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# Barcelona Medical Destination: High value, high complexity

**Patrick Torrent**

Executive director

Barcelona Medical Destination - Catalan Tourist Board



# Catalonia, a land of contrasts

Everything is close at hand and everything is different

# Barcelona, the capital

**Welcoming & compact**

**Well connected**

**Cosmopolitan, modern and Mediterranean character**

# Barcelona, the capital

**Best services**

# A healthy city with the best medical facilities



# Barcelona Medical Destination

An excellent choice for advanced medical care

A program run by the Catalan Tourist Board and Barcelona Tourist Board, in partnership with the Barcelona Medical Centre and Barcelona International Hospitals associations, which bring together the leading medical centres in Catalonia and, particularly, in Barcelona



Generalitat de Catalunya  
Government of Catalonia  
**Catalan Tourist Board**



# Why Catalonia?

- The **health sector** is the 4th largest sector in employment, with over 230.000 dedicated professionals.
- The EU recognizes that Catalonia has a mature healthcare system in **organization, innovation, research and efficiency.**
- The average **life expectancy** is 80 years for men and 86 years for women
- Spain holds the 7th position in the overall health system performance rating of WHO (Tandon et al, 2000)





# Why Catalonia?

- Barcelona is a city with one the **highest health levels** in Europe.
- It has the best medical teams and professionals for **patient service**.
- They are equipped with the **most advanced technology** and equipment for patient care.
- Barcelona meets the most attractive **medical package** in Europe.
- Its hospitals cover **all specialties** in the field of medicine.



# Leading specialties and procedures



Aesthetic &  
reconstructive surgery



Cardiovascular  
medicine



Complex pediatrics  
(0-18)



Dermatology



Digestive surgery &  
metabolic diseases



Gynecology



Neurorehabilitation



Neuroscience



Obstetrics & Fetal  
Medicine



Oncology & hematology  
& radiotherapy



Ophthalmology



Otolaryngology



Reproductive Medicine



Transplants



Traumatology &  
orthopedics



Urology & nephrology



**barnaclinic+**



**Servidigest**



**CIMA**



**Teknon**



**Atrys**



**Iderma**



**Guttman**



**Puigvert**



**Sant Joan de Déu**



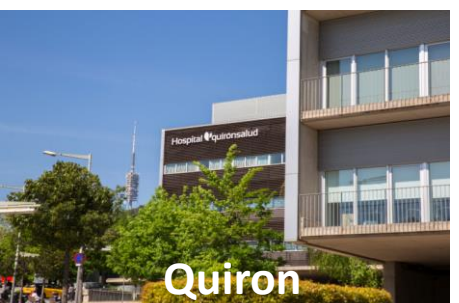
**Dexeus**



**HM Nou Delfos**



**HM Nens**



**Quiron**



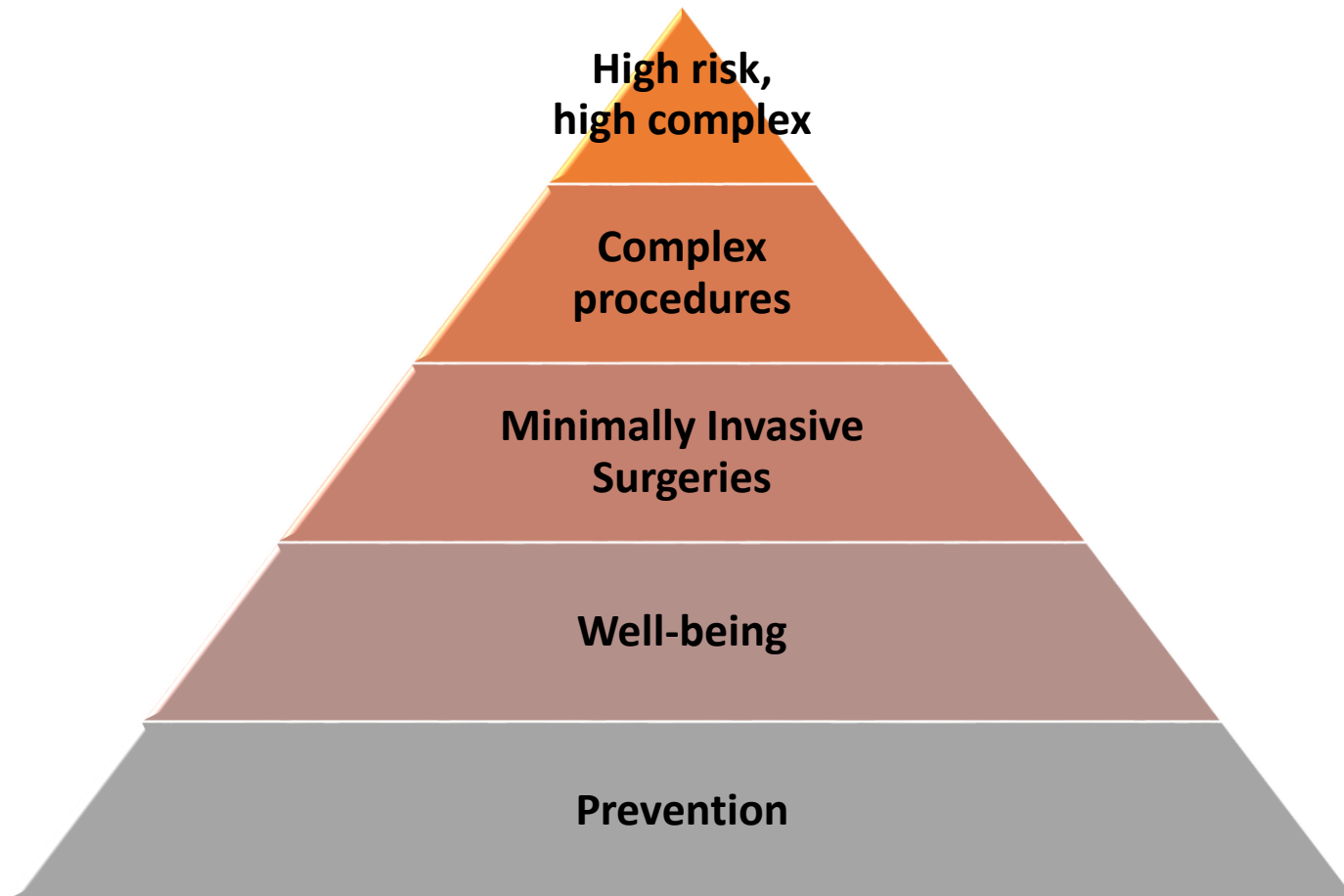
**IMO**



**Barraquer**



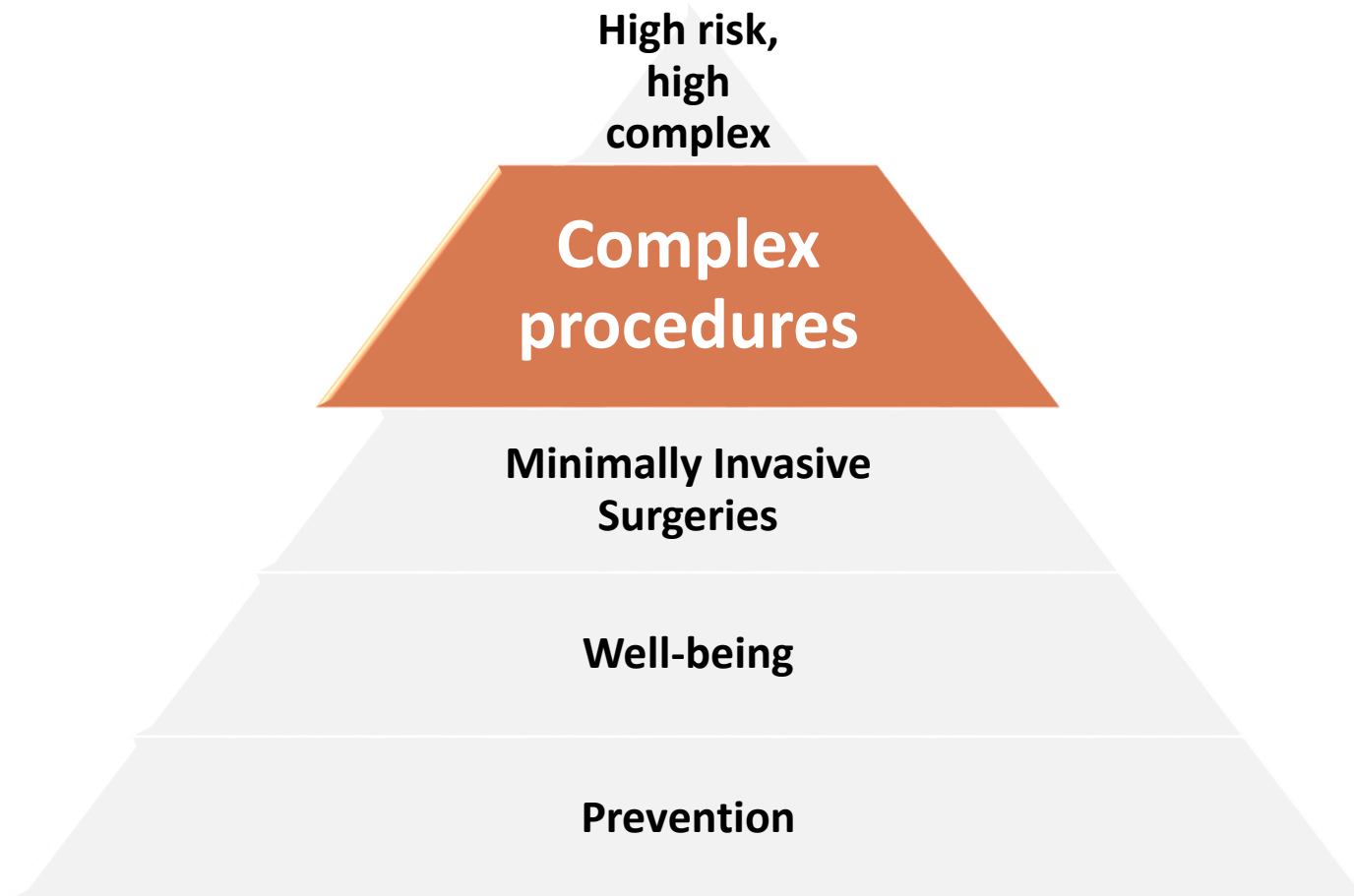
# Barcelona medical offer



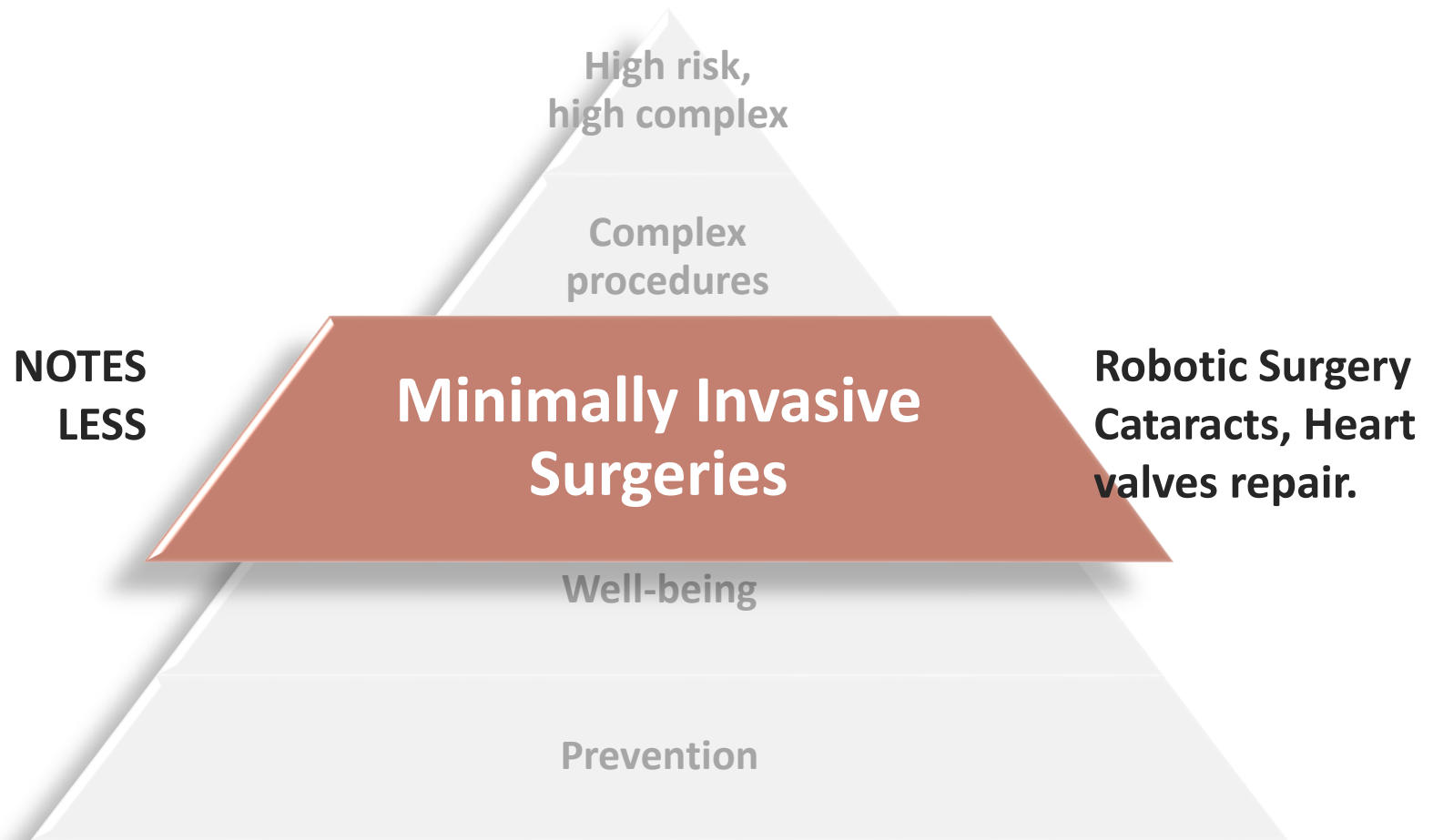
# Barcelona medical offer



# Barcelona medical offer

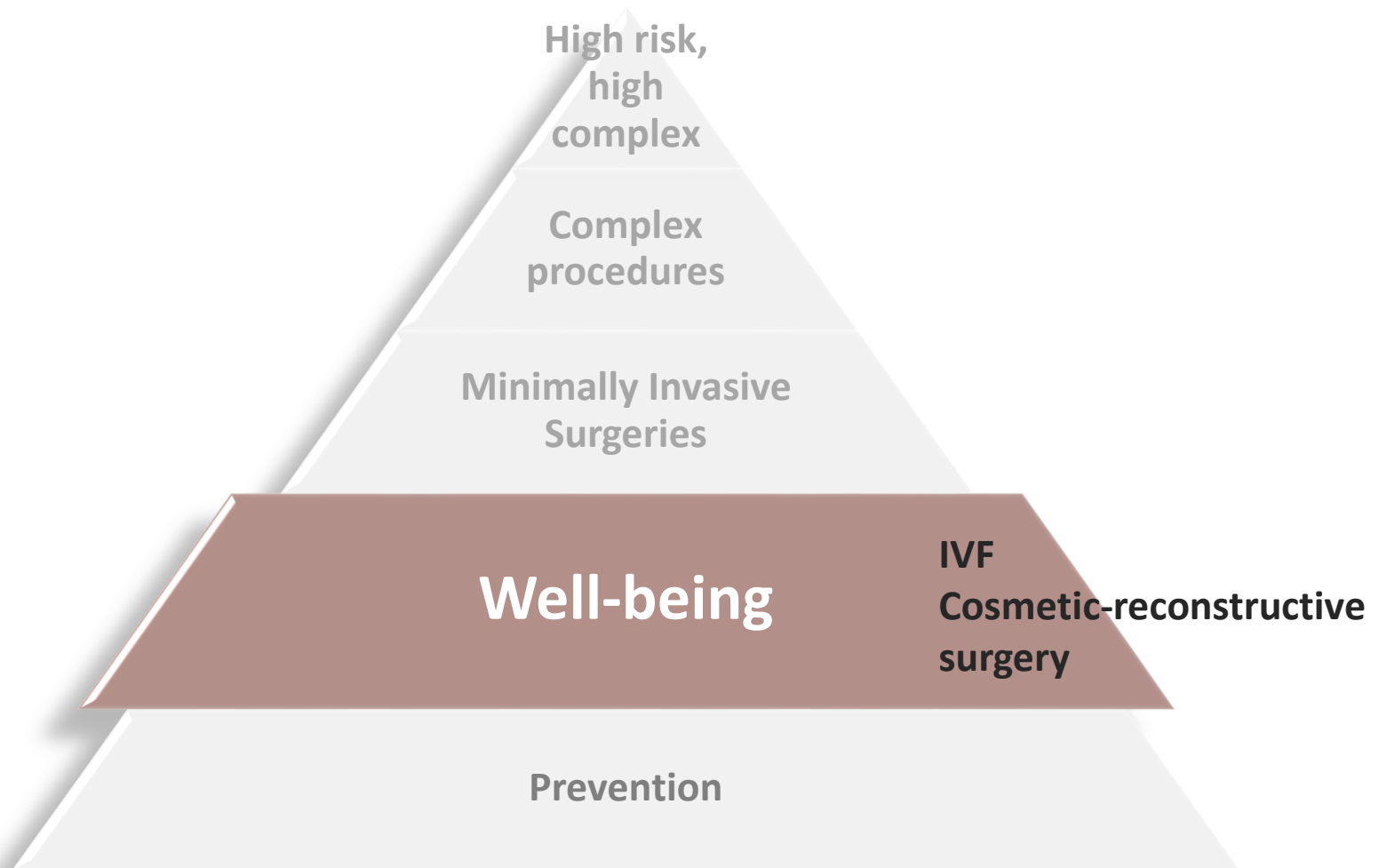


## Barcelona medical offer





## Barcelona medical offer



## Barcelona medical offer



# Strength of the medical offer of Barcelona

**High critical  
mass of  
Knowledge**

# Barcelona Medical Destination: a long history



**Josep Trueta, MD  
(1897-1977)  
General Surgeon  
The Trueta Method for  
treatment of open  
fractures**



**Ignasi Barraquer, MD  
(1887-1965)  
Ophthalmologist  
The Barraquer Method for  
cataract surgery  
(phacoeresis)**

## Physicians: Knowledge and expertise



**Valentí Fuster**  
MD, PhD  
Director,  
Institute of  
Cardiology  
Mount Sinai Hospital  
(New York)



**Joan Massagué**  
PhD  
Director,  
Sloan-Kettering  
Cancer Research  
Institute  
(New York)



**José Baselga**  
PhD  
Director,  
Sloan-Kettering  
Cancer Center  
(New York)



**Pedro Alonso**  
PhD  
Director,  
Director of  
WHO's Global  
Malaria  
Programme

## Physicians: Knowledge and expertise



**Jaume Mora,**  
MD, PhD  
(Pediatric Oncologist)



**Josep Tabernero,**  
MD, PhD, MsC  
(Oncologist)



**Armando Lopez  
Guillermo,** MD, PhD  
(Hematology)



**Antonio Lacy**  
MD, PhD  
General Surgery



**Antonio Alcaraz**  
MD, PhD  
Urology



**Benjamin Guix**  
MD, PhD  
Radiooncology

## Physicians: Knowledge and expertise



**Josep Brugada**  
MD, PhD  
Cardiology



**Eduard Gratacós,**  
MD, PhD  
Fetal Medicine



**Ramon Cugat,**  
MD PhD  
(Traumatologist)



**Rafael Barraquer,**  
MD, PhD  
(Ophthalmologist)



**Humberto  
Villavicencio**  
MD, PhD (Urologist)



**Francesc Palau,**  
MD, PhD (Medical  
Geneticist)

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# Strength of the medical offer of Barcelona

**Health Care  
Teamwork**



# To achieve good results: organization & team work



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# Strength of the medical offer of Barcelona

**Postgraduate  
education &  
training**

## Post-graduate training



## Staff continuous training



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# Strength of the medical offer of Barcelona

**Patient  
experience  
programs**

# A comprehensive approach to patients



# A comprehensive approach to patients



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# Strength of the medical offer of Barcelona

**Research &  
Innovation**



# Translational Research and Clinical Trials



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## Catalonia, among the top 10 in Europe in clinical trials

Catalonia is among the top 10 countries in Europe in terms of participation in clinical trials and among the top 20 in the world; looking at oncology alone, it is in the European Top 5 and the global Top 10. This November, Barcelona hosted the international Clinical Trials Europe event: a great time to look back over the factors that have made the BioRegion a benchmark in attracting trials from all the major pharmaceutical companies in the world, and also at the future challenges this sector is facing.

27.11.2019



NÚRIA PELÁEZ 



### Recent entries

“Many more role models are needed.” Women's presence in the Catalan biomedical ecosystem  
23.02.2021

Remote working in the BioRegion: a new reality that is here to stay?  
27.01.2021

### Related Contents

Five researchers from the BioRegion receive ERC Proof of Concept

The UB is once more the leading institution in Spain with most researchers among the highly-cited worldwide



Researchers linked to the UB appearing in the Clarivate Analytics 2021 list.

16/11/2021

### Recerca

The University of Barcelona appears one more year as the leading university in Spain with the most researchers among the most influential worldwide and it is the second most influential research centre in Spain, following CSIC (Spanish National Research Council). The ranking, published by Clarivate Analytics, identifies the experts who lead the projects with the highest international scientific impact in various areas of study.

# Pioneer research in oncology

## Science Translational Medicine

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at Kyoto University

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## Therapeutic targeting of the RB1 pathway in retinoblastoma with the oncolytic adenovirus VCN-01

Guillem Pascual-Pasto<sup>1,2</sup>, Miriam Bazan-Peregrino<sup>3</sup>, Nagore G. Olaciregui<sup>1,2</sup>, Camilo A. Restrepo-Perdomo<sup>4</sup>, Ana Mato-Berciano<sup>5</sup>, Daniela Ottaviani<sup>5,6</sup>, Klaus Weber<sup>7</sup>, Genevieve Correa<sup>1,2</sup>, Sonia Paco<sup>1,2</sup>, Monica Vila-Ubach<sup>1,2</sup>, Maria Cuadrado-Vilanova<sup>1,2</sup>, Helena Castillo-Ecija<sup>1,2</sup>, Gaia Botteri<sup>1,2</sup>, Laura Garcia-Gerique<sup>1,2</sup>, Helena Moreno-Gilabert<sup>1,2</sup>, Marta Gimenez-Alejandre<sup>3</sup>, Patricia Alonso-Lopez<sup>3</sup>, Marti Farrera-Sal<sup>3</sup>, Silvia Torres-Manjon<sup>8</sup>, Dolores Ramos-Lozano<sup>8</sup>, Rafael Moreno<sup>8</sup>, Isabelle Aerts<sup>5,6</sup>, François Doz<sup>5,9</sup>, Nathalie Cassoux<sup>5,9,10</sup>, Elodie Chapeaublanc<sup>5,6</sup>, Montserrat Torredadell<sup>1,2</sup>, Monica Roldan<sup>1,4</sup>, Andrés König<sup>11</sup>, Mariona Suñol<sup>4</sup>, Joana Claverol<sup>1,12</sup>, Cinzia Lavarino<sup>1,2</sup>, Torres Carmen de<sup>1,2,9</sup>, Ligia Fu<sup>13</sup>, François Radvanyi<sup>15,6</sup>, Francis L. Munier<sup>14</sup>, Jaume Catalá-Mora<sup>15</sup>, Jaume Mora<sup>1,2</sup>, Ramón Alemany<sup>8</sup>, Manel Cascalló<sup>8</sup>, Guillermo L. Chantada<sup>1,2,16,17</sup> and Angel M. Carcaboso<sup>1,2,7</sup>

<sup>1</sup>Institut de Recerca Sant Joan de Deu, Barcelona 08950, Spain.

<sup>2</sup>Pediatric Hematology and Oncology, Hospital Sant Joan de Deu, Barcelona 08950, Spain.

<sup>3</sup>VCN Biosciences, Sant Cugat del Valles, Barcelona 08174, Spain.

<sup>4</sup>Pathology, Hospital Sant Joan de Deu, Barcelona 08950, Spain.

<sup>5</sup>Institut Curie, CNRS, UMR144, SIREDO Oncology Center, 75248 Paris, France.

<sup>6</sup>Institut Curie, PSL Research University, 75248 Paris, France.

<sup>7</sup>AnaPath GmbH, Oberbuchsitzen 4625, Switzerland.

<sup>8</sup>Translational Research Laboratory, IDIBELL-Institut Catala d'Oncologia, 08908, L'Hospitalet de Llobregat, Barcelona, Spain.

<sup>9</sup>Paris Descartes University, 75006 Paris, France.

<sup>10</sup>Institut Curie, Ophthalmic Oncology, 75248 Paris, France.

<sup>11</sup>Vivotecnia Research S.L., Tres Cantos, Madrid 28760, Spain.

<sup>12</sup>Clinical Trials Unit, Hospital Sant Joan de Deu, Barcelona 08950, Spain.

<sup>13</sup>Pediatric Hematology-Oncology, Hospital Escuela Universitario, Tegucigalpa, Honduras.

<sup>14</sup>Hôpital Ophtalmique Jules-Gonin, Lausanne 133, Switzerland.

<sup>15</sup>Ophthalmology, Hospital Sant Joan de Deu, Barcelona 08950, Spain.

<sup>16</sup>Hospital de Pediatría JP Garrahan, Buenos Aires 1245, Argentina.

<sup>17</sup>CONICET, Buenos Aires 1245, Argentina.

<sup>✉</sup>Corresponding author. Email: amontero@fsjd.org

<sup>✝</sup> Deceased.

- Hide authors and affiliations



### Science Translational Medicine

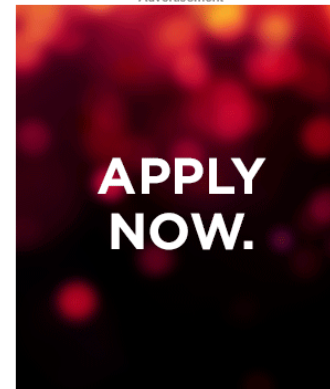
Vol 11, Issue 476  
23 January 2019

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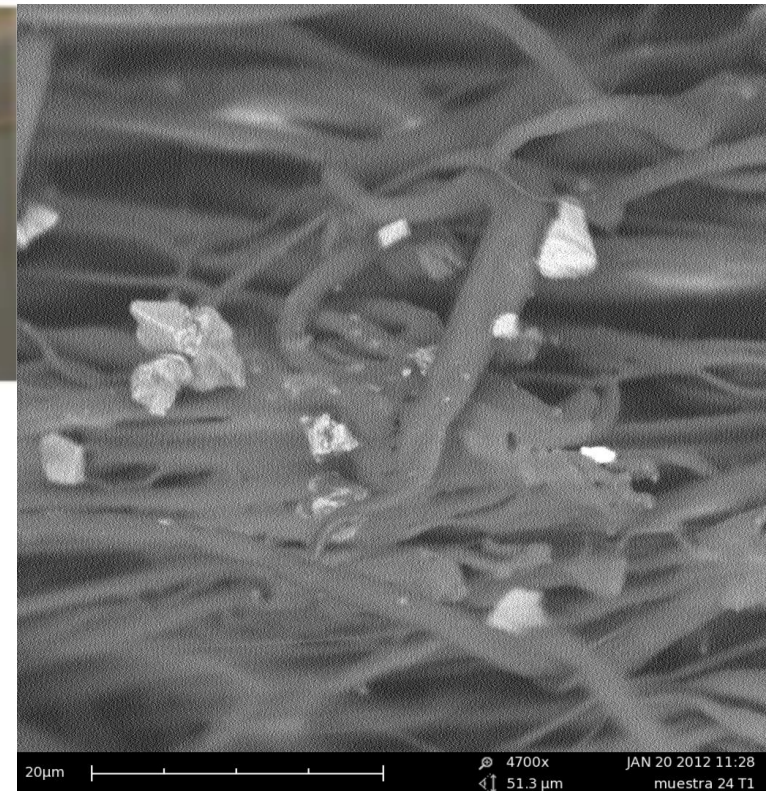


Publication  
in Science  
2019:  
Oncolytic  
virus to  
attack  
selectively a  
tumor in  
children

## **CAR-T ARI-0001 (in-house developed) Patients with acute lymphoblastic leukaemia >25 years**



# Start-up: Nanofiber membranes to apply chemotherapy locally



**cebiotex**   
BIOMEDICAL NANOFIBERS

20µm

4700x  
51.3 µm

JAN 20 2012 11:28  
muestra 24 T1

INSTITUTIONAL

September 18 2020

## Spin-off Reveal Genomics born to develop innovative diagnostic tests in oncology

Reveal Genomics' first goal will be to develop diagnostic tools based on complex genomic data for patients with advanced breast cancer.



# Emotional Navigation applied to Medicine



## Global Collaboration



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# Strength of the medical offer of Barcelona

**Upfront  
technology**



## Barcelona Super-Computing Center

Development  
of Precision  
Medicine  
Based on  
Artificial  
Intelligence



## 5G Technologies



# Integrated surgical theaters



## Vectra 360° - Skin malignance diseases



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# Strength of the medical offer of Barcelona

**Quality & Safety  
Programs**

# Quality & patient safety: culture and practice

## Evolució dels indicadors analitzats. Hospitals SISCAT, 2016-2018

Efectivitat	2016	2017	2018
Mortalitat a 30 dies per malalties seleccionades (%)*	12,1	12,0	13,4
Mortalitat hospitalària (a l'alta) per malalties seleccionades (%)*	8,1	8,0	8,3
Mortalitat a 30 dies per IAMEST (%)*	8,8	8,7	8,8
Mortalitat hospitalària (a l'alta) per IAMEST (%)*	6,9	6,6	6,6
Mortalitat a 30 dies per IAMEST (sense trasllats) (%)*	9,4	9,2	9,3
Mortalitat hospitalària (a l'alta) per IAMEST (sense trasllats) (%)*	7,2	7,2	7,3
Mortalitat a 30 dies per insuficiència cardíaca congestiva (%)*	13,6	13,5	15,7
Mortalitat hospitalària (a l'alta) per insuficiència cardíaca congestiva (%)*	8,6	8,3	8,9
Mortalitat a 30 dies per ictus (%)*	18,2	18,0	19,3
Mortalitat hospitalària (a l'alta) per ictus (%)*	13,2	13,3	13,4
Mortalitat a 30 dies per fractura de coll de fèmur (%)*	7,6	7,3	9,0
Mortalitat hospitalària (a l'alta) per fractura de coll de fèmur (%)*	4,6	4,5	4,7
Reingressos a 30 dies per causes seleccionades (%)	9,8	9,8	-
Reingressos a 30 dies per complicacions de la diabetis (%)	4,6	4,6	-
Reingressos a 30 dies per malaltia pulmonar obstructiva (%)	16,3	16,0	-
Reingressos a 30 dies per insuficiència cardíaca congestiva (%)	14,3	14,2	-
Mortalitat a 3 mesos en trombòlisi intraven. aïllada per ictus isquèmic	19,4	14,0	11,6
Superv a 3 mesos amb recuperació completa en trombòlisi intraven aïllada per ictus isquèmic	37,0	34,2	33,3
Donants cadàver vàlids (%)	66,7	68,4	58,2
Negatives familiars (%)	14,9	13,7	19,0
Índex d'òrgans trasplantats per donant vàlid	2,4	2,6	2,6
Donants vàlids de mort en assistència (%)	33,3	35,1	36,6
Donació de víu en el trasplantament renal (%)	19,5	17,1	16,0
Casos incidents en diàlisi amb diàlisi peritoneal (%)	16,3	-	14,7
Casos incidents en diàlisi amb hemodiàlisi i amb un FAVI com a primer accés vascular (%)	44,6	-	40,4
Casos en tractament substituït renal amb un tractament renal funcionant (%)	55,3	-	57,8

\* En el 2018 s'han produït dos grans canvis en el CMDB-HA, per una banda el model emprat en la comunicació de les dades, i per l'altra el catàleg de classificació de malalties i procediments. Totes aquestes modificacions fan que sigui difícil interpretar els possibles canvis de tendència que es poden observar en els indicadors. Per aquest motiu es prega la màxima cautela a l'hora de comparar i valorar els resultats provisionals d'aquest any 2018 amb els d'any anterior.

## Regional and hospital level:

- Effectivity
- Safety
- Satisfaction
- Adequacy of care

Seguretat	2016	2017	2018
Bacterièmia de catèter venós global (per 1.000 dies d'estada)*	0,18	0,17	0,20
Bacterièmia de catèter venós central (per 1.000 dies d'estada)*	0,11	0,09	0,09
Bacterièmia de catèter venós central associada a la nutrició parenteral (per 1.000 dies NP)*	1,88	1,88	1,74
Infecció de localització quirúrgica d'O/E en la cirurgia electiva de colon (%)*	6,1	4,7	5,0
Taxa de profilaxi adequada de cirurgia colon (%)*	81,0	79,0	85,1
Infecció de localització quirúrgica d'O/E en la cirurgia electiva de recte (%)*	7,7	8,0	9,4
Taxa de profilaxi adequada de cirurgia recte (%)*	76,0	80,8	85,1
Infecció de localització quirúrgica d'O/E en la cirurgia protètica de genoll (%)*	1,32	-	1,23
Infecció de localització quirúrgica d'òrgan-espai en la cirurgia protètica de maluc*	-	-	1,38
Taxa de caigudes en pacients hospitalitzats (per 1.000 hospitalitzacions)	-	-	1,79
Percentatge d'embolisme pulmonar (%)	0,14	0,15	-
Mortalitat en GRD de baixa mortalitat (%)	0,07	0,06	-
Mortalitat en pacients que han desenvolupat complicacions (%)	29,0	34,0	-
Úlceres per pressió (%)	0,72	0,75	-

\* Les dades totals de Catalunya corresponen a tots els hospitals públics i privats que notifiquen al VINCat

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# Strength of the medical offer of Barcelona

**Highly effective  
health care  
system**



IN THE MAGAZINE 

# How Spain Became the World Leader in Organ Donations



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# Strength of the medical offer of Barcelona

**Biomedical  
Industry**

**GRIFOLS**



High critical  
mass of  
Knowledge

Health Care  
Teamwork

Postgraduate  
education &  
training

Patient  
experience  
programs

Research &  
Innovation

Upfront  
technology

Quality &  
Safety  
Programs

Highly effective  
health care  
system

Biomedical  
Industry

MILESTONES



# World's first full robotic transvaginal kidney transplant (2015)



# A child with an aggressive brain tumor is successfully treated with an adult lung cancer medication



# Among the best Children's Hospitals in the world for Neuroblastoma



15 SEPTEMBER 2021

Published in: **CLINICAL PRACTICE, MAIN, RESEARCH**



An oncological patient in a waiting room of the Sant Joan de Déu Hospital Barcelona

## Milestone

# THE TIMES

THE TIMES | Saturday May 11 2013 FGM

World

## Happy and healthy, the child saved by surgery that stopped him dying in womb at 21 weeks

### Spain

Graham Keeley Madrid

When Gonzalo Pardo Sánchez's parents discovered that their unborn baby had a life-threatening condition in the womb, they were at first advised to have an abortion.

Gonzalo was suffering from congenital high airway obstruction syndrome (Chaos), which stopped his lungs from expelling fluid through the trachea.

Purely by chance, their doctor in Almería heard that a team from two research hospitals in Barcelona had performed three operations to try to save fetuses with this unusual condition. Those operations had proved unsuccessful but, after having the same procedure, Gonzalo survived.

Yesterday, doctors confirmed that the baby, now ten months old



HOSPITAL SANT JOAN DE DÉU / CONSELL DE BAIXES

**Gonzalo Pardo Sánchez, with his mother María, is now ten months old and in good health after the ground-breaking surgery in Barcelona**

heart. Weeks after the operation, he was born healthy without any respiratory problems.

Today Gonzalo sounds like any normal ten-month-old and has come through two health checks. The operation has been performed on four other occasions around the world but the children have either died or suffered brain damage or serious respiratory problems.

Surgery on unborn babies is extremely rare but has become established as an option for life-threatening problems that cannot wait until a baby is born. It was first successfully attempted in San Francisco in 1981 when a baby named Michael Skinner had a blocked urinary tract repaired. He is now a healthy adult. Since then it has been used regularly for conditions such as tumours and spina bifida. King's College Hospital in

First saved foetus in the world with congenital high airway obstruction syndrome by foetal surgery at 21 weeks of pregnancy



**First European center  
applying:**

**Last generation  
Immunotherapy in  
High-Risk  
Neuroblastoma**

**(US FDA approved,  
2020)**



# First time in Europe of the Argus II artificial sight chip 2015



# TaTME technique for the treatment of colon and rectal cancer. Worldwide pioneers



# 3D surgical navigation for Foetal Surgery



# PERORAL ENDOSCOPIC MYOTOMY - POEM



# First centre in Spain to have the new guided robot for spinal pathology. Mazor XTM robotic platform



# First hospital Spain Transorbital Skull Base Surgery



# International Expansion

[Request an appointment](#)



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# THANK YOU!

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

[barcelonamedicaldestination@gencat.cat](mailto:barcelonamedicaldestination@gencat.cat)