educational technology. This way, you will be able to study with a range of comfortable and versatile multimedia tools that will give you the operability you need in your training.

The design of this program is based on Problem-Based Learning: an approach that conceives learning as a highly practical process. To achieve this remotely, we will use telepractice: with the help of an innovative interactive video system, and learning from an expert, you will be able to acquire the knowledge as if you were actually dealing with the scenario you are learning about. A concept that will allow you to integrate and fix learning in a more realistic and permanent way.





# 02 Objectives

This program aims to train highly qualified professionals for the workplace. An objective that is complemented, moreover, in a global manner, by promoting human development that lays the foundations for a better society. This objective is focused on helping surgical professionals reach a much higher level of expertise and control, meeting all the requirements in the field of bariatric surgery. A goal that, in just a few months, you will be able to achieve with a highly intensive and precise course.







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*Our goal is yours: to provide you with the best online training and specialization course in Bariatric Surgery on the market. A highly qualified step, from the hands of the best professionals in this specialty”*



## General Objectives

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- ◆ Become familiar with the history, concept and indications of metabolic surgery.
- ◆ Understand the Anatomico-Physiological basis of metabolic surgery and inflammatory mediators.
- ◆ Study the role of gastrointestinal hormones in the resolution of Type 2 Diabetes Mellitus after bariatric surgery.
- ◆ Establish the success or failure criteria of bariatric surgery.
- ◆ Define the general characteristics and the surgical strategy in revision surgery.
- ◆ Examine the general criteria of revision surgery in each of the bariatric surgery techniques.
- ◆ Analyze the available evidence on bariatric surgery in patients with BMI < 35 kg/m<sup>2</sup>, in super obese patients, adolescents and women who wish to procreate..
- ◆ Determine the adverse effects of bariatric surgery on bone metabolism and muscle mass.
- ◆ Evaluate the current recommendations for bariatric surgery in patients who are candidates for solid organ transplantation or have associated cardiological, renal or psychiatric diseases.
- ◆ Establish the significance of postoperative gastroesophageal reflux and abdominal wall alterations.





## Specific Objectives

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- ♦ Understand the importance of loop lengths in bariatric surgery.
- ♦ Determine the influence of microbiota on bariatric surgery.
- ♦ Study the relationship between obesity and NASH.
- ♦ Present the metabolic effects of manipulating intestinal bile acid availability after bariatric surgery.
- ♦ Analyze the influence of bariatric surgery on hypogonadism and polycystic ovary syndrome.
- ♦ Understand the regeneration changes in the pancreas and hyperinsulinism after bariatric surgery.
- ♦ Describe the therapeutic alternatives in revision surgery of techniques no longer used.
- ♦ Study the indications, technical details and results after adjustable gastric band revision surgery.
- ♦ Analyze the different technical options for revision surgery after vertical gastrectomy, depending on whether there has been inadequate weight loss and/or weight regain, or due to the occurrence of complications.
- ♦ Determine the etiology, diagnosis and therapeutic attitude toward complications and revision surgery after a gastric bypass.
- ♦ Describe the indications, technical details and results after OAGB revision surgery.
- ♦ Analyze the most relevant aspects of surgical revision for insufficient weight loss, weight regain and/or nutritional complications following duodenal crossover surgery.
- ♦ Examine the most frequent indications for revision surgery after biliopancreatic diversion.
- ♦ Establish the most appropriate surgical options in revision surgery due to malnutrition syndromes and severe nutritional complications following SADI-S.
- ♦ Determine the role of endoscopic surgery in the management of complications and weight regain after bariatric surgery.
- ♦ Analyze the safety of treatment in patients with BMI < 35kg/m<sup>2</sup>.
- ♦ Evaluate the most appropriate techniques for obese patients.
- ♦ Describe the complications that can occur in the abdominal wall involved in bariatric surgery.
- ♦ Establish indications for surgery in patients who are candidates for solid organ transplantation.
- ♦ Interpret the risk of alterations in bone metabolism.
- ♦ Evaluate the risk of developing sarcopenia
- ♦ Quantify the risk-benefit ratio of surgery in when there is also a pre-existing renal, cardiac or psychiatric pathology.
- ♦ Compare the results of different surgical techniques with conservative treatment.
- ♦ Design future lines of work in superobese patients.
- ♦ Assess the risk of pregnancy in patients put forward for bariatric surgery.

03

# Course Management

For our master's degree to be of the highest quality, we are proud to work with a teaching staff of the highest level, chosen for their proven track record in the field of Bariatric Surgery. A multidisciplinary team, made up of professionals who will contribute their vision and experience to this comprehensive course. A unique opportunity to learn from the best.





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*Your professors in this Postgraduate Diploma will be a team of professionals with solid backgrounds: a unique opportunity to learn directly from the best in the field”*

## International Guest Director

Dr. Alec Beekely is an international eminence in Bariatric and Metabolic Surgery. Throughout his career, this specialist has mastered the most disruptive tools and procedures to intervene patients with pathologies such as Morbid Obesity, Diabetes, among others. Thanks to his extensive experience and continuous updating, he has become the Director of the surgical program, focused on this area, at Thomas Jefferson University Hospital in the United States.

At the same time, the expert maintains close ties with the Trauma and Intensive Care Service of the same health institution. Through this work, he has performed operations on people in serious or acute conditions and, in turn, supervises the progress of residents and interns under his care. In addition, he is an instructor of Advanced Life Support in Trauma.

Similarly, his research career has been linked to clinical analysis projects. In particular, Dr. Beekley has addressed in depth the management of the Roux-en-Y gastric bypass technique and its subsequent outcomes such as weight loss and ulceration. He is also a scientific reviewer for multiple peer-reviewed journals such as Surgery for Obesity and Related Diseases and the Journal of Trauma.

On the other hand, this specialist has a long career in the medical-war context. His beginnings in the field of military surgery have been linked to combat and extreme situations such as the wars in Afghanistan and Iraq. Given his merits in this complex field, he has received various awards such as the Bronze and Meritorious Service Medals awarded by his country's army.

Dr. Beekley has also been an active member of several scientific societies and committees. In this way, through his intense healthcare management, he has become a true reference in world medicine..



## Dr. Beekley, Alec

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- Director of the Metabolic and Bariatric Surgery Program at Thomas Jefferson University Hospital
- Advanced Life Support Instructor in the Trauma and Intensive Care Service at Thomas Jefferson University Hospital
- Director of the Combat Casualty Research Team at the 28th Combat Support Hospital in Baghdad, Iraq
- Staff Surgeon General, 102nd Forward Surgical Team, Kandahar, Afghanistan
- General Surgeon, Madigan Army Medical Center, Tacoma
- General Surgeon at Blanchfield Army Community Hospital in Kentucky
- M.D., Case Western Reserve University

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*Thanks to TECH, you will be able to learn with the best professionals in the world”*

## Management



### Dr. Priego Jiménez, Pablo

- ◆ Specialist Physician, Department of General and Digestive System Surgery, Ramón y Cajal University Hospital (Madrid). Esophagogastric, Bariatric and Minimally Invasive Surgery Unit (January 2015-present).
- ◆ PhD in Medicine from the University of Miguel Hernández de Elche (2013). (Outstanding Cum Laude).
- ◆ Fellowship in Gastric Oncology Surgery in the Gastric Cancer Department at Cancer Institute Hospital (Tokyo) with Professor Takeshi Sano (July 2018).
- ◆ Fellowship in Esophagogastric and Minimally Invasive Oncological Surgery in the Division of Esophageal and Upper Gastrointestinal Surgery at Queen Mary Hospital, Hong Kong with Professor Simon Law (January-March 2014).
- ◆ Degree in Medicine from the Complutense University Madrid (1996 - 2002).
- ◆ Master's Degree in Advanced Laparoscopic Surgery. University of Alcalá (2007).
- ◆ Master's Degree in Clinical Management, Medical, and Welfare Management. University of CEU(2019)
- ◆ Medical Specialist in the Department of General and Digestive System Surgery at the General Hospital of Villalba (Madrid). Esophagogastric and Bariatric Surgery Unit (Oct 2014- Dec 2014).
- ◆ Medical Specialist in the Department of General and Digestive System Surgery at the General University Hospital of Castellón. Esophagogastric, Hepatobiliopancreatic and Thoracic Surgery Unit (Jun 2008-Sep 2014).





### Dr. Ruiz-Tovar Polo, Jaime

- ◆ Bariatric Surgeon in the Centre for Excellence for the Study and Treatment of Obesity. Valladolid. Bariatric Surgery Unit (2017-2020).
- ◆ Faculty Specialist in the Bariatric Surgery Unit. Rey Juan Carlos University Hospital, Madrid (2014-2020).
- ◆ Coordinator of the Bariatric Surgery Unit. Elche University General Hospital(2010 -2014)
- ◆ Specialist in General and Digestive Surgery. Henares University Hospital Madrid (2019-2020)
- ◆ Doctorate in Medicine from the Autonomous University Madrid
- ◆ Degree in Medicine from the Autonomous University of Madrid.
- ◆ Master's Degree in Advanced Laparoscopic Surgery. University of Alcalá
- ◆ Specialist in General and Digestive System Surgery
- ◆ Diploma of Expert Level Competence by the Spanish Society of Obesity Surgery (SECO).
- ◆ Diploma in Obesity and Metabolic Diseases Surgery. European Accreditation Council for Bariatric Surgery of IFSO. 2000 hours.

## Professors

### Dr. Lorenzo González, Óscar

- ♦ Degree in Biology, Complutense University of Madrid (1996).
- ♦ PhD in Biochemistry, Autonomous University of Madrid, 2001.
- ♦ Degree in Medicine (2013-present) Subject: Introduction to Biomedical Research Subject: Fundamentals of Cardiovascular and Renal Research from a Hospital Approach.
- ♦ Degree in Nursing (2016-present) Subject: Pharmacology and Nutrition. Subject: Biochemistry
- ♦ Master's Degree in Pharmacology Research, 30 ECTS. Faculty of Medicine, Autonomous University of Madrid.
- ♦ Master's in Advanced Patient Care in Anaesthesia, Resuscitation and Pain Treatment, 30 ECTS. Jiménez Díaz Foundation Nursing School, Autonomous University of Madrid.

### Dr. Wolfgang Vorwald, Peter

- ♦ Head of Esophago-gastric and Bariatric Surgery Unit:
- ♦ Jiménez Díaz Foundation (2008-2020).
- ♦ General Hospital of Villalba (2015 - 2020)
- ♦ PhD in Medicine from the Complutense University of Madrid.
- ♦ Degree in Medicine from the Autonomous University of Madrid.
- ♦ Specialist Physician at the Hospital Foundation of Alcorcón (1999-2008).
- ♦ Specialist Physician at the University Hospital "Klinikumrechts der Isar" in Munich (1993-1998).

- ♦ Chair of the Esophagogastric Surgery Section of the Spanish Association of Surgeons from January 2019 to present.
- ♦ Coordinator of Esophagogastric Surgery Working Group in the Spanish Multimodal Rehabilitation Group (GERM) from January 2016 to present.
- ♦ Associate Professor of Health Sciences from 2013 in the Autonomous University of Madrid, Spain.
- ♦ Associate Professor (1993-1998) in the Technical University of Munich, Germany.

### Dr. Barragán Serrano, Cristina

- ♦ Residency at La Paz University Hospital (2015 - 2020)
- ♦ Assistant in the Esophagogastric and Obesity Unit at Jiménez Díaz Foundation. Fellowship training program (2020-2021)
- ♦ Phd and Degree in Medicine from Alcalá de Henares University (UAH), Madrid (2008-2014).
- ♦ First cycle at the University of the Basque Country (UPV)
- ♦ Second cycle at the Guadalajara Hospital (Alcalá de Henares University).
- ♦ Collaborator in practical classes at the Autonomous University of Madrid
- ♦ Mechanical Sutures training speech. La Paz University Hospital. Tuesday, November 27, 2018
- ♦ ACS Speaker at the Course on Minimally Invasive Surgery in the MIS-ITEC section. Virtual ACS Classroom. Teaching in times of crisis.

**Dr. Posada González, María**

- ♦ Faculty Specialist in the Esophagogastric and Bariatric Surgery Unit. General and Digestive System Surgery Department. Jiménez Díaz Foundation Hospital (Madrid). (July 2016- present).
- ♦ Degree in Medicine from the Autonomous University of Madrid. Promotion 2001-2007
- ♦ Specialist Doctor via RMI in “General and Digestive System Surgery” at La Princesa University Hospital.(Madrid) (May 2008 - May 2013).
- ♦ Specialist in General and Digestive Surgery. General and Digestive System Surgery Department. La Paz University Hospital, Madrid. (April and May 2016)
- ♦ Faculty Specialist in the Esophagogastric and Bariatric Surgery Unit. General and Digestive System Surgery Department. Jiménez Díaz Foundation Hospital (Madrid). (November 2015 - February 2016).
- ♦ Fellowship in Esophagogastric and Obesity Surgery. Esophagogastric Surgery Unit. General and Digestive System Surgery Department. Jiménez Díaz Foundation Hospital (Madrid). (November 2013 - November 2015).
- ♦ Faculty Specialist in the Endocrine Surgery Unit. General and Digestive System Surgery Department. Basurto University Hospital (Bilbao). (September - November 2013).
- ♦ Resident Intern. General and Digestive System Surgery Department. La Princesa University Hospital Madrid. May 2008 - May 2013.

**Dr. Salcedo, Gabriel**

- ♦ Faculty Specialist. Esophagogastric and Bariatric Surgery Unit, Jiménez Díaz Foundation University Hospital & General University Hospital Collado Villalba. 2015 - present.
- ♦ Degree in Medicine from the Autonomous University of Madrid, 1999.
- ♦ Fellowship Grant for Subspecialized Training from the Spanish Association of Surgeons. 2007
- ♦ Specialist in General and Digestive System Surgery. Gregorio Marañón General University Hospital.
- ♦ FAST Accreditation Diploma and Ultrasound course for surgeons from the Spanish Association of Surgeons (AEC). 2005
- ♦ Surgeon in Our Lady of the Rosary Sanatorium. General and Digestive Surgery. 2004-2009
- ♦ Faculty Specialist. Esophagogastric Surgery Unit Coordinator. Infanta Cristina University Hospital (2008-2015).

**Dr. García Gómez de las Heras, Soledad**

- ♦ Degree in Medicine and Surgery (June 1998), Faculty of Medicine at the Complutense University of Madrid.
- ♦ PhD in Medicine and Surgery (June 2002, Outstanding Cum Laude), Faculty of Medicine at the Complutense University of Madrid.
- ♦ Doctor Professor in Human Histology and Pathological Anatomy, Faculty of Health Sciences, Rey Juan Carlos University, since October 2006- present.
- ♦ Doctor Professor in Human Anatomy, Faculty of Health Sciences, Rey Juan Carlos University, since October 1999- October 2006.
- ♦ Professor of Human Histology module in Medicine Degree since the academic course 2009-2010 where she continues to do most of her teaching.
- ♦ Professor of Cell Biology and Human Histology in Nursing, Physiotherapy and Dentistry degrees from September 2006 to June 2009.
- ♦ Professor of Human Anatomy in Nursing, Physiotherapy and Dentistry degrees from 1999 to June 2006.

**Dr. Zubiaga, Lorea**

- ♦ Medical Surgeon for the University of Los Andes (Merida- Venezuela) Magna-Cum Laude mention.
- ♦ Postdoc in basic research at EGID supported by the University of Lille and Inserm-1190 (2016-2020).
- ♦ PhD in Surgical Anatomy from the University of Miguel Hernández de Elche. Outstanding, Cum Laude and Outstanding Award.
- ♦ Degree in Medicine from the Miguel Hernández de Elche University after passing the academic validation tests of the Ministry of Education.
- ♦ Faculty Specialist in the Bariatric Surgery Unit. Elche University General Hospital(2012 -2016)
- ♦ Master's Tutor in Health Sciences (Lille University, 2017-2018).
- ♦ Clinical Tutor at Elche University General Hospital (2012 -2016).
- ♦ Collaborating Professor at Miguel Hernández de Elche University (Spain) in Human Anatomy and Medical Surgical Pathology.

**Dr. Valentí Azcárate, Víctor**

- ♦ Degree in Medicine and Surgery from the Faculty of Medicine, University of Navarra.
- ♦ PhD in Medicine from the University of Navarra.
- ♦ Co-director of Obesity Unit. Navarra University Clinic.
- ♦ Medical Practitioner in General Surgery. General Medical Council. UK. January - December 2007.
- ♦ General and Digestive System Surgery Department Consultant. Navarra University Clinic.
- ♦ Co-director of Obesity Unit. Navarra University Clinic
- ♦ Esophago-gastric Surgery Section Coordinator. Navarra University Clinic.
- ♦ Expert Surgical Diploma in Bariatric Surgery. SECO.
- ♦ Surgeon of Excellence for Bariatric and Metabolic Surgery. European Accreditation Council for Bariatric Surgery (IFSO endorsed COE Program) EAC-BS.

**Dr. Botella Carretero, José Ignacio**

- ♦ Academic Training
- ♦ Head of the Endocrinology and Nutrition Department. Endocrinology and Nutrition Services. Ramón y Cajal Hospital. Madrid. Since December 2014.
- ♦ Degree in Medicine and Surgery. Autonomous University of Madrid (1995).
- ♦ Specialist in Endocrinology and Nutrition. Ramón y Cajal University Hospital Madrid 2001.
- ♦ Doctor of Medicine. Outstanding, Cum Laude and Outstanding Award. Alcalá Henares University. Madrid 2005.
- ♦ MBA in Management and Integrated Management of Clinics, Medical Centers and Hospitals. European Institute of Business Studies. Associate Center of the International Commission on Distance Education, 2012.
- ♦ Resident Intern. Endocrinology and Nutrition Services. Ramón y Cajal Hospital. Madrid. May 1997 - May 2001.



- ♦ Specialist in Endocrinology and Nutrition in Velázquez Medical Office. A private center with an agreement with the Community of Madrid as a Collaborating Health Center. June 2001 – March 2002.
- ♦ Specialist in Endocrinology and Nutrition. Endocrinology and Nutrition Services at Carlos III Health Institution (ISCIII) Ramón y Cajal Hospital. Madrid. March 2002 – March 2005.
- ♦ Specialist in Endocrinology and Nutrition. Providing Continuous Care shifts. Endocrinology and Nutrition Services. Ramón y Cajal Hospital. Madrid. March 2005 – July 2005.
- ♦ Specialist in Endocrinology and Nutrition. Clinical Nutrition and Dietetics Unit. Endocrinology and Nutrition Services. Ramón y Cajal Hospital. Madrid. July 2005 - May 2013.
- ♦ Specialist in Endocrinology and Nutrition. Endocrinology and Nutrition Services. Ramón y Cajal Hospital. Madrid. May 2013 - December 2014.

#### **Dr. García Ureña, Miguel Ángel**

- ♦ Head of Surgery at Henares University Hospital. 2007- present
- ♦ PhD in Medicine from the Complutense University of Madrid.
- ♦ Outstanding Award in her PhD
- ♦ Degree in Medicine from the Autonomous University of Madrid.
- ♦ Specialist in General and Digestive System Surgery Unit at Puerto Real University Hospital, Madrid. 1995-2003
- ♦ Facultative Area Specialist in General Surgery.
- ♦ Specialist in General and Digestive System Surgery
- ♦ Professor of the subject "surgical conditions" at the University School of Nursing SalusInfirmorum, attached to the University of Cadiz. 1995-2000.
- ♦ Professor of the subject "medical-surgical nursing" at the University School of Nursing SalusInfirmorum, attached to the University of Cadiz. 2000-2005.

#### **Dr. Mirada Murua, María del Coro**

- ♦ Head of Esophagogastric and Bariatric Surgery Unit. Navarra Hospital Complex.
- ♦ 1. Training as specialist in General and Digestive System Surgery through RMI: Pamplona Hospital of Navarra (Jan 1995 - Dec 1999).
- ♦ 2. Attending Physician in General and Digestive System Surgery (Jan 2000- Jan 2019).
- ♦ Degree in Medicine: Navarra University. Spain. June 1992.

#### **Dr. Guijarro Moreno, Carlos**

- ♦ General and Digestive System Surgery Department. Henares University Hospital
- ♦ Professional work in Continuing Care in the General and Digestive System Surgery Service. Infanta Cristina University Hospital
- ♦ General and Digestive System Surgery Department. Medina del Campo Hospital
- ♦ General and Digestive System Surgery Department. Prince of Asturias University Hospital. Madrid
- ♦ Degree in Medicine. Autonomous University of Madrid
- ♦ Professional Master's Degree in General and Digestive System Surgery. CEU - Cardenal Herrera University
- ♦ RMI General and Digestive System Surgery. Prince of Asturias University Hospital

**Dr. Barragán Serrano, Cristina**

- ♦ Residency at La Paz University Hospital (2015 - 2020)
- ♦ Assistant in the Esophagogastric and Obesity Unit at Jiménez Díaz Foundation. Fellowship training program (2020-2021)
- ♦ Phd and Degree in Medicine from Alcalá de Henares University (UAH), Madrid (2008-2014).
- ♦ First cycle at the University of the Basque Country (UPV)
- ♦ Second cycle at the Guadalajara Hospital (Alcalá de Henares University).
- ♦ Collaborator in practical classes at the Autonomous University of Madrid
- ♦ Mechanical Sutures training speech. La Paz University Hospital. Tuesday, November 27, 2018
- ♦ ACS Speaker at the Course on Minimally Invasive Surgery in the MIS-ITEC section. Virtual ACS Classroom. Teaching in times of crisis.

**Dr. Ortiz Larcozana, Javier**

- ♦ Attending Physician for General and Digestive Surgery Service. Basurto University Hospital. (1990-Present) with specialized activity in Bariatric and Metabolic Surgery since 2001.
- ♦ Coordinator of Bariatric and Metabolic Surgery at the Esophagogastronomy Unit, University Hospital Basurto (2013-present).
- ♦ Degree in Medicine and Surgery - UPV/EHU, 1982)
- ♦ PhD in Medicine and Surgery - (UPV/EHU, 1989)
- ♦ Specialist in General and Digestive System Surgery (1989- RMI system)
- ♦ Collaborator (1985-89); Acting Full Professor (Chair of Surgery, Radiology and Physical Medicine UPV/EHU, 1990-92)
- ♦ Associate Professor of Surgery (Chair of Surgery, Radiology and Physical Medicine UPV/EHU, 1992-present).
- ♦ Postgraduate Professor (UPV/ EHU):
- ♦ Doctoral Degree Courses: Medical Degree
- ♦ Courses: Master's in Perioperative Care (Nursing Degree).
- ♦ Membership in national and international scientific societies \*\*specialized in Obesity Surgery and Metabolic diseases and the study and treatment of nutritional disorders: SEC01, SEED02, IFSO3, SENPE4, AEC5.





**Dr. Díez del Val, Ismael**

- ◆ Head of Esophago-gastric and Bariatric Surgery Section, Basurto University Hospital (Bilbao).
- ◆ ACS esophago-gastric surgery coordinator (2019 to present).
- ◆ ACS esophago-gastric surgery coordinator (2019 to present).
- ◆ Member of the Board of Directors of SECO
- ◆ Expert in Emerging Viruses from SECO

**Dr. Frangi Caregnato, Andrés**

- ◆ Faculty Specialist of the General and Digestive System Surgery Department, Co-Coordinator of Multidisciplinary Unit of Nutrition and Metabolic and Obesity Surgery at the Sagunto Hospital since March 2016- present.
- ◆ Co-Coordinator of Unit of Nutrition and Metabolic and Obesity Surgery, Sagunto Hospital. (2016 to present)
- ◆ PhD in Medicine from the University of Valencia, Valencia(2015)
- ◆ Specialist in General and Digestive System Surgery. RMI La Fe Hospital of Valencia (2004-2009).
- ◆ Degree in Medicine from La Plata National University, Buenos Aires, Argentine. (1994-2002)
- ◆ Faculty Specialist of the General and Digestive System Surgery Department, in the Coloproctology Unit at the Sagunto Hospital from March 2012- 2016.
- ◆ Faculty Specialist of the General and Digestive System Surgery Department, in the Coloproctology Unit at Elche General University Hospital from May 2010- January 2012.
- ◆ Faculty Specialist of the General and Digestive System Surgery Department, in the Coloproctology Unit at La Fe University Hospital, Valencia from January 2010- April 2010.

**Dr. Rodríguez Carrillo, Rodolfo**

- ♦ Co-Coordinator of the Bariatric and Metabolic Surgery Unit of the Sagunto Hospital (Valencia).
- ♦ Faculty Specialist in the Department of General and Digestive System Surgery at the Sagunto Hospital (Valencia).
- ♦ PhD in Medicine from the University of Valencia with an Outstanding Qualification and "Cum Laude" mention (Nov 2017).
- ♦ Degree in Medicine and Surgery: Faculty of Medicine and Dentistry. University of Valencia. July 1999.
- ♦ Specialist in General and Digestive System Surgery. July 2005
- ♦ Resident Intern of General and Digestive Surgery by competitive examination from July 2000 to July 2005. General and Digestive System Surgery Department. Dr J.V. Roig Vila. Sagunto Hospital.
- ♦ Assistant Physician in the General Surgery and Digestive System Service at the De La Ribera Hospital (Alzira) July 2005 - May 2009.
- ♦ Assistant Physician in the General Surgery and Digestive System Service at De Manises Hospital (Valencia) May 2009 - February 2012.
- ♦ Assistant Physician in the General Surgery and Digestive System Service at Sagunto Hospital (Valencia) since February 2012.

**Dr. Almeida Ponce, Helen**

- ♦ Facultative Area Specialist at Alcañiz Hospital, Alcañiz.
- ♦ Degree in Medicine from catholic University of Santiago de Guayaquil (2004-2010) Homologated to the Spanish degree of Licenciada en Medicina (1/10/2010)
- ♦ PhD in Medicine from the University Zaragoza (2020)
- ♦ Master's Degree in Coloproctology University of Zaragoza.
- ♦ Professional Master's Degree in Update in General and Digestive System Surgery
- ♦ University expert in minimally invasive surgery of the pelvic floor.
- ♦ Facultative Area Specialist of Obispo Polanco Hospital, Teruel.
- ♦ Facultative Area Specialist of Ernest Lluch Hospital, Calatayud.

**Dr. Gómez Correcher, María Amparo**

- ♦ Department Specialist Physician at Arnau de Vilanova Hospital from January 2019 to the present. PhD in Clinical and Surgical Sciences with the thesis entitled: Effect of axillary lavage with gentamicin solution on drainage debit after axillary lymphadenectomy in breast cancer patients. Miguel Hernández University. Tuesday, July 29, 2014.
- ♦ Specialist in General and Digestive System Surgery Training Period (RMI): 2010-2015. General Surgery Department. Elche University General Hospital.
- ♦ Degree in Medicine and Surgery. University of Valencia. Promotion 2003-2009. Member number 46-4621989 of the Very Illustrious Official College of Physicians of Valencia.
- ♦ Department Specialist at Vinaroz Hospital from May 2015- September 2015.
- ♦ Department Specialist Physician at Llíria Hospital from September 2015 to January 2019.
- ♦ Master's Degree in Clinical and Surgical Investigation from Miguel Hernández de Elche University 2010-2011 (60 credits).
- ♦ Master's Degree in Esthetic and Anti-aging Medicine from the Complutense University Madrid (2018- 2019).
- ♦ Expert in Pelvic Floor University Specialist in Pelvic Floor Pathology in Surgery. 300 hours.

**Dr. Pujol, Juan**

- ♦ Head of the General and Digestive Surgery Unit at Mi Tres Torres Clinic in Barcelona and coordinator of the Obesity and Metabolic Surgery Unit (UCOM).
- ♦ Expert in Bariatric and Metabolic Surgery for the Spanish Society of Obesity Surgery, and founding member.
- ♦ World Society for Obesity Surgery Award for his professional career in 2003.
- ♦ Head of the Communication and Development Committee of the European Society for Obesity Surgery and member of the Scientific Research Committee of the World Society for Obesity Surgery (IFSO).
- ♦ More than 30 years of experience in the field of bariatric and metabolic surgery, in which he has treated hundreds of cases.



**Dr. Balagué Ponz, M Carmen**

- ♦ Attending Physician for General and Digestive Surgery Services at Hospital de la Sta. Creu i Sant Pau in Barcelona.
- ♦ Coordinator of the Functional Unit of Bariatric and Metabolic Surgery of the Hospital de la Sta. Creu i Sant Pau in Barcelona.
- ♦ Degree in Medicine and Surgery from the University of Barcelona. 1,989
- ♦ Specialist in General and Digestive Surgery. MIR 1991-95. Barcelona Clinical Hospital
- ♦ PhD in Medicine and Surgery from the University of Barcelona. 1,998
- ♦ Attending Physician for General Surgery Services at Clinical Hospital Barcelona. 1999-2002.
- ♦ Professor of Surgery at UD Sant Pau. Autonomous University of Barcelona (2007).

**Dr. Beisani Pellise, Marc**

- ♦ Member of the Animal Experimentation Ethics Committee of the Center of Applied Experimental Biomedicine (CREBA) in Lleida (2016-2020).
- ♦ ACS Fellowship in Bariatric Surgery at the Hospital Universitari Vall d'Hebron (2019-2020).
- ♦ PhD in Surgery from the Autonomous University of Barcelona (2018) (Outstanding Cum Laude).
- ♦ Specialist in General and Digestive System Surgery at Vall d'Hebron University Hospital (2010-2015).
- ♦ Master's Degree in Applied Clinical Research in Health Sciences from the Autonomous University of Barcelona (2011).
- ♦ Degree in Medicine from the University of Barcelona (1999 - 2007).
- ♦ Attending Physician in the Surgery Unit at Mar Hospital, Barcelona (2018-2019).
- ♦ Coordinator of Surgical Activity at the Center for Applied Experimental Biomedicine (CREBA) in Lleida (2016-2018).
- ♦ Attending Physician in the Surgery Unit at Arnau de Vilanova Hospital, Lleida (2015-2018).

**Dr. García Ruíz, Amador**

- ♦ Faculty Specialist in Services Commissions at Vall d'Hebron University Hospital, Barcelona since January 2019.
- ♦ Degree in Medicine. Faculty of Medicine and Dentistry. Basque Country University / Euskal Herriko
- ♦ PhD from the University of the Basque Country / Euskal Herriko Unibertsitatea. Defended his Doctoral Thesis 19/11/2015 entitled: Critical Analysis of Vertical Gastrectomy as a Bariatric Surgical Technique. Outstanding Cum Laude Qualification.
- ♦ Diploma in Research Methodology: Design and Statistics in Health Sciences. Autonomous University of Barcelona.
- ♦ Resident of General and Digestive System Surgery. Bellvitge University Hospital, Llobregat Hospital. Barcelona: 16th June 2003 - 15th June 2008
- ♦ External rotation at the Surgery Department of the Western General Hospital. Colorectal Unit. Edinburgh (United Kingdom). February-April 2008
- ♦ Assistant of the General and Digestive System Surgery Service of the Bellvitge University Hospital from 1/1/2009 to 31/5/2018.
- ♦ Statutory position since 1/6/2018.

**Dr. Baltar Boilève, Javier**

- ♦ Specialist in General and Digestive Surgery, CHU Santiago, (1994- present).
- ♦ Doctor in General and Digestive Surgery from the University of Santiago de Compostela (1994).
- ♦ Degree in Medicine and Surgery from the University of Santiago de Compostela (1986).
- ♦ Specialist in General and Digestive Surgery, MIR (1989-1993).
- ♦ Associate Professor since 2013, Surgery Department, University of Santiago de Compostela.
- ♦ Tutor and Professor of Bariatric Surgery Courses Obesity section of the Spanish Association of Surgery.

**Dr. Antozzi, Luciano**

- ♦ Vice-coordinator of the Bariatric Endoscopy Committee of the Argentine Society of Obesity Surgery.
- ♦ PhD in Medicine from Maimónides University, Buenos Aires, Argentina.
- ♦ Clinical Surgical Specialist awarded by District X - Italian Hospital of Bahía Blanca.
- ♦ Bariatric Surgery Specialist.
- ♦ Specialist in esophago-gastric surgery and therapeutic endoscopy of the upper digestive tract.
- ♦ Intern at the Surgery Department of the Hospital Italiano, Bahía Blanca, Argentina
- ♦ Intern at the Esophago-gastric Department at the Italian Hospital of Bahía Blanca.
- ♦ Coordinator of the Esophago-gastric Surgery Department at the Italian Hospital of Bahía Blanca.
- ♦ Bariatric surgery intern at the Bahía Blanca Special Surgery Center of Bahía Blanca.
- ♦ Active Member of the Argentinian Association of Surgery.
- ♦ Member of the Esophago-gastric Surgery Committee of the Argentinean Association of Surgery.
- ♦ Active member of the Argentine Society of Obesity Surgery.

**Dr. Pagán Pomar, Alberto**

- ♦ Clinical Chief of the Esophagogastric and Morbidly Obese Surgery Unit. General and Digestive System Surgery Department. Son Espases University Hospital Palma, 2015-present.
- ♦ Founder of Integral Centre of Nutrition of the Balearic Islands (CINIB). Palma, 2015-present.
- ♦ DamiáCarbó 2020 Award from the Official College of Physicians of the Balearic Islands: "Biliopancreatic diversion in the surgical treatment of morbid obesity. Long-term results and metabolic consequences". Authors: Bianchi A, Pagán A, Marina Jiménez, José Antonio Martínez, Francesc Xavier González.
- ♦ Degree in Medicine and Surgery from the Autonomous University of Barcelona in 1983.
- ♦ Specialization in Clinical Management. Balearic Islands Official Medical College, 2003-2004.
- ♦ On Line Course of Fundamentals in Bariatric and Metabolic Surgery. SECO, 2009-2010
- ♦ University expert in Management and Use of Minimally Invasive Technologies in Surgery. Complutense University of Madrid, 2004-2005.
- ♦ Master's Degree in Obesity and its Comorbidities: Prevention, Diagnosis, and Integral Treatment. Rey Juan Carlos University, Alcorcón (2017-2018)

**Dr. Martínez Ubieta, Fernando**

- ♦ Coordinator of the Obesity and Metabolism Surgery Unit at Viamed Montecanal Hospital in Zaragoza, Spain
- ♦ Coordinator of the Obesity and Metabolism Surgery Unit at Viamed Los Manzanos Hospital in Logroño.
- ♦ Student intern of the Chair of Surgical Pathology and Clinical Surgery "A" (Prof. Lozano) during the academic years 1978-79 and 1979-80.
- ♦ Degree in Medicine and Surgery from the Faculty of Medicine at the University of Zaragoza, 1974-80.
- ♦ Bachelor's Degree Revalidation on July 12, 1980.
- ♦ Certificate in General Medicine in the Spanish National Health System and in the EEC countries, issued by the Ministry of Health on April 1, 1994.
- ♦ Specialist in General and Digestive System Surgery (Via RMI) in the 1981 uptake, and was a resident at the Clinical University Hospital of Zaragoza from 1982 to 1987.

**Dr. Alfaro Almajano, Enrique**

- ♦ Specialist in Digestive System Unit. Lozano Blesa Clinical University Hospital. Zaragoza (2019-present) Degree in Medicine. University of Zaragoza. 2008-2014
- ♦ RMI training in Digestive System in Lozano Blesa Clinical University Hospital. Zaragoza
- ♦ Specialist in Digestive System Unit. Lozano Blesa Clinical University Hospital. Zaragoza
- ♦ Resident Intern in Digestive System in Lozano Blesa Clinical University Hospital. Zaragoza (2015-2019)
- ♦ Professional Master's Degree in Initiation to Research in Medicine. Faculty of Medicine. University of Zaragoza 2016-2017
- ♦ University expert degree: Emergencies in Gastroenterology and Hepatology. Distance Learning University of Madrid (UDIMA) 2017.
- ♦ Master in Gastroenterological and Hepatobiliary Emergencies. Distance Learning University of Madrid (UDIMA). 2018-2020

**Dr. Cañamares Orbís, Pablo**

- ♦ Facultative Area Specialist in the Digestive System at San Jorge University Hospital, Huesca (2019- present)
- ♦ Degree in Medicine from the Complutense University of Madrid, 2014.
- ♦ Specialist in the Digestive System since 2019.
- ♦ Professional Master's Degree in Initiation to Research in Medicine from the University of Zaragoza.
- ♦ Master's Degree in Gastroenterological and Hepatobiliary Emergencies from the Distance Learning University of Madrid.
- ♦ Resident in Lozano Blesa University Clinical Hospital, Zaragoza (2015-2019).
- ♦ Facultative Area Specialist in the Digestive System at Donostia Hospital (2019)

**Dr. Mayo Ossorio, M<sup>a</sup> de los Angeles**

- ♦ Coordinator of the Bariatric and Esophagogastric Surgery Unit of the General and Digestive System Surgery Service of the HUPM of Cádiz since 2012.
- ♦ Degree in Medicine and Surgery from the University of Cadiz (1985-1992).
- ♦ PhD in Medicine and Surgery from Cadiz University (1998) with the qualification of outstanding Cum Laude.
- ♦ Master's Degree in Obesity Surgery. Francisco de Vitoria University (2019).
- ♦ University Expert in Esophagogastric and bariatric surgery. CEU Cardenal Herrera University. January 09, 2017.
- ♦ Assistant in the General Surgery team at Maria Social Institute in Cadiz, 1992 to 2004.
- ♦ Specialist Physician in the Department of General and Digestive System Surgery at Puerta del Mar University Hospital in Cadiz (2005-2020).
- ♦ Associate Professor of Surgery in the Faculty of Medicine at the University of Cadiz (2010-present).

# 04

# Structure and Content

The contents of this Postgraduate Diploma have been developed by the different experts involved in the program, with a clear purpose: to ensure that our students acquire each and every one of the necessary skills to become true experts in this field. A complete and well-structured program that will take you to the highest standards of quality and success.





“

*A comprehensive teaching program, structured in well-developed teaching units, oriented toward learning that is compatible with your personal and professional life”*



## Module 1 Basics of Metabolic Surgery

- 1.1. Metabolic Syndrome and Mediators of Inflammation
  - 1.1.1. Bariatric Surgery vs Metabolic Surgery Anatomic-Physiological Basis of Metabolic Surgery
  - 1.1.2. Control Mechanisms of the Different Comorbidities Associated with Obesity
  - 1.1.3. Future Perspectives of Metabolic Surgery
- 1.2. Pathophysiology of Diabetes Medical and Dietary Treatment of Diabetes
  - 1.2.1. Insulin and Alteration in its Cellular Response.
  - 1.2.2. Hyperglycemia, Hyperlipidemia and Tissue Damage
  - 1.2.3. Energetic Metabolism Alterations
  - 1.2.4. Associated Phenomena; Inflammation, Apoptosis, Steatosis and Cellular Fibrosis
- 1.3. Role of Gastrointestinal Hormones in the Resolution of Type 2 Diabetes Mellitus after Bariatric Surgery
  - 1.3.1. Introduction
  - 1.3.2. Gastrointestinal Hormones Involved in the Metabolism of Glucose
    - 1.3.2.1. Incretin Effect
  - 1.3.3. Pathophysiology and Etiopathogenesis of Type 2 Diabetes in Obese Patients
    - 1.3.3.1. Role of Gastrointestinal Hormones in Resistance to Insulin
  - 1.3.4. Contribution of Bariatric Surgery to the Resolution of Type 2 Diabetes
    - 1.3.4.1. Weight Loss
    - 1.3.4.2. Modification of Nutrients and Microbiota
    - 1.3.4.3. Effect of Gastrointestinal Hormones: Proximal and Distal Bowel Theory
  - 1.3.5. Evidence of Bariatric Surgery in Type 2 Diabetes
    - 1.3.5.1. Short and Long term Impact of Bariatric Surgery in Regulating Glucose Metabolism
    - 1.3.5.2. Medical vs Surgical Treatment
    - 1.3.5.3. GBP vs VG
- 1.4. Concept of Metabolic Surgery, Concept and Scientific Evidence
  - 1.4.1. Introduction: History of Metabolic Surgery
  - 1.4.2. Concepts of Metabolic Surgery:
    - 1.4.2.1. General Concepts: Obesity Surgery and the Metabolic Complications
    - 1.4.2.2. Specific Concepts: Diabetes Surgery
  - 1.4.3. Indications of Metabolic Surgery:
    - 1.4.3.1. Indications in Diabetic Patients with Morbid Obesity



- 1.4.3.2. Indications in Type 2 Diabetic Patients with BMI 35-40
- 1.4.3.3. Indications in Diabetic Patients with BMI < 30
- 1.4.4. Surgical Defects
  - 1.4.4.1. Classic Techniques (Gastric Banding, Vertical Gastrectomy, Gastric Bypass and Biliopancreatic Bypass)
  - 1.4.4.2. New Techniques: BAGUA SADI-S, Gastroileal Bypass of One Anastomosis, others)
- 1.4.5. Current Scientific Evidence on Metabolic Surgery
- 1.4.4. Ethical and Deontological Aspects of Metabolic Surgery
- 1.5. Importance of Loop Lengths in Bariatric Surgery
  - 1.5.1. Determining the Cutting Points
  - 1.5.2. Patient Monitoring
  - 1.5.3. Comorbidity Remission
- 1.6. Influence of the Microbiota in Bariatric Surgery
  - 1.6.1. Microbiome: basic concepts
  - 1.6.2. Microbiome and Obesity
  - 1.6.3. Changes in Microbiome after Bariatric Surgery
- 1.7. Obesity and NASH Role of the Liver as Metabolism Regulator
  - 1.7.1. Role of the Liver as Metabolism Regulator
  - 1.7.2. Obesity and Non-Alcoholic Fatty Liver Disease
  - 1.7.3. Bariatric Surgery and Non-Alcoholic Fatty Liver Disease
- 1.8. Influence of Bile Acids
  - 1.8.1. Bile Acid Synthesis and Hepatic Circulation
  - 1.8.2. Regulation of Dietary Fat Availability by Bile Acids
  - 1.8.3. Main Bile Acid Receptors: TGR5 - FXR
  - 1.8.4. Regulation of Metabolism by the Bile Acids
  - 1.8.5. Metabolic Effects of Manipulating Intestinal Bile Acid Availability after Bariatric Surgery
- 1.9. Influence of Bariatric Surgery on Hypogonadism and Polycystic Ovary Syndrome (POS)
  - 1.9.1. Prevalence of Male Hypogonadism and POS in Bariatric Surgery Candidates
  - 1.9.2. Effects of Bariatric Surgery in the Hormonal Concentrations of Patients with Male Hypogonadism and the Semen Quality
  - 1.9.3. Effects of Bariatric Surgery on the Resolution of POS and Female Fertility
- 1.10. Timing of Metabolic Surgery and its Effect on the Pancreas
  - 1.10.1. Time as a Predictor of Diabetes Resolution after Metabolic Surgery
  - 1.10.2. Pancreas Remodeling Capacity of the Pancreas in Man versus Animal Models
  - 1.10.3. Regeneration of the Pancreas and Hyperinsulinism after Bariatric Surgery

## Module 2 Transplantation, Abdominal Wall and Special Situations in Bariatric Surgery

- 2.1. Technical Considerations in the Perioperative Management of the Morbidly Obese Patient with Associated Abdominal Wall Pathology
  - 2.1.1. Preoperative Optimization
  - 2.1.2. Obesity Surgery Before Wall Surgery
  - 2.1.3. Dermolipectomies as an Associated Procedure in Abdominal Wall Reconstruction
- 2.2. Solid Organ Transplant and Bariatric Surgery
  - 2.2.1. Obesity and Donors
  - 2.2.2. Transplantation and Surgical Technique
  - 2.2.3. Post-Transplant Obesity: Metabolic Syndrome
  - 2.2.4. Bariatric Surgery and Liver or Kidney Transplant
- 2.3. Obesity and Gastroesophageal Reflux
  - 2.3.1. Pathophysiology of Reflux Diagnostic tests
  - 2.3.2. GERD in the Context of Obesity
  - 2.3.3. GERD Therapy Focus in an Obese Patient
    - 2.3.3.1. Medical Treatment
    - 2.3.3.2. Surgical Management
  - 2.3.4. Monitoring of Patient with GERD
- 2.4. Management of a Morbidly Obese Patient What is the Ideal Strategy?
  - 2.4.1. Definition of a Superobese Patient
  - 2.4.2. Is a Superobese Patient Different to a Simple Obese Patient?
  - 2.4.3. Multidisciplinary Preoperative Management of the Superobese Patient
  - 2.4.4. Role of an Intra-gastric Balloon in a Superobese Patient
  - 2.4.5. Anesthetic Management and Monitoring of the Superobese Patient
  - 2.4.6. Surgery in Superobese Patients Is There a Technique of Choice?
  - 2.4.7. What Results Can We Expect Following Surgery in Superobese Patients?
  - 2.4.8. Nutritional Monitoring in a Superobese Patient After Surgery
- 2.5. Surgery in a Patient with BMI <35
  - 2.5.1. Introduction
  - 2.5.2. Impact of Class I Obesity (BMI 30-35kg/ m<sup>2</sup>) On Health
  - 2.5.3. Non-Surgical Treatment of Class I Obesity
  - 2.5.4. Evidence in the Literature on Bariatric Surgery in BMI 30-35 Kg/M<sup>2</sup>
  - 2.5.5. Safety of Bariatric Surgery
  - 2.5.6. Cost-Benefit Ratio

- 2.5.7. Recommendations from Different Scientific Societies
- 2.6. Pregnancy and Bariatric Surgery
  - 2.6.1. Perinatal Risks and Complications in Pregnant Women undergoing Bariatric Surgery
  - 2.6.2. Management of Pregnant Woman Undergoing Bariatric Surgery
- 2.7. Adolescents and Bariatric Surgery Technique and Results
  - 2.7.1. Adolescents and Morbid Obesity
  - 2.7.2. Indications and Current Situation
  - 2.7.3. Therapeutic Perspectives and Results
- 2.8. Effects of Bariatric Surgery on Bone Metabolism
  - 2.8.1. Introduction
  - 2.8.2. Pathophysiological Mechanisms
    - 2.8.2.1. Malabsorption of Nutrients
    - 2.8.2.2. Mechanical Disorders
    - 2.8.2.3. Neurohormonal Mechanisms
  - 2.8.3. Effects of Bariatric Surgery on Bone Metabolism
    - 2.8.3.1. Adjustable Gastric Band
    - 2.8.3.2. Gastric Bypass
    - 2.8.3.3. Vertical Gastrectomy
    - 2.8.3.4. Biliopancreatic Diversion- Duodenal Crossover
  - 2.8.4. Fracture Risk
  - 2.8.5. Recommendations in the Preoperative Evaluation and Treatment of Bone Metabolism Alterations after Bariatric Surgery.
    - 2.8.5.1. Preoperative Evaluation
    - 2.8.5.2. Treatment of Bone Metabolism Alterations after Bariatric Surgery
- 2.9. Other Special Situations in Bariatric Surgery
  - 2.9.1. Inflammatory Bowel Disease
  - 2.9.2. Heart Disease
  - 2.9.3. Kidney Diseases
  - 2.9.5. Neurological Diseases and Mobility Problems
  - 2.9.5. Psychiatric Illness

- 2.10. Sarcopenia and Loss of Muscle Mass
  - 2.10.1. Body Tissue
  - 2.10.2. Energy Expenditure
  - 2.10.3. Sarcopenia
    - 2.10.3.1. Definition
    - 2.10.3.2. Assessment
    - 2.10.3.3. Sarcopenic Obesity
  - 2.10.4. Changes in Body Composition in Bariatric Patients
  - 2.10.5. Inconveniences of Loss of Fat-Free Mass in Bariatric Patients

### Module 3 Revision Surgery

- 3.1. Definition and Indications of Revision Surgery
  - 3.1.1. Definition and Indicators of the Success or Failure of the Bariatric Surgery
  - 3.1.2. Indications of Revision Surgery
  - 3.1.3. General Features of Revision Surgery
  - 3.1.4. Surgical Strategy in Revision Surgery
  - 3.1.5. General Criteria According to the Type of Primary Technique
- 3.2. Revision Surgery of Techniques No-Longer Used
  - 3.2.1. Introduction. Historical Review
  - 3.2.2. Description of Techniques No-Longer Used
  - 3.2.3. Indications of Revision Surgery
  - 3.2.4. Preoperative Study and Preparation of the Patient
  - 3.2.5. Therapy Options
  - 3.2.6. Conclusions
- 3.3. Revision Surgery Following Adjustable Gastric Band
  - 3.3.1. Introduction, Indications and Basic Principles When Should We Consider Bandage Revision Surgery?
  - 3.3.2. Revision Surgery Following Adjustable Gastric Band Technique Analysis of Surgery
  - 3.3.3. Revision Surgery Following Adjustable Gastric Band: Results
- 3.4. Revision Surgery after a Vertical Gastrectomy
  - 3.4.1. Motives and Candidates for Revision Surgery after a Vertical Gastrectomy
  - 3.4.2. Revision Surgery Due To Insufficient Loss or Weight Regain after Vertical Gastrectomy
    - 3.4.1.1. Duodenal Crossover / SADI-S Revision or 2nd Part
    - 3.4.1.2. Gastric Bypass as an Alternative to Duodenal Crossover

- 3.4.1.3. Other Possible Alternatives?
  - 3.4.2. Revision Surgery for GER after Vertical Gastrectomy
    - 3.4.2.1. Gastric By-Pass as the Best Option
    - 3.4.2.2. Other Possible Alternatives?
- 3.5. Revision Surgery after a Gastric Bypass
  - 3.5.1. Introduction
  - 3.5.2. Indications
    - 3.5.2.1. Insufficient Weight Loss
    - 3.5.2.2. Weight Regain
    - 3.5.2.3. Persistence of Comorbidities
    - 3.5.2.4. Late Complications
      - 3.5.2.4.1. Reservoir Dilatation
      - 3.5.2.4.2. Alterations of the Gastro-Gastric Anastomosis
      - 3.5.2.4.3. Gastroesophageal Reflux
      - 3.5.2.4.5. Internal Hernias
      - 3.5.2.4.6. Malnutrition
      - 3.5.2.4.7. Hypoglycemia
  - 3.5.3. Technical Aspects
    - 3.5.3.1. Reconnection of the Reservoir
    - 3.5.3.2. Reparation of the Gastro-Gastric Anastomosis
    - 3.5.3.3. Modification of Handle Length
    - 3.5.3.4. Conversion of Normal Anatomy
  - 3.5.4. Conclusions
- 3.6. Revision Surgery after a One Anastomosis Bypass
  - 3.6.1. Introduction
  - 3.6.2. Relevance of a Correct Technique
  - 3.6.3. Indications
    - 3.6.3.1. Weight Loss or Weight Regain
    - 3.6.3.2. Persistence of Comorbidities
    - 3.6.3.3. Gastroesophageal Reflux
    - 3.6.3.4. Nutritional Disorders
  - 3.6.4. Technical Aspects
  - 3.6.5. Results
  - 3.6.6. Conclusions
- 3.7. Revision Surgery after a Duodenal Crossover
  - 3.7.1. Revision Surgery after a Duodenal Crossover
    - 3.7.1.1. Revision Surgery for Nutritional Complications
      - 3.7.1.1.1. Indications
      - 3.7.1.1.2. Technique Options
  - 3.7.2. Revision Surgery for Insufficient Weight Loss or Weight Regain after Duodenal Crossover
    - 3.7.2.1. Indications
    - 3.7.2.2. Technique Options
- 3.8. Revision surgery after BPD
  - 3.8.1. Indications of Revision Surgery for Biliopancreatic Diversion
  - 3.8.2. Revision Surgery due to Insufficient Loss or Weight Regain after Biliopancreatic Diversion
  - 3.8.3. Medical-Surgical Criteria for Revision Surgery for Protein Malabsorption
    - 3.8.3.1. Technique Options in Revision Surgery for Severe Protein Deficiency
  - 3.8.4. Revision Surgery in Ulcerative Complications of Gastrojejunal Anastomosis in Biliopancreatic Diversion
- 3.9. Revision surgery after SADI-S
  - 3.9.1. Medium and Long-Term Results of SADI-S, Common Problems
  - 3.9.2. Indications of Revision Surgery after SADI-S
  - 3.9.3. Technique Options in Revision Surgery for Severe Protein Deficiency
- 3.10. Role of Endoscopic Surgery in the Management of Complications and Weight Regain
  - 3.10.1. Introduction
  - 3.10.2. Gastrointestinal Bleeding
  - 3.10.3. Anastomotic Ulcers
  - 3.10.4. Stenosis
  - 3.10.5. Leakages and Fistulas
  - 3.10.6. Pancreatobiliary Pathology
  - 3.10.7. Weight Regain



05

# Methodology

This training provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

This teaching system is used in the most prestigious medical schools in the world, and major publications such as the ***New England Journal of Medicine*** have considered it to be one of the most effective.



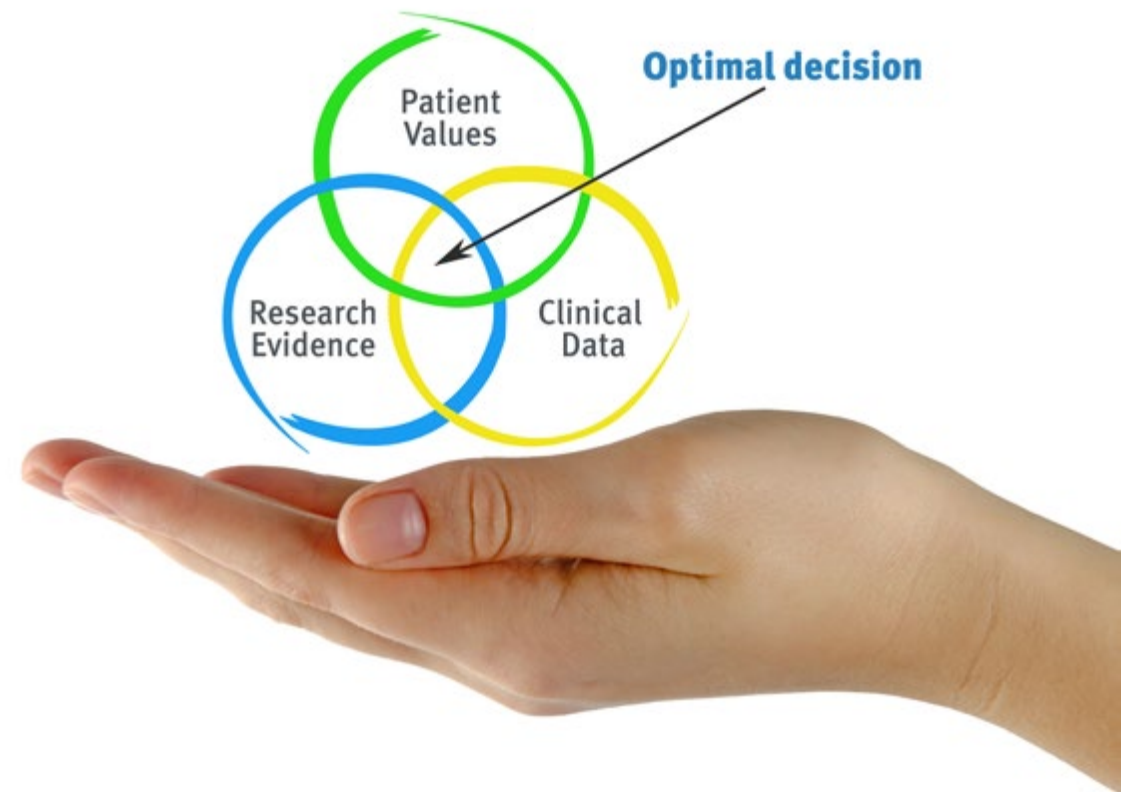
“

*Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization”*

## At TECH we use the Case Method

In a given situation, what would you do? Throughout the program you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you can experience a way of learning that is shaking the foundations of traditional universities around the world.*



According to Dr. Gervas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching potential or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.

“

*Did you know that this method was developed in 1912 at Harvard for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”*

The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the program.





## Re-learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our University is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.



*The physician will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*

At the forefront of world teaching, the Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 250,000 physicians with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Re-learning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

In our program, learning is not a linear process, but rather a spiral (we learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by our learning system is 8.01, according to the highest international standards.



In this program you will have access to the best educational material, prepared with you in mind:



#### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



#### Latest Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



#### Interactive Summaries

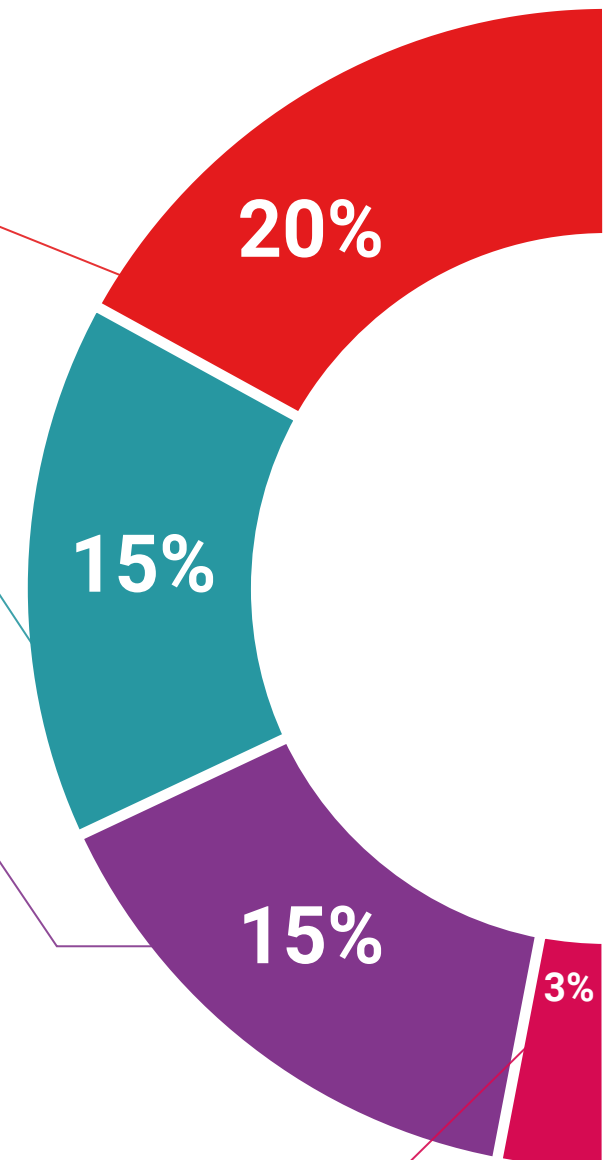
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.





#### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Retesting

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



#### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an expert strengthens knowledge and memory, and generates confidence in our future difficult decisions.



#### Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.





06

# Certificate

The Postgraduate Diploma in Revision Surgery, Metabolic Surgery and Special Situations After Bariatric Surgery guarantees, in addition to the most rigorous and updated training, access to a qualification issued by TECH Global University.



“

*Successfully complete this training  
and receive your diploma without  
travel or laborious paperwork.*

This program will allow you to obtain your **Postgraduate Diploma in Revision Surgery, Metabolic Surgery and Special Situations After Bariatric Surgery** endorsed by **TECH Global University**, the world's largest online university.

**TECH Global University** is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

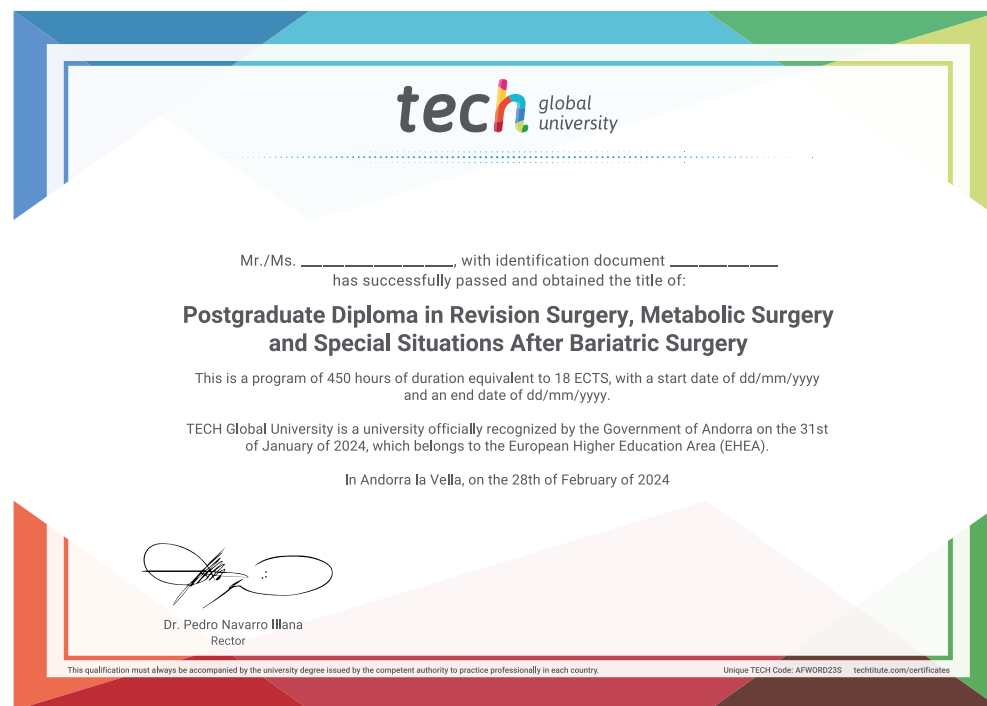
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Revision Surgery, Metabolic Surgery and Special Situations After Bariatric Surgery**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

future

health

confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

**tech** global  
university

## Postgraduate Diploma

Revision Surgery, Metabolic  
Surgery and Special Situations  
After Bariatric Surgery

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online



# Postgraduate Diploma

Revision Surgery, Metabolic Surgery and  
Special Situations after Bariatric Surgery

