

A photograph of a modern hospital corridor. The ceiling is composed of numerous colorful, rectangular panels in shades of red, orange, yellow, green, and purple, arranged in a grid-like pattern. The floor is a highly reflective, polished material that mirrors the lights and the colorful ceiling. The walls are made of light-colored wood panels. In the distance, there are glass partitions and more colorful ceiling panels. The overall atmosphere is bright and modern.

Otorhinolaryngology

Clinical Management Unit

Virgen Macarena University Hospital
Seville, Spain

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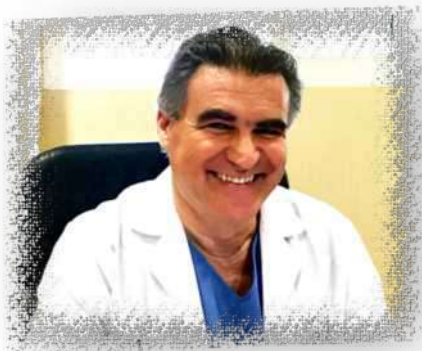
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I welcome you to the Otorhinolaryngology Clinical Management Unit / Service of the Virgen Macarena University Hospital in Seville.

Our entire team of professionals strives every day to improve patient care, to use the most appropriate diagnostic tools and to provide them with the best treatments. We want to create the best conditions so that they can deal with illnesses in the most comfortable way possible, so we are always receptive to their suggestions and needs.

Our vocation for training, for innovation and for research allows us to be continuously at the forefront of the advances of Medicine and Nursing in order to offer them to our patients.

In the same way, our full identification with the Public Health System of Andalusia allows us to provide equitable health care for all citizens, at the same time accessible and transparent. All patients receive our maximum attention, from the most banal to the most complex processes.

We are a reference center for Western Andalusia in Cochlear Implants, having received the explicit recognition of our trajectory in favor of implanted patients by the Federation of Associations of Implanted Patients of Spain.

All specialists and most of nursing professionals are accredited by the Professional Certification Program of the Health Quality Agency of Andalusia, and the Service / UGC itself is also accredited since 2010, having periodically renewed its demanding criteria quality.

We want you to know us better through the following pages.

Thanks for trusting us.



Dr. Serafín Sánchez Gómez

Head of Service and Director of the Clinical Management Unit of Otorhinolaryngology.

Virgen Macarena University Hospital. Seville.

Associate Professor of Otolaryngology.

University of Seville.

In a historical and cultural environment ...



Hospital Universitario
Virgen Macarena

Andalus de Salud
ERIP DE SALUD

■ Our reference population

The Virgen Macarena University Hospital provides healthcare to the reference population of its hospital area as a Basic Population. In addition, the Otorhinolaryngology Service / Clinical Unit assumes complex oncological and infectious care processes in other Districts and Basic Health Zones. We are a reference center in Cochlear Implants for the provinces of Western Andalusia and in Spasmodic Dysphonia for all of Andalusia.

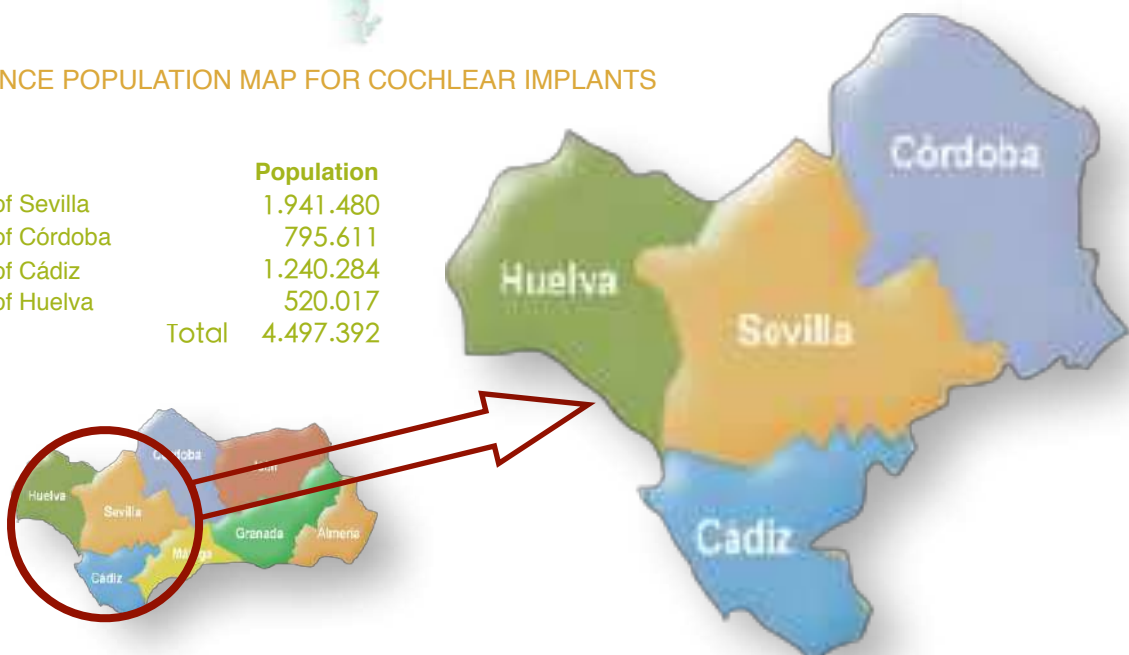
Basic Population	
Districts	HUVM
Guadalquivir	3.524
Sevilla Norte	207.822
Sevilla	269.505
Total	480.851

REFERENCE POPULATION MAP OF THE VIRGEN MACARENA UNIVERSITY HOSPITAL
Districts and Basic Health Care Areas



REFERENCE POPULATION MAP FOR COCHLEAR IMPLANTS

Province	Population
Province of Sevilla	1.941.480
Province of Córdoba	795.611
Province of Cádiz	1.240.284
Province of Huelva	520.017
Total	4.497.392





■ Where we are

Operating rooms

The main surgical activity is performed in the operating room n° 305 (daily plus 2 weekly sessions in the afternoon) and LI (2-3 weekly sessions) in the Hospital Virgen Macarena, where we have the most modern surgical and imaging technology: 3 columns of high definition endoscopic surgery (one of them with NBI light), 3 motorized surgical microscopes, navigator, debrisor, high-speed milling motors, neuromonitor, radiofrequency equipment, CO2 laser, diode laser, ultrasonic surgery equipment (Thunderbeat), equipment for high definition video recording.



We also use 3 or 4 operating rooms weekly with general anesthesia at the San Lázaro Hospital and the Santa Isabel Clinic. The operating room sessions with local anesthesia (6 monthly), we carried out in the Operating Room of the UGC-ORL in the Polyclinic of the area of External Consults.





Hospitalization

The hospitalized patients are in the 5th Floor, A Ward, of the Hospital Virgen Macarena. The ENT Service / Clinical Unit is assigned 12 beds, which are intended primarily for the development of surgical activity and urgent admissions.



The ENT Service / Clinical Unit is organized to carry out a very efficient hospitalization activity and at the same time of excellent quality. The average stay of the 1,474 admitted patients is of 1.64 days, reaching an activity in ambulatory major surgery of 82.34% of the 1,655 scheduled surgery interventions.

All the processes are protocolized and 2 Clinical Pathways have been designed for those of greater importance for patients and professionals: 1- Total laryngectomy; 2- Cochlear implant.

The ENT Service / Clinical Unit carries out a very efficient management of the hospitalization, performing more than 70% of its activity as Ambulatory Surgery and as Day Hospital, reaching an average stay of 2.15 days.

The majority of hospitalized patients with stays longer than 2 days are due to surgical and reconstructive oncological processes of the head and neck. To a lesser extent, serious infectious processes (deep cervical abscesses, descending necrotizing fasciitis) and hemorrhagic processes are counted.

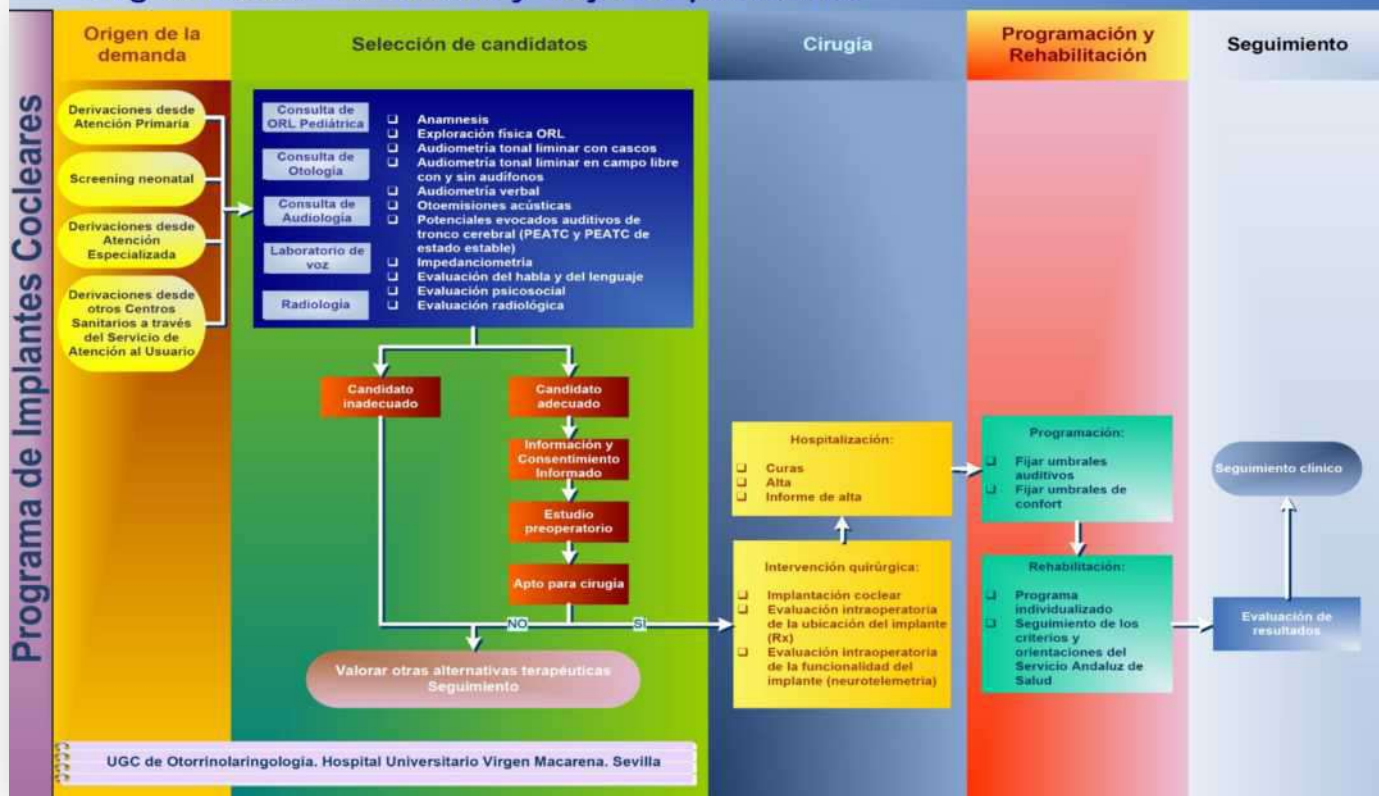
The ENT Service / Clinical Unit has a doctor and a resident every day of the week in the morning, including Saturdays, Sundays and holidays, for the care of hospitalized patients.

Likewise, it has a doctor every working day, destined to the attention of the non-urgent or preferential interconsultations that are requested from other specialties about hospitalized patients in their corresponding wards. Urgent and preferential interconsultations are attended without delay by the hospitalization doctors or by the continuing care physicians.

Clinical Pathways

[illegible]

Organización funcional y flujo de pacientes



Treatment and Cure Room

The Treatment and Cure Room is located at the entrance of A Ward of the 5th Floor of the Virgen Macarena Hospital. It has a high definition endoscopy column with NBI light, portable fibroscope, microscope, endoscopes and several computer terminals connected to the hospital's intranet.



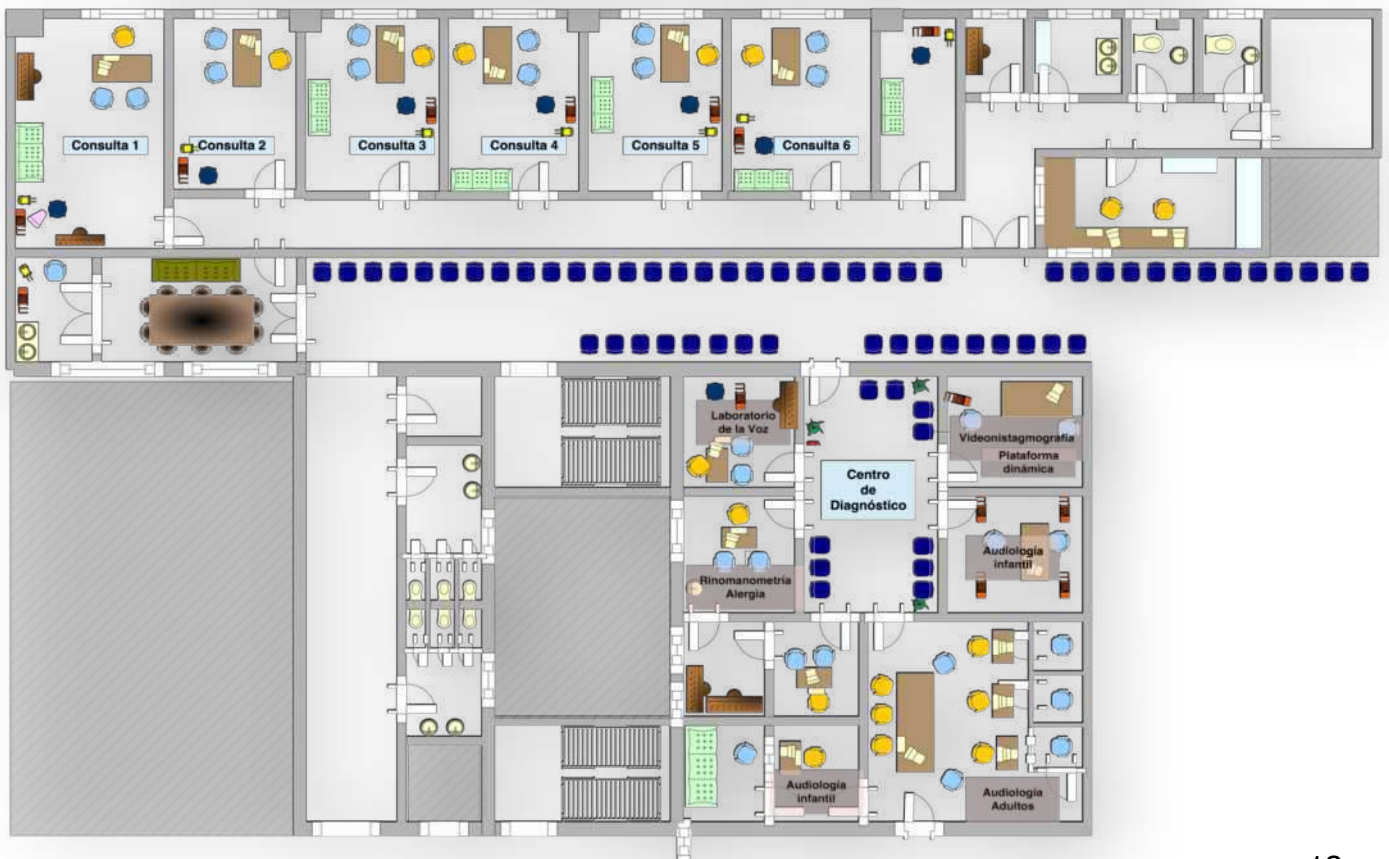
In addition to the cures of the patients who undergo surgery and the care of hospitalized patients in charge of the ENT Service / Clinicaal Unit, all the interconsultations received from other inpatient units are centralized and attended to.

The nurse responsible for the care of hospitalized ENT patients acts as the hospitalization reference of the Tracheostomized Patient Care Unit. This nurse works as a team with the nurse of the Tracheostomized Patient Care Unit that is located in the outpatient clinics of the Polyclinic, as well as with other professionals of Home Hospitalization, Palliative Care, Case Management Nursing and ICU.



Consultations and explorations (ENT Diagnostic and Treatment Center, Polyclinic)

The activity of office consultations and special examinations is carried out in the ENT Diagnostic and Treatment Center, located on the second floor of the Policlínico building, located on the Macarena campus, 50 meters in front of the hospital. The lower images and the plane show the distribution of the different spaces.



The consultation offices have an endoscopy column with fiberoptics with a television chip on the tip and recording systems, which offers the highest image quality in the explorations. They also have microscopes with a television camera, endoscopes, NBI light system, videolaryngostroboscopy and suctioning equipment.

The consultations of the Diagnostic Center constitute the second level of specialized care of the ENT Service / Clinical Unit, to where the patients referred from the first level of specialized care of the ENT Service / Clinical Unit and the other Hospital Units are attended. They have a distribution by Sections and Units to offer the best healthcare quality of the superspecialization.

In the Nursing Consultation, the ambulatory care patients' cures are carried out daily, as well as the first postoperative care of the patients who undergo outpatient surgery.

It is also the point of reference of the Tracheostomized Patient Care Unit for all tracheostomized patients of all specialties that are subject to clinical follow-up in their homes.

Likewise, it provides nursing care for the cures and spare parts of phonatory prostheses and carries out a relevant activity of health education in all areas of the specialty.

Otorhinolaringology Offices and Diagnostic Center				
Monday	Tuesday	Wednesday	Thursday	Friday
Office 1 Oncology Dr. Ventura	Office 1 Oncology Dr. Mingo	Office 1 Voice Dr. Galera	Office 1 Rhinology Dr. Galera	Office 1 Oncology Dr. Herrero
Office 2 Pediatric ENT Dr. Gómez	Office 2 Pediatric ENT Dra. López-Ladrón	Office 2 Pediatric ENT Dr. Prado	Office 2 Pediatric ENT Dr. Gómez	Office 2 Pediatric ENT Dr. Prado
Office 3 Otology Dr. Alcalá	Office 3 Otology Dr. Alcalá	Office 3 Otology Dr. Aguilar	Office 3 Otology Dra. Berrocal	Office 3 Otology Dr. Alcalá
Office 4 Rhinology Dr. Prado	Office 4 Rhinology Dr. Maza	Office 4 Otology Dr. Alcalá	Office 4 Rhinology Dr. Moreno	Office 4 Lacrimal Tracts and Orbit
Office 5 Otoneurology Dr. Domínguez	Office 5 Rhinology Dr. González	Office 5 Otology Dr. Ropero	Office 5 Otology Dr. Aguilar	Office 5 Otology Dres. Berrocal-Ropero
Office 6 Pharynx-Larynx Dr. Mingo	Office 6 OSAS-Dysphagia Dr. Estrada	Office 6 Pharynx-Larynx Dr. Benavente	Office 6 Voice Dr. Benavente	Office 6 Voice Dra. López-Ladrón
Office 7 Clinical Trials	Office 7 Otoneurology Dra. Nemeckova	Office 7 Cochlear Implants Dra. Berrocal	Office 7 Cochlear Implants Dr. Ropero	Office 7 Otoneurology Dr. Domínguez
Diagnostic Center Audiología Infantil Dra. López-Ladrón	Diagnostic Center Audiología Infantil Dra. Postigo	Diagnostic Center Audiología Infantil Dra. Postigo-Alonso	Diagnostic Center Audiología Infantil Dra. Postigo	Diagnostic Center Audiología Infantil Dra. Alonso
Diagnostic Center Clinical Trials	Diagnostic Center Clinical Trials	Office 8 Thyroid gland Dr. Moreno	Office 8 Rhinology Dr. Maza	Diagnostic Center Clinical Trials
CE San Jerónimo 1 General ENT Dr. Berrocal	CE San Jerónimo 1 General ENT Dr. Aguilar	CE San Jerónimo 1 General ENT Dr. González	CE San Jerónimo 1 General ENT Dr. Prado	CE San Jerónimo 1 General ENT Dr. Estrada
CE San Jerónimo 2 General ENT Dr. Ropero	CE San Jerónimo 2 General ENT Dr. Prado	CE San Jerónimo 2 General ENT Dr. Maza	CE San Jerónimo 2 General ENT Dra. López-Ladrón	CE San Jerónimo 2 General ENT Dr. Ventura
CE San Jerónimo 3 General ENT Dr. Benavente	CE San Jerónimo 3 General ENT Dr. Gómez	CE San Jerónimo 3 General ENT Dra. Nemeckova	CE San Jerónimo 3 General ENT Dra. Alonso	CE San Jerónimo 3 General ENT Dr. Gómez





Consultations and explorations (Centro de Especialidades de San Jerónimo)

The ENT Service / Clinical Unit has 3 daily consultation offices in the Center of Specialties of San Jerónimo, plus a shared Audiology office.

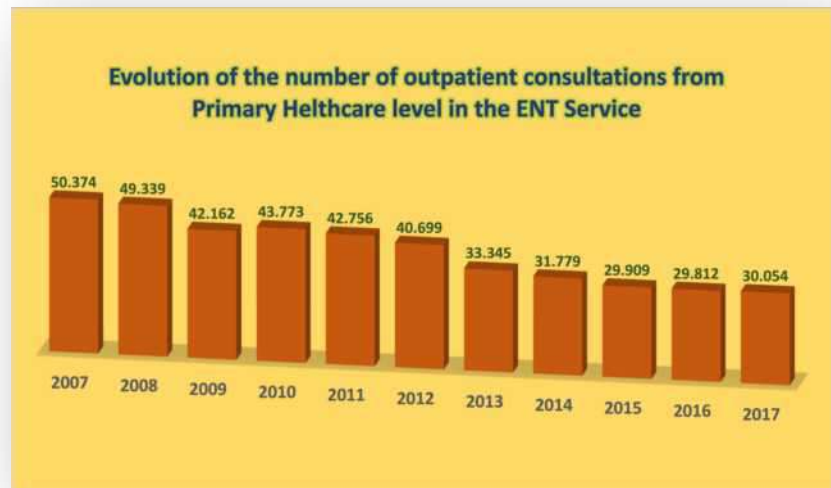
They constitute the first level of specialized care of the ENT Service / Clinical Unit and are exclusively dedicated to the care of patients referred from Primary Care. They offer preferential attention in less than 5 days and scheduled service in less than 25 days.

Each office has an endoscopy column with a fibroscope and a microscope, as well as all the exploration instruments.



The ENT Service / Clinical Unit works closely with Primary Care to optimize the care of patients shared between both levels and reduce the inconvenience to users derived from unnecessary displacement or uncertainty about their health status. To this end, it organizes multiple training activities and prepares documentary material to help decision-making and clinical management of patients with otorhinolaryngological pathologies.

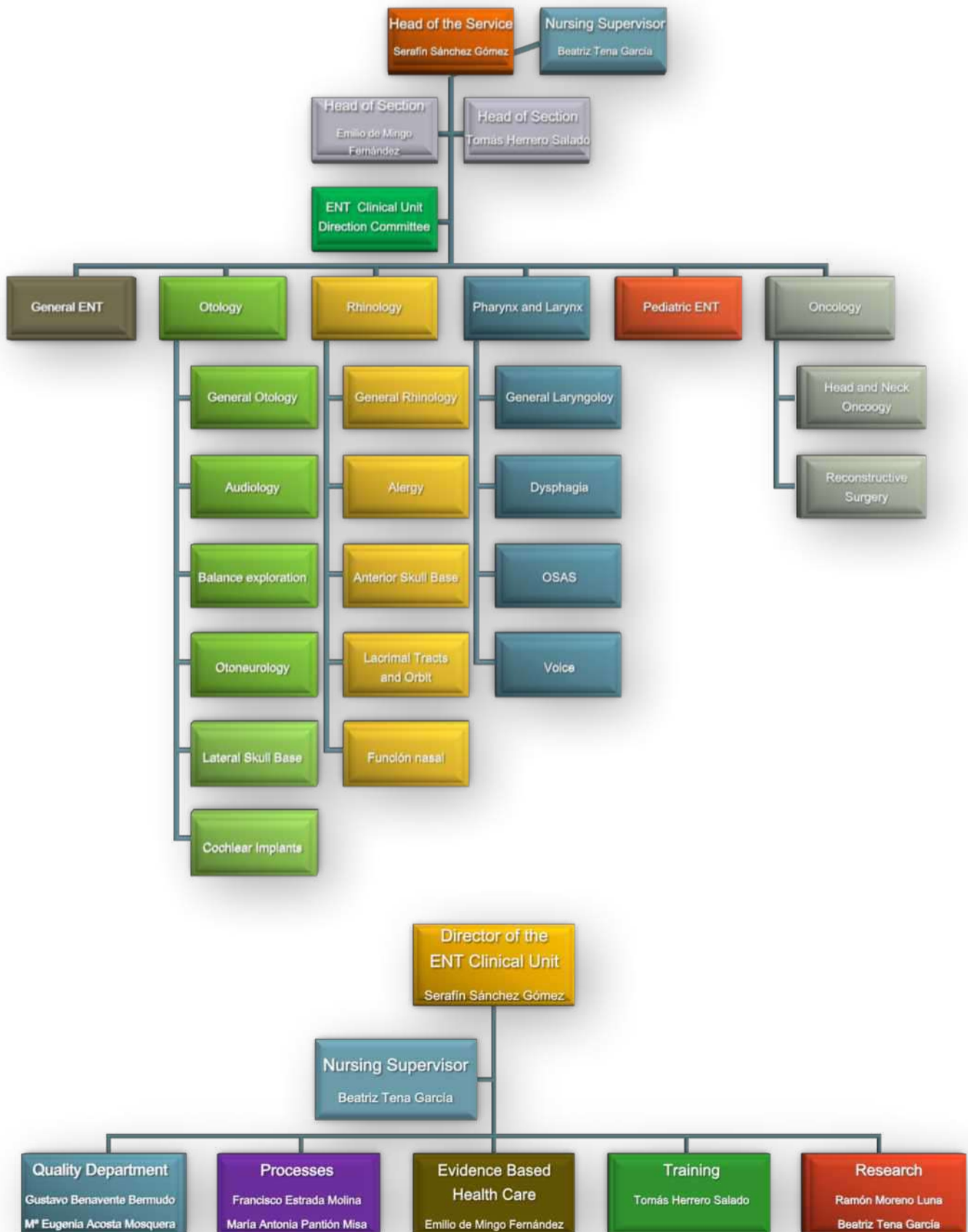
The result of this joint effort is the decrease in the number of global consultations of the ENT Service / Clinical Unit that did not add value to the care process and the increase in the scientific-technical level of the consultations that are currently carried out, increasing the health outcomes and the satisfaction of the users.

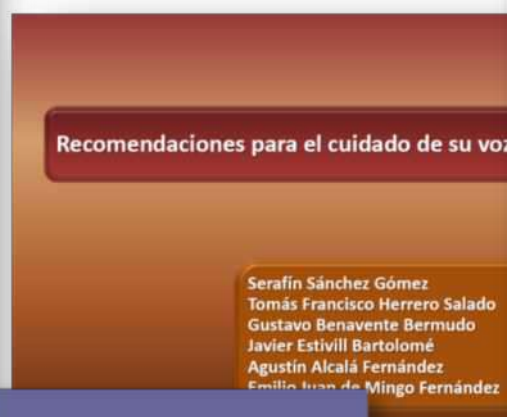
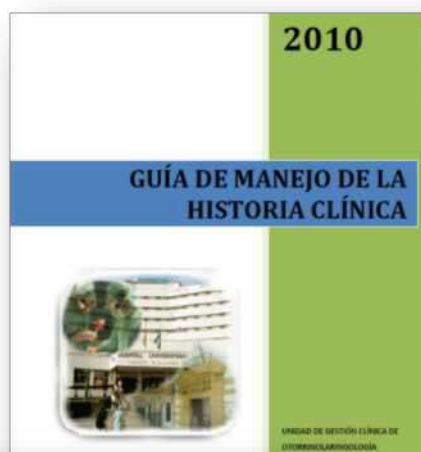




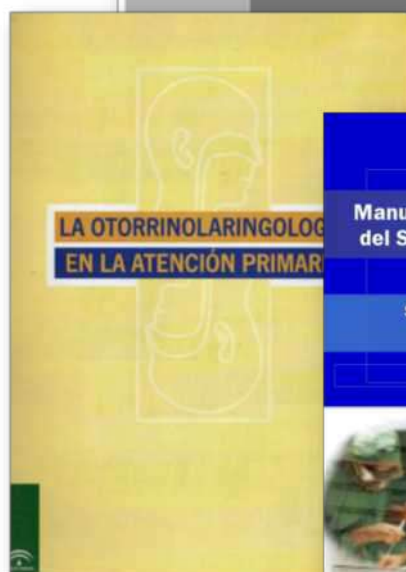
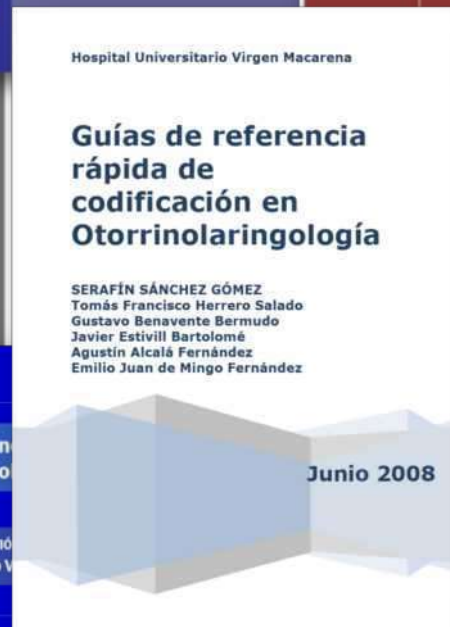
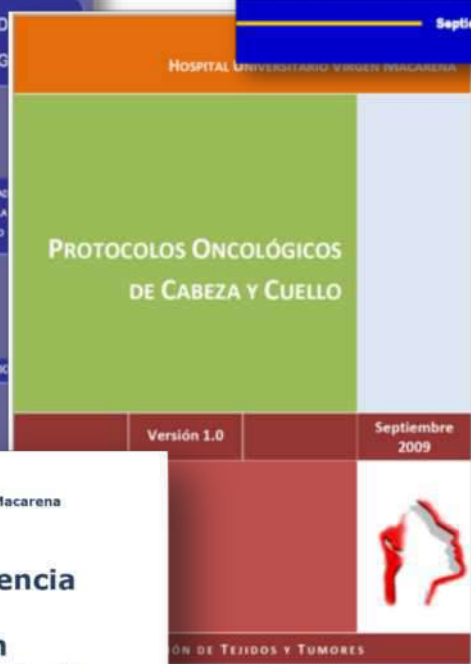
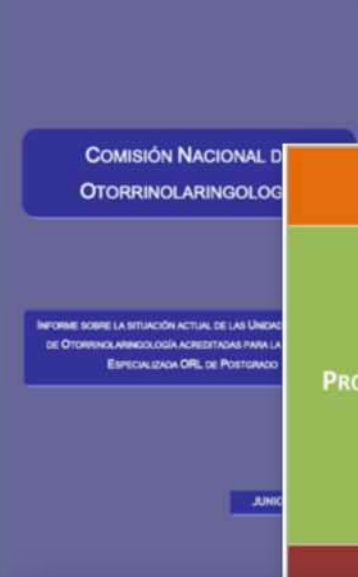


Hierarchical and functional organization





Comisión Nacional de Otorrinolaringología



■ Section of Otology and Audiological Implants



**Dr. Agustín Alcalá
Fernández**



**Dr. Estefanía
Berrocal Postigo**



**Dr. Francisco
Ropero Romero**



**Dr. Francisco
Aguilar Vera**

Dr. Alcalá is a national reference in otological surgery and audiological implants. Throughout his career he has made multiple stays in the best otological centers in the United States, France, Great Britain, Holland, Germany, Denmark and Austria. His solid training and extensive professional experience have allowed him to transmit his knowledge to an excellent team that develops an intense surgical activity on a wide range of procedures in Otology.

His clinical leadership has placed the ENT Clinical Unit of the Virgen Macarena University Hospital at the head of the national centers in the number of annual patients who have benefited from the cochlear implant technology.

The Section of Otology and Audiological Implants maintains a continuous offer of teaching and training. In addition to 2 annual courses of Otologic Surgery and Temporary Bone Dissection, they receive practically every month national and foreign otolaryngologists to update themselves in oto-surgical techniques and cochlear implants.

At the same time, they participate in multiple congresses, symposia, courses and training activities as expert speakers in their field of expertise in Otology and Audiological Implants.

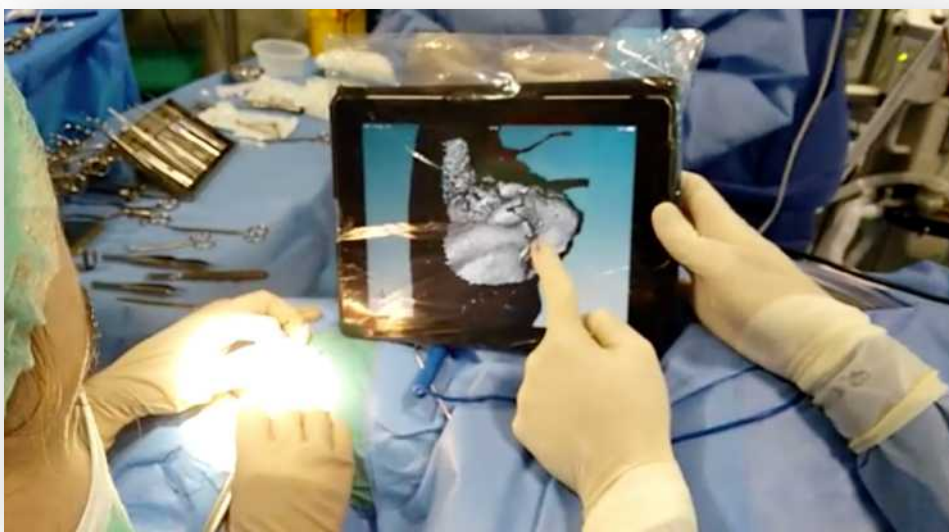
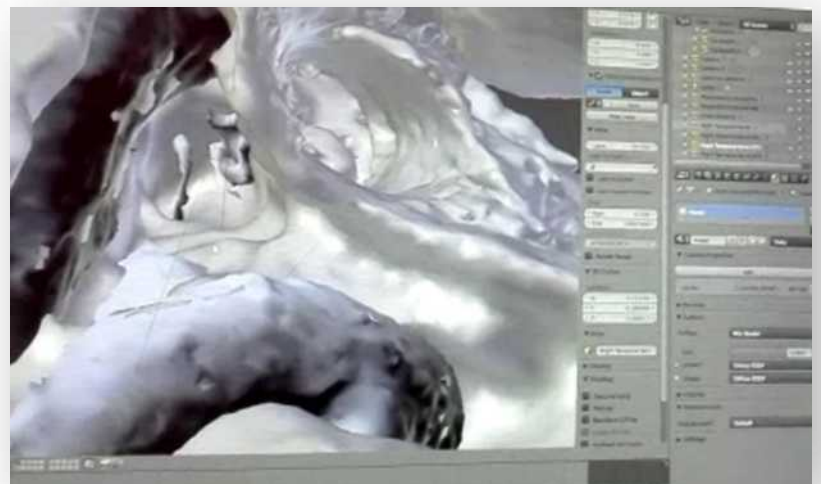
The consolidation of the portfolio of services is enabling this Section to deploy research initiatives. There are several doctoral theses that are being carried out on interesting otological and implantological auditory aspects. A multicenter and multinational clinical trial on the use of a drug in the form of a gel for the preservation of residual frequencies after cochlear implantation has also been carried out in 2017.

One of the areas of greatest impact in the otorhinolaryngological community is the development of virtual reality application methodologies and augmented reality for the planning of surgeries and the surgical approach that is being developed in the ENT Clinical Unit. One of the additional advantages of this innovation is to allow ENT residents a much faster surgical learning and techniques of much greater complexity.

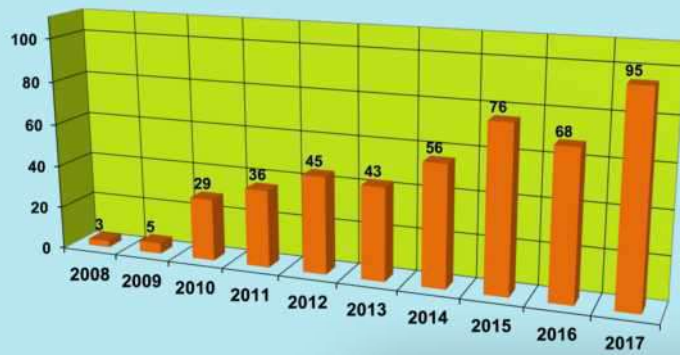


Cochlear Implant team, composed of otolaryngologists, audiologists, phoniaticians, speech therapists, nurses, engineers, technicians.

Examples of the use of the Virtual Reality and Augmented Reality methodologies and their clinical application during surgeries.



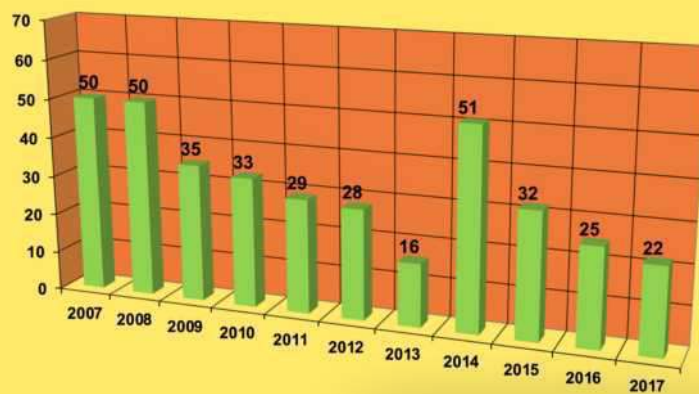
COCHLEAR IMPLANTS



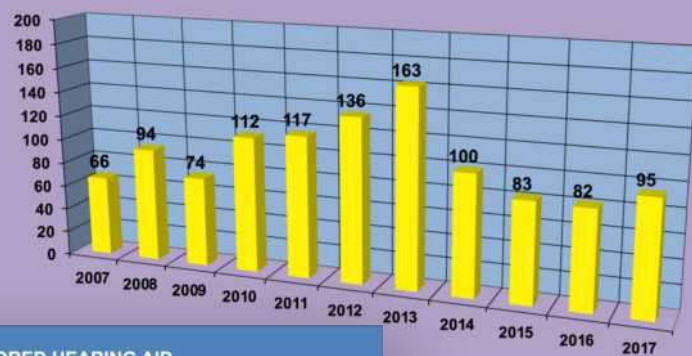
TYMPANOPLASTIES WITH / WITHOUTH MASTOIDECTOMY



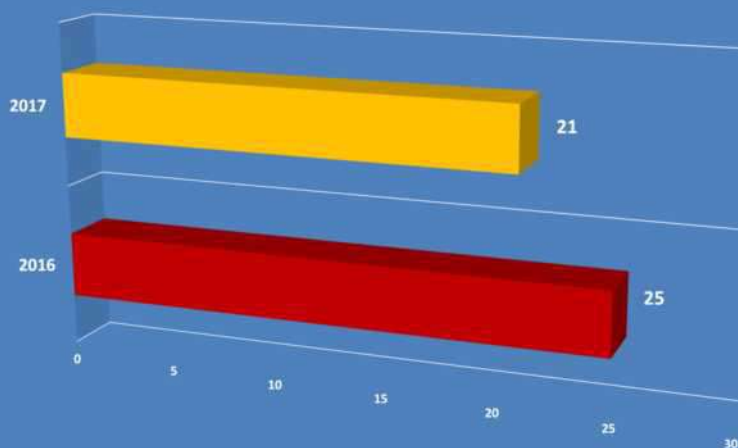
STAPEDECTOMIES

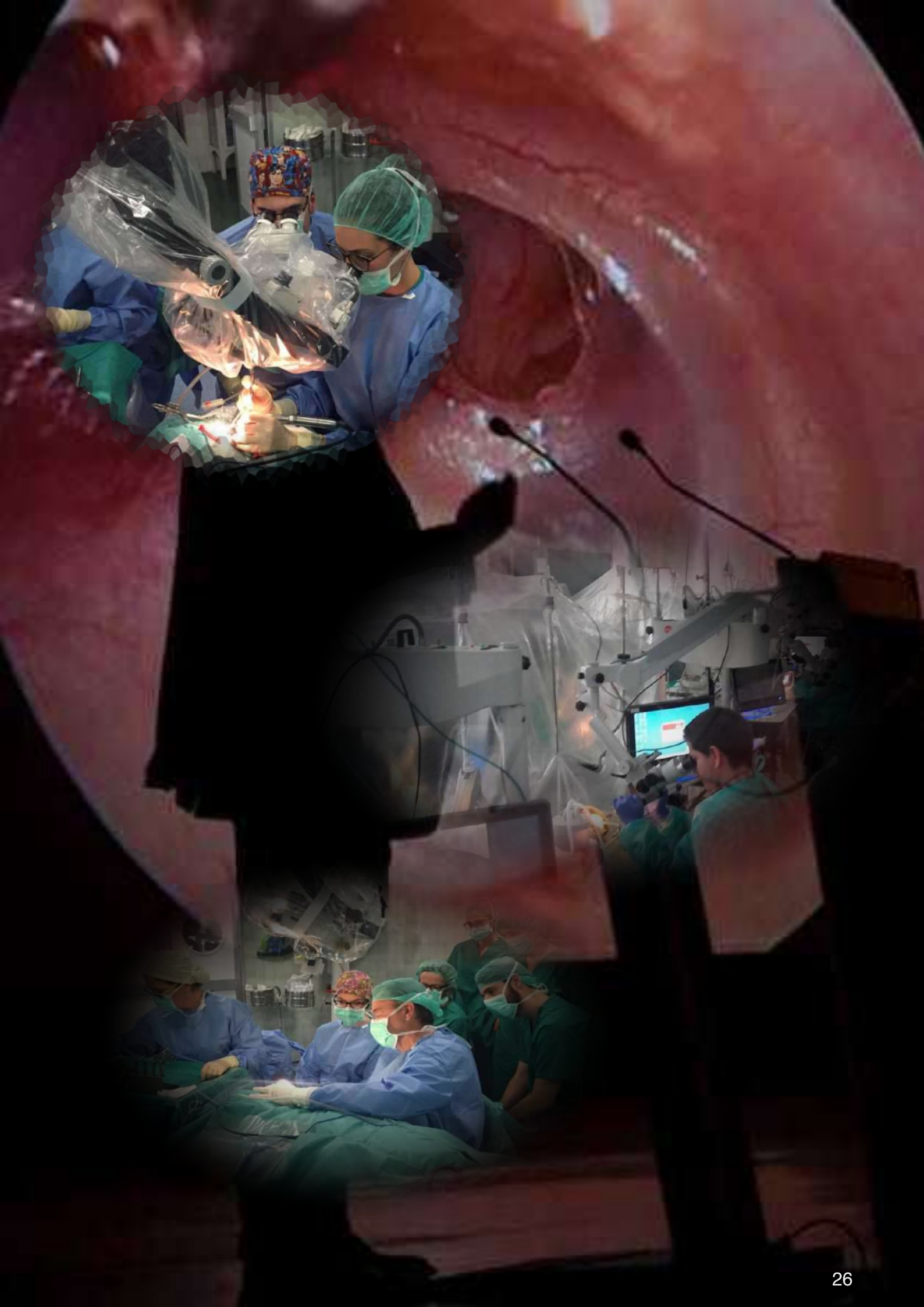


MYRINGOPLASTIES



BAHA: BONE ANCHORED HEARING AID





■ Section of Audiology



**Dr. Amparo
Postigo Madueño**



**Dr. Cayetana López-
Ladrón García de la
Borbolla**



**Dr. Cristina
Alonso González**

Dr. Postigo has been leading this section for more than 15 years, and is a true benchmark in the field of Audiology. His career is linked to the learning of his predecessor, Dr. Ana María Ruiz Carmona, introducer and promoter of Audiology in Spain.

Dr. Postigo combines her enormous clinical experience in audiological explorations with an exceptional teaching vocation, recognized by the multiple generations of otolaryngologists, residents, nurses and hearing care professionals who have been trained at her side.

It is also present in the most important national and international audiological forums and maintains close professional contacts with the most important Spanish Audiology centers and Associations of people affected by hearing loss and those associated with cochlear implants.

His teaching and competence, especially in the field of Children's Audiology, have been the fundamental support for the Virgen Macarena University Hospital acquired accreditation as a reference center in Andalusia for the implementation of Cochlear Implants by the Andalusian Health Service in the year 2008.

The clinical assistance, teaching and research volume of the Audiology Section has allowed the secondment of otorhinolaryngologists Dras. López-Ladrón and Alonso to it, developing a high daily activity in both pediatric patients and adult patients.

The team work of otolaryngologists / audiologists is complemented by the collaboration of 2 nurses, 1 nursing assistant technician and 1 hearing care professional.

The experience of the entire team in the management of complex patients and the modern technological equipment allow the realization of more than 98% of the pediatric explorations in consultation, without requiring sedation in the operating room.



■ Section of Otoneurology



Virgen Macarena

**Dr. Emilio
Domínguez Durán**



**Dr. Francisco
Aguilar Vera**



**Dr. Cristina
Alonso González**

The growing interest in the specialty of the field of Otoneurology has found an adequate reference in the Virgen Macarena University Hospital with the team of otorhinolaryngologists that make up the Otoneurology Section.

Drs. Domínguez, Aguilar and Alonso have protocolized the management of patients affected by balance pathologies, both from a diagnostic and therapeutic point of view. They extend this management from the reception of patients in the Emergency Department or from Primary Care to carry out even close collaborations with the Neurology and Rehabilitation Services to offer patients the best healthcare and the fastest possible integration to their activities.

The illusion and vocation of the members of the Otoneurology Section are transmitted to residents and medical students, and it manages to extend this interest beyond the hospital. Work and research groups have been established with primary care physicians to continue the projects generated by otoneurologists, projects of great relevance for the establishment of prognostic factors in the onset of stroke and for the proper management of vertiginous processes in Primary Care.

The research activity of this Section is reflected in the publication of articles in journals of scientific impact and in its continued presence in national and international forums in the field of Otoneurology.

It also highlights its spirit of innovation, which is reflected in the design and development of computer applications based on Information and Communication Technologies for the management of otoneurological processes, both basic and complex, such as dizziness. caused by migraines. These applications are available for computers, tablets and mobile phones.



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OTOLOGY

Identification of dizzy patients who will develop an acute cerebrovascular syndrome: a descriptive study among emergency department patients

I. Mármol-Szombathy¹ · E. Domínguez-Durán¹ · L. Calero-Ramos¹ · S. Sánchez-Gómez¹

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Abstract

Purpose To calculate the incidence of subsequent acute cerebrovascular syndrome in emergency department patients with vertigo or dizziness symptoms and to determine predictors of subsequent acute cerebrovascular syndrome in these patients.

Methods Descriptive and retrospective hospital based-population study among emergency department patients with vertigo or dizziness symptoms in 1 year. One year follow-up since the medical visit was performed. Chi-square and Fisher tests were used for qualitative variables; Mann-Whitney *U* test for quantitative variables. A multivariate model was created.

Results 1243 dizzy patients who visited emergency department during 2015 were identified, finally 928 were included. 12 acute cerebrovascular syndromes were identified; 8 strokes and 4 transient ischemic attacks. Percentages over the sample size: 1.29% for acute cerebrovascular syndromes, 0.43% for transient ischemic attacks and 0.86% for stroke. Odds ratio values to develop an event over the general population were 7.24 for acute cerebrovascular syndrome, 95% CI (3.98–13.12); 14.9 for transient ischemic attack; 95% CI (4.8–40.9) and 5.86 for stroke, 95% CI (2.72–12.0). Atrial fibrillation and diabetes mellitus were identified as significant risk factors to develop an acute cerebrovascular syndrome.

Conclusion Emergency department patients with symptoms of vertigo or dizziness had sevenfold higher risk of acute cerebrovascular syndromes than the general population. Atrial fibrillation and diabetes mellitus are risk factors associated with high risk of acute cerebrovascular syndromes in these patients.

Keywords Dizziness · Vertigo · Emergency Department · Acute cerebrovascular syndrome · Transient ischemic attack · Stroke · Cardiovascular risk factors

Introduction

Vertigo is the sensation of self-motion when no self-motion is occurring or the sensation of distorted self-motion during an otherwise normal head movement [1], and dizziness is the feeling of being light-headed, 'swimmy' or giddy [2]. It is a very annoying symptom which causes the patient to seek medical care. In this sense, approximately 10% of total emergency room visits are due to vertigo [3]. In patients over 65 years old, it is estimated to be at 13–38% [4], making it one of the most common principal complaints in the emergency department (ED).

Although most patients with vertigo or dizziness have benign vestibular problems, up to 3% have posterior circulation stroke and other serious central nervous system causes [5]. It has been proven that patients whose prolonged crisis of dizziness is due to a central cause are at risk of additional strokes and secondary complications of the initial stroke particularly ischemic swelling following large cerebellar infarction or a progression of the lesion, involving more widespread areas of infarction in the posterior circulation [6].

The evidence demonstrates an increased stroke risk in the following period associated with vertigo or dizziness, but the results are not consistent [7]. This may be due to the fact of that these results have been measured in different ways [7–9].

The objectives of this study are to calculate the incidence of acute cerebrovascular syndrome (ACVS) in ED patients with vertigo and to identify risk factors in the ED population with vertigo which can be used as predictors of ACVS.

✉ I. Mármol-Szombathy
 imarmol@univ.es

¹ Department of Otolaryngology, University Hospital Virgen Macarena, Doctor Fedriani 3, 41009 Seville, Spain

■ Section of Rhinology and Anterior Skull Base Surgery



**Dr. Serafín
Sánchez Gómez**



**Dr. Jaime
González García**



**Dr. Juan Maza
Solano**



**Dr. Ramón
Moreno Luna**



**Prof. Dr. Hugo
Galera Ruíz**

The Rhinology and the Anterior Skull Base Surgery have known in the last decade an unprecedented boom in the specialty. Its rapid and intense development has taken place due to the availability of a technological equipment based on the image and for having overcome the classic limits of Otorhinolaryngology by having allied in multidisciplinary teams with other related specialties.

The Rhinology and Anterior Skull Base Surgery Section has 4 high definition video-imaging systems and light source connections for endoscopic surgery in the operating room, with an electromagnetic and infrared navigators, with microdebridization and laser diode engines.

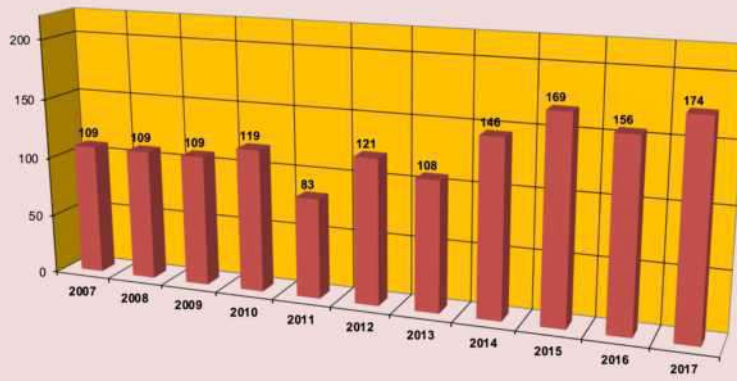
One of the pillars of the high level achieved by this Section is its pioneering character at the national and international level by the application of 3-dimensional imaging technologies and the manufacture of rapid stereolithographic prototypes from diagnosis to treatment in endonasal endonasal surgery. His works in the field of surgical planning based on 3D images and in having disseminated planning protocols based on checklists created by the members of the Section are especially noteworthy.

Another of the pillars of success lies in the collaboration with the Neurosurgery Unit, from the beginning of the skull base surgery with Dr. López Izquierdo in 2007 until its later completion with Drs. Eugenio Cárdenas Ruíz-Valdepeñas and Ariel Kaen. Likewise, the multidisciplinary collaboration has been extended to the Units of Maxillo-Facial Surgery, Plastic and Reconstructive Surgery and Ophthalmology. Processes from all of these areas and disciplines have benefited from expanded endonasal endoscopic approaches.

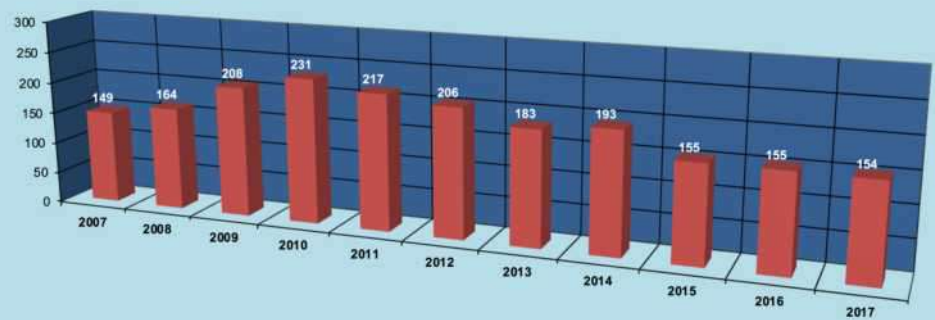
This Section is also very active in the field of research, developing several Clinical Trials in rhinology, especially in nasosinusual polyposis and allergic rhinitis.



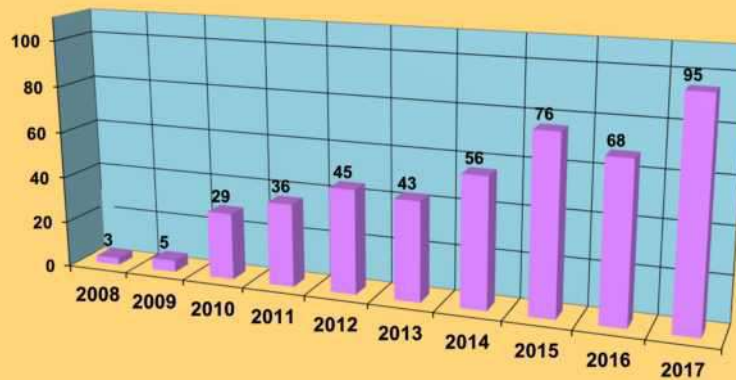
SINONASAL ENDOSCOPIC SURGERIES



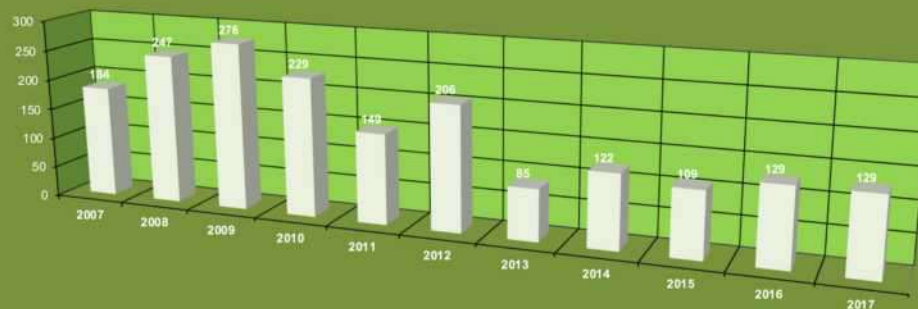
SEPTOPLASTIES



ANTERIOR SKULL BASE SURGERY



TURBINOPLASTIES



■ Section of Oncology and Head and Neck Surgery



**Dr. Tomás
Herrero Salado**



**Dr. Emilio de
Mingo Fernández**



**Dr. Julio Ventura
Díaz**



**Dr. Gustavo
Benavente Bermudo**



**Dr. Francisco
Estrada Molina**

The Virgen Macarena University Hospital has an attached population close to 500,000 inhabitants, located in an area with low economic resources in general. There are no regional hospitals or private clinics that can absorb a portion of the health demand, so the Hospital provides health care in a way that is practically unique to its entire reference population. This means that there are high incidence and prevalence of otorhinolaryngological and head and neck cancer processes.

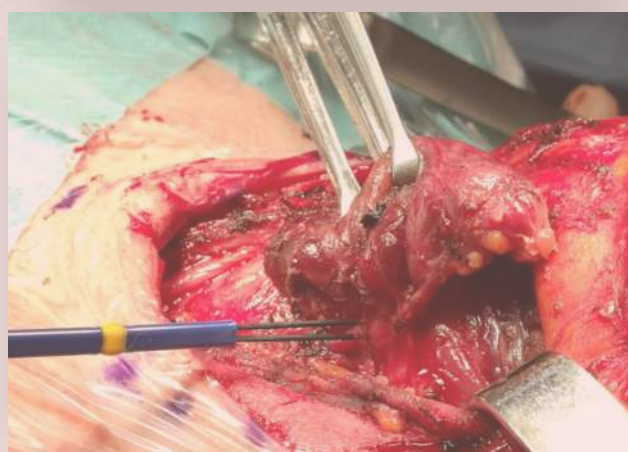
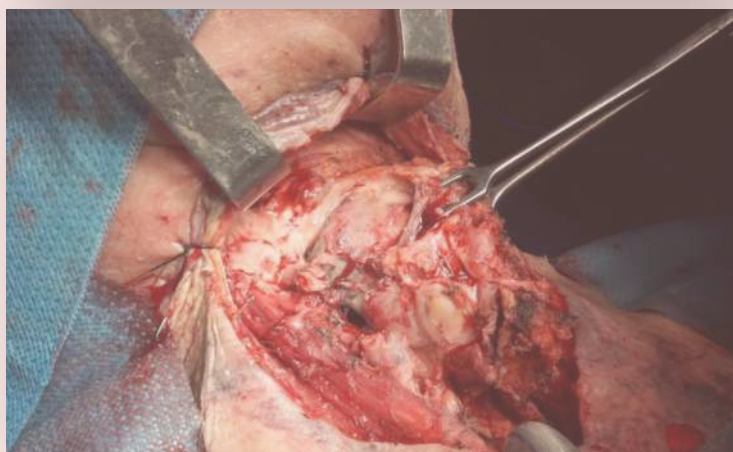
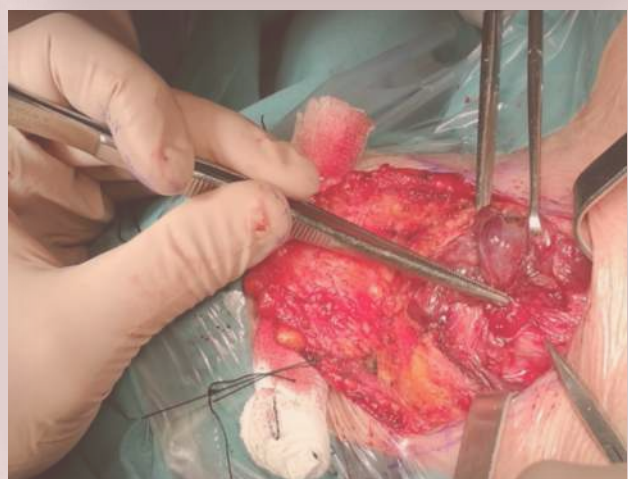
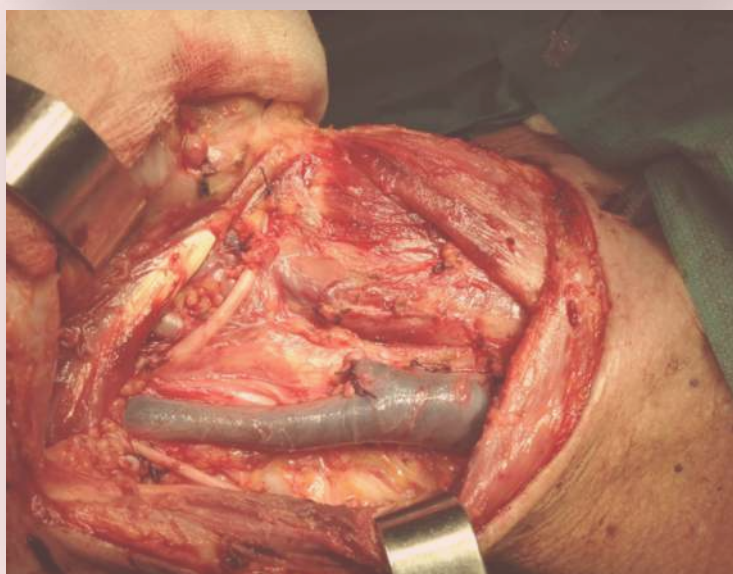
The Section attends annually to around 80 cancers of the larynx and to 30 of the pharynx. He directs the Head and Neck Tumor Committee of the Hospital, where all oncological cases of this anatomical area are discussed in a multidisciplinary environment. From their resolutions, patients are offered different therapeutic options for their processes, from chemoradiotherapy protocols to surgery.

The Section has exploratory equipment in consultations with high resolution video-imaging system and light source connections, equipped with light NBI (Narrow Band Imaging), as in the operating room. In addition to the classic surgical techniques, transoral techniques with CO2 laser (TOLS) and transoral techniques with ultrasound surgery (TOUSS) are carried out.

There are also numerous patients who have benefited from voice recovery after total laryngectomy by performing phonatory fistuloplasties and placement of phonatory prostheses. Along with Nursing, an

outstanding work of health education for laryngectomized and tracheostomized patients is also carried out.

The members of the Section display an intense teaching and training activity, both in updating knowledge and in training by simulation with human and animal corpses.





■ Section of Dysphagia and Sleep Disorders



**Dr. Emilio de
Mingo Fernández**



**Dr. Francisco
Estrada Molina**

The pathology of the pharynx has gained a prominent role in recent years within the Otorhinolaryngology. The otorhinolaryngologists are making use of our ability to explore and treat the anatomical regions where the diseases settle and are manifested through dysphagia and sleep disorders.

The knowledge of the anatomy and the accumulated experience in the management of oncological and infectious diseases linked to the pharynx place the otolaryngologist at the central point of the management of the dysphagic and sleep processes.

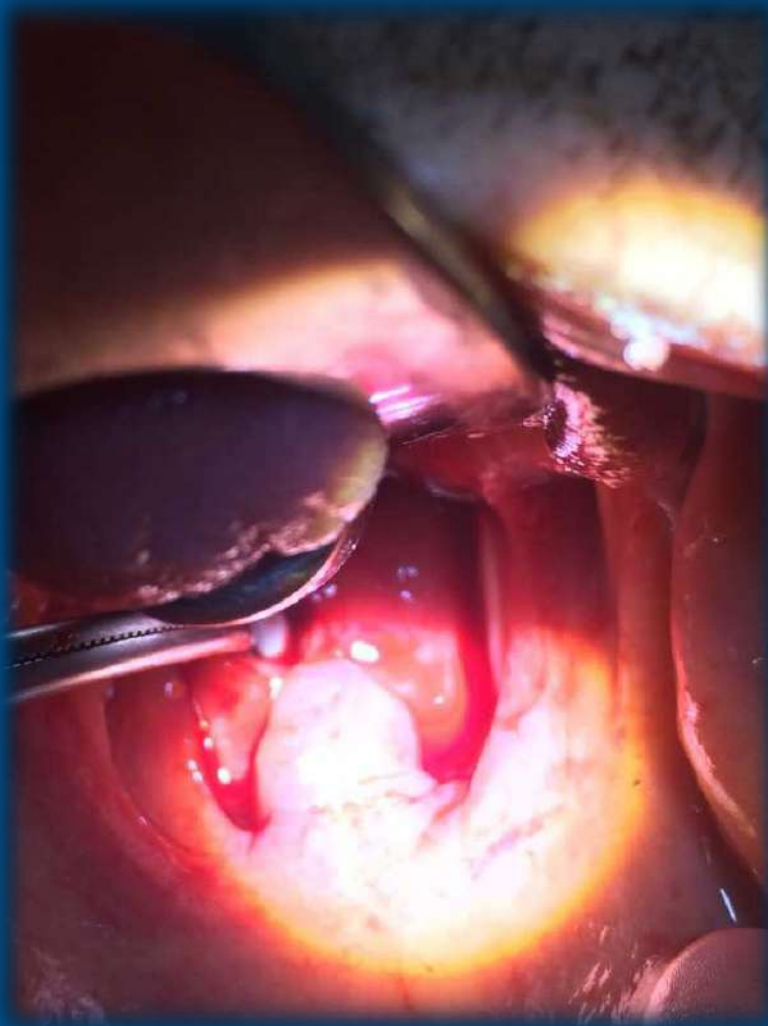
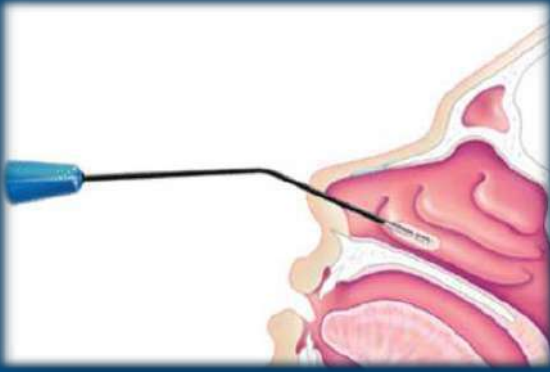
However, this Section works in close collaboration with other specialties and Units that treat these pathologies from other points of view: Pneumology, Neurology, Neurophysiology, Rehabilitation, Critical Care and Intensive Care.

The members of the Section apply the Clinical Practice Guideline on Physical Examination of the Upper Airway in Obstructive Sleep Apnea-Hypopnea Syndrome of Adults, published in 2018 jointly by specialists from multiple disciplines and areas of knowledge and endorsed by the Spanish Society of Otolaryngology and Head and Neck Surgery, by the Spanish Sleep Society, and by the Spanish Society of Oral and Maxillofacial Surgery.

On selected patients, DISE (Drug Induced Sleep Endoscopy) is carried out to evaluate the functional pharyngeal behavior and the establishment of the site of the obstruction.

On the results of the explorations, the otorhinolaryngologists share with the other specialists involved in these processes the best therapeutic alternatives that can be offered to each patient. They monitor and evaluate their results, always considering the patient's opinion and making decisions in a shared manner.

This Section is specialized in the treatment of chronic snoring, using surgical treatments when other conservative alternatives have not achieved their resolution. While some procedures must be performed in the operating room under general anesthesia, others are performed under local anesthesia, with or without sedation.



■ Section of Pediatric Otorhinolaryngology



**Dr. Félix Prado
Mediano**



**Dr. Enrique
Gómez Aldaz**



**Dr. Cayetana López-
Ladrón García de la
Borbolla**

Otorhinolaryngological diseases in children are very frequent. They range from completely banal processes to situations that really compromise the child's life. The Section of Pediatric Otorhinolaryngology addresses all this wide range of pathologies in this age group.

The management of the different processes is protocolized by applying the official documents prepared by the Andalusian Ministry of Health in relation to the most frequent clinical situations that can lead to surgical intervention (Tonsillectomy / Adenoidectomy, Ventilation tubes/grommets) or that are managed within medical alternatives (Otitis).

The Section of Pediatric Otorhinolaryngology is a reference for the treatment of bronchial foreign bodies in children of any age by rigid bronchoscopy, in close collaboration with the Pediatric Pulmonology Section of the Pediatric Unit.

Likewise, he has extensive experience in the management of pediatric airway problems.

This Section shares with the Audiology and Otology Sections the field of diagnostic and therapeutic action of the otological processes subsidiary of surgical treatment.

Adequate attention is also given to voice, swallowing, olfactory and balance pathologies that affect pediatric patients.

The physicians of this Section are especially focused on the personalized attention of patients and their parents, who offer detailed information about the processes, their management options, their expectations and their foreseeable results.



■ Section of Voice



**Prof. Dr. Hugo
Galera Ruíz**



**Dr. Gustavo
Benavente Bermudo**



**Dr. Cayetana López-
Ladrón García de la
Borbolla**

The voice is one of the hallmarks of the Otorhinolaryngology specialty. The otolaryngologists in this Section perform visual evaluations of the phonatory tract using high definition imaging systems and light source connections, which provide images of exceptional quality to fiberoptic explorations.

The visual exploration is complemented with the visualization of the behavior of mucous waves with laryngostroboscopy. Modern equipment allows the acoustic analysis of the voice, simultaneous electronic visualization of the vocal emission with the analysis of its physical parameters of frequencies, formants, duration, phonatory indexes, etc.

The members of the Section perform delicate micro-surgery interventions, using high-precision instruments.

The experience of otolaryngologists in the Otorhinolaryngology Clinical Management Unit in the care of voice problems has allowed the Andalusian Health Service to have accredited it as a reference center in Andalusia for the management of patients suffering from Spasmodic Dysphonia, a rare disease included in the catalog of rare diseases prepared by the Ministry of Health.

The Voice Section organizes and participates actively in activities of dissemination of voice care and prevention of diseases of the vocal cords. In addition to the celebrations of the World Voice Day at the Teatro de la Maestranza in Seville, training sessions are shared with groups closely linked to the use of the voice as a professional tool, as is the case of students and teachers of singing at the Conservatories Superior and Media of Seville and the case of teachers and educators of all levels.

This Section also collaborates closely with the Phoniatrics and Speech Therapy Unit of the Hospital Rehabilitation Unit.



■ Resident Medical Interns of Otorhinolaryngology



The Otolaryngology Service / CM Unit of the University Hospital Virgen Macarena is accredited for the teaching of 2 In-house Otorhinolaryngology Residents in each annual call. Depending on the offer of places, the ENT Service / counts each year with a number between 6 and 8 residents.

The MIR training occupies one of the most important activities of the ENT Service / Unit, being organized so that the residents can achieve the teaching objectives in all professional fields, being involved from the first moment in the assistance, teaching and research.



The high healthcare capacity of the ENT Service / Unit allows the care performance of the ENT MIRs in outpatient consultations, complementary examinations and tests, hospitalization, emergencies, operating theaters and clinical management.

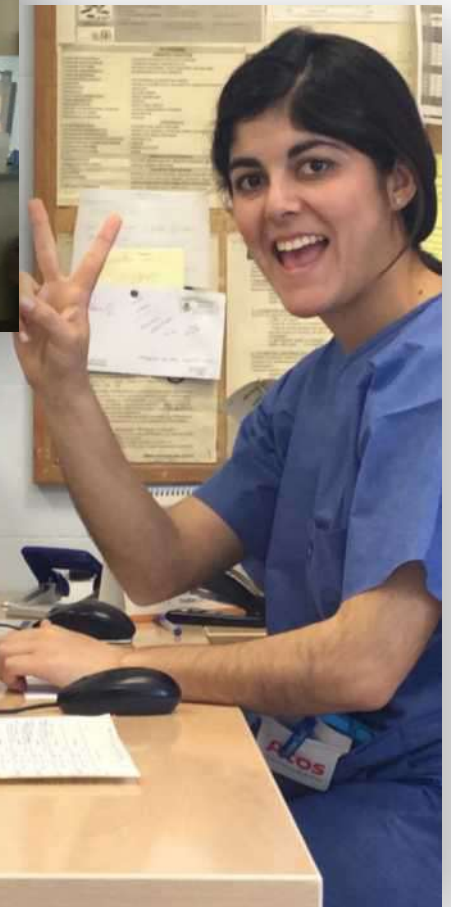
The ORL MIRs have an ORL Service / Unit simulation laboratory to train on a daily basis in all surgical techniques, both with simulation materials and with corpses.



The tutors accompany the residents in the simulation laboratory during the sessions of temporal bone dissection, nasosinusual endoscopic surgery and laryngeal and cervical surgery.

Residents can record their work while they are running, in order to evaluate their progress later.

The ENT Service / Unit has Dissection Guidelines for each area of surgical procedures, as well as an extensive reference videotape library for surgical training.





■ Nursing care in Otorhinolaryngology



**Beatriz Tena
García**
Nurse Supervisor

Nursing care is an essential pillar in the care of otorhinolaryngological patients. The characteristics of medical-surgical specialty of Otorhinolaryngology means that multiple health care is required in outpatient clinics, in the hospitalization room and in the local anesthesia operating room of the ENT Service / Unit.

The strict protocolization of nursing care in all these areas allows the development of functions and tasks with the maximum guarantees of quality of care and comfort for patients and users.

Nursing leadership of the Nursing Referral / Nursing Supervisor of the CM Unit of Otorhinolaryngology promotes scientific nursing work, continuously using assessment scales of the different items, applying systematic in the work organization of nurses and nursing assistants, using systems of nursing classification of nursing diagnoses (NANDA), elaborating documents of reception / care / discharge / continuity of care, identifying and applying the rules of patient safety, developing a relevant strategy of health education for patients / caregivers ...

The scientific and professional level of the nursing staff is reflected in the continued presence in relevant events and national and international congresses. Work of nurses and nursing assistants of the UGC of ENT have been awarded in the most recent congresses of their respective fields.

Likewise, the Nurse Supervisor belongs to the Boards of Directors of National Scientific Societies of Nursing in Otolaryngology and Nursing Directors.





PROFESIÓN

Enfermeras de Otorrinolaringología del Hospital Universitario Virgen Macarena premiadas en el Congreso Nacional de Enfermería







- 50

University teaching staff in the Otorhinolaryngology Subject. Department of Surgery



Prof. Dr. Hugo Galera Ruíz
Profesor Titular de Otorrinolaringología



Dr. Serafín Sánchez Gómez
Profesor Asociado



Dr. Amparo Postigo Madueño
Profesora Asociada



Dr. Emilio de Mingo Fernández
Profesor Asociado



Dr. Gustavo Benavente Bermudo
Profesor Asociado

The link between Otorhinolaryngology and the University of Seville extends from the very beginnings of the specialty in Spain, in the last third of the 19th century.

Since then, generations and generations of doctors have learned Otorhinolaryngology in the classrooms of the Faculty of Medicine of Seville and have done the practices in the consultations, in the wards and in the operating rooms of the Virgen Macarena University Hospital.

The teaching vocation of all teachers and clinical tutors is very positively appreciated by the students, some of whom have continued the stimulus received in the university period by choosing Otorhinolaryngology as their specialty in choosing the positions of Internal Medical Residents.

Otorhinolaryngology annually receives several university students from other European and American countries to develop their Practices of the Erasmus Plus Program in our Faculty of Medicine and our Service / Unit of Otorhinolaryngology of the Virgen Macarena University Hospital.

Master's Thesis, Final Degree Projects and Doctoral Thesis are carried out annually.

El jardín del campus universitario Macarena acoge un busto en memoria de Federico Rubio y Galí.



Dirigió el servicio de Otorrinolaringología del Instituto de Terapéutica Operatoria, creado por Federico Rubio en el Hospital de la Princesa de Madrid, que convirtió en la primera escuela española de Otorrinolaringología. Introdujo la otoscopia y la laringoscopia.



El 31 de Mayo de 1887 practicó la primera "intubación laríngea" que se hizo en Europa.

University teaching staff in the Surgical Nursing Subject. Faculty of Nursing, Physiotherapy and Podiatry



Beatriz Tena García
Profesora Asociada



María Eugenia Acosta Mosquera
Profesora Asociada

The teachers of Surgical Nursing deploy an intense teaching activity, very recognized by the students.

The rigor in the transfer of theoretical knowledge to the practice of care in a real environment is emphasized, with direct attention to patients under the supervision of professionals from the nursing staff of the Otorhinolaryngology Unit.

A very close monitoring of the progress of each student is carried out individually, being very demanding in the completion of the registration of the activities they develop.

It is also relevant the direction of Final Degree Projects, which culminate in very enriching experiences for the training of students in research methodology and high-level scientific productions, both in the presentations that are defended in the corresponding academic act and in the documents that shape and structure the work carried out.



■ Coordination of the Cochlear Implant Program of Western Andalusia

The Cochlear Implant Program of the Otolaryngology Service / Clinical Unit of the Virgen Macarena University Hospital is one of the two accredited centers



Hospital is one of the two accredited centers in the Public Health System of Andalusia (SSPA) for this benefit. The Program includes aspects of accessibility at source (audiology + otorhinolaryngology + early detection of hearing loss) with referral to the implantation center (otolaryngology + audiology + radiology + genetics + psychiatry + pediatrics + engineers + hearing care professionals + phoniatriy + speech therapy) and with subsequent referral to center of origin for health and non-healthcare monitoring (speech therapy + school education + early stimulation +

hearing aids).

This high number of professionals in different geographical scenarios, process phases, moments of time and different competencies requires a demanding coordination that prevents the loss of patients (most of them are deaf children) and a scrupulous adaptation to the clinical pathway and follow-up of the milestones of hearing and language to obtain an optimal result of social, school and work integration.



The operative coordination of the Cochlear Implant Program falls on the Reference of Care and ENT Supervisor, Beatriz Tena García, and on the Healthcare Professional Kiko López Benítez.



Implementation of Coordination of the Cochlear Implant Program•

- Coordination of the care teams of the ENT Services of the hospitals belonging to the Network of Cochlear Implants of Western Andalusia to offer a health care of excellence and uniformity.
- Provision of equitable health care to the reference populations in access to the cochlear implant of all candidates. Goal of reaching 100% of newborns in hospitals and subsidized centers of the SSPA to which the neonatal screening for congenital hearing loss is performed.

Province	Population	New born	< 18 years old
Sevilla	1.941.000	19.455	433.954
Cádiz	1.240.000	11.800	272.102
Córdoba	799.402	7.044	165.183
Huelva	521.968	5.004	109.005
Total	4.502.370	43.303	980.244

- Offer benefits to candidates to receive a cochlear implant under the criterion of equity, ensuring that the indications and decisions related to health benefits are adjusted and carried out according to the requirements, requirements and recommendations of the state and regional regulations that regulate and frame cochlear implants and other related devices.

- Facilitate the renewal of external processors to 100% of patients when the requirements are met.

- Ensure the use of the cochlear implant, especially in children, with all the necessary benefits in a timely manner and in social, family, educational and economic contexts that facilitate the proper development of the implanted person.

Health Care Center	Ownership
1 HU Virgen del Rocío (Sevilla)	SAS
2 HU Virgen Macarena (Sevilla)	SAS
3 HU Virgen de Valme (Sevilla)	SAS
4 H Nuestra Señora de la Merced (Osuna, Sevilla)	SAS
5 H de Constantina (Constantina, Sevilla)	Agencia Sanitaria Bajo Guadalquivir
6 H de Utrera (Utrera, Sevilla)	Agencia Sanitaria Bajo Guadalquivir
7 H de Morón (Morón de la Frontera, Sevilla)	Agencia Sanitaria Bajo Guadalquivir
8 H de Ecija (Ecija, Sevilla)	Agencia Sanitaria Bajo Guadalquivir
9 H San Juan de Dios (Bormujos, Sevilla)	Hospital privado concertado
10 CHU de Huelva (Huelva)	SAS
11 H de Riotinto (Riotinto, Huelva)	SAS
12 HU Reina Sofía (Córdoba)	SAS
13 H Infanta Margarita (Cabra, Córdoba)	SAS
14 H Valle de los Pedroches (Pozoblanco, Córdoba)	SAS
15 H de Montilla (Montilla, Córdoba)	Agencia Sanitaria Alto Guadalquivir
16 H de Puente Genil (Puente Genil, Córdoba)	Agencia Sanitaria Alto Guadalquivir
17 H Valle del Guadiato (Peñarroya Pueblonuevo, Córdoba)	Agencia Sanitaria Alto Guadalquivir
18 HU Puerta del Mar (Cádiz)	SAS
19 HU Puerto Real (Puerto Real, Cádiz)	SAS
20 H de Jerez de la Frontera (Jerez de la Frontera, Cádiz)	SAS
21 H Punta Europa (Algeciras, Cádiz)	SAS
22 H de la Línea (La Línea de la Concepción, Cádiz)	SAS
23 H de Puerto de Santa María (El Puerto de Santa María, Cádiz)	Hospital privado concertado
24 H de Sanlúcar de Barrameda (Sanlúcar de Barrameda, Cádiz)	Hospital privado concertado
25 H de Villamartín (Villamartín, Cádiz)	Hospital privado concertado

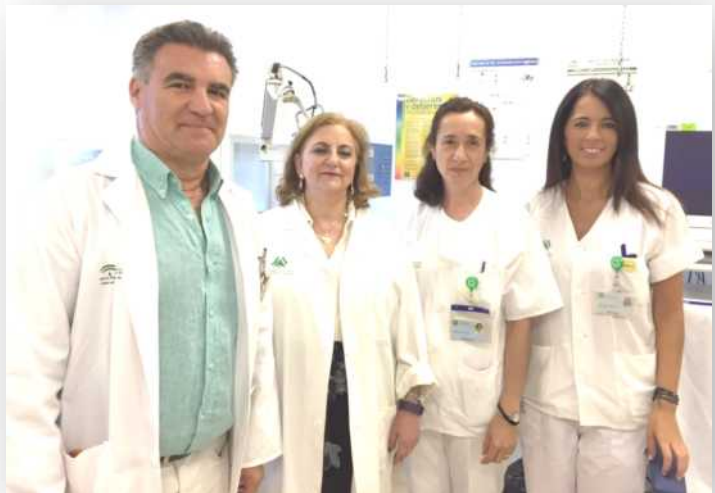
- Have a personal and individualized record of 100% of the implanted patients, showing the milestones to be achieved in terms of hearing (intelligibility), benefit of language (oral communication) and improvement of educational levels. rehabilitative speech therapist and speech therapist effectively delivered to implanted patients.
- Promote to the maximum the unique acts for patients who move from distant homes to the implantation center.
- Maximize local follow-up (where the patient resides) by professionals trained in the care of implanted patients and evaluate this follow-up following standardized protocols.

■ Tracheostomized Patient Care Unit

Patients with more complex ENT oncology are usually tracheostomized. This attention has been classically part of the specialty, but nowadays patients of any specialty who have required the completion of a tracheotomy are emerging. The specialties that have a greater number of tracheostomized patients beyond Otorhinolaryngology are Maxillofacial Surgery, Internal Medicine, Pulmonology and Cardiology. To a lesser extent Oncology and Digestive System.

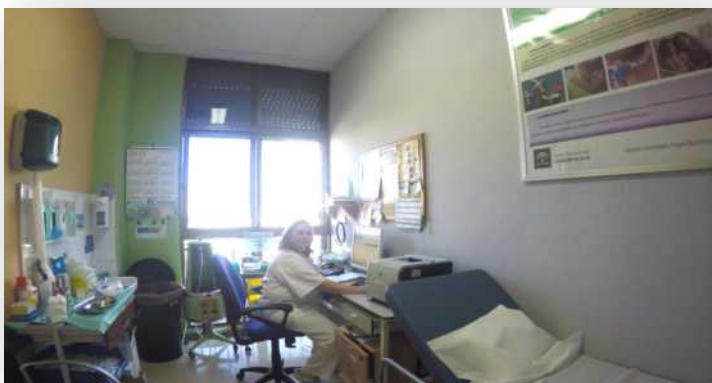
These patients are identified through the Tracheostomized Patient Care Unit, which is endorsed by a trajectory of more than two years as a Unit that provides transversal care from the UGC of ENT to all tracheostomized patients of any specialty, from the hospitalized to those who are in home follow-up.

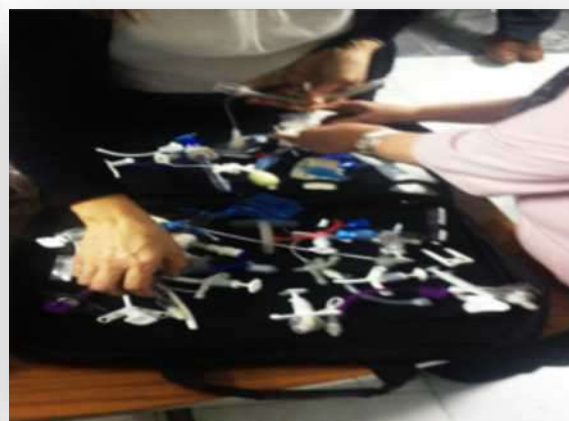
Throughout this time an average of 17 new non-oncological monthly patients and seven monthly laryngectomized patients have been



treated, which require multiple actions depending on their healthcare needs.

In addition, the members of the Tracheostomized Patient Care Unit move to the homes of those patients who find it difficult to go to the hospital due to their clinical conditions, most of them subject to long-term mechanical home ventilation, working as a team with the Home Hospitalization Unit and the Palliative Care Unit.





The Tracheostomized Patient Care Unit is included in the Multidisciplinary Team of Attention to Patients Affected by Amyotrophic Lateral Sclerosis (ALS) of the Virgen Macarena University Hospital. It provides information and advice to patients who are candidates for a tracheostomy. It also provides comprehensive care in all aspects related to tracheostomy, cannulas and connections to tracheostomy cannulae to all patients affected by ALS who are carriers of a tracheostomy.



UNIDAD DE TRAQUEOTOMÍA

Es una unidad de referencia para el paciente con insuficiencia respiratoria crónica, que requiere de una intervención quirúrgica para la colocación de una cánula traqueal.

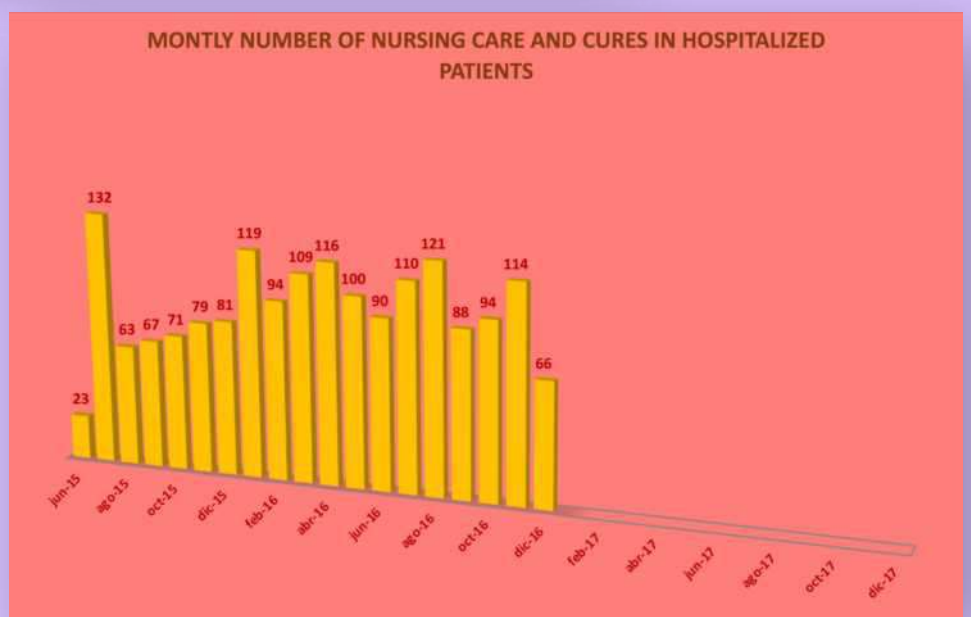
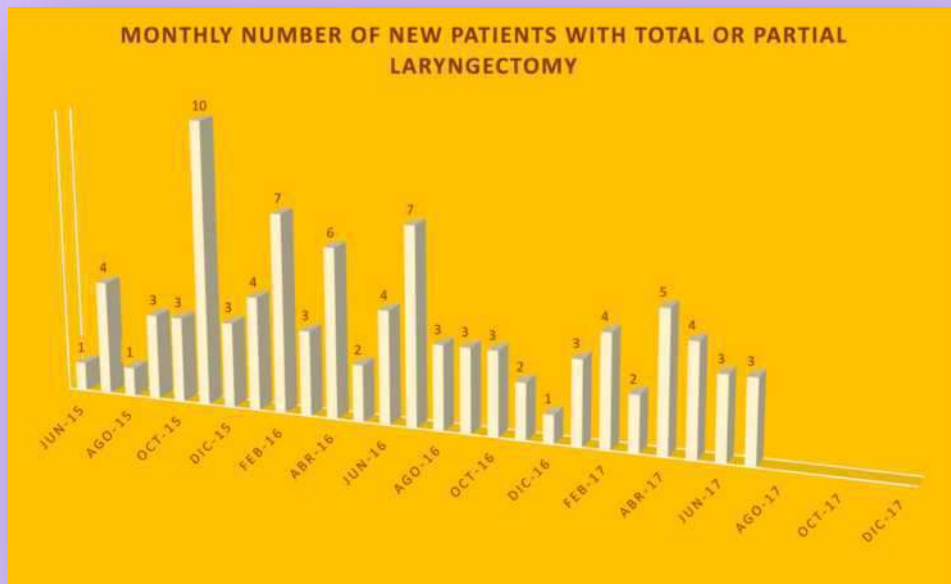
Según una nota de prensa, esta consulta asistencial de enfermería dependiente de la Unidad de gestión clínica de Otorrinolaringología (ORL) es el primer dispositivo de sus características que se conoce en el ámbito sanitario público del país que incorpora profesionales dotados de conocimientos y habilidades adecuadas en la asistencia a este tipo de pacientes. Con esta unidad se potenciará la calidad y eficiencia de la misma realizando un seguimiento individualizado tanto a nivel ambulatorio como hospitalario.

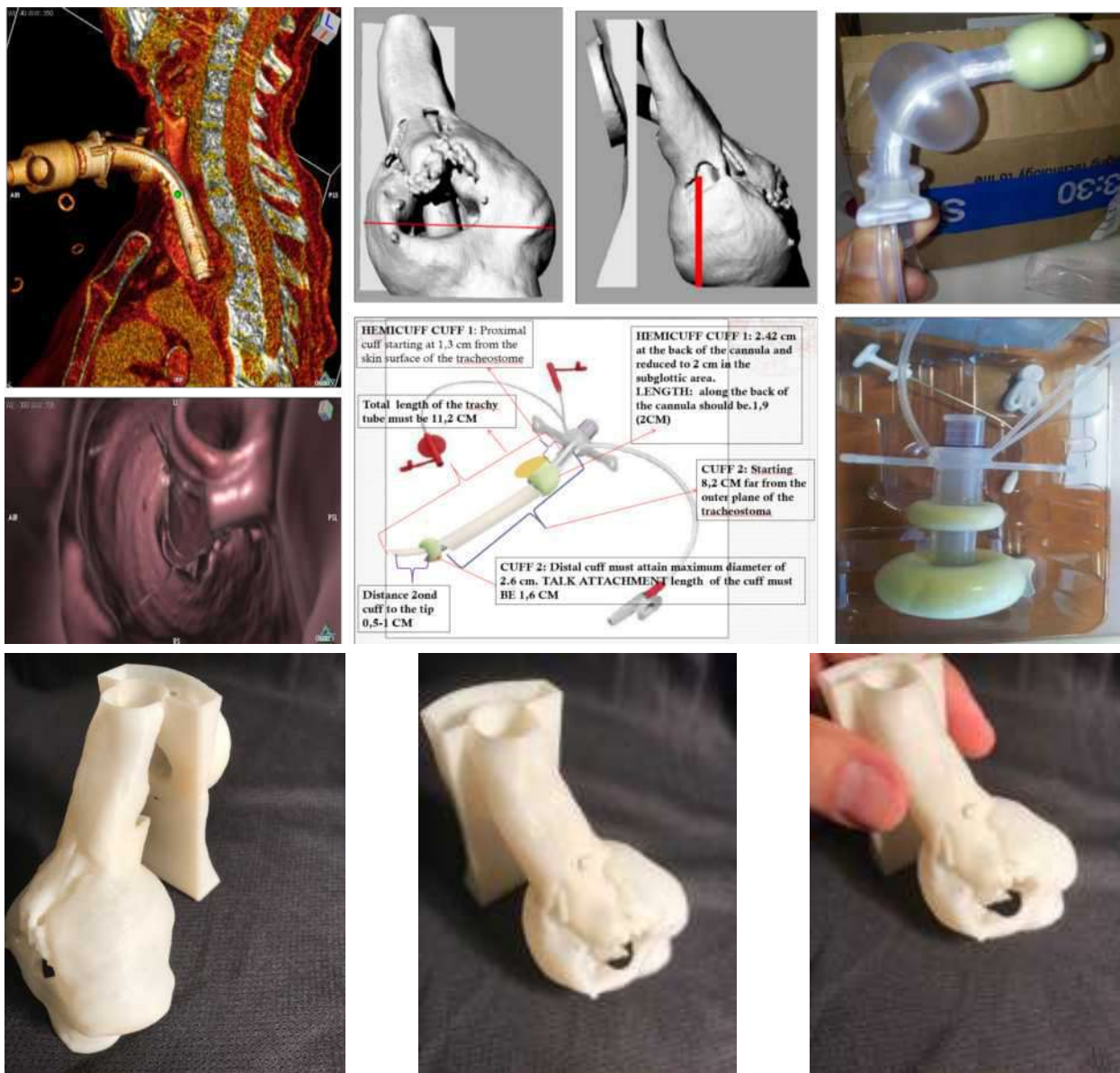
En esta línea de continuidad de la atención, se creará una agenda específica dentro del Dispositivo de Atención Especializada (DAE) de la Unidad de Gestión Clínica de Otorrinolaringología (ORL) para la atención de estos pacientes, permitiendo un seguimiento individualizado de los pacientes traqueotomizados, tanto por parte de enfermería como de los médicos.

¿Donde? Sala de curas de ORL de la 5ª Planta Ala A. Es la sala de curas polivalente de ORL y de Cirugía Máxilo-Facial, también dotada de todo el equipamiento y material necesario para la atención de pacientes traqueotomizados, tanto por parte facultativa como enfermera.

Teléfono: 955 00 85 34 30 85 34
Hospitales Universitarios Virgen Macarena

The members of the Tracheostomized Patient Care Unit have spread this innovative health organizational formula in multiple forums, providing a proactive response not only to tracheotomized patients affected by ALS, but also to all patients suffering from a chronic illness that requires them to use this device and even to stay connected to artificial respirators.





Award-winning work at the XVI National Nursing Congress in ENT 2017 for the experience of the Tracheostomized Patient Care Unit in the design and development of customized 3D cannulae

COMUNICORL: App for mobile phones, tablets and computers to facilitate communication for those who can not speak





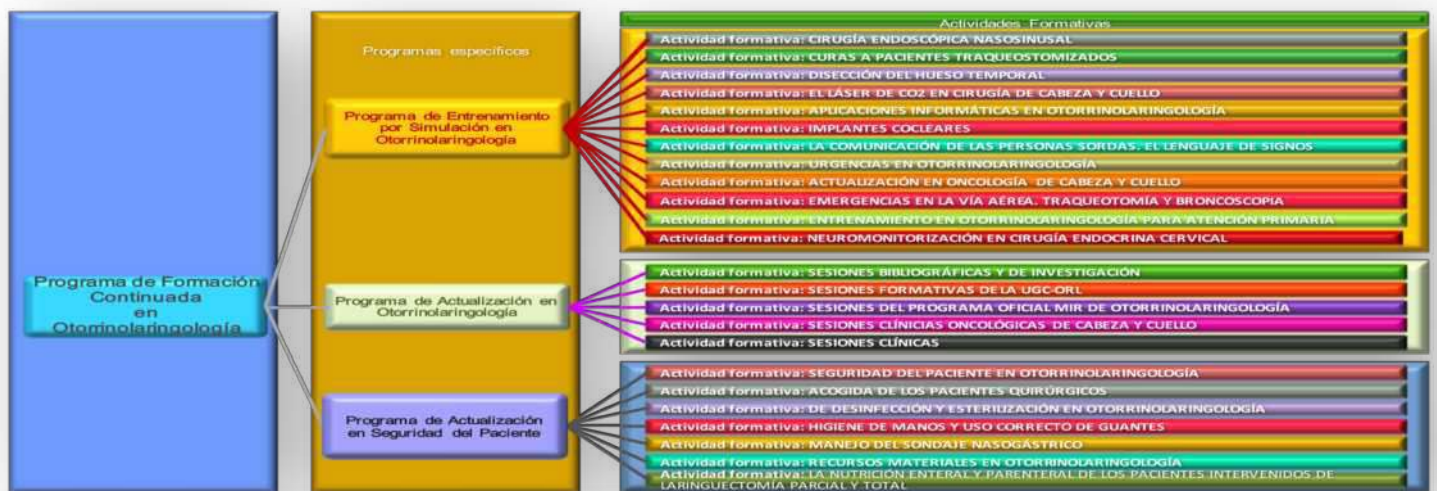
Books published by the Tracheostomized Patient Care Unit on various aspects of the organization of patient flows and the management of tracheostomized patients



Training

The Service / Clinical Unit of Otorhinolaryngology has an extensive training offer in multiple fields of the specialty. It covers aspects of updating knowledge and internal continuous training for professionals of the Service in relation to new benefits or new ways of approaching the management of diseases.

But above all it stands out for its Simulation Training Program using human corpses, animal carcasses and computer technologies for handling 3D images focused on national and international attendees.



Diseción cervical, laringectomía total con sutura mecánica y prótesis fonatorias	12, 13 y 14 de febrero	Organiza: Asociación Andaluza de Educación Médica en Otorrinolaringología. Colabora: FAIGESCO.
Cirugía endoscópica nasosinusal	7, 8 y 9 de marzo	Organiza: FAIGESCO
Implantes cocleares	12 y 13 de marzo	Organiza: Unidad de Gestión Clínica del Hospital Universitario Virgen Macarena. Colabora: FAIGESCO.
Cirugía otológica y disección del hueso temporal I	14, 15 y 16 de marzo	Organiza: FAIGESCO
Audiología	4, 5 y 6 de abril	Organiza: Unidad de Gestión Clínica del Hospital Universitario Virgen Macarena. Colabora: FAIGESCO.
Patología de la voz	11 y 12 de abril	Organiza: Unidad de Gestión Clínica del Hospital Universitario Virgen Macarena. Colabora: FAIGESCO.
Urgencias en Otorrinolaringología I	25, 26 y 27 de abril	Organiza: Unidad de Gestión Clínica del Hospital Universitario Virgen Macarena. Colabora: FAIGESCO.
Planificación quirúrgica en 3D y manejo de imágenes con Osirix	10 y 11 de mayo	Organiza: FAIGESCO
Diagnóstico en la Patología del Equilibrio	16, 17 y 18 de mayo	Organiza: Unidad de Gestión Clínica del Hospital Universitario Virgen Macarena. Colabora: FAIGESCO.
Cirugía otológica y disección del hueso temporal II	23, 24 y 25 de mayo	Organiza: FAIGESCO
Aplicaciones informáticas en Otorrinolaringología	20 de junio	Organiza: Unidad de Gestión Clínica del Hospital Universitario Virgen Macarena. Colabora: FAIGESCO.
Urgencias en Otorrinolaringología II	2, 3 y 4 de octubre	Organiza: Unidad de Gestión Clínica del Hospital Universitario Virgen Macarena. Colabora: FAIGESCO.
Diseción del nervio facial extratemporal y parotidectomía	9, 10 y 11 de octubre	Organiza: Asociación Andaluza de Educación Médica en Otorrinolaringología. Colabora: FAIGESCO.
Actualización en oncología de cabeza y cuello	20 y 21 de noviembre	Organiza: Unidad de Gestión Clínica del Hospital Universitario Virgen Macarena. Colabora: FAIGESCO.
Emergencias en la vía aérea: traqueotomía y broncoscopia	29 y 30 de noviembre y 1 de diciembre	Organiza: Unidad de Gestión Clínica del Hospital Universitario Virgen Macarena. Colabora: FAIGESCO.
Entrenamiento en Otorrinolaringología para Atención Primaria	10 ediciones	Organiza: Unidad de Gestión Clínica del Hospital Universitario Virgen Macarena. Colabora: FAIGESCO.

Servicio de Otorrinolaringología
Hospital Universitario Virgen Macarena y
Departamento de Anatomía y Embriología Humanas.
Universidad de Sevilla

**IX Curso de CIRUGÍA
ENDOSCÓPICA
NASOSINUSAL**

Sevilla 7, 8 y 9 de marzo de 2018

Directores:
Serafín Sánchez Gómez
Jesús Ambrosiani Fernández



Curso completamente práctico que permite al asistente realizar todos los pasos de CENS básica, CENS avanzada y procedimientos expandidos de la base de cráneo anterior. En todos ellos se trabaja en profundidad la planificación del abordaje quirúrgico con imágenes en 3D.

Organiza: FAIGESCO
Información e inscripciones:
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faigesco@faigesco.es

Servicio de Otorrinolaringología
Hospital Universitario Virgen Macarena y
Departamento de Anatomía y Embriología Humanas. Universidad de Sevilla

**XVII Curso de Cirugía
Otológica y
Disección del
Hueso
Temporal**

**Sevilla
14, 15 y 16
de marzo de
2018**

Directores:
Agustín Alcalá Fernández
Jesús Ambrosiani Fernández



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Servicio de Otorrinolaringología
Hospital Universitario Virgen Macarena y
Departamento de Anatomía y Embriología Humanas.
Universidad de Sevilla

**IV Curso de PLANIFICACIÓN
QUIRÚRGICA EN 3D EN ORL Y
MANEJO DE IMÁGENES CON OSIRIX**

Sevilla 10 y 11 de mayo de 2018

Directores:
Serafín Sánchez Gómez
Jesús Ambrosiani Fernández

- Sistematización de la planificación.
- Listados de verificación (check-lists) para cada área de la ORL-CCC.
- Renderización de imágenes 3D.
- Obtención y manejo de ROIs (Region of Interest).
- Selección de imágenes 3D para presentaciones y videos.
- Correlación imagenología-cirugía.
- Estereolitografía en ORL-CCC.



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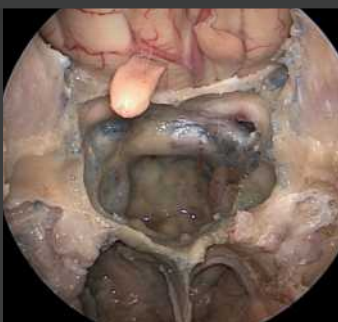
**X Curso de emergencias
otorrinolaringológicas
de la vía aérea:
broncoscopia y traqueotomía**

Directores:
Emilio Juan de Mingo Fernández
Jesús Ambrosiani Fernández
Serafín Sánchez Gómez

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Hospital Universitario Virgen Macarena.
Departamento de Anatomía y Embriología Humanas.
Universidad de Sevilla.





The ENT Service / Clinical Unit of Otorhinolaryngology has a strong care and teaching trajectory that has been properly channeled in the last 7 years into an organizational structure of Functional Units and Training Programs that allows it to promote its own research lines with an important substratum of organizational resources, of equipment and humans. It has 6 doctors currently in a staff of 22 specialists and 3 more with the Doctoral Thesis in progress.

The Service is currently qualified to develop several of the research lines of its portfolio of services.

Audiology and Cochlear Implants

- Physiology of hearing: role of hair cells.
- Genetics of deafness.
- Neurotransmitters in the auditory pathway.
- Early detection of childhood deafness.
- Effectiveness of cochlear implants.
- Psychological evaluation of cochlear implant recipients. The family environment
- Etiopathogenesis, physiopathology and therapeutic management of tinnitus.
- Design of new models of cochlear implants and devices to improve their insertion and performance.

Molecular Biology and Genetics

- Oncogenes and suppressor genes in laryngeal cancer.
- Adhesion molecules and tumor progression.
- Tumor angiogenesis in pharyngo-laryngeal cancer.
- Proliferation antigens and prognosis.
- Expression of tumor genes.
- Epigenetics in pharyngo-laryngeal cancer.
- Tumor markers in cancer of the pharynx and larynx.
- Molecular biology of nasal polyposis.

Applied clinical research

- Application of images in 3 dimensions (3D) and stereolithographic rapid prototypes to the planning of ENT surgical interventions and to the personalized design of devices and organs.
- Prognostic factors in cancer of the pharynx and larynx.
- Minimally invasive endoscopic surgical approach routes for the skull base pathology.
- Reconstructive methods of the airway.
- Larynx transplant.
- Therapeutic organ preservation in laryngeal cancer.
- Psychological and psychopathological impact of laryngeal cancer.
- The emerging cancer of the larynx in the female population.
- Neuromonitoring and neurostimulation in cervical endocrine surgery.
- Indications of adenoidectomy and tonsillectomy.
- Diagnosis and therapy of obstructive sleep apnea syndrome.
- Nasal allergy.
- Nasosinusual polyposis.
- Therapeutic alternatives in the management of voice pathology.
- Nursing care plans.
- New methods in nursing procedures.
- Information and Communication Technologies in nursing care.
- Nursing care in Otolaryngology.
- Organizational innovations in Otolaryngology:
- Tracheostomized Patient Care Unit.
- Coordination of Cochlear Implants.
- Variability of clinical practice.

Clinical Trials active in 2017 and 2018

TITLE: A Phase II multicenter, placebo-controlled, proof-of-concept study evaluating the safety, and efficacy of intratympanic STR001 thermogel to preserve residual hearing in adults undergoing cochlear implant surgery

PROTOCOL NUMBER: STR001-201

EUDRACT NUMBER: 2015-002672-25

TEST PRODUCT: STR001

SPONSOR: STREKIN AG. Technologiepark Basel. Basel, Switzerland.

TITLE: A randomized, double-blind, 52-week, placebo-controlled efficacy and safety study of DUPILUMAB, in patients with bilateral nasal polyposis on a background therapy with intranasal corticosteroids

PROTOCOL NUMBER: EFC14280

EUDRACT NUMBER: 2015-001314-10

TEST PRODUCT: DUPILUMAB/SAR231893

SPONSOR: SANOFI-AVENTIS RECHERCHE & DÉVELOPPEMENT. Chilly-Mazarin Cedex, France

TITLE: A Phase III, randomized, multicenter, double blind, placebo-controlled clinical trial of OMALIZUMAB in patients with chronic rhinosinusitis with nasal polyps.

PROTOCOL NUMBER: GA39855

EUDRACT NUMBER: 2017-003450-16

TEST PRODUCT: OMALIZUMAB (IGE025)

SPONSOR: F. Hoffmann-La Roche Ltd. Basel, Switzerland.

TITLE: Open-Label extension study of OMALIZUMAB in patients with chronic rhinosinusitis with nasal polyps.

PROTOCOL NUMBER: WA40169

EUDRACT NUMBER: 2017-003450-16

TEST PRODUCT: OMALIZUMAB (IGE025)

SPONSOR: F. Hoffmann-La Roche Ltd. Basel, Switzerland.

Research and Innovation Projects financed by official Agencies active in recent years

Modality	Health Research Projects. Ministry of Health of the Junta de Andalucía
File	PI-0212-2017
Title of the project	New therapeutic targets in the treatment of chronic sinusitis with sinonasal polyposis
Principal investigator	Juan Manuel Maza Solano
Researchers Collaborators	Amparo Postigo Madueño, Juan Solanellas Soler, Isabel María Reyes Tejero, Rafael Moreno Luna, Manuel Castellano Muñoz, Jaime González García, Ramón Moreno Luna
Center/s	H. Virgen Macarena; H. Virgen del Valme; Instituto de Salud Carlos III; Hospital Nacional de Paraplégicos de Toledo
Modality	Health Innovation Projects. Ministry of Health of the Junta de Andalucía
File	PIN-0460-2017
Title of the project	Coordination of a Cochlear Implant Program based on the management of patients' needs
Princiipal investigator	Serafín Sánchez Gómez
Researchers Collaborators	Beatriz Tena García, Amparo Postigo Madueño, Francisco Javier Bernet Toledano, Paola Díaz Borrego
Center/s	H. Virgen Macarena

Research and Innovation Projects financed by official Agencies active in recent years

Modality	Health Innovation Projects. Ministry of Health of the Junta de Andalucía
File	PIN-0020-2016
Title of the project	Impact of an Integral and Multidisciplinary Unit of Attention to Tracheotomized Patients in the improvement of the quality of care and in the efficiency of health management
Principal Investigator	Beatriz Tena García
Researchers Collaborators	Maria Eugenia Acosta Mosquera, Amparo Postigo Madueño, Francisco Javier Bernet Toledano, Sergio Barrientos Trigo
Center/s	H. Virgen Macarena and University of Seville

Modality	Health Innovation Projects. Ministry of Health of the Junta de Andalucía
File	PI 0828-2013
Title of the project	External validation of the Care Level Inventory through Nursing Outcomes Classification Indicators (INICIARE), for the evaluation of the dependency level in hospitalized patients. Multicenter study (INICIARE 2.0).
Principal Investigator	Ana María Porcel Gálvez
Researchers Collaborators	Sergio Barrientos Trigo, Beatriz Tena García, Concepción Martínez Lara, Concepción Romero Brioso et al.
Center/s	H. Virgen Macarena and University of Seville

Research and Innovation Projects financed by official Agencies active in recent years

Modality	First Own Teaching Plan. University of Sevilla.
File	372-2012
Title of the project	Design and development of an Electronic Portfolio to adapt the competences of the Degree in Medicine to the new requirements of the European Higher Education Area
Principal Investigator	Serafín Sánchez Gómez
Researchers Collaborators	José Ortega Beviá, Elisa Cabot Ostos
Center/s	H. Virgen Macarena and University of Seville

Modality	First Own Teaching Plan. University of Seville.
File	304-2011
Title of the project	Formative and summative evaluation of competencies in surgical knowledge areas through the new electronic portfolio of the Department of Surgery
Principal Investigator	Serafín Sánchez Gómez
Researchers Collaborators	José Ortega Beviá, Elisa Cabot Ostos
Centers	H. Virgen Macarena and University of Seville

Most recent publications in scientific journals

Mármol-Szombathy I, Domínguez-Durán E, Calero-Ramos L, Sánchez-Gómez S. **Identification of dizzy patients who will develop an acute cerebrovascular syndrome: a descriptive study among emergency department patients.** European Archives of Oto-Rhino-Laryngology. 2018;275:1709-1713.

Gómez Ávila J, Andrés Martín A, Pérez Pérez G, Sánchez Gómez S, Navarro Merino. **Tracheal foreign body. Importance of early diagnosis.** Vox Pediatrica. 2017;24(1):50-53.

Maza Solano JM, Benavente Bermudo G, Estrada Molina FJ, Ambrosiani Fernández J, Sánchez Gómez S. **Evaluation of the training capacity of the Book of the Spanish Otorhinolaryngology Resident (FORMIR) as an electronic portfolio.** Acta Otorrinolaringológica Española. 2017;68(6).

Moreno-Luna R, Cárdenas E, Tato JI, Rivero-Garvía M, Márquez-Rivas J, Mochón-Martín A. **Basiespinal Cerebrospinal Fluid Leak as a Complication After Adenoidectomy: Case Report and Literature Review.** World Neurosurgery. 2016;93:484:e9-484.e12.

García Rica E, Maza Solano JM, Herrero Salado TF, Sánchez Gómez S. **Laryngeal chondroid hamartoma: an exceptional case.** Acta Otorrinolaringológica Española. 2016;67(2):117-119.

Maza-Solano JM, Sánchez-Gómez S, Herrero-Salado T, Benavente-Bermudo G, Ventura-Díaz J, Mingo-Fernández EJ. **Prognostic classification of malignant tumors of the parotid gland.** Revista Española de Cirugía Oral y Máxilofacial. 2016;38(1):11-16.

Sánchez-Gómez S, Herrero-Salado TF, Maza-Solano JM, Ropero-Romero F, González-García J, Ambrosiani-Fernández J. **Improvement in the planning of nasosinus endoscopic surgeries from 3-dimensional images with Osirix and stereolithography.** Acta Otorrinolaringológica Española. 2015;66(6):

Blanco-Piñero N, Antequera-Jurado R, Rodríguez-Franco L, Ibáñez-Guerra E, Herrero-Salado TF, Sánchez-Gómez S. **Emotional and psychopathological alterations in laryngectomized cancer patients.** Acta Otorrinolaringológica Española. 2015;66(4):210-217.

Maza-Solano JM, Sánchez-Gómez S, Herrero-Salado TF, Estrada-Molina F. **Nasopharyngeal melanoma: an infrequent entity.** Acta Otorrinolaringológica Española. 2014;65(5):314-316.

Most recent publications in scientific journals

Jiménez García A; Jiménez Calderón MC; Vázquez Zarza V; Marín Velarde C; Díaz Rodríguez M; Gila Bohórquez A; Reyes Díaz MI; Jurado Tudela F; Domínguez Adame E; Sánchez Gómez S; Oliva Mompeán F. **Neuromonitoring in cervical endocrine surgery. Detection and intraoperative prevention of recurrent paralysis.** Cir Andal. 2014;1(25):43-52.

Sánchez-Gómez S, Cabot-Ostos EM, Maza-Solano JM, Herrero-Salado TF. **An electronic portfolio for quantitative assessment of surgical skills in undergraduate medical education.** BMC Education 2013;13:65

Escudero-Carretero MJ, Sánchez-Gómez S, González-Pérez R, Sanz-Amores R, Prieto-Rodríguez MA, Fernández de la Mota E. **Preparation and validation of an informative document on adeno-tonsillectomy for patients.** Anales del Sistema Sanitario de Navarra. 2013;36(1):21-33.

Sánchez Gómez S, Maza Solano JM, Armas Padrón JR, Refolio Sánchez F, Herrero Salado TF. **Salivary Gland Choristoma of the Middle Ear and Review of the Literature.** International Journal of Otolaryngology and Head & Neck Surgery. 2013;2:215-220.

González-García A, González-García J, Diniz-Freitas M, García-García A, Bullón P. **Accidental displacement and migration of endosseous implants into adjacent craniofacial structures: A review and update.** Med Oral Patol Oral Cir Bucal. 2012;17(5):e769-774.

Most recent publications in books

Herrero Salado TF. **Management of phonatory prostheses in laryngectomized patients.** Ed. FAIGESCO. Sevilla, 2017. ISBN 978-84-16696-06-2.

Pedraza Juan CM, Tena García B, Sánchez Lozano MC. **Nursing interventions for the recovery of communication in tracheostomized and laryngectomized patients.** Ed. FAIGESCO. Sevilla, 2016. ISBN 978-84-16696-02-4.

de Luque Piñana V, Guardia Martínez P, Sánchez Gómez S. **The profilin. More than a food panallergen.** Ed. FAIGESCO. Sevilla, 2016. ISBN 978-84-16696-03-1.

Ropero Romero F. **Temporal Bone Dissection Guide.** Ed. FAIGESCO. Sevilla, 2016. ISBN 978-84-16696-04-8.

Tena García B. **Hospital Tracheotomy Unit: an organizational innovation.** Ed. FAIGESCO. Sevilla, 2016. ISBN 978-84-16696-00-0.

Sánchez Lozano MC, Tena García B, Pedraza Juan CM. **Nursing care in tracheotomized patients.** Ed. FAIGESCO. Sevilla, 2016. ISBN 978-84-16696-01-7.

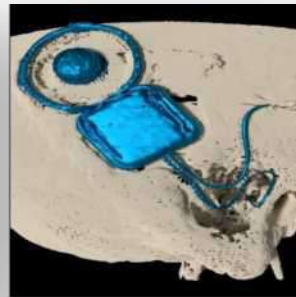
Sánchez Gómez S. **Residents' Book.** In "Principles of Medical Education. From the Degree to Professional Development.." Ed. PANAMERICANA. Madrid, 2014. ISSN 788498358629. pp. 639-648.

Sánchez Gómez S. **Healthcare marketings applied to the expansion of the Major Ambularia Surgery as an organizational innovation.** In "MAS. Major Ambulatory Surgery. Efficiency in Healthcare". Ed. DOYMA. Madrid, 2014. pp. 994-1011. ISBN 978-84-94440-30-4.

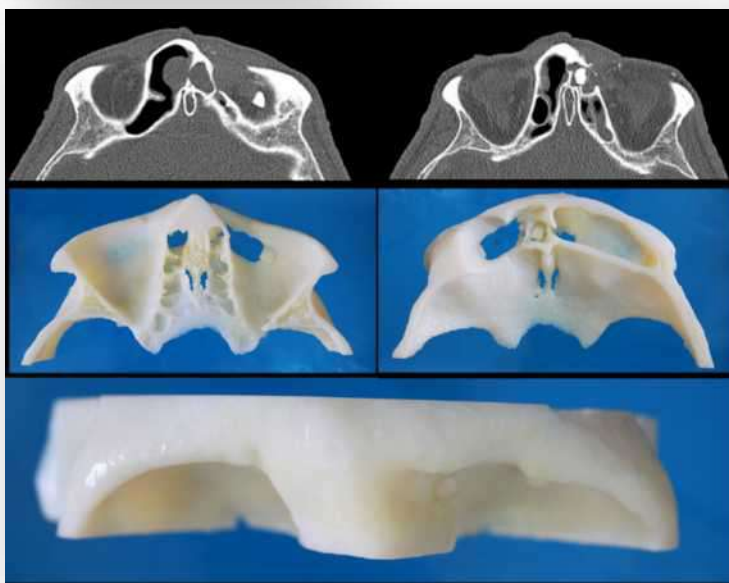
Sánchez Gómez S. **Anthropological approach to the human voice. The patient with voice problems. Clinical and biopsychosocial aspects.** pp. 6-38. 25/05/2013. ISBN 978-84-69576-76-2.

Innovation

Innovation is one of the most decided bets of the Service / Clinical Unit of Otorhinolaryngology. Its innovative lines cover many aspects, from technological innovations to organizational innovations that modify the way professionals organize to provide better care to patients.



Innovations in the application of the methodologies of Virtual Reality, Augmented Reality, 3D images, stereolithography for the planning of the approaches and execution of the surgical procedures.





Organizational innovations:

- Telemedicine through video-otoscopy.
- Extensive development of the Major Ambulatory Surgery.
- Improvements in Clinical Management Units.
- Creation of a Tracheostomized Patient Care Unit.
- Coordination of the Cochlear Implant Program in Western Andalusia.



Quality Accreditation: Unit of Otolaryngology

The Service / Clinical Management Unit of Otolaryngology is accredited in Quality by the Agency of Health Quality of Andalusia since 2010, obtaining the reaccreditation in 2016.



■ Quality Accreditation: health care providers

All the facultative and nursing professionals of the Otorhinolaryngology Service / Clinical Unit are also accredited by the Health Quality Agency of Andalusia. All have continued with their accreditation processes also when the certification has expired.



■ Celebration of relevant events

World Voice Day





Conferences with the Laryngectomized Patients Associations



Distinctions and institutional collaborations



The ENT Service team receives the 2017 Prize from the Federation of Associations of Cochlear Implant Users of Spain (AICE) in the MEDICAL category (upper and middle left images), act chaired by the Spanish Health Minister.



Under these lines, images of acts of delivery of different Awards of the Spanish Society of Otolaryngology and Head and Neck Surgery to members of the ENT Service.



The image above includes one of the work sessions shared between the ENT Service and the Manuel Castillo Conservatory of Music of Seville with the common link of the VOICE.

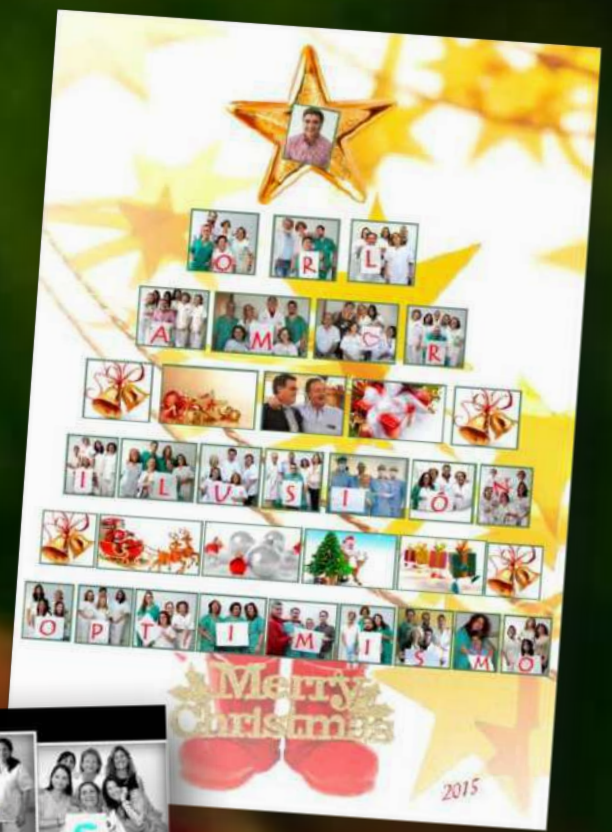


Informative activities and presence in the media



■ Team cohesion days





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