



# Organ Donation and Transplantation: The Spanish Model

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**Organización Nacional de Trasplantes**



## Global activity in organ transplantation Estimations 2021

Kidney	Liver	Heart	Lung	Pancreas	S. bowel
92 532	34 694	8 409	6 470	2 025	172

≈ 144 302 solid organ transplants

≈ 11.3% increase vs 2020

≤ 10% of global needs

38 % living kidney transplants

23% living liver transplants

38 156 deceased donors (29 611 DBD and 8 545 DCD donors)

# The Madrid Conference

## The Madrid Resolution on Organ Donation & Transplantation

National Responsibility in Meeting the Needs of Patients  
Guided by the WHO Principles

Every country, in light of its own level of economic and health system development, should progress towards the global goal of meeting patients' needs on the basis of resources obtained within the country, for that country's population, and through regulated and ethical regional or international cooperation when needed.

Donation from deceased persons, as a consequence of death determined by neurologic criteria (brain death) or by circulatory criteria (circulatory death), was affirmed as the priority source of organs and as having a fundamental role in maximizing the therapeutic potential of transplantation.



World Health  
Organization



on Organ Donation and Transplantation



Guide on the decision-making process regarding medical treatment in end-of-life situations



Decision-making at the end-of-life should be based not only on medical criteria, but also on social, moral and welfare considerations

Donation must be a routine component of end-of-life care

el profesional de urgencias y el proceso de donación

5 RECOMENDACIONES DE INTERÉS ELEVADO de los Grupos de Trabajo de la SEMICYUC

GRUPO DE TRABAJO DE TRASPLANTES

- 1) Ofrece la opción de la donación de órganos y tejidos como parte integral de los cuidados al final de la vida.
- 2) Garantiza la posibilidad de donación de órganos y tejidos de todos aquellos pacientes que fallecen en muerte encefálica.
- 3) Valora la posibilidad de la donación en asistencia controlada en los pacientes en los que se decide la limitación del tratamiento de soporte vital.
- 4) Entrevista a familiares de pacientes con muerte cerebral catastrófica sin opción de tratamiento, previamente a muerte encefálica, para ofrecer ingreso en cuidados intensivos.
- 5) En la información médica a las familias de aquellos pacientes que fallecen en tu UCI, si la patología lo permite, incorpora la posibilidad de donación de tejidos.

CUIDADOS INTENSIVOS ORIENTADOS A LA DONACIÓN DE ÓRGANOS

RECOMENDACIONES Grupo de trabajo SEMICYUC-ONT

AN ETHICAL FRAMEWORK FOR CONTROLLED DONATION AFTER CIRCULATORY DEATH

UK DONATION ETHICS COMMITTEE

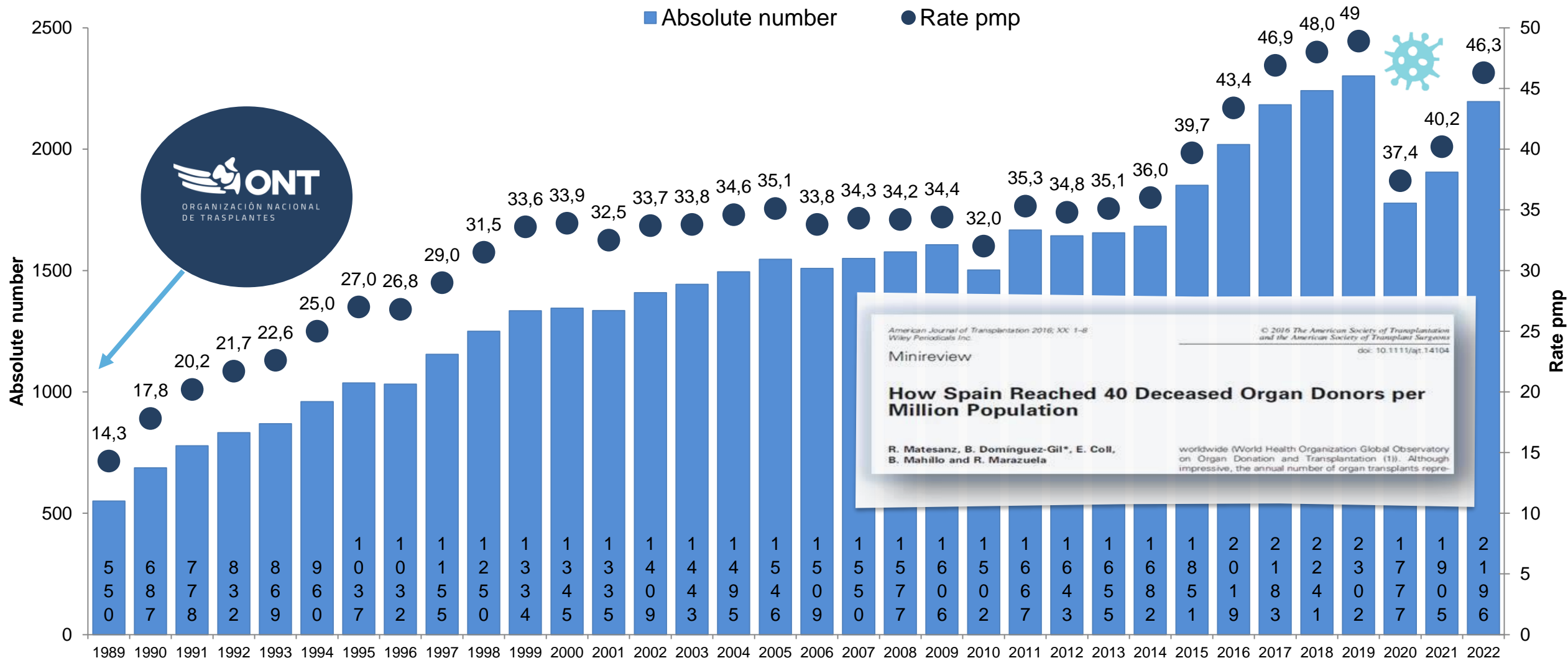
DECEMBER 2011

Recommendations for end-of-life care in the intensive care unit: A consensus statement by the American College of Critical Care Medicine

Robert D. Truog, MD, MA; Margaret L. Campbell, PhD, RN, FAAN; J. Randall Curtis, MD, MPH; Curtis E. Haas, PharmD, FCCP; John M. Luce, MD; Gordon D. Rubenfeld, MD, MSc; Cynda Hylton Rushton, PhD, RN, FAAN; David C. Kaufman, MD

WMA STATEMENT ON MEASURES FOR THE PREVENTION AND FIGHT AGAINST TRANSPLANT-RELATED CRIMES

# DECEASED DONATION IN SPAIN



American Journal of Transplantation 2016; XX: 1-8  
Wiley Periodicals Inc.

Minireview

**How Spain Reached 40 Deceased Organ Donors per Million Population**

R. Matesanz, B. Dominguez-Gil\*, E. Coll, B. Mahillo and R. Marazuela

© 2016 The American Society of Transplantation and the American Society of Transplant Surgeons  
doi: 10.1111/ajt.14104

worldwide (World Health Organization Global Observatory on Organ Donation and Transplantation (1)). Although impressive, the annual number of organ transplants repre-

Source: Organización Nacional de Trasplantes



WHO Collaborating Centre on Donation and Transplantation



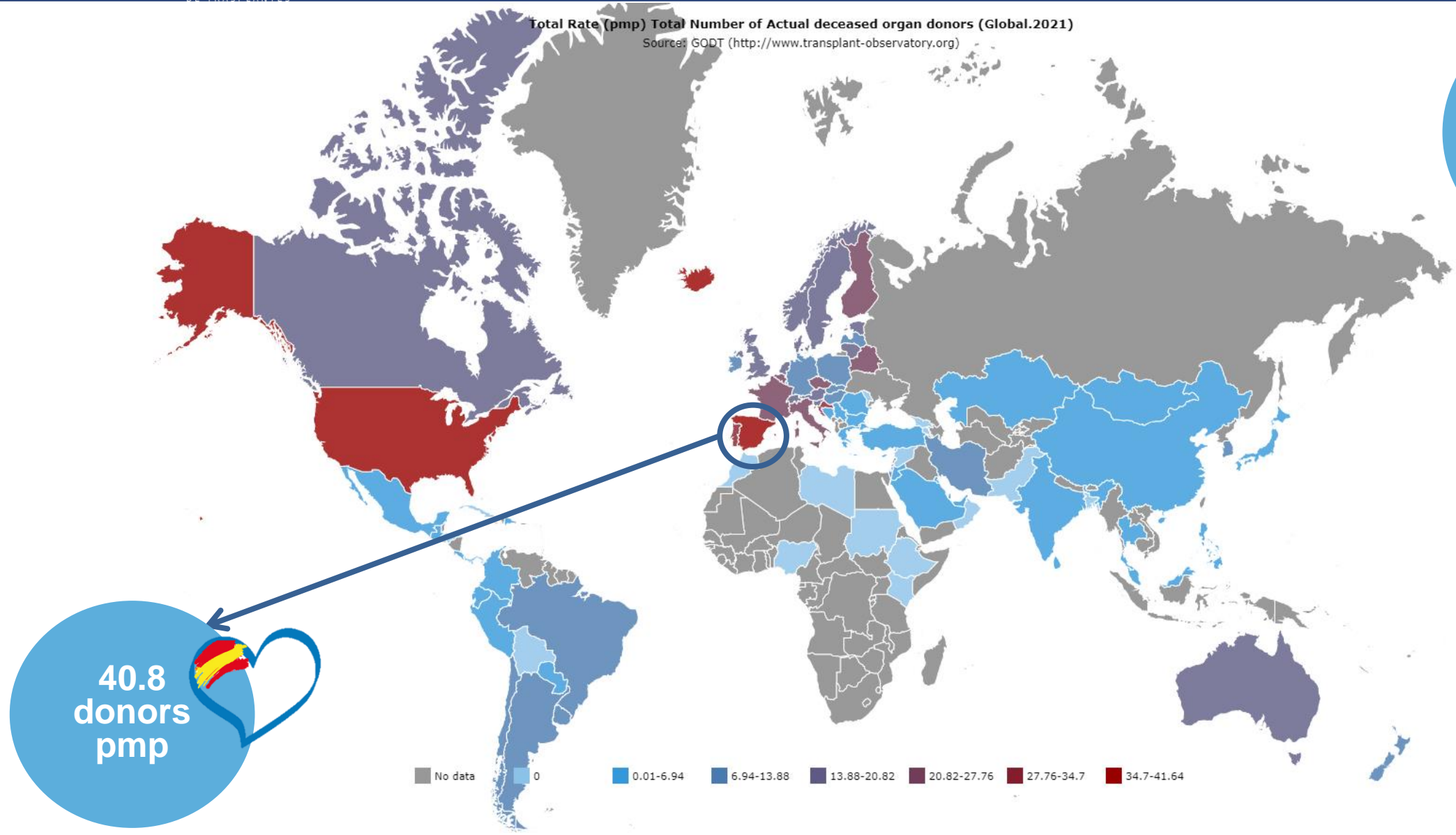
# GODT

Global Observatory on Donation and Transplantation

WHO-ONT Global Observatory on Donation and Transplantation: <http://www.transplant-observatory.org>

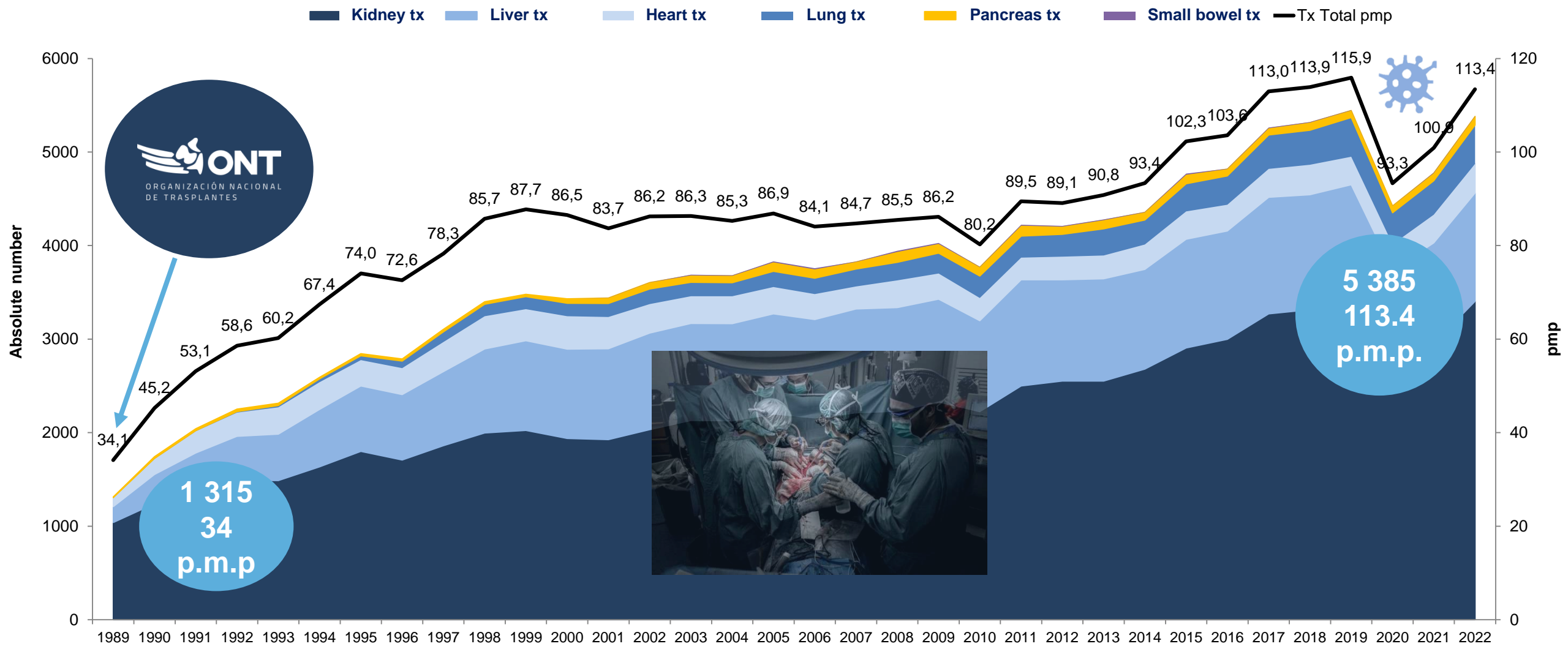
Total Rate (pmp) Total Number of Actual deceased organ donors (Global.2021)  
Source: GODT (<http://www.transplant-observatory.org>)

Donors pmp 2021



40.8 donors pmp

# SOLID ORGAN TRANSPLANTS IN SPAIN



Source: Organización Nacional de Trasplantes



WHO Collaborating Centre on Donation and Transplantation



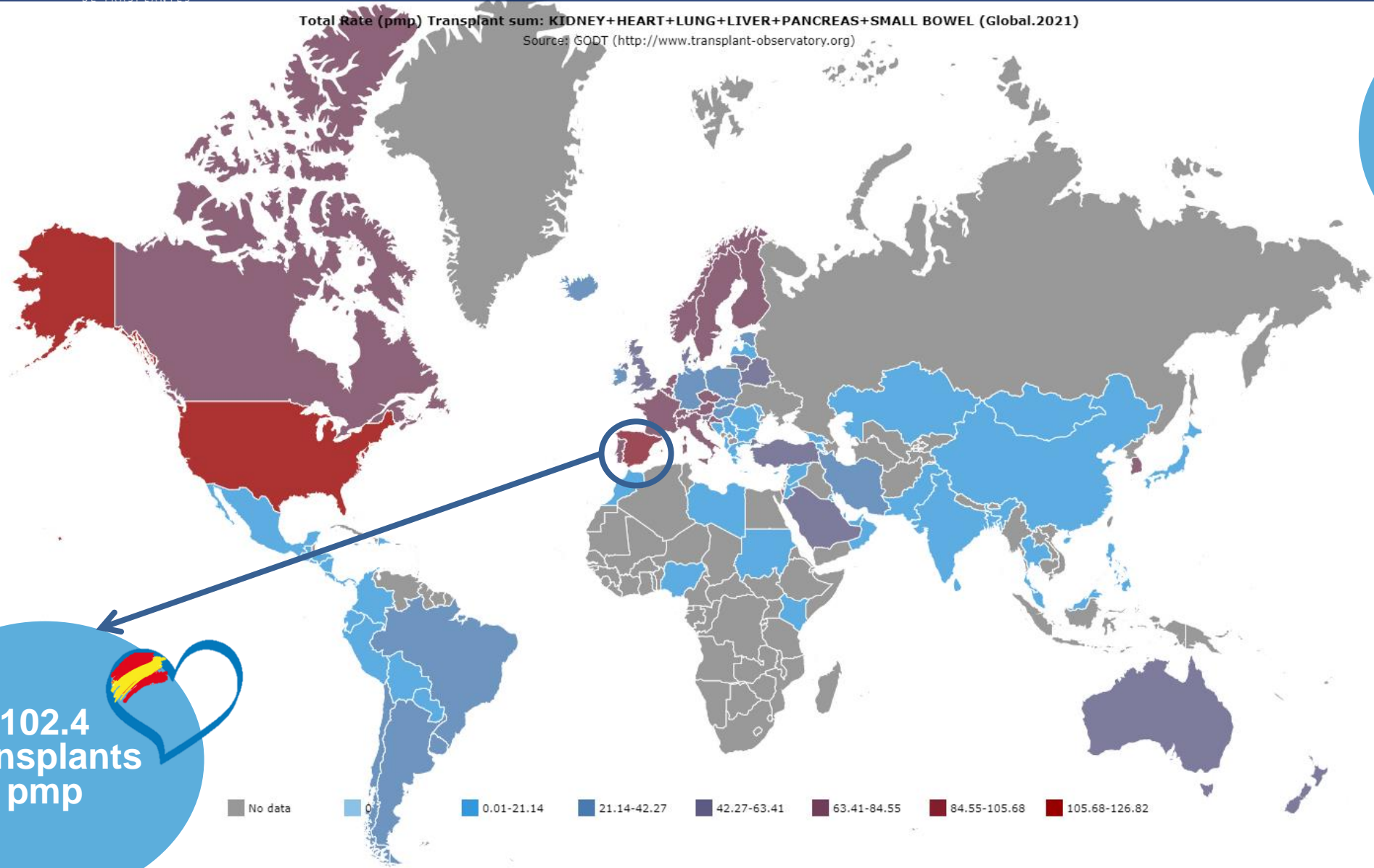
# GODT

Global Observatory on Donation and Transplantation

WHO-ONT Global Observatory on Donation and Transplantation: <http://www.transplant-observatory.org>

Total Rate (pmp) Transplant sum: KIDNEY+HEART+LUNG+LIVER+PANCREAS+SMALL BOWEL (Global.2021)  
Source: GODT (<http://www.transplant-observatory.org>)

Trasplants pmp 2021



102.4 transplants pmp



Fuente: Observatorio Global de Donación y Trasplante



# The Spanish Opt-Out System: Policy and Practice

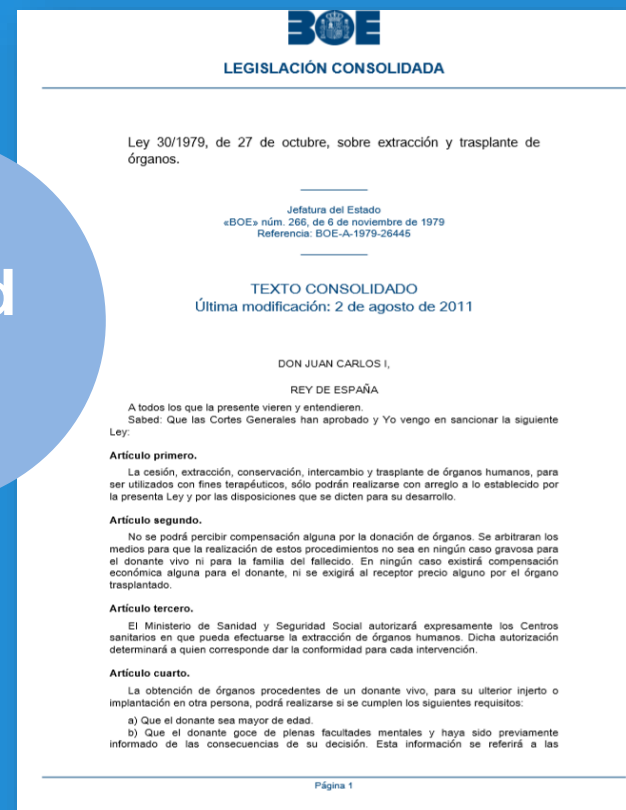


⊕ Donate seems the “normal” option

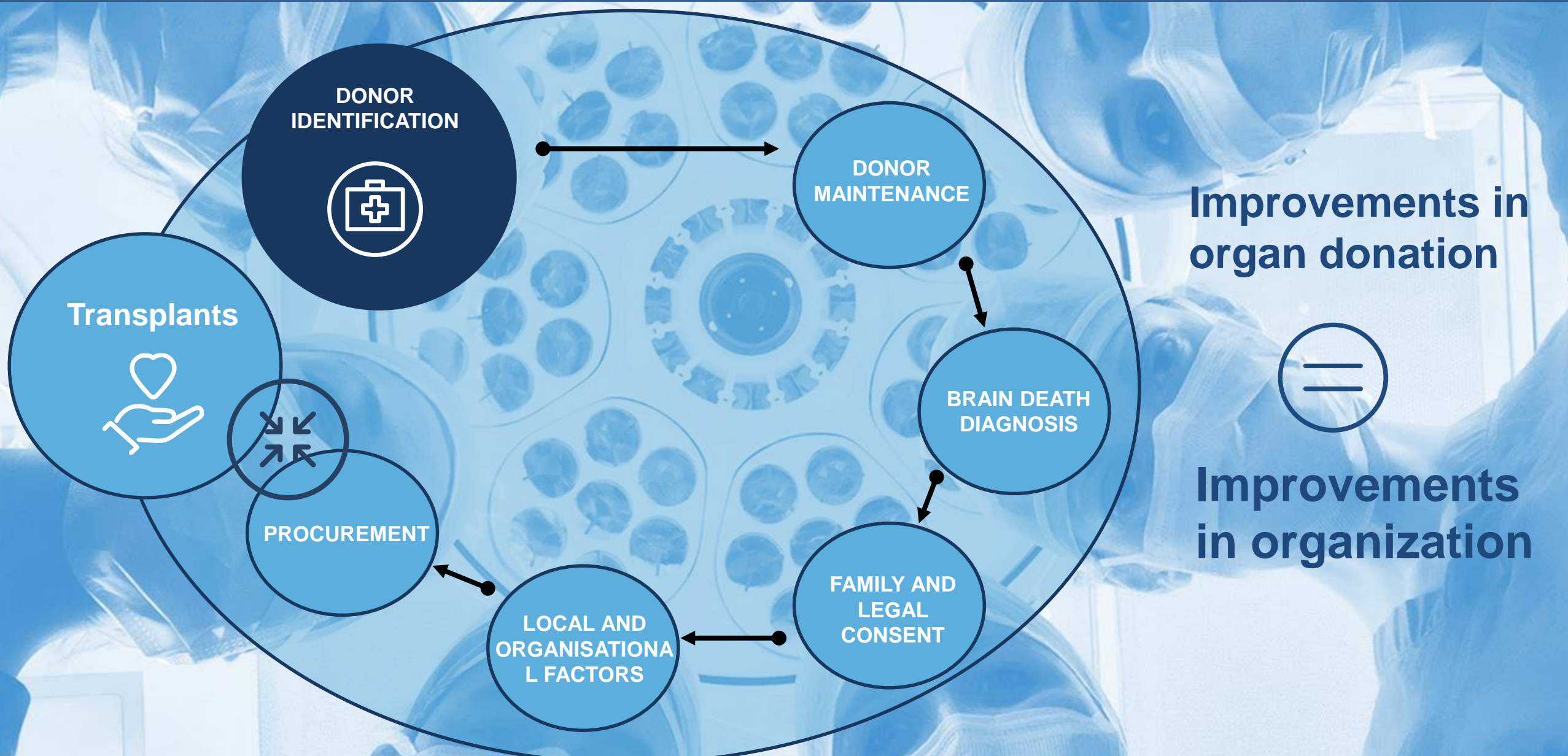
⊖ The State as the “owner” of organs

- ✓ DETAILED IN SECONDARY LEGISLATION (RD 1723/2012)
- ✓ ADVANCED DIRECTIVES REGISTRY
- ✓ RELATIVES ALWAYS APPROACHED
- ✓ THEY ALWAYS HAVE THE FINAL VETO

Issued  
1979



# THE PROCESS OF DONATION AFTER BRAIN DEATH





# BASIC PRINCIPLES OF THE SPANISH MODEL

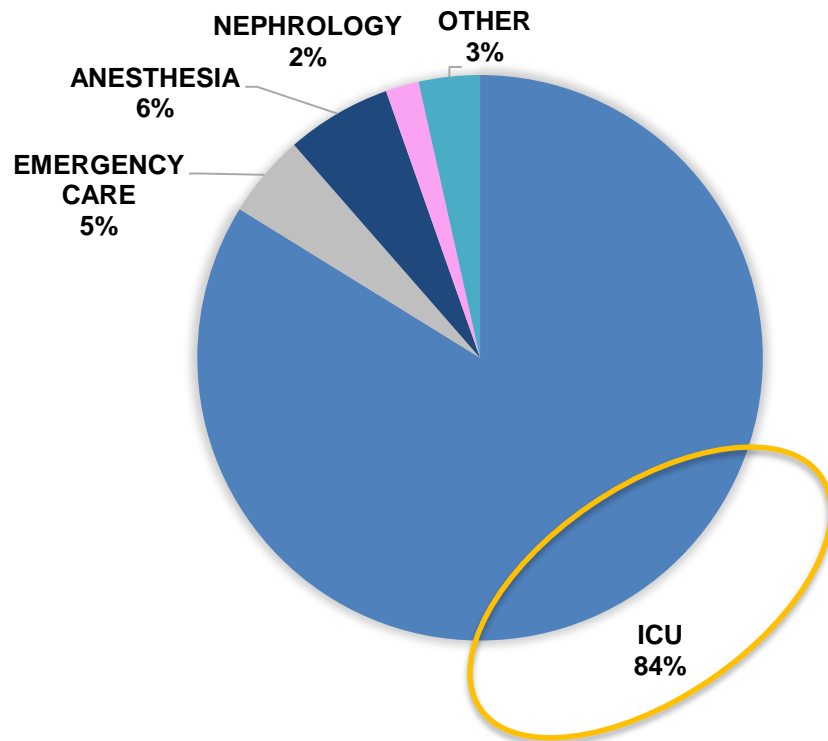
**All these points together**

- 01 Adequate legal & technical background
- 02 Donor coordination network
- 03 Special profile of donor coordinator
- 04 Donor coordinators inside the hospitals
- 05 Central Office (ONT) as a support agency
- 06 Continuous potential donor audit
- 07 Great effort in professional training
- 08 Hospital reimbursement
- 09 Continuous attention to the mass media

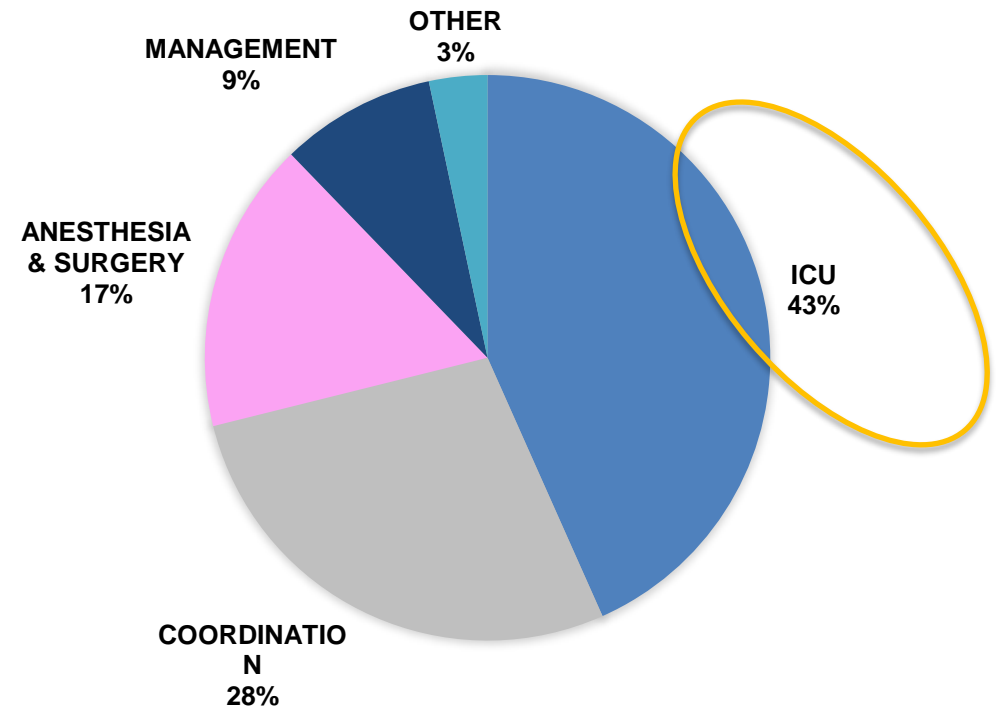


**KEEP  
CALM**  
The  
**Intensivist  
Is Here**

# DONOR TRANSPLANT COORDINATION UNITS. SPAIN 2023 (N 185)



**PHYSICIANS (348; 62%)**  
 Full-time: 4%  
 Part-time: 96%



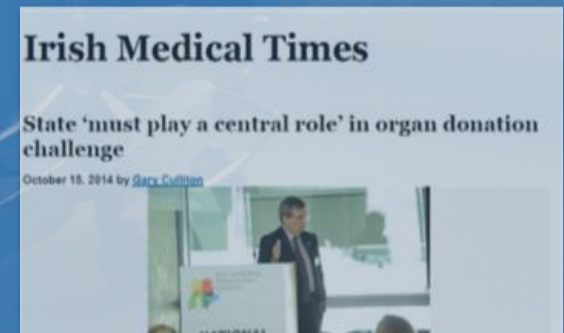
**NURSES (213; 38%)**  
 Full-time: 30%  
 Part-time: 70%

# A SYSTEM THAT COORDINATES COORDINATORS



Transplant Committee of the National Healthcare System

*HAWTHORNE EFFECT:  
“Everybody who feels observed automatically changes their behaviour”*



- **General courses on Donor Coordination**
- **Courses targeted to residents in Intensive Care Medicine**
- **Courses targeted to Emergency Care personnel**
- **Courses targeted to Neurologists – Stroke Units**
- **Courses targeted to non-health care professionals**
- **Specific courses on communication in critical situations**
- **Specific courses on DCD, living donation, others**



**>20,000 HEALTH CARE PROFESSIONALS TRAINED THROUGH ONT COURSES SINCE 1991**

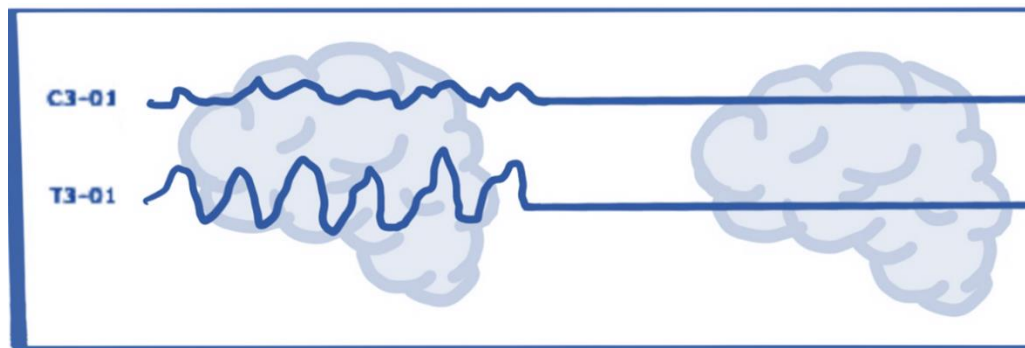
WHAT'S  
**NEXT?**



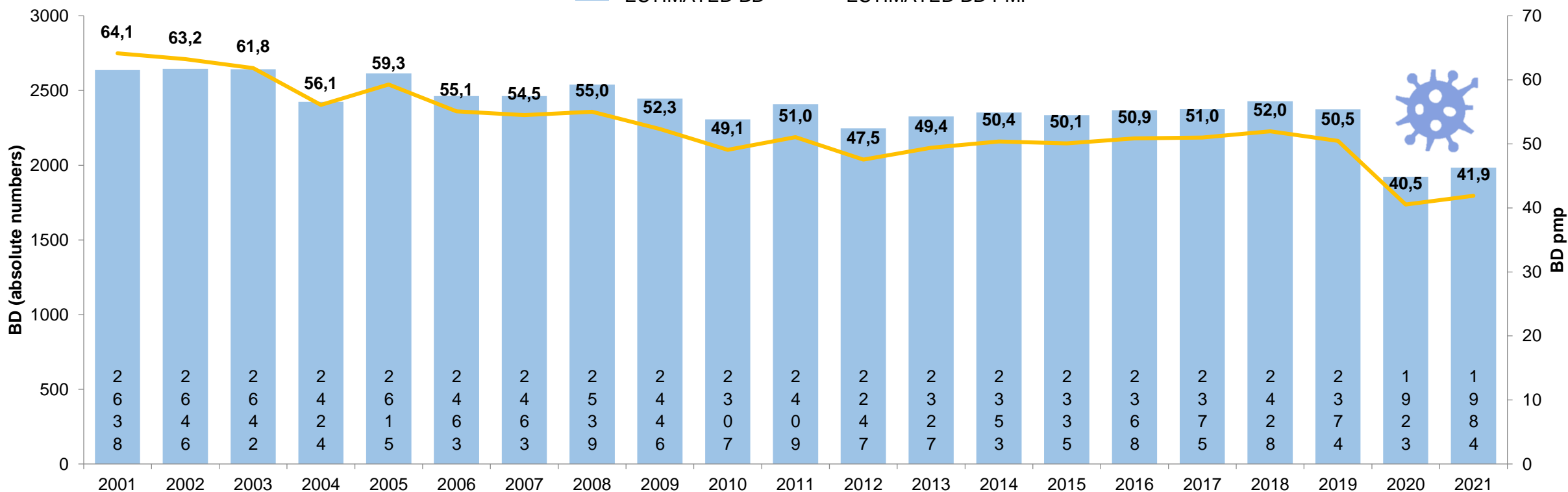


# DECREASE IN THE INCIDENCE OF BRAIN DEATH IN SPAIN

**50 years**  
**60% CVA**



**58 years**  
**64% CVA**



Source: Organización Nacional de Trasplantes

# STRATEGY 2018-2022

Intensive care to facilitate organ donation

Participation of private health care in organ donation

Live organ donation

Expanded criteria and non standard risk donors

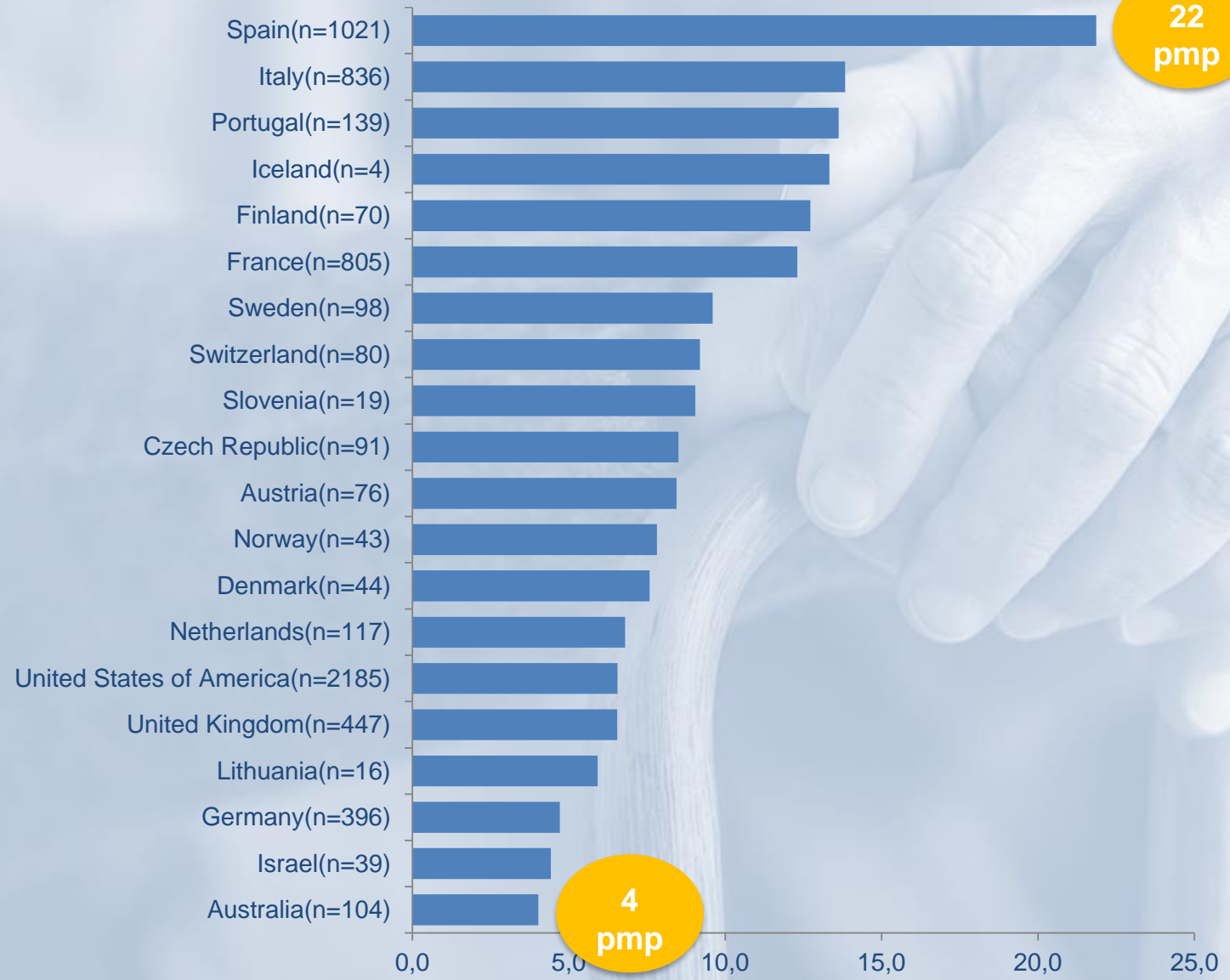
Donation after circulatory death

Pediatric donation

50x22

# THE 20 COUNTRIES WITH HIGHER RATES OF DECEASED DONORS > 60 YEARS

WHO-ONT Global Observatory on Donation and Transplantation: <http://www.transplant-observatory.org>

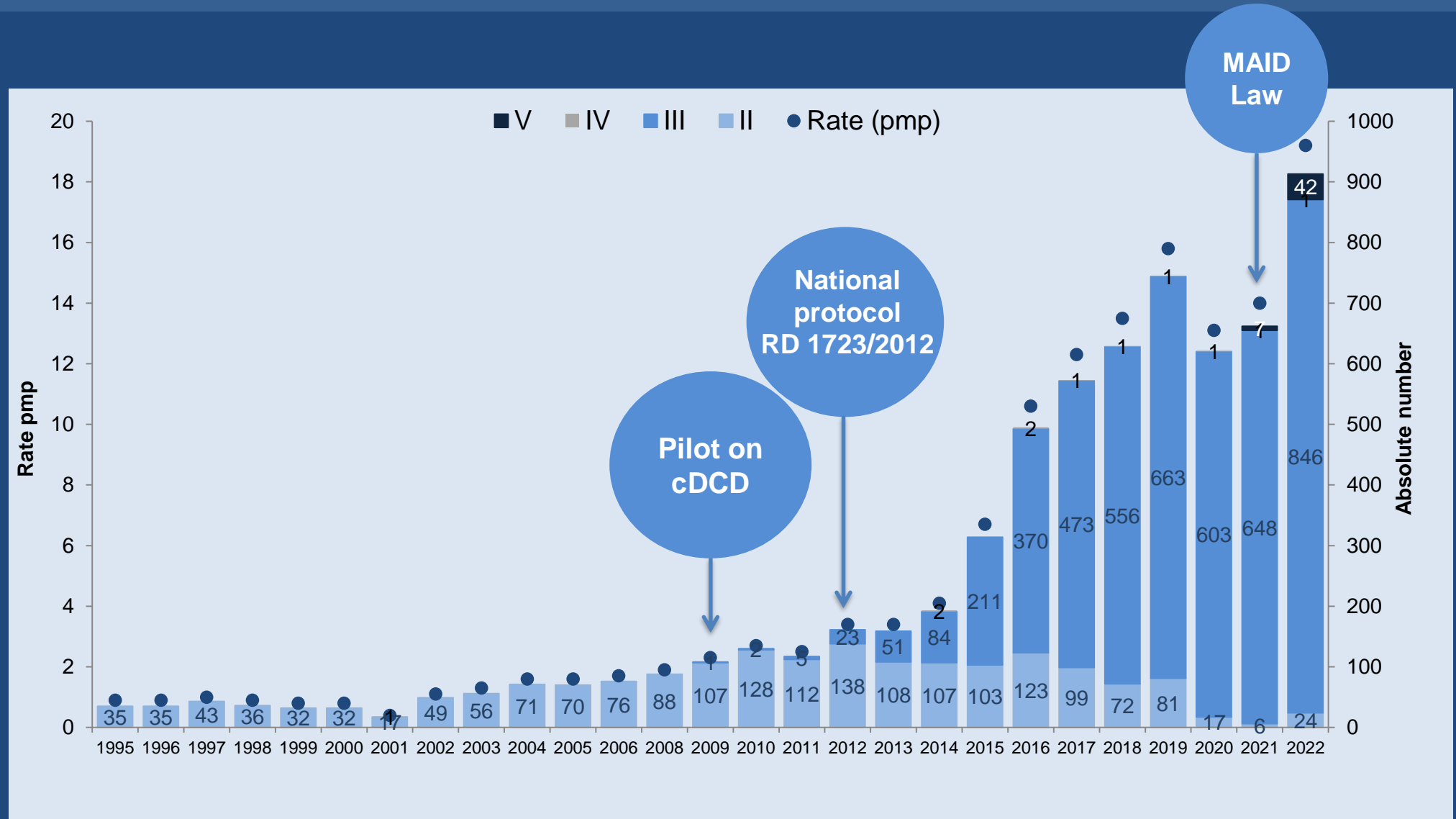


**DECEASED DONORS  
> 60 YEARS PMP  
YEAR 2021**

***Spain is the country with  
the highest rate of donors  
> 60 years***

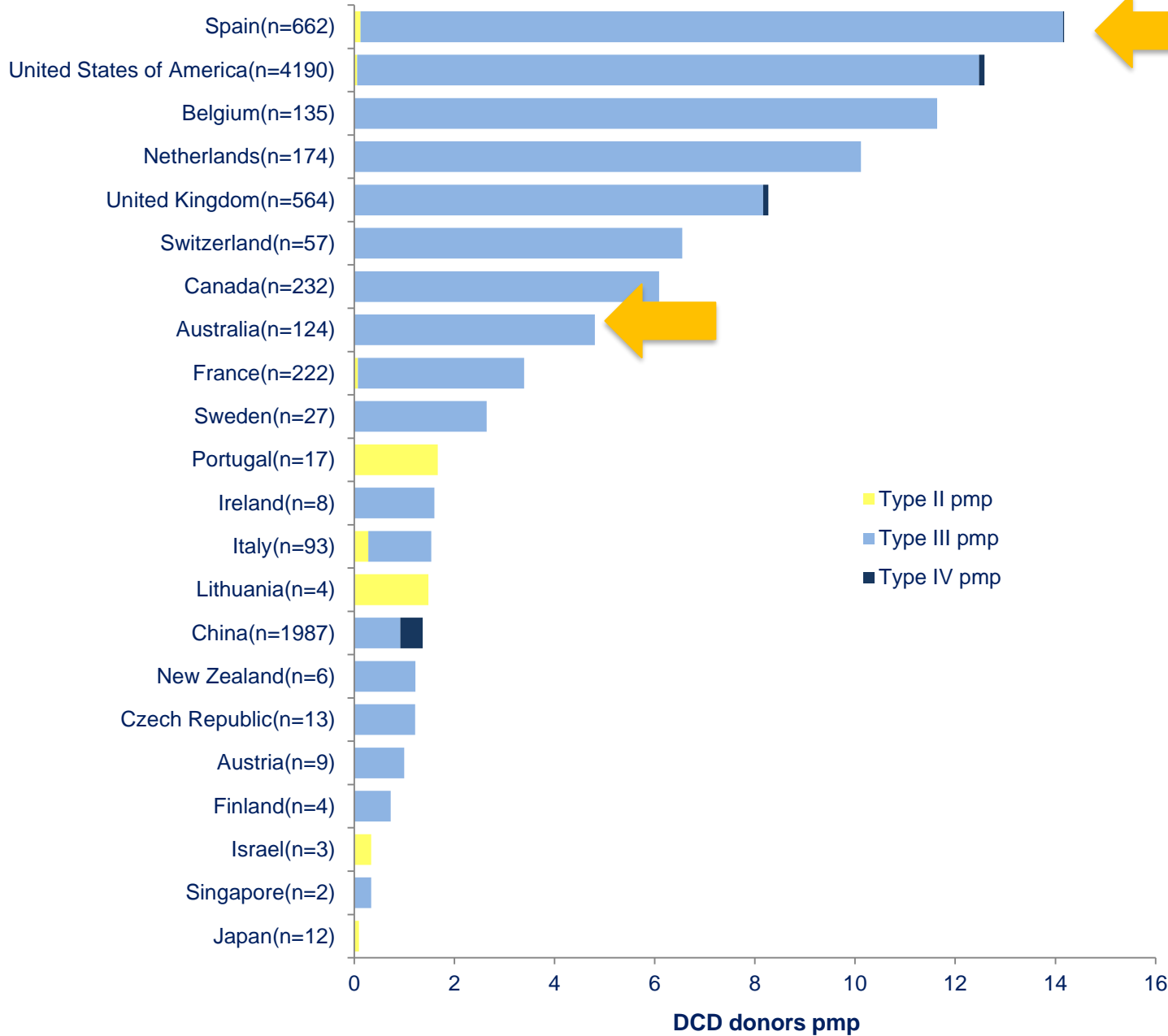
# DONATION AFTER CIRCULATORY DEATH IN SPAIN

**DCD REPRESENTS 42% OF DECEASED DONATION ACTIVITIES IN SPAIN**



**913**  
  
**2022**

Source: Organización Nacional de Trasplantes



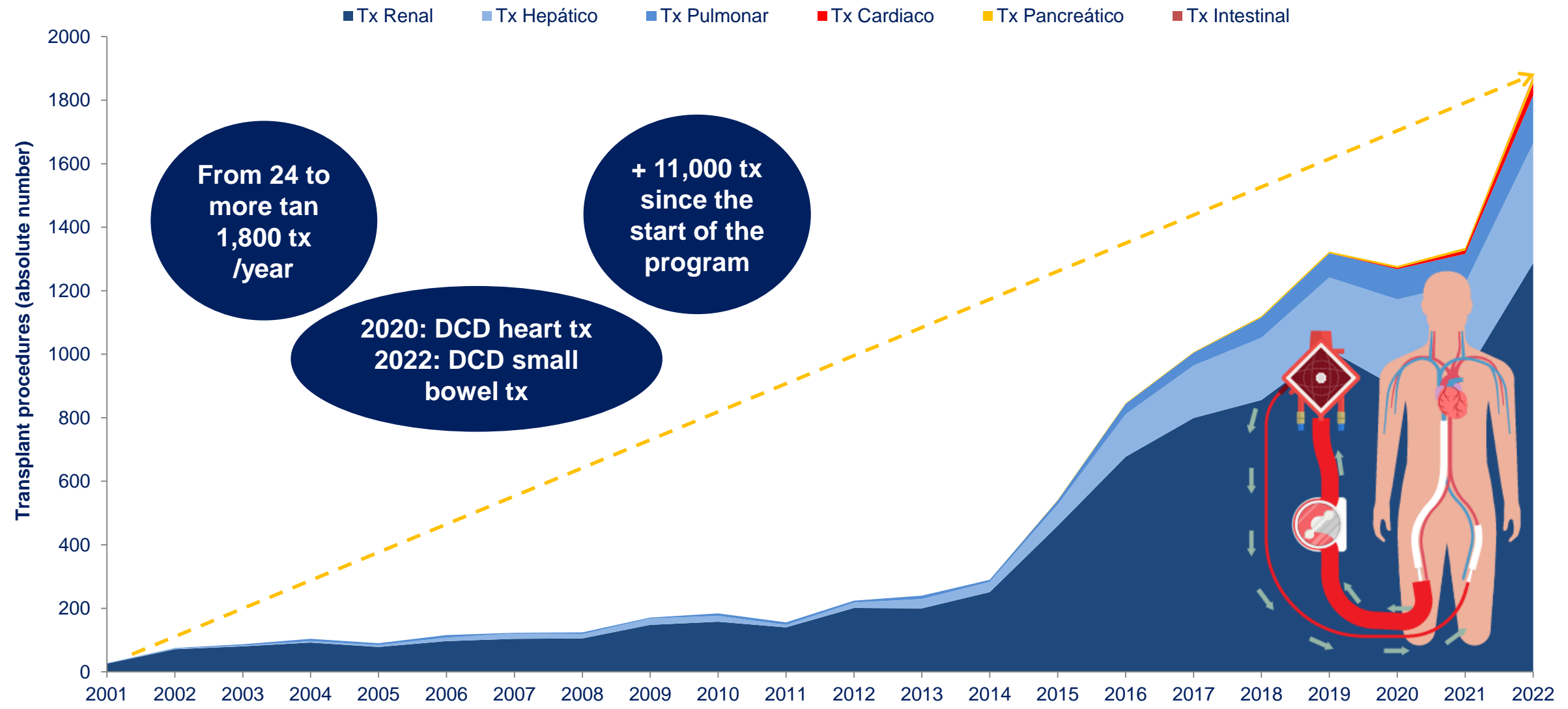
## Actual DCD donors by Maastricht type (pmp) 2021

DCD activities reported in 22/91 countries

**DCD donors: 8 545**

**Type II: 83 (1%)**  
**Type III: 7 771 (91%)**  
**Type IV: 691 (8%)**

# DCD TRANSPLANTS IN SPAIN



Source: Organización Nacional de Trasplantes

# DCD HEART TRANSPLANTS IN SPAIN (31/12/2022)



**52**  
**9 (ped)**



Source: Organización Nacional de Trasplantes

# Emma, una española de 13 meses, la primera en el mundo en recibir un trasplante de intestino en asistolia

11/10/2022

La niña fue dada de alta del Hospital madrileño de La Paz y se encuentra en perfecto estado de salud en su domicilio

ABC [Salud](#)





# DCDD PROVIDES THE OPPORTUNITY TO DONATE TO PATIENTS OTHER THAN THOSE WITH A DEVASTATING BRAIN INJURY



DCDD

+DBD

Devastating brain injuries

Respiratory diseases

Heart diseases

Neurodegenerative diseases

- ✓ Emergency care
- ✓ Neurology
- ✓ Neurosurgery
- ✓ Internal medicine
- ✓ Oncology, neurology, palliative care (CNS neoplasia)

- ✓ Emergency care
- ✓ Neumology
- ✓ Internal medicine

- ✓ Emergency care
- ✓ Cardiology
- ✓ Coronary unit
- ✓ Internal medicine

- ✓ Neurology
- ✓ Neumology
- ✓ Palliative care
- ✓ ALS units

2013-2022

**173 actual donors with ALS (444 transplants) in Spain through DCDD protocols**

# DONATION AFTER MAiD

**NEW CIRCUMSTANTANCE OF DEATH THAT IS CONSISTENT WITH ORGAN DONATION**

- ③ **DCD possible in more than 120 hospitals**
- ③ **Death occurs in controlled circumstances**
- ③ **Other countries have well established protocols of donation after MAiD**

**ORGANIC LAW 3/2021 REGULATING EUTHANASIA**

## Belgium



**> 50 donors since 2011**

## Canada



**> 150 donors since 2017**

## Netherlands



**> 85 donors since 2012**

## The patient at the center

RESPECT FOR THE DECISION OF THE PERSON TO DONATE

- ① **INDEPENDENCE** in the decision-making process
- ① **INFORMATION** on possibility of being informed about donation by treating team
- ① **GRANULAR INFORMATION** about the donation process by coordinator
- ① **AUTHORIZATION SIGNED** after approval of MAiD
- ① **POSSIBILITY TO CHANGE DECISION** about donation at any moment
- ① **PERSONALIZED ORGANIZATION** of the process
- ① **MINIMIZATION** of discomfort
- ① **NEED THAT MAiD TAKES PLACE IN THE HOSPITAL**

# ORGAN DONATION AFTER MAiD (31/12/2022)

 **69**

 **29**

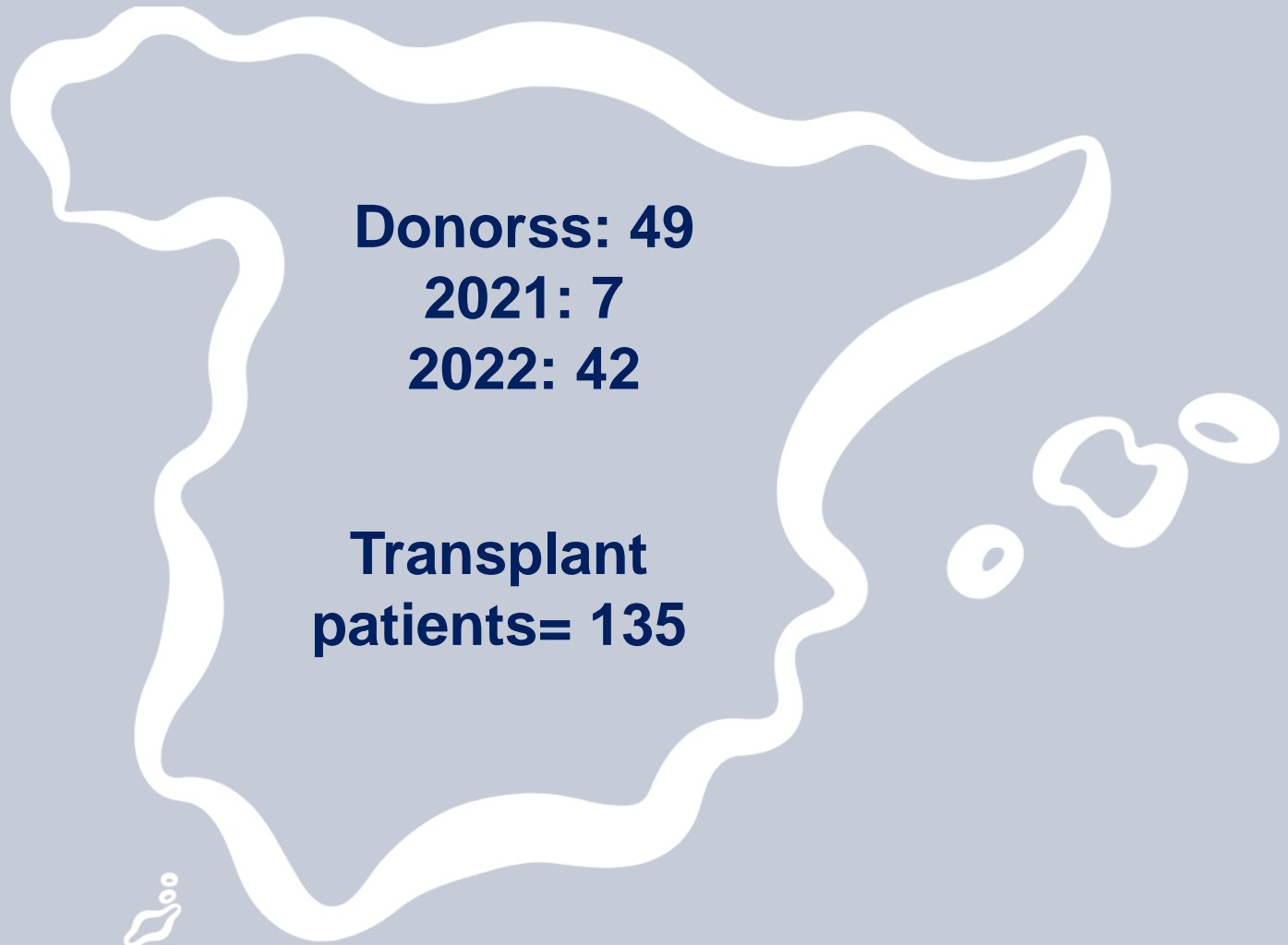
 **20**

 **3**

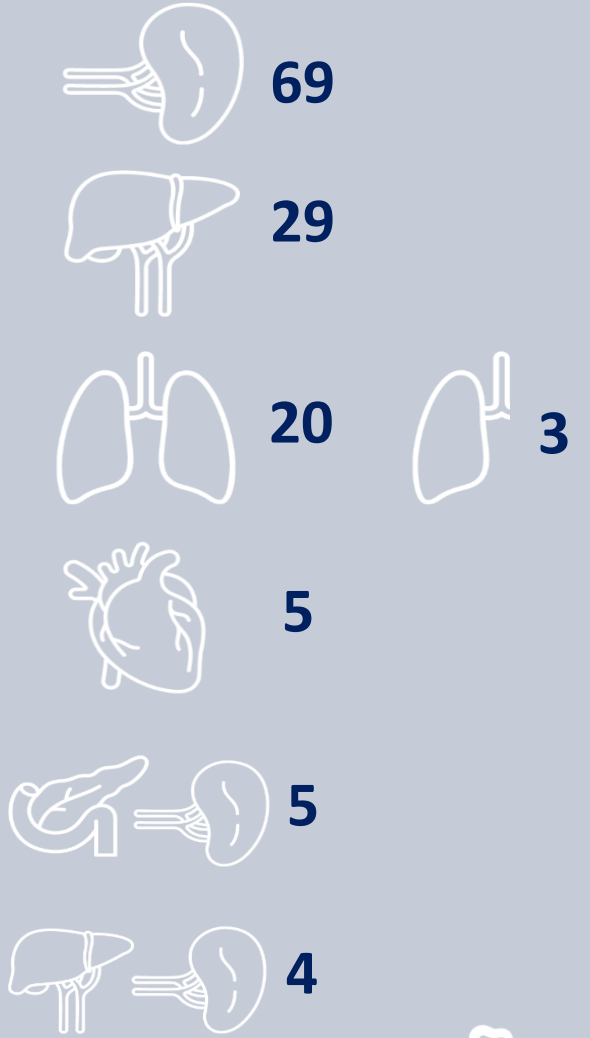
 **5**

 **5**

 **4**



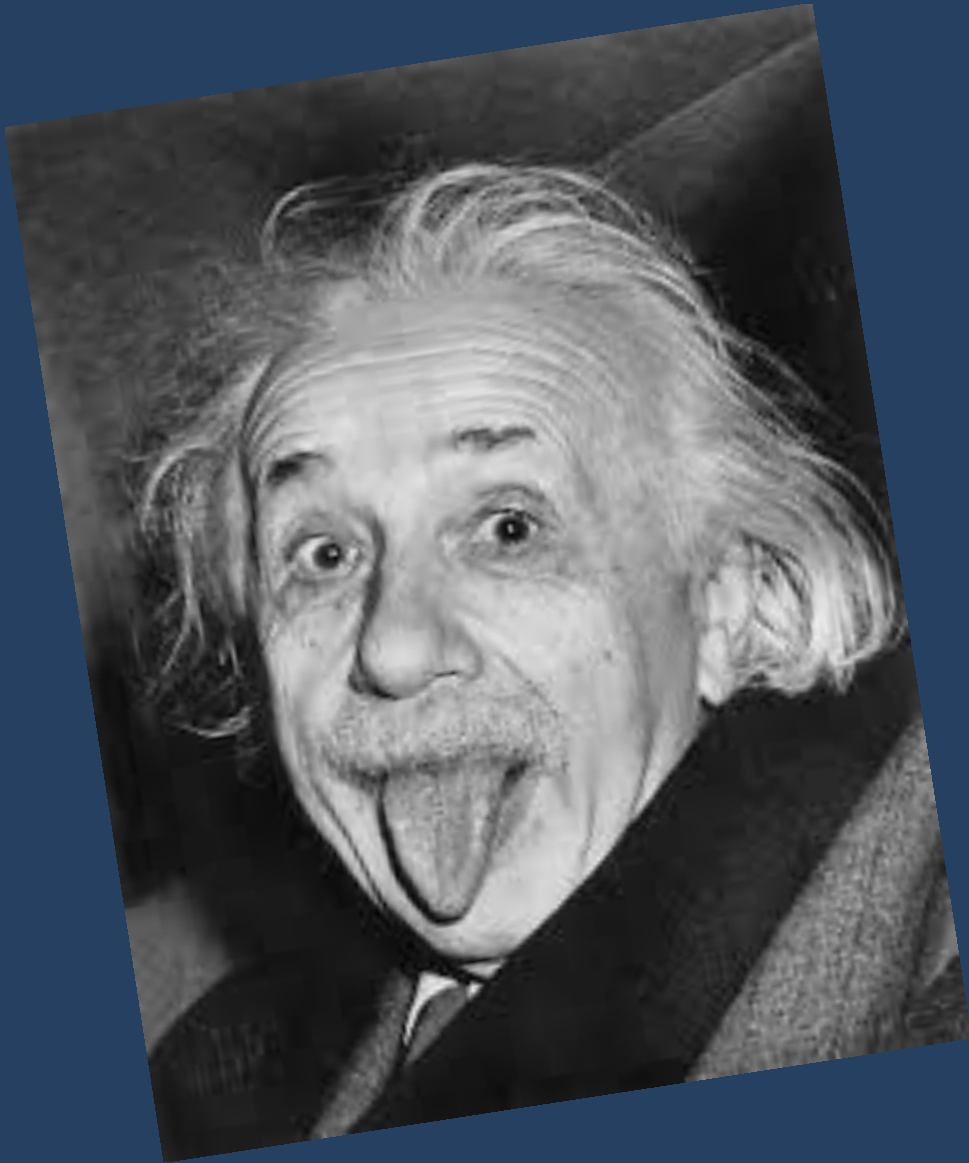
# ORGAN DONATION AFTER MAiD (31/12/2022)



**PatientsTx= 135**



**N=49**  
**2021: 7**  
**2022: 42**



*“The people who are crazy enough to think they can change the world are the ones who do”*

Albert Einstein

THINK DIFFERENT





GOBIERNO  
DE ESPAÑA

MINISTERIO  
DE SANIDAD



ORGANIZACIÓN NACIONAL  
DE TRASPLANTES



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