





# Professional Master's Degree

Update on Bariatric Surgery

Course Modality: Online
Duration: 12 months

Certificate: TECH Technological University

Official No of hours: 1,500 h.

Website: www.techtitute.com/in/medicine/professional-master-degree/master-update-bariatric-surgery

# Index

01		02			
Introduction		Objectives			
	p. 4		p. 8		
03		04		05	
Skills		Course Management		Structure and Content	
	p. 16		p. 20		p. 50
		06		07	
		Methodology		Certificate	
			p. 68		p. 76





# tech 06 | Introduction

The Professional Master's Degree in Update on Bariatric Surgery not only covers all the controversial topics in the field of obesity surgery, but also expands upon the contents of other similar master's degree program. Therefore, it is undoubtedly the most complete and up-to-date Professional Master's Degree on the market.

Among the aspects which differentiate this course from others, there is a module dedicated to endoscopic and percutaneous treatments, the management and treatment of bariatric emergencies, the monitoring and nutritional requirements of the patient in the postoperative period, and a module related to metabolic surgery.

In the past few years, we have seen the emergence of multiple new endoscopic and percutaneous treatments aimed at treating obesity and the associated complications, but its actual usefulness is relatively unknown. The Professional Master's Degree aims to provide up-to-date information on the different alternatives to endoscopic obesity treatment that currently exist. The main focus is on technical aspects and on the existing evidence in the literature on its clinical utility, both in the primary treatment of obesity and in its therapeutic role in weight regain, or in the management of post-surgical complications.

The peculiarities of morbidly obese patients in postoperative care, which differentiate them from standard postoperative patients, have led to the creation of a module exclusively dedicated to the management of postoperative emergencies in this type of patient. This module is of paramount importance due to the legal implications involved. Although postoperative complications are infrequent these days, ignoring these peculiarities can lead to a fatal outcome for the patient. Therefore, it is essential that every surgeon who wants to enter into a multidisciplinary bariatric surgery unit possesses this knowledge.

What differentiates this program from other master's degrees on the market, is the focus on the follow-up treatment and nutritional needs of a bariatric patient during the postoperative period. The bariatric surgeon must know how to appropriately monitor their patients, know how to identify and correlate the patient's symptoms with possible nutritional deficits and to adopt the appropriate therapeutic measures in each case.

This **Professional Master's Degree in Update on Bariatric Surgery** contains the most complete and up-to-date scientific program on the market. The most important features of the program include:

- The latest technology in online teaching software
- A 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
- · Autonomous 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 that are permanently available, even after the course





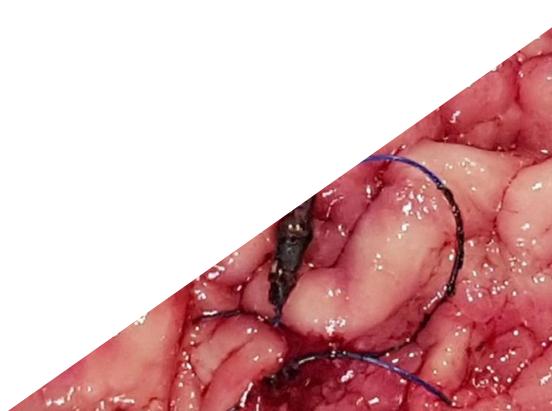
The teachers of this Professional Master's
Degree have been selected based on two
criteria: the excellence of their medical
practice in the field of the creation, promotion
and maintenance of the bariatric units, and
their proven didactic capacity: To offer you
the high-quality program that you need"

Our teaching staff is composed of medical professionals, practising specialists. In this way we ensure that we deliver the up-to-date educational program that we are aiming for. A multidisciplinary team of medical professionals with training and experience in different environments, who will develop the theoretical knowledge in an efficient way, but, above all, will contribute their practical knowledge derived from their own experience to the course: one of the aspects that sets this Professional Master's Degree apart.

This mastery of the subject is complemented by the effectiveness of the methodology used in the design of this Professional Master's Degree. 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 learning.

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.

With a methodological design based on proven teaching techniques, this master's degree will take you through different teaching approaches to allow you to learn in a dynamic and effective way.







# tech 10 | Objectives



- Learn the key elements of obesity surgery
- Perform an exhaustive review of the latest scientific evidence available
- Describe and understand the most advanced techniques in bariatric surgery
- Describe the theoretical framework and praxis of multidisciplinary obesity teams
- Describe the aspects of clinical management
- Describe the aspects of economic management
- Describe the medical legal aspects of bariatric surgery
- Describe the different endoscopic and percutaneous techniques in the treatment of obesity
- Analyze the short-term to medium-term results achieved with these procedures
- Evaluate complications
- Establish the mechanisms of action for each technique
- Know the historical background and beginnings of obesity surgery
- Study the different surgical techniques in the treatment of obesity
- Establish which is the most appropriate surgical technique for each patient
- Define ERAS protocols in bariatric surgery
- Break down the different sections within the protocol
- Analyze the results obtained through the implementation of these protocols
- Understand the importance of multidisciplinary management
- Describe the semiology peculiarities of the bariatric patient and the different tools available for the diagnosis of complications

- Know the most common surgical complications involved in bariatric surgery
- Evaluate the specific medical and nutritional complications during bariatric procedures
- 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
- Determine how different techniques can influence the evolution of the patient
- Monitor the nutritional evolution of the patient
- Establish the basic recommendations in relation to the special nutritional requirements of children, adolescents and elderly candidates in bariatric surgery
- Know the nutritional requirements during pregnancy and breastfeeding in women who have previously undergone bariatric surgery
- Identify the specific nutritional risks of the menopause after bariatric surgery
- Know the history, concept and indications of metabolic surgery
- Understand the Anatomo-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
- Analyze the available evidence on bariatric surgery in patients with BMI < 35 kg/m2, in super obese patients, adolescents and women who wish to procreate.
- To 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
- Obtain a general vision of the psychotherapy approach in postoperative follow-up care
- Know the criteria used for the initial assessment of a patient with esthetic consequences of obesity after bariatric surgery
- Establish quality standards and appropriate educational programs
- Identify the most recent technical advances (robotic surgery and NOTES)



Take advantage of the opportunity and take the step to get up to date on the latest developments in Bariatric Surgery"

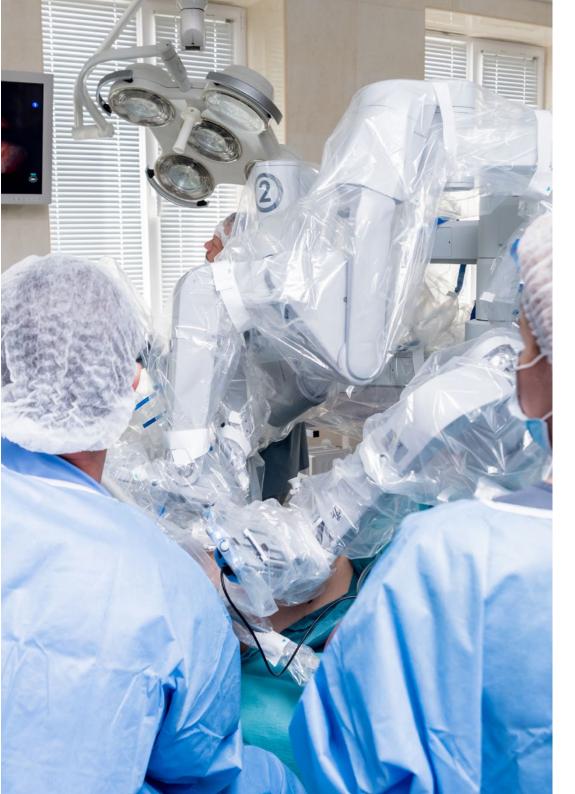
# tech 12 | Objectives



#### **Specific Objectives**

- Gain an in-depth understanding of obesity as a clinical condition and its pathophysiology
- Correctly evaluate a patient with obesity
- Learn advanced practical knowledge of dietary, pharmacological treatment and movement education of obesity
- Establish the physiological principles of action in these procedures
- Describe the development of techniques
- Analyze hormonal effects
- Justify the causes of decreased appetite
- Analyze the safety of treatment
- Evaluate the quality of life during and after the treatment
- Describe adjuvant methods with a synergistic effect in these procedures
- Know the historical framework of the origin of each of the bariatric techniques
- Describe step-by-step the development of surgical techniques
- Establish the physiological bases and mechanisms of action in these procedures
- Highlight the most accepted indications of each of the interventions
- Analyze the short-term to medium-term results achieved with these procedures
- Explain the postoperative complications associated with each of the different surgical techniques
- Analyze the role of each of the members of a multidisciplinary group
- Establish the importance of information and patient participation in perioperative care

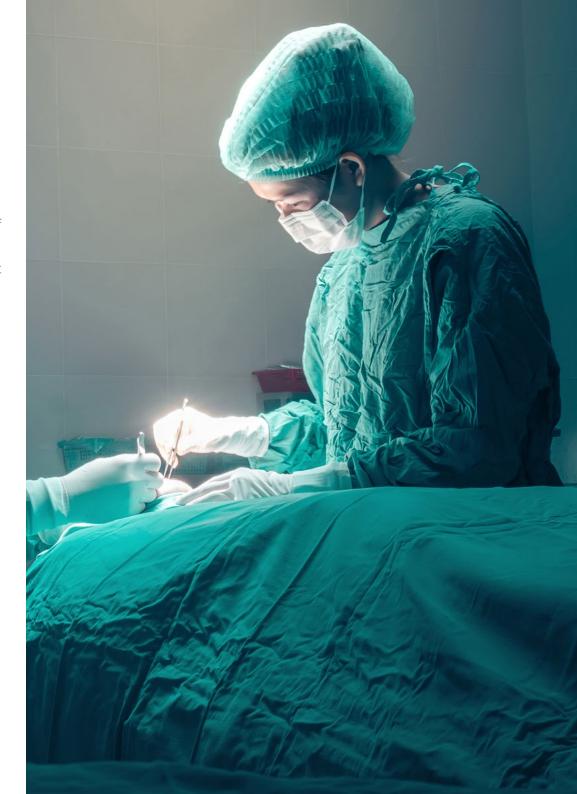
- Evaluate the importance of creating protocols
- Define the measures included in the ERAS protocols
- Analyze the peculiarities of the ERAS protocols in bariatric surgery
- Identify problems in the implementation of protocols
- Develop strategies to promote universal implantation
- Establish guidelines and advice for the reintroduction of physical activity after surgery
- Understand the benefits of weight loss, nutritional optimization and comorbidity preoperatively in bariatric surgery
- Know the guidelines for dietary treatment after bariatric surgery, depending on the type of surgery
- Identify the specific nutritional risks in the perioperative period
- Analyze the most important findings in the anamnesis and physical examination of bariatric patients, as well as the usefulness of each of the auxiliary diagnostic methods
- Describe the most important complications in endoscopic treatment procedures for obesity, as well as their diagnosis and management
- Study the relative aspects of leakages and fistulas following the different types of surgical techniques, determining the most appropriate algorithm in the treatment of each one
- Establish the main causes of intestinal obstruction which occurs in patients undergoing bariatric surgery, their differential diagnosis and treatment
- Know the most important aspects in the treatment and management of gastrointestinal bleeding and/ or hemoperitoneum after bariatric surgery



- Study the etiology and management of marginal ulcer, stenosis and abdominal digestive disorders in the bariatric patient
- Analyze hepato-biliary complications resulting from post-surgical intestinal malabsorption and bacterial overgrowth after surgery
- Establish the diagnosis and treatment of endocrine, cardiac and renal complications in the postoperative period of bariatric surgery
- Describe the nutritional or toxic deficits most frequently seen in the emergency department after obesity surgery.
- Study the etiology and chronic pain management 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 towards 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.

# tech 14 | Objectives

- Examine the most frequent indications for revision surgery after biliopancreatic diversion.
- Establish the most appropriate surgical options in revision surgery due to the occurence of 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.
- Describe the parameters to be evaluated in a correct nutritional assessment.
- Define the guidelines for providing appropriate nutritional education.
- Analyze the nutritional needs of patients in relation to an intervention.
- Establish a program fro monitoring the nutritional status of a patient.
- Identify the nutritional risk during pregnancy and breastfeeding in women who have previously undergone bariatric surgery.
- Know the maternal-fetal outcomes of this type of pregnancy.
- Identify the specific risks of each type of surgery.
- Know the guidelines for supplementation of micronutrients during pregnancy and breastfeeding.
- Know the nutritional treatment guidelines during menopause in women who have previously undergone bariatric surgery.
- Identify the occurrence of anemia, hypoproteinemia and neurological disorders.
- Understand the importance of loop lengths in bariatric surgery.
- Determine the influence of the 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.
- Know the regeneration changes in the pancreas and hyperinsulinism after bariatric surgery.
- Analyze the safety of treatment in patients with BMI < 35kg/m2.
- 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.

- Analyze the psychological profile of the "bariatric patient" and there difficulties in adapting to the postoperative process.
- Learn about the process of psychological evaluation and intervention following surgery aimed at enhancing the benefits of surgery and reduce the risk of weight regain.
- Identify the most common areas of the body affected by excess skin following weight loss.
- Know the most relevant surgical techniques used according to the affected area, to remove excess skin.
- Identify the benefits of robotic surgery and NOTES.
- Establish the criteria for prioritizing patients on the surgical waiting list.
- Analyze the cost benefit relationship in bariatric surgery.
- Establish quality standards.
- · Assess the advantages and disadvantages of bariatric tourism.
- · Identify quality of life indicator parameters.
- Weigh up the pros and cons of different surgical training methods.





# tech 18 | Skills



### **General Skills**

- Implement the most important elements of the Multidisciplinary Obesity Team
- Be able to create or improve the multidisciplinary obesity team
- Manage relationships between associated multidisciplinary departments
- Enhancing all aspects of 360° care for morbidly obese patients
- Recognize the appropriate intervention techniques for each case
- Correctly deal with the existing intervention techniques in bariatric surgery
- Organize all aspects of a Bariatric Surgery Unit with real efficacy
- Increase the number of interventions performed





- Confidently and safely manage the indications of endoscopic and surgical treatments
- Know how to prepare a patient for bariatric surgery as well as how to select them with the surgical technique criteria
- Manage the protocols which allow professionals in the EMO to develop their practice with security, making the correct decisions in accordance with the best evidence and medical praxis
- Know how to use endoscopic techniques
- Know the indications and their clinical management with agility and security
- Perform the implantation and removal of endoscopic elements safely (endoscopic physicians, gastroenterologists or surgeons)
- Select the best bariatric technique for each patient
- Possess advanced theoretical knowledge for professional practice
- Elaborate a realistic, high-quality protocol focused on the patient's needs and the possibilities in their surroundings
- Early diagnosis
- Safely and effectively manage complications arising from this surgery

- Confidently evaluate a bariatric surgery patient "in failure"
- Determine the cause of the failure and outline the best plan, surgical or otherwise, for its treatment
- Confidently evaluate a Type 2 Diabetic patient
- Determine if they have surgery indiciations
- Define the patient's expectation of results and choose the best technique for the patient
- Determine which elements are key (and which are not) for the transmission of knowledge in bariatric activity
- Start your scientific activity with a lower volume of cases than other teams who do not have this knowledge
- Design an FEMO with a viable and sustainable business plan structure
- Specify in the business plan, the key elements to ensure it is cost-effective
- Carry out practice with legal security
- Be able to cope before, during and after any legal contingency





# tech 22 | Course Management

#### 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-...)
- PhD in Medicine from the University of Miguel Hernández de Elche (2013). (Oustanding "Cum Laude")
- Fellowship in Gastric Oncology Surgery in the "Gastric Cancer Department" in the 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 Dgree 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

- Bariatrci 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 Madric
- Degree in Medicine from the Autonomous University 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

# tech 24 | Course Management

#### **Professors**

#### Dr. Trullenque Juan, Ramón

- PhD in Medicine from the University of Valencia (2001). (Oustanding "Cum Laude")
- Degree in Medicine from the University of Valencia (1987 1993)
- Clinical symptoms Master's Degree in Medical and Clinical Management Spanish Open University in the Carlos III Health Institute. (2016-2017)
- Specialist in General and Digestive System Surgery. Dr Peset University Hospital, Valencia (1995-2000)
- Complete Training Diploma by the Spanish Society of Obesity Surgery (SECO)
- Medical Specialist in the Department of General and Digestive System Surgery at the Dr Peset University Hospital of Valencia (2000- 2012) Esophagogastric, Bariatric and Wall Surgery Unit
- Head of Esophagogastric, Bariatric and Wall Surgery Department. (2013)

#### Dr. Jiménez, José María

- Administration and clinical management of patients of the European Accreditation Council for Bariatric Surgery of the Center of Excellence for the Study and Treatment of Obesity.
   Valladolid. Bariatric Surgery Unit (2010-Present)
- Professor in the Nursing Faculty. Valladolid
- PhD from the University of Valladolid. University Diploma in Nursing
- Master's Degree in Integrated Management. University expert in Health Organization and Management
- Master's Degree Health Emergencies and Disasters
- University specialist in Gender Studies and Equality Policy Management
- Attending Nurse at the Río Hortega University Hospital, Valladolid (2009-2018)

#### Ms. Vallejo, Carmen

- Resident of Anesthesiology and Resuscitation at the La Princesa Hospital
- Degree in Medicine. Autonomous University of Madrid (2001-2007)
- Resident of Anesthesiology, Resuscitation, and Pain Management. La Princesa University Hospital, Madrid (2008-2012)
- European Diploma in Anesthesiology and Critical Care awarded by the ESA (European Society of Anesthesiology). Part I and II. 2012
- PhD program in Surgery and Medicine in Autonomous University, Madrid. Research work, Researcher Sufficiency "Descriptive observational study on the relationship between cerebral, central venous oxygen saturations and proBNP with perioperative complications in thoracic surgery". Grade. Outstanding
- Rotation at Saint Thomas Hospital in London, in Intensive Care Unit and High Dependency Unit (July 2011)
- Rotation in La Paz Children's Hospital (April, May, June 2011)
- Rotation in Maternity at La Paz Hospital (Nov-Dec, 2009)
- Faculty Specialist in Anesthesiology and Resuscitation at UH. de la Princesa (July-September 2012)
- Faculty Specialist in Anesthesiology and Resuscitation at UH Rey Juan Carlos (Sept 2012-July 2015)
- Faculty Specialist in Anesthesiology and Resuscitation at UH de la Princesa (since July 2015)

#### Pujol, Juan

- Head of the general and digestive surgery unit of the Mi Tres Torres clinic in Barcelona and coordinator of the obesity and metabolic surgery unit (UCOM)
- Postgraduate Diploma in Bariatric and Metabolic Surgery for the Spanish Society of Obesity Surgery of which he is one of the founding members
- World Society for the Surgery of Obesity Career Achievement Award 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 where he has treated hundreds of cases throughout his extensive professional career

#### Dr. Picardo, Antonio L.

- Head of the Surgery at Infanta Sofía University Hospital. San Sebastián de los Reyes, Madrid
- Professor of Surgery. European University of Madrid
- PhD in Medicine and Surgery Faculty of Medicine. Surgery Department. Complutense University of Madrid. Madrid. Grade: Outstanding Award
- Degree in Medicine and Surgery. Faculty of Medicine. Autonomous University. Madrid.
   Grade: Outstanding
- Specialist in General and Digestive System Surgery. Residency training program. San Carlos University Hospital. Madrid
- Certified by the Educational Commission for Foreign Medical Graduates (ECFMG)

- Research Fellowship in Surgical Oncology. Surgery Department. Memorial Sloan-Kettering Cancer Center. New York, USA
- ANECA Accreditation
- European Board Certificate in Endocrine Surgery
- SECO Accreditation (Spanish Society of Obesity Surgery). Level: EXPERT

#### Dr. García Marín, Andrés

- Specialist in General and Digestive System Surgery at Hellín Hospital (Albacete) since December 2018
- PhD in Medicine from the Miguel Hernandéz de Elche University 2017, the qualification of "outstanding cum laude."
- Degree in Medicine from the Complutense University of Madrid, 2004
- Positive accreditation as Professor Hired Doctor and Private University, by the National Agency for Quality Assessment and Accreditation (ANECA) in 2018
- Master's Degree in Coloproctology (Colorectal and Pelvic Floor Surgery) from the University of Zaragoza (2016)
- Expert in Health Law from University of Alicante (2015)
- Specialist in General and Digestive System Surgery. Gregorio Marañón General University Hospital, Madrid (2005-2010)
- Degree in Medicine from the Complutense University Madrid (1998 2004)
- Specialist in General and Digestive System Surgery at San Juan de Alicante Hospital (June 2010- November 2018)

# tech 26 | Course Management

#### Dr. Valle de Lersundi, Álvaro Robin

- Specialist in General and Digestive System Surgery at Henares University Hospital since 2008
- PhD in Surgery from the Complutense University of Madrid
- Degree in Medicine and Surgery from the Autonomous University of Madrid in 1998
- Teaching collaborator since 2011 at the Francisco de Vitoria University (Madrid. Spain)
- Resident in General and Digestive System Surgery in San Carlos Clinical Hospital (Madrid) since 1999 until 2004
- Specialist in General and Digestive System Surgery

#### Dr. Torres García, Antonio José

- Professor of Surgery. Head of the Surgery Department. Faculty of Medicine. San Carlos Clinical Hospital. Complutense University of Madrid. Madrid. 2001- present
- Degree in Medicine and Surgery: University of Malaga. June 1978
- Degree: Degree: University of Malaga. October 1978
- PhD in Medicine and Surgery: Complutense University of Madrid. April 1983
- General and Digestive System Surgery Resident Intern. Carlos Haya University Hospital.
   Malaga.1979-1981
- Thoracic Surgery Resident Intern. San Carlos Clinical Hospital. Madrid.1981-1985
- Surgery Department Specialist. San Carlos Clinical Hospital. Madrid.1986-1987
- Titular Professor Surgery Department Specialist. Faculty of Medicine. San Carlos Clinical Hospital. Complutense University of Madrid. Madrid. 1987-1992
- Titular Professor Head of the Surgery Department. Faculty of Medicine. San Carlos Clinical Hospital. Complutense University of Madrid. Madrid. 1992-2000
- Professor of Surgery. Head of the Surgery Department. Faculty of Medicine. San Carlos Clinical Hospital. Complutense University of Madrid. Madrid. 2000-2001

#### Dr. Bolaños Muñoz, María de Lourdes

- Professor in the Neuropsychology Laboratory in the Neurosciences Institute
- Degree in Clinical Psychology from the Autonomous University of Guadalajara
- PhD in Behavioral Sciences, Neuroscience Orientation from the University of Guadalajara
- Member of the National Society of Researchers (SNI) as "Candidate to National Researcher" as of January 1, 2019

#### Dr. Mayo Ossorio, Ma 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 the University Cadiz (1998) with the qualification of outstanding cum laude
- Master's Degree in Obesity Surgery. Francisco de Vitoria University (2019)
- Postgraduate Diploma in Esophagogastric and bariatric surgery. CEU Cardenal Herrera University. 09/01/2017
- Assistant of surgical team of General Surgery at the Maria Social Institute in Cadiz from 1992 to 2004
- Medical Specialist in the Department of General and Digestive System Surgery at the Puerta del Mar University Hospital of Cadiz (2005-2020)
- Associate Professor of Surgery at the Faculty of Medicine of the University of Cadiz (2010-presen)

#### Fernández Cebrián, José María

- Specialist in General and Digestive System Surgery
- Degree from the School of Medicine. Complutense University of Madrid. September 1979-July 1985
- PhD: Faculty of Medicine. Complutense University of Madrid. 1985-1987
- Competitive exam for the provision of training positions for specialists in 1986, specializing in General and Digestive Surgery in the C.E. Ramon and Cajal, Madrid, from 1986 to 1990
- General Practitioner in Public Social Security Systems for Member States European Communities
- Management and Directing and Clinical Units
- Advanced Program in Management in Health Institutions-III edition University of Navarra.
   IESE 2009

#### 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 Madrid
- Faculty Specialist at the Hospital Foundation of Alcorcón (1999-2008)
- Faculty Specialist 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 since 2013 at the Autonomous University of Madrid. Associate Professor (1993-1998) at the Technical University of Much (Germany)

#### Dr. Barragán Serrano, Cristina

- Residency at La Paz University Hospital (2015 2020)
- Assistant in the Esophagogastric and Obesity Unit at Jímenez 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
- ACS Speaker at the Course on Minimally Invasive Surgery in the MIS-ITEC section. Virtual ACS Classroom. Teaching in times of crisis

#### Durán, Carlos

- Head of the General and Digestive System Surgery Department at La Luz Quirón Hospital.
   Madrid
- Degree in Medicine and Surgery from the Complutense University Madrid (1977/ 1983)
- Specialist in General and Digestive Surgery at the Hospital De La Princesa in Madrid. Dr Modesto Martinez Piñeiro Service. (1988)
- Member of different scientific societies
- Spanish Society of Surgery
- Spanish Society of Obesity Surgery
- International Federation for Surgery of Obesity and Metabolic Disorders (ISFO) since 2008
- Inguinal hernia surgeon (transabdominal approach TAPP), colo-rectal surgery by single port and obesity surgery where he has developed his experience, collaborating in the teaching of these techniques to various surgeons who have come to the service

# tech 28 | Course Management

#### Dr. Zubiaga, Lorea

- Medical Surgeon for the University of Los Andes (Merida- Venezuela) Magna-Cum Laude
- 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. Oustanding, 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)

#### Dr. Royo Dachary, Pablo

- Degree in Medicine and Surgery from the University of Zaragoza (1998-2004).
- PhD in Medicine from the University Zaragoza (2008)
- Resident Intern at Zaragoza Clinical Hospital. General and Digestive System Surgery Department. (2005-2010)
- Area Specialist in General Hospital de la Defensa, Zaragoza in the General Surgery Department (2010)
- Area Specialist in San Jorge de Huesca Hospital, in the General Surgery Department (2011-2013)
- Area Specialist in Clinical Hospital of Zaragoza in the General Surgery Department. (2013-2019)
- Area Specialist in Miguel Servet Hospital, Zaragoza in the General Surgery Department (since 2019)
- ERAS Spain training program coordinator 2015 2016
- IMPRICA training program coordinator (implementation of the RICA pathway) in Surgery 2017 - 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, Residency Internship (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. Durán Poveda, Manuel

- Degree in Medicine and Surgery from the Complutense University of Madrid. 1992
- Professional Master's Degree in Senior Management of Health Services and Business Management (3rd Edition) Laín Entralgo Agency for Training, Research and Health Studies and the University of Alcalá de Henares. 2007
- Master's Degree in Health Management and Research Tools. National University for Distance Learning. 2011
- Co-director of Master's Degree in Obesity.
- General Surgery Resident Teaching Tutor for Interns and Residents. Fuenlabrada Public Hospital. Madrid. Start: 31/03/2004- End: 16/01/2012
- Head of Medicine and Surgery Department. Rey Juan Carlos University. Faculty of Health Sciences. Madrid. Start: 10/07/2009- End: 03/07/2013
- Head of Studies. Rey Juan Carlos University Hospital. Madrid. Dedication regime: Part time teaching tutor. Start: 19/09/2014- present
- Director of the Research Group "Obesity and Diabetes Lilly-Universidad Rey Juan Carlos".
   (2017- present)

#### Dr. Bretón Lesmes, Irene

- Specialist in Endocrinology and Nutrition
- Attending Physician in Endocrinology and Nutrition Department. Gregorio Marañón General University Hospital, Madrid
- Member of the Obesity Unit at Monteprincipe University Hospital
- Degree in Medicine and Surgery from the Autonomous University of Madrid
- Doctor of Medicine and Surgery, from the Complutense University of Madrid
- Specialist in Endocrinology and Nutrition
- Master's Degree in Management of Endocrinology and Nutrition Care Units from the Menéndez Pelayo International University
- Member of ESPEN Faculty

#### Dr. Montoya Álvarez, Teresa

- Degree in Medicine and Surgery from the University of Navarra 1995-2001
- Head of Endocrinology and Nutrition Department at Infanta Elena University Hospital from October 2019
- Master's Degree in Obesity and its Comorbidities. Prevention, Diagnosis, and Integral Treatment. Rey Juan Carlos University. V Edition. 60 credits ECTS 2016/2017
- Researcher at Universidad Autónoma de Madrid (2007)
- Diploma in Advanced Studies at Autonomous University of Madrid (2007)
- Clinical Tutor of Residents of 1st and 5th Year of Medicine Students Francisco de Vitoria University
- Secretary of the Neck and Bariatric Surgery Committee. HUIE since 2010 onwards
- HUIE Documentation and Quality Commission until 2017 Professional Experience
- Attending Physician in the Endocrinology and Nutrition Department at the Infanta Elena Hospital.(2007-2019)

- Resident Doctor at Getafe University Hospital (2002-2006)
- EASO (European Association for the study of Obesity) Corporate Accreditation as a Leading Center for Comprehensive Obesity Management (2018-2021)
- Specialist in General and Digestive System Surgery
- Diploma of Expert Level Competence from the Spanish Society of Obesity Surgery (SECO).
- Diploma in Obesity and Metabolic Diseases Surgery. European Accreditation Council for Bariatric Surgery of IFSO

#### Dr. Corripio Sánchez, Ramón

- · Head of the Bariatric Surgery Unit. La Paz University Hospital
- Quality Coordinator of General and Digestive System Surgery. La Paz University Hospital
- Specialist in General and Digestive System Surgery at Torrelodones University Hospital -Monteprincipe
- Faculty Specialist. Esophagogastric and Bariatric Surgery Unit. Jiménez Díaz Foundation Hospital and Collado Villalba General University Hospital. 2015- present.
- Degree in Medicine and Surgery from the Complutense University of Madrid.
- Specialist in General and Digestive System Surgery. Gregorio Marañón General University Hospital
- Accreditation Diploma of FAST and Ultrasound course for surgeons by 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)

# tech 30 | Course Management

#### Dr. Castro Alija, María José

- Nutrition Specialist in Valladolid Health Clinic
- Consultant Physician at the Center of Excellence for the Treatment of Obesity and Metabolic Diseases in Valladolid
- PhD in Medicine and Surgery from the University of Valladolid
- Degree in Medicine and Surgery from the University of Valladolid in 1992
- Doctor Professor since 2002 at the University of Valladolid in the following subjects,
- Clinical Nutrition
- Dietetics and Diet Therapy
- Extensive teaching experience, with 4 five-year teaching periods recognized by the University of Valladolid with a rating of excellent in the DOCENTIA program

#### 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 Esophagogastroenterology 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- Residency Internship 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 Degree 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, IFS03, SENPE4, AEC5

#### Dr. Puigdevall Gallego, Víctor

- Doctor of Medicine and Surgery
- Specialist in Endocrinology and Nutrition in Soria Hospital Complex
- Associate Professor in Valladolid University (academic courses 2005-2021)

#### Dr. Laguna Sastre, José Manuel

- Head of General and Digestive Surgery Services at the General University Hospital of Castellón. Since February 2020 to present
- Degree in Medicine and Surgery from the University of Valladolid in 1986
- PhD in Medicine and Surgery from the University of Alcalá de Henares 1998
- Specialist in General and Digestive Surgery, General University Hospital of Castellón since January 1993 until January 2015 (with a statuatory fixed place since April 2005)
- Head of the Bariatric, Endocrine and Breast Surgery Section of the General and Digestive Surgery Service of the Hospital General Universitario de Castellón. Since January 2015 until February 2020
- Certified Specialist in General and Digestive System Surgery. Ramón y Cajal Hospital.
   Madrid. January 1993
- University Diploma in Laparoscopic Surgery. Montpellier University. 2001 2002

#### 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 Digestve 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 by 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. Botella Carretero, José Ignacio

- 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 (ISCII) 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. Bruna Esteban, Marcos

- Facultative Area Specialist. Section of Esophagogastric Surgery and Peritoneal Carcinomatosis. General and Digestive System Surgery Department
- Doctor of Medicine "Cum Laude" from the University of Valencia (2015)
- Degree in Medicine from the Faculty of Medicine at the Autonomous University of Madrid 2003
- Residency Intership training in General and Digestive System Surgery, obtaining the qualification EXCELLENT in the Consorcio General University Hospital of Valencia in 2009.
- Advanced Studies Diploma (2007) from the University of Valencia in the Department: Surgery and its Specialities
- Full Training Level Diploma of Competence by the Spanish Society of Obesity Surgery (2016)
- Faculty Specialist Physician (FEA), Section of Esophagogastric Surgery, Morbid Obesity and Abdominal Wall. General and Digestive System Surgery Department: Consorcio General University Hospital of Valencia from 3rd June 2009 until 1st March 2019
- Coordinator of Transplant Unit. Center: Consorcio General University Hospital of Valencia from April 2013 until 1st March 2019
- Chair of the Section of Esophagogastric Surgery of the Spanish Association of Surgeons from January 2019 to November 2020
- Secretary of the Section of Esophagogastric Surgery of the Spanish Association of Surgeons from January 2015 to November 2019
- Coordinator of Esophagogastric Surgery Working Group in the Spanish Multimodal Rehabilitation Group (GERM) from January 2016 to present

# tech 32 | Course Management

#### Dr. Santos Benito, Francisco Fernando

- General and Digestive System Private Surgeon. Virgen de Fátima de Vigo Hospital,
   La Rosaleda de Santiago de Compostela and currently Quirón-Domínguez Hospital in Pontevedra
- Degree in Medicine and Surgery, 1993, Faculty of Medicine. University of Salamanca
- PhD in Medicine and Surgery, 1998, Department of Surgery, Faculty of Medicine. University
  of Salamanca
- Specialist in General and Digestive System Surgery through the Residency Internship program at Clinical University Hospital, Salamanca
- Master's Degree in Laparoscopic Surgery. Institute of Digestive Diseases in the Foundation Clinic, University Clinical Hospital of Barcelona
- Master's Degree in Pancreatic and Esophageal Surgery. Hammersmith University Hospital, London
- Master's Degree in Laparoscopic Surgery. Montpellier University Hospital
- Clinical Assistant at Amato Lusitano de Castelo Branco Hospital Coimbra
- Clinical Assistnat at Santiago de Compostela University Clinical Hospital
- Head of the Surgical Performance Unit. Virgen de Fátima de Vigo Hospital Pontevedra
- Registered activity in Pontevedra and La Coruña, with number 15/3705782

#### Dr. Serrano Moreno, Clara

- · Specialist in Endocrinology and Nutrition. Gregorio Marañón General University Hospital
- Faculty Specialist in Endocrinology and Nutrition in Alcorcón Foundation Hospital
- Resident Intern in Endocrinology and Nutrition in Alcorcón Foundation Hospital
- Degree in Medicine. Navarra University
- Master's Degree in Clinical Nutrition from the University of Granada

#### Dr. Cuadrado Ayuso, Marta

- Faculty Area Specialist Ramón y Cajal Hospital (2016- present). Esophagogastric and Bariatric Surgery Unit
- Degree in Medicine and Surgery from the Autonomous University of Madrid (2010)
- Master's Degree in Update on General and Digestive System Surgery, Cardenal Herrera University CEU (2020)
- Specialist in General and Digestive System Surgery, Gregorio Marañón General University Hospital (2016)
- Facultative Area Specialist at El Escorial Hospital (2016)
- Faculty Specialist in the private field, Torrelodones (2016)
- Faculty Specialist in the private field, La Luz Hospital (2019)

#### Hernández García, Artur Marc

- Coordinator of the exercise program for bariatric patients at Miguel Hernández University
- Degree in Physical Activity and Sports Science from the University of Valencia (2012)
- Master's Degree in Performance and Health from Miguel Hernández University (2013)
- PhD in Health Psychology from Miguel Hernández University (2017)
- Project Researcher "Physiological and Psychological Effects of Exercise in Patients Put
  Forward for Bariatric Surgery". Development of study design, coordination and supervision
  of the training sessions, data collection, statistical analysis and document writing

#### Dr. Martínez Amorós, Rosana

- Clinical Psychologist in the Mental Health Unit of San Vincent of Raspeig (Alicante) Since May 2019
- Degree in Psychology from the University of Valencia
- Specialist in Clinical Psychology

- 2016-2019 Clinical Psychologist in the Mental Health Unit of Altabix de Elche (Alicante)
- 2013-2016 Clinical Psychologist at the Elche University General Hospital (Alicante) dependent on the Valencian Health Agency
- 2006-2013. Sexologist in the Reproductive and Sexual Health Center of Novelda-Aspe (Alicante) dependent on the Valencian Health Agency
- October 2004- October 2006. Clinical Psychologist in the day center of the C.V Foundation.
   Santos Andrés and Santiago de Sueca (Valencia)
- May 2004- September 2004. Coordinator of the moderate and severe intellectual disability ward of the Pere Mata University Psychiatric Hospital of Reus (Tarragona)

#### Dr. Almeida Ponce, Helen

- Facultative Area Specialist at Alcañiz Hospital, Alcañiz
- Degree in Medicine from catholic University of Santiago de Guayaquil (2004-2010) Validated in Spain (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 on 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 ErnestLluch Hospital, Calatayud

#### Dr. Sánchez López, José Daniel

- Attending Physician in General and Digestive Surgery Services at Infanta Sofía University Hospital (San Sebastián de Los Reyes, Madrid) from 2008 to present
- Degree in Medicine and Surgery from the University of Alcalá de Henares, Madrid (1990)
- Residency internship training as Specialist in General and Digestive System Surgery at 12th October University Hospital.(Madrid). 1992-1996

- PhD in Medicine and Surgery, from the Complutense University of Madrid. (Outstanding"Cum Laude" 1999)
- University Expert in Minimally Invasive Surgery. Complutense University of Madrid (1999)
- Master's Degree in Medical Management from the International School of Senior Hospital Management (2004)
- SECO accreditation as Bariatric Surgeon. Complete Training Diploma by the Spanish Society of Obesity Surgery (SECO). November 2017
- Attending Physician in General and Digestive Surgery Services at Prince of Asturias University Hospital (Alcalá de Henares, Madrid) from 1999 to 2008. Statutory position by competitive examination since 2005
- Laparoscopic Obesity Surgery (Restrictive, Malabsorptive and Mixed Techniques)
- Laparoscopic Esophagogastric Surgery (hiatal hernia, gastroesophageal reflux, gastric cancer, esophageal cancer...)
- Laparoscopic Surgery of the inguinal hernia and eventration

#### 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 Residency internship: Pamplona Hospital of Navarra (Jan1995- Dec 1999)
- 2. Attending Physian in General and Digestive System Surgery (Jan 2000- Jan 2019)
- Degree in Medicine: Navarra University. Spain. June 1992

#### 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

# tech 34 | Course Management

- 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. Balagué Ponz, Maria Carmen

- Attending Physician for General and Digestive Surgery Services at Hospital de la Sta. Creu i Sant Pau of Barcelona
- Coordinator of the Functional Unit of Bariatric and Metabolic Surgery of the Hospital de la Sta. Creu i Sant Pau of Barcelona
- Degree in Medicine and Surgery from the University of Barcelona. 1989
- Specialist in General and Digestive Surgery. MIR 1991-95. Barcelona Clinical Hospital
- PhD in Medicine and Surgery from the University of Barcelona. 1998
- Attending Physician for General Surgery Services at Clinical Hospital Barcelona. 1,999-2,002
- Professor of Surgery at UD Sant Pau. Autonomous University of Barcelona (2007)

#### Dr. Gómez Correcher, María Amparo

 Department Specialist Physician at the Hospital Arnau de Vilanova from January 2019 to the present. PhD in Clinical and Surgical Sciences with the thesis entitles: Effect of axillary lavage with gentamicin solution on drainage debit after axillary lymphadenectomy in breast cancer patients. Miguel Hernández University. 29/07/2014

- Specialist in General and Digestive System Surgery Training Period: 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 Physician at the Hospital of Vilanova from May 2015 September 2015
- Department Specialist 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

#### Ms. Llavero Garrido, Carolina

- Operating Room, Resuscitation and CMA Service. Southeast Hospital Arganda del Rey (Madrid). (2008– present.)
- Collaborating researcher in several research lines developed in bariatric surgery and obesity
- Diploma in Nursing from the Alfonso X University

#### 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
- Residency internship 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's Degree in Gastroenterological and Hepatobiliary Emergencies. Distance Learning University of Madrid (UDIMA). 2018-2020
- 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. Moreno Sanz, Carlos

- Head of Surgery Services at General Hospital Mancha Centro and General Hospital of Tomelloso
- Specialist in General and Digestive System Surgery with specific focus on Minimally Invasive Surgery and its Innovations
- Honorary Member of European Fellow in Minimally Invasive Surgery
- Professor in the International Doctorate School at the University of Castilla La Mancha
- Professor in the Master's Degree in Coloproctology of the University of Zaragoza and the Master's Degree in Update in General Surgery and Digestive System from the CEU University

#### Dr. García Villabona, Esther

- Attending Physician (Anaethesiology, Resuscitation and Pain Treatment) La Princesa University Hospital
- Degree in Medicine: University of Salamanca (1999-2005)
- Specialized Training in Medicine: Resident of Anesthesiology, Resuscitation, and Pain Management. La Princesa University Hospital Madrid. 2006-2010

- Resident Intern in La Princesa University Hospital. May 2006- May 2010. External Rotations at La Paz University Hospital: -Maternity: 2 months (Jan-Feb 2008) - Infantil: 3 months Oct-Dec 2009
- External Rotation at Gregorio Marañón University Hospital
- PCU Rotation (Postoperative Care Cardiac Surgery). February-March 2010. External Rotation in "Memorial Sloan-Kettering Cancer Center" Hospital (New York): Thoracic Surgery, ICU, Pain Unit. Duration 2 months: June-Julio 2009

#### Dr. García Muñoz-Najar, Alejandro

- Specialist Physician, Department of General and Digestive System Surgery, Rey Juan Carlos University Hospital (Madrid). Abdominal Wall Surgery Unit. Endocrine Surgery Unit. Coordinator of the Bariatric and Metabolic Surgery Unit (2014-...)
- Degree in Medicine from the University of Navarra (1988 1994)
- Specialist in General and Digestive System Surgery. 12th October University Hospital (Madrid) 1995-1999
- Medical Specialist in the Department of General and Digestive System Surgery at the University Hospital of Fuenlabrada (Madrid). Endocrine and Bariatric Surgery Unit (2004-2014)

#### 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 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

# tech 36 | Course Management

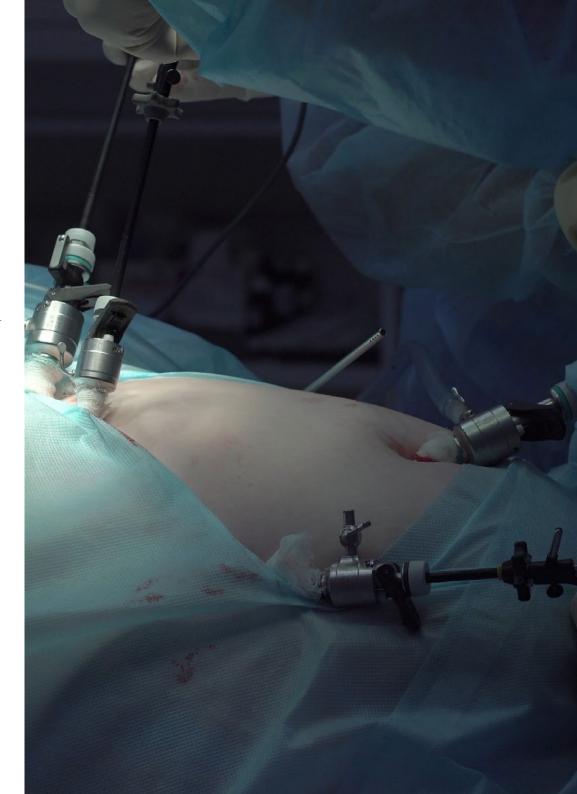
- Professor of the subject "surgical conditions" at the University School of Nursing SalusInfirmorum, attached to the University of Cadiz. 1995-2000
- Professor of the subject "medical-surgical nursing" at the University School of Nursing SalusInfirmorum, attached to the University of Cadiz. 2000-2005

#### Dr. Valentí Azcárate, Víctor

- Degree in Medicine and Surgery from the Faculty of Medicine of the 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. García Gómez de las Heras, Soledad

- Degree in Medicine and Surgery (June 1998), Faculty of Medicine in the Complutense University of Madrid
- PhD in Medicine and Surgery (June 2002, Outstanding Cum Laude), Faculty of Medicine in 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. Bordallo Cortina, Alberto

- Degree and PhD in Medicine and Surgery
- Specialist in General and Digestive System Surgery
- · Bariatric and metabolic surgeon. SECO Diploma
- Head of the Surgery Department of the HLA Hospital, Denia (Spain)
- He has performed more than than 5,000 laparoscopic procedures
- Chief Surgeon of IntraObes Denia

#### Dr. Ferrero Celemín, Esther

- Faculty Specialist. General and Digestive Surgery Department at Infanta Sofía University Hospital (San Sebastián de Los Reyes, Madrid) from 2013 to present
- Degree in Medicine from the Complutense University Madrid (1990 1996)
- Specialist in General and Digestive System Surgery, Digestive System Surgery and Intestinal Organ Transplant Service of the "Hospital 12 de Octubre", Madrid (prof. E. Moreno González). (1998-2003)
- Doctorate courses in the Department of Surgery and obtaining the recognition of research proficiency. (1999-2001)

- Complete Training Diploma by the Spanish Society of Obesity Surgery (SECO) March 2019
- Instructor of the laparoscopic TAPP/TEP Hernia Training Course. Infanta Sofía Hospital (Madrid). (2016, 2017,2018 and 2019)
- Author of content for teaching use in the academic program of Tech Technological Mexico University, carried out in the 2019-2020 editions: Professional Master's Degree in General and Digestive System Surgery. ESOPHAGOGASTRIC SURGERY. Esophageal Diverticula
- Resident in General and Digestive System Surgery in Carlos III Clinical Hospital, Madrid (2004-2008.)
- Participation in the general surgery service of Sur de Alcorcón Hospital (Madrid) as an autonomous surgeon (2004-2008)
- Faculty Specialist. General and Digestive System Surgery Department in Infanta Leonor University Hospital, Madrid (2008-2013.)

#### Ms. Escudero Pallardó, Lluch

- Degree in Nutrition
- IntraObes Team Nutrition Manager

#### 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 Offical Medical College, 2003-2004

### tech 38 | Course Management

- 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. 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 Anaethesia, Resuscitation and Pain Treatment, 30 ECTS. Jiménez Díaz Foundation Nursing School, Autonomous University of Madrid

#### Dr. Zúñiga Ruiz, Alejandro

- In charge of the Emergency Department at Doctors Hospital East, Guadalupe Nuevo Leon, Mexico
- General Surgeon in General Surgery Department at the General Hospital in Zone 2 of the Mexican Institute of Social Security in Apizaco; Tlaxcala, Mexico
- General Surgeon in the General Surgery Department in Institute of State Security and Social Services in Zona Tlaxcala General Hospital; Mexico
- Specialist in Bariatric and Metabolic Surgery from the José Eleuterio Gonzalez University Hospital, Autonomous University of Nuevo León, Monterrey, Mexico
- Specialist in General Surgery at the José Eleuterio Gonzalez University Hospital, Autonomous University of Nuevo León, Monterrey, Mexico

- Bachelor's Degree in Surgery and Midwifery, Autonomous University of Nuevo Leon, Monterrey, Mexico
- Certification in Bariatric and Metabolic Surgery from the Mexican Council of General Surgery A.C. (2020)
- High Speciality Course in Bariatric and Metabolic Surgery from the José Eleuterio Gonzalez University Hospital, Autonomous University of Nuevo León, Monterrey, Mexico. (2019-2020)

#### Dr. Castellón Pavón, Camilo

- Associate Chief at Rey Juan Carlos Hospital (Móstoles) from March 16, 2018 to present
- Degree in Medicine and Surgery. Autonomous University of Madrid (1992)
- Doctor of Medicine. Complutense University of Madrid. Madrid 2006
- Specialist in General and Digestive System Surgery
- "Expert in Health Management" from the European Institution of Health and Social Wellbeing (2007)
- ESADE Professional Master's Degree "Being a leader at Quirónsalud" (2017)
- Resident Tutor of the General Surgery Service at Rey Juan Carlos University Hospital (Móstoles) from December 2019

#### Dr. Paiva, Gabriel

- Faculty Specialist-Paraguayan Laparoscopic Center Advanced Laparoscopic Surgery
- Faculty Specialist- Santa Julia Medical Center- Bariatric and Metabolic Surgery Unit (2017-2020)
- PhD in Medicine from the Faculty of Medicine at the Asunción National University Paraguay (2005)
- Specialist in General and Digestive System Surgery. General University Hospital of Castellón, 2008–2013
- Educational Comission for Foreign Medical Graduates (ECFMG) (EEUU) 2007 MD Degree

- International College of Surgeons Fellow in Laparoscopic and Bariatric Surgery 2016
- Robotic Bariatric Sugery IRCAD Strasbourg France 2018
- Active member of the Latin American Association for Endoscopy Surgery, 2017
- Paraguayan Society for Bariatric and Metabolic Surgery- Former President

#### Dr. Rodríguez Carrillo, Rodolfo

- Co-Coordinator of the Bariatric and Metabolic Surgery Unit of the Sagunto Hospital
- 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
- Attending Physician of the General and Digestive System Surgery Service at the Manises Hospital (Valencia) from May 2009- February 2021
- Attending Physician for General and Digestive Surgery Services at Sagunto Hospital (Valencia) since February 2021

#### Dr. Sartal Cuñarro, Ma Isabel

- Degree in Medicine from the Faculty of Medicine at the University of Santiago de Compostela, A Coruña. 2000-2006
- 2007 2012: Specialist training in General and Digestive System Surgery via Residency internship in the Santiago de Compostela University Hospital Complex between May 2007 and May 2012.

- 2009 2011: Completion of doctoral courses: Advances in Surgery, Anesthesia and Ophthalmology. Diploma of Advanced Studies from the University of Santiago de Compostela with work on "Emergency Treatment of Colon Cancer". Surgery Department. University of Santiago de Compostela. RD 185/1985, 778/1998
- 2017: Cum Laude in the Doctoral Thesis "Treatment of rectal cancer by laparoscopic surgery: applicability and results". Surgery Department. University of Santiago de Compostela
- 2018 2019: Professional Master's Degree in General and Digestive System Surgery.
   Taught and accredited by Cardenal Herrera University with 60 credits and 1500 hours
- 2019 2020: Master's Degree in Legal and Forensic Medicine. Taught and accredited by Cardenal Herrera University with 60 credits and 1500 hours
- 2002: Practice in Microbiology and Biochemistry Laboratories at Pontevedra Hospital Complex
- 2003 2004: Clinical Practice in Emergency Services at Pontevedra Hospital Complex.

#### 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 of the Spanish Association of Surgeons. 2007
- Specialist in General and Digestive System Surgery. Gregorio Marañón General University Hospital
- Accreditation Diploma of FAST and Ultrasound course for surgeons by 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).

### tech 40 | Course Management

#### Dr. Molina-Amador García, Alicia

- Dietitian-nutritionist in private practice (2017-present).
- Dietitian-nutritionist postdoctoral researcher linked to research projects in the Surgery Service of the University Hospital Sant Joan de Reus (2016-present).
- PhD in Biomedicine from the Rovira I Virgili University (2016).
- Diploma in Human Nutrition and Diet from the Rovira i Virgili University (2010).
- Master's Degree in Nutrition and Metabolism from the Rovira i Virgili University (2012).
- Master's Degree in genetic, nutritional and environmental determinants of growth and development by the Rovira i Virgili University in 2013.
- Postgraduate Degree in Research: Design and Statistics in Health Sciences from Autonomous University of Barcelona (2014)
- Diploma of Specialized Nutrition in Obesity Surgery from the Mexican College of Obesity Surgery and Metabolic Diseases in 2017.
- Associate Professor in the Surgery Service of the Rovira i Virgili University (2018-present).
- Professor of the Master's Degree in Obesity Surgery SECO/AEC/Editorial Panamericana (2019-present)

#### Dr. Amengual Galbarte, Ángela

- Specialist in Endocrinology and Nutrition. Rey Juan Carlos University Hospital, Madrid (since 2017)
- Degree in Medicine from the Autonomous University Madrid (2006-2012).
- Residency internship training Medical in Endocrinology and Nutrition at the San Carlos Clinical Hospital (2013-2017).
- Maste"s Degree in Obesity and its Comorbidities: Prevention, Diagnosis, and Integral Treatment, from a Preventative, Clinical and Research Perspective. Rey Juan Carlos University, Madrid (2017-2018)
- Diploma in Applied Statistical Analysis in Clinical Research, by the Illustrious Official College of Physicians of Madrid (ICOMEM), 2016.

#### Dr. Acín, Débora

- Attending Physician in General and Digestive System Surgery in the Fuenlabrada University Hospital (August 2011- present) Endocrine and Bariatric Surgery Unit
- PhD in Medicine from Rey Juan Carlos University, Madrid, with an Outstanding Cum Laude Qualification and Outstanding Award.
- Degree in Medicine and Surgery from the Autonomous University of Madrid in (2003).
- General and Digestive System Surgeon associated with the Jiménez Díaz Foundation (March 2011- October 2019)
- Rotation in Bariatric Surgery Unit at Bellvitge University Hospital, Barcelona (November 2011)
- Attending Physician in General and Digestive System Surgery in the Severo Ochoa de Leganés Hospital (April 2011- August 2011)
- Attending Physician in General and Digestive System Surgery in the Infanta Sofía de Parla Hospital (March 2011)
- General and Digestive System Surgery in the Infanta Sofía de Parla Hospital (February 2011 until May 2011)
- Attending Physician in General and Digestive System Surgery in the Fuenlabrada University Hospital (May 2009- February 2011)

#### Dr. Rivaletto, Lucas

- General Surgeon specializing in Laparoscopy
- PhD in Medicine from La Plata National University, Buenos Aires, Argentina.
- Specialist in General Surgery, degree awarded by the Argentine Association of Surgery.
- Diploma in Obesity and Metabolic Diseases Surgery. European Accreditation Council for Bariatric Surgery of IFSO. 2000 hours. Center of excellence for the treatment of obesity and diabetes, directed by Dr. Carbajo, Miguel Ángel. Valladolid, Spain.
- Fellowship in Esophagogastric and Bariatric Surgery at the National University of La Plata.

- Surgeon in the esophago-stomach section and bariatric surgery at the San Martin de La Plata University Hospital from 2016 to date.
- Staff surgeon at La Plata Italian Hospital from 2018 to date.
- Staff Surgeon at CIOBE (Surgery and Obesity) in the City of La Plata from 2016 to date.

#### Dr. Velasco Hernández, Norberto Daniel

- Staff surgeon in the esophago-gastric surgery department of the Hospital Interzonal General San Martín of the city of La Plata.
- Medical Doctor, awarded by the Faculty of Medical Sciences of the National University of La Plata.
- Surgical Clinic, College of Physicians of the Province of Buenos Aires. District 1
- Specialist in General Surgery awarded by the Argentine Association of Surgery.
- Specialist in Gastroenterologic Surgery awarded by the Argentina Catholic University
- Full Member of the Argentina Association of Surgery (MAAC)
- Fellow at American College of Surgeons (FACS)
- Full member of the International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO).
- Full member of the International Society for Diseases of the Esophagus (ISDE).
- Full member of the American Society for Metabolic and Bariatric Surgery (ASMBS).
- Staff Surgeon at La Plata Diagnosis Institute

#### Ms. Posada González, María

- Faculty Specialist in the Esophagogastric and Bariatric Surgery Unit. General and Digestive System Surgery Department. Jiménez Díaz Foundation Hospital (Madrid). (July 2016present)
- 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. Díez del Val, Ismael

- Head of Esophago-gastric and Bariatric Surgery Section, Basurto University Hospital.
- 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. Beisani Pellise, Marc

- Member of the Animal Experimentation Ethics Committee of the Center of Applied Experimental Biomedicine (CREBA) of Lleida (2016-2020).
- ACS Fellowship in Bariatric Surgery at the Hospital Universitari Valld'Hebron (2019-2020)
- PhD in and Surgery, from the Autonomous University of Barcelona (2018) (Outstanding"Cum Laude")

### tech 42 | Course Management

- Specialist in General and Digestive System Surgery in Valld'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 Surgery Unit at Mar Hospital, Barcelona (2018-2019)
- Coordinator of Surgical Acitivity at the Center for Applied Experimental Biomedicine (CREBA) of Lleida (2016-2018)
- Attending Physician in the Surgery Unit at Arnau de Vilanova Hospital, Lleida (2015-2018)

#### Dr. El Mehdi Skalli

- 1995 2003: Medicine Studies at the Faculty of Medicine and Rabat Pharmacy.
- 2nd June 2003: Medicine Studies at the Faculty of Medicine and Rabat Pharmacy.
- 30th April 2010 Diploma in Specialized Studies (DES) in General Surgery from the Faculty of Medicine in Montpellier.
- 28th October 2011: Diploma in Additional Specialized Studies (DESC) in Visceral and Digestive Surgery from the Faculty of Medicine in Montpellier.

#### Dr. Oliver, José Ramón

• General and Digestive System Surgery Service, Soria Healthcare Complex

#### Dr. Solar Peche, Alfonso

- General Surgery and Laparoscopy Doctor, Staff at San Pablo Hospital Complex. San Pablo Clinic, Sede Surco, since July 2019- present.
- Professional degree of Surgical Medicine graduated from the Faculty of Human Medicine of the San Marcos National Higher University, granted on March 22, 2013.
- Second Professional Speciality Degree in General Surgery from the Faculty of Human Medicine of the San Marcos National Higher University, granted on December 6, 2017.

- Master's Degree in Health Services Management, Faculty of Medicine from San Martin de Porres University, from 1st June 2020
- Essalud Medical Internship Program 2012 at the Edgardo Rebagliati Martins National Hospital, from January 1, 2012 to December 31, 2012.
- Doctor SERUMS of the Santiago de Pichus Health Post, Microred Pazos, Tayacaja Health Network, DIRESA Huancavelica from May 06, 2013 to May 05, 2014, Directorial Resolution N°791-2013/GOB.REG-HVCA/DIRESA granted on May 28, 2014.
- Resident Doctor of General Surgery, San Marcos National Higher University, Il Vitarte EsSalud Hospital, Red Desconcentrada Almenara, from July 1, 2014 to June 30, 2017.
- Assistant Physician of General Surgery and Transplantation of the National Hospital Guillermo Almenara Irigoyen EsSalud, in the Liver Transplant Service of the Department of Transplantation, from December 30, 2017 to the present.

#### Dr. Vázquez Martínez, Clotilde

- Head of the Endocrinology and Nutrition Department. Jiménez Díaz Foundation
- Director of the Overweight and Obesity Institute. Jiménez Díaz Foundation
- CIBEROBn and IISFJD Researcher
- Co-Director of the Obesity and Diabetes Chair. Rey Juan Carlos University

#### Dr. Lévano Linares, Dennis César

- Specialist in General and Digestive System Surgery. Rey Juan Carlos University Hospital and Jiménez Díaz Foundation University Hospital (February 2018- present)
- PhD in Medicine from the Autonomous University Madrid. (UAM) 2020. Oustanding CUM LAUDE
- Master's Degree in Colorectal and Pelvic Floor Surgery from the University of Zaragoza (2019).
- Homologation to Degree in Medicine and Surgery by the Ministry of Science and Innovation in 2008.

- Medical Surgeon Degree from San Martin de Porres University in Lima (2007).
- Specialist in General and Digestive System Surgery. Collado Villalba General Hospital (2016 2017)
- Official Title of Medical Specialist in General Surgery and Digestive System. Jiménez Díaz Foundation Hospital
- · University Diploma in Laparoscopic Surgery. Louis Pasteur University. Strasbourg
- European Accreditation in Laparoscopic Surgery by the European Association of Continuing Medical Education (EACCME)
- Training in Minimally Invasive Surgery by IRCAD EITS. University of Strasbourg

#### Dr. Atencia Goñi, José

- Specialist in Endocrinology and Nutrition: Gregorio Marañón General University Hospital
- Division of Endocrinology, Metabolism, and Lipids. Emory University. Atlanta
- Degree in Medicine from the University of Navarra
- Update in the Management of Neuroendocrine Tumors" patroned by Novartis. Net Alliane Meeting Madrid
- TNE Refresher Course" sponsored by IPSEN. Face-to-Face Gregorio Marañón Hospital Madrid

#### Dr. Martínez Ubieto, Fernando

- Coordinator of the Obesity and Metabolism Surgery Unit at Viamed Montecanal Hospital in Zaragoza, Spain
- Coordinator of the Obesity and Metabolism Surgery Unit of the 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 of the University of Zaragoza in the promotion 1974-80.

- Revalidation of Bachelor's Degree 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. Del Castillo Díez, Federico

- Assistant Surgeon at the General Surgery and Digestive System Service of the La Paz University Hospital, Madrid, in the Esophagogastroduodenal and Abdominal Wall Surgery Unit.
- Fellowship in Laparoscopic Esophagogastroduodenal and Obesity Surgery, from the Centre Hospitalier de Luxembourg with Prof. Dr. J.S. Azagra Soria
- Degree in Medicine and Surgery from the Complutense University of Madrid in 2003.
- Member of the Illustrious College of Physicians of Madrid, since 2003.
- Member of the Spanish Association of Surgeons since 2004.
- Member of the Spanish Society of Obesity Surgery and of the International Federation of Surgery of the Obesity, IFSO since 2010.
- Member of the European Endoscopic Surgery Society (EAES) and the European Hernia Society (EHS) since 2015.

#### 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.

### tech 44 | Course Management

- 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 of the Italian Hospital of Bahía Blanca.
- Bariatric surgery intern at the Bahía Blanca Special Surgery Center of Bahía Blanca.
- · Active Member of the Argentina 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.

#### D. Sarmiento Alarcón, Andrei Gustavo

- · Human Medicine, National University of Trujillo.
- Specialty: General Surgery University: San Marcos National University (UNMSM)
  Headguarters: Edgardo Rebagliati Martins National Hospital (HNERM)
- Fellowship in Bariatric and Metabolic Surgery, training in robotic-laparoscopic surgery in obesity and diabetes surgery, with international diploma degree. Center of excellence for the study and treatment of obesity and diabetes
- Diploma in general ultrasound (with post-graduate level): abdominal, soft tissue, musculoskeletal, color Doppler, pediatrics and emergency ultrasound. Obstetricalgynecological ultrasound, 3D, 4D. Trujillo National University
- Diploma in bioethics and health malpractice prevention. Trujillo National University

#### Dr. Deluca, Luciano

- Cirujano de Staff del Servicio de Cirugía General, Programa de Cirugía Bariátrica, Complejo Medico de la PFA Churruca-Visca - CABA - Argentina (2011-presente)
- Staff Surgeon at the CRQO (Center for Surgical Rehabilitation of Obesity Dr. Ezequiel Fernandez) CABA Argentina (2011-present).

- Surgeon, Bariatric Surgery Program, Provincial de Merlo Private Clinic-Buenos Aires -Argentina (2014-present).
- Medical Surgeon of the Bariatric Surgery Program Paysandu Paysandu Uruguay (2018-present).
- Medical Surgeon of the Bariatric Surgery Program Paysandu Paysandu Uruguay (2018-present).
- Medical Surgeon of the Bariatric Surgery Program Obesitac Tacna Peru (2020)
- Honorary Diploma in Medicine from the School of Medicine of the University of Buenos Aires.
- Specialist in General Surgery.
- Specialist in Bariatric and Metabolic Minimally Invasive Surgery.

#### Dr. González Ramírez, Gilberto

- Surgeon, Specialist in Gastrointestinal Surgery, Advanced Laparoscopy, Bariatric and Metabolic Surgery.
- Academic Training
- Surgeon and Midwife graduated from the University of Guadalajara, Jalisco, Mexico.
- Degree in Human Medicine from the University of Guadalajara.
- Specialist in general surgery and digestive system, former civil hospital Fray Antonio Alcalde, University of Guadalajara.
- Bariatric and Metabolic Surgery
- Diploma in Obesity and Metabolic Disorders Surgery, Salvador Zubirán Institute of Medical Sciences, Mexico City.
- Diploma and Fellowship in Obesity and Diabetes Surgery, Valladolid, Spain.

#### Dr. Oller Navarro, Inmaculada

- PhD and Degree in Medicine and Surgery from the University of Granada (2009).
- Master's Degree in Clinical and Surgical Research. 2010/2011 UMH Elche
- Professional Master's Degree in Update in General and Digestive System Surgery.
   2018/2019 CEU, Cardenal Herrera University
- University Expert Degree in General Surgery, 2018/2019 CEU, Cardenal Herrera University.
- University Expert Degree in Colorectal Surgery, 2018/2019 CEU, Cardenal Herrera University.
- University Expert Degree in Pancreatic Hepatobiliary Surgery, 2018/2019 CEU, Cardenal Herrera University.
- University Expert Degree in Esophagogastric and Bariatric Surgery, 2018/2019 CEU, Cardenal Herrera University.
- Associate Professor since 2016 at the Miguel Hernández University of Elche, Alicante.
- Medical-surgical anatomy III

#### Ms. Pérez López, Mercedes

- Degree in Nursing from the University of Alicante (2014).
- Auxiliary Nursing Care Technician in 2009
- Professional Master's Degree in Emergencies and Disasters organized by TECH Education Rights and Technologies.
- Degree in Nursing from the University of Alicante.
- More than 40 courses, sponsored by the University of Castilla La Mancha and Catholic University of Avila
- Co-author of: 8 book chapters, 7 scientific articles and 22 communications to congresses

#### Dr. Lumbreras, Eva

- Work as an Esthetic and Reconstructive Plastic Surgery Faculty Specialist from 2008 to the present.
- Degree in Medicine and Surgery from the Complutense University of Madrid in June 1995.
- Specialist in Family and Community Medicine via RMI at 12th October Hospital, Madrid (Area 11) 1996-1999.
- Specialist in Esthetic and Reconstructive Plastic Surgery via RMI at Getafe University Hospital (Area 10) 2002-2008.
- Completion of doctoral courses and passing the entire program (research proficiency).
- Accreditation of Personal Competency for performing procedures in animals. Category B and C. Course accredited by the Ministry of Environment. May 2013 (120 hours).
- Associate Professor in Alfonso X El Sabio University since September 2017 in the Human Anatomy Department.
- Work in Family Medicine and Primary Care since May 1999 December 2000 and as an intern in Primary Care at the Abrantes Health Center (Area 11 of Madrid) from May 2001 to June 2003.
- Attending Physician in the Emergency Department in Alcorcón Foundation Hospital July 1999 December 2000.

#### Dr. Escartí Usó, Miguel Ángel

- Degree in Medicine and Surgery from the University of Valencia
- PhD in Medicine from the University of Valencia
- Specialist in General and Digestive System Surgery
- · Master's Degree in Emergency Surgery.
- Skills Diploma by the Spanish Society of Obesity Surgery (SECO).

### tech 46 | Course Management

- Accreditation for Robotic Surgery in Obesity.
- 16 years of exclusive dedication to bariatric surgery.
- More than 2200 cases of obesity surgery performed to date
- Medical Director of IntraObes (Spain's leading private obesity surgery group).
- Bariatric Surgery Unit at HLA Moncloa University Hospital (Madrid) and HLA- La Vega University Hospital (Murcia).

#### 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. González Antigüedad, Cynthia

- Endocrinology at Gregorio Marañón General University Hospital. Morbid Obesity Monographic Consultation
- Collaborating Professor in Medicine at the Complutense University of Madrid.
- Degree in Medicine and Surgery from the San Pablo University CEU

- Specialist in Endocrinology and Diabetes at the Gregorio Marañón University Hospital in Madrid
- Postgraduate courses on Medicine- Health Sciences.
- Expert Course on Type 2 Diabetes from University of Alcalá
- Expert Course on Obesity and Metabolic Illnesses from the Editorial Médica Panamericana
- Member of the SEEDO Working Groups on Exercise-Obesity and Childhood Obesity.
- Member of the Diabetics Association of Madrid

#### Dr. Serrano Moreno, Clara

- Specialist in Endocrinology and Nutrition. Gregorio Marañón General University Hospital
- Faculty Specialist in Endocrinology and Nutrition in Alcorcón Foundation Hospital.
- Resident Intern in Endocrinology and Nutrition in Alcorcón Foundation Hospital.
- Degree in Medicine. Navarra University
- Master's Degree in Clinical Nutrition from the University of Granada.

#### 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.

#### Ms. Morales, Ángela

- Researcher in the Clinical Nutrition and Dietetics Unit at Gregorio Marañón Hospital.
- Dietitian-nutritionist in the Obesity Unit at HM Montepríncipe.
- Collaborator in Practical Teaching for the subject Epidemiology and Public Health (UCM).
   Degree in Human Nutrition and Dietetics
- Collaborated in the teaching practice Degree in Human Nutrition and Dietetics while practicing at Gregorio Marañón Hospital.
- Collaborator in Practical Teaching Seminars in Clinical Nutrition (Elective Medical Degree at the Complutense University of Madrid).
- Appointed Collaborating Professor in Practical Teaching. Department of Medicine in the Faculty of Medicine - Complutense University, Madrid.
- Doctoral candidate in the PhD program in Medical-Surgical Sciences at the Complutense University in Madrid.
- Master's Degree in Human Nutrition and Applied Dietetics (Specialty: Clinic) Complutense University, Madrid.
- Grade in Human Nutrition and Dietetics from the Complutense University of Madrid.

#### Dr. Motilla de la Cámara, Marta

- Associate Physician in the Clinical Nutrition and Dietetics Unit, Endocrinology and Nutrition Service, Gregorio Marañón University General Hospital, Madrid.
- Attending physician in the Endocrinology and Nutrition Department Infanta Leonor Hospital, Madrid.
- Specialist in Endocrinology and Nutrition at Clínica Valdelasfuentes and Clínica Jaca.
- Author and coauthor of 2 modules for the online course: University Expert in Clinical Nutrition and Nutritional Health 1st and 2nd editions.
- · Lecturer Nutrition and Sport classes Rey Juan Carlos University, Madrid.
- Honorary Collaborator in the Faculty of Medicine Department, during the academic year.
- Degree in Medicine from the Autonomous University Madrid
- Specialized in the nutrition of patients in onco-radiotherapy, onco-hematology, head and neck, esophago-gastric surgery, neurosurgery, geriatrics and maxillofacial surgery.
- Specialized health training (MIR): Endocrinology and Nutrition at the Gregorio Marañón
   University General Hospital in Madrid from the Ministry of Health and Consumer Affairs.

#### Dr. Abreu Quezada, Hanser Antonio

- General Director of Center for Advanced Medicine, Mother and Child Clinic and Specialties
- International Fellowship in Bariatric and Metabolic Surgery: Center of Excellence for the Study and Treatment of Obesity and Diabetes and the Endocrinology and Nutrition Center University of Valladolid, Spain
- PhD in Medicine from the Technological University of Santiago (UTESA)
- Master's Degree in Obesity Surgery from the Francisco de Vitoria University

### tech 48 | Course Management

#### Dr. Miranda Múrua, María del Coro

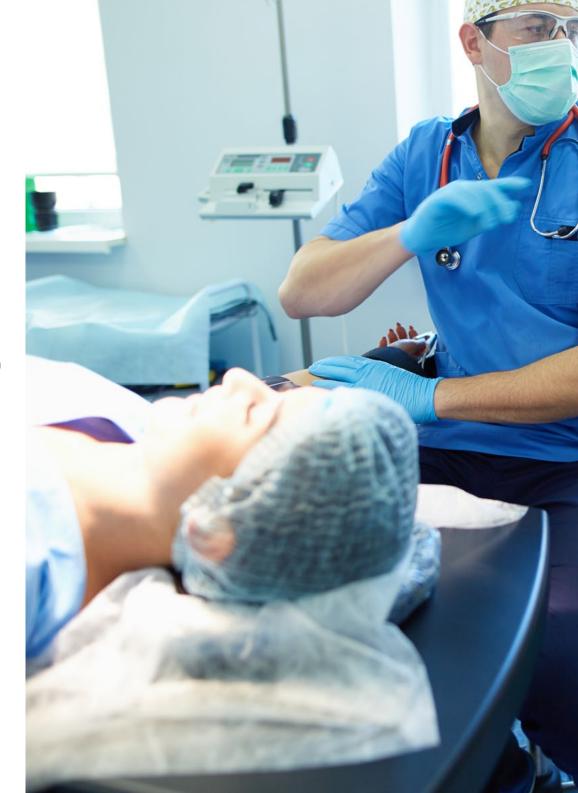
- Head of the Esophagogastric Surgery Unit of the General Surgery Area at the Navarra General Hospital Complex.
- Doctor of Medicine
- Degree in Medicine from the University of Navarra

#### Dr. Ortega Abad, Virginia

- Specialist in Obstetrics and Gynecology at Gregorio Marañón Hospital
- Degree in Medicine and Surgery

#### Dr. Acosta Mérida, María Asunción

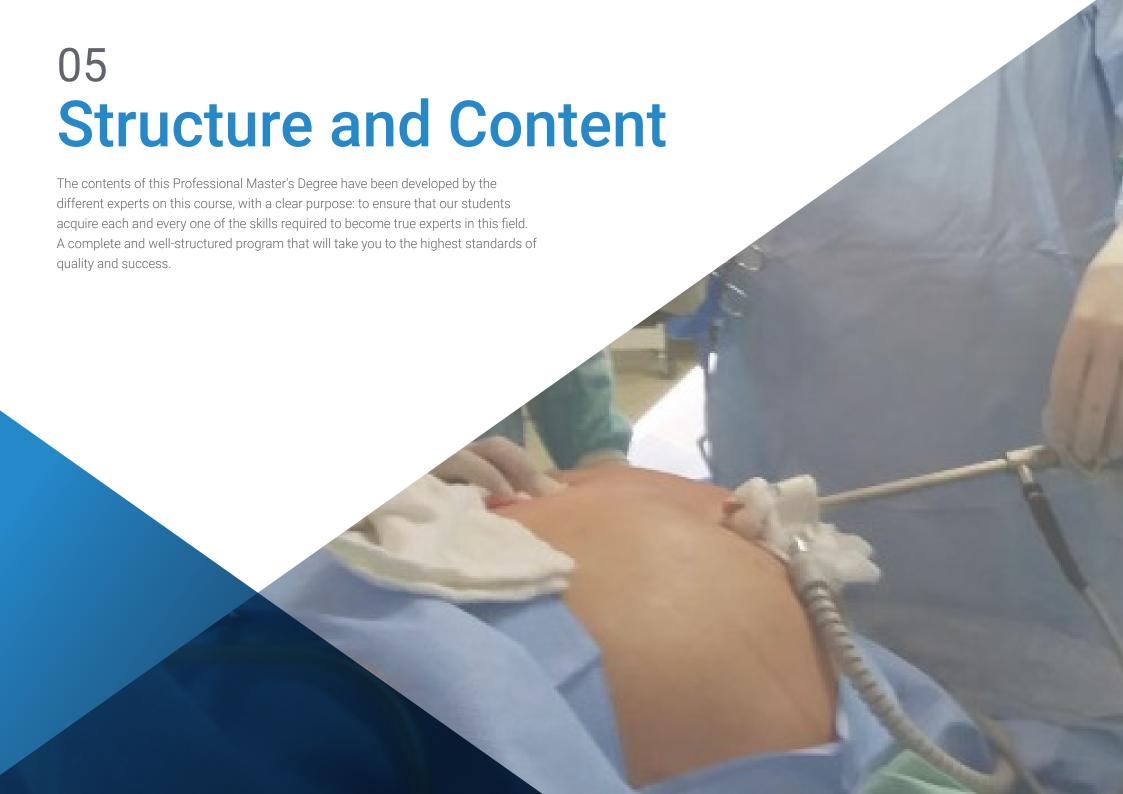
- Head of Esophagogastric, Endocrinometabolic and Obesity Services at the Dr. Negrin Gran Canaria University Hospital (HUGCDN)
- Associate Professor of the Medical Sciences and Surgical Department at Las Palmas de Gran Canaria University
- Member of the Scientific Committee of the Spanish Society of Obesity Surgery (SECO).
- Degree in Medicine and Surgery from La Laguna University
- Master's Degree in Coloproctology from University of Zaragoza.

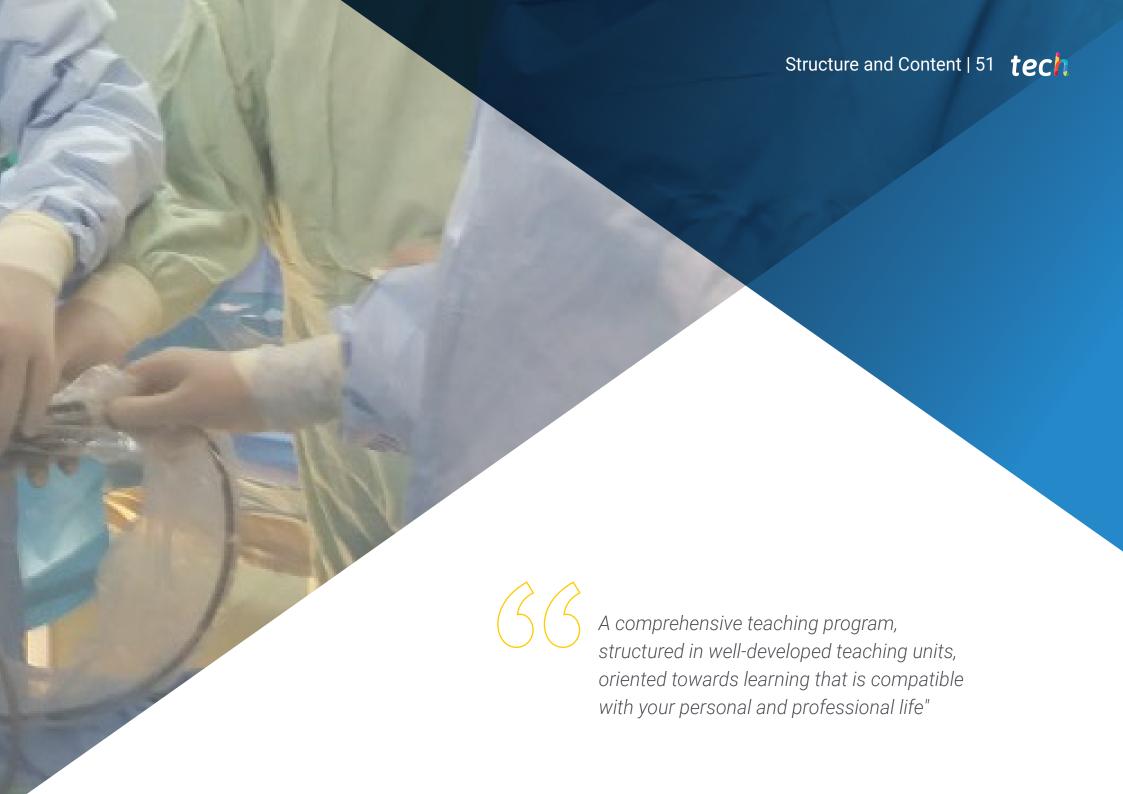






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### tech 52 | Structure and Content

#### Module 1. General Aspects of Obesity

- 1.1. Obesity and Overweight
  - 1.1.1. Introduction
  - 1.1.2. Definition of Obesity
  - 1.1.3. Epidemiology
  - 1.1.4. Pathophysiology
  - 1.1.5. Energy Intake
  - 1.1.6. Metabolism and Energy Expenditure
  - 1.1.7. Mechanisms of Action in the Update on Bariatric Surgery
  - 1.1.8. Etiology: Genetics and Epigenetics of Obesity. Syndromes with Dysmorphic Obesity
  - 1.1.9. Initial Evaluation of Obesity
    - 1.1.9.1. Body Mass Index
    - 1.1.9.2. Waist Circumference
    - 1.1.9.3. Body Fat Percentage
    - 1194 Other Parameters
  - 1.1.10. Evaluation of Patient Risk
- 1.2. Major Comorbidities
  - 1.2.1. Definition of Major and Minor Comorbidity
  - 1.2.2. Diabetes Mellitus Type 2
    - 1.2.2.1. Prediabetes and Diabetes: Definition
    - 1.2.2.2. Dietary Treatment
    - 1.2.2.3. Oral Anti-Diabetic Treatment
    - 1.2.2.4. Insulin Treatment
    - 1.2.2.5. Target Organ Involvement: Signs and Symptoms
  - 1.2.3. Hyperlipidemia
    - 1.2.3.1. Total Cholesterol
    - 1.2.3.2. HDL and LDL
    - 1.2.3.3. Triglycerides
  - 1.2.4. Cardiovascular
    - 1.2.4.1. Cardiac: Ischemic Heart Disease
    - 1.2.4.2. Vascular
      - 1.2.4.2.1. Venous Stasis with Increased Risk of DVT/PTE
      - 1.2.4.2.2. High Blood Pressure

- 1.2.5. Metabolic Syndrome
- 1.2.6. Respiratory: hypoventilation syndrome and apnea-hypopnea syndrome
- 1.2.7. Weight-Bearing Joint Arthropathy: Definition and Common Injuries
- 1.2.8. Infertility
- 1.3. Minor Comorbidities
  - 1.3.1. Digestive
    - 1.3.1.1. Hepatic Steatosis, Steatohepatitis and Cirrhosis
    - 1.3.1.2. Colelitiasis, Colecistitis
    - 1.3.1.3. Gastroesophageal Reflux Diseases.
  - 1.3.2. Obesity and Cancer: Incidence
  - 1.3.3. Asthma
  - 1.3.4. Hypothyroidism
  - 1.3.5. Incontinence
  - 1.3.6. Psychological Disorders (Major or Minor?)
  - 1.3.7. Other Minor Comorbidities
- 1. 4. Dietary and Pharmacological Treatment
  - 1.4.1. Dietary Treatment
    - 1.4.1.1. Introduction
    - 1.4.1.2. Food Plan: Dietary Treatment
    - 1.4.1.3. Distribution of Macronutrients in the Diet
    - 1.4.1.4. Modification of Diet Structure
    - 1.4.1.5. General Recommendations for Hypocaloric Diets
  - 1.4.2. Pharmacological Treatment
    - 1.4.2.1. Types of Drugs
    - 1.4.2.2. Drugs that Affect Appetite and Fullness
    - 1.4.2.3. Drugs that Work on a Gastrointestinal Level
    - 1.4.2.4. Thermogenic Drugs
    - 1.4.2.5. Other Drugs
    - 1.4.2.6. Medication being Researched
    - 1.4.2.7. Therapeutic Algorithms
- 1.5. Physical Activity
  - 1.5.1. Program Objectives
  - 1.5.2. Types of Exercise
  - 1.5.3. Frequency, Duration and Intensity
  - 1.5.4. Behaviour Modification

- 1.6. Indications of Endoscopic and Surgical Treatments
  - 1.6.1. According to BMI
  - 1.6.2. According to Previous Surgery
  - 1.6.3. According to Associated Comorbidities
  - 1.6.4. Listening to the Patient
  - 1.6.5. Therapeutic Algorithms
- 1.7. Preoperative Study
  - 1.7.1. Basic Preoperative Process
  - 1.7.2. Study of the Upper Digestive Tract: Endoscopy vs X-Ray
  - 1.7.3. Study and Eradication of Helicobacter Pylori: When and How
  - 1.7.4. ASMBS Micronutrient Survey and Grades of Recommendations
  - 1.7.5. Indications from Other Studies
    - 1.7.5.1. Respiratory: Functional Respiratory Tests and Polysomnography
    - 1.7.5.2. Digestive: Ultrasound and CAT
    - 1.7.5.3. Cardiac: ECG and Stress Test
    - 1.7.5.4. Movement: Anti-Gravity Treadmill Test
    - 1.7.5.5. DMT2. Hb Glycated A1, Pancreatic Reserve, and Pancreatic Antibodies
    - 1.7.5.6. Studies of Venous Circulation in Lower Limbs
  - 1.7.6. Pre-Anesthesia Assessment in Bariatric Surgery
- 1.8. Pre-Surgery Preparation
  - 1.8.1. Pre-Surgery Preparation
  - 1.8.2. Duration, Objectives and Scientific Evidence Related to Preparation
  - 1.8.3. Liquid Diet
  - 1.8.4. Physical Activity
  - 1.8.5. Respiratory Physiotherapy and Tobacco Consumption
  - 1.8.6. Study and Control of Arterial Hypertension
  - 1.8.7. Blood Glucose Control in the Update on Bariatric Surgery
- 1.9. Surgical Technique Selection
  - 1.9.1. According to BMI
  - 1.9.2. According to Psychological and Nutritional Profile
  - 1.9.3. According to Associated Comorbidities
  - 1.9.4. Listening to the Patient
  - 1.9.5. Recommended Algorithm

- 1.10. Indications and Technique Selection in Special Groups
  - 1.10.1. Adolescents and Children
    - 1.10.1.1. Children vs Adolescents: how to identify them
    - 1.10.1.2. Bridging vs. Definitive Techniques: For Whom and Which Ones?
  - 1.10.2. Over the Age of 60
    - 1.10.2.1. How to Differentiate Between Biological Age and Theoretical Age
    - 1.10.2.2. Specific Techniques for >60s
  - 1.10.3. BMI 30-35
    - 1.10.3.1. Indications for Surgery
    - 1.10.3.2. Surgical Techniques
  - 1.10.4. Other Borderline Patients
    - 1.10.4.1. BMI < 30 and DMT2
    - 1.10.4.2. BMI 30-35 and C-peptide=0
    - 1.10.4.3. BMI 30 and 35 and DMT1
    - 1.10.4.4. Over the Age of 70
    - 1.10.4.5. HIV Patients
    - 1.10.4.6. Liver Cirrhosis Patients

#### Module 2. Endoscopic and Percutaneous Treatments in Obesity

- 2.1. Intragastric Balloon (Oballon, ELIPSE)
  - 2.1.1. Definition
  - 2.1.2. Technique
  - 2.1.3. Results
  - 2.1.4. Complications
- 2.2. Endobarrier
  - 2.2.1. Definition
  - 2.2.2. Technique
  - 2.2.3. Results
  - 2.2.4. Complications
- 2.3. Vertical Endoluminal Gastroplasty (EndoCinch)
  - 2.3.1. Definition
  - 2.3.2. Technique
  - 2.3.3. Results
  - 2.3.4. Complications

### tech 54 | Structure and Content

Transoral Gastronlasty (TOGA)

2	11011001	ar each opiacly (1007)		
	2.4.1.	Definition		
	2.4.2.	Technique		
	2.4.3.	Results		
	2.4.4.	Complications		
2.5.	POSE			
	2.5.1.	Definition		
	2.5.2.	Technique		
	2.5.3.	Results		
	2.5.4.	Complications		
2.6.	Endoscopic Plication (Apollo)			
	2.6.1.	Definition		
	2.6.2.	Technique		
		Results		
	2.6.4.	Complications		
2.7.	Gastric	Electrical Stimulation (Gastric Pacemaker)		
	2.7.1.	Definition		
	2.7.2.	Technique		
	2.7.3.	Results		
	2.7.4.	Complications		
2.8.	Neuros	timulation of the Dermatomes of the Abdomen		
		Definition		
	2.8.2.	Technique		
	2.8.3.	Results		
	2.8.4.	Complications		
2.9.	ASPIRE Method			
		Definition		
		Technique		
	2.9.3.	Results		
	2.9.4.	Complications		
2.10.	Uncommon Methods (Lingual Mesh, Surgiclip)			
	2.10.1.	Definition		
		Techniques		
	2.10.3.	Results		
	2.10.4.	Complications		

#### Module 3. Surgical Treatment of Morbid Obesity

- 3.1. History of Surgical Treatment of Morbid Obesity
  - 3.1.1. Historical Background in Ancient Times
  - 3.1.2. Beginning of Obesity Surgery in the Modern Era
  - 3.1.3. Current Use of Bariatric and Metabolic Surgery
- 3.2. Adjustable Gastric Band
  - 3.2.1. Introduction
  - 3.2.2. Surgical Technique
  - 3.2.3. Results
  - 3.2.4. Immediate Postoperative Complications
- 3.3. Vertical Gastrectomy
  - 3.3.1. Introduction
  - 3.3.2. Surgical Technique
  - 3.3.3. Results
  - 3.3.4. Immediate Postoperative Complications
- 3.4. Roux-en-Y Gastric Bypass
  - 3.4.1. Introduction
  - 3.4.2. Surgical Technique
  - 3.4.3. Results
  - 3.4.4. Immediate Postoperative Complications
- 3.5. One-Anastomosis Gastric Bypass
  - 3.5.1. Introduction
  - 3.5.2. Surgical Technique
  - 3.5.3. Results
  - 3.5.4. Immediate Postoperative Complications
- 3.6. Biliopancreatic Diversion
  - 3.6.1. Introduction
  - 3.6.2. Surgical Technique
  - 3.6.3. Results
  - 3.6.4. Immediate Postoperative Complications

- 3.7. Duodenal Crossover
  - 3.7.1. Introduction
  - 3.7.2. Surgical Technique
  - 3.7.3. Results
  - 3.7.4. Immediate Postoperative Complications
- 3.8. SADIS
  - 3.8.1. Introduction
  - 3.8.2. Surgical Technique
  - 3.8.3. Results
  - 3.8.4. Immediate Postoperative Complications.
- 3.9. Nissen Sleeve
  - 3.9.1. Introduction
  - 3.9.2. Surgical Technique
  - 3.9.3. Results
  - 3.9.4. Immediate Postoperative Complications
- 3.10. Other Techniques: SAGIS/SASI, Intestinal Bipartition, Gastric Plication, Banding Techniques...
  - 3.10.1. Introduction
  - 3.10.2. Surgical Technique
  - 3.10.3. Results
  - 3.10.4. Immediate Postoperative Complications.

#### **Module 4.** Perioperative Management

- 4.1. ERAS Program in Bariatric Surgery
  - 4.1.1 Introduction
  - 4.1.2 ERAS Protocols in Bariatric Surgery
  - 4.1.3 Results of Implementation
  - 4.1.4 GERM Multidisciplinary Working Group Protocol Update
- 4.2. Multidisciplinary Management of the Bariatric Patient
  - 4.2.1. Preoperative
    - 4.2.1.1. Endocrinology and Nutrition
    - 4.2.1.2. Dietitian
    - 4.2.1.3. Psychiatry
    - 4.2.1.4. Psychology

- 4.2.1.5. Pulmonology
- 4.2.1.6. Cardiology
- 4.2.1.7. Digestive System
- 4.2.1.8. Radiology
- 4.2.1.9. Surgery
- 4.2.1.10. Anaesthesiology
- 4.2.1.11. Rehabilitation and Physiotherapy
- 4.2.2. Hospital Admission
  - 4.2.2.1. Preoperative
  - 4.2.2.2. Intraoperative
  - 4.2.2.3. Postoperative
- 4.2.3. Monitoring
  - 4.2.3.1. Surgery
  - 4.2.3.2. Endocrinology and Nutrition
  - 4.2.3.3. Dietitian
  - 4.2.3.4. Psychiatry and Psychology
  - 4.2.3.5. Pulmonology
  - 4.2.3.6. Primary Care
- 4.3. Patient Information, Objectives and Establishing Realistic Expectations
  - 4.3.1. What is Obesity?
  - 4.3.2. Obesity-Related Issues
  - 4.3.3. Obesity in the Present Day
  - 4.3.4. Can it Be Modified?
  - 4.3.5. Benefits of Fighting It
  - 4.3.6. Postoperative Results
    - 4.3.6.1. Complications
    - 4.3.6.2. Weight Regain
    - 4.3.6.3. Therapy Options
  - 4.3.7. Monitoring

### tech 56 | Structure and Content

4.4.	Psychological Assessme		
	4.4.1.	Psychological Fo	
	4.4.2.	Emotional State a	

- 4.4.1. Psychological Focus on an Obese Patient in Bariatric Surgery
- 4.4.2. Emotional State and Quality of Life in Bariatric Surgery Candidates
- 4.4.3. Considerations in the Preoperative Psychological Assessment
- 4.4.4. Aspects to be Addressed in the Initial Interviews
  - 4.4.4.1. History of the Start and Evolution of Their Obesity
  - 4.4.4.2. Explore Expectations, Motivation and Goals of the Patient
  - 4.4.4.3. Patient's Lifestyle
  - 4.4.4.4. Family Circle
  - 4.4.4.5. Patient Coping Strategies
- 4.4.5 Recommended Assessment Instruments
  - 4.4.5.1. Depression/Anxiety Scale
  - 4.4.5.2. Decision-Making and Self Control
  - 4.4.5.3. Quality of Life
  - 4.4.5.4. Body Image
  - 4.4.5.5. Eating Disorders
  - 4.4.5.6. Personality
- 4.4.6. Considerations for Interpreting the Information Collected
- 4.5. Perioperative Nutritional Management for Bariatric Surgery Patients
  - 4.5.1. Introduction
  - 4.5.2. Benefits of Preoperative Weight Loss in Bariatric Surgery
  - 4.5.3. Preoperative Treatment Guidelines
    - 4.5.3.1. Hypocaloric Diet and Very Low-Calorie Diet
    - 4.5.3.2. Pharmacological Treatment
    - 4.5.3.3. Other Treatments
  - 4.5.4. Postoperative Nutritional Treatment
    - 4.5.4.1. Dietary Progression in the First Weeks
    - 4.5.4.2. Micronutrient Supplementation Guidelines
    - 4.5.4.3. Special Situations

- 4.6. Thromboembolic Prophylaxis in Bariatric Surgery. Prevention Measures for Surgical Site Infections
  - 4.6.1. Thromboembolic Prophylaxis
    - 4.6.1.1. Introduction
    - 4.6.1.2. Early Mobilization
    - 4.6.1.3. Mechanical Prophylaxis
    - 4.6.1.4. Pharmacological Prophylaxis
  - 4.6.2. Prevention of Surgical Site Infections
    - 4.6.2.1. Introduction
    - 4.6.2.2. Preoperative Phase
      - 4.6.2.2.1. Smoking Control
      - 4.6.2.2.2. Shower and Shaving
      - 4.6.2.2.3. Skin Asepsis and Antisepsis
      - 4.6.2.2.4. Antibiotic Prophylaxis
    - 4.6.2.3. Intra- and Perioperative Phase
      - 4.6.2.3.1. Door Opening Control
      - 4.6.2.3.2. Body Temperature and Blood Sugar Level Control
      - 4.6.2.3.3. Tissue Oxygenation
      - 4.6.2.3.4. Wound/Operation Site Irrigation
      - 4.6.2.3.5. Sutures with Antiseptics
    - 4.6.2.4. Postoperative Phase
      - 4.6.2.4.1. Skin Dressings
      - 4.6.2.4.2. Measurement Packages
- 4.7. Antiemetic Prophylaxis and Goal-Directed Fluid Therapy
  - 4.7.1. Antiemetic Prophylaxis
    - 4.7.1.1. Identification of Patients at Risk of Suffering Postoperative Nausea and Vomiting (PONV) in Bariatric Surgery.
    - 4.7.1.2. Detection and Intervention of Factors with Reduce the Basal Risk of  $\ensuremath{\mathsf{PONV}}$
    - 4.7.1.3. Antiemetic Drug Management
    - 4.7.1.4. Establishing a Prophylactic Algorithm to Establish Preventive Strategies in High-Risk Patients.
    - 4.7.1.5. Description of Treatment for Post Operative Nausea and Vomiting in Bariatric Surgery

- 4.7.2. Goal-Guided Fluid Therapy
  - 4.7.2.1. Different Approaches to Fluid Administration in Obesity Surgery: Liberal vs. Restrictive Approach
    - 4.7.2.1.1. Liberal vs Restrictive Fluid Therapy
    - 4.7.2.1.2. Preoperative, Intraoperative and Postoperative Periods
    - 4.7.2.1.3. Surgical Factors that Affect the Administration of Fluids
  - 4.7.2.2. Concepts Goal-Guided Fluid Therapy
  - 4.7.2.3. Description of the Parameters that Guide the Administration of Fluids in Bariatric Surgery
    - 4.7.2.3.1. Volume Monitoring
    - 4.7.2.3.2. Functional Hemodynamic Variables
  - 4.7.2.4. Review of Current Monitoring Recommendations in Bariatric Surgery
- 4.8. Early Mobilization and Reintroduction or Oral Feeding
  - 4.8.1. Early Mobilization
    - 4.8.1.1. Inconveniences Period of Inactivity
    - 4.8.1.2. Benefits of Early Mobilization
    - 4.8.1.3. Early Mobilization Guidelines
  - 4.8.2. Reintroduction of Oral Feeding
    - 4.8.2.1. Benefits of Early Oral Feeding
    - 4.8.2.2. Importance of Protein Supplements
    - 4.8.2.3. Guidelines for Reintroduction of Oral Feeding
- Impact of Physical Training Programs on the Maintenance of Weight Loss Before and After Bariatric Surgery
  - 4.9.1. Impact of Physical Training Programs on the Physical Aptitude of Obese People
  - 4.9.2. Physical Activity in the Preoperative and Postoperative Periods of Bariatric Surgery
    - 4.9.2.1. Preoperative Physical Activity
    - 4.9.2.2. Postoperative Physical Activity
  - 4.9.3. Advice before Starting a Physical Activity Program after Bariatric Surgery
  - 1.9.4. Physical Activity Regime after Bariatric Surgery
    - 4.9.4.1. Physical Activity during the 1st Month
    - 4.9.4.2. Physical Activity between the 2nd and 6th Month
    - 4.9.4.3. Physical Activity after the 6th Month
  - 4.9.5. Types of Routines and Exercises

- 4.10. Optimization of Comorbidities Prior to Bariatric Surgery
  - 4.10.1. Concept of Multimodal Rehabilitation in Bariatric Surgery
  - 4.10.2. Preanesthetic Consultation in Bariatric Surgery
  - 4.10.3. Study and Detection of the Risk Factors of Coronary Heart Disease
  - 4.10.4. Screening for Sleep Apnea-Hypopnea Syndrome
  - 4.10.5. Indications for Preoperative Spirometry in Obese Patients
  - 4.10.6. Description of the Recommended Laboratory Studies on Proposed Patients for Bariatric Surgery
  - 4.10.7. Nutritional Optimization in the Preoperative Period
  - 4.10.8. Respiratory Physiotherapy
  - 4.10.9. Bariatric Patient Physical Rehabilitation

#### Module 5. Bariatric Surgery Patient Emergencies

- 5.1. Semiology of Abdominal Pathology and Complementary Examinations in Emergencies in Patients with a History of Bariatric Surgery
  - 5.1.1. Introduction
  - 5.1.2. Medical History and Anamnesis
  - 5.1.3. Physical Exploration
  - 5.1.4. Complementary Examination Orientation
  - 5.1.5. Blood Analysis
  - 5.1.6. Abdominal X-Ray
  - 5.1.7. Abdominal Ultrasound
  - 5.1.8. Axial and Computerized Tomography
  - 5.1.9. Esophagogram and Upper Intestinal Transit
  - 5.1.10. Upper Digestive Endoscopy
  - 5.1.11. Endoscopic Retrograde Cholangiopancreatography
  - 5.1.12. Magnetic Resonance Cholangiopancreatography
  - 5.1.13. Echoendoscopy
  - 5.1.14. Exploratory Laparoscopy
- 5.2. Complications of Endoscopic Procedures (Intragastric Balloon, POSE, Apollo)
  - 5.2.1. Definition of Techniques
  - 5.2.2. Indication of Techniques
  - 5.2.3. Development of Complications
  - 5.2.4. Solution of Complications

### tech 58 | Structure and Content

5.3.	Fistula Management After Bariatric Surgery		
	5.3.1.	Introduction	
	5.3.2.	Leakage and Postoperative Sepsis	
	5.3.3.	Fistula after Laparoscopic Vertical Gastrectomy	
		5.3.3.1. Causes	
		5.3.3.2. How to Avoid Them	
		5.3.3.3. How to Diagnose Them	
		5.3.3.4. Management	
	5.3.4.	Fistula after Gastric Bypass	
		5.3.4.1. Causes	
		5.3.4.2. How to Avoid Them	
		5.3.4.3. How to Diagnose Them	
		5.3.4.4. Management	
	5.3.5.	Fistulas after Malabsorptive Techniques	
5.4.		nal Obstruction of the Upper and Lower Digestive T ) after Bariatric Surgery	

- ve Tract (bridles, internal hernias,
  - 5.4.1. Introduction
  - 5.4.2. Obstruction of Upper Digestive Tract
  - 5.4.3. Causes of Intestinal Obstruction
    - 5.4.3.1. After Open Surgery

5.4.3.1.1. Early Onset

5.4.3.1.2. Late Onset

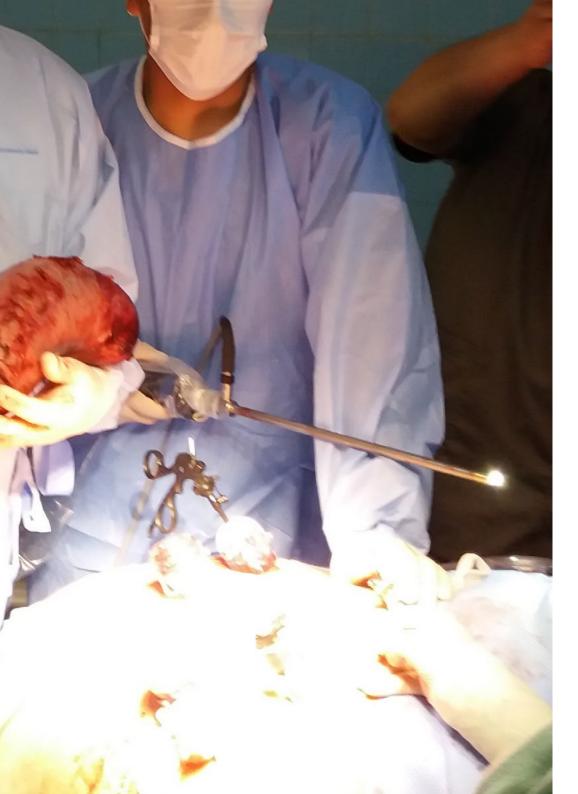
5.4.3.2. After Laparoscopic Surgery

5.4.3.2.1. Early Onset

5.4.3.2.2. Late Onset

- 5.4.4. Diagnosis of Intestinal Obstruction
- Treatment of Intestinal Obstruction 5.4.5.
- 5.4.6. Additional Material
- 5.5. Acute Digestive complications: Marginal or Anastomotic Ulcer, Stenosis, Diarrhea, Proctalgia...
  - 5.5.1. Introduction
  - 5.5.2. Anastomotic Fistula
  - 5.5.3. Marginal Ulcer





### Structure and Content | 59 tech

5.5.4.	Anastomotic Stend	oio
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- 5.5.5. Acute Diarrhea after Bariatric Surgery
- 5.5.6. Proctalgia after Bariatric Surgery
- 5.6. Management of Bleeding after Bariatric Surgery (Upper GI Hemorrhage, Hemoperitoneum...)
  - 5.6.1. Upper Gastrointestinal Bleeding
    - 5.6.1.1. Early Onset
    - 5.6.1.2. Late Onset
  - 5.6.2. Lower Gastrointestinal Bleeding
  - 5.6.3. Hemoperitoneum
- 5.7. Hepatobiliary Complications Secondary to Post-Surgical Intestinal Malabsorption: Bacterial Overgrowth
  - 5.7.1. Hepatobiliary Complications: Cholelithiasis
  - 5.7.2. Effect of Bacterial Overgrowth on MO
  - 5.7.3. Bacterial Overgrowth and NASH
- 5.8. Medical Complications Related to Bariatric Surgery (Dumping Syndrome, Reactive Hypoglycemia, Cardiopulmonary and Renal Complications)
  - 5.8.1. Dumping Syndrome
  - 5.8.2. Reactive Hypoglycemia
  - 5.8.3. Cardiopulmonary Complications
  - 5.8.4. Renal Complications
- 5.9. Nutritional or Toxic Deficiency Emergencies
  - 5.9.1. Introduction
  - 5.9.2. Digestive Emergencies
  - 5.9.3. Neurological Emergencies
  - 5.9.4. Cardiac Emergencies
  - 5.9.5. Nephrourological Emergencies
  - 5.9.6. Psychiatric Emergencies
- 5.4. Morbidly Obese Patient Management: What Is the Ideal Strategy?
  - 5.4.1. Definition of Superobese Patients
  - 5.4.2. Is a Superobese Patient Different to a Simple Obese Patient?
  - 5.4.3. Multidisciplinary Preoperative Management of the Superobese Patient
  - 5.4.4. Role of an Intragastric Balloon in a Superobese Patient

## tech 60 | Structure and Content

5.10.	5.10.1. 5.10.2. 5.10.3. 5.10.4. 5.10.5.	Pain after Bariatric Surgery: A Challenge for the Multidisciplinary Team Introduction Definition Etiology Diagnosis Non-Invasive Treatment Invasive Treatment
Mod	ule 6. R	Revision Surgery
Modul 6.1.	Definition	on and Indications of Revision Surgery
	6.1.1.	Definition and Indicators of the Success or Failure of the Bariatric Surgery
	6.1.2.	Indications of Revision Surgery
	6.1.3.	General Features of Revision Surgery
	6.1.4.	Surgical Strategy in Revision Surgery
	6.1.5.	General Criteria According to the Type of Primary Technique
6.2.	Revision Surgery of Techniques No-Longer Used	
	6.2.1.	Introduction: Historical Review
	6.2.2.	Description of Obsolete Techniques
	6.2.3.	Indications of Revision Surgery
	6.2.4.	Preoperative Study and Preparation of the Patient
	6.2.5.	Therapy Options
	6.2.6.	Conclusions
6.3.	Revision	n Surgery Following Adjustable Gastric Band
	6.3.1.	Introduction, Indications and Basic Principles: When Should We Consider Bandage Revision Surgery?
	6.3.2.	Revision Surgery Following Adjustable Gastric Band: Technical Analysis of Surgery
	6.3.3.	Revision Surgery Following Adjustable Gastric Band: Results
6.4.	Revision	n Surgery after a Vertical Gastrectomy
	6.4.1.	Motives and Candidates for Revision Surgery after a Vertical Gastrectomy
	6.4.2.	Revision Surgery Due to Insufficient Loss or Weight Regain after Vertical Gastrectomy
		6.4.2.1. Duodenal Crossover/SADI-S. Revision or 2nd Part?
		6.4.2.2. Gastric Bypass as an Alternative to Duodenal Crossover
		6.4.2.3. Other Possible Alternatives

	6.4.3. F	Revision Surgery for GER after Vertical Gastrectomy
		6.4.3.1. Gastric Bypass as the Best Option
		6.4.3.2. Other Possible Alternatives
6.5.	Revisio	on Surgery after a Gastric Bypass
	6.5.1.	Introduction
	6.5.2.	Indications
		6.5.2.1. Insufficient Weight Loss
		6.5.2.2. Weight Regain
		6.5.2.3. Persistence of Comorbidities
		6.5.2.4. Late Complications
		6.5.2.4.1. Reservoir Dilatation
		6.5.2.4.2. Gastrogastric Anastomosis Disorders
		6.5.2.4.3. Gastroesophageal Reflux
		6.5.2.4.5. Internal Hernias
		6.5.2.4.6. Malnutrition
		6.5.2.4.7. Hypoglycemia
	6.5.3.	Technical Aspects
		6.5.3.1. Reservoir Reconstruction
		6.5.3.2. Gastrogastric Anastomosis Repair
		6.5.3.3. Modification of Handle Length
		6.5.3.4. Conversion of Normal Anatomy
	6.5.4.	Conclusions
6.6.	Revisio	on Surgery after One Anastomosis Bypass
	6.6.1.	Introduction
	6.6.2.	Relevance of a Correct Technique
	6.6.3.	
		6.6.3.1. Weight Loss and Weight Regain
		6.6.3.2. Persistence of Cormobidities
		6.6.3.3. Gastroesophageal Reflux
		6.6.3.4. Nutritional Disorders
	6.6.4.	Technical Aspects
	6.6.5.	Results
	6.6.6.	Conclusions

- 6.7. Revision Surgery after a Duodenal Crossover
  - 6.7.1. Revision Surgery after a Duodenal Crossover
    - 6.7.1.1. Revision Surgery for Nutritional Complications
      - 6.7.1.1.1 Indications
      - 6.7.1.1.2. Technique Options
  - 6.7.2. Revision Surgery for Insufficient Weight Loss or Weight Regain after Duodenal Crossover
    - 6.7.2.1. Indications
    - 6.7.2.2. Technique Options
- 6.8. Revision Surgery after BPD
  - 6.8.1. Indications of Revision Surgery for Biliopancreatic Diversion
  - 6.8.2. Revision Surgery Due to Insufficient Loss or Weight Regain after Biliopancreatic Diversion
  - 6.8.3. Medical-Surgical Criteria for Revision Surgery for Protein Malabsorption 6.8.3.1. Technique Options in Revision Surgery for Severe Protein Deficiency
  - 6.8.4. Revision Surgery in Ulcerative Complications of Gastrojejunal Anastomosis in Biliopancreatic Diversion
- 6.9. Revision surgery after SADI-S
  - 6.9.1. Medium and Long-Term Results of SADI-S, Common Problems
  - 6.9.2. Indications of Revision Surgery after SADI-S
  - 6.9.3. Technique Options in Revision Surgery for Severe Protein Deficiency
- 6.10. Role of Endoscopic Surgery in the Management of Complications and Weight Regain
  - 6.10.1. Introduction
  - 6.10.2. Gastrointestinal Bleeding
  - 6.10.3. Anastomotic Ulcers
  - 6.10.4. Stenosis
  - 6.10.5. Leakages and Fistulas
  - 6.10.6. Pancreatobiliary Pathology
  - 6.10.7. Weight Regain

#### Module 7. Postoperative Aftercare and Supplementation

- 7.1. Postoperative Aftercare and Screening for Nutritional Deficiencies
  - 7.1.1. Dietary and Lifestyle Guidelines after Bariatric Surgery
  - 7.1.2. Macronutrient Deficiencies
    - 7.1.2.1. Vitamins.
    - 7.1.2.2. Minerals
- 7.2. Postoperative Supplementation: Mineral and Vitamin Supplements
  - 7.2.1. Supplementation in Restrictive Techniques
  - 7.2.2. Supplementation in Malabsorption Techniques
  - 7.2.3. Supplementation in Mixed Techniques
- 7.3. Nutritional Recommendations after Restrictive Techniques
  - 7.3.1. Nutritional Recommendations in Patients Undergoing Restrictive Techniques
  - 7.3.2. Post-Surgical Complications and Nutritional Problems
- 7.4. Nutritional Recommendations after Mixed Techniques
  - 7.4.1. Introduction
  - 7.4.2. Nutritional Objectives
  - 7.4.3. Dietary Progression after Surgery
    - 7.4.3.1. Clear Liquid Diet
- 7.5. Nutritional Recommendations after Malabsorptive Techniques.
  - 7.5.1. Introduction
  - 7.5.2. Preoperative Evaluation and Supplementation
  - 7.5.3. Postoperative Diet and Supplementation
    - 7531 Proteins
    - 7.5.3.2. Micronutrients
  - 7.5.4. Gastrointestinal Symptoms
  - 7.5.5. Long-Term Monitoring
  - 7.5.6. Conclusions

### tech 62 | Structure and Content

- 7.6. Nutritional Management of Patients Suffering from Complications (Critical Patients).
  - 7.6.1. Nutritional Assessment for Critically III Patients
  - 7.6.2. Therapeutic Approach for Patients with Complications
- 7.7. Specific Nutritional Requirements in Children and Adolescents
  - 7.7.1. Introduction
  - 7.7.2. Nutritional Recommendations
  - 7.7.3. Assessment of Nutritional Status
  - 7.7.4. Nutritional Education
  - 7.7.5. Nutritional Needs
  - 7.7.6. Monitoring of Nutritional Status
- 7.8. Special Nutritional Requirements in the Elderly
  - 7.8.1. Preoperative Age-Focused Assessment
  - 7.8.2. Age-Related Physiological Changes that Alter Supplementation
  - 7.8.3. Special Supplementation and Monitoring
- 7.9. Special Nutritional Requirements in Women (Pregnancy, Breastfeeding and Menopause)
  - 7.9.1. Introduction
  - 7.9.2. Obesity and Reproductive Function in Women
  - 7.9.3. Bariatric Surgery, Pregnancy and Breastfeeding
    - 7.9.3.1. Dietary Recommendations
    - 7.9.3.2. Nutritional Supplements
    - 7.9.3.3. Gestational Diabetes
    - 7.9.3.4. Pregnancy Complications after Bariatric Surgery
    - 7.9.3.5. Neonatal Care
    - 7.9.3.6. Nursing
  - 7.9.4. Bariatric Surgery and Menopause
- 7.10. Postoperative Management of Specific Complications: Anemia, Protein Deficiency and Neurological Problems
  - 7.10.1. Introduction
  - 7.10.2. Anaemia
  - 7.10.3. Protein Deficiency
  - 7.10.4. Neurological Complications

#### Module 8. Basics of Metabolic Surgery

- 3.1. Metabolic Syndrome and Mediators of Inflammation
  - 8.1.1. Bariatric Surgery vs Metabolic Surgery: Anatomo-Physiological Basis of Metabolic Surgery
  - 8.1.2. Control Mechanisms of the Different Comorbidities Associated with Obesity
  - 8.1.3. Future Perspectives of Metabolic Surgery
- 8.2. Pathophysiology of Diabetes: Medical and Dietary Treatment of Diabetes
  - 8.2.1. Insulin and Alteration in its Cellular Response.
  - 8.2.2. Hyperglycemia, Hyperlipidemia and Tissue Damage
  - 8.2.3. Energetic Metabolism Alterations
  - 8.2.4. Associated Phenomena; Inflammation, Apoptosis, Steatosis and Cellular Fibrosis
- 8.3. Role of Gastrointestinal Hormones in the Resolution of Type 2 Diabetes Mellitus after Bariatric Surgery
  - 8.3.1. Introduction
  - 8.3.2. Gastointestinal Hormones Involved in the Metabolism of Glucose 8.3.2.1. Incretin Effect
  - 8.3.3. Pathphysiology and Etipathogenesis of Type 2 Diabetes in Obese Patients 8.3.3.1. Role of Gastrintestinal Hormones in Resistance to Insulin
  - 8.3.4. Contribution of Bariatric Surgery to the Resolution of Type 2 Diabetes
    - 8.3.4.1. Weight Loss
    - 8.3.4.2. Modification of Nutrients and Microbiota
    - 8.3.4.3. Effect of Gastrointestinal Hormones: Proximal and Distal Bowel Theory
  - 8.3.5. Evidence of Bariatric Surgery in Type 2 Diabetes
    - 8.3.5.1. Short- and Long-Term Impact of Bariatric Surgery in Regulating Glucose Metabolism
    - 8.3.5.2. Medical vs. Surgical Treatment
    - 8.3.5.3. GBP vs VG
- 8.4. Concept of Metabolic Surgery, Concept and Scientific Evidence
  - 8.4.1. Introduction: History of Metabolic Surgery
  - 8.4.2. Concepts of Metabolic Surgery:
    - 8.4.2.1. General Concepts: Obesity Surgery and the Metabolic Complications
    - 8.4.2.2. Specific Concepts: Diabetes Surgery

- 8.4.3. Indications of Metabolic Surgery
  - 8.4.3.1. Indications in Diabetic Patients with Morbid Obesity
  - 8.4.3.2. Indications in Type 2 Diabetic Patients with BMI 35-40
  - 8.4.3.3. Indications in Diabetic Patients with BMI< 30
- 8.4.4. Surgical Techniques
  - 8.4.4.1. Classic Techniques (Gastric Banding, Vertical Gastrectomy, Gastric Bypass and Biliopancreatic Bypass)
  - 8.4.4.2. New Techniques: BAGUA SADI-S, One Anastomosis Gastroileal Bypass, Others).
- 8.4.5. Current Scientific Evidence on Metabolic Surgery
- 8.4.4. Ethical and Deontological Aspects of Metabolic Surgery
- 8.5. Importance of Loop Lengths in Bariatric Surgery
  - 8.5.1. Determining the Cutting Points
  - 8.5.2. Patient Monitoring
  - 8.5.3. Comorbidity Remission
- 8.6. Influence of Microbiota in Bariatric Surgery
  - 8.6.1. Microbiome: Basic Concepts
  - 8.6.2. Microbiome and Obesity
  - 8.6.3. Changes in Microbiome after Bariatric Surgery
- 8.7. Obesity and NASH: Role of the Liver as a Metabolism Regulator
  - 8.7.1. Role of the Liver as a Metabolism Regulator
  - 8.7.2. Obesity and Non-Alcoholic Fatty Liver Disease
  - 8.7.3. Bariatric Surgery and Non-Alcoholic Fatty Liver Disease
- 8.8. Influence of Bile Acids
  - 8.8.1. Bile Acid Synthesis and Hepatic Circulation
  - 8.8.2. Regulation of Dietary Fat Availability by Bile Acids
  - 8.8.3. Main Bile Acid Receptors: TGR5 FXR
  - 8.8.4. Regulation of Metabolism by the Bile Acids
  - 8.8.5. Metabolic Effects of Manipulating Intestinal Bile Acid Availability after Bariatric Surgery

- 8.9. Influence of Bariatric Surgery on Hypogonadism and Polycystic Ovary Syndrome (POS)
  - 8.9.1. Prevalence of Male Hypogonadism and POS in Bariatric Surgery Candidates
  - 8.9.2. Effects of Bariatric Surgery in the Hormonal Concentrations of Patients with Male Hypogonadism and the Semen Quality
  - 8.9.3. Effects of Bariatric Surgery on the Resolution of POS and Female Fertility
- 8.10. Timing of Metabolic Surgery and its Effect on the Pancreas
  - 8.10.1. Time as a Predictor of Diabetes Resolution after Metabolic Surgery
  - 8.10.2. Pancreas Remodeling Capacity of the Pancreas in Man versus Animal Models
  - 8.10.3. Regeneration of the Pancreas and Hyperinsulinism after Bariatric Surgery

# **Module 9.** Transplantation, Abdominal Wall and Special Situations in Bariatric Surgery

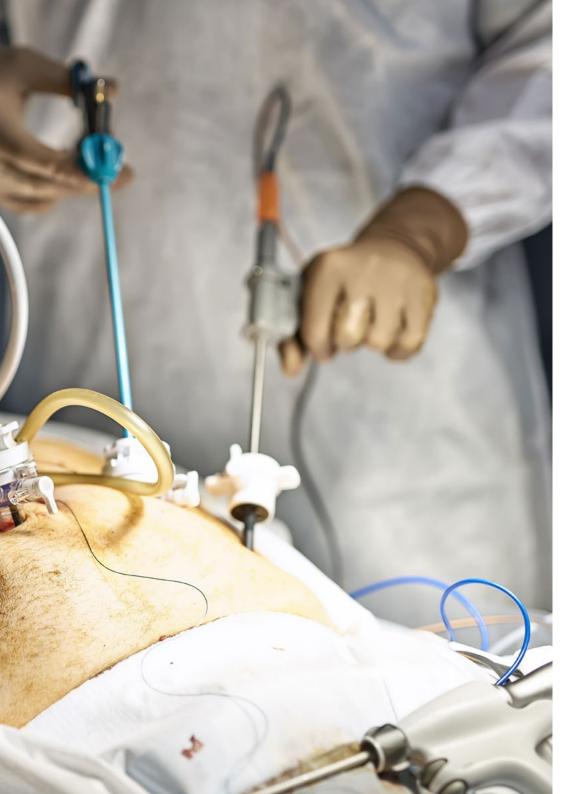
- 9.1. Technical Considerations in the Perioperative Management of the Morbidly Obese Patient with Associated Abdominal Wall Pathology
  - 9.1.1. Preoperative Optimization
  - 9.1.2. Obesity Surgery Before Wall Surgery
  - 9.1.3. Dermolipectomies as an Associated Procedure in Abdominal Wall Reconstruction
- 9.2. Solid Organ Transplant and Bariatric Surgery
  - 9.2.1. Obesity and Donors
  - 9.2.2. Transplantation and Surgical Technique
  - 9.2.3. Post-Transplant Obesity: Metabolic Syndrome
  - 9.2.4. Bariatric Surgery and Liver or Kidney Transplant
- 9.3. Obesity and Gastroesophageal Reflux
  - 9.3.1. Pathophysiology of Reflux: Diagnostic Tests
  - 9.3.2. GERD in the Context of Obesity
  - 9.3.3. Therapeutic Approach to GERD in Obese Patients
    - 9.3.3.1. Medical Treatment
    - 9.3.3.2. Surgical Management

### tech 64 | Structure and Content

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9.3.4.	GERD	Patient	IVIOL	ILOHIIG

- 9.4.5. Anesthetic Management and Monitoring of the Superobese Patient
- 9.4.6. Surgery in Superobese Patients: Is There a Preferred Technique?
- 9.4.7. What Results Can We Expect Following Surgery in Superobese Patients?
- 9.4.8. Nutritional Monitoring in a Superobese Patient After Surgery
- 9.5. Surgery in a Patient with BMI <35
  - 9.5.1. Introduction
  - 9.5.2. Impact of Class I Obesity (BMI 30-35kg/m2) On Health
  - 9.5.3. Non-Surgical Treatment of Class I Obesity
  - 9.5.4. Evidence in the Literature on Bariatric Surgery in BMI 30-35 Kg/M2
  - 9.5.5. Bariatric Surgery Safety
  - 9.5.6. Cost-Benefit Ratio
  - 9.5.7. Recommendations from Different Scientific Societies
- 9.6. Pregnancy and Bariatric Surgery
  - 9.6.1. Perinatal Risks and Complications in Pregnant Women undergoing Bariatric Surgery
  - 9.6.2. Management of Pregnant Woman Undergoing Bariatric Surgery
- 9.7. Adolescents and Bariatric Surgery: Techniques and Results
  - 9.7.1. Adolescents and Morbid Obesity
  - 9.7.2. Indications and Current State
  - 9.7.3. Therapeutic Perspectives and Results
- 9.8. Effects of Bariatric Surgery on Bone Metabolism
  - 9.8.1. Introduction
  - 9.8.2. Pathophysiological Mechanisms
    - 9.8.2.1. Nutrient Malabsorption
    - 9.8.2.2. Mechanical Disorders
    - 9.8.2.3. Neurohormonal Mechanisms
  - 9.8.3. Effects of Bariatric Surgery on Bone Metabolism
    - 9.8.3.1. Adjustable Gastric Band
    - 9.8.3.2. Gastric Bypass
    - 9.8.3.3. Vertical Gastrectomy
    - 9.8.3.4. Biliopancreatic Diversion- Duodenal Crossover





### Structure and Content | 65 tech

- 9.8.4. Fracture Risk
- 9.8.5. Recommendations in the Preoperative Evaluation and Treatment of Bone Metabolism Alterations after Bariatric Surgery.
  - 9.8.5.1. Preoperative Evaluation
  - 9.8.5.2. Treatment of Bone Metabolism Disorders after Bariatric Surgery
- 9.9. Other Special Situations in Bariatric Surgery
  - 9.9.1. Inflammatory Bowel Disease
  - 9.9.2. Heart Disease
  - 9.9.3. Kidney Diseases
  - 9.9.5. Neurological Diseases and Mobility Problems
  - 9.9.6. Psychiatric Disorders
- 9.10. Sarcopenia and Loss of Muscle Mass
  - 9.10.1. Body Tissue
  - 9.10.2. Energy Expenditure
  - 9.10.3. Sarcopenia
    - 9.10.3.1. Definition
    - 9.10.3.2. Assessment
    - 9.10.3.3. Sarcopenic Obesity
  - 9.10.4. Changes in Body Composition in Bariatric Patients
  - 9.10.5. Inconveniences of Loss of Fat-Free Mass in Bariatric Patients

### tech 66 | Structure and Content

## **Module 10.** Innovation, Quality of Life, Training and Clinical Management in Bariatric Surgery

- 10.1. Innovation, Quality of Life, Training and Clinical Management in Bariatric Surgery
  - 10.1.1. Application of Robotics in Bariatric Surgery
    - 10.1.1.1. Bariatric Procedures: General Aspects (Indications, Contraindications, Advantages and Disadvantages)
    - 10.1.1.2. Restrictive Laparoscopic and Robot-Assisted Procedures
      - 10.1.1.2.1. Gastric Sleeve: Advantages and Disadvantages of Using a Robot
    - 10.1.1.2.2. Other Restrictive Procedures Gastric Banding, BariClip, Gastroplication, Intragastric Balloon and Endorobotics
    - 10.1.1.3. Robot-Assisted Laparoscopic Roux-en-Y Gastric Bypass
      - 10.1.1.3.1. Pouch Confirmation and Probe Calibration
    - 10.1.1.3.2. Distances of Intestinal Loops: Food Loop, Biliopancreatic Loop, Common Loop
    - 10.1.1.3.3. Types of Anastomoses: Manual, Linear, Circular, Robotic Grappling (Anterior, Posterior, One Plane, Two Plane)
      - 10.1.1.3.4. Closing Spaces and Gaps
    - 10.1.1.3.5. Intraoperative Tests: Methylene Blue, Pneumatic Testing, Endoscopy
      - 10.1.1.3.6. Use of Open and Closed Drains
    - 10.1.1.4. Other Robot-Assisted Mixed Procedures:
      - 10.1.1.4.1. One Anastomosis Gastric Bypass
      - 10.1.1.4.2. SADI-S
      - 10.1.1.4.3. Duodenal Crossover and Biliopancreatic Diversion
      - 10.1.1.4.4. Intestinal Bipartition
    - 10.1.1.5. Revision Surgery and Robotic Surgery
    - 10.1.1.6. Superobesity and Robotic Surgery
    - 10.1.1.7. Use of New Platforms in Gastrointestinal Surgery
    - 10.1.1.8. How to Reduce Costs in Robotic Surgery Without Putting the Patient at Risk
    - 10.1.1.9. Future of Surgery Robotics in Bariatric Surgery
    - 10.1.1.10. Pandemic and Robotic Surgery
    - 10.1.1.11. Telemedicine and 5G Technology
    - 10.1.1.12. Conclusions

- 10.2. Application of NOTES and Single Port in Bariatric Surgery
  - 10.2.1. Basics of Access Reduction in Bariatric Surgery
  - 10.2.2. Surgical Techniques
  - 10.2.3. Results
- 10.3. Quality of Life after Bariatric Surgery
  - 10.3.1. Introduction
  - 10.3.2. Concept of Quality of Life
  - 10.3.3. Questionnaires
    - 10.3.3.1. Generic Ouestionnaires
    - 10.3.3.2. Specific Questionnaires
  - 10.3.4. Results
    - 10.3.4.1. Surgical Techniques Results
      - 10.3.4.1.1. Short-Term Results
    - 10.3.4.2. Long-Term Results
    - 10.3.4.3. Future Perspectives
    - 10.3.4.4. Conclusions
- 10.4. Bariatric Surgery Cost-Benefit Studies
  - 10.4.1. Economic Impact of Obesity and Bariatric Surgery
    - 10.4.1.1. Economic Load of Obesity
    - 10.4.1.2. Costs of Bariatric Surgery.
    - 10.4.1.3. Benefits of Bariatric Surgery
    - 10.4.1.4. Cost-Effective Aspect of Bariatric Surgery
  - 10.4.2. Systems or Methods for the Evaluation of the Impact on Health Costs
    - 10.4.2.1. Comparison of Approaches for Measuring Cost Impact
      - 10.4.2.1.1. Cost Minimization Analysis (CMA)
      - 10.4.2.1.2. Cost-Effectiveness Analysis (CEA)
      - 10.4.2.1.3. Cost-Utility Analysis (CUA)
      - 10.4.2.1.4. Cost-Benefit Analysis (CBA)
    - 10.4.2.2. Visualization of Cost-Effectiveness Using the Cost-Effectiveness Plan
  - 10.4.3. Summary of Current Data on the Economic Benefit of Bariatric Surgery

### Structure and Content | 67 tech

10.5. Waiting List and Candidate Selection Management in Bariatric Surg	gery
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- 10.5.1. Introduction
- 10.5.2. Bariatric Surgery Candidate Selection
- 10.5.3. Factors Affecting the Waiting List

10.5.3.1. Resources Availability

10.5.3.2. Severity

10.5.3.3. Waiting Capacity

- 10.5.4. Criteria for Prioritizing Patients on the Waiting List: Severity Scales
- 10.5.5. Conclusions

#### 10.6. Experimental Animal and Thiel Cadaver Training in Bariatric Surgery

- 10.6.1. Introduction
- 10.6.2. Learning Curve in Laparoscopic Gastric Bypass
- 10.6.3. Ex Vivo Laparocopic Gastric Bypass Training Strategies

10.6.3.1. Training Models

10.6.3.1.1. Laboratory Models

10.6.3.1.2. Virtual Reality Simulators

10.6.3.1.3. Animal Experimentation Models

10.6.3.1.4. Thiel Human Cadavers

10.6.3.2. Laparoscopic Surgery Workshops

- 10.7. Bariatric Tourism
- 10.8. Quality Standards after Bariatric Surgery: Current Evidence
  - 10.8.1. In Relation to Weight Loss
  - 10.8.2. In Relation to the Resolution of Comorbidities in Revision Surgery
  - 10.8.3. Bariatric Procedure Morbidity and Mortality: Record of Complications
  - 10.8.4. How to Measure Quality of Life in Bariatric Patients: Measuring Systems

#### 10.9. Aesthetic and Body Contouring Surgery

- 10.9.1. Selection Criteria for Intervention of Morbid Obesity Sequelae Following Bariatric Surgery
- 10.9.2. Plastic Surgery Techniques for the Intervention of Sequelae

10.9.2.1. Upper Limbs: Classification and Techniques

10.9.2.1.1. Horizontal, L, T Brachioplasty

10.9.2.1.2. Posterior Brachioplasty

10.9.2.2. Posterior Brachioplasty

10.9.2.2.1. Horizontal Lifting

10.9.2.2.2. Vertical Lifting

10.9.2.2.3. Complementary Techniques

10.9.2.3. Abdomen Classification and Techniques

10.9.2.3.1. Conventional/Anchor Abdominoplasty with/without Rectus

Plication, with/without Umbilical Transposition

10.9.2.3.2. Upper/Lower Body Lift

10.9.2.3.3. Complementary Techniques: Liposuction

10.9.2.4. Breast Classification and Techniques

10.9.2.4.1. Breast Reduction

10.9.2.4.2. Mastopexy with/without Prosthesis

- 10.9.3. Intra/Postoperative Management
- 10.9.4. Complications after Obesity Seguelae Surgery
- 10.10. Creation of Behavioral Therapy Programs for Maintaining Weight Loss after Surgery
  - 10.10.1. Introduction
  - 10.10.2. Psychological Aspects of the Patient with Morbid Obesity Post-Surgery
  - 10.10.3. Phases in the Post-Surgery Monitoring
  - 10.10.4. Areas to Evaluate in Post-Surgical Monitoring
  - 10.10.5. Individual Psychological Monitoring





### tech 70 | Methodology

#### At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately 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 will experience a way of learning that is shaking the foundations of traditional universities around the world.



According to Dr. Gérvas, 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 power 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 achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
- 2. Learning is solidly translated into 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 course.





### **Relearning Methodology**

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This 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, a real revolution with respect to the mere study and analysis of cases.

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



### Methodology | 73 tech

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

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, 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 (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

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

## tech 74 | Methodology

This program offers the best educational material, prepared with professionals 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.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



#### **Surgical Techniques and Procedures on Video**

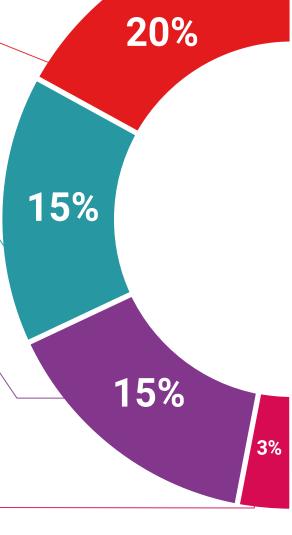
TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



#### **Interactive Summaries**

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".





#### **Additional Reading**

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.

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

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Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, 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 students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.

#### Classes



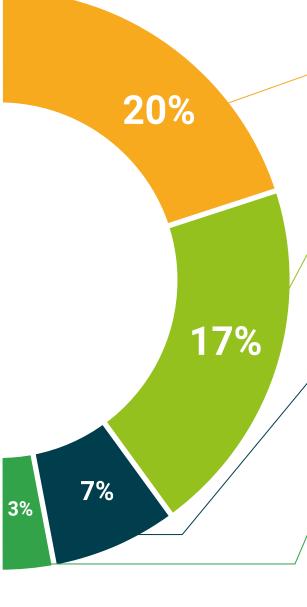
There is scientific evidence on the usefulness of learning by observing experts.

The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

#### **Quick Action Guides**



TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.







### tech 76 | Certificate

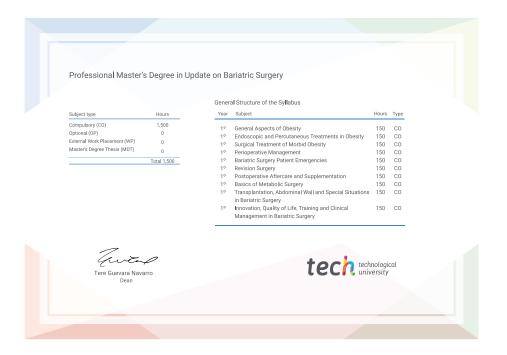
This **Professional Master's Degree in Update on Bariatric Surgery** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Professional Master's Degree** issued by **TECH Technological University** via tracked delivery\*.

The certificate issued by **TECH Technological University** will express the qualification obtained in the Professional Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

Title: Professional Master's Degree in Update on Bariatric Surgery Official N° of hours: 1,500 h.





<sup>\*</sup>Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

technological university



**Professional Master's** Degree Update on Bariatric Surgery

Course Modality: Online

Duration: 12 months

Certificate: TECH Technological University

Official No of hours: 1,500 h.

