

Gemelli



Fondazione Policlinico Universitario Agostino Gemelli IRCCS  
Università Cattolica del Sacro Cuore



MISSION  
STATEMENT  

---

2018



Gemelli



Fondazione Policlinico Universitario Agostino Gemelli IRCCS  
Università Cattolica del Sacro Cuore

MISSION  
STATEMENT  

---

2018



04	<u>ROUTE TO IRCCS</u>
05	<u>OUR VALUES</u>
06	<u>ASSET - GEMELLI IN NUMBERS</u>
07	<u>OUR MISSION - GOVERNANCE</u>
08	<u>VALUE PRODUCTION</u>
10	<u>RESEARCH</u>
14	<u>CLINICAL ACTIVITY</u>
16	<u>EMERGENCY DEPARTMENT</u>
18	<u>TRANSPLANTS</u>
19	<u>INNOVATION IN INTENSIVE THERAPIES</u>
20	<u>DEPARTMENTS</u>
28	<u>ONCOLOGY AT THE GEMELLI</u>
30	<u>PRIVATE PRACTICE</u>
32	<u>TECHNOLOGICAL AND INFRASTRUCTURE INNOVATION</u>
40	<u>PARTICIPATIONS</u>
42	<u>THE NETWORK</u>
44	<u>THE COMMUNITY, THE PEOPLE</u>



SUMMARY

# ROUTE TO IRCCS

- August 2015** **Fondazione Policlinico Universitario Agostino Gemelli IRCCS officially and fully takes over the management of the Foundation.**  
By becoming a Foundation, the Gemelli acquires the necessary autonomy to manage its ever-increasing complexity and to better face the challenges imposed by an evolving healthcare context.
- November 2015** **Fondazione Policlinico Universitario Agostino Gemelli IRCCS rents the CIC Company attributable to the Association Columbus.**  
This one, hit by a phase of serious corporate crisis, in order to guarantee the continuity of employment and to rationalize the health services offered.
- January 2016** **The Pediatric Emergency Department was inaugurated**  
An integral part of the new DEA and Emergency Department of Gemelli, which covers a total of 3,100 m2 and a point of reference not only for the territory of Rome and the Province but, also, for the whole regional and extra-regional territory, putting at the service of the little patients all the skills and technologies for the management of all cases of pediatric emergency.
- February 2017** **Presentation of the Gemelli ART (Advanced Radiation Therapy)**  
The Advanced Oncological Radiotherapy Center, which currently has unique technologies and equipment in Europe and among the few in the world of this complexity, is a technological center for the fight against cancer that has no equal in Europe.
- May 2017** **The new Cardiac Surgery Intensive Therapy is operational**  
For greater safety towards patients suffering from important cardiovascular pathologies that need heart operations, thanks to a better organization of beds and thanks to innovative technologies.
- July 2017** **Qatar Foundation Endowment (QFE) and Policlinico Universitario A. Gemelli IRCCS announce the signing of a joint venture for Mater Olbia in Olbia, in Sardinia**  
The Hospital, acquired by QFE through the European investment platform in May 2015, has been the subject of considerable structural and technological interventions in these two years that led to the definition of the structure of the new hospital in Olbia.
- August 2017** **Principia SGR joins the capital of Clinical Trial Center SpA**  
Principia SGR, through the Principia III Fund - Health has entered with a 35% stake in the capital of Clinical Trial Center SpA, a spin off of the Fondazione Policlinico Universitario Agostino Gemelli IRCCS. The objective is to support the development and growth of the Clinical Trial Center business unit within the Foundation itself.
- November 2017** **CEMAD is born**  
The CEMAD (Centro Malattie Apparato Digerente - Digestive Disease Center) is the new center for the diagnosis, treatment and prevention of diseases of the digestive system, made possible thanks to the precious support of Fondazione Roma.
- February 2018** **Fondazione Policlinico Universitario Agostino Gemelli is an IRCCS**  
The Minister of Health Beatrice Lorenzin signed the decree of recognition of the scientific character of the Foundation for the disciplines "Personalized Medicine" and "Innovative Biotechnologies".
- September 2018** **Fondazione Giovanni Paolo II of Campobasso enters the welfare network of the Policlinico Universitario A. Gemelli IRCCS in Rome**  
The integration with the Policlinico Universitario A. Gemelli IRCCS will further improve the quality of services offered to the Molise territory and to neighbouring regions and to achieve significant synergies in sharing common services.

# OUR VALUES

The value of the centrality of the person, of his unicum made of physical needs and spiritual needs, the commitment in the field of care as a mission of attention to the other, even before as a professional duty, found a model of Christian charity that has inspired the birth of the Policlinico Universitario A. Gemelli IRCCS and continues to lead its activity.

The tangible sign of this ideal root is given by the work performed daily within the Foundation by the Pastoral Center and by the Cappelania hospital - under the responsibility of S.E. Mons. Claudio Giuliadori, General Assistant of the Università Cattolica del Sacro Cuore - who work alongside the Foundation staff and respond to the needs of patients and their families.

## Fondo Carità

<http://donaora.policlinicogemelli.it>

Fondo Carità, launched in 2016, is confirmed as a tool for social and economic support, especially in the most difficult and emergency moments of patients who find themselves in situations of loneliness and vulnerability, thanks also to Social Workers and healthcare personnel who offer them listening and support to activate rapid interventions of concrete and punctual support.

## Villetta della Misericordia

The “Villetta della Misericordia”, inaugurated in 2016 as a Night Reception Center for homeless people, has become an important example of the Foundation's commitment to the emerging needs of the local community in just two years of activity. Born from the collaboration between the Community of Sant'Egidio, the Policlinico Universitario A. Gemelli IRCCS, the Università Cattolica del Sacro Cuore and the Toniolo Institute, the residence welcomes twenty guests, men and women of Italian or foreign citizenship who lives in conditions of social marginalization, of extreme psychological fragility and, some of them, carriers of chronic diseases neglected for years.

## The collaboration with No profit organizations

There are **over 40 no profit organizations** operating within the Gemelli, with **over 400 volunteers** working together with doctors and nurses, assisting in the wards and committed, with dedication and expertise, in psychological and physiotherapy support services for patients, welcoming the relatives of the sick in the family houses and organizing workshops and recreational play areas for the little patients. To these, are added the **approximately 70 volunteers of the Italian Red Cross** who carry out their service at the Foundation's Emergency Department. The work of the volunteers within the Gemelli is aimed at making the stay of elderly, seriously ill, children and people who are alone or in difficulty more peaceful.



Tra i tuoi regali di Natale  
pensa anche a Ibrahim.  
Dona 50 euro per le sue cure  
#50xlaSIRIA  
Ospedali aperti in Siria

Also in 2018 the value of the “Open Hospitals” initiative in Syria was confirmed, launched in 2017 to protect local populations exhausted by years of civil war.

The project, promoted by the Fondazione AVSI with the contribution of the Policlinico Universitario A. Gemelli IRCCS, gives concrete support to three Catholic hospitals operating in the region, **the Saint Louis Hospital in Aleppo, the French Hospital and the Italian Hospital in Damascus**, which can thus provide free medical services to the most vulnerable people, victims of war.

The Foundation participates in “Open Hospitals” both through the direct allocation of funds and through initiatives to train and update Syrian health personnel and care for the population.

# ASSET

Fondazione Policlinico Universitario Agostino Gemelli IRCCS is organized in two hospital units: **Policlinico Gemelli** and **Columbus**.



**241** Units  
of which  
85 Complex Operating Units,  
124 Simple Operating Units and  
32 Simple Operating Area Units.



7  
Departments



## GEMELLI IN NUMBERS\*

\*Reference to calendar year 2018



1.526

Total beds



94.919

Total discharged



about 400

Transplants performed  
(kidney, liver, cornea  
and bone marrow)



82.076

Access to the Emergency  
Department



4.110

Babies born



53.701

Surgical procedures



10.514.533

Outpatient services



167.386

Internal Private Practice  
Outpatient services  
performed at the Foundation's  
ambulatories



1.200.000

Website visits at  
policlinicgemelli.it



5.322

Number of employees



over 40

No Profit Organizations  
operating within the Gemelli



62.138

Hours of training  
enjoyed by staff



17,7%

Percentage of opposition  
to organ donation



2.500

Scientific publications



171.297

Online reports



1.495.221

Meals provided  
to patients and staff

# OUR MISSION

The Fondazione Policlinico Universitario Agostino Gemelli IRCCS is the place where scientific and technical skills, human sensitivity, ethics and catholic values become a motivating commitment to the service of all, to guarantee excellent and accessible care to the whole community.

# GOVERNANCE

## Board of Directors

GIOVANNI RAIMONDI  
*Chairman*

Franco Anelli  
Alessandro Azzi  
Rocco D. A. Bellantone  
Vincenzo G. Cesareo  
Carlo Fratta Pasini

**Control and Risks  
Committee**

Antonio Gasbarrini  
Fabio Lenzi  
Gianni Letta  
Cesare Mirabelli  
Alfredo Pontecorvi

## Board of Auditors

## Supervisory Board

## Clinical, Educational and Scientific Consultancy Committee

## General Management

MARCO ELEFANTI  
*General Manager*

## Ethics Committee

## IRCCS Scientific Committee

**Clinical Government Direction**  
Rocco Domenico Alfonso Bellantone

**Sanitary Direction**  
Andrea Cambieri

**Scientific Direction**  
Giovanni Scambia

**Private Practice  
and Customer Service Direction**  
Roberto Battisti

**Human Resources Direction**  
Daniele Piacentini

**Administration and Finance Direction**  
Massimo Dalfelli

**Operation Direction**  
Daniele Mauri

**ICT Direction**  
Paolo Sergi

# VALUE PRODUCTION

Determination of added value*	31/12/18	31/12/17
Value of production and other revenue	671.108	668.504
<b>Intermediate costs of production</b>		
Consumption	-173.580	-173.373
Services	-82.602	-83.114
Third party fruition	-6.919	-6.895
Different management fees	-1.272	-750
<b>Gross characteristic added value</b>	<b>406.736</b>	<b>404.372</b>
<b>Accessory and extraordinary components</b>		
Extraordinary income / expenses	134	11.499
<b>Gross global added value</b>	<b>406.870</b>	<b>415.871</b>
Depreciation and write-downs	-43.672	-43.388
<b>Total net added value</b>	<b>363.198</b>	<b>372.483</b>

During 2018, due to the lower incidence of extraordinary components compared to 2017, the Net Added Value decreased by approximately 2.5%, going from € mil. 372 to € mil. 363.

The allocation of value added was mainly directed to remuneration of personnel costs (substantially in line with the previous year) and of the Public Administration (for Value Added Tax paid on the purchase of goods and services).

There was a reduction in the contribution to the Public Administration compared to 2017 due to the lower impact of IRAP following the redevelopment of the Foundation's tax status in previous years.

A slight decrease is also seen in the remuneration of the loan capital, deriving from the reduction of the total debt during 2018.

Allocation of added value*	31/12/18	31/12/17	Var%
Staff remuneration	321.683	320.299	0,4%
Remuneration of the Public Administration	30.831	41.608	-25,9%
Remuneration of credit capital	8.956	9.103	-1,6%
Remuneration of the Community / Environment	933	4.403	-78,8%
Net Result	795	-2.930	-127,1%
<b>Total</b>	<b>363.198</b>	<b>372.483</b>	<b>-2,5%</b>

The remuneration of the community and the environment, down compared to 2017, includes the donations made and the effects on the environment of eco-sustainable initiatives produced by identifying the associated costs.

The Net result, which represents the financial statement result, shows an operating profit of € mil. 0.8.

\* in thousand of €



# RESEARCH



1.157

Number of Researchers  
and Clinicians



11.125.475 €

Total Value of research  
Gemelli's projects



2.500

Number of Scientific Publications  
per year

With the official recognition of its scientific character by the Italian Ministry of Health, the research activity at Fondazione Policlinico Universitario Agostino Gemelli IRCCS (Istituto di Ricovero e Cura a Carattere Scientifico) becomes a powerful source of innovation, primarily devoted to improve patient's quality of life and care and, more generally, to the general growth of the national and international bio-medical knowledge. The results produced by the cutting-edge research carried out confirm Gemelli researchers as renown lead scientists in the frontier areas of the Medicine of Complexity, particularly on Personalized Medicine and Innovative Biotechnology as the two main disciplines for which the Gemelli Hospital is now a recognised reference site.

# GEMELLI AND UNIVERSITÀ CATTOLICA: RESEARCH METRICS

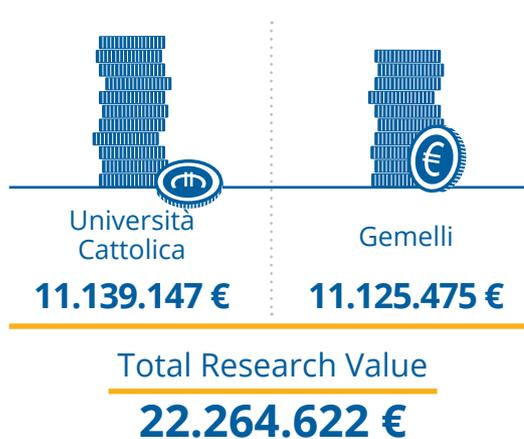
The research activity carried out by the Academics and Researchers of the Università Cattolica del Sacro Cuore and of the Policlinico Universitario A. Gemelli IRCCS in 2018 is built on **485 research projects**, out of whom 194 new projects have been funded by external Funding Agencies for a total amount of more than 14 million euro. Furthermore additional contributions for scientific research come directly from internal resources of Università Cattolica del Sacro Cuore (200 projects and prizes for € 1.4m) and from 91 clinical trials launched in 2018 (with a turnover of € 6.5m). The total portfolio of new Research Projects for Università Cattolica and Fondazione in 2018 values **more than € 22 million**. These figures consolidate the increasing trend of the results of the last three-year period, confirming the the capacity of Università Cattolica and the Policlinico Gemelli to attract resources for an excellent Research.

The **most significant funding obtained** include:

- ▶ More than 1.4 million euros from AIRC - Associazione Italiana per la Ricerca contro il Cancro (Italian Association for the Cancer Research).
- ▶ A major funding of more than 500.000€ from the Italian Ministry of Education, University and Research - National Operative Programme for Research and Innovation - for the BIOMIS project to build a Biobank of Gut Microbiota and human sputum samples.
- ▶ More than 1.4 million € of funding by the Italian Ministry of Health on the themes of health protection, health security and health technology

assessment (in addition to the funding received under the main national stream "Ricerca Corrente" and "Ricerca Finalizzata").

- ▶ Voluntary funding from private pharmaceutical companies totalling € 1.871.767, increased over the previous years, which demonstrates the trust that pharmaceutical companies and private associations have in the quality of the research carried out by the Faculty of Medicine in collaboration with the Fondazione Policlinico Universitario Agostino Gemelli IRCCS.
- ▶ At International level, several European projects started: ExACT on precision medicine, BETTER-B on palliative care, FAIR4HEALTH on BigData management, DIABFRAIL LATAM for Diabetes management, PANACEA on hospital data security , INCLUDING on safety and health emergencies, IPAAC - Joint Action Cancer, GANNET53 in the gynecological oncology area.
- ▶ During 2018, 10 projects funded by the Italian Ministry of Health under the stream "Ricerca Finalizzata" for a total of € 2.102.000 were launched. It is important to underline that out of the 10 awarded projects, 6 studies have young researchers as Principal Investigator. The main funded research topics include gut microbiota, advanced diagnostic systems in oncology, multimorbidity and neurodegenerative diseases and involved multidisciplinary teamworking on following scientific-disciplinary areas: Gastroenterology, Microbiology, Geriatrics, Medical Physics, Physiology, General Pathology, Neurology and Hygiene.



- 91 Clinical trials for profit
- 22 No profit co-financed by companies
- 12 National Institutional no profit organizations
- 3 International Institutional no profit organizations

(\*) Managed entirely by the Policlinico Universitario A. Gemelli IRCCS

# THE IRCCS RESEARCH: THE RESEARCH LINES

The “research hospital” status (IRCCS) was given to the Policlinico Universitario A. Gemelli IRCCS for two research disciplines (“Personalized Medicine”, “Innovative Biotechnologies”) that represent today the most innovative frontier of medical science, and they are also those that have a greater impact not only with respect to care but also - and above all - with respect to prevention. In fact, Biomedical Research has evolved towards approaches oriented to unravel the intrinsic complexity of the transition from a state of “health” to that of “disease”. The Gemelli is a reference actor in these fields that belong to the Medicine of Complexity, and is developing its own activity through 7 specific research lines.

- 1 Translational Research in Personalized Medicine of Complex Chronic Diseases**
- 2 Clinical Research in Personalized Medicine of Complex Chronic Diseases**
- 3 Sustainability of Personalized and Predictive Medicine in the National Health System**
- 4 Innovative and predictive approaches in the elderly subject**
- 5 New frontiers of innovation in health technologies and development of medical surgical devices**
- 6 Innovative and personalized approaches in the science of women’s and children’s health**
- 7 Innovative biotechnologies and personalization paths in diagnostic and intensive therapy for acute pathologies**

## GOVERNANCE IRCCS

### Scientific Committee

GIOVANNI SCAMBIA  
*Scientific Director*

### Executive Scientific Committee

Giovanni Scambia  
*Scientific Director*

Guido Costamagna  
*Vice Director*

Ruggero De Maria Marchiano  
*Vice Director*

Vincenzo Valentini  
*Vice Director*

Rocco Domenico Alfonso Bellantone  
*Committee Member*

## THE IRCCS RESEARCH CHAIN

Complex chronic diseases (Chronic Non-Communicable Diseases) constitute the focus of the research activity of the Policlinico Universitario A. Gemelli IRCCS. In particular, there are 8 Major Disease Categories (*infographics 1*) identified as pivotal of the Research activities as they are more representative of the Foundation in healthcare services in terms of volumes and excellence in health services. The Scientific Direction has initiated a process of implementation of the factors enabling

research in the disciplines of Personalized Medicine and Innovative Biotechnologies (recognition disciplines) which will guarantee full support to the Researcher by streamlining administrative procedures, drafting policy documents and standard operating procedures (SOPs) for studies clinical, enhancing and organizing the technology park in centralized and certified core facilities. This process will ensure that the synergy between the Gemelli care pathways and the Research activities is fully and mutually enhanced.



## THE ETHICS COMMITTEE

The Ethics Committee is inspired by the values and principles of the Policlinico Universitario A. Gemelli IRCCS and its activity is a fundamental element that integrates the clinical and assistance commitment of the professionals involved. The Committee is an independent consulting body whose members, bearers of different skills and experiences, are mainly called to assess the ethical conditions of the of the research protocols (including clinical trials) and to verify that the safety, integrity and rights of patients participating in the studies be respected.

**The aims of the Ethics Committee** are essentially three:

- 1** Giving public guarantees of respecting life, health and human rights in clinical practice and research.
- 2** Facilitating the choices of, especially in cases of particular difficulty, the choices of the carers and the collaboration with the patients in the information consent.
- 3** Overcoming the fragmentation and complexity of medical specialties through their reading in the anthropological unity of the human person and in particular of the suffering person, with the objective of the best quality of care and research.

# CLINICAL ACTIVITY



1.526

Total beds



10.514.533

Outpatient services



2018 was characterized by a reorganization and functional redistribution of some clinical areas. A rationalization aimed not only at improving the efficiency of the services provided to patients, but also to aggregating skills and areas according to a logic of care path and not just response to a single need of the moment. The centrality of the patient as a person, the fielding of skills, technologies and know-how avant-garde, the ability to respond to care needs complex through increasingly customized solutions the distinctive features of the clinical activity are confirmed e assistance fielded every day.

# CLINICAL ACTIVITY HIGHLIGHTS



**81,5%**

Ordinary stay in acute patients Region



**18,5%**

Ordinary stay in acute patients Extra Region



**91%**

Ordinary stay in acute patients SSN



**9%**

Ordinary stay in acute patients out of SSN



**7,5**

Average length of ordinary stay (days)



**1.526**

Total beds

**88,4%**

Occupation Rate (Patients discharged, OS)

## Acute Patients

- 60.406 Discharged in OS
- 33.832 Discharged in DH
- 681 Discharged in Rehabilitation

Total Patients Discharged

**94.919**

## Surgical procedures

**53.701**



## Outpatient services



63%  
INTERNAL  
6.653.321

37%  
EXTERNAL  
3.861.212

of which  
20%  
NO SSN

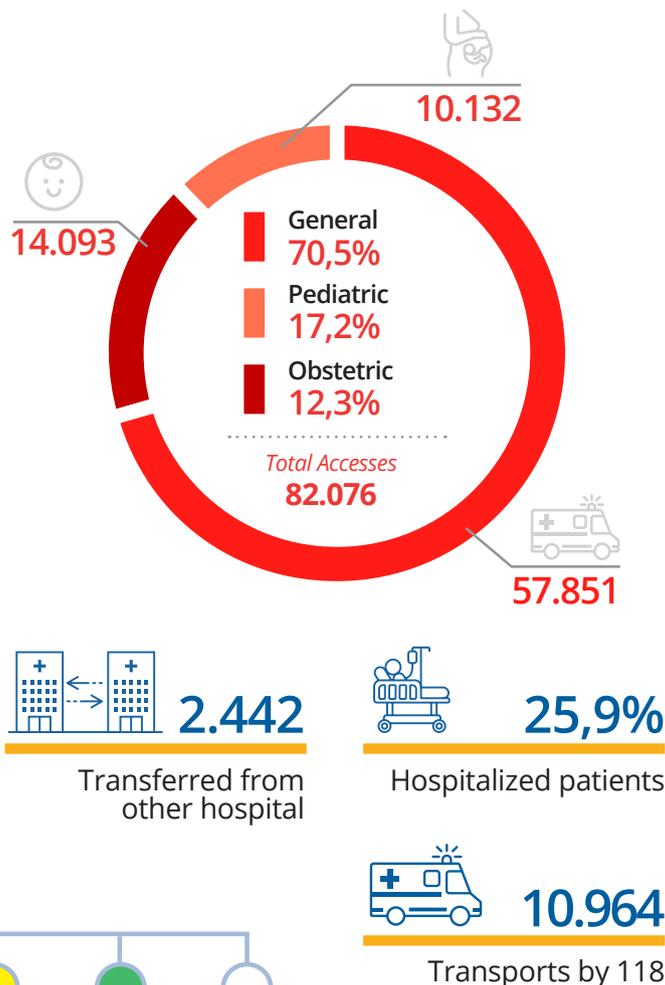
# EMERGENCY DEPARTMENT

The Gemelli Emergency Department, with over 200 accesses every day, responds to the emergency and urgent needs of an area of over 1.5 million inhabitants, who find a 24-hour service here thanks to the presence of a team of four emergency doctors, an orthopedist, a pediatrician, a gynecologist and two radiologists. Neurological consultants, neurosurgeons and otolaryngologists are also available on an ongoing basis, as well as - in the 12 daylight hours - ophthalmologist consultants. At the Emergency Department the first medical and surgical treatments are given to cases of emergency and urgency, the necessary interventions for reanimation and stabilization of the critical patient are carried out, and the necessary tests are carried out to assess the actual severity of the case.

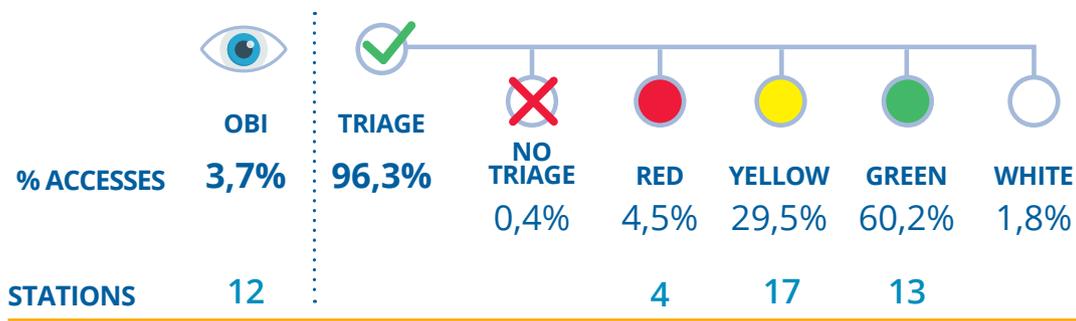
In 2015, the service was completely reorganized, going beyond the traditional concept of the visiting room. The new organizational and architectural model has been designed according to the criterion of intensity of care, which allows patients to be "separated", requiring greater intensity of treatment from others, thus achieving a situation of greater safety and comfort.

The Gemelli Emergency Department - equipped with a heliport active 24 hours a day, which allows the transport by helicopter of major traumatological and medical-surgical emergencies - is DEA (Department of Emergency and Acceptance) of II level, and is the reference for 7 Level I DEA and 6 emergency principals.

## Accesses to the Emergency Department



## Percentages of Accesses to the Emergency Department and Stations





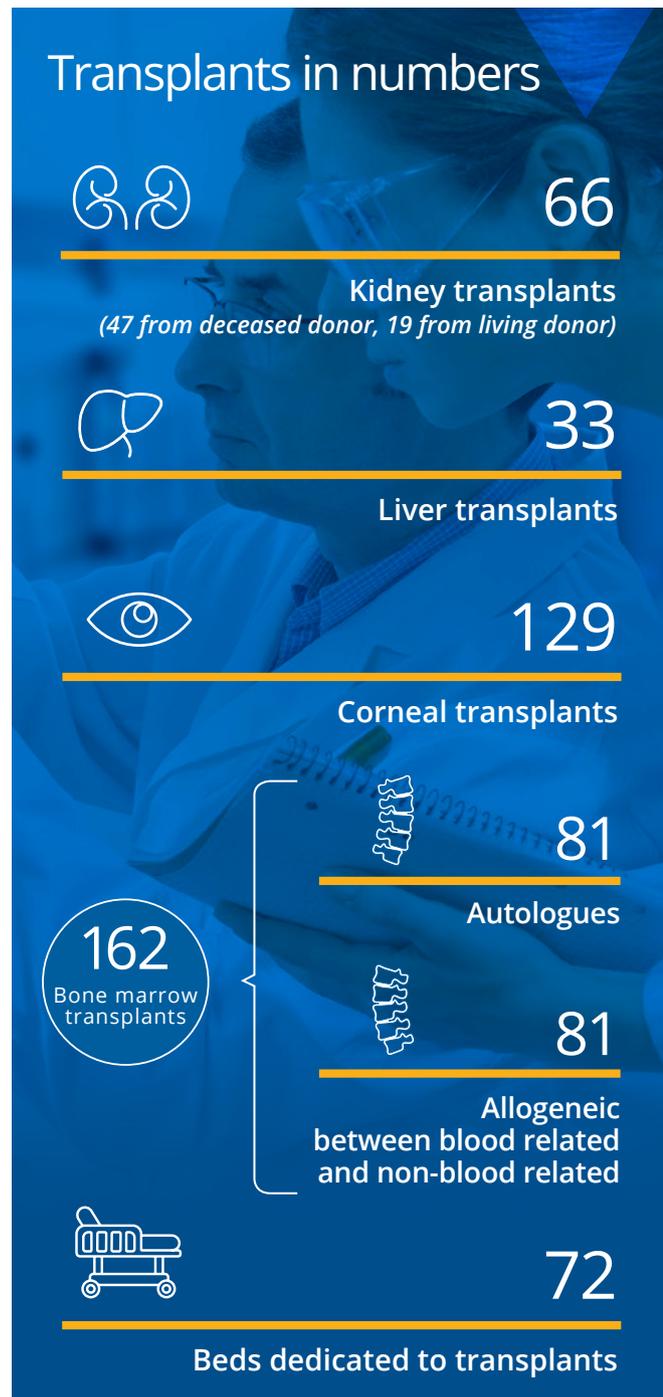
# TRANSPLANTS

The transplant activity continues to be a flagship for the Foundation. There are 4 Complex Operative Units in which transplantation activities take place: the COU of General Surgery and Liver Transplantation, the Kidney Transplantation COU, the COU of Hematology and Hematopoietic Stem Cell Transplantation and the COU of Ophthalmology.

Specifically, the bone marrow transplant activity, started since 1988, is accredited according to current legislation and complies with the GITMO (Italian Bone Marrow Transplantation Group), EBMT (European Blood and Marrow Transplantation group) and JACIE (Joint Accreditation Committee regulations ISCT & EBMT). The activity covers all types of hematopoietic stem cell transplants from the simplest, such as autologous transplantation (the patient receives, after high-dose chemotherapy, his own cells that were taken from the marrow and then temporarily cryopreserved) to the most complex, such as allogeneic transplantation from an unfamiliar donor that can be performed with hematopoietic stem cells taken from bone marrow or peripheral blood via apheresis or from cryopreserved umbilical cord blood. To date, more than 1.000 transplants have been performed.

In 2018, 66 kidney transplants were performed, considering deceased donor transplants (47) and living donor transplants (19), which lead to more than 1300 kidney transplants performed at Gemelli. In particular, the living donor kidney transplant activity in 2018, with the 19 transplants performed, places the Foundation in 3rd place in Italy, after the Padua and Turin centers, and in 1st place in the Central South. This result is explained by the organizational and innovative effort made in recent years, to offer to the patients with chronic renal failure, modern models of kidney transplantation that are not widespread elsewhere, such as incompatible living ABO donor transplantation, living donor cross-transplantation between hyperimmune couples and preemptive living donor transplantation, ie before entering dialysis.

Corneal transplant surgery is one of the flagships of the Eye Clinic of the Fondazione Policlinico Universitario Agostino Gemelli IRCCS. The Institute performs all types of corneal perforating transplantation, anterior lamellar, posterior lamellar. In the three-year period from 2015 to 2018 it was possible to increase progressively the number of transplants performed at the Ophthalmology Clinic year after year, which turn out to be 405. It underlines as excellence the "DMEK" posterior lamellar transplant for which the group is positioned as Pilot in Italy with original techniques and lots of demonstrative surgery in "direct", presentations at national and international congresses.



# INNOVATION IN INTENSIVE THERAPIES

Over the years, the Foundation has structured a complete offer of intensive care therapies, which can now meet the needs of all types of patients, from the newborn to the post-surgical patient to emergency interventions. This is thanks to a continuous specialization of medical and health personnel, but also thanks to a constant attention and investment in the personalization of the answers to the needs.

## TIN – Neonatal Intensive Care

The Neonatal Intensive Care Units (TIN), Sub-TIN and Pathology Neonatal, excellences of Gemelli; since 2018 they guarantee access to parents 24 hours a day, with the aim of promoting a closer relationship contact between parents and premature babies. This also happens through the “Kangaroo mother care”, the practice of providing a continuous skin-to-skin contact between mother / father and newborn, thus favouring breastfeeding and reducing hospitalization times.

## TIP - Pediatric Intensive Care

Gemelli's Pediatric Intensive Care and Trauma Center (TIP) Unit was the first in Italy to have opened the doors of the Department to patients' families for most of the day. In addition to managing all pediatric emergencies, it is the first Trauma National Pediatric Center for number of admissions. It has 8 intensive beds in which about 600 cases of pathologies are treated annually.

## TIPO - Post Operative Intensive Care

Post-operative Intensive Care (TIPO) is dedicated to hospitalization, in the post-operative period, of patients undergoing surgery particularly challenging or whose basic conditions result incompatible with an immediate return to the ward ordinary. It also welcomes patients following a liver transplant and kidney. Hospitalization in TIPO can be scheduled before of surgery or decided extemporaneously in the course or at the end of the intervention. The TIPO is an integral part of the COU Anesthesia Intensive Care and Clinical Toxicology, which acts as an immediate emergency aid for the more serious pathologies, multi-organ failure, trauma, refractory cardiac arrest and circulatory shock.

## Beds in Intensive Therapies

TIN	32	
TIP	8	
TIPO	17	<i>of which CIC 4</i>
REANIMATION	20	
TIC	24	
TINCH	10	
STROKE UNIT	8	
		<b>119</b> Total beds

## TIPO CIC - Post Operative Intensive Care

There is also a Therapy at the Columbus Presidium (CIC) Post-operative Intensive who has 4 beds.

## TIC - Cardiac Surgery Intensive Care

It is a Department of 10 high-intensity treatment beds for hospitalizations immediately after surgery, where operates a team of cardioanesthesiologists assisted by specialized nurses. Together with the 14 beds of Cardiological Intensive Care, it constitutes a integrated, technologically advanced center that allows to modulate the intensity of care, guaranteeing accessibility and patient safety through improved usability and information integration.

## TINCH - Neurosurgical Intensive Care

The Department, which has 10 beds, hosts the patients operated for complex neurosurgical procedures (removal of neoplasms cerebral, corrections of intracranial vascular malformations, column pathologies), in addition to patients undergoing surgery neuroradiology for ischemic stroke or brain aneurysm that require intensive post-intervention assistance. It is equipped with sophisticated intracranial monitoring methods, interconnected among them through a latest generation computer system.

## Stroke Unit - Neurological Intensive Care

The Stroke Unit, Hub of III level, has 8 beds and is point of convergence for all the most serious patients, where they can be implemented the most advanced procedures for stroke therapy, such as endovascular interventional procedures.

# AGEING, NEUROSCIENCES, HEAD-NECK AND ORTHOPAEDICS SCIENCES DEPARTMENT

Director: Prof. **Roberto Bernabei**

## Mission

To guarantee an organized and multidisciplinary response to the needs of assistance and care of complex patients (in particular, the elderly population),

with the objective of positively affecting their functional and mental decline and preserving self-sufficiency and the best quality of life possible.

3  
areas

29 units  
of which

20 Complex  
Operating Units and  
9 Simple Operating  
Area Units



307  
of which 30  
of Rehabilitation

Beds



345.736

Outpatient services



19.821  
of which 8.996  
Day Hospital

Total discharged



17,7%

Discharged  
outside the Region



20.187

Total surgical procedures

## Research activities\*

(\*) the most significant activities have been reported

### SPRINTT

It is a clinical study conducted in various research centers in Italy (including the Foundation) and abroad, to prevent disability in the elderly as no specific preventive measures are available at the moment. The study is aimed at men and women aged  $\geq 70$  years old who lives at home and are at high risk of developing disability in the medium term. The groups are followed for at least 2 years by a team medical staff and are supervised on physical activity without the use of gymnastic equipment.

### LifeHand2

With the specialists of the Department, the Foundation is the leader of the international LifeHand2 project, which concerns experimentation of the implant of a bionic hand capable of restoring the sense of touch. The Gemelli's neurosurgeons, since 2011, have performed 4 bionic hand implants.

### Interceptor

The study, promoted by the Ministry of Health and by AIFA (Agenzia Italiana del Farmaco) and in collaboration with the Superior Institute of Health and AIMA, aims to investigate - on a panel of 500 patients with mild cognitive deficits, recruited in 20 Italian centers - which exams they are more useful to the doctor in diagnosing the effective presence of Alzheimer's disease in people who have an initial mild cognitive disorder, before it is manifested in a full-blown way. All patients will be monitored for 3 years, after which it will be possible to know which biomarker or which combination of biomarkers are able to predict more precisely the evolution of the disease from the beginning of the first symptoms.

# CARDIOVASCULAR AND THORACIC SCIENCES DEPARTMENT

Director: Prof. **Filippo Crea**

## Mission

The Cardiological and Vascular Area deals with ischemic cardiopathies, myocardopathies, valvulopathies, arrhythmias, congenital heart disease of the adult, aorta diseases and peripheral vasculopathies, with a particular one attention to heart failure. The activity

of the Pneumology Area, on the other hand, concerns a large series of pulmonary diseases (including emphysema, bronchitis chronic, bronchial asthma, pulmonary fibrosis), to which lung cancer is added, one of the cancers more frequent and more lethal.

3  
areas

13 units  
of which  
10 Complex  
Operating Units and  
3 Simple Operating  
Area Units



234  
of which 10  
of Rehabilitation

Beds



131.055

Outpatient services



7.715  
of which 241  
Day Hospital

Total discharged



12,1%

Discharged  
outside the Region



5.656

Total surgical procedures

1.062

Chest Area  
Surgical procedures

4.025

Cardio Area  
Surgical procedures

569

Vascular Area  
Surgical procedures

920

Cardiac Surgery  
procedures

3.105

Hemodynamics  
procedures

## Research activities\*

(\*) the most significant activities have been reported

### Studio Tiara™

Beginning in 2018, the Gemelli Cardiac Surgery Center is one of the centers involved in the international **Tiara™ Transcatheter Mitral Valve Replacement Study (TIARA-II)**. This study is aimed at evaluating the results of transapical implantation of the Tiara Neovasc prosthesis in the mitral position. These are the very first attempts at hybrid treatment of mitral valve disease.

### Early diagnosis of pulmonary fibrosis

Thanks to various funding, an important research project was launched within the Thorax area, which explores the use of digital chest auscultation in the early diagnosis of pulmonary fibrosis. This study is coordinated with numerous ongoing experimental trials (phase 1, 2 and 3) to evaluate the safety and efficacy of new experimental drugs for the treatment of idiopathic pulmonary fibrosis.

# GASTROENTEROLOGICAL, ENDOCRINE-METABOLIC AND NEPHRO-UROLOGICAL SCIENCES DEPARTMENT

4 areas

Director: Prof. **Guido Costamagna**

## Mission

The close integration between medical activity and surgical activity characterizes this Department consisting of four different Areas. The wealth of skills and professionalism guarantees an approach multidisciplinary for the diagnosis, therapy and research

of various pathologies: oncological pathologies, pathologies of the digestive system and metabolic endocrine diseases (obesity and diabetes), inflammatory diseases autoimmune diseases, allergic diseases, skin diseases, urological and renal diseases.

29 units

of which  
23 Complex Operating Units and  
6 Simple Operating Area Units



378

Beds



433.435

Outpatient services



26.637  
of which 8.791  
Day Hospital

Total discharged



22,2%

Discharged  
outside the Region



20.594

Total surgical procedures

## Research activities\*

(\*) the most significant activities have been reported

There are two subjects belonging to this Department that constitute excellences in the field of research applied to care. The first is **CEMAD**, the national reference center for the treatment and diagnosis of diseases of the digestive system inaugurated just over a year ago within the Foundation (see page 37).

The second and very recent activation (end of October 2018) is the **Gemelli Pancreatic Advanced Research Center**, a center that will allow to apply basic research to the patient's bed to defeat tumors that are still not very curable like those of the pancreas, a frontier area in the national and international scientific panorama.

Within the Operative Unit of Endocrine and Metabolic Surgery, it also represents an excellence at a national level, with effects on the clinical research front, the use of the **SADI-S technique** (Single Anastomosis Duodeno-ileal bypass) for the treatment of subjects with morbid obesity: 36 cases successfully treated in the last two years, and although definitive conclusions cannot yet be drawn (given the absence of long-term follow-up) the results in the literature are very encouraging.

# WOMAN AND CHILD HEALTH SCIENCES DEPARTMENT

Director: Prof. **Giovanni Scambia**

## Mission

The Department addresses the various issues of female and child health. In particular, with the creation of a unit specifically dedicated to women's health, the Ge-

melli marked a fundamental step in the enhancement of a gender medicine oriented towards the extreme personalization of care in the female health sector.

3  
areas

17 units  
of which

11 Complex  
Operating Units and  
6 Simple Operating  
Area Units



268

Beds



355.766

Outpatient services



33.498  
of which 14.230  
Day Hospital

Total discharged

**BABIES BORN**

4.110

TOTAL BIRTHS

3.963



7.018

Chemotherapeutic  
performances



9.807

Total surgical procedures



18,9%

Discharged  
outside the Region

## Research activities\*

(\* the most significant activities have been reported)

### **Genetic therapy against spinal muscular atrophy (SMA)**

Gemelli was the first center to start experimenting with gene therapy against spinal muscular atrophy (SMA), followed by from 5 other clinical centers, confirming the European record in Italy in the research on this pathology. The therapy, which gave very encouraging results in a first test in the US on 12 children, published in the New England Journal of Medicine, consists in inserting with a carrier viral the correct copy of the gene in the patients' DNA.

### **Current research in the COU Pediatric Oncology**

Important collaborations are in place with international pediatric oncology centers that offer small patients the possibility to use, in addition to the international protocols currently in use, even more recently developed and approved by the scientific world. In particular, over the years numerous phase I and II studies have been conducted with new anticancer compounds.

In the **NeMO Pediatric Center** are followed about 800 children affected by childhood neuromuscular diseases. There is a pediatric library where patients, parents and rehabilitators can see, choose and discuss the main aids existing.

# DIAGNOSTIC IMAGING, ONCOLOGICAL RADIOTHERAPY AND HEMATOLOGY DEPARTMENT

Director: Prof. **Vincenzo Valentini**

## Mission

The Department of Imaging Diagnostics, Oncological Radiotherapy and Hematology includes resources and facilities in which the activities are the result of an intense collaboration of numerous experts, who belong to different fields: radiologists, nuclear-doctors, radiotherapists, oncologists, hematologists, physicists, chemists, radiochemi-

sts, biologists, engineers, biometrists.

The Department is equipped with a high number of innovative and highly reliable diagnostic and therapeutic instruments and techniques. Inpatients are specialized in offering highly complex services, using innovative drugs or highly personalized interventional procedures.

3  
areas

14 units  
of which

9 Complex  
Operating Units and  
5 Simple Operating  
Area Units



79

Beds



2.549.262

Outpatient services



2.826  
of which 728  
Day Hospital

Total discharged



101.004

CAT scan



19.398

Magnetic Resonances



24,7%

Discharged  
outside the Region



11.851

Chemotherapeutic  
performances



# EMERGENCY, ANESTHESIOLOGY AND REANIMATION SCIENCES DEPARTMENT

Director: Prof. **Massimo Antonelli**

**2**  
areas

## Mission

The Department brings together a wide range of Areas and specializations able to guarantee patients and the territory an articulated response to care ne-

eds for time-dependent situations and pathologies and for widely spread pathologies.

**9** units  
of which

8 Complex  
Operating Units and  
1 Simple Operating  
Area Unit



**2.324**  
of which **227**  
Day Hospital

Total discharged



**106**

Beds



**6,8%**

Discharged  
outside the Region



**10.030**

Outpatient services

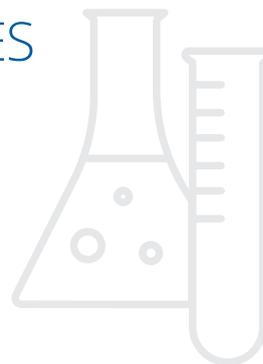


# LABORATORY AND INFECTIOUS DISEASES SCIENCES DEPARTMENT

Director: Prof. **Maurizio Sanguinetti**

## Mission

The Department is one of the sectors with the greatest degree of transversality within the Foundation, providing diagnostic and analysis services to all the Areas. An area in which promptness and the time factor constitute a fundamental element of the activity.



2 areas

6 units of which

4 Complex Operating Units and 2 Simple Operating Area Units



41

Beds



1.308  
of which 613  
Day Hospital

Total discharged



6,6%

Discharged outside the Region



6.554.951

Outpatient services

4.785.940

Internal

1.769.011

External

## Research activities\*

(\*): the most significant activities have been reported

Among the research areas and projects conducted in the Department, we note the development and validation of molecular methods for the rapid diagnosis of pathogens and their antimicrobial resistance genes; the integration of molecular methods in the antimicrobial treatment protocols of the infected patient; analysis of the theory of empirical and targeted antimicrobial therapies following the implementation of an integrated approach.

Other important areas are the translational medicine of sexually transmitted infections (STDs) in women of childbearing age and during pregnancy; the resistance of a model to guarantee the duration and satisfaction of the patient in HIV positive subjects in antiretroviral treatment; the conception and experimentation of new models of "drug delivery", on the structure of self-assembling viral particles and on the use of calcium phosphate nano particles (project was funded by the Foundation for the Study of Cystic Fibrosis); the identification, characterization and evaluation of new compounds with antimicrobial activity. In particular, essential oils of natural origin, peptides derived from Antarctic fish (*Chionodraco hamatus*) and compounds based on graphene are evaluated.

A particular research was the study of the microbiota and its modifications in specific clinical situations or in experimental models (alcoholic rat).

Important studies have been carried out for the definition of "direct-host therapy" of tuberculosis and the characterization of the new determinants of virulence in *Mycobacterium tuberculosis*.



## ONCOLOGY AT THE GEMELLI

The Gemelli, since its establishment in 1964, has always devoted a pioneering attention to Oncology and over the years has developed an integrated network of reception, diagnosis, therapy and rehabilitation services, fielding a continuous capacity for innovation. Always aware that assistance to these patients does not only concern the management of the cure of the disease, but requires a “global management”, aimed at recognizing and alleviating psychological and relational problems, which can influence the therapeutic course.

### Comprehensive Cancer Center

Starting from this philosophy of approach, which is declined in the avant-garde activity of medical oncology, surgery, interventional radiology and radiotherapy, the Gemelli deploys the Comprehensive Cancer Center to structure all the structures even more organically who carry out oncological activities within the Foundation, reinforcing the principle of taking charge globally throughout the patient's clinical-assistance pathway, through staff with integrated skills, professional figures (such as psycho-oncologist, nutritionist etc.),

reception programs and humanization of care.

The Comprehensive Cancer Center of the Fondazione Policlinico Universitario Agostino Gemelli IRCCS will be the site of a structured basic and translational research on cancer conjugated with an integrated portfolio of services and performances that cover the entire clinical-assistance pathway of the patient. Clinical-assistance pathways specific to each disease are currently in place for cancer patients, favouring complete integration between the various specialists, according to a patient-centered multidisciplinary approach.

The coordinated activity with all the Foundation structures allows to offer a global response to the patients' health demand, making use of the most advanced equipment, useful both in the diagnostic phase (latest generation multi-layer CT, PET-CT) and in the therapeutic phase (three-dimensional conformal radiotherapy, intensity modulated radiotherapy and stereotactic radiotherapy, increasingly personalized drugs and treatments on the molecular target). The management of the patient is taken in charge by the Tumor Boards, multidisciplinary and multi-professional groups that jointly discuss the individual cases to make joint decisions, establishing the best diagnostic and therapeutic course. Continuous research is a fundamental component of this holistic approach to the patient and his needs.

### The numbers of Oncology



about  
**50.000**

Cancer patients treated  
each year



over  
**22.000**

Hospitalizations



over  
**1.000.000**

Outpatient services

## THE FEMALE CANCER PHARMACOLOGY CENTER AND THE THERAPEUTIC ROOF GARDEN



An important oncology project launched during the course of 2018 is **The Female Cancer Pharmacology Center**, a center dedicated to clinical trials as well as treatment of women's cancer diseases. The Center consists of a hospital ward with 4 beds and a day hospital, and it is currently home to around 23 clinical trials in gynecological oncology phase II-III, most on ovarian carcinomas.

Together with the Female Cancer Pharmacology Center, it was inaugurated a **Therapeutic Roof Garden**, an innovative reality and the only one of its kind that for the first time brings chemotherapy "Outside the hospital walls". The Garden, in fact, is at service of cancer patients in clinical-assistance pathways of the Woman and Child Health Sciences Department.

Patients, during the therapy, may experience direct contact with nature offered by the garden, maximizing the beneficial effects; they have comfortable sheltered seating available from the sun that will allow you to enjoy sensations of refuge and privacy, surrounded by plants and immersed in a sequence natural of sensory stimuli (the sound of water, the sounds of the nature, variations in air temperature, variable intensity of light, the presence of small animals such as butterflies). The garden "flourished", thanks to the contribution of the Oppo Association and its ONLUS rooms, as part of the "Exploring the therapeutic benefits of biophilic design in hospital settings", promoted from the ReLab Study Center - Studies for Urban Re-Evolution.

### Pancreatic Advanced Research Center

A specialized center, already operational, which puts surgeons, oncologists, radiotherapists, gastroenterologists and other specialists in a multidisciplinary team. Each patient from the moment of diagnosis is placed in an organized therapeutic diagnostic path, and is accompanied by the team at all stages of his journey. This innovative approach, from the point of view of the management, diagnosis and treatment of the disease, is receiving a new push from research and specifically from studies of biomolecular analysis of pancreatic tumors.

# PRIVATE PRACTICE



**Gemelli's Private Practice** is aimed at both patients who pay for their own services and those who are covered by supplementary health funds and insurance (there are 34 active agreements). The offer of services structured by the Foundation for patients who choose to access private services has grown over the course of 2018: a wide range of outpatient, surgical and hospitalization activities that allow the patient to resort to services by choosing the professional who he will follow him in his care path.

 **167.386**  
Internal outpatient services performed at the Foundation clinics

 **52**  
Outpatient specialties ALPI - Foundation

 **over 750**  
Doctors engaged in private outpatient activities

 **28.000**  
Monthly calls to the call center 06-8881 8881

 **79**  
Beds

 **101**   
**71**   
Check-up (April-December 2018)

<http://privato.policlinicogemelli.it>

 **about 34.000**  
Website visits in 2018

 **+13,3%**  
Increase in visits to the website since the previous year

## PRIVATE PRACTICE

In addition to the classic diagnostic or therapeutic services, the proposal of the Private Practice is organized in Prevention and Health Packages, in structured outpatient pathways that allows you to have a complete, multidisciplinary and personalized picture relating to a specific health problem.

Packages can have the preventive purpose of providing a general picture of health even in the absence of symptoms (general check-ups for men and women, dermatological check-up for control of moles, pediatric cardiology package, etc.), or be aimed at identifying a complete diagnosis around a single health problem (diabetes, osteoporosis, thyroiditis, liver disease, menopause, recurrent spontaneous abortions, keratoconus, rhinopathy).

There are also packages related to nutrition (intolerances and malabsorption, lifestyle, eating disorders) and for patients who are candidates for surgery (diagnostic procedures for refractive surgery and for patients who are candidates for bariatric surgery).

In total, there are 14 active Packages, which cover an important part of the most significant health needs, across the different age and gender groups.



## PUNTO GEMELLI - SAN BASILIO

By 2019 the first “external” first-level outpatient point dedicated to diagnostic health activities, not in the SSN agreement, will open its doors to the public, covering an area of about 500 square meters which will have its own authorization for the exercise of health private practice in the district San Basilio.

## Gemelli a Casa

At the end of 2018 the company Gemelli a Casa s.p.a. (GAC) has been established, the result of collaboration between the Foundation (50%) and OSA Cooperativa sociale (50%), one of the main Italian operators in the field of integrated home care.

The aim is to offer highly qualified social and health services according to a model of global and integrated management directly at home.

The multidisciplinary team will assess the complex needs of patients with the aim of identifying an adequate care plan and monitoring it over time; this will also be possible for hospitalized patients, to guarantee continuity of care.



# TECHNOLOGICAL AND INFRASTRUCTURE INNOVATION



From the hybrid cardiac surgery room, a unicum at European level that allows the execution of minimally invasive and hybrid procedures, guaranteeing a wide range of therapeutic solutions tailored to each type of patient, to the “network” of intensive care, the Foundation is growing as a hospital that makes technological progress a tool of care but also of spreading an increasingly advanced medical culture, even on the research front. This requires continuous investment in know-how and dedicated structures, which make Gemelli a continuous yard of innovation.

# INNOVATION IN SURGERY



Catholic laparoscopic advanced surgery school

In the last twenty years, thanks to scientific research and the introduction of technologies in the surgical field, surgical techniques have been completely revolutionized: today endoscopic approaches (laparoscopy, robotic surgery and hysteroscopy) represent the gold standard for many diseases. The main objective of this live surgery session is to demonstrate the reproducibility of the application of modern gynecological technologies to stimulate the scientific community and increase the proportion of patients treated with minimally invasive approaches. The new operating Department has four large rooms available beyond the spaces necessary for their functioning as support spaces and for personnel. Each room has an average area of approx. 50 sqm while the Department extends for approx. 950 sqm. The rooms have been equipped with the latest technological standards and plant engineers. For example, an important implementation adopted is the 4K and 3D digital image recording system. Also important is the study on the principles of biophilic design applied to indoor hospital spaces to maximize the well-being of patients and medical personnel through a reconnection with the forms and elements of nature. Visual comfort is guaranteed by the choice of colors, the design of the lights, the presence of display cases that contain plants and stabilized green and the glass walls that reproduce images of the natural world.



Today Gemelli is one of the few hospitals in the world to have two surgical robots, used for urological and gynecological interventions, but also thoracic-cardiac surgery and transplant surgery. By putting in a coordinated manner technologies and know-how developed by the staff, the GeRoMe, Gemelli Robotic and Mentoring center was established. A Center for Robotic Surgery which is a national and international reference point in Applied Robotic Surgery, Research and Mentoring in Robotic Surgery (with great advantages from the point of view of the possibility of enhancing minimally invasive surgery). The simultaneous presence of all the robotic platforms available on the market makes GeRoMe Center unique, and constitutes an important step towards a new concept of Personalized Robotic Surgery.

## “Hybrid” Room of Cardiac Surgery

The “Hybrid” operating room of Cardiac Surgery, which since 2015 has been a unicum at European level, allows the execution of minimally invasive and hybrid procedures, guaranteeing a wide range of therapeutic solutions tailored to each type of patient, including elderly subjects and at high surgical risk.

The “Hybrid” Room is a cutting-edge operating stage that allows you to perform delicate procedures performed by a multidisciplinary team consisting of cardiac surgeons, cardiologists, vascular surgeons, and radiologists on difficult patients.

A modern angiograph is installed in the room, which uses a robotic arm, this is the most advanced device of its kind in the world.

The whole radiological and imaging part is managed by a control room adjacent to the “Hybrid” Room, connected in real time with the multimedia room of the Department.

## New surgical Heart Surgery block

Improvements have been made in the cardiac surgery block, with the construction of two new operating rooms, equipped with a technological and plant equipment that brings the standards of the Department to very high levels. Also in this case, a careful study was made of the spaces, colors and lights, creating glass walls on the inside that reproduce images of water to favor the comfort of patients and staff.

## GEMELLI ART

Gemelli



ART  
Advanced Radiation  
Therapy

Fondazione Policlinico Universitario Agostino Gemelli IRCCS  
Università Cattolica del Sacro Cuore

[www.gemelliart.it](http://www.gemelliart.it)

The Gemelli Advanced Radiotherapy Center (GemelliART) has been confirmed as an international reference institution in radiation oncology after the installation in December 2018 of the MRIdian technology, an advanced hybrid delivery unit that couples magnetic resonance imaging with radiotherapy.

In addition to the areas dedicated to therapies, the cutting-edge technologies and research laboratories, the Center offers training spaces for doctors and operators and places for information or listening to cancer patients, which make it one of the most accredited European institutions in cancer care.

The Gemelli ART offers to its patients the most advanced clinical assistance and therapeutic possibilities, providing innovative technologies both in outpatient and inpatient settings.

Highly specialized treatments are offered through modern radiation therapy techniques, which combine imaging with radiation delivery and guarantee extreme precision, treatment personalization, organ and function preservation, achieving greater opportunities of cure.

The high level of innovation and the number of technological solutions available at the Gemelli ART allow a very high standard of service, which goes from the reduction of waiting times to the possibility of extremely versatile personalization of patient's treatment times, according to his needs. The large majority of the patients was followed in a multidisciplinary context, discussing the situation of each patient in dedicated meetings involving various specialists in order to propose the treatment strategy that fitted best to the specific clinical situation and to help patients in taking the most appropriate decisions for their needs.



## Gemelli ART in numbers



35.000

Radiotherapy fractions



14.000

IMRT fractions  
(Intensity Modulated RadioTherapy)



about  
400

Interventional oncology procedures



about  
19.000

Radiotherapy visits

# DIGESTIVE DISEASE CENTER (CEMAD)



[www.cemadgemelli.it](http://www.cemadgemelli.it)

The CEMAD, Digestive Disease Center, born with the support of Fondazione Roma, in just over a year of activity has established itself as a national reference point for the diagnosis and treatment of a large number of Diseases of the Digestive System which include pathologies such as chronic intestinal inflammatory diseases, tumors, malformations, and degenerations that affect the digestive tract and the attached organs such as the liver, biliary tract and pancreas. Taking care of the patient is characterized by a multidisciplinary approach that favors the sharing of skills of teams of professionals of different specializations (Gastroenterologists, Surgeons, Endoscopists, Internists, Radiologists, Sonographers, Psychologists, Nutritionists, Gynecologists, Urologists, Pulmonologists, Biologists), which use modern technological equipment. The organization of care pathways for multidisciplinary teams, which meet weekly to assess individual cases and make jointly shared decisions, allows a holistic and personalized approach to the patient, and not only oriented to the individual pathology.

At CEMAD, we also developed boards for the management of numerous extradigestive diseases. The revolution brought by research on the Microbiome (Microbiome revolution) is highlighting how this immunometabolic organ (Metabolome) can influence the other surfaces of contact with the outside such as skin, lung, and genitourinary apparatus.

## SPECIALIZATIONS AT CEMAD

Gastroenterology, Diagnostic and operative digestive Endoscopies, Diagnostic and interventional gastroenterological ultrasounds, Breath test, Food intolerances, Nutritional consultations, Dietology, Hepatology, Pancreatology.

more than **100**

Professionals

over **10.000**

Nutritional  
assessments

over **2.000**

Day Hospital

## CEMAD in numbers

CEMAD is the site of the **first Italian Microbiome Clinic**



**50.000**

Outpatient visits for patients suffering from diseases of the digestive system, liver and pancreas



**30.000**

Endoscopy and echoendoscopy



about  
**15.000**

Diagnostic and interventional ultrasound scans



over  
**4.000**

Breath tests

## QUALITY OF CARE

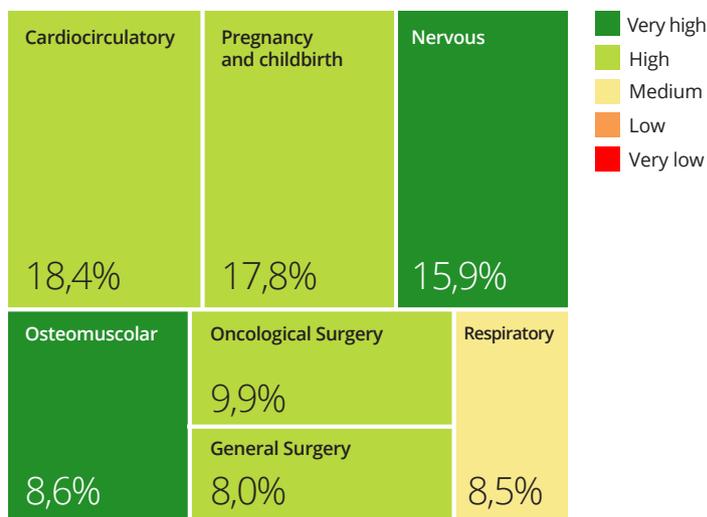
Also for 2018, the indicators of evaluation of care performance are based on the quality monitoring system of Italian hospital structures, implemented through the AGENAS National Outcome Program (PNE).

In this way it is possible to compare the care quality of the professionals within the Foundation with the teams of the best Italian hospitals. The Treemap is the instrument used by the PNE to represent the hospital performance in a chromatic way. To date, the last Treemap available is the one for 2016 (Figure alongside: the best performances are in green), which recorded a substantial improvement in Gemelli's performance compared to the previous year. However, this system complains of a significant time delay: in 2018, the data for 2016 is still available at national level. This does not help to represent the current situation and, above all, does not allow for timely action to improve the quality of assistance.

For this reason, in 2018, together with the Sanitary Direction and the ICT Department, the "Clinical Outcome Trails and Evaluation" Unit developed a monitoring system that, on a quarterly basis, reports internally the trend of the main PNE indicators of the Foundation and compares them with the expected assistance standards. This system, based on protocols validated at national level, allows, therefore, to monitor in real time the performance of the areas and the main routes assistance, promptly highlighting

situations worthy of improvement, in a perspective of constant pursuit of the best care for our clients. This, also according to what is foreseen by the assistance standards to be guaranteed with the recent recognition of the Foundation as IRCCS.

### Treemap: quality indicators by clinical area



**Joint Commission  
International  
Accreditation Process**



Policlinico Universitario A. Gemelli IRCCS has chosen to adopt the Joint Commission International model by 2020 and pursue the recognition of accreditation in order to strengthen and make systematic the continuous improvement of the quality of services. The Joint Commission International (JCI) is one of the largest and most prestigious accrediting bodies in the world and the voluntary accreditation process ensures that a health organization respects specific standards in terms of quality and safety, with a "transversal" application in every area.

## GEMELLI TRAINING CENTER



Starting **from July 2018**, Ipse Center has assumed the new name of **GTC Gemelli Training Center**,

managed entirely by the Fondazione Policlinico Universitario Agostino Gemelli IRCCS.

The GTC aims to create **a place of advanced training**, in which scientific and technical skills, innovation and research products, excellence and high specialization in care, can be put **at the service of all health professionals**.

The GTC focuses on educational activities of a predominantly **experiential nature** and with **innovative teaching methods**. 2018 saw the realization of **69 training projects**, with **1.343 participations**.

From July of this year, in addition to the participation of professionals from other hospitals (national and international), there are active agreements with the Foundation and with the Università Cattolica that allow access to employees, specialists and students, in order to contribute to the updating and development of internal technical and transversal skills.

## TREE CENTER



[www.treecenter.it](http://www.treecenter.it)

2018 saw the progression of the educational activities of the Tree Training Center (Teaching and Research for Education in Emergency Medicine and Anesthesia) using the push received in 2017 but above all in view of important deadlines and

appointments of 2019.

The **scientific and educational initiatives** aimed at optimizing the professional skills of the health professionals involved in various ways in all phases of the clinical care pathways of patients direct the focus both on **technical-manual and non-technical-aptitude abilities**. The disciplinary areas included in the activities of the center include peri-operative medicine, pain therapy, emergency-urgency medicine, maxi-emergencies, clinical toxicology, adult intensive care and pediatric therapy.

The **teaching methods** used include all the modern educational techniques applicable in adults: lectures, activities in small groups, divergent and convergent discussions, role-play, case studies, high-fidelity real scale simulation, task trainer, and video assisted debriefing.

In addition to the usual activities for students of the degree course in Medicine and Surgery and for post-graduate students in Anesthesia and Reanimation, for doctors and nurses, for instructors in advanced simulation, important courses were hosted including the following topics:

- difficult airways with the use of unique and specific simulation technologies (Salad Park)
- emergency echography and in critical medicine
- coagulopathies in traumatology
- halogenated anesthetics

Lastly, it is worth mentioning the leading role of the Tree Center in the National Registry of Simulation Centers and the programming of the Regional Register of Simulation Centers which will be launched on November 23, 2019 as part of an important event on regional networks for health education. In terms of numbers, in 2018 the Tree Center produced **1.340 hours of teaching activity** and hosted over **1.200 learners**.

# THE GREAT PROJECTS OF TOMORROW

2018 was a year of “incubation” for two major projects that will give a fundamental contribution to the Foundation, both on the medical-assistance front and in the field of research and training, a characterizing trait of Gemelli from the beginning.

## **New building for Sanitary, University and Research Activities**

The new building will be the result of the fusion of the needs of the Health and University Area: the laying of the first stone will take place in 2020. It is an important work, also in terms of size, with an area of almost 30 thousand square meters, which responds to a logic of integration between research, training and assistance according to a patient-centered organizational model.

Floors for health activities (from 4th to 10th) will host outpatient, day hospital and hospitalization spaces, with double or single rooms for 170/200 total beds. From the architectural point of view, the introduction of “light wells” - windowed modules placed in the side plugs - which allow natural light to filter through and the creation of a reception point at the entrance of each hospital ward humanize the spaces, for the benefit of patients and their families. The building will also house a new University area (from floor 0 to level 3), with the unification and reorganization of the Biological Institutes Laboratories and with new spaces for the Departments.

## **New Ambulatory Hub**

The second major project in the pipeline involves the construction of a new outpatient hub at the Healthcare Residence of Protected Hospitality. The project, which will cover an area of over 2.500 square meters, provides for the definition of a reception area, with a central reception on the entrance level and waiting areas, as well as additional reception and waiting points provided for in each floor; 7 front office positions and 3 administrative offices; 38 outpatient clinics, one of which is for withdrawals, a radiological area (MRI and CT) and a radiological section with mammograph and ultrasound scanners.



# INNOVATION IN INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

In a constantly changing context, characterized by large-scale digital transformation programs, the ICT function acquires a fundamental role in optimizing processes, organizing governance and enhancing data.

In order to face a future of great challenges and repositioning, the Gemelli, in the course of 2018, has matured the decision to replace the entire “backbone of the nervous system” of the hospital, investing in a new and innovative hospital information system international matrix.

The project, launched at the end of 2018, will lead, over a three-year period, to the replacement of the medical records and the administrative management of the episodes of treatment (admissions, ordinary, DH and outpatient) in the various agreed private and research regimes. This system will be in support of the Gemelli in a process of reviewing processes in a perspective of substantial growth in supervision, efficiency and standardization of production as well as support for analytical, multi-dimensional and detailed data collection for research.

Within this scenario, the investments made in 2018 developed basically on four lines:

1. The first of these is aimed at improving IT tools in support of clinical activity, working not only on the folder electronic clinic, but also on a clinical collaboration platform, useful

for sharing health information such as reports, images and structured data, coming from various sources, usable in the numerous clinical boards that are carried out every day in order to put together common knowledge, so as to offer the best patient care plan.

2. The second guideline is related to the improvement of reception and access services and of communication with patients. To this end, an App has been created that allows the interaction between hospital and family / patient keeping the relatives of the patients (authorized) updated on the status of their family member.
3. The third guideline concerns the development of the corporate Data Warehouse, a core function that is taking on an increasingly strategic role in providing summary information, necessary to address more targeted and timely decision-making choices.
4. Finally, a modern information system cannot do without a solid, efficient and secure back-end. This is why the fourth and last director focuses on the attempt to almost completely renew the IT infrastructures with the acquisition of new generation servers and storage.



# PARTICIPATIONS



By putting its excellence to value, and by structuring itself to face the national and international markets in a competitive way, in recent years the Foundation has accompanied the development of some successful spin-offs in different areas. Taking advantage of the vocation gained over the years in combining scientific research and practical application. With an ongoing focus on sustainability and long-term project strategy.



The second year of activity of Clinical Trial Center SpA, a company controlled by the Fondazione Policlinico Universitario Agostino Gemelli IRCCS and owned by Principia SGR, represents the first “full” year of activity of the new spin-off with the achievement of important results in conducting clinical trials for profit.

The contacts initiated with the pharmaceutical companies, together with a strong involvement of the Foundation’s investigators, have led to an increase in the number of new studies launched and, consequently, of the activity in support of the Ethics Committee.

The attraction of new studies, together with the significant improvement in performance, with particular regard to the clinical areas related to child and women’s health, gastroenterology, neuroscience, medical oncology and hematology, have led to an increase in turnover compared to the previous year, for a total value of 2018 over 6 million euros. These results, achieved thanks to the contribution of the experimenters and all the internal structures of the Foundation, provide a representation of the ever increasing attention of the Foundation and all its operators towards the new frontiers of clinical research, also in light of the recent recognition as IRCCS, and will be the basis for the development of new collaborations with pharmaceutical and healthcare organizations for future years.



XBioGem - a company born from the partnership between the Policlinico Universitario A. Gemelli IRCCS and BioRep, a Sapio Group company specialized in cryopreservation services - provides laboratory and biological material storage services to public and private research institutes, guaranteeing the highest levels quality and safety. The high specialization, the avant-garde technologies available to the company and the standardization of the most advanced material sampling methods make XBioGem the reference

provider of biological samples and high-level laboratory services able to create and provide useful data for the success of scientific research.

In fact, one of the company’s objectives is to structure and manage a biobank aimed at collecting, preserving and distributing human biological samples - and the related data assets - that can support research activities in the academic field, but also by developing paths collaboration with the pharmaceutical industry, the biotech industry, public and private health centers and laboratories.



[www.gemellihealthsystem.it](http://www.gemellihealthsystem.it)

Each person is different from the others due to the genetic characteristics that distinguish them. The specialists working at the Gemelli Health System (GHS), a company born within the Fondazione Policlinico Universitario Agostino Gemelli IRCCS, are well aware of this, dealing with personalized therapies obtained thanks to micronutrient mixtures.

Nutrigenomics and nutrigenetics are innovative and rapidly expanding sectors: GHS, also taking into account these evolving elements, is committed to implementing treatments with nutrient mixtures for rare diseases and particular patients, with increasingly personalized approaches that enhance the commitment of Gemelli, filling the gaps in the supply of micronutrients and macronutrients.

The idea of a company dedicated to Special Medical Foods (AFMS) stems from the implementation implemented by the specialists of the Gemelli of a European protocol, called ERAS, born with the intention of improving the patient’s operative and post-operative course. The Gemelli doctors declined the ERAS protocol through nutrient mixtures (NutriCatt). A logical choice based on scientific evidence has therefore guided the choice to make available a line of Special Medical Foods able to respond to the concrete demand for well-being, which doctors collect daily from patients and their families. All the doctors of the Fondazione Policlinico Universitario Agostino Gemelli IRCCS were therefore invited to participate in this project.

# THE NETWORK



The skills, operational processes, good clinical, welfare and management practices developed by the Foundation become models of development. Which allow Gemelli to “exit” from the historic Rome campus and feed other health experiences with its know-how. From Campobasso to the new structure in Olbia, a culture of care is spreading that is becoming a school. Laying the foundations for a possible network of relationships and collaborations that benefit a more and more extended audience of territories and communities.

## GIOVANNI PAOLO II RESEARCH AND CARE FOUNDATION (CAMPOBASSO)



FONDAZIONE  
GIOVANNI PAOLO II

[www.fgps.it](http://www.fgps.it)

With its 130 beds and the recognized quality of specializations in the areas of oncology and cardiovascular diseases, the **Giovanni Paolo II Research And Care Foundation (FGP) of Campobasso** is an important health reference for the whole area of southern-oriental Italy: delivers excellent clinical-assistance activities as well as hosting nursing degree courses, medical radiology techniques for images and radiotherapy and physiotherapy of the Università Cattolica del Sacro Cuore of Rome and to promote refresher courses, conferences and training events for health professionals. From July 2018 the Foundation - an hospital institute promoted in 2002 by the Università Cattolica del Sacro Cuore - has been fully integrated into the clinical - assistance offer perimeter of the Fondazione Policlinico Universitario Agostino Gemelli IRCCS.

A step that allows the Foundation to further improve the quality of services offered to the Molise territory and to the neighboring regions, as well as being able to achieve important synergies in sharing common services, combining two fundamental objectives of greater effectiveness of care and greater efficiency in management .

Since 2008 he has been awarded the "Hospital for women" award by the National Observatory on Women's Health (O.N.Da). In 2016 the quality of the services provided by the Foundation was also attested by the National Outcomes Plan (PNE), the tool with which the National Agency for Regional Health Services (AGE.NA.S) develops in the Italian Health Service the evaluation of outcomes of health interventions. The hospital has a modern and constantly improving technological park.

## MATER OLBIA HOSPITAL (OLBIA)



MATER OLBIA  
HOSPITAL

[www.materolbia.com](http://www.materolbia.com)

The first outpatient activities started in December 2018 and during the course of 2019 the **Mater Olbia Hospital**, the new hospital located in the north of Sardinia that guarantees an excellent medical-health garrison to the whole island, will progressively become fully operational.

The Policlinico Universitario A. Gemelli IRCCS, minority partner of Mater Olbia SpA and scientific partner of the Qatar Foundation Endowment, owner of the structure, will manage the clinical activities of the new hospital, bringing its know-how, its professionalism and expertise in the management of a complex and articulated proposal of health and hospital services in an area where the demand for care exceeds the offer that has existed up to now.

Mater Olbia will offer a wide range of services including neurological, orthopedic and pediatric specialties, as well as a modern radiotherapy center. In the start-up phase, 12 outpatient clinics were operated: cardiology, general surgery, ultrasound, endocrinology, physiatry, gastroenterology, gynecology, mammography, neurosurgery, neurology, otorhinolaryngology and pneumology. The hospitalization wards will start operating in the coming months. Through a big data platform, created together with General Electric, Mater Olbia will provide more effective, faster and targeted care and can also be a valuable reference point for the Sardinian hospital network.

# THE COMMUNITY, THE PEOPLE



Number of employees



The percentage of women out of the total number of employees



No Profit Organizations operating within the Gemelli



Hours of training enjoyed by staff



With **over 5000 employees** and daily reports with thousands of stakeholders, the Policlinico Universitario A. Gemelli IRCCS is a nationally significant company that operates in an economically sustainable manner in a complex context such as that of Health. The merit of the successes achieved in this delicate balance is of all the collaborators who work, each for their own skills and responsibilities, within the Gemelli. People who every day marry the Foundation's mission with motivation and commitment, they guarantee excellent and accessible care for the entire community with professionalism and humanity.

# THE WORKING COMMUNITY

	total
Medical staff	1.018
Nursing staff	2.111
OTA, auxiliaries, OSS	716
Sanitary technicians / other sanitarians	457
Administrative	676
Other staff (clerks, technical operators)	344
<b>Total staff</b>	<b>5.322</b>



60%

**The percentage of women out of the total number of employees**



years 46

**Average age of staff**



441

**Independent contractor**

## Top Employer and other awards for excellence

A path of attention to the skills oriented to the growth, also professional, of the people who in the course of 2018 allowed the Foundation to stand out in different areas in the field of personnel management. In particular, the Top Employers Italy certification and the Le Fonti award recognized the Human Resources Department's vision and intelligence in the adoption of innovative practices capable of guaranteeing personnel management oriented towards the recognition of merit, the enhancement of talents and the introduction of forms of welfare tailored to each individual employee. With the Le Fonti award, the Foundation was proclaimed "Excellence of the Year" in personnel management in Health, while the Top Employer Italy certification recognized the processes implemented in different areas: talent strategy, workforce planning, management of performance, leadership development, career management, compensation and benefits, and organizational culture.



## LinkedIn

The Policlinico Universitario A. Gemelli IRCCS is now also present on the LinkedIn platform, with a page that presents the news and updates on the clinical and scientific activity of the Foundation's professionals, on-going innovations and, of course, on job opportunities and open jobs position.

# SAFETY AT THE WORKPLACE

In 2018 the Foundation implemented a Safety and Health Management System in the Workplace (SGSL) in compliance with the BS OHSAS 18001 standard, starting the certification process, according to the provisions of the ACCREDIA RT-12 Technical Regulation, with the DNV-GL Certification Body, which ended with the release of the certificate in February 2019 (Certificate No. 281098-2018-AHSO-ITA-ACCREDIA). The BS OHSAS 18001: 2007 certification attests, internationally, to the voluntary and concrete commitment by the Foundation to adopt a system that allows to control and manage all the activities carried out, in order to minimize the risks related to health and safety of the workers contributing to the reduction of injuries, in addition to compliance with current legislation. A first objective achieved along the path to excellence that will lead the Foundation, through successive and periodic verification audits, to improve its level of attention to the issues of safety and health of workers, patients, users and the large population student who lives our big hospital facility every day.

## COU Hospital Hygiene

Among the Units that operate transversally with respect to the framing of activities for Departments and Gemelli Areas, the **Hospital Hygiene Unit** operates to guarantee the safety of the patient in the hospital, through the application of specific national and international guidelines and Corporate Procedures focused on on verifications of the sanitary requisites of determined scopes: water; food; environments and procedures with controlled microbial load; obligatory sterile products and verification of the microclimate in hospital environments, providing contributions in Expertise, Education, Evidence.

Among the activities carried out in 2018, there are the on-site inspections, inspections and environmental sampling carried out in the Gemelli premises, during and after renovations, to check the conformity and safety of the places, before opening to the patients (Cemad 3° A, Hematology and hematopoietic stem cell transplantation 1° E, Female Clinical Pharmacology Center 10° O, 5° D Dental Centers, Interventional Oncology Center 2° F, 4° O Delivery Rooms, 3° B Operating Rooms, 1° J, 2° J, 6° O, 8° O, polyclinics 1° C, Code 75 3° V (Ce.MI), Angiographic Room 2° F).



## 2007 certification: BS OHSAS 18001

*A great achievement,  
the result of an interdisciplinary work  
that involved many company functions  
in an organic vision of sharing  
and participation.*

Release date 15 February 2019  
Certificate n. 281098-2018-AHSO-ITA-ACCREDIA



# COMMUNICATION CAMPAIGNS

## Blood Donation Campaign

The use of donated blood is often necessary for children patients with blood diseases and tumors. Therefore the Gemelli, in collaboration with the blood donor group Francesco Olgiate Onlus and the Vatican Museums, started in 2017 the campaign **"Donate blood and follow your artistic inclination"** which has led to an increase in blood collection over the 15%. Every blood donor was entitled to a voucher to visit the Vatican Museums with a special fare ticket.

**2.614 vouchers** were assigned.

The Gemelli, in collaboration with the Gruppo Donatori Sangue Francesco Olgiate Onlus, has realized the App **"Donatori Olgiate Onlus"**, which aims to facilitate the donation of blood to their donors, but also to whom wants to become one.

**More than 20.000 red blood cells are transfused every year 3.000 platelet doses and 4.000 plasma units.**



 **+15%**  
Donations made compared to 2017

## Vax Campaign

It's called **"PROTEGGITI, fai la tua parte"**, the 2018-19 flu vaccination for health operators and Gemelli employees.

 **2.000**  
Total vaccinations

 **+100%**  
Compared with 2017

 **50%**  
Vaccinated doctors

### Additional targets for vaccination campaigns:

- ▶ Healthcare professionals susceptible to Measles and / or, Rubella and / or Chickenpox and / or Mumps;
- ▶ Vaccinations of pregnant women (28-36 weeks) not immune to Pertussis;
- ▶ Vaccinations of mothers non-immune to the Measles and / or the Rubella and / or Chickenpox.



## Hand Washing Campaign

In 2018 was launched the **5<sup>th</sup> awareness campaign for hand hygiene**, in the occasion of the established Day by the World Health Organization (WHO), "Save lives: Clean Your Hands" which was celebrated on May 5th.

"Con le tue mani preveni le sepsi ospedaliere": this is its slogan for the new awareness campaign that you see committed all the components of the hospital community and university: doctors, operators, patients, family members, visitors and students.

The training course started in 2017 with the aim of having in each Department of the Foundation operators able to perform detection of hand hygiene compliance by of their own colleagues also continued in 2018.



**Gemelli**  
Fondazione Policlinico Universitario Agostino Gemelli IRCCS  
Università Cattolica del Sacramento

**PER UNA EFFICACE IGIENE DELLE MANI**

**con gel alcolico**

- Prendi due erogazioni di **Septaman gel**
- Ritorna le mani seguendo i **giusti movimenti** dello schema

**con acqua e sapone**

- Bagna e insapona
- Ritorna le mani seguendo i **giusti movimenti** dello schema

**Una volta asciutte, le tue mani sono sicure**

**Indiaca e acciuga le mani con una salvietta medicata**

**Chiudi il rubinetto con la salvietta**

**Una volta asciutte, le tue mani sono sicure**

**Durata della procedura: 20 - 30 secondi**

**Durata della procedura: 40 - 60 secondi**

Servizio Radioprotezione e Igiene Ospedaliera  
Direzione Sanitaria  
Fondazione Policlinico Universitario Agostino Gemelli IRCCS  
Largo A. Gemelli, 8 - 00168 Roma

DONA ORA

For all those who wish to support care, assistance and research with a donation, the Fondazione Policlinico Universitario Agostino Gemelli IRCCS has developed a website to be reachable from the home page of the [policlinicogemelli.it](http://policlinicogemelli.it) website or by entering the address [donaora.policlinicogemelli.it](http://donaora.policlinicogemelli.it).

All the information dedicated to individuals is available online and Companies, to contribute to the realization of no profit projects of the Fondazione Policlinico Universitario Agostino Gemelli IRCCS.

[donaora.policlinicogemelli.it](http://donaora.policlinicogemelli.it)

Publication by:  
Fondazione Policlinico Universitario Agostino Gemelli IRCCS

For information:  
Ufficio Comunicazione Interna e Marketing  
Fondazione Policlinico Universitario Agostino Gemelli IRCCS

Largo Agostino Gemelli 8  
00168 Roma - Italia  
[www.policlinicogemelli.it](http://www.policlinicogemelli.it)

Editorial and graphic design by:  
Ufficio Comunicazione Interna e Marketing  
Fondazione Policlinico Universitario Agostino Gemelli IRCCS

Photo Archive:  
Gallery Fondazione Policlinico Universitario Agostino Gemelli IRCCS

Printing:  
STR PRESS SRL  
Via Carpi, 19 - Pomezia (Roma)

Finished printing in April 2019

The Mission Statement was created thanks to the collaboration of the health and administrative structures of Fondazione Policlinico Universitario Agostino Gemelli IRCCS and of the UCSC Headquarters offices in Rome, including the Research Office and the Pastoral Center.

**Notice regarding the nature of the information:**

The Mission Statement contains information relating to projects and intent in progress and future fulfillment. However, various factors could cause future activities and results to be somewhat different in some respects from the intentions presented here. Furthermore, this Mission Statement is not intended or intended in any way to solicit any form of economic commitment on the part of stakeholders, for which reference should be made to the financial information tools available at the Foundation.



# Gemelli



Fondazione Policlinico Universitario Agostino Gemelli IRCCS  
Università Cattolica del Sacro Cuore

---

[WWW.POLICLINICOGEMELLI.IT](http://WWW.POLICLINICOGEMELLI.IT)







**Fondazione Policlinico Universitario Agostino Gemelli IRCCS**

Largo Agostino Gemelli, 8 | 00168 Roma

[www.policlinicogemelli.it](http://www.policlinicogemelli.it)