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2012



INTERNATIONAL FIGURES ON  
DONATION AND TRANSPLANTATION - 2011

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# NEWSLETTER TRANSPLANT



GOBIERNO  
DE ESPAÑA

MINISTERIO  
DE SANIDAD, SERVICIOS SOCIALES  
E IGUALDAD



# INTERNATIONAL FIGURES ON ORGAN, TISSUE & HEMATOPOIETIC STEM CELL DONATION & TRANSPLANTATION ACTIVITIES. DOCUMENTS PRODUCED BY THE EUROPEAN COMMITTEE (PARTIAL AGREEMENT) ON ORGAN TRANSPLANTATION (CD-P-TO). YEAR 2011

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# NEWSLETTER

## TRANSPLANT 2012



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## FOR THE PURPOSES OF THIS NEWSLETTER THE FOLLOWING DEFINITIONS WERE USED:

### Actual deceased organ donor

An actual deceased organ donor is a person from whom at least one organ has been recovered for the purpose of transplantation, in contrast to a utilised donor, who is an actual donor from whom at least one organ has been transplanted. The number of utilised donors is therefore lower or equal than the number of actual donors.

### Donor after brain death

A donor after brain death (DBD) is a deceased organ donor in whom death has been determined by neurologic criteria.

### Donor after circulatory death

A donor after circulatory death (DCD) is a deceased organ donor in whom death has been determined by circulatory and respiratory criteria.

### Multiorgan donor

A multiorgan donor is an actual donor from whom at least two different types of organs have been recovered for the purpose of transplantation.

### Total TX. (all combinations included)

Includes the transplantation of the corresponding organ with or without the simultaneous transplant of a different type of organ (s).

### Double-kidney TX.

One double-kidney TX. is counted as 1 TX.

### TX. from living donors

A living donor is a living human being from whom organs have been recovered for the purpose of transplantation.

A Living Donor has one of the following three possible relationships with the recipient:

A/ Related:

A1/ Genetically Related:

1st Degree Genetic Relative: Parent, Sibling, Offspring

2nd Degree genetic relative, e.g. grandparent, grandchild, aunt, uncle, niece, nephew,

Other than 1st or 2nd degree genetically related, for example cousin

A2/ Emotionally Related: Spouse (if not genetically related); in-laws; Adopted; Friend

B/ Unrelated = Non Related: Not Genetically or Emotionally Related

### Heart-lung TX.

One heart-lung TX. is counted as 1 lung TX., 1 heart TX. and 1 heart-lung TX.

### Double-lung TX.

One double-lung TX. is counted as 1 TX.

### Total number of patients transplanted

For more than one organ transplanted into the same recipient: kidney-liver-heart TX. = counted as one recipient.

### Absolute number

Includes all figures corresponding to all donors/ patients adults and children.

### Paediatric

Includes only paediatric activity (patients aged < 15 years).

### Waiting List

**Example:** At 1/1/2011 there were 200 patients active on the WL. Along the year, 100 patients are newly included on the WL (first row). In total, 300 patients have been ever active on the WL during the year (second row). Along the year, 200 patients were transplanted (number recorded in a different questionnaire), 50 patients remain active at the end of the year (third row), 25 patients died (fourth row) and 25 patients were excluded (number not to be reported, but derived from previous figures).

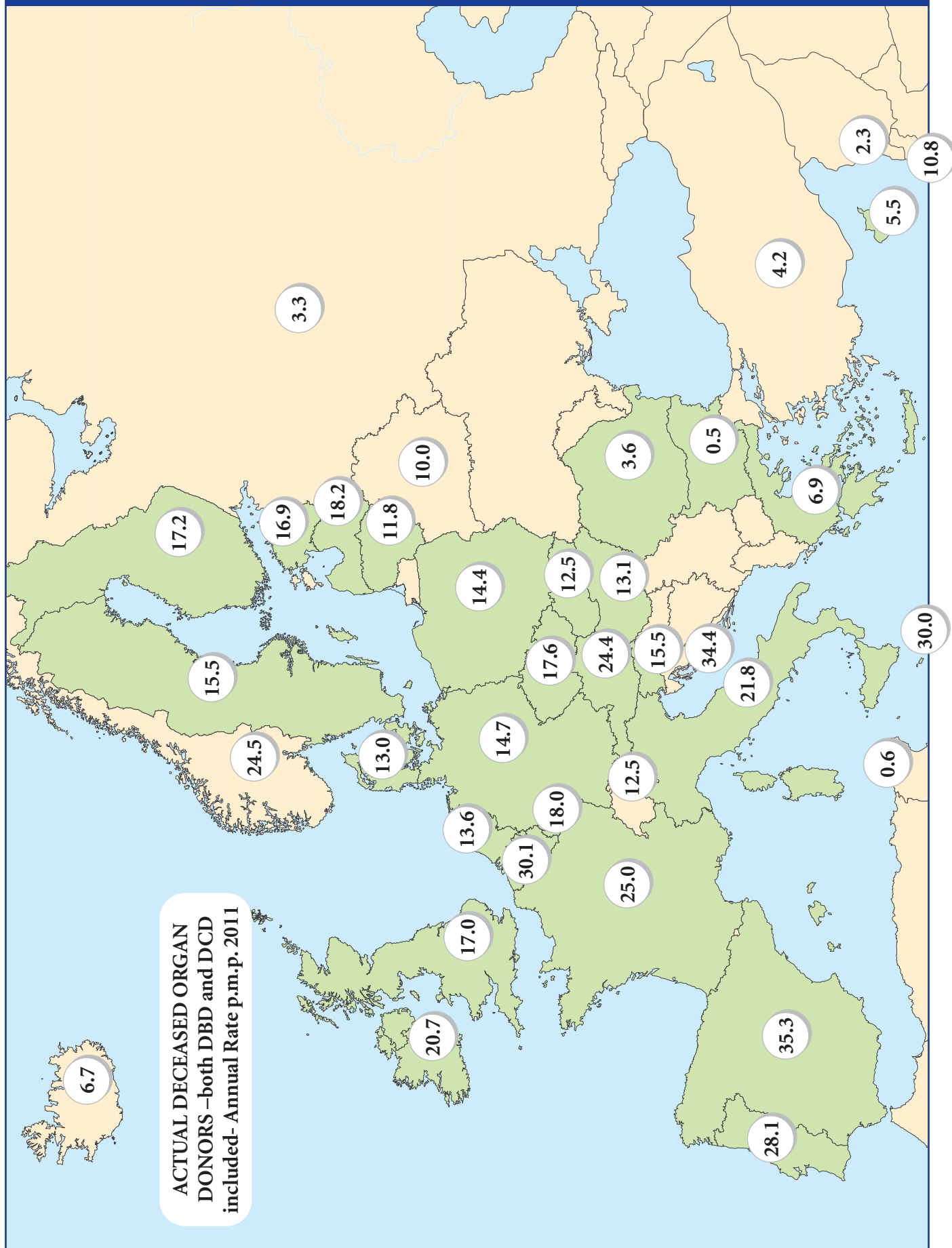
Patients included on the WL for the first time in the course of 2011	100
Total number of patients ever active on the WL during 2011	300
Patients awaiting for a transplant (only active candidates) on 31/12/2011	50
Patients who died while on the WL during 2011	25

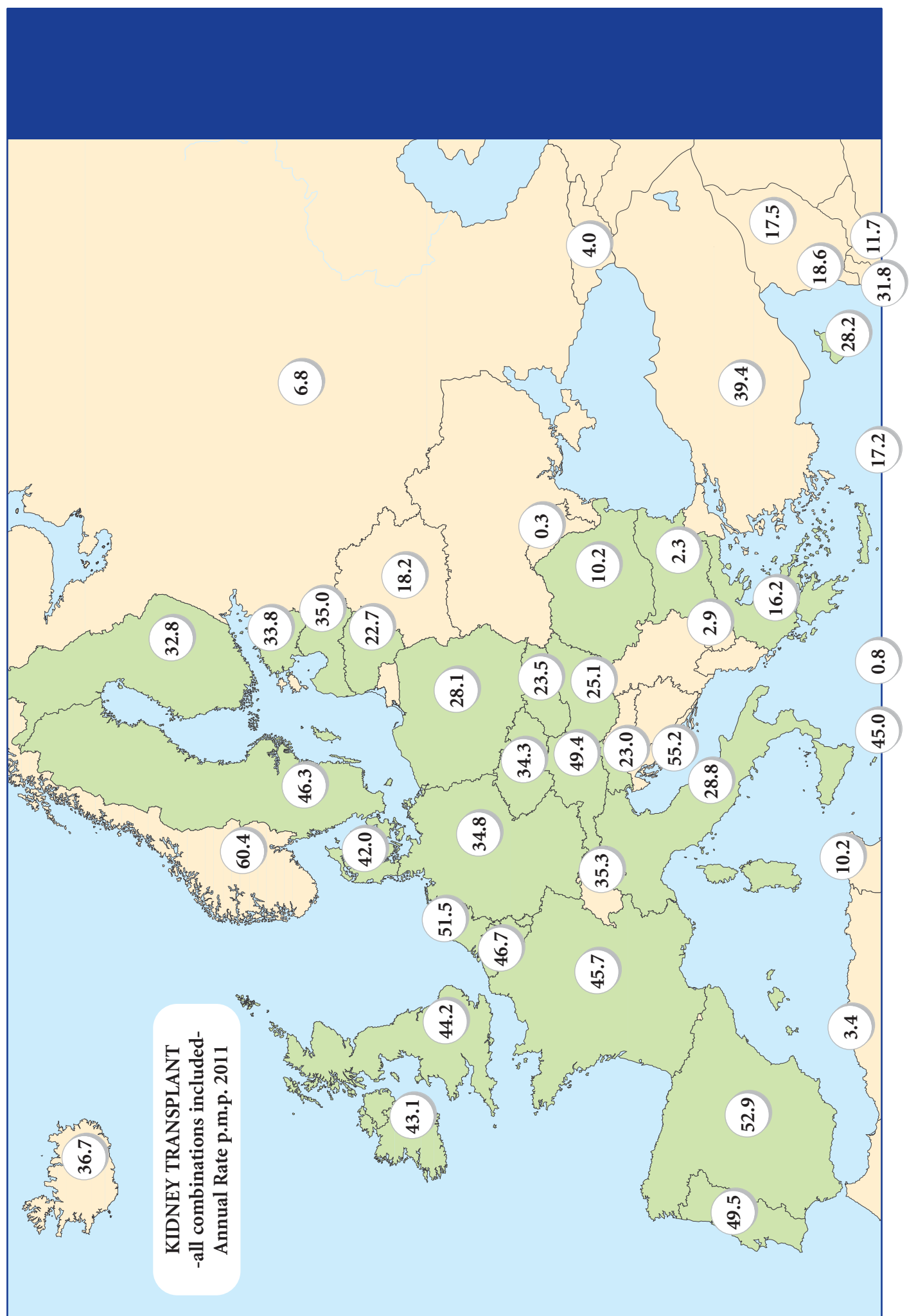
(\*The United Nations Fund report (UNFPA: <http://www.unfpa.org/public/>) is used as the data source for estimates of population size, unless a more up-to-date figure is available from an official source).



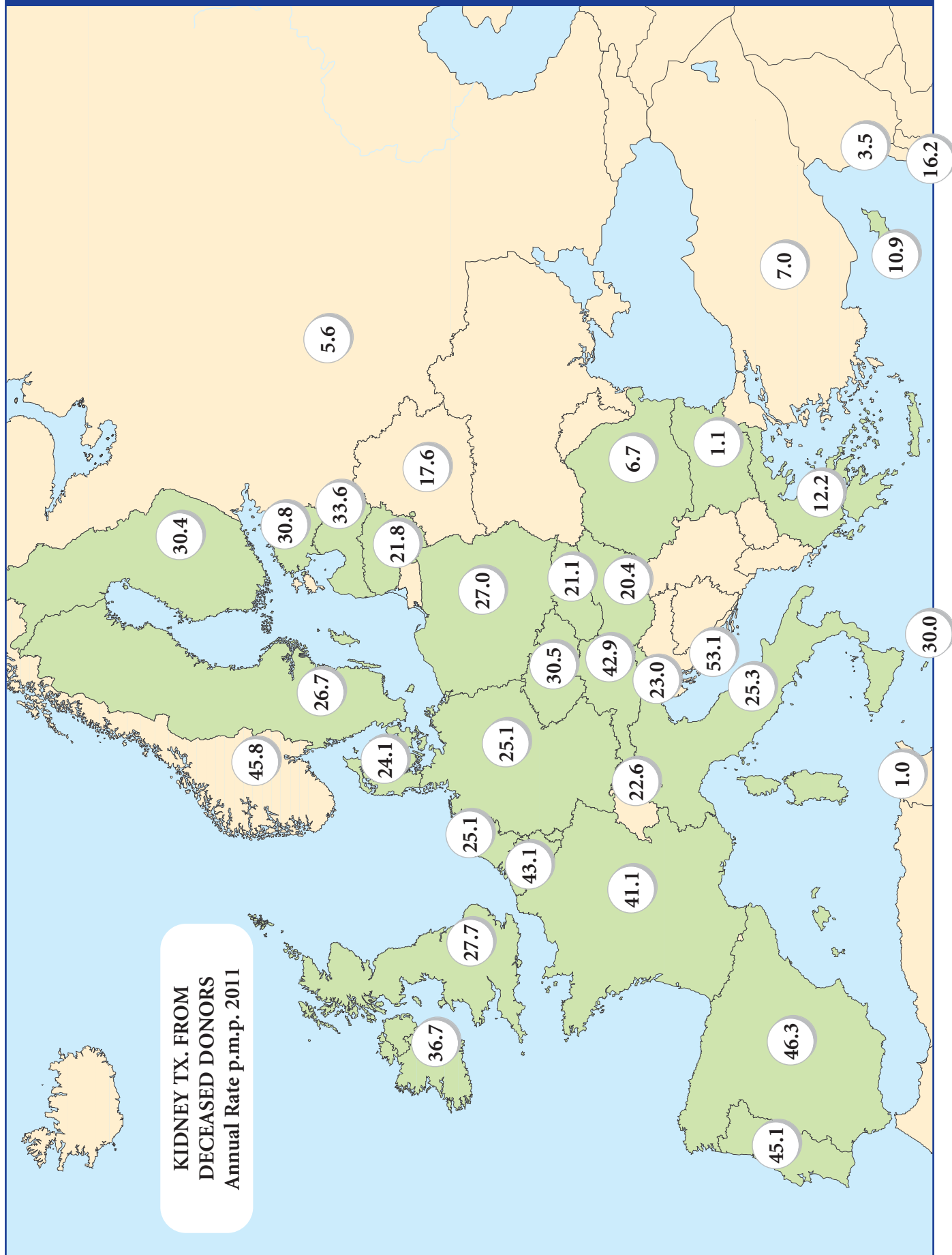
# International Figures on Organ Donation and Transplantation Activity. Year 2011

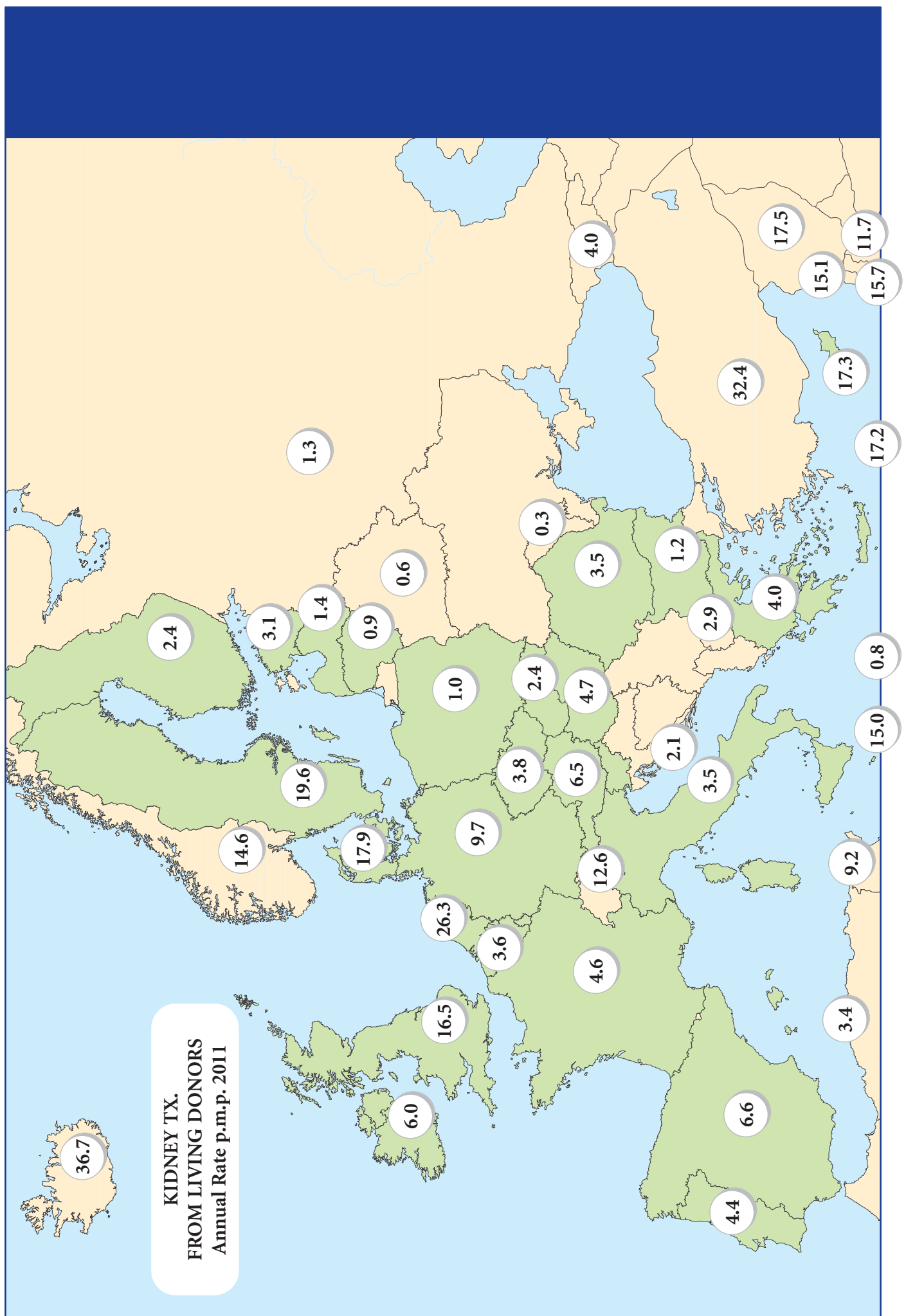


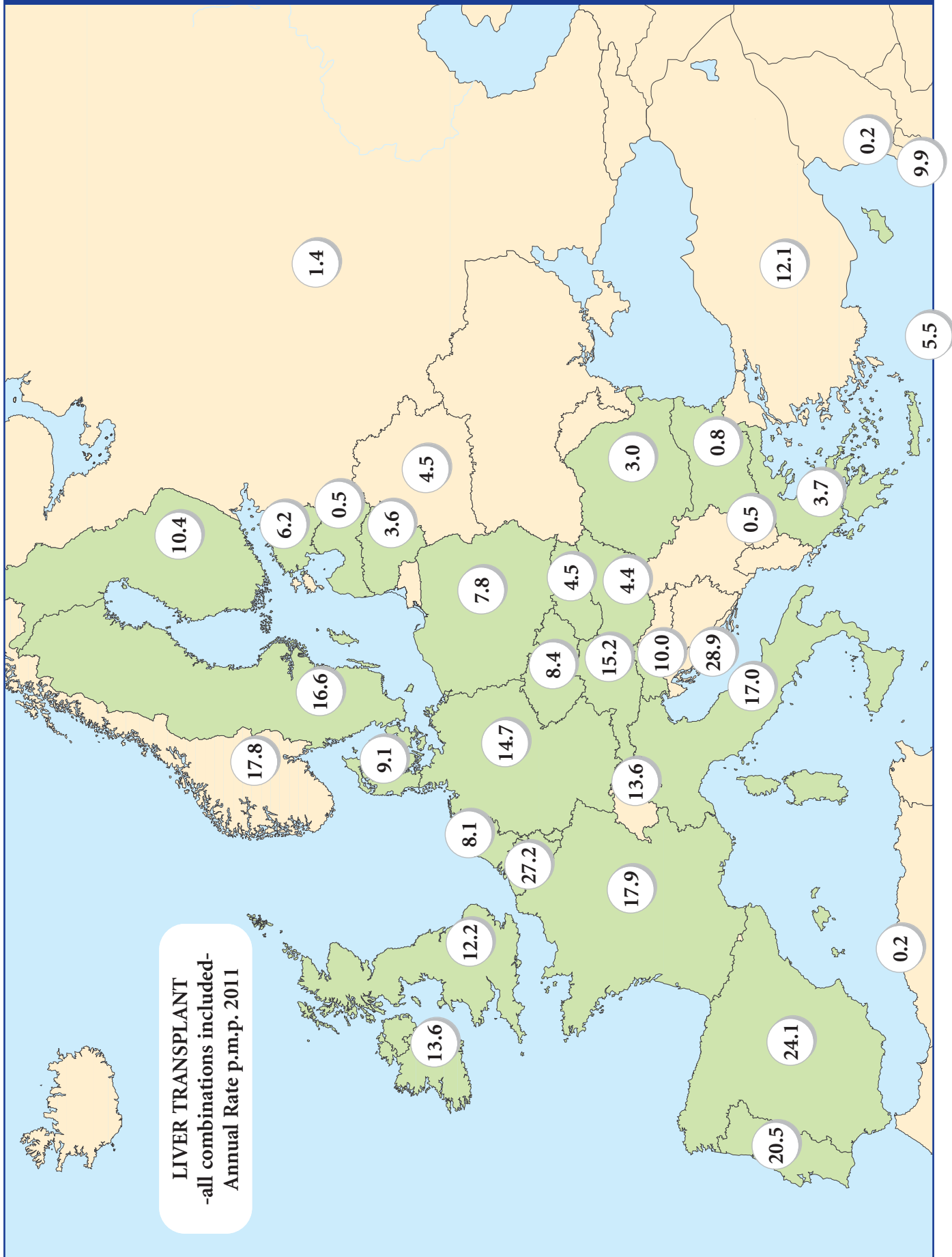




**KIDNEY TX. FROM  
DECEASED DONORS**  
Annual Rate p.m.p. 2011



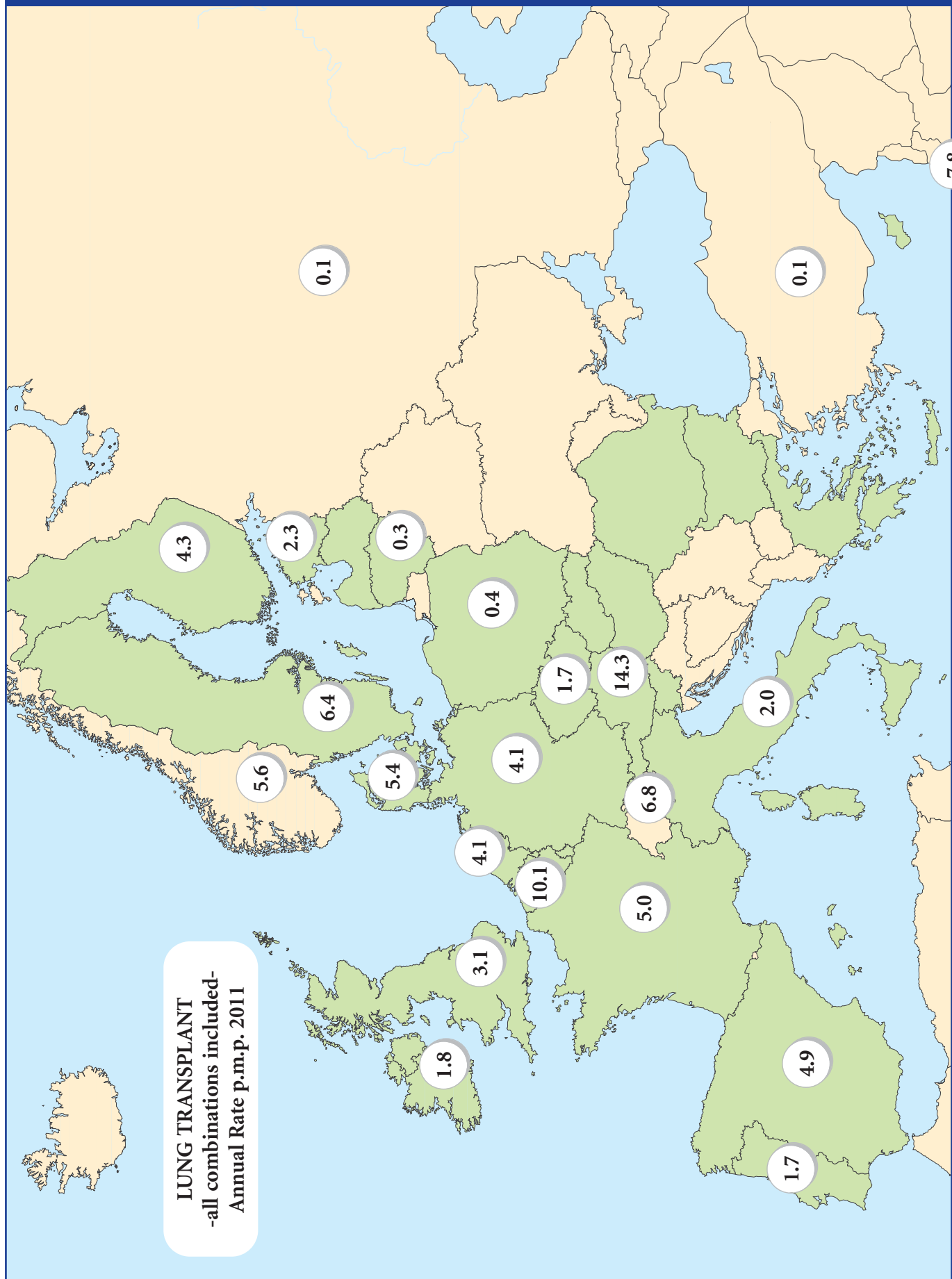


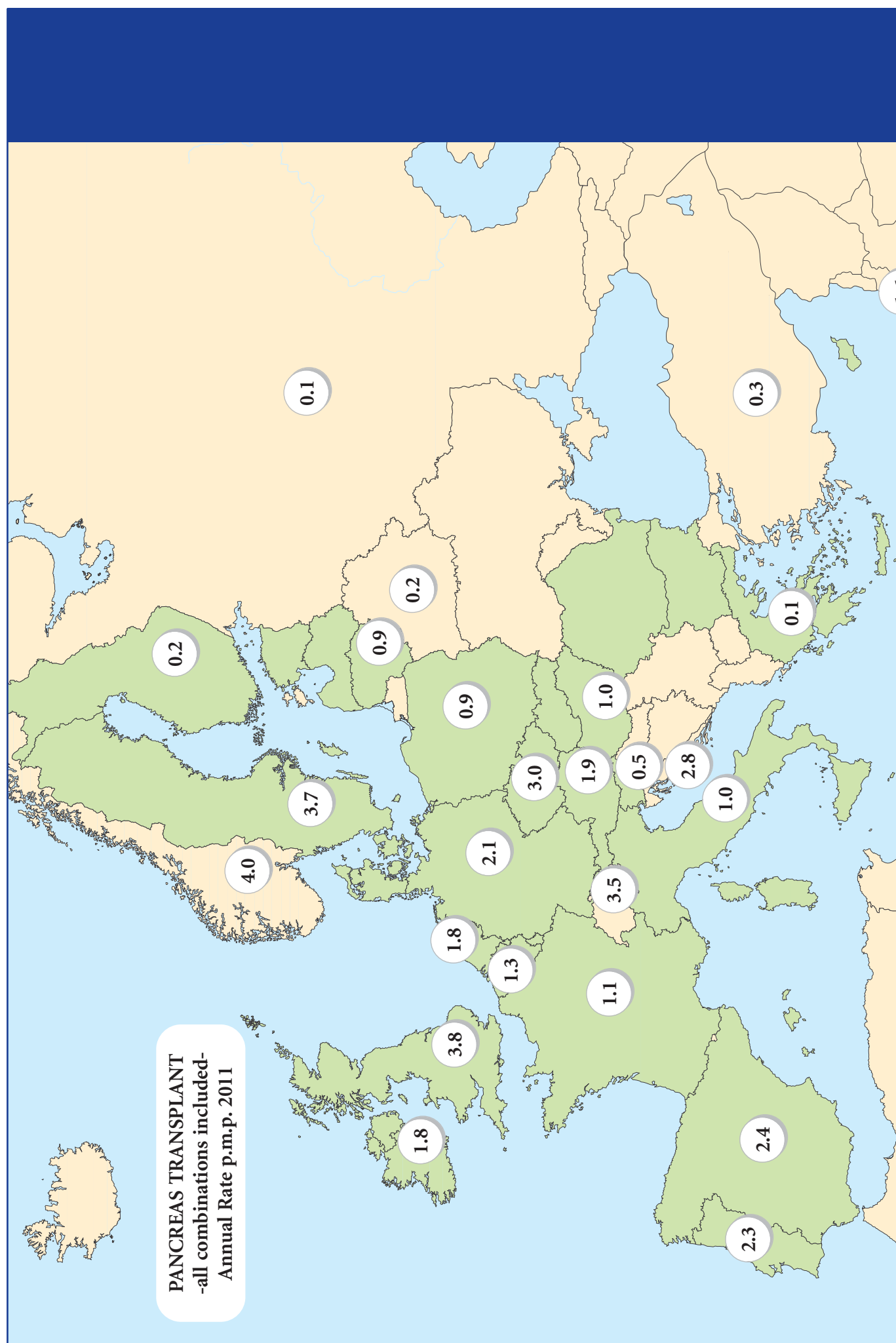






**LUNG TRANSPLANT**  
-all combinations included-  
Annual Rate p.m.p. 2011











Global Observatory on  
Donation & Transplantation

In collaboration with

World Health  
Organization



GOBIERNO DE ESPAÑA

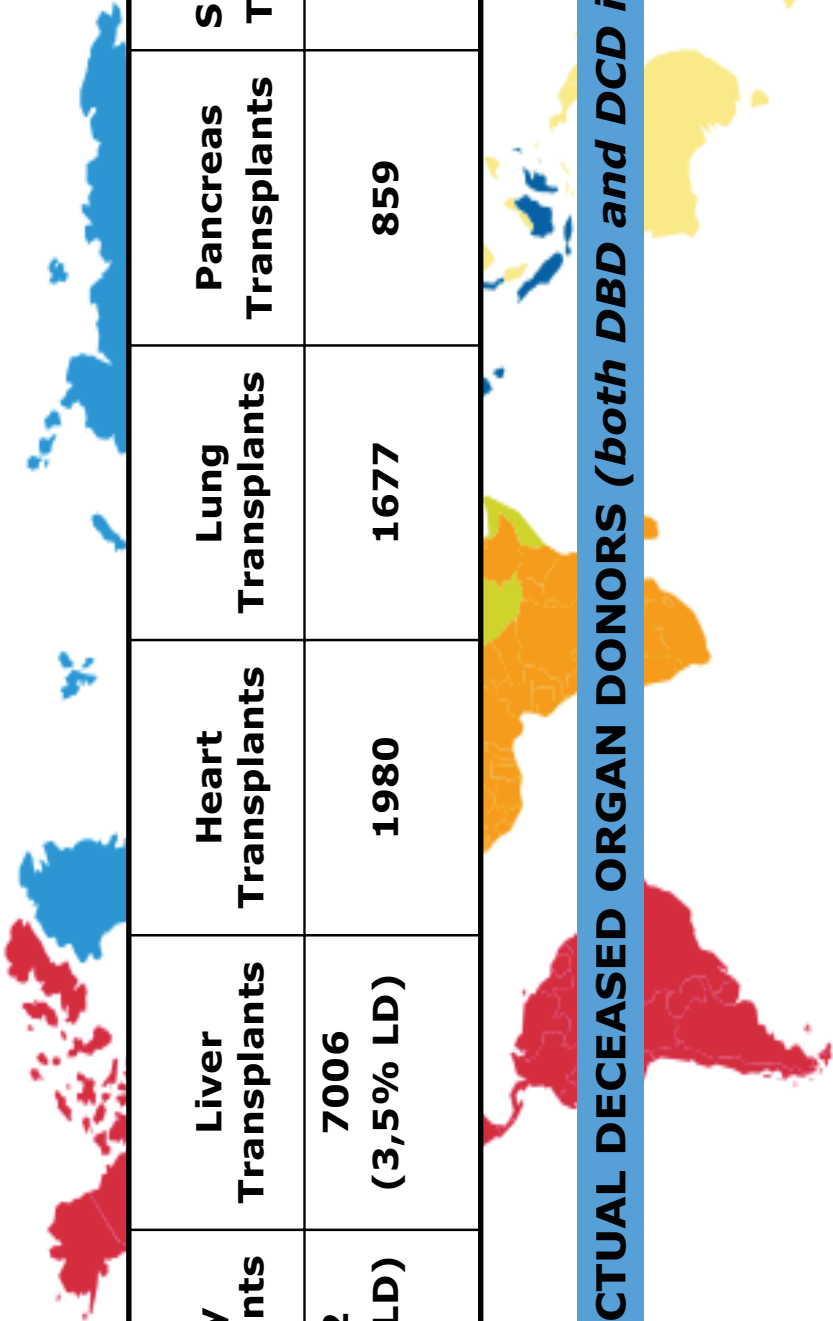
MINISTERIO DE SANIDAD Y CONSUMOS

SEGURIDAD E IGUALDAD



GODT African Americas Eastern Mediterranean Europe South-East Asia Western Pacific Search

EUROPEAN UNION DATA



Kidney Transplants	Liver Transplants	Heart Transplants	Lung Transplants	Pancreas Transplants	Small Bowel Transplants
18712 (20,6% LD)	7006 (3,5% LD)	1980	1677	859	56

9604 ACTUAL DECEASED ORGAN DONORS (both DBD and DCD included)

\*2011 data  
N= 27 COUNTRIES (504,2 million inhabitants)



**Population (million inhabitants):**

Actual deceased organ donors -both DBD and DCD included-(pmp) 34.5  
 Kidney TX. from deceased donors (pmp) 531 (15.4)  
 Kidney TX. from living donors (pmp) 803 (23.3)  
 Liver Total TX. -all combinations included-(pmp) 433 (12.6)  
 Heart-Lung Total TX. (pmp) 487 (14.1)  
 Lung Total TX. -all combinations included-(pmp) 157 (4.6)  
 Pancreas Total TX. -all combinations included-(pmp) 1 (0.0)  
 Small Bowel Total TX. -all combinations included-(pmp) 181 (5.2)  
 Total number of patients transplanted (pmp) 108 (3.1)  
 2 (0.1)

**Population (million inhabitants):**

Actual deceased organ donors -both DBD and DCD included-(pmp) 22.6  
 Kidney TX. from deceased donors (pmp) 337 (14.9)  
 Kidney TX. from living donors (pmp) 570 (25.2)  
 Liver Total TX. -all combinations included-(pmp) 255 (11.3)  
 Heart-Lung Total TX. (pmp) 215 (9.5)  
 Lung Total TX. -all combinations included-(pmp) 66 (2.9)  
 Pancreas Total TX. -all combinations included-(pmp) 2 (0.1)  
 Small Bowel Total TX. -all combinations included-(pmp) 159 (7.0)  
 Total number of patients transplanted (pmp) 26 (1.2)  
 1226 (56.0)

**Population (million inhabitants):**

Actual deceased organ donors -both DBD and DCD included-(pmp) 313.1  
 Kidney TX. from deceased donors (pmp) 8126 (26.0)  
 Kidney TX. from living donors (pmp) 11838 (37.8)  
 Liver Total TX. -all combinations included-(pmp) 5772 (18.4)  
 Heart-Lung Total TX. (pmp) 6342 (20.3)  
 Lung Total TX. -all combinations included-(pmp) 2349 (7.5)  
 Pancreas Total TX. -all combinations included-(pmp) 27 (0.1)  
 Small Bowel Total TX. -all combinations included-(pmp) 1849 (5.9)  
 Total number of patients transplanted (pmp) 1082 (3.5)  
 129 (0.4)  
 28539 (91.1)

**Population (million inhabitants):**

Actual deceased organ donors -both DBD and DCD included-(pmp) 4.4  
 Kidney TX. from deceased donors (pmp) 35 (8.0)  
 Kidney TX. from living donors (pmp) 61 (13.9)  
 Liver Total TX. -all combinations included-(pmp) 57 (13.0)  
 Heart-Lung Total TX. (pmp) 30 (6.8)  
 Lung Total TX. -all combinations included-(pmp) 12 (2.7)  
 Pancreas Total TX. -all combinations included-(pmp) 13 (3.0)  
 Small Bowel Total TX. -all combinations included-(pmp) 3 (0.7)  
 Total number of patients transplanted (pmp) 115 (26.1)

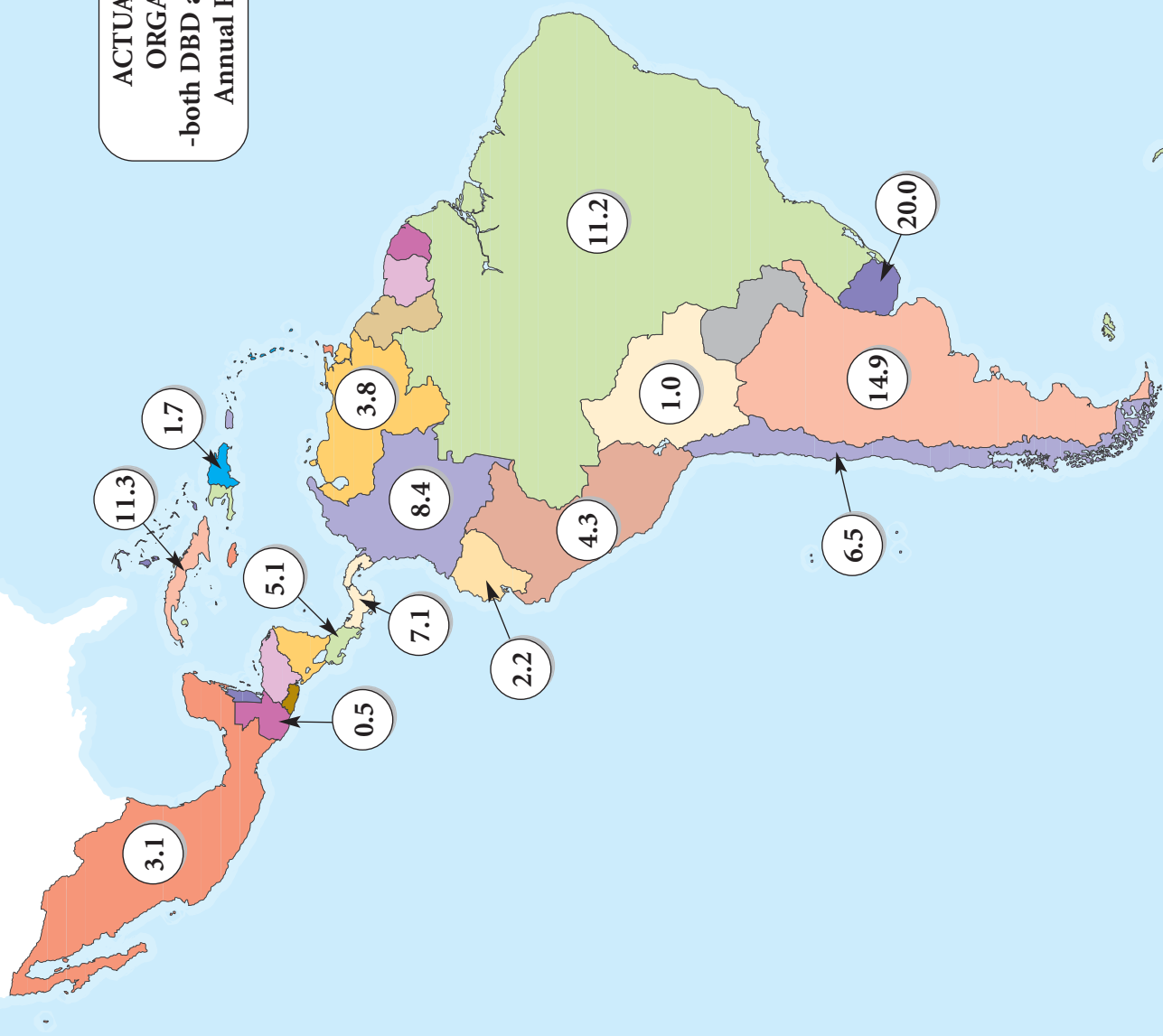
CANADA

USA

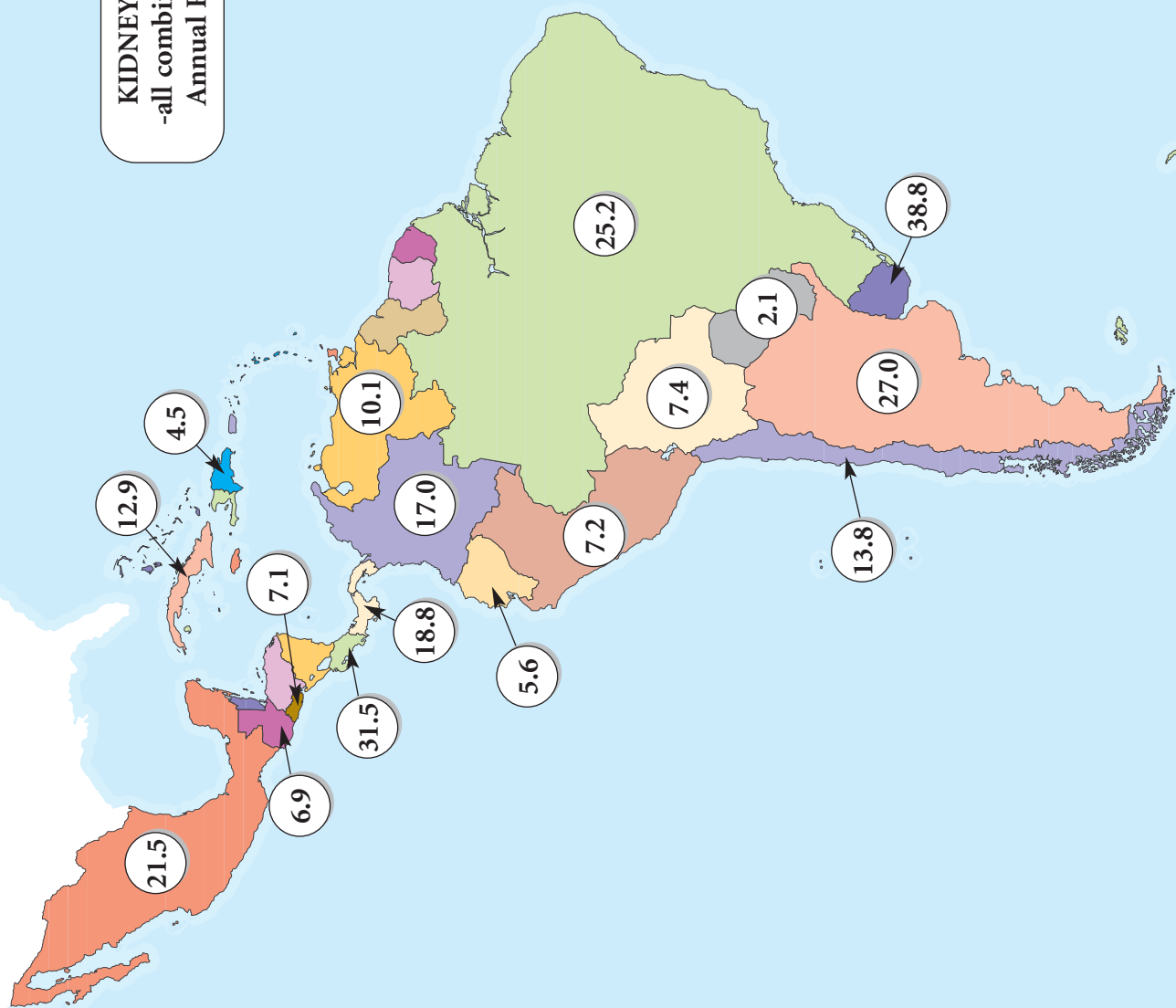
AUSTRALIA

NEW ZEALAND

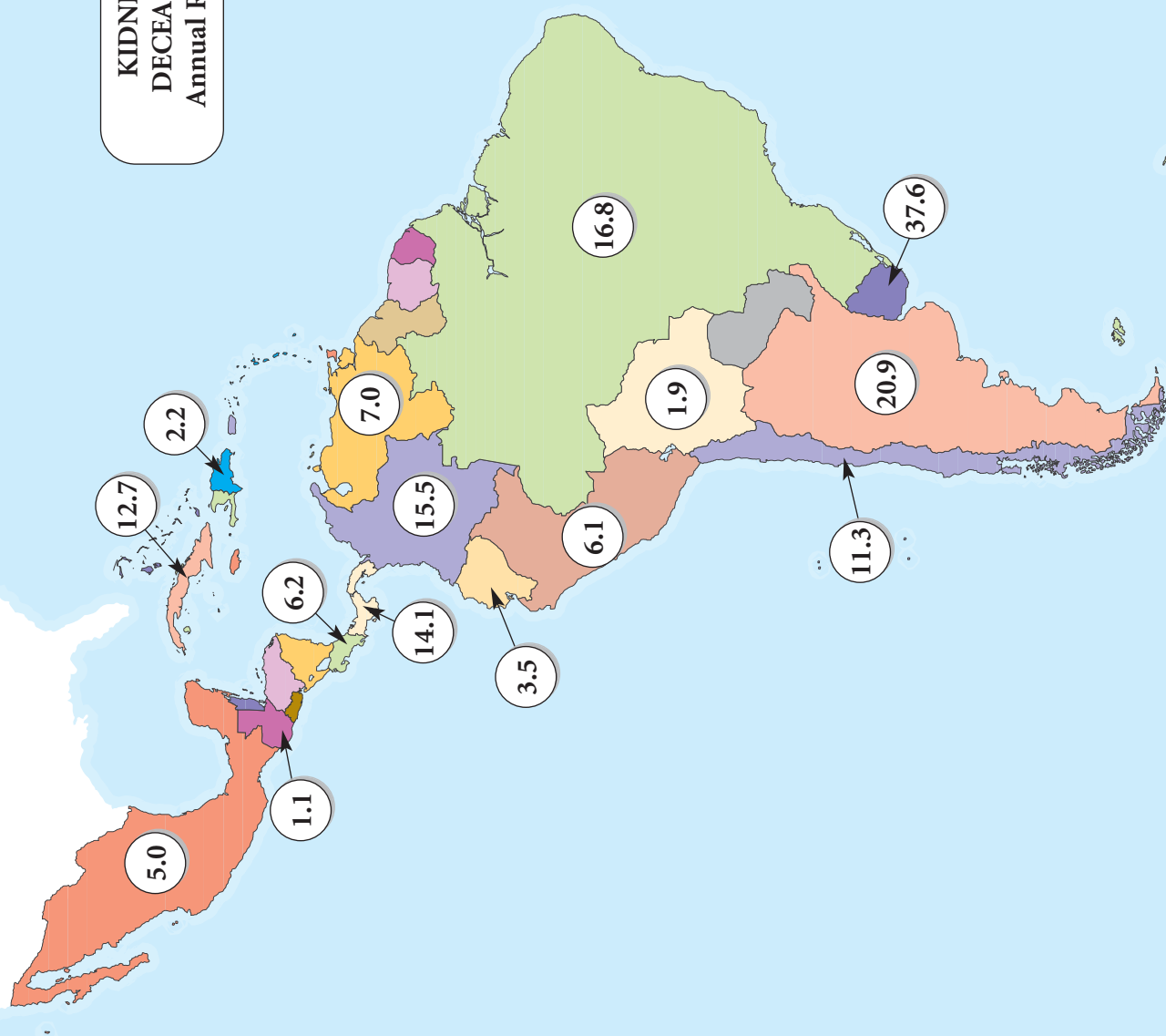
ACTUAL DECEASED  
ORGAN DONORS  
-both DBD and DCD included-  
Annual Rate p.m.p. 2011



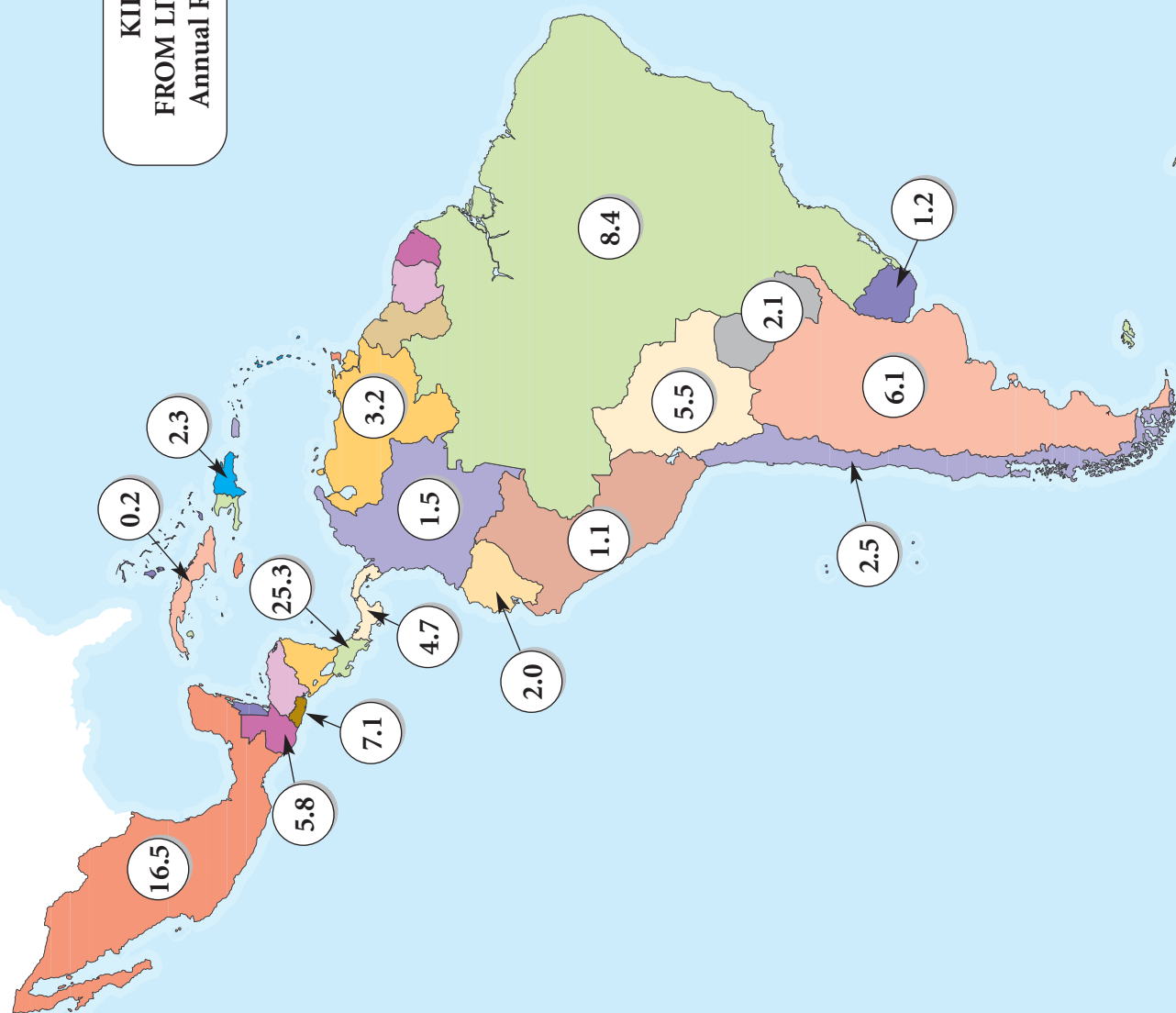
KIDNEY TRANSPLANT  
-all combinations included-  
Annual Rate p.m.p. 2011



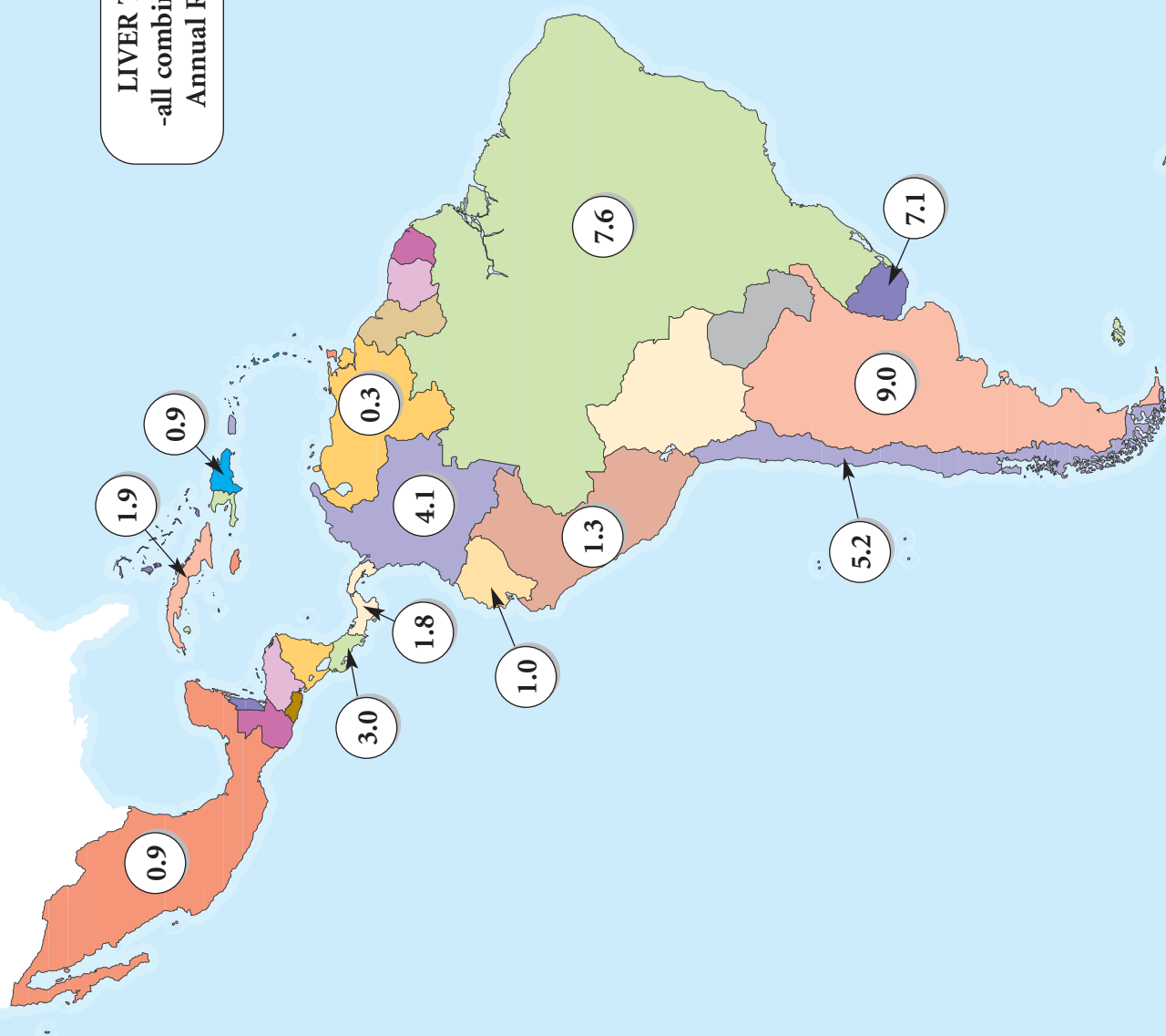
KIDNEY TX. FROM  
DECEASED DONORS  
Annual Rate p.m.p. 2011



**KIDNEY TX.  
FROM LIVING DONORS  
Annual Rate p.m.p. 2011**

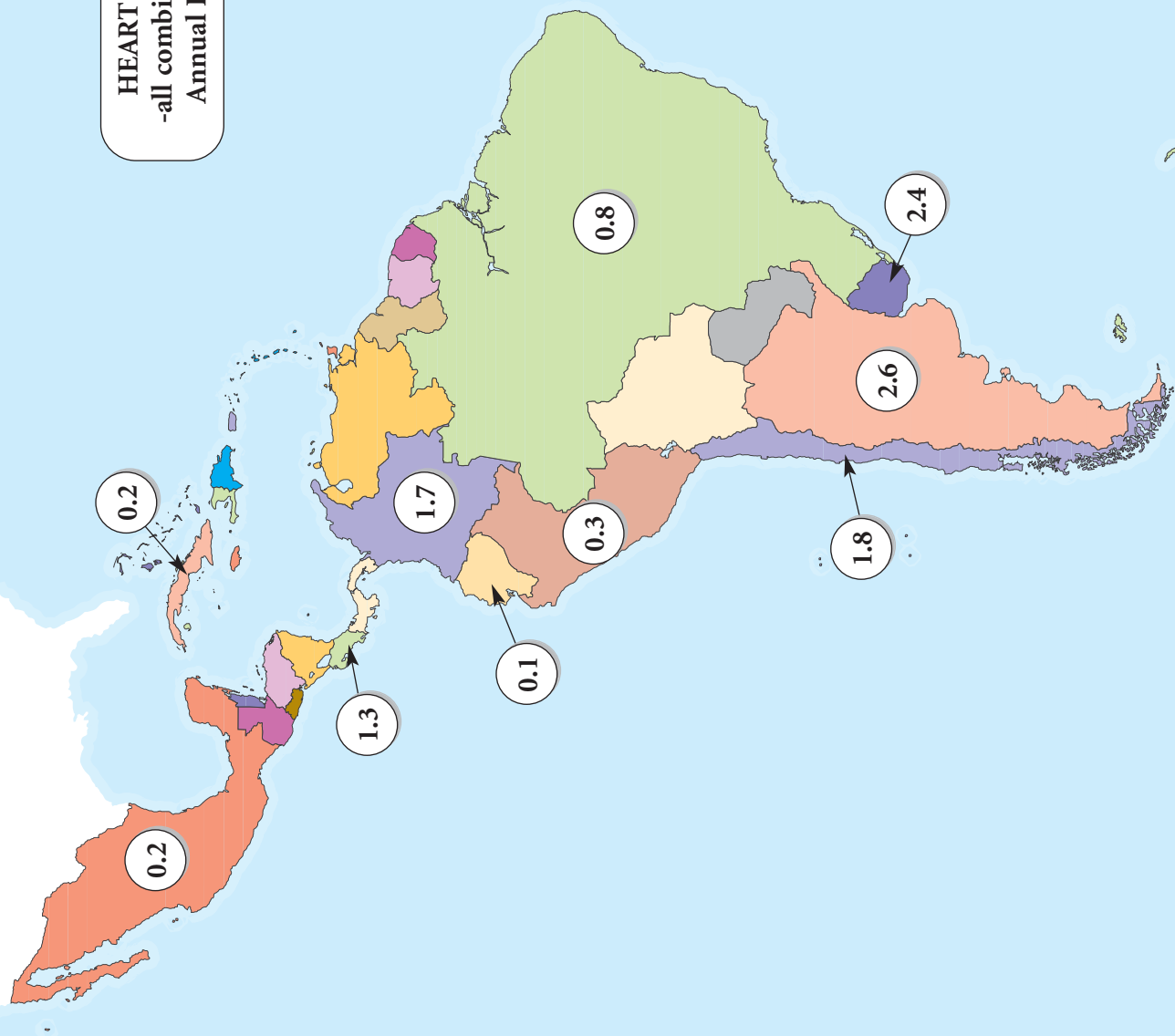


LIVER TRANSPLANT  
-all combinations included-  
Annual Rate p.m.p. 2011

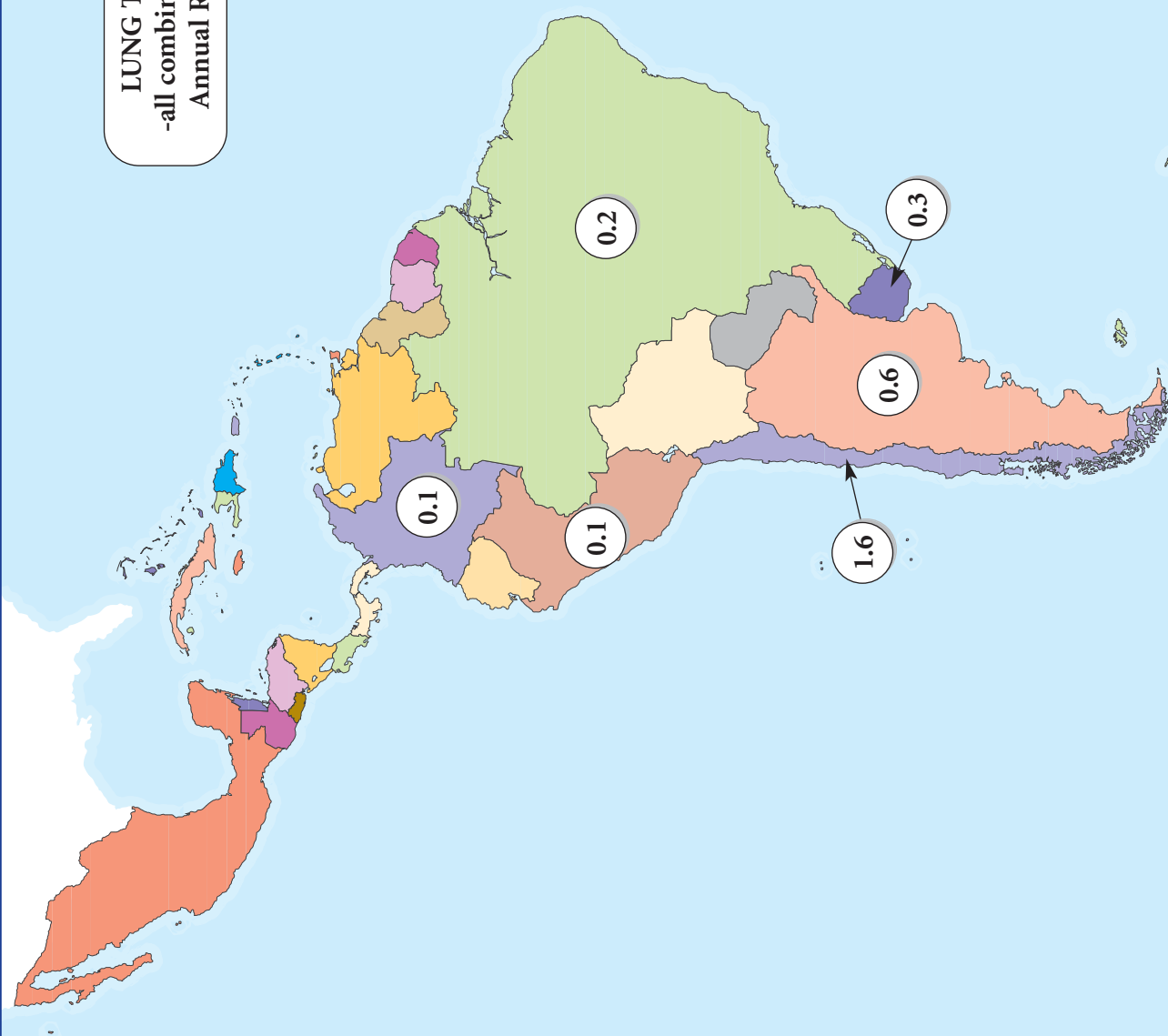




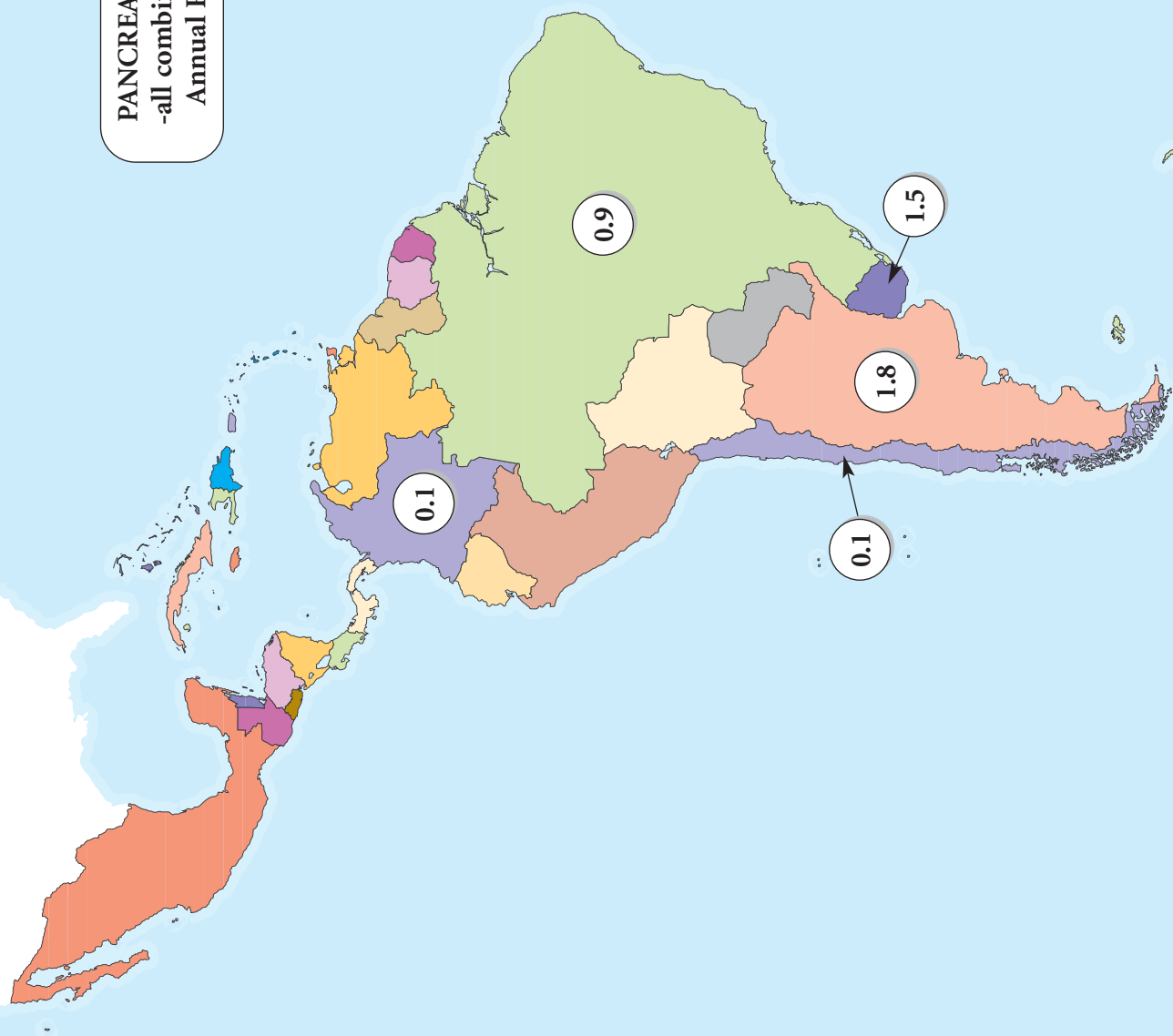
HEART TRANSPLANT  
-all combinations included-  
Annual Rate p.m.p. 2011



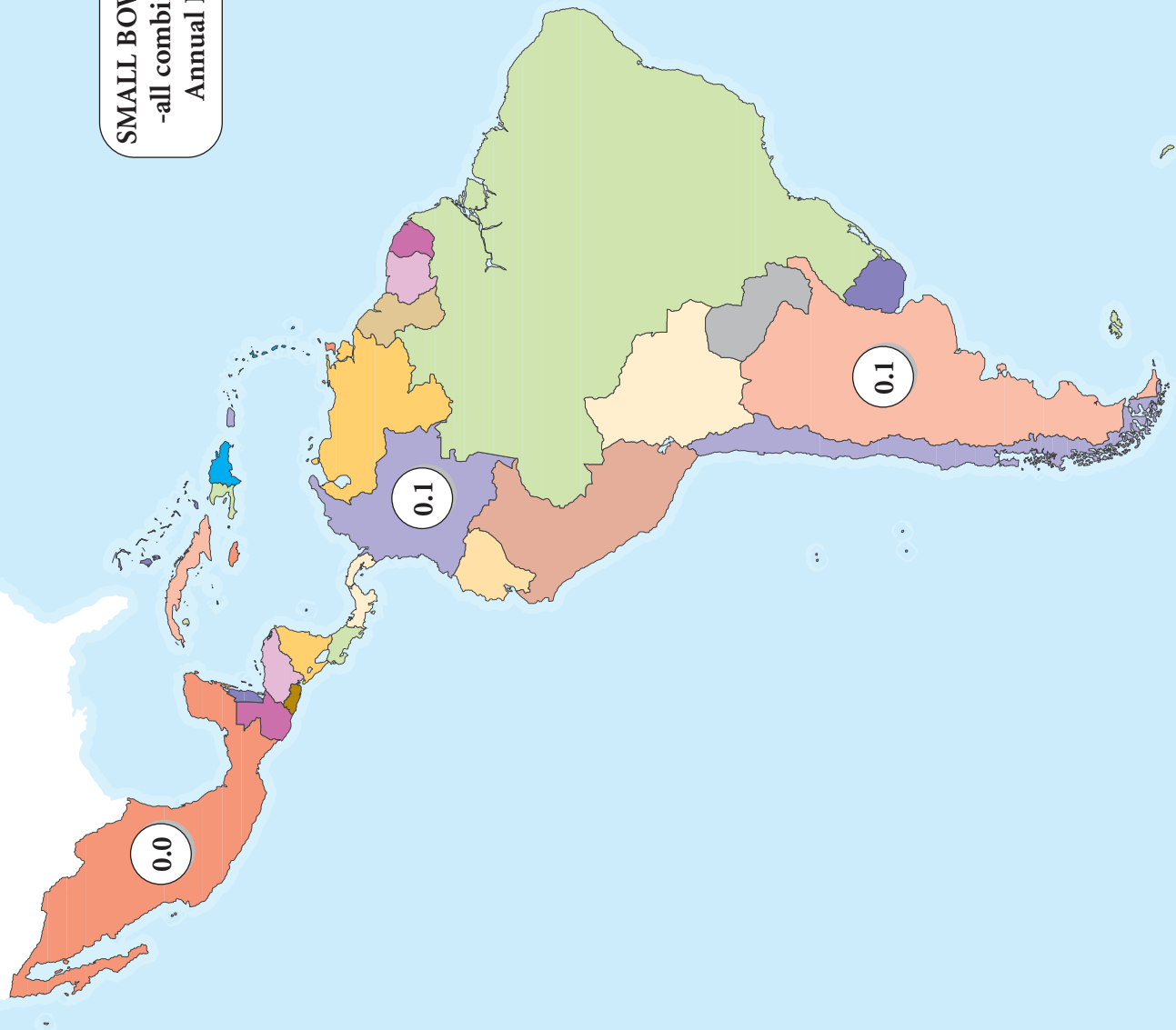
LUNG TRANSPLANT  
-all combinations included -  
Annual Rate p.m.p. 2011



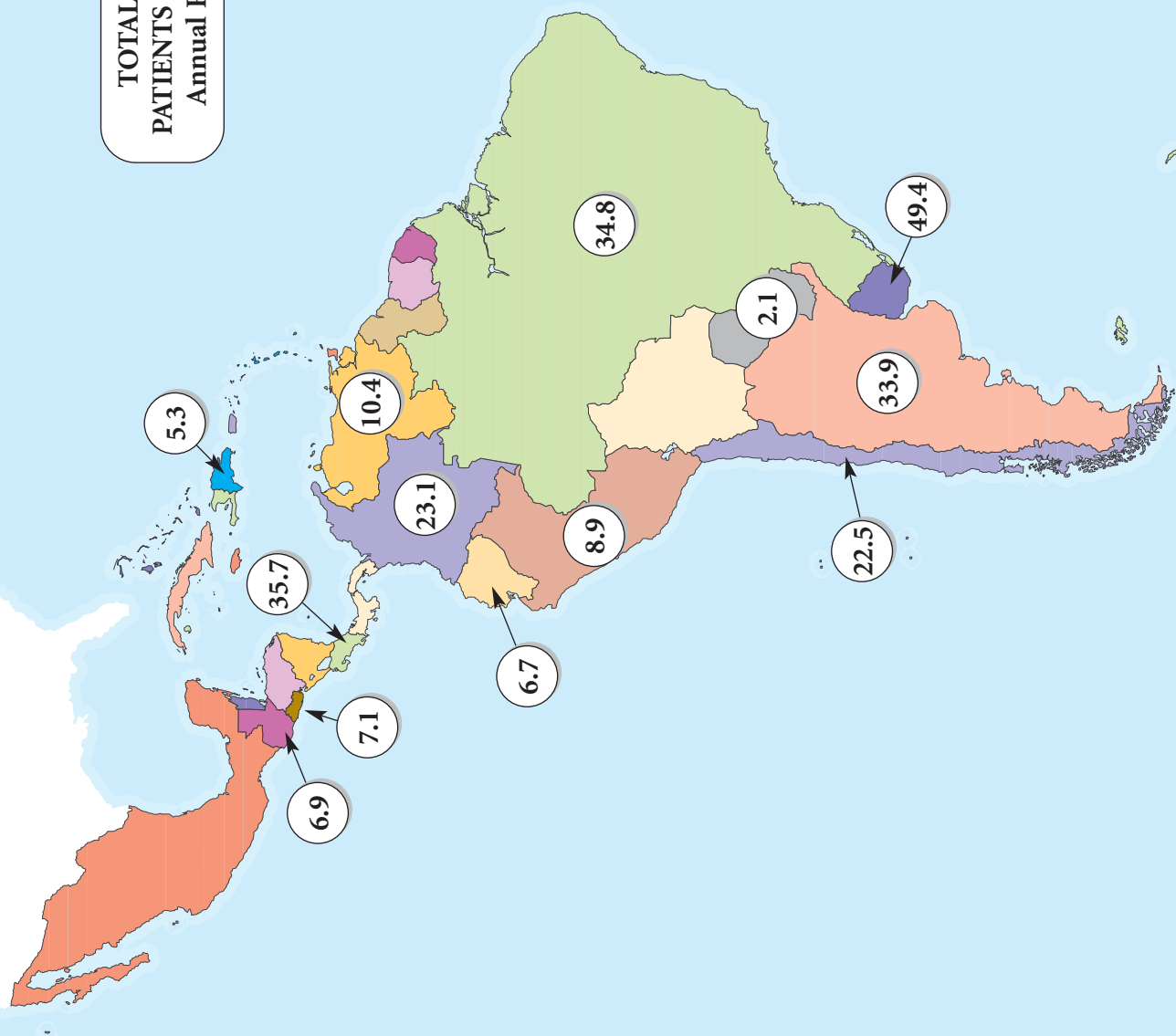
**PANCREAS TRANSPLANT**  
-all combinations included-  
Annual Rate p.m.p. 2011



SMALL BOWEL TRANSPLANT  
-all combinations included -  
Annual Rate p.m.p. 2011



**TOTAL NUMBER OF  
PATIENTS TRANSPLANTED  
Annual Rate p.m.p. 2011**





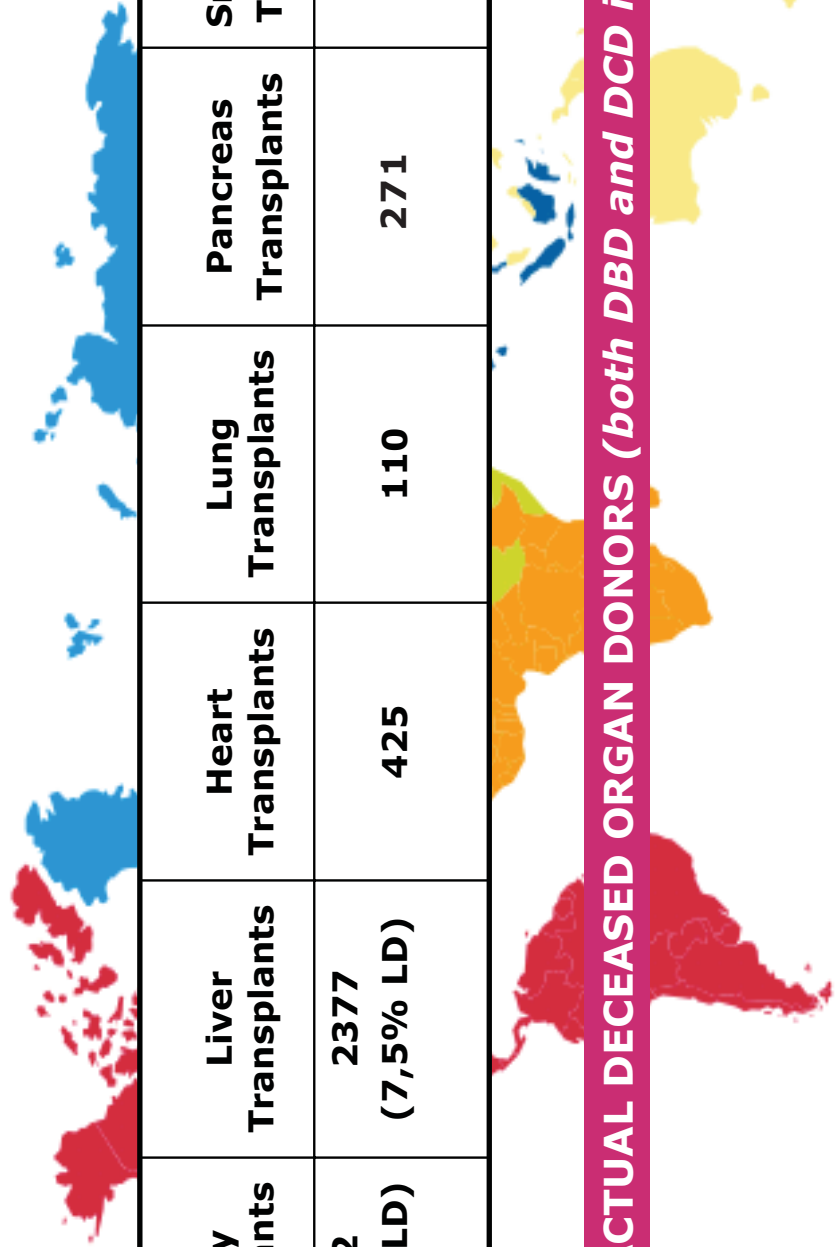
Global Observatory on  
Donation & Transplantation

In collaboration with  
World Health  
Organization



GODT African Americas Eastern Mediterranean Europe South-East Asia Western Pacific Search

LATINAMERICAN COUNTRIES



Kidney Transplants	Liver Transplants	Heart Transplants	Lung Transplants	Pancreas Transplants	Small Bowel Transplants
10922 (40,4% LD)	2377 (7,5% LD)	425	110	271	9

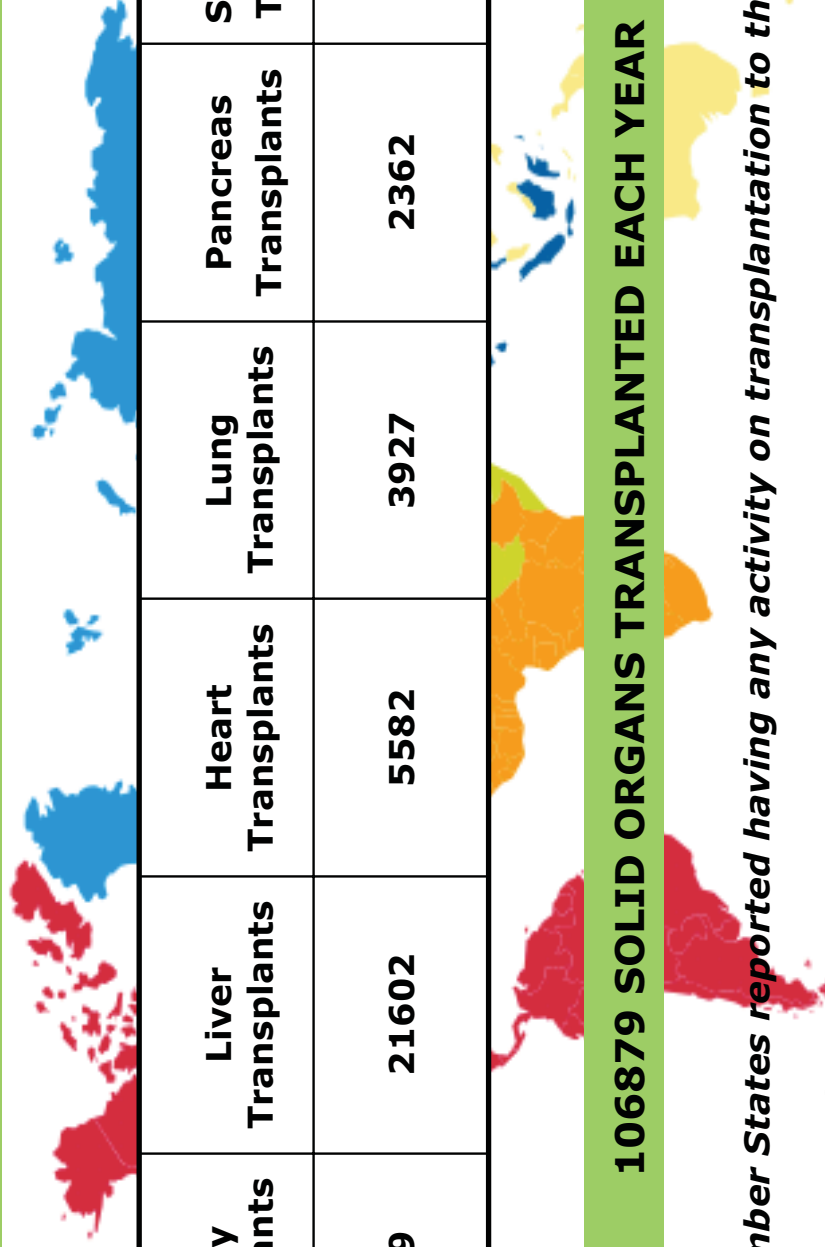
4221 ACTUAL DECEASED ORGAN DONORS (both DBD and DCD included)

\*2011 data

N= 18 COUNTRIES (566,3 million inhabitants)



## GLOBAL ACTIVITY IN ORGAN TRANSPLANTATION 2010 ESTIMATES

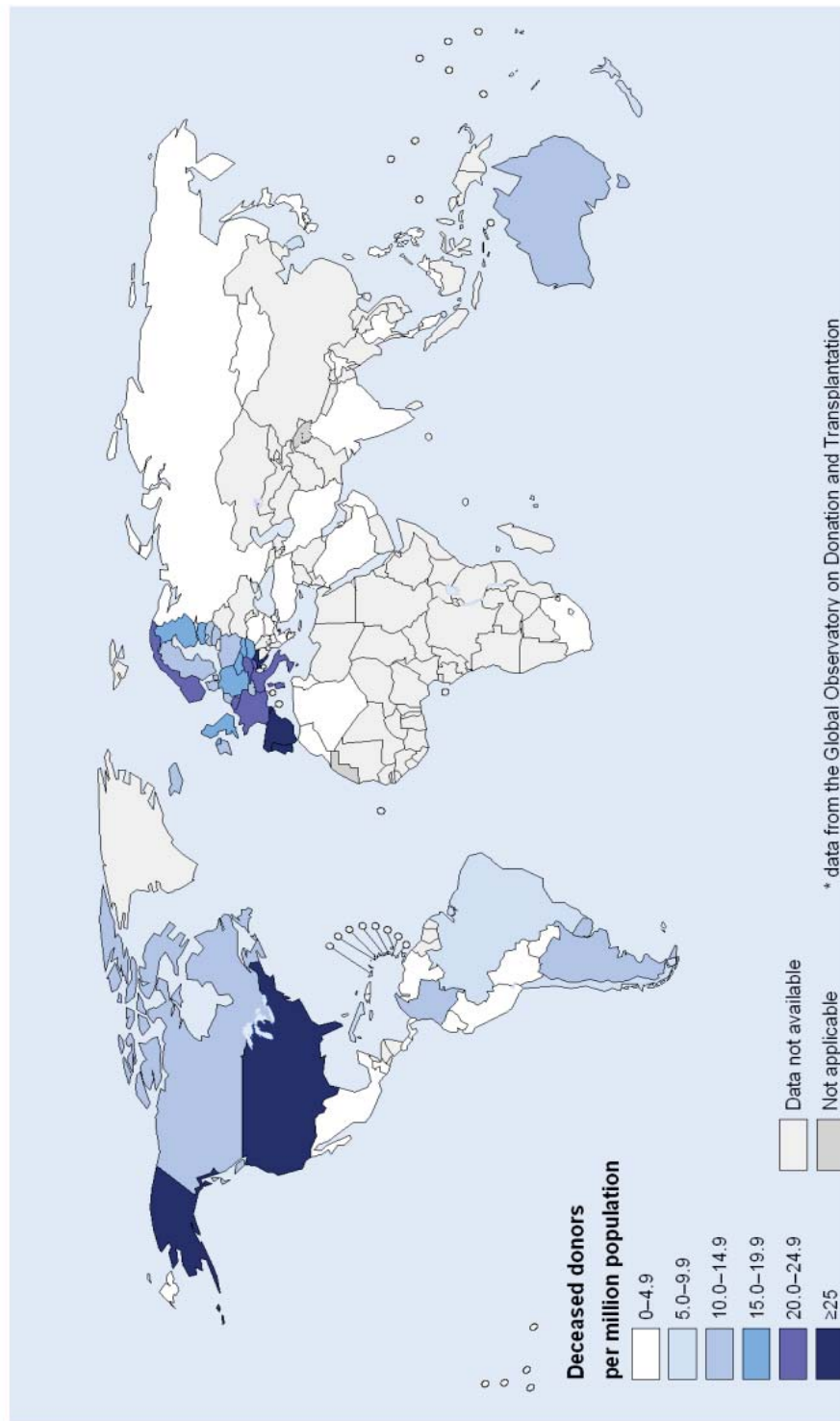


Kidney Transplants	Liver Transplants	Heart Transplants	Lung Transplants	Pancreas Transplants	Small Bowel Transplants
73179	21602	5582	3927	2362	227

## 106879 SOLID ORGANS TRANSPLANTED EACH YEAR

- 95 Member States reported having any activity on transplantation to the GODT.
- Information of organ transplantation activities is included in the GODT: 89 from 2010, 7 from 2009 and 6 countries from 2008.

## Donors from deceased persons, 2010\*

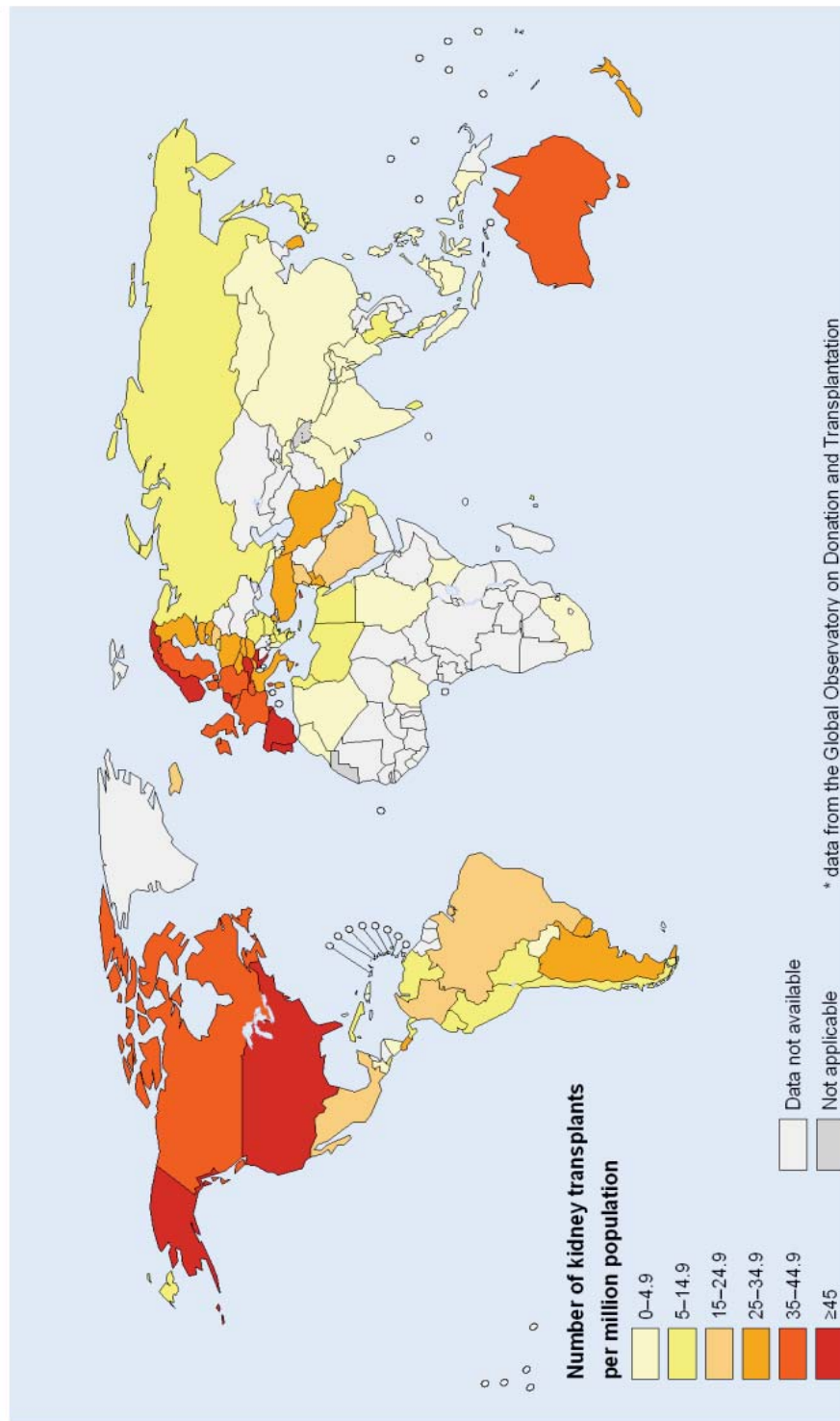


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Data Source: Global Observatory on Donation & Transplantation. Map Production: Public Health Information and Geographic Information Systems (GIS), World Health Organization

  
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## Kidney transplantation activities, 2010\*

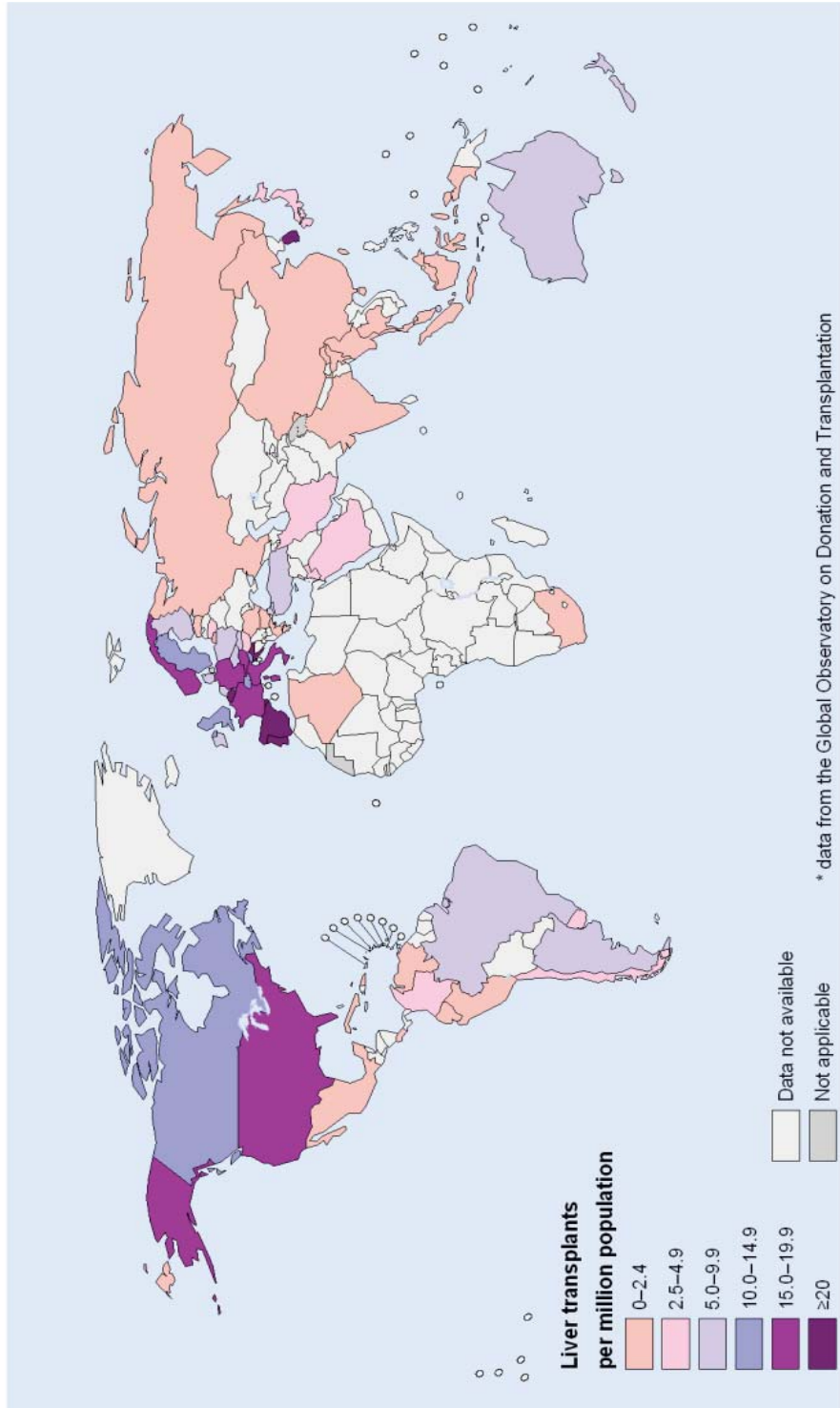


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Data Source: Global Observatory on Donation & Transplantation. Map Production: Public Health Information and Geographic Information Systems (GIS), World Health Organization




Liver transplantation activities, 2010\*

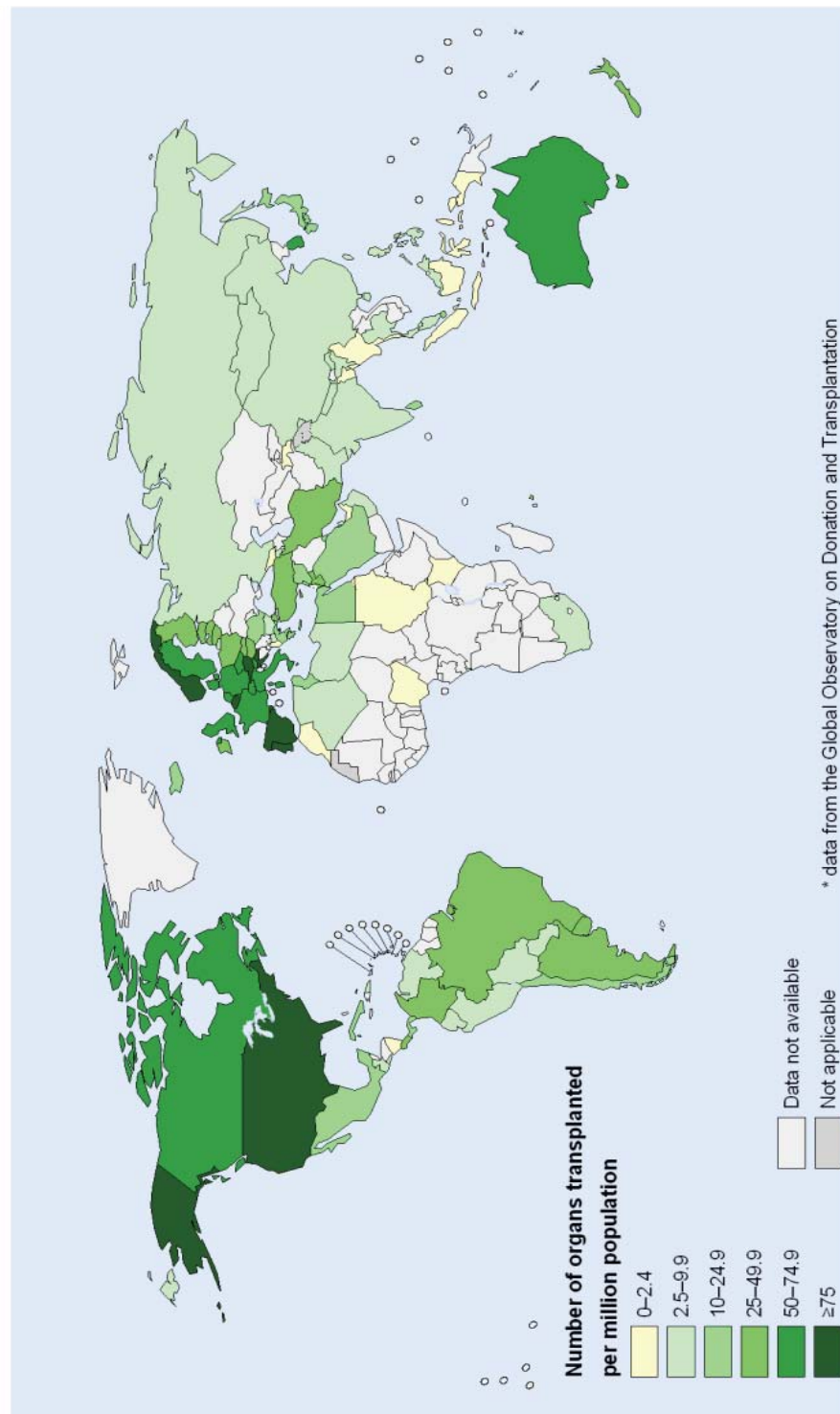


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Data Source: Global Observatory on Donation & Transplantation. Map Production: Public Health Information and Geographic Information Systems (GIS), World Health Organization

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## Global transplantation activities of solid organs, 2010\*



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Data Source: Global Observatory on Donation & Transplantation. Map Production: Public Health Information and Geographic Information Systems (GIS), World Health Organization



# International Data on Organ Donation and Transplantation Activity, Waiting List, Family Refusals and Transplantation of Vascularised Composite Allografts. Year 2011



## DONATION AND TRANSPLANTATION ACTIVITY

EUROPEAN UNION COUNTRIES										
COUNTRIES	AUSTRIA	BELGIUM	BULGARIA	CYPRUS	CZECH. R.	DENMARK	ESTONIA	FINLAND	FRANCE	
Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	8.4	11.0	7.4	1.1	10.5	5.6	1.3	5.4	65.1	
	DONATION									
Actual deceased organ donors										
-both DBD and DCD included- (pmp)	205 (24.4)	331 (30.1)	4 (0.5)	6 (5.5)	185 (17.6)	73 (13.0)	22 (16.9)	93 (17.2)	1630 (25.0)	
Actual donors after circulatory death –DCD- (pmp)	6 (0.7)	64 (5.8)	0	NA	1 (0.1)	0	0	0	58 (0.9)	
Multitorgan donors	149	256	2	6	105	50	13	61	1458	
	TRANSPLANTATION									
<b>KIDNEY</b>										
Total TX. -all combinations included- (pmp)	415 (49.4)	514 (46.7)	17 (2.3)	31 (28.2)	360 (34.3)	235 (42.0)	44 (33.8)	177 (32.8)	2976 (45.7)	
% (TX. from living d. / Total TX.)	13.3	7.8	52.9	61.3	11.1	42.6	9.1	7.3	10.1	
Paediatric <15 years	11	14	0		0	4	2	8	59	
TX. from deceased donors (pmp)	360 (42.9)	474 (43.1)	8 (1.1)	12 (10.9)	320 (30.5)	135 (24.1)	40 (30.8)	164 (30.4)	2674 (41.1)	
Single TX. (pmp)	358 (42.6)	467 (42.5)	8 (1.1)	12 (10.9)	318 (30.3)	134 (23.9)	37 (28.5)	164 (30.4)	2618 (40.2)	
Double TX. (pmp)	2 (0.2)	7 (0.6)		0	2 (0.2)	1 (0.2)	3 (2.3)	0	56 (0.9)	
TX. from living donors (pmp)	55 (6.5)	40 (3.6)	9 (1.2)	19 (17.3)	40 (3.8)	100 (17.9)	4 (3.1)	13 (2.4)	302 (4.6)	
TX. from Related living donors (pmp)	-	-	9 (1.2)	19 (17.3)	36 (3.4)	99 (17.7)	4 (3.1)	13 (2.4)	302 (4.6)	
TX. from Unrelated living donors (pmp)	-	-	0	0	4 (0.4)	1 (0.2)	0	0	NA	
TX. from DCD (pmp)	16 (1.9)	91 (8.3)	0	NA	2 (0.2)	NA	0	NA	65 (1.0)	
<b>LIVER</b>										
Total TX. -all combinations included- (pmp)	128 (15.2)	299 (27.2)	6 (0.8)	NA	88 (8.4)	51 (9.1)	8 (6.2)	56 (10.4)	1164 (17.9)	
Paediatric <15 years	7	36	0	NA	1	7	1	7	78	
Split TX. (pmp)	2 (0.2)	7 (0.6)	3 (0.4)	NA	0	-	0	-	90 (1.4)	
Domino TX. (pmp)	0	2 (0.2)	-	NA	0	0	0	0	19 (0.3)	
TX. from living donors (pmp)	2 (0.2)	35 (3.2)	3 (0.4)	NA	0	0	0	0	14 (0.2)	
TX. from DCD (pmp)	2 (0.2)	45 (4.1)	0	NA	0	NA	0	NA	5 (0.1)	
<b>HEART</b>										
Total TX. -all combinations included- (pmp)	51 (6.1)	76 (6.9)	2 (0.3)	NA	68 (6.5)	29 (5.2)	-	18 (3.3)	410 (6.3)	
Paediatric <15 years	5	4	0	NA	0	1	-	1	27	
<b>HEART-LUNG</b>										
Total TX. (pmp)	1 (0.1)	3 (0.3)	0	NA	0	0	0	0	12 (0.2)	
Paediatric <15 years	-	-	0	NA	0	0	0	0	1	
<b>LUNG</b>										
Total TX. -all combinations included- (pmp)	120 (14.3)	111 (10.1)	0	NA	18 (1.7)	30 (5.4)	3 (2.3)	23 (4.3)	324 (5.0)	
Paediatric <15 years	4	-	0	NA	0	0	0	0	3	
Single TX. (pmp)	7 (0.8)	13 (1.2)	0	NA	5 (0.5)	6 (1.1)	1 (0.8)	1 (0.2)	82 (1.3)	
Double TX. (heart-lung TX. included) (pmp)	113 (13.5)	98 (8.9)	0	NA	13 (1.2)	24 (4.3)	2 (1.5)	22 (4.1)	242 (3.7)	
TX. from living donors (pmp)	-	-	0	NA	0	NA	0	NA	0	
TX. from DCD (double + single) (pmp)	-	17 (1.5)	0	NA	0	NA	0	NA	0	
<b>PANCREAS</b>										
Total TX. -all combinations included- (pmp)	16 (1.9)	14 (1.3)	0	NA	32 (3.0)	-	-	1 (0.2)	73 (1.1)	
Paediatric <15 years	-	-	0	NA	0	-	-	-	0	
Kidney - Pancreas TX. (pmp)	16 (1.9)	11 (1.0)	0	NA	28 (2.7)	-	-	1 (0.2)	67 (1.0)	
Pancreas TX. Alone (pmp)	-	3 (0.3)	0	NA	4 (0.4)	-	-	0	6 (0.1)	
TX. from DCD (pmp)	-	-	0	NA	0	-	NA	-	-	
<b>SMALL BOWEL</b>										
Total TX. -all combinations included- (pmp)	-	-	0	NA	0	-	-	-	10 (0.2)	
Paediatric <15 years	-	-	0	NA	0	-	-	-	8	
Liver + Small bowel (pmp)	-	-	0	NA	0	-	-	-	3 (0.1)	
Small bowel TX. Alone (pmp)	-	-	0	NA	0	-	-	-	5 (0.1)	
<b>RECIPIENTS</b>										
Total number of patients transplanted (pmp)	-	-	25 (3.4)	NA	521 (49.6)	344 (61.4)	55 (42.3)	275 (50.9)	4755 (73.0)	
Paediatric <15 years	-	-	0	NA	14	-	3	-	163	
Patients transplanted from living donors (pmp)	57 (6.8)	75 (6.8)	12 (1.6)	19 (17.3)	40 (3.8)	100 (17.9)	4 (3.1)	13 (2.4)	316 (4.9)	
NA : Not applicable										



# DONATION AND TRANSPLANTATION ACTIVITY

## EUROPEAN UNION COUNTRIES

COUNTRIES Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	GERMANY	GREECE	HUNGARY	IRELAND	ITALY	LATVIA	LITHUANIA	LUXEMBOURG	MALTA
	81.8	11.4	10.0	4.5	60.8	2.2	3.3	0.5	0.4
DONATION									
TRANSPLANTATION									
<b>KIDNEY</b>									
Total TX, -all combinations included- (pmp)	2850 (34.8)	185 (16.2)	251 (25.1)	192 (43.1)	1751 (28.8)	77 (35.0)	75 (22.7)	0	18 (45.0)
% (TX, from living d. / Total TX.)	27.9	24.9	18.7	14.1	12.1	3.9	4.0	0	33.3
Paediatric <15 years	-	5	7	7	65	1	0	0	0
TX, from deceased donors (pmp)	2055 (25.1)	139 (12.2)	204 (20.4)	165 (36.7)	1540 (25.3)	74 (33.6)	72 (21.8)	0	12 (30.0)
Single TX, (pmp)	2020 (24.7)	137 (12.0)	204 (20.4)	162 (36.0)	1432 (23.6)	74 (33.6)	72 (21.8)	0	12 (30.0)
Double TX, (pmp)	35 (0.4)	2 (0.2)	0	3 (0.7)	108 (1.8)	0	0	0	0
TX, from living donors (pmp)	795 (9.7)	46 (4.0)	47 (4.7)	27 (6.0)	211 (3.5)	3 (1.4)	3 (0.9)	0	6 (15.0)
TX, from Related living donors (pmp)	-	46 (4.0)	47 (4.7)	27 (6.0)	134 (2.2)	3 (1.4)	3 (0.9)	0	5 (12.5)
TX, from Unrelated living donors (pmp)	-	-	0	0	-	0	NA	0	1 (2.5)
TX, from DCD (pmp)	0	-	0	1 (0.2)	2 (0.0)	26 (11.8)	NA	0	NA
<b>LIVER</b>									
Total TX, -all combinations included- (pmp)	1199 (14.7)	42 (3.7)	41 (4.4)	61 (13.6)	1034 (17.0)	1 (0.5)	12 (3.6)	0	NA
Paediatric <15 years	74	0	2	0	66	0	0	0	NA
Split TX, (pmp)	75 (0.9)	-	1 (0.1)	0	88 (1.1)	0	NA	0	NA
Domino TX, (pmp)	12 (0.1)	-	0	0	0	0	NA	0	NA
TX, from living donors (pmp)	71 (0.9)	-	0	0	15 (0.2)	0	0	0	NA
TX, from DCD (pmp)	0	-	0	0	0	0	NA	0	NA
<b>HEART</b>									
Total TX, -all combinations included- (pmp)	366 (4.5)	6 (0.5)	14 (1.4)	6 (1.3)	278 (4.6)	3 (1.4)	5 (1.5)	-	1 (2.5)
Paediatric <15 years	19	0	1	0	26	0	0	-	0
<b>HEART-LUNG</b>									
Total TX, (pmp)	10 (0.1)	-	0	8 (1.8)	1 (0.0)	0	0	-	NA
Paediatric <15 years	0	-	0	0	1	0	0	-	NA
<b>LUNG</b>									
Total TX, -all combinations included- (pmp)	337 (4.1)	-	NA	8 (1.8)	120 (2.0)	0	1 (0.3)	-	NA
Paediatric <15 years	5	-	NA	0	6	0	0	-	NA
Single TX, (pmp)	57 (0.7)	-	NA	7 (1.6)	32 (0.5)	0	0	-	NA
Double TX, (heart-lung TX, included) (pmp)	280 (3.4)	-	NA	1 (0.2)	88 (1.4)	0	1 (0.3)	-	NA
TX, from living donors (pmp)	-	-	NA	0	0	0	NA	-	NA
TX, from DCD (double + single) (pmp)	0	-	NA	0	0	0	NA	-	NA
<b>PANCREAS</b>									
Total TX, -all combinations included- (pmp)	171 (2.1)	1 (0.1)	10 (1.0)	8 (1.8)	58 (1.0)	0	3 (0.9)	-	NA
Paediatric <15 years	0	-	0	0	1	0	0	-	NA
Kidney - Pancreas TX, (pmp)	154 (1.9)	1 (0.1)	10 (1.0)	7 (1.6)	41 (0.7)	0	3 (0.9)	-	NA
Pancreas TX, Alone (pmp)	14 (0.2)	-	0	1 (0.2)	14 (0.2)	0	NA	-	NA
TX, from DCD (pmp)	0	-	0	0	0	0	NA	-	NA
<b>SMALL BOWEL</b>									
Total TX, -all combinations included- (pmp)	9 (0.1)	-	NA	NA	4 (0.1)	0	NA	-	NA
Paediatric <15 years	0	-	NA	NA	2	0	NA	-	NA
Liver + Small bowel (pmp)	4 (0.0)	-	NA	NA	2 (0.0)	0	NA	-	NA
Small bowel TX, Alone (pmp)	5 (0.1)	-	NA	NA	2 (0.0)	0	NA	-	NA
<b>RECIPIENTS</b>									
Total number of patients transplanted (pmp)	-	232 (20.4)	304 (30.4)	192 (42.7)	3167 (62.1)	81 (36.8)	93 (28.2)	-	19 (47.5)
Paediatric <15 years	-	5	13	4	161	3	0	-	0
Patients transplanted from living donors (pmp)	866 (10.6)	46 (4.0)	47 (4.7)	27 (6.0)	226 (3.7)	3 (1.4)	3 (0.9)	-	6 (15.0)
NA : Not applicable									

## DONATION AND TRANSPLANTATION ACTIVITY

EUROPEAN UNION COUNTRIES									
COUNTRIES	NETHERLANDS	POLAND	PORTUGAL	ROMANIA	SLOVAKIA	SLOVENIA	SPAIN	SWEDEN	U. K.
Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	16.7	38.3	10.7	21.4	5.5	2.0	47.2	9.4	62.3
DONATION									
Actual deceased organ donors									
-both DBD and DCD included- (pmp)	227 (13.6)	553 (14.4)	301 (28.1)	77 (3.6)	69 (12.5)	31 (15.5)	1667 (35.3)	146 (15.5)	1056 (17.0)
Actual donors after circulatory death –DCD- (pmp)	117 (7.0)	0	0	3 (0.1)	0	0	117 (2.5)	0	405 (6.5)
Multitorgan donors	178	323	223	58	40	24	-	123	749
TRANSPLANTATION									
KIDNEY									
Total TX -all combinations included- (pmp)	860 (51.5)	1075 (28.1)	530 (49.5)	219 (10.2)	129 (23.5)	46 (23.0)	2498 (52.9)	435 (46.3)	2752 (44.2)
% (TX. from living d. / Total TX.)	51.2	3.7	8.9	34.2	10.1	0	12.5	42.3	37.3
Paediatric <15 years	130	50	10	9	2	0	63	15	94
TX. from deceased donors (pmp)	420 (25.1)	1035 (27.0)	483 (45.1)	144 (6.7)	116 (21.1)	46 (23.0)	2186 (46.3)	251 (26.7)	1726 (27.7)
Single TX. (pmp)	419 (25.1)	-	455 (42.5)	141 (6.6)	115 (21.0)	46 (23.0)	2167 (45.9)	250 (26.6)	-
Double TX. (pmp)	1 (0.0)	-	28 (2.6)	3 (0.1)	1 (0.2)	0	19 (0.4)	1 (0.1)	-
TX. from living donors (pmp)	440 (26.3)	40 (1.0)	47 (4.4)	75 (3.5)	13 (2.4)	0	312 (6.6)	184 (19.6)	1026 (16.5)
TX. from Related living donors (pmp)	217 (13.0)	40 (1.0)	31 (2.9)	-	10 (2.0)	0	304 (6.4)	183 (19.5)	934 (15.0)
TX. from Unrelated living donors (pmp)	223 (13.4)	0	-	-	3 (0.5)	0	8 (0.2)	1 (0.1)	92 (1.5)
TX. from DCD (pmp)	207 (12.4)	0	0	6 (0.3)	0	0	140 (3.0)	-	622 (10.0)
LIVER									
Total TX -all combinations included- (pmp)	135 (8.1)	300 (7.8)	219 (20.5)	65 (3.0)	25 (4.5)	20 (10.0)	1137 (24.1)	156 (16.6)	759 (12.2)
Paediatric <15 years	21	30	5	2	0	0	68	14	101
Split TX. (pmp)	1 (0.1)	0	0	4 (0.2)	0	1 (0.5)	4 (0.1)	-	124 (2.0)
Domino TX. (pmp)	2 (0.1)	0	26 (2.4)	0	0	0	6 (0.1)	3 (0.3)	4 (0.1)
TX. from living donors (pmp)	8 (0.5)	18 (0.5)	0	8 (0.4)	0	0	28 (0.6)	7 (0.7)	37 (0.6)
TX. from DCD (pmp)	37 (2.2)	0	0	3 (0.1)	0	0	8 (0.2)	-	124 (2.0)
HEART									
Total TX -all combinations included- (pmp)	44 (2.6)	80 (2.1)	46 (4.3)	7 (0.3)	19 (3.5)	14 (7.0)	237 (5.0)	52 (5.5)	148 (2.4)
Paediatric <15 years	4	4	3	0	0	1	17	3	36
HEART-LUNG									
Total TX. (pmp)	0	0	0	0	0	0	4 (0.1)	1 (0.1)	4 (0.1)
Paediatric <15 years	0	0	0	0	0	0	0	0	0
LUNG									
Total TX -all combinations included- (pmp)	68 (4.1)	15 (0.4)	18 (1.7)	0	0	0	230 (4.9)	60 (6.4)	191 (3.1)
Paediatric <15 years	1	0	0	0	0	0	6	0	2
Single TX. (pmp)	13 (0.8)	10 (0.3)	10 (0.9)	0	0	0	100 (2.1)	15 (1.6)	35 (0.6)
Double TX. (heart-lung TX. included) (pmp)	55 (3.3)	5 (0.1)	8 (0.7)	100 (0.3)	0	0	130 (2.8)	45 (4.8)	156 (2.5)
TX. from living donors (pmp)	0	0	0	0	0	0	NA	-	0
TX. from DCD (double + single) (pmp)	27 (1.6)	0	0	0	0	0	8 (0.2)	-	19 (0.3)
PANCREAS									
Total TX -all combinations included- (pmp)	30 (1.8)	34 (0.9)	25 (2.3)	0	0	1 (0.5)	111 (2.4)	35 (3.7)	236 (3.8)
Paediatric <15 years	0	0	0	0	0	0	5	-	2
Kidney - Pancreas TX. (pmp)	20 (1.2)	33 (0.9)	25 (2.3)	92 (0.3)	0	1 (0.5)	92 (1.9)	26 (2.8)	163 (2.6)
Pancreas TX. Alone (pmp)	2 (0.1)	1 (0.0)	0	14 (0.3)	0	0	14 (0.3)	9 (1.0)	35 (0.6)
TX. from DCD (pmp)	4 (0.2)	0	0	0	0	0	0	-	40 (0.6)
SMALL BOWEL									
Total TX -all combinations included- (pmp)	1 (0.1)	0	0	0	0	0	9 (0.2)	2 (0.2)	21 (0.3)
Paediatric <15 years	0	0	0	0	0	0	7	-	8
Liver + Small bowel (pmp)	0	0	0	0	0	0	0	-	9 (0.1)
Small bowel TX. Alone (pmp)	1 (0.1)	0	0	0	0	0	4 (0.1)	-	12 (0.2)
RECIPIENTS									
Total number of patients transplanted (pmp)	1122 (67.2)	1464 (38.2)	812 (75.9)	-	-	80 (40.0)	4079 (86.4)	711 (75.6)	3902 (62.6)
Paediatric <15 years	39	84	18	-	-	1	154	-	335
Patients transplanted from living donors (pmp)	448 (26.8)	58 (1.5)	47 (4.4)	83 (3.9)	13 (2.4)	0	340 (7.2)	191 (24.4)	1063 (17.1)
N/A : Not applicable									

# DONATION AND TRANSPLANTATION ACTIVITY

## OTHER COUNTRIES

COUNTRIES	ALGERIA	AUSTRALIA	BELARUS	CANADA	CROACIA	EGYPT	GEORGIA	ICELAND	ISRAEL	LEBANON	LIBYA
Population (million inhabitants)											
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	36.0	22.6	9.6	34.5	4.3	82.5	4.3	0.3	7.6	4.3	6.4
DONATION											
Actual deceased organ donors											
-both DBD and DCD included- (pmp)	NA	337 (14.9)	96 (10.0)	531 (15.4)	148 (34.4)	NA	0	2 (6.7)	82 (10.8)	10 (2.3)	NA
Actual donors after circulatory death –DCD- (pmp)	NA	86 (3.8)	0	65 (1.9)	-	NA	0	0	-	-	NA
Multiorgan donors	NA	240	56	-	130	NA	0	2	62	8	NA
TRANSPLANTATION											
<b>KIDNEY</b>											
Total TX, -all combinations included- (pmp)	124 (3.4)	825 (36.5)	175 (18.2)	1236 (35.8)	237 (55.2)	1417 (17.2)	17 (4.0)	11 (36.7)	242 (31.8)	80 (18.6)	5 (0.8)
% (TX, from living d. / Total TX.)	100	30.9	3.4	35.0	3.8	100	100	100	49.2	81.3	100
Paediatric <15 years	12	23	21	-	4	-	-	-	9	-	0
TX, from deceased donors (pmp)	0	570 (25.2)	169 (17.6)	803 (23.3)	228 (53.1)	NA	0	-	123 (16.2)	15 (3.5)	NA
Single TX. (pmp)	0	554 (24.5)	169 (17.6)	786 (22.8)	225 (52.4)	NA	0	-	-	15 (3.5)	NA
Double TX. (pmp)	0	16 (0.7)	0	17 (0.5)	3 (0.7)	NA	0	-	-	0	NA
TX, from living donors (pmp)	124 (3.4)	255 (11.3)	6 (0.6)	433 (12.6)	9 (2.1)	1417 (17.2)	17 (4.0)	11 (36.7)	119 (15.7)	65 (15.1)	5 (0.8)
TX, from Related living donors (pmp)	118 (3.3)	216 (9.6)	6 (0.6)	275 (8.0)	-	-	-	11 (36.7)	90 (11.8)	-	5 (0.8)
TX, from Unrelated living donors (pmp)	6 (0.2)	39 (1.7)	0	158 (4.6)	-	-	-	0	29 (3.8)	-	0
TX, from DCD (pmp)	0	151 (6.7)	0	108 (3.1)	0	NA	0	-	-	-	NA
<b>LIVER</b>											
Total TX, -all combinations included- (pmp)	6 (0.2)	215 (9.5)	43 (4.5)	487 (14.1)	124 (28.9)	450 (5.5)	0	-	75 (9.9)	1 (0.2)	0
Paediatric <15 years	0	12	9	-	4	NA	0	-	3	-	0
Split TX. (pmp)	0	30 (1.3)	0	16 (0.5)	5 (1.1)	NA	0	-	2 (0.3)	-	NA
Domino TX. (pmp)	0	-	0	0	0	NA	0	-	-	-	NA
TX, from living donors (pmp)	6 (0.2)	2 (0.1)	2 (0.2)	64 (1.9)	3 (0.7)	450 (5.5)	0	-	6 (0.8)	-	0
TX, from DCD (pmp)	0	11 (0.5)	0	20 (0.6)	0	NA	0	-	-	1 (0.2)	NA
<b>HEART</b>											
Total TX, -all combinations included- (pmp)	0	66 (2.9)	21 (2.2)	157 (4.6)	38 (8.9)	NA	0	-	23 (3.0)	6 (1.4)	NA
Paediatric <15 years	0	4	0	0	1	NA	0	-	3	-	NA
<b>HEART-LUNG</b>											
Total TX. (pmp)	0	2 (0.1)	0	1 (0.0)	-	NA	0	-	4 (0.5)	-	NA
Paediatric <15 years	0	-	0	0	-	NA	0	-	2	-	NA
<b>LUNG</b>											
Total TX, -all combinations included- (pmp)	0	159 (7.0)	0	181 (5.2)	-	NA	0	-	59 (7.8)	-	NA
Paediatric <15 years	0	5	0	-	-	NA	0	-	2	-	NA
Single TX. (pmp)	0	12 (0.5)	0	13 (0.4)	-	NA	0	-	39 (5.1)	-	NA
Double TX. (heart-lung TX. included) (pmp)	0	147 (6.5)	0	167 (4.8)	-	NA	0	-	20 (2.6)	-	NA
TX, from living donors (pmp)	0	-	0	1 (0.0)	-	NA	0	-	-	-	NA
TX, from DCD (double + single) (pmp)	0	33 (1.5)	0	24 (0.7)	-	NA	0	-	-	-	NA
<b>PANCREAS</b>											
Total TX, -all combinations included- (pmp)	0	26 (1.2)	2 (0.2)	108 (3.1)	12 (2.8)	NA	0	-	12 (1.6)	-	NA
Paediatric <15 years	0	1	0	-	-	NA	0	-	-	-	NA
Kidney - Pancreas TX. (pmp)	0	26 (1.2)	2 (0.2)	56 (1.6)	10 (2.3)	NA	0	-	12 (1.6)	-	NA
Pancreas TX. Alone (pmp)	0	-	0	15 (0.4)	2 (0.5)	NA	0	-	-	-	NA
TX, from DCD (pmp)	0	-	0	3 (0.1)	-	NA	0	-	-	-	NA
<b>SMALL BOWEL</b>											
Total TX, -all combinations included- (pmp)	0	-	0	2 (0.1)	-	NA	0	-	-	-	NA
Paediatric <15 years	0	-	0	-	-	NA	0	-	-	-	NA
Liver + Small bowel (pmp)	0	-	0	0	-	NA	0	-	-	-	NA
Small bowel TX. Alone (pmp)	0	-	0	0	-	NA	0	-	-	-	NA
<b>RECIPIENTS</b>											
Total number of patients transplanted (pmp)	130 (3.6)	1266 (56.0)	241 (25.1)	-	400 (93.0)	1867 (22.6)	17 (4.0)	11 (36.7)	125 (16.4)	87 (20.2)	5 (0.8)
Paediatric <15 years	12	-	30	-	-	NA	0	-	-	-	0
Patients transplanted from living donors (pmp)	130 (3.6)	257 (11.4)	8 (0.8)	498 (14.4)	12 (2.7)	1867 (22.6)	17 (4.0)	11 (36.7)	125 (16.4)	65 (15.1)	5 (0.8)
NA : Not applicable											

## DONATION AND TRANSPLANTATION ACTIVITY

## OTHER COUNTRIES

COUNTRIES	MACEDONIA	MOLDOVA	NEW ZEALAND	NORWAY	PALESTINE	RUSSIA	SWITZERLAND	SYRIA	TUNISIA	TURKEY	USA
Population (million inhabitants)	2.1	3.6	4.4	5.0	4.2	142.8	8.0	20.8	10.7	74.7	313.1
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>											
DONATION											
Actual deceased organ donors											
-both DBD and DCD included- (pmp)	0	0	35 (8.0)	127 (24.5)	NA	470 (3.3)	100 (12.5)	0	6 (0.6)	311 (4.2)	8126 (26.0)
Actual donors after circulatory death –DCD– (pmp)	0	0	2 (0.5)	0	NA	187 (1.3)	3 (0.4)	0	0	NA	1055 (3.4)
Multitorgan donors	0	0	31	112	NA	188	87	0	1	283	6360 (20.3)
TRANSPLANTATION											
KIDNEY											
Total TX. -all combinations included- (pmp)	6 (2.9)	1 (0.3)	118 (26.8)	302 (60.4)	49 (11.7)	975 (6.8)	282 (35.3)	363 (17.5)	109 (10.2)	2942 (39.4)	17610 (56.2)
% (TX. from living d. / Total TX.)	100	100	48.3	24.2	100	18.4	35.8	100	89.9	82.3	32.8
Paediatric <15 years	2	0	6	5	NA	-	7	25	3	184	491
TX. from deceased donors (pmp)	0	0	61 (13.9)	229 (45.8)	NA	796 (5.6)	181 (22.6)	0	11 (1.0)	521 (7.0)	11838 (37.8)
Single TX. (pmp)	0	0	57 (13.0)	229 (45.8)	NA	796 (5.6)	175 (21.9)	0	11 (1.0)	NA	11536 (36.8)
Double TX. (pmp)	0	0	4 (1.0)	-	NA	0	6 (0.8)	0	0	NA	302 (1.0)
TX. from living donors (pmp)	6 (2.9)	1 (0.3)	57 (13.0)	73 (14.6)	49 (11.7)	179 (1.3)	101 (12.6)	363 (17.5)	98 (9.2)	2421 (32.4)	5772 (18.4)
TX. from Related living donors (pmp)	6 (2.9)	1 (0.3)	49 (11.1)	73 (14.6)	49 (11.7)	179 (1.3)	101 (12.6)	141 (6.8)	98 (9.2)	NA	5029 (16.1)
TX. from Unrelated living donors (pmp)	0	0	8 (1.8)	0	0	NA	0	222 (10.7)	0	NA	743 (2.4)
TX. from DCD (pmp)	0	0	4 (0.9)	-	NA	-	6 (0.8)	0	0	NA	1723
LIVER											
Total TX. -all combinations included- (pmp)	1 (0.5)	0	30 (6.8)	89 (17.8)	NA	204 (1.4)	109 (13.6)	0	0	904 (12.1)	6342 (20.3)
Paediatric <15 years	1	0	3	5	NA	-	11	0	0	183	491
Split TX. (pmp)	0	0	-	-	NA	1 (0.0)	18 (2.3)	0	0	NA	143 (0.5)
Domino TX. (pmp)	0	0	-	0	NA	NA	0	0	0	NA	11 (0.0)
TX. from living donors (pmp)	0	0	8 (1.8)	0	NA	81 (0.6)	9 (1.1)	0	0	623 (8.3)	247 (0.8)
TX. from DCD (pmp)	0	0	2 (0.5)	-	NA	1 (0.0)	1 (0.1)	0	0	NA	269 (0.9)
HEART											
Total TX. -all combinations included- (pmp)	NA	NA	12 (2.7)	30 (6.0)	NA	107 (0.7)	36 (4.5)	0	1(0.1)	93 (1.2)	2349 (7.5)
Paediatric <15 years	NA	NA	-	2	NA	0	3	0	0	13	322
HEART-LUNG											
Total TX. (pmp)	NA	NA	-	1 (0.2)	NA	2 (0.0)	0	0	0	-	27 (0.1)
Paediatric <15 years	NA	NA	-	0	NA	0	0	0	0	-	1
LUNG											
Total TX. -all combinations included- (pmp)	NA	NA	13 (3.0)	28 (5.6)	NA	8 (0.1)	54 (6.8)	0	0	5 (0.1)	1849 (5.9)
Paediatric <15 years	NA	NA	-	0	NA	0	0	0	0	-	25
Single TX. (pmp)	NA	NA	-	0	NA	0	6 (0.8)	0	0	5 (0.1)	548 (1.8)
Double TX. (heart-lung TX. included) (pmp)	NA	NA	13 (3.0)	28 (5.6)	NA	8 (0.1)	48 (6.0)	0	0	-	1301 (4.2)
TX. from living donors (pmp)	NA	NA	-	-	NA	0	0	0	0	-	1 (0.0)
TX. from DCD (double + single) (pmp)	NA	NA	-	-	NA	0	0	0	0	NA	19 (0.1)
PANCREAS											
Total TX. -all combinations included- (pmp)	NA	NA	3 (0.7)	20 (4.0)	NA	14 (0.1)	28 (3.5)	0	0	26 (0.3)	1082 (3.5)
Paediatric <15 years	NA	NA	-	-	NA	0	0	0	0	-	31
Kidney + Pancreas TX. (pmp)	NA	NA	3 (0.7)	10 (2.0)	NA	13 (0.1)	14 (1.8)	0	0	-	795 (2.5)
Pancreas TX. Alone (pmp)	NA	NA	-	10 (2.0)	NA	1 (0.0)	12 (1.5)	0	0	-	287 (0.9)
TX. from DCD (pmp)	NA	NA	-	-	NA	1 (0.0)	0	0	0	NA	32 (0.1)
SMALL BOWEL											
Total TX. -all combinations included- (pmp)	NA	NA	-	-	NA	NA	1 (0.1)	0	0	1 (0.0)	129 (0.4)
Paediatric <15 years	NA	NA	-	-	NA	NA	0	0	0	-	51
Liver + Small bowel (pmp)	NA	NA	-	-	NA	NA	0	0	0	NA	50 (0.2)
Small bowel TX. Alone (pmp)	NA	NA	-	-	NA	NA	0	0	0	1 (0.0)	66 (0.2)
RECIPIENTS											
Total number of patients transplanted (pmp)	6 (2.9)	1 (0.3)	115 (26.1)	457 (91.4)	49 (11.7)	1292 (9.0)	492 (61.5)	363 (17.5)	110 (10.3)	3928 (52.6)	28539 (91.1)
Paediatric <15 years	2	0	-	-	NA	NA	20	0	3	557	1406
Patients transplanted from living donors (pmp)	6 (2.9)	1 (0.3)	65 (14.8)	73 (14.6)	49 (11.7)	260 (1.8)	110 (13.8)	363 (17.5)	98 (9.2)	3044 (40.7)	6020 (19.2)
NA : Not applicable											

# DONATION AND TRANSPLANTATION ACTIVITY

## LATINAMERICAN COUNTRIES

COUNTRIES	ARGENTINA	BOLIVIA	BRASIL	CHILE	COLOMBIA	COSTA RICA	CUBA	DOMINICANA	ECUADOR
Population (million inhabitants)	40.6	10.1	196.7	17.3	46.9	4.7	11.3	10.1	14.7
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>									
DONATION									
Actual deceased organ donors									
-both DBD and DCD included- (pmp)	604 (14.9)	10 (1.0)	2207 (11.2)	113 (6.5)	392 (8.4)	24 (5.1)	128 (11.3)	17 (1.7)	31 (2.2)
Actual donors after circulatory death –DCD- (pmp)	0	0	0	0	0	-	-	0	0
Multiorgan donors	330	0	1125	90	111	8	22	9	31
TRANSPLANTATION									
KIDNEY									
Total TX, -all combinations included- (pmp)	1097 (27.0)	75 (7.4)	4957 (25.2)	239 (13.8)	798 (17.0)	148 (31.5)	146 (12.9)	45 (4.5)	82 (5.6)
% (TX, from living d. / Total TX.)	22.7	74.7	33.1	18.4	8.8	80.4	1.4	51.1	36.6
Paediatric <15 years	46	2	83	-	56	10	6	0	11
TX, from deceased donors (pmp)	848 (20.9)	19 (1.9)	3314 (16.8)	195 (11.3)	727 (15.5)	29 (6.2)	144 (12.7)	22 (2.2)	52 (3.5)
Single TX, (pmp)	847 (20.9)	-	-	-	724 (15.4)	29 (6.2)	142 (12.6)	22 (2.2)	52 (3.5)
Double TX, (pmp)	1 (0.0)	-	-	-	3 (0.1)	0	2 (0.2)	0	0
TX, from living donors (pmp)	249 (6.1)	56 (5.5)	1643 (8.4)	44 (2.5)	71 (1.5)	119 (25.3)	2 (0.2)	23 (2.3)	30 (2.0)
TX, from Related living donors (pmp)	249 (6.1)	45 (4.5)	1345 (6.8)	44 (2.5)	65 (1.4)	119 (25.3)	-	19 (1.9)	30 (2.0)
TX, from Unrelated living donors (pmp)	0	11 (1.1)	298 (1.5)	0	6 (0.1)	0	-	4 (0.4)	0
TX, from DCD (pmp)	0	0	NA	0	0	-	0	0	0
LIVER									
Total TX, -all combinations included- (pmp)	364 (9.0)	0	1496 (7.6)	90 (5.2)	191 (4.1)	14 (3.0)	22 (1.9)	9 (0.9)	15 (1.0)
Paediatric <15 years	22	0	183 (0.9)	-	27	3 (0.6)	-	0	1
Split TX, (pmp)	25 (0.6)	0	0	0	0	-	2 (0.2)	0	0
Domino TX, (pmp)	1 (0.0)	0	0	0	0	-	0	0	0
TX, from living donors (pmp)	32 (0.8)	0	104 (0.5)	12 (0.7)	7 (0.1)	6 (1.3)	2 (0.2)	0	0
TX, from DCD (pmp)	0	0	NA	0	0	-	0	0	0
HEART									
Total TX, -all combinations included- (pmp)	106 (2.6)	0	160 (0.8)	32 (1.8)	82 (1.7)	6 (1.3)	2 (0.2)	NA	2 (0.1)
Paediatric <15 years	7	0	29	-	5	NA	-	NA	0
HEART-LUNG									
Total TX, (pmp)	1 (0.0)	0	0	0	0	NA	2 (0.2)	NA	0
Paediatric <15 years	0	0	0	0	0	NA	-	NA	0
LUNG									
Total TX, -all combinations included- (pmp)	26 (0.6)	0	48 (0.2)	27 (1.6)	4 (0.1)	NA	0	NA	0
Paediatric <15 years	3	0	4	-	0	NA	0	NA	0
Single TX, (pmp)	13 (0.3)	0	-	-	2 (0.0)	NA	0	NA	0
Double TX, (heart-lung TX, included) (pmp)	13 (0.3)	0	-	-	2 (0.0)	NA	0	NA	0
TX, from living donors (pmp)	0	0	1 (0.0)	0	0	NA	0	NA	0
TX, from DCD (double + single) (pmp)	0	0	NA	0	0	NA	0	NA	0
PANCREAS									
Total TX, -all combinations included- (pmp)	75 (1.8)	0	184 (0.9)	1 (0.1)	6 (0.1)	NA	0	NA	0
Paediatric <15 years	0	0	1	-	0	NA	0	NA	0
Kidney - Pancreas TX, (pmp)	65 (1.6)	0	130 (0.7)	1 (0.1)	4 (0.1)	NA	0	NA	0
Pancreas TX, Alone (pmp)	9 (0.2)	0	54 (0.3)	0	2 (0.0)	NA	0	NA	0
TX, from DCD (pmp)	0	0	NA	0	0	NA	0	NA	0
SMALL BOWEL									
Total TX, -all combinations included- (pmp)	5 (0.1)	0	NA	0	3 (0.1)	NA	0	NA	0
Paediatric <15 years	3	0	NA	0	0	NA	0	NA	0
Liver + Small bowel (pmp)	1 (0.0)	0	NA	0	1 (0.0)	-	0	NA	0
Small bowel TX, Alone (pmp)	4 (0.1)	0	NA	0	2 (0.0)	-	0	NA	0
RECIPIENTS									
Total number of patients transplanted (pmp)	1377 (33.9)	-	6485 (34.8)	389 (22.5)	1084 (23.1)	168 (35.7)	-	54 (5.3)	99 (6.7)
Paediatric <15 years	81	2	300	-	88	13	-	0	12
Patients transplanted from living donors (pmp)	281 (6.9)	56 (5.5)	1748 (8.9)	56 (3.2)	78 (1.7)	125 (26.6)	4 (0.4)	23 (2.3)	30 (2.0)
NA: Not applicable									

## DONATION AND TRANSPLANTATION ACTIVITY

LATINAMERICAN COUNTRIES									
COUNTRIES	EL SALVADOR	GUATEMALA	MEXICO	NICARAGUA	PANAMA	PARAGUAY	PERU	URUGUAY	VENEZUELA
Population (million inhabitants)									
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	6.2	14.8	114.8	5.9	3.4	6.6	29.4	3.4	29.4
DONATION									
Actual deceased organ donors									
-both DBD and DCD included- (pmp)	0	8 (0.5)	356 (3.1)	-	24 (7.1)	0	127 (4.3)	68 (20.0)	112 (3.8)
Actual donors after circulatory death –DCD- (pmp)	0	0	0	-	0	0	0	NA	0
Multiorgan donors	0	0	356	-	6	0	40	-	0
TRANSPLANTATION									
<b>KIDNEY</b>									
Total TX. -all combinations included- (pmp)	44 (7.1)	102 (6.9)	2468 (21.5)	-	64 (18.8)	14 (2.1)	213 (7.2)	132 (38.8)	298 (10.1)
% (TX. from living d. / Total TX.)	100	84.3	76.5	-	25.0	100	15.5	3.0	31.2
Paediatric <15 years	0	10	225	-	-	0	24	4	14
TX. from deceased donors (pmp)	0	16 (1.1)	579 (5.0)	-	48 (14.1)	0	180 (6.1)	128 (37.6)	205 (7.0)
Single TX. (pmp)	0	16 (1.1)	571 (5.0)	-	-	0	176 (6.0)	-	205 (7.0)
Double TX. (pmp)	0	0	8 (0.1)	-	-	0	4 (0.1)	NA	0
TX. from living donors (pmp)	44 (7.1)	86 (5.8)	1889 (16.5)	-	16 (4.7)	14 (2.1)	33 (1.1)	4 (1.2)	93 (3.2)
TX. from Related living donors (pmp)	44 (7.1)	80 (5.4)	1538 (13.4)	-	13 (3.8)	13 (2.0)	33 (1.1)	4 (1.2)	93 (3.2)
TX. from Unrelated living donors (pmp)	0	6 (0.4)	351 (3.1)	-	3 (0.9)	1 (0.1)	0	0	0
TX. from DCD (pmp)	0	0	0	-	0	-	0	NA	0
<b>LIVER</b>									
Total TX. -all combinations included- (pmp)	NA	NA	100 (0.9)	-	6 (1.8)	0	38 (1.3)	24 (7.1)	8 (0.3)
Paediatric <15 years	NA	NA	20	-	-	0	3	1	3
Split TX. (pmp)	NA	NA	-	-	0	0	0	NA	0
Domino TX. (pmp)	NA	NA	0	-	-	0	0	NA	0
TX. from living donors (pmp)	NA	NA	5 (0.0)	-	0	0	2 (0.1)	NA	8 (0.3)
TX. from DCD (pmp)	NA	NA	0	-	-	0	0	NA	0
<b>HEART</b>									
Total TX. -all combinations included- (pmp)	NA	NA	19 (0.2)	-	NA	0	8 (0.3)	8 (2.4)	0
Paediatric <15 years	NA	NA	1	-	NA	0	1	1	0
<b>HEART-LUNG</b>									
Total TX. (pmp)	NA	NA	0	-	NA	0	0	0	0
Paediatric <15 years	NA	NA	0	-	NA	0	0	0	0
<b>LUNG</b>									
Total TX. -all combinations included- (pmp)	NA	NA	0	-	NA	0	4 (0.1)	1 (0.3)	0
Paediatric <15 years	NA	NA	0	-	NA	0	0	0	0
Single TX. (pmp)	NA	NA	0	-	NA	0	4 (0.1)	1 (0.3)	0
Double TX. (heart-lung TX. included) (pmp)	NA	NA	0	-	NA	0	0	0	0
TX. from living donors (pmp)	NA	NA	0	-	NA	0	0	0	0
TX. from DCD (double + single) (pmp)	NA	NA	0	-	NA	0	0	NA	0
<b>PANCREAS</b>									
Total TX. -all combinations included- (pmp)	NA	NA	0	-	NA	-	0	5 (1.5)	0
Paediatric <15 years	NA	NA	0	-	NA	-	0	0	0
Kidney - Pancreas TX. (pmp)	NA	NA	0	-	NA	-	0	5 (1.5)	0
Pancreas TX. Alone (pmp)	NA	NA	0	-	NA	-	0	NA	0
TX. from DCD (pmp)	NA	NA	0	-	NA	-	0	NA	0
<b>SMALL BOWEL</b>									
Total TX. -all combinations included- (pmp)	NA	NA	1 (0.0)	-	NA	-	0	0	0
Paediatric <15 years	NA	NA	0	-	NA	-	0	0	0
Liver + Small bowel (pmp)	NA	NA	0	-	NA	-	0	0	0
Small bowel TX. Alone (pmp)	NA	NA	1 (0.0)	-	NA	-	0	0	0
<b>RECIPIENTS</b>									
Total number of patients transplanted (pmp)	44 (7.1)	102 (6.9)	-	-	NA	14 (2.1)	263 (8.9)	168 (49.4)	306 (10.4)
Paediatric <15 years	0	10	246	-	NA	-	28	6	17
Patients transplanted from living donors (pmp)	44 (7.1)	86 (5.8)	1894 (16.5)	-	16 (4.7)	14 (2.1)	35 (1.2)	4 (1.2)	101 (3.4)
NA : Not applicable									

# WAITING LIST

## EUROPEAN UNION COUNTRIES

COUNTRIES	AUSTRIA	BELGIUM	BULGARIA	CYPRUS	CZECH. R.	DENMARK	ESTONIA	FINLAND	FRANCE
Population (million inhabitants)									
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	8.4	11.0	7.4	1.1	10.5	5.6	1.3	5.4	65.1
<b>KIDNEY</b>									
<b>N° TX CENTRES</b>	-	-	6	2	7	3	1	1	44
Patients included on the WL for the first time in the course of 2011	361	500	133	11	361	279	39	207	3884
Total number of patients ever active on the WL during 2011	-	-	969	53	1042	616	103	474	12320
Patients awaiting for a transplant (only active candidates) on 31/12/2011	743	883	950	41	667	322	43	292	8942
Patients who died while on the WL during 2011	45	35	2	-	25	28	4	13	200
Patients on dialyses on 31/12/2011	-	-	-	373	-	-	322	-	NA
<b>LIVER</b>									
<b>N° TX CENTRES</b>	-	-	2	NA	2	1	1	1	23
Patients included on the WL for the first time in the course of 2011	162	337	19	NA	105	57	12	63	1530
Total number of patients ever active on the WL during 2011	-	-	50	NA	162	89	13	71	2462
Patients awaiting for a transplant (only active candidates) on 31/12/2011	112	172	27	NA	43	26	6	11	941
Patients who died while on the WL during 2011	36	54	4	NA	12	4	1	1	135
<b>HEART</b>									
<b>N° TX CENTRES</b>	-	-	2	NA	2	2	-	1	26
Patients included on the WL for the first time in the course of 2011	56	106	9	NA	84	36	-	29	514
Total number of patients ever active on the WL during 2011	-	-	40	NA	171	53	-	49	798
Patients awaiting for a transplant (only active candidates) on 31/12/2011	67	59	28	NA	84	16	-	22	302
Patients who died while on the WL during 2011	9	23	1	NA	11	5	-	4	60
<b>LUNG</b>									
<b>N° TX CENTRES</b>	-	-	0	NA	1	1	1	1	13
Patients included on the WL for the first time in the course of 2011	135	142	0	NA	29	28	2	25	325
Total number of patients ever active on the WL during 2011	-	-	0	NA	67	71	5	34	145
Patients awaiting for a transplant (only active candidates) on 31/12/2011	66	119		NA	30	26	2	8	17
Patients who died while on the WL during 2011	20	8	0	NA	18	9	-	2	489
<b>PANCREAS</b>									
<b>N° TX CENTRES</b>	-	-	0	NA	1	0	-	1	16
Patients included on the WL for the first time in the course of 2011	15	37	0	NA	29	-	-	4	92
Total number of patients ever active on the WL during 2011	-	-	0	NA	85	-	-	4	240
Patients awaiting for a transplant (only active candidates) on 31/12/2011	17	51	0	NA	45	-	-	3	144
Patients who died while on the WL during 2011	3	1	0	NA	4	-	-	0	5
<b>SMALL BOWEL</b>									
<b>N° TX CENTRES</b>	-	-	0	NA	1	-	-	1	6
Patients included on the WL for the first time in the course of 2011	-	-	0	NA	0	-	-	-	11
Total number of patients ever active on the WL during 2011	-	-	0	NA	1	-	-	-	23
Patients awaiting for a transplant (only active candidates) on 31/12/2011	-	-	0	NA	1	-	-	-	12
Patients who died while on the WL during 2011	-	-	0	NA	0	-	-	-	1

## WAITING LIST

## EUROPEAN UNION COUNTRIES

COUNTRIES	GERMANY	GREECE	HUNGARY	IRELAND	ITALY	LATVIA	LITHUANIA	LUXEMBOURG	MALTA
Population (million inhabitants)									
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	81.8	11.4	10.0	4.5	60.8	2.2	3.3	0.5	0.4

## KIDNEY

## N° TX CENTRES

Patients included on the WL for the first time in the course of 2011  
 Total number of patients ever active on the WL during 2011  
 Patients awaiting for a transplant (only active candidates) on 31/12/2011  
 Patients who died while on the WL during 2011  
 Patients on dialyses on 31/12/2011

## LIVER

## N° TX CENTRES

Patients included on the WL for the first time in the course of 2011  
 Total number of patients ever active on the WL during 2011  
 Patients awaiting for a transplant (only active candidates) on 31/12/2011  
 Patients who died while on the WL during 2011

## HEART

## N° TX CENTRES

Patients included on the WL for the first time in the course of 2011  
 Total number of patients ever active on the WL during 2011  
 Patients awaiting for a transplant (only active candidates) on 31/12/2011  
 Patients who died while on the WL during 2011

## LUNG

## N° TX CENTRES

Patients included on the WL for the first time in the course of 2011  
 Total number of patients ever active on the WL during 2011  
 Patients awaiting for a transplant (only active candidates) on 31/12/2011  
 Patients who died while on the WL during 2011

## PANCREAS

## N° TX CENTRES

Patients included on the WL for the first time in the course of 2011  
 Total number of patients ever active on the WL during 2011  
 Patients awaiting for a transplant (only active candidates) on 31/12/2011  
 Patients who died while on the WL during 2011

## SMALL BOWEL

## N° TX CENTRES

Patients included on the WL for the first time in the course of 2011  
 Total number of patients ever active on the WL during 2011  
 Patients awaiting for a transplant (only active candidates) on 31/12/2011  
 Patients who died while on the WL during 2011

41	NA	4	1	43	1	2	0	0	1
3241	NA	408	204	2009	25	92	0	0	25
-	NA	1213	528	8652	180	298	0	0	65
7873	1112	833	460	6542	55	214	0	0	90
-	NA	34	15	162	5	7	0	0	11
-	9805	6204	1768	NA	500	1400	0	0	243

24	1	1	1	22	0	2	0	0	0
1792	91	108	63	1101	0	45	0	0	NA
-	153	192	83	2272	0	79	0	0	NA
2119	94	128	20	1000	0	55	0	0	NA
-	17	19	10	162	0	11	0	0	NA

22	1	2	1	19	1	2	0	0	1
695	17	23	9	432	5	11	0	0	NA
-	44	38	16	1143	9	29	0	0	NA
1039	30	13	17	733	3	18	0	0	NA
-	3	5	0	94	0	7	0	0	NA

14	-	0	1	13	0	1	0	0	0
435	-	11	25	218	0	1	0	0	NA
-	-	20	38	561	0	3	0	0	NA
606	-	7	36	382	0	2	0	0	NA
-	-	0	10	57	0	0	0	0	NA

23	-	2	1	13	0	1	0	0	0
188	-	11	9	66	0	5	0	0	NA
-	-	31	18	306	0	25	0	0	NA
282	-	21	-	236	0	18	0	0	NA
-	-	3	0	3	0	0	0	0	NA

4	-	-	NA	3	0	NA	0	0	0
15	-	-	NA	4	0	NA	0	0	NA
-	-	-	NA	29	0	NA	0	0	NA
12	-	-	NA	23	0	NA	0	0	NA
-	-	-	NA	2	0	NA	0	0	NA



# WAITING LIST

## EUROPEAN UNION COUNTRIES

COUNTRIES	NETHERLANDS	POLAND	PORTUGAL	ROMANIA	SLOVAKIA	SLOVENIA	SPAIN	SWEDEN	U. K.
Population (million inhabitants)									
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	16.7	38.3	10.7	21.4	5.5	2.0	47.2	9.4	62.3
<b>KIDNEY</b>									
<b>N° TX CENTRES</b>	8	18	8	3	4	1	44	4	26
Patients included on the WL for the first time in the course of 2011	974	1147	366	558	160	56	-	610	2485
Total number of patients ever active on the WL during 2011	-	2646	2301	-	548	109	-	1025	7849
Patients awaiting for a transplant (only active candidates) on 31/12/2011	883	1469	1973	3000	382	68	4493	426	6721
Patients who died while on the WL during 2011	89	64	63	20	45	1	-	27	308
Patients on dialyses on 31/12/2011	6379	20000	11520	8000	3100	1425	23647	-	48000
<b>LIVER</b>									
<b>N° TX CENTRES</b>	3	6	3	1	2	1	25	2	7
Patients included on the WL for the first time in the course of 2011	157	335	225	117	48	22	1400	66	427
Total number of patients ever active on the WL during 2011	-	530	333	-	78	30	2172	134	1330
Patients awaiting for a transplant (only active candidates) on 31/12/2011	123	132	169	383	30	10	641	43	523
Patients who died while on the WL during 2011	29	37	18	62	14	4	127	4	98
<b>HEART</b>									
<b>N° TX CENTRES</b>	3	5	4	2	1	1	18	2	7
Patients included on the WL for the first time in the course of 2011	59	220	48	15	22	23	309	47	138
Total number of patients ever active on the WL during 2011	-	443	71	-	43	49	405	76	298
Patients awaiting for a transplant (only active candidates) on 31/12/2011	57	252	17	114	21	34	98	19	170
Patients who died while on the WL during 2011	11	53	4	65	7	8	18	1	23
<b>LUNG</b>									
<b>N° TX CENTRES</b>	3	2	1	0	0	1	7	2	6
Patients included on the WL for the first time in the course of 2011	120	32	29	0	0	0	305	60	145
Total number of patients ever active on the WL during 2011	-	73	51	-	0	0	478	93	457
Patients awaiting for a transplant (only active candidates) on 31/12/2011	235	30	31	0	0	0	190	27	223
Patients who died while on the WL during 2011	20	12	0	0	0	0	22	5	61
<b>PANCREAS</b>									
<b>N° TX CENTRES</b>	2	4	2	1	1	1	13	3	11
Patients included on the WL for the first time in the course of 2011	25	35	14	1	0	1	99	47	171
Total number of patients ever active on the WL during 2011	-	62	61	-	0	1	263	58	525
Patients awaiting for a transplant (only active candidates) on 31/12/2011	38	15	53	63	0	0	137	13	262
Patients who died while on the WL during 2011	3	1	1	11	0	0	2	0	30
<b>SMALL BOWEL</b>									
<b>N° TX CENTRES</b>	1	1	0	0	0	0	2	1	4
Patients included on the WL for the first time in the course of 2011	1	3	0	0	0	0	11	-	25
Total number of patients ever active on the WL during 2011	1	5	0	-	0	0	23	-	45
Patients awaiting for a transplant (only active candidates) on 31/12/2011	1	3	0	0	0	0	10	-	14
Patients who died while on the WL during 2011	0	2	0	0	0	0	1	-	2

## WAITING LIST

## OTHER COUNTRIES

COUNTRIES	ALGERIA	AUSTRALIA	BELARUS	CANADA	CROACIA	EGYPT	GEORGIA	ICELAND	ISRAEL	LEBANON	LIBYA
Population (million inhabitants)											
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	36.0	22.6	9.6	34.5	4.4	82.5	4.3	0.3	7.6	4.3	6.4
<b>KIDNEY</b>											
<b>N° TX CENTRES</b>	10	20	3	25	-	NA	-	1	7	8	1
Patients included on the WL for the first time in the course of 2011	NA	525	281	-	187	NA	-	-	259	42	33
Total number of patients ever active on the WL during 2011	NA	2121	717	-	-	-	-	-	992	85	320
Patients awaiting for a transplant (only active candidates) on 31/12/2011	4000	1135	680	2360	172	NA	-	-	729	85	-
Patients who died while on the WL during 2011	NA	8	10	95	11	NA	-	-	36	4	-
Patients on dialyses on 31/12/2011	14500	10710	2075	25573	-	-	-	-	5700	1500	3000
<b>LIVER</b>											
<b>N° TX CENTRES</b>	2	8	1	9	-	9	-	-	4	1	1
Patients included on the WL for the first time in the course of 2011	NA	267	74	-	160	NA	-	-	45	7	20
Total number of patients ever active on the WL during 2011	NA	437	80	-	-	-	-	-	204	11	-
Patients awaiting for a transplant (only active candidates) on 31/12/2011	150	162	80	376	78	NA	-	-	135	11	-
Patients who died while on the WL during 2011	NA	13	11	97	18	NA	-	-	25	3	-
<b>HEART</b>											
<b>N° TX CENTRES</b>	0	5	1	11	-	NA	-	-	4	4	NA
Patients included on the WL for the first time in the course of 2011	NA	97	11	-	64	NA	-	-	34	6	NA
Total number of patients ever active on the WL during 2011	NA	139	63	-	-	-	-	-	162	7	NA
Patients awaiting for a transplant (only active candidates) on 31/12/2011	NA	63	31	125	21	NA	-	-	96	7	NA
Patients who died while on the WL during 2011	NA	7	NA	26	12	NA	-	-	17	5	NA
<b>LUNG</b>											
<b>N° TX CENTRES</b>	0	5	1	6	-	NA	-	-	3	-	NA
Patients included on the WL for the first time in the course of 2011	NA	172	16	-	-	NA	-	-	39	-	NA
Total number of patients ever active on the WL during 2011	NA	288	16	-	-	NA	-	-	79	-	NA
Patients awaiting for a transplant (only active candidates) on 31/12/2011	NA	99	16	271	-	NA	-	-	70	-	NA
Patients who died while on the WL during 2011	NA	13	NA	68	-	NA	-	-	27	-	NA
<b>PANCREAS</b>											
<b>N° TX CENTRES</b>	0	2	1	8	-	NA	-	-	7	-	NA
Patients included on the WL for the first time in the course of 2011	NA	40	2	-	-	NA	-	-	2	-	NA
Total number of patients ever active on the WL during 2011	NA	76	17	-	-	-	-	-	18	-	NA
Patients awaiting for a transplant (only active candidates) on 31/12/2011	NA	46	17	138	9	NA	-	-	10	-	NA
Patients who died while on the WL during 2011	NA	3	0	16	1	NA	-	-	0	-	NA
<b>SMALL BOWEL</b>											
<b>N° TX CENTRES</b>	0	1	0	3	-	NA	-	-	-	-	NA
Patients included on the WL for the first time in the course of 2011	NA	1	0	-	-	NA	-	-	-	-	NA
Total number of patients ever active on the WL during 2011	NA	3	0	-	-	NA	-	-	-	-	NA
Patients awaiting for a transplant (only active candidates) on 31/12/2011	NA	2	0	5	-	NA	-	-	-	-	NA
Patients who died while on the WL during 2011	NA	1	0	2	-	NA	-	-	-	-	NA

# WAITING LIST

## OTHER COUNTRIES

COUNTRIES	MACEDONIA	MOLDOVA	NEW ZEALAND	NORWAY	PALESTINE	RUSSIA	SWITZERLAND	SYRIA	TUNISIA	TURKEY	USA
Population (million inhabitants)											
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	2.1	3.6	4.4	5.0	4.2	142.8	8.0	20.8	10.7	74.7	313.1
<b>KIDNEY</b>											
<b>N° TX CENTRES</b>	2	2	3	1	1	32	6	8	6	62	239
Patients included on the WL for the first time in the course of 2011	5	2	NA	297	0	-	384	NA	192	6267	29774
Total number of patients ever active on the WL during 2011	5	2	NA	520	0	-	1185	NA	1062	19912	86565
Patients awaiting for a transplant (only active candidates) on 31/12/2011	5	2	458	189	-	-	838	NA	1041	17390	55883
Patients who died while on the WL during 2011	0	0	NA	6	-	-	23	NA	9	958	4707
Patients on dialyses on 31/12/2011	1450	408	NA	-	500	-	629	5000	8637	53733	-
<b>LIVER</b>											
<b>N° TX CENTRES</b>	1	1	1	1	0	12	3	0	2	40	133
Patients included on the WL for the first time in the course of 2011	NA	0	NA	99	0	-	181	NA	NA	-	10757
Total number of patients ever active on the WL during 2011	NA	0	NA	109	0	-	289	NA	NA	2733	24160
Patients awaiting for a transplant (only active candidates) on 31/12/2011	NA	-	24	13	0	-	125	-	NA	1460	13019
Patients who died while on the WL during 2011	NA	-	NA	2	0	-	24	NA	NA	329	1535
<b>HEART</b>											
<b>N° TX CENTRES</b>	0	1	1	1	NA	9	3	0	1	13	129
Patients included on the WL for the first time in the course of 2011	NA	0	NA	43	NA	-	57	NA	NA	-	3305
Total number of patients ever active on the WL during 2011	NA	0	NA	54	NA	-	88	NA	NA	387	5675
Patients awaiting for a transplant (only active candidates) on 31/12/2011	NA	-	13	16	NA	-	36	-	NA	218	2214
Patients who died while on the WL during 2011	NA	-	NA	3	NA	-	9	NA	NA	44	331
<b>LUNG</b>											
<b>N° TX CENTRES</b>	0	0	1	1	NA	3	2	0	1	3	64
Patients included on the WL for the first time in the course of 2011	NA	-	NA	30	NA	-	54	NA	NA	-	2311
Total number of patients ever active on the WL during 2011	NA	-	NA	72	NA	-	113	-	NA	14	3773
Patients awaiting for a transplant (only active candidates) on 31/12/2011	NA	-	13	40	NA	-	49	NA	NA	4	1333
Patients who died while on the WL during 2011	NA	-	NA	3	NA	-	5	NA	NA	3	240
<b>PANCREAS</b>											
<b>N° TX CENTRES</b>	0	0	1	1	NA	3	3	0	0	5	112
Patients included on the WL for the first time in the course of 2011	NA	-	NA	27	NA	-	35	NA	NA	-	546
Total number of patients ever active on the WL during 2011	NA	-	NA	31	NA	-	84	-	NA	193	964
Patients awaiting for a transplant (only active candidates) on 31/12/2011	NA	-	4	5	NA	-	51	NA	NA	69	336
Patients who died while on the WL during 2011	NA	-	NA	1	NA	-	0	NA	NA	14	44
<b>SMALL BOWEL</b>											
<b>N° TX CENTRES</b>	0	0	0	-	NA	0	2	0	0	4	24
Patients included on the WL for the first time in the course of 2011	NA	-	NA	-	NA	-	2	NA	NA	-	177
Total number of patients ever active on the WL during 2011	NA	-	NA	-	NA	-	3	-	NA	-	379
Patients awaiting for a transplant (only active candidates) on 31/12/2011	NA	-	0	-	NA	-	2	NA	NA	-	184
Patients who died while on the WL during 2011	NA	-	NA	-	NA	-	0	NA	NA	-	12

## WAITING LIST

## LATINAMERICAN COUNTRIES

COUNTRIES	ARGENTINA	BOLIVIA	BRASIL	CHILE	COLOMBIA	COSTA RICA	CUBA	DOMINICANA	ECUADOR
Population (million inhabitants)									
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	40.6	10.1	196.7	17.3	46.9	4.7	11.3	10.1	14.7
<b>KIDNEY</b>									
<b>N° TX CENTRES</b>	53	6	106	22	21	4	9	8	11
Patients included on the WL for the first time in the course of 2011	2155	19	6530	207	-	134	593	28	-
Total number of patients ever active on the WL during 2011	7532	19	31549	1540	-	-	573	99	86
Patients awaiting for a transplant (only active candidates) on 31/12/2011	5839	19	19486	1185	1001	170	500	-	34
Patients who died while on the WL during 2011	337	1	251	-	25	23	-	4	0
Patients on dialyses on 31/12/2011	26786	2000	-	17000	19550	170	2714	2009	-
<b>LIVER</b>									
<b>N° TX CENTRES</b>	24	0	52	8	6	3	3	1	1
Patients included on the WL for the first time in the course of 2011	681	0	1307	33	-	27	18	6	-
Total number of patients ever active on the WL during 2011	1207	0	3167	155	-	44	32	13	30
Patients awaiting for a transplant (only active candidates) on 31/12/2011	738	0	1138	155	50	26	3	-	9
Patients who died while on the WL during 2011	116	0	202	-	8	15	5	1	6
<b>HEART</b>									
<b>N° TX CENTRES</b>	28	0	44	7	7	1	1	NA	1
Patients included on the WL for the first time in the course of 2011	151	0	183	10	-	3	4	NA	-
Total number of patients ever active on the WL during 2011	262	0	265	9	-	8	5	NA	7
Patients awaiting for a transplant (only active candidates) on 31/12/2011	87	0	201	9	12	5	4	NA	4
Patients who died while on the WL during 2011	47	0	183	-	6	3	2	NA	1
<b>LUNG</b>									
<b>N° TX CENTRES</b>	12	0	5	4	1	0	0	NA	0
Patients included on the WL for the first time in the course of 2011	93	0	54	12	-	-	0	NA	0
Total number of patients ever active on the WL during 2011	193	0	194	30	-	-	0	NA	0
Patients awaiting for a transplant (only active candidates) on 31/12/2011	132	0	144	30	8	-	0	NA	0
Patients who died while on the WL during 2011	31	0	54	-	1	-	0	NA	0
<b>PANCREAS</b>									
<b>N° TX CENTRES</b>	11	0	16	2	4	1	2	NA	0
Patients included on the WL for the first time in the course of 2011	113	0	16	1	-	2	0	NA	0
Total number of patients ever active on the WL during 2011	111	0	103	2	-	2	0	NA	0
Patients awaiting for a transplant (only active candidates) on 31/12/2011	105	0	21	2	4	2	0	NA	0
Patients who died while on the WL during 2011	13	0	0	-	0	1	0	NA	0
<b>SMALL BOWEL</b>									
<b>N° TX CENTRES</b>	4	0	0	1	2	0	0	NA	0
Patients included on the WL for the first time in the course of 2011	7	0	0	0	-	-	0	NA	0
Total number of patients ever active on the WL during 2011	17	0	0	0	-	-	0	NA	0
Patients awaiting for a transplant (only active candidates) on 31/12/2011	8	0	0	0	2	-	0	NA	0
Patients who died while on the WL during 2011	1	0	0	0	0	-	0	NA	0

# WAITING LIST

## LATINAMERICAN COUNTRIES

COUNTRIES	EL SALVADOR	GUATEMALA	MEXICO	NICARAGUA	PANAMA	PARAGUAY	PERU	URUGUAY	VENEZUELA
Population (million inhabitants)									
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	6.2	14.8	114.8	5.9	3.4	6.6	29.4	3.4	29.4
<b>KIDNEY</b>									
<b>N° TX CENTRES</b>	5	-	208	-	1	3	15	3	10
Patients included on the WL for the first time in the course of 2011	-	-	3903	-	73	-	174	145	401
Total number of patients ever active on the WL during 2011	-	-	8118	-	289	-	378	558	1068
Patients awaiting for a transplant (only active candidates) on 31/12/2011	-	-	1962	-	214	-	183	444	557
Patients who died while on the WL during 2011	-	-	-	-	18	-	-	19	38
Patients on dialyses on 31/12/2011	4300	-	37000	-	1643	-	-	3079	12580
<b>LIVER</b>									
<b>N° TX CENTRES</b>	-	NA	59	-	6	-	5	1	1
Patients included on the WL for the first time in the course of 2011	-	NA	194	-	12	-	33	31	6
Total number of patients ever active on the WL during 2011	-	NA	326	-	6	-	54	46	9
Patients awaiting for a transplant (only active candidates) on 31/12/2011	-	NA	92	-	6	-	16	27	7
Patients who died while on the WL during 2011	-	NA	-	-	0	-	-	5	NA
<b>HEART</b>									
<b>N° TX CENTRES</b>	-	NA	38	-	-	1	4	2	1
Patients included on the WL for the first time in the course of 2011	-	NA	48	-	-	-	8	18	0
Total number of patients ever active on the WL during 2011	-	NA	44	-	-	-	8	40	0
Patients awaiting for a transplant (only active candidates) on 31/12/2011	-	NA	21	-	-	-	0	24	NA
Patients who died while on the WL during 2011	-	NA	-	-	-	-	-	3	NA
<b>LUNG</b>									
<b>N° TX CENTRES</b>	-	NA	6	-	-	-	1	0	0
Patients included on the WL for the first time in the course of 2011	-	NA	2	-	-	-	4	3	0
Total number of patients ever active on the WL during 2011	-	NA	5	-	-	-	4	4	0
Patients awaiting for a transplant (only active candidates) on 31/12/2011	-	NA	2	-	-	-	0	2	NA
Patients who died while on the WL during 2011	-	NA	-	-	-	-	-	1	NA
<b>PANCREAS</b>									
<b>N° TX CENTRES</b>	-	NA	13	-	-	-	0	1	0
Patients included on the WL for the first time in the course of 2011	-	NA	9	-	-	-	0	15	0
Total number of patients ever active on the WL during 2011	-	NA	17	-	-	-	0	29	0
Patients awaiting for a transplant (only active candidates) on 31/12/2011	-	NA	9	-	-	-	0	23	NA
Patients who died while on the WL during 2011	-	NA	-	-	-	-	0	0	NA
<b>SMALL BOWEL</b>									
<b>N° TX CENTRES</b>	-	NA	3	-	-	-	0	0	0
Patients included on the WL for the first time in the course of 2011	-	NA	1	-	-	-	0	0	0
Total number of patients ever active on the WL during 2011	-	NA	0	-	-	-	0	0	0
Patients awaiting for a transplant (only active candidates) on 31/12/2011	-	NA	0	-	-	-	0	0	NA
Patients who died while on the WL during 2011	-	NA	-	-	-	-	0	0	NA

## FAMILY REFUSALS

## EUROPEAN UNION COUNTRIES

COUNTRIES	AUSTRIA	BELGIUM	BULGARIA	CYPRUS	CZECH. R.	DENMARK	ESTONIA	FINLAND	FRANCE
Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	8.4	11.0	7.4	1.1	10.5	5.6	1.3	5.4	65.1
Number of interviews, asking for consent to donation	-	-	10	9	-	-	40	-	-
Number of family refusals (%)	-	-	3 (30.0)	3 (33.3)	13	-	10 (25.0)	-	616
COUNTRIES	GERMANY	GREECE	HUNGARY	IRELAND	ITALY	LATVIA	LITHUANIA	LUXEMBOURG	MALTA
Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	81.8	11.4	10.0	4.5	60.8	2.2	3.3	0.5	0.4
Number of interviews, asking for consent to donation	-	-	209	-	2271	25	89	-	18
Number of family refusals (%)	-	-	11 (5.3)	19	651 (28.7)	6 (24.0)	34 (38.2)	-	2 (11.0)
COUNTRIES	NETHERLANDS	POLAND	PORTUGAL	ROMANIA	SLOVAKIA	SLOVENIA	SPAIN	SWEDEN	U. K.
Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	16.7	38.3	10.7	21.4	5.5	2.0	47.2	9.4	62.3
Number of interviews, asking for consent to donation	552	732	-	159	88	36	2007	-	2542
Number of family refusals (%)	289 (52.4)	68 (9.3)	-	45 (28.3)	9 (10.2)	5 (13.9)	319 (15.9)	-	1104 (43.4)

## OTHER COUNTRIES

COUNTRIES	ALGERIA	AUSTRALIA	BELARUS	CANADA	CROACIA	EGYPT	GEORGIA	ICELAND	ISRAEL	LEBANON	LIBYA
Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	36.0	22.6	9.6	34.5	4.4	82.5	4.3	0.3	7.6	4.3	6.4
Number of interviews, asking for consent to donation	NA	-	17	-	-	NA	NA	-	162	32	NA
Number of family refusals (%)	NA	-	11 (64.7)	-	-	NA	NA	-	73 (45.1)	22 (68.8)	NA
COUNTRIES	MACEDONIA	MOLDOVA	NEW ZEALAND	NORWAY	PALESTINE	RUSSIA	SWITZERLAND	SYRIA	TUNISIA	TURKEY	USA
Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	2.1	3.6	4.4	5.0	4.2	142.8	8.0	20.8	10.7	74.7	313.1
Number of interviews, asking for consent to donation	2	1	-	162	NA	-	-	NA	14	1292	-
Number of family refusals (%)	2 (100)	1 (100)	-	35 (21.6)	NA	-	-	NA	8 (57.1)	958 (74.1)	-

## LATINAMERICAN COUNTRIES

COUNTRIES	ARGENTINA	BOLIVIA	BRASIL	CHILE	COLOMBIA	COSTA RICA	CUBA	DOMINICANA	ECUADOR
Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	40.6	10.1	196.7	17.3	46.9	4.7	11.3	10.1	14.7
Number of interviews, asking for consent to donation	1335	53	-	231	690	30	140	-	53
Number of family refusals (%)	645 (48.3)	43 (81.1)	-	118 (51.1)	197 (28.6)	6 (20.0)	12 (8.6)	-	22 (41.5)
COUNTRIES	EL SALVADOR	GUATEMALA	MEXICO	NICARAGUA	PANAMA	PARAGUAY	PERU	URUGUAY	VENEZUELA
Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	6.2	14.8	114.8	5.9	3.4	6.6	29.4	3.4	29.4
Number of interviews, asking for consent to donation	-	-	1353	-	24	39	249	88	180
Number of family refusals (%)	-	-	64 (4.7)	-	8 (33.3)	9 (23.1)	122 (49.0)	16 (18.2)	68 (37.8)

# TRANSPLANTATION OF VASCULARISED COMPOSITE ALLOGRAFTS

## EUROPEAN UNION COUNTRIES

COUNTRIES	AUSTRIA	BELGIUM	BULGARIA	CYPRUS	CZECH. R.	DENMARK	ESTONIA	FINLAND	FRANCE
Population (million inhabitants)									
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	8.4	11.0	7.4	1.1	10.5	5.6	1.3	5.4	65.1
<b>Hand TX.</b>	-	-	0	-	0	0	-	0	0
Single Hand TX.	-	-	0	-	0	0	-	0	0
Double Hand TX.	-	-	0	-	0	0	-	0	0
<b>Face TX.</b>	-	-	0	-	0	0	-	0	2
<b>Other TX.</b>	-	-	0	-	-	0	-	0	0
<b>COUNTRIES</b>	<b>GERMANY</b>	<b>GREECE</b>	<b>HUNGARY</b>	<b>IRELAND</b>	<b>ITALY</b>	<b>LATVIA</b>	<b>LITHUANIA</b>	<b>LUXEMBOURG</b>	<b>MALTA</b>
Population (million inhabitants)									
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	81.8	11.4	10.0	4.5	60.8	2.2	3.3	0.5	0.4
<b>Hand TX.</b>	NA	0	-	NA	0	-	NA	-	0
Single Hand TX.	NA	0	-	NA	0	-	NA	-	0
Double Hand TX.	NA	0	-	NA	0	-	NA	-	0
<b>Face TX.</b>	NA	0	-	NA	0	-	NA	-	0
<b>Other TX.</b>	NA	0	-	NA	-	-	NA	-	0
<b>COUNTRIES</b>	<b>NETHERLANDS</b>	<b>POLAND</b>	<b>PORTUGAL</b>	<b>ROMANIA</b>	<b>SLOVAKIA</b>	<b>SLOVENIA</b>	<b>SPAIN</b>	<b>SWEDEN</b>	<b>U. K.</b>
Population (million inhabitants)									
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	16.7	38.3	10.7	21.4	5.5	2.0	47.2	9.4	62.3
<b>Hand TX.</b>	-	1	NA	0	0	0	0	0	0
Single Hand TX.	-	1	NA	0	0	0	0	0	0
Double Hand TX.	-	0	NA	0	0	0	0	0	0
<b>Face TX.</b>	-	0	NA	0	0	0	0	0	0
<b>Other TX.</b>	-	-	NA	0	0	0	1	0	0

## TRANSPLANTATION OF VASCULARISED COMPOSITE ALLOGRAFTS

## OTHER COUNTRIES

COUNTRIES	ALGERIA	AUSTRALIA	BELARUS	CANADA	CROACIA	EGYPT	GEORGIA	ICELAND	ISRAEL	LEBANON	LIBYA
Population (million inhabitants)											
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	36.0	22.6	9.6	34.5	4.4	82.5	4.3	0.3	7.6	4.3	6.4
Hand TX.	0	-	0	-	-	NA	0	-	-	-	NA
Single Hand TX.	0	-	0	-	-	NA	0	-	-	-	NA
Double Hand TX.	0	-	0	-	-	NA	0	-	-	-	NA
Face TX.	0	-	0	-	-	NA	0	-	-	-	NA
Other TX.	0	-	6	-	-	NA	0	-	-	-	NA
COUNTRIES	MACEDONIA	MOLDOVA	NEW ZEALAND	NORWAY	PALESTINE	RUSSIA	SWITZERLAND	SYRIA	TUNISIA	TURKEY	USA
Population (million inhabitants)											
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	2.1	3.6	4.4	5.0	4.2	142.8	8.0	20.8	10.7	74.7	313.1
Hand TX.	NA	NA	-	0	NA	NA	0	0	0	1	3
Single Hand TX.	NA	NA	-	0	NA	NA	0	0	0	0	2
Double Hand TX.	NA	NA	-	0	NA	NA	0	0	0	1	1
Face TX.	NA	NA	-	0	NA	NA	0	0	0	0	0
Other TX.	NA	NA	-	0	NA	NA	0	0	0	0	0
LATINAMERICAN COUNTRIES											
COUNTRIES	ARGENTINA	BOLIVIA	BRASIL	CHILE	COLOMBIA	COSTA RICA	CUBA	DOMINICANA	ECUADOR		
Population (million inhabitants)											
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	40.6	10.1	196.7	17.3	46.9	4.7	11.3	10.1	14.7		
Hand TX.	-	0	-	0	0	NA	0	0	-		
Single Hand TX.	-	0	-	0	0	NA	0	0	-		
Double Hand TX.	-	0	-	0	0	NA	0	0	-		
Face TX.	-	0	-	0	0	NA	0	0	-		
Other TX.	-	0	-	0	0	NA	0	0	-		
COUNTRIES	EL SALVADOR	GUATEMALA	MEXICO	NICARAGUA	PANAMA	PARAGUAY	PERU	URUGUAY	VENEZUELA		
Population (million inhabitants)											
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	6.2	14.8	114.8	5.9	3.4	6.6	29.4	3.4	29.4		
Hand TX.	-	-	0	-	-	-	0	0	-		
Single Hand TX.	-	-	0	-	-	-	0	0	-		
Double Hand TX.	-	-	0	-	-	-	0	0	-		
Face TX.	-	-	0	-	-	-	0	0	-		
Other TX.	-	-	0	-	-	-	0	0	-		



# International Data on Tissue and Hematopoietic Stem Cell Donation and Transplantation Activity. Year 2011



**DATA PROVIDED BY NATIONAL COMPETENT AUTHORITIES:**

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## PRELIMINARY DATA ON TISSUES - YEAR 2011

## EUROPEAN UNION COUNTRIES

Country Population (Font: eurostat)	AUSTRIA 8.404.252	BELGIUM 10.951.266	BULGARIA 7.369.431	CYPRUS 839.751	CZECH R. 10.485.489	DENMARK 5.552.037	ESTONIA 1.340.194	FINLAND 5.375.276	FRANCE 65.048.412
TYPE OF TISSUE	NO DATA	NO DATA				NO DATA		NO DATA	
TYPE OF DATA									
CORNEA	N. of tissue donations		66	0	405		31		5.025
	Tissue donation PMP		8,96	0,00	38,62		23,13		7,725
	N° of tissue retrieved		125	0	806		34		9,998
	N° tissue processed (units)		125	NO DATA	658		34		9,998
	N° tissue distributed (units)		89	NO DATA	479		0		3.846
	N° tissue imported (units)		0	16	0		0		0
	N° tissue exported (units)		0	0	68		0		133
	N° of tissues transplanted		89	16	479		34		3.349
	N° of patients transplanted		NO DATA	16	479		34		NO DATA
	N° of transplants		89	16	479		34		3.349
SKIN	N. of tissue donations		149	0	50		NO DATA		189
	Tissue donation PMP		20,22	0,00	4,77		NO DATA		2,91
	N° of tissue retrieved (cm2)		NO DATA	0	122,104		NO DATA		347,041
	N° tissue processed (units)		NO DATA	NO DATA	NO DATA		NO DATA		347,041
	N° tissue distributed (units)		NO DATA	NO DATA	NO DATA		NO DATA		309,555
	N° tissue imported (units)		0	0	1		NO DATA		39,500
	N° tissue exported (units)		0	0	1,020		NO DATA		0
	N° of tissues transplanted		64	0	0		NO DATA		NO DATA
	N° of patients transplanted		NO DATA	0	0		NO DATA		NO DATA
	N° of transplants		64	0	0		NO DATA		NO DATA
CARDIAC TISSUE	N. of tissue donations		0	0	61		NO DATA		165
	Tissue donation PMP		0,00	0,00	5,82		NO DATA		2,54
	N° of tissue retrieved		NO DATA	0	104		NO DATA		361
	N° tissue processed (units)		0	NO DATA	104		NO DATA		361
	N° tissue distributed (units)		0	NO DATA	64		NO DATA		200
	N° tissue imported (units)		0	0	0		NO DATA		72
	N° tissue exported (units)		0	0	8		NO DATA		0
	N° of tissues transplanted		0	0	64		NO DATA		NO DATA
	N° of patients transplanted		0	0	64		NO DATA		NO DATA
	N° of transplants		0	0	64		NO DATA		NO DATA
BLOOD VESSEL	N. of tissue donations		0	0	13		7		276
	Tissue donation PMP		0,00	0,00	1,24		5,22		4,24
	N° of tissue retrieved		0	0	18		12		4,036
	N° tissue processed (units)		0	NO DATA	16		13		4,036
	N° tissue distributed (units)		0	NO DATA	7		8		1,260
	N° tissue imported (units)		0	0	0		0		40
	N° tissue exported (units)		0	0	0		0		28
	N° of tissues transplanted		0	0	7		10		NO DATA
	N° of patients transplanted		0	0	7		33		NO DATA
	N° of transplants		0	0	7		34		NO DATA
MUSCULOSKELETAL	N. of tissue donations		138	0	195		54		86
	Tissue donation PMP		18,73	0,00	18,60		40,29		1,32
	N° of tissue retrieved		2.209	0	1.114		62		21.518
	N° tissue processed (units)		0	0	523		121		21.518
	N° tissue distributed (units)		0	0	676		113		27.994
	N° tissue imported (units)		0	0	0		0		0
	N° tissue exported (units)		0	0	39		0		0
	N° of tissues transplanted		84	0	676		113		NO DATA
	N° of patients transplanted		NO DATA	0	676		63		NO DATA
	N° of transplants		84	0	676		113		NO DATA
PLACENTA/AMNIOTIC MEMBRANE	N. of tissue donations		19	0	5		30		NO DATA
	Tissue donation PMP		2,58	0,00	0,48		22,38		NO DATA
	N° of tissue retrieved		19	0	5		30		89
	N° tissue processed (units)		NO DATA	NO DATA	NO DATA		51		2.290
	N° tissue distributed (units)		0	NO DATA	54		77		2.289
	N° tissue imported (units)		0	0	0		0		0
	N° tissue exported (units)		0	0	10		0		0
	N° of tissues transplanted		19	0	54		50		NO DATA
	N° of patients transplanted		NO DATA	0	54		77		NO DATA
	N° of transplants		19	0	54		77		NO DATA
OTHERS	N. of tissue donations		20	0	0		NO DATA		NO DATA
	Tissue donation PMP		2,71	0,00	0,00		NO DATA		NO DATA
	N° of tissue retrieved		20	0	0		NO DATA		NO DATA
	N° tissue processed (units)		NO DATA	NO DATA	NO DATA		NO DATA		NO DATA
	N° tissue distributed (units)		NO DATA	NO DATA	NO DATA		NO DATA		NO DATA
	N° tissue imported (units)		NO DATA	1	0		NO DATA		NO DATA
	N° tissue exported (units)		0	0	0		NO DATA		NO DATA
	N° of tissues transplanted		0	1	0		NO DATA		NO DATA
	N° of patients transplanted		0	1	0		NO DATA		NO DATA
	N° of transplants		0	1	0		NO DATA		NO DATA

## PRELIMINARY DATA ON TISSUES - YEAR 2011

## EUROPEAN UNION COUNTRIES

Country Population (Font: eurostat)	GERMANY 81.751.602	GREECE 11.309.885	HUNGARY 9.985.722	IRELAND 4.480.858	ITALY 60.626.442	LATVIA 2.074.605	LITHUANIA 3.244.601	LUXEMBOURG 511.840	MALTA 417.617
TYPE OF TISSUE	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CORNEA	N. of tissue donations								
	Tissue donation PMP								
	N° of tissue retrieved	260	26,04		7.391	21	29		
	N° tissue processed (units)	26,04	75		121,91	10,12	8,94		
	N° tissue distributed (units)	563	75		14.609	21	57		
	N° tissue imported (units)	490			12.115	21	57		
	N° tissue exported (units)	1			6.384	21	49		
	N° of tissues transplanted	0			0	0	0		
	N° of patients transplanted	138			357	0	0		
	N° of transplants	199			5.935	21	49		
SKIN	N. of tissue donations								
	Tissue donation PMP								
	N° of tissue retrieved (cm2)	0	0,00		376	0	0		
	N° tissue processed (units)	0			6.220	0,00	0,00		
	N° tissue distributed (units)	NO DATA			1.060.002	0	0		
	N° tissue imported (units)	0	NO DATA		945.790	0	0		
	N° tissue exported (units)	0			0	0	0		
	N° of tissues transplanted	8			0	0	0		
	N° of patients transplanted	8			5.424	0	0		
	N° of transplants				NO DATA	0	0		
CARDIAC TISSUE	N. of tissue donations	10			209	0	0		
	Tissue donation PMP								
	N° of tissue retrieved	1,00			3,45	0,00	0,00		
	N° tissue processed (units)	9			376	0	0		
	N° tissue distributed (units)	10			334	0	0		
	N° tissue imported (units)	NO DATA			180	0	0		
	N° tissue exported (units)	0			0	0	0		
	N° of tissues transplanted	0			0	0	0		
	N° of patients transplanted	NO DATA			NO DATA	0	0		
	N° of transplants	NO DATA			205	0	0		
BLOOD VESSEL	N. of tissue donations	0			773	0	0		
	Tissue donation PMP								
	N° of tissue retrieved	0,00			12,75	0,00	0,00		
	N° tissue processed (units)	0			965	0	0		
	N° tissue distributed (units)	NO DATA			1.040	0	0		
	N° tissue imported (units)	NO DATA			568	0	0		
	N° tissue exported (units)	0			0	0	0		
	N° of tissues transplanted	0			0	0	0		
	N° of patients transplanted	NO DATA			NO DATA	0	0		
	N° of transplants	NO DATA			309	0	0		
MUSCULOSKELETAL	N. of tissue donations	280			3.364	70	128		
	Tissue donation PMP								
	N° of tissue retrieved	28,04			55,49	33,74	39,45		
	N° tissue processed (units)	159			7.912	218	128		
	N° tissue distributed (units)	154			0	218	128		
	N° tissue imported (units)	154			9.408	109	114		
	N° tissue exported (units)	0			0	0	1		
	N° of tissues transplanted	0			0	0	0		
	N° of patients transplanted	227			NO DATA	109	115		
	N° of transplants	197			NO DATA	109	113		
PLACENTA/AMNIOTIC MEMBRANE	N. of tissue donations	1			176	16	10		
	Tissue donation PMP								
	N° of tissue retrieved	0,10			2,90	7,71	3,08		
	N° tissue processed (units)	0			176	16	9		
	N° tissue distributed (units)	220			81	0	45		
	N° tissue imported (units)	90			13.155	0	73		
	N° tissue exported (units)	0			0	0	0		
	N° of tissues transplanted	0			0	0	0		
	N° of patients transplanted	18			NO DATA	0	73		
	N° of transplants	32			1.104	0	57		
OTHERS	N. of tissue donations	1			0	0	0		
	Tissue donation PMP								
	N° of tissue retrieved	0,10			0,00	0,00	0,00		
	N° tissue processed (units)	0			0	0	0		
	N° tissue distributed (units)	20			NO DATA	0	0		
	N° tissue imported (units)	5			NO DATA	0	0		
	N° tissue exported (units)	0			0	0	0		
	N° of tissues transplanted	0			0	0	0		
	N° of patients transplanted	32			NO DATA	0	0		
	N° of transplants	32			NO DATA	0	0		

## PRELIMINARY DATA ON TISSUES - YEAR 2011

## EUROPEAN UNION COUNTRIES

Country Population (Font: eurostat)	NETHERLANDS 16.655.799	POLAND 38.200.037	PORTUGAL 10.572.157	ROMANIA 21.413.815	SLOVAKIA 5.392.446	SLOVENIA 2.050.189	SPAIN 46.152.926	SWEDEN 9.415.570	U. K. 62.498.610
TYPE OF TISSUE	NO DATA								
TYPE OF DATA	NO DATA								
CORNEA									
N. of tissue donations	652	17,07	506	44	128		2,772	434	NO DATA
Tissue donation PMP	17,07	47,86	23,74	2,05	101		60,06	46,09	NO DATA
N° of tissue retrieved	1.294	987	23,74	44	101		4,218	882	10.556
N° tissue processed (units)	1.177	NO DATA	NO DATA	44			4,218	890	10.282
N° tissue distributed (units)	905	752	NO DATA	43	151		2,622	630	3.894
N° tissue imported (units)	0	162	0	84	0		1	0	159
N° tissue exported (units)	0	0	0	0	0		0	0	0
N° of tissues transplanted	NO DATA	916	NO DATA	127	151		2,705	NO DATA	NO DATA
N° of patients transplanted	NO DATA	127	NO DATA	127	151		2,887	NO DATA	NO DATA
N° of transplants	NO DATA	916	NO DATA	127	0		NO DATA	630	NO DATA
SKIN									
N. of tissue donations	30	13,675	1	13,675	21		207	40	NO DATA
Tissue donation PMP	13,64	638,61	0,09	638,61	3,89		4,50	4,28	NO DATA
N° of tissue retrieved (cm2)	86,900	843	843	13,675	109,378		567,256	NO DATA	1.364
N° tissue processed (units)	86,500	844	844	13,675	no data		567,258	46	1.247
N° tissue distributed (units)	992	0	0	12,300	20212 cm2		320,055	93,999	4.284
N° tissue imported (units)	0	1	0	0	0		0	NO DATA	2.174
N° tissue exported (units)	0	0	0	0	0		76	0	2.174
N° of tissues transplanted	NO DATA	5,000	NO DATA	12,300	20212 cm2		205,920	NO DATA	NO DATA
N° of patients transplanted	NO DATA	3	NO DATA	6	2		45	NO DATA	NO DATA
N° of transplants	NO DATA	3	NO DATA	11	0		NO DATA	19	NO DATA
CARDIAC TISSUE									
N. of tissue donations	247	17	17	0	20		198	243	NO DATA
Tissue donation PMP	6,47	1,61	0,09	0,00	3,71		4,29	25,81	NO DATA
N° of tissue retrieved	494	34	34	0	30		328	243	1.048
N° tissue processed (units)	330	18	18	0	30		328	243	1.038
N° tissue distributed (units)	212	7	7	0	13		134	145	469
N° tissue imported (units)	0	0	0	0	0		0	0	23
N° tissue exported (units)	0	0	0	0	0		67	0	50
N° of tissues transplanted	NO DATA	7	NO DATA	0	13		142	NO DATA	NO DATA
N° of patients transplanted	NO DATA	7	NO DATA	0	13		64	NO DATA	NO DATA
N° of transplants	NO DATA	7	NO DATA	0	13		NO DATA	148	NO DATA
BLOOD VESSEL									
N. of tissue donations	12	1	1	0	0		204	94	NO DATA
Tissue donation PMP	0,31	0,09	0,09	0,00	0,00		4,42	9,98	NO DATA
N° of tissue retrieved	15	1	1	0	NO DATA		391	94	285
N° tissue processed (units)	15	0	0	0	NO DATA		391	117	73
N° tissue distributed (units)	15	0	0	0	NO DATA		220	15	50
N° tissue imported (units)	0	0	0	0	NO DATA		0	0	9
N° tissue exported (units)	0	0	0	0	NO DATA		21	20	9
N° of tissues transplanted	NO DATA	0	NO DATA	0	NO DATA		173	NO DATA	NO DATA
N° of patients transplanted	NO DATA	0	NO DATA	0	NO DATA		156	15	NO DATA
N° of transplants	NO DATA	0	NO DATA	0	NO DATA		NO DATA	15	NO DATA
MUSCULOSKELETAL									
N. of tissue donations	721	59	59	197	718		2,072	1.733	NO DATA
Tissue donation PMP	18,87	5,38	5,38	9,20	133,15		44,89	184,06	NO DATA
N° of tissue retrieved	3,280	NO DATA	NO DATA	197	8,976		13,883	1.733	10.459
N° tissue processed (units)	2,715	235	235	365	1.024		13,883	1.764	4.403
N° tissue distributed (units)	10,675	276	276	83	550		10,535	1.321	19.041
N° tissue imported (units)	0	118	0	230	0		1,943	33	9.851
N° tissue exported (units)	0	0	0	0	7,952		468	0	9.890
N° of tissues transplanted	NO DATA	NO DATA	NO DATA	317	NO DATA		9,506	NO DATA	NO DATA
N° of patients transplanted	NO DATA	NO DATA	NO DATA	291	8,675		8,675	NO DATA	NO DATA
N° of transplants	NO DATA	NO DATA	NO DATA	291	278		NO DATA	1.321	NO DATA
PLACENTA/AMNIOTIC MEMBRANE									
N. of tissue donations	82	58	58	0	5		50	6	NO DATA
Tissue donation PMP	82	5,49	5,49	0,00	0,93		1,08	6,64	NO DATA
N° of tissue retrieved	82	59	59	0	5		1,365	351	49
N° tissue processed (units)	72	31,486	31,486	0	153		1,365	351	19
N° tissue distributed (units)	324	21,726	21,726	0	120		1,656	332	548
N° tissue imported (units)	0	0	0	0	0		0	0	10
N° tissue exported (units)	0	0	0	0	0		0	0	10
N° of tissues transplanted	NO DATA	188	NO DATA	0	120		1,080	NO DATA	NO DATA
N° of patients transplanted	NO DATA	NO DATA	NO DATA	0	111		1,275	NO DATA	NO DATA
N° of transplants	NO DATA	NO DATA	NO DATA	0	111		NO DATA	332	NO DATA
OTHERS									
N. of tissue donations		0	0	1,945	NO DATA		NO DATA	0	NO DATA
Tissue donation PMP		0,00	0,00	90,83	NO DATA		NO DATA	0,00	NO DATA
N° of tissue retrieved		0	0	1,945	NO DATA		NO DATA	0	2.878
N° tissue processed (units)		NO DATA	NO DATA	0	NO DATA		NO DATA	NO DATA	1.924
N° tissue distributed (units)		NO DATA	NO DATA	0	NO DATA		NO DATA	NO DATA	631
N° tissue imported (units)		21	0	0	NO DATA		0	0	197
N° tissue exported (units)		0	0	0	NO DATA		0	0	197
N° of tissues transplanted		16	NO DATA	0	NO DATA		NO DATA	NO DATA	NO DATA
N° of patients transplanted		NO DATA	NO DATA	0	NO DATA		NO DATA	NO DATA	NO DATA
N° of transplants		NO DATA	NO DATA	0	NO DATA		NO DATA	NO DATA	NO DATA

## PRELIMINARY DATA ON TISSUES - YEAR 2011

## OTHER COUNTRIES

Country Population (Font: eurostat)	CROATIA 4.412.137	ICELAND 318.452	MACEDONIA 2.057.284	MOLDOVA	NORWAY 4.920.305	SWITZERLAND 7.870.134	TURKEY 73.722.988
TYPE OF TISSUE	TYPE OF DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CORNEA	N. of tissue donations Tissue donation PMP N° of tissue retrieved N° tissue processed (units) N° tissue distributed (units) N° tissue imported (units) N° tissue exported (units) N° of tissues transplanted N° of patients transplanted N° of transplants	12 2,72 12 NO DATA 67 0 10 77 77	NO DATA	0 0 0 0 0 0 0 0 0	0 0,00 0 NO DATA 0 0 NO DATA NO DATA NO DATA	2168 29.41 2168 1997 NO DATA NO DATA NO DATA NO DATA 1997	
SKIN	N. of tissue donations Tissue donation PMP N° of tissue retrieved (cm2) N° tissue processed (units) N° tissue distributed (units) N° tissue imported (units) N° tissue exported (units) N° of tissues transplanted N° of patients transplanted N° of transplants	12 2,72 92 16.416 14.896 0 0 196 4 8	NO DATA	1 1.000 0 0 0 0 1 1 1	0 0,00 0 NO DATA 0 0 NO DATA NO DATA NO DATA	2 0,03 0 NO DATA NO DATA NO DATA NO DATA NO DATA 2	
CARDIAC TISSUE	N. of tissue donations Tissue donation PMP N° of tissue retrieved N° tissue processed (units) N° tissue distributed (units) N° tissue imported (units) N° tissue exported (units) N° of tissues transplanted N° of patients transplanted N° of transplants	10 2,27 14 14 NO DATA 0 0 0 NO DATA NO DATA	NO DATA	0 0 0 0 0 0 0 0 0	0 0,00 0 NO DATA 0 0 NO DATA NO DATA NO DATA	1 0,01 0 NO DATA NO DATA NO DATA NO DATA NO DATA 1	
BLOOD VESSEL	N. of tissue donations Tissue donation PMP N° of tissue retrieved N° tissue processed (units) N° tissue distributed (units) N° tissue imported (units) N° tissue exported (units) N° of tissues transplanted N° of patients transplanted N° of transplants	0 0,00 0 NO DATA NO DATA 0 0 0 NO DATA NO DATA	NO DATA	0 0 0 0 0 0 0 0 0	0 0,00 0 NO DATA 0 0 NO DATA NO DATA NO DATA	0 0,00 0 NO DATA NO DATA NO DATA NO DATA NO DATA 1	
MUSCULOSKELETAL	N. of tissue donations Tissue donation PMP N° of tissue retrieved N° tissue processed (units) N° tissue distributed (units) N° tissue imported (units) N° tissue exported (units) N° of tissues transplanted N° of patients transplanted N° of transplants	230 52,13 230 156 170 0 0 126 167 166	NO DATA	26 26 153 180 0 0 180 116 116	379 77,03 379 379 265 43 0 NO DATA 265	9 0,12 9 NO DATA NO DATA NO DATA NO DATA NO DATA NO DATA 9	
PLACENTA/AMNIOTIC MEMBRANE	N. of tissue donations Tissue donation PMP N° of tissue retrieved N° tissue processed (units) N° tissue distributed (units) N° tissue imported (units) N° tissue exported (units) N° of tissues transplanted N° of patients transplanted N° of transplants	6 1,36 6 1.818 51 0 3 8 12	NO DATA	0 0 0 0 0 0 0 0 0	0 0,00 0 NO DATA NO DATA 12 0 NO DATA NO DATA 10	0 0,00 0 NO DATA NO DATA NO DATA NO DATA NO DATA 10	
OTHERS	N. of tissue donations Tissue donation PMP N° of tissue retrieved N° tissue processed (units) N° tissue distributed (units) N° tissue imported (units) N° tissue exported (units) N° of tissues transplanted N° of patients transplanted N° of transplants	0 0,00 0 NO DATA NO DATA 0 0 NO DATA NO DATA NO DATA	NO DATA	2 2 4 0 0 0 0 0 0	0 0,00 0 NO DATA NO DATA 0 0 NO DATA NO DATA 6	1 0,01 1 NO DATA NO DATA 0 0 NO DATA NO DATA 1	

# PRELIMINARY DATA ON TISSUES - YEAR 2011

## LATINAMERICAN COUNTRIES

Country Population (Font: UNFPA)	ARGENTINA 40,6	BOLIVIA 10,1	BRASIL 196,7	CHILE 17,3	COLOMBIA 46,9	COSTA RICA 4,7	CUBA 11,3	DOMINICANA 10,1
TYPE OF TISSUE	TYPE OF DATA							
CORNEA	N. of tissue donations	772	0	14002	44	110	590	17
	Tissue donation PMP	19,00	0,00	71,18	2,5	23,40	52,21	1,68
	N° of tissue retrieved	1.544	0	24200		218	1146	
	N° tissue processed (units)							
	N° tissue distributed (units)							
	N° tissue imported (units)							
SKIN	N° tissue exported (units)	972	0	15175	2,013	173	588	
	N° of tissues transplanted							
	N° of patients transplanted							
	N° of transplants							
	N. of tissue donations	14	0	27	4	16		
	Tissue donation PMP	0,34	0,00	0,14	0,2	3,40		
CARDIAC TISSUE	N° of tissue retrieved (cm2)	11.662	0	38.198	47	13.239		
	N° tissue processed (units)							
	N° tissue distributed (units)							
	N° tissue imported (units)							
	N° tissue exported (units)	55	0	16	174	27		
	N° of tissues transplanted							
BLOOD VESSEL	N° of patients transplanted	211	0		88	7		
	N° of transplants							
	N. of tissue donations	254	0	5	39	13		
	Tissue donation PMP	6,26	0,00	0,3	0,83	2,77		
	N° of tissue retrieved	344	0		69	26		
	N° tissue processed (units)	146	0					
MUSCULOSKELETAL	N° tissue distributed (units)							
	N° tissue imported (units)							
	N° tissue exported (units)							
	N° of tissues transplanted	4	0		0	8		
	N° of patients transplanted							
	N° of transplants							
PLACENTA/AMNIOTIC MEMBRANE	N. of tissue donations	1.442	0	596	7	245	151	
	Tissue donation PMP	35,52	0,00	3,03	0,4	5,22	13,36	
	N° of tissue retrieved	1.781	0	999		3.588	1.005	
	N° tissue processed (units)	12.276	0					
	N° tissue distributed (units)							
	N° tissue imported (units)							
OTHERS	N° tissue exported (units)	8.036	0	24.661	17.771		322	
	N° of tissues transplanted							
	N° of patients transplanted							
	N° of transplants							
	N. of tissue donations	NO DATA	0					
	Tissue donation PMP		0,00					
OTHERS	N° of tissue retrieved	NO DATA	0					
	N° tissue processed (units)	NO DATA	0					
	N° tissue distributed (units)	NO DATA	0					
	N° tissue imported (units)							
	N° tissue exported (units)							
	N° of tissues transplanted	NO DATA	0					
OTHERS	N° of patients transplanted							
	N° of transplants							
	N. of tissue donations							
	Tissue donation PMP							
	N° of tissue retrieved							
	N° tissue processed (units)							

## PRELIMINARY DATA ON TISSUES - YEAR 2011

## LATINAMERICAN COUNTRIES

Country Population (Font: UNFPA)	ECUADOR 14,7	MEXICO 114,8	NICARAGUA 5,9	PANAMA 3,4	PARAGUAY 6,6	PERU 29,4	URUGUAY 3,4	VENEZUELA 29,4
TYPE OF TISSUE	NO DATA							
CORNEA	N. of tissue donations	18	1.118	113	30	112	110	74
	Tissue donation PMP	1,22	9,74	33,24	4,55	3,81	32,35	2,52
	N° of tissue retrieved	36	942	226			220	143
	N° tissue processed (units)							
	N° tissue distributed (units)							
	N° tissue imported (units)							
SKIN	N° tissue exported (units)							
	N° of tissues transplanted		1.753	130	60	324	171	138
	N° of patients transplanted							
	N° of tissue donations		5			0	15	
	Tissue donation PMP		0,04			0,00	4,41	
	N° of tissue retrieved (cm2)		0				21.300	
CARDIAC TISSUE	N° tissue processed (units)		0					
	N° tissue distributed (units)		0					
	N° tissue imported (units)					0	1	35
	N° tissue exported (units)						3	
	N° of tissues transplanted		0					
	N° of patients transplanted					0	3	6
BLOOD VESSEL	N° of tissue donations		0				16	
	Tissue donation PMP		0,00				4,71	
	N° of tissue retrieved		0				33	
	N° tissue processed (units)		0					
	N° tissue distributed (units)		0					
	N° of tissues transplanted		0				15	
MUSCULOSKELETAL	N° of patients transplanted							
	N° of tissue donations		91				21	
	Tissue donation PMP		0,79				6,18	
	N° of tissue retrieved						38	
	N° tissue processed (units)							
	N° tissue distributed (units)							
PLACENTA/AMNIOTIC MEMBRANE	N° tissue imported (units)							
	N° tissue exported (units)						178	
	N° of tissues transplanted							
	N° of patients transplanted							
	N° of tissue donations							
	Tissue donation PMP							
OTHERS	N° of tissue retrieved							
	N° tissue processed (units)							
	N° tissue distributed (units)							
	N° tissue imported (units)							
	N° tissue exported (units)							
	N° of tissues transplanted							



PRELIMINARY DATA ON HPC CELLS - YEAR 2011

EUROPEAN UNION COUNTRIES

Country	AUSTRIA	BELGIUM	BULGARIA	CYPRUS	CZECH R.	DENMARK	ESTONIA	FINLAND	FRANCE
Population (Font: eurostat)	8.404.252	10.951.266	7.369.431	839.751	10.485.489	5.552.037	1.340.194	5.375.276	65.048.412
CATEGORY OF DATA	TYPE OF DATA		NO DATA		NO DATA		NO DATA		NO DATA
POTENTIAL DONATION AND SEARCHING IN THE NATIONAL REGISTRIES	N° of potential donors at 31.12		15	120.542	79.072	0	0		196.391
	N° of coord blood unit at 31.12		NO DATA	1.742	3.739		0		16.162
	N° of searches requested		NO DATA	2.092	18.355		0		19.490
	N° of unrelated donation		NO DATA	21	115		0		1.325
DONATION	N° of donation - Autologous		108	28	0		35		3.218
	N° of donation - Allogenic		7	37	46		1		1.664
	N° of donation - Allogenic, related		7	15	0		1		747
	N° of donation - Allogenic, unrelated		0	22	46		0		917
BANKING of CORD BLOOD	N° of unrelated coord blood units collected		NO DATA	1.289	0		0		5.441
	N° of unrelated coord blood units distributed		NO DATA	0	0		0		163
	N° of unrelated coord blood units at 31.12		NO DATA	1.712	0		0		16.162
	N° of related coord blood units collected		NO DATA	1.961	0		26		0
	N° of related coord blood units distributed		NO DATA	0	0		NA		0
	N° of related coord blood units at 31.12		NO DATA	15.499	0		NA		0
	Total N° of coord blood units collected		NO DATA	3.250	0		NA		5.441
	Total N° of coord blood units distributed		NO DATA	0	0		NA		163
	Total N° of coord blood units at 31.12		NO DATA	17.211	0		NA		16.162
TRANSPLANT	N° of transplants - Autologous		79	18	0		NA		3.003
	N° of patients transplanted - Autologous		77	18	0		31		0
	N° of transplants - Allogenic		11	0	55		NA		1.769
	N° of patients transplanted - Allogenic		11	0	10		16		0
	N° of transplants - Allogenic, related		8	0	0		NA		748
	N° of patients transplanted - Allogenic, related		8	0	0		1		0
	N° of transplants - Allogenic, unrelated		3	0	55		NA		1.021
	N° of patients transplanted - Allogenic, unrelated		3	0	10		15		0

## PRELIMINARY DATA ON HPC CELLS - YEAR 2011

## EUROPEAN UNION COUNTRIES

Country	GERMANY	GREECE	HUNGARY	IRELAND	ITALY	LATVIA	LITHUANIA	LUXEMBOURG	MALTA
Population (Font: eurostat)	81.751.602	11.309.885	9.985.722	4.480.858	60.626.442	2.074.605	3.244.601	511.840	417.617
CATEGORY OF DATA	NO DATA				NO DATA				NO DATA
TYPE OF DATA	NO DATA				NO DATA				NO DATA
POTENTIAL DONATION AND SEARCHING IN THE NATIONAL REGISTRIES									
N° of potential donors at 31.12	NO DATA	33.737	1.240		334.772		6.592	0	
N° of coord blood unit at 31.12	NO DATA	1.176	1.252		26.698		765	0	
N° of searches requested	NO DATA	191	0		3.594		144	0	
N° of unrelated donation	NO DATA	79	0		735		39	0	
DONATION									
N° of donation - Autologous	13.384	NO DATA	1.318		5.082		284	117	
N° of donation - Allogenic	10.917	0	0		1.219		67	0	
N° of donation - Allogenic, related	1.110	0	0		935		24	0	
N° of donation - Allogenic, unrelated	9.807	0	0		283		43	0	
BANKING of CORD BLOOD									
N° of unrelated coord blood units collected	2.742	0	0		21.820		0	0	
N° of unrelated coord blood units distributed	35	0	0		96		0	0	
N° of unrelated coord blood units at 31.12	NO DATA	1.176	0		34.836		0	0	
N° of related coord blood units collected	20	0	7973		339		213	0	
N° of related coord blood units distributed	6	0	1		8		0	0	
N° of related coord blood units at 31.12	NO DATA	0	36722		2.503		718	0	
Total N° of coord blood units collected	2.762	0	7973		22.159		213	0	
Total N° of coord blood units distributed	41	0	1		104		0	0	
Total N° of coord blood units at 31.12	NO DATA	1.176	36722		37.339		718	0	
TRANSPLANT									
N° of transplants - Autologous	3.893	NO DATA	79		3.002		79	0	
N° of patients transplanted - Autologous	3.319	0	79		2.377		71	0	
N° of transplants - Allogenic	3.098	97	10		1.690		67	0	
N° of patients transplanted - Allogenic	2.928	0	10		1.564		64	0	
N° of transplants - Allogenic, related	962	0	1		935		24	0	
N° of patients transplanted - Allogenic, related	872	0	1		845		21	0	
N° of transplants - Allogenic, unrelated	2.136	97	9		755		43	0	
N° of patients transplanted - Allogenic, unrelated	2.056	0	9		719		43	0	

PRELIMINARY DATA ON HPC CELLS - YEAR 2011

EUROPEAN UNION COUNTRIES

Country	Population (Font: eurostat)									
CATEGORY OF DATA	TYPE OF DATA		NO DATA		NO DATA		NO DATA		NO DATA	
POTENTIAL DONATION AND SEARCHING IN THE NATIONAL REGISTRIES	N° of potential donors at 31.12		262.041	277.938	NO DATA		93.366	NO DATA		NO DATA
	N° of coord blood unit at 31.12		632	7.259	3.222		52.377	NO DATA		NO DATA
	N° of searches requested		902*	2.808	0		2.349	NO DATA		NO DATA
	N° of unrelated donation		138	147	0		733	NO DATA		NO DATA
DONATION	N° of donation - Autologous		NO DATA	395	2.029		1.675	502		NO DATA
	N° of donation - Allogenic		282	207	1.609		1.250	98		NO DATA
	N° of donation - Allogenic, related		144	78	1.609		510	NO DATA		NO DATA
	N° of donation - Allogenic, unrelated		138	129	0		740	NO DATA		NO DATA
BANKING of CORD BLOOD	N° of unrelated coord blood units collected		464	10.950	0		5.861	1.240		7.869
	N° of unrelated coord blood units distributed		0	5	0		392	6		NO DATA
	N° of unrelated coord blood units at 31.12		997	7.264	22		52.793	2.933		NO DATA
	N° of related coord blood units collected		5.823	11.976	17.549		3	0		18.501
	N° of related coord blood units distributed		4	2	0		3	0		NO DATA
	N° of related coord blood units at 31.12		36.527	58.177	67.625		0	0		NO DATA
	Total N° of coord blood units collected		6.287	22.926	17.549		5.864	1.240		26.370
	Total N° of coord blood units distributed		4	7	0		395	6		NO DATA
	Total N° of coord blood units at 31.12		37.524	65.441	67.647		52.793	2.933		NO DATA
	TRANSPLANT	N° of transplants - Autologous		NO DATA	327	0		1.675	NO DATA	
N° of patients transplanted - Autologous		NO DATA	316	0		0	397		NO DATA	
N° of transplants - Allogenic		377	134	0		997	NO DATA		NO DATA	
N° of patients transplanted - Allogenic		349	126	0		0	259		NO DATA	
N° of transplants - Allogenic, related		144	68	0		510	NO DATA		NO DATA	
N° of patients transplanted - Allogenic, related		135	63	0		0	NO DATA		NO DATA	
N° of transplants - Allogenic, unrelated		233	66	0		487	NO DATA		NO DATA	
N° of patients transplanted - Allogenic, unrelated		214	63	0		0	NO DATA		NO DATA	

## PRELIMINARY DATA ON HPC CELLS - YEAR 2011

## OTHER COUNTRIES

Country	CROATIA	ICELAND	MACEDONIA	MOLDOVA	NORWAY	SWITZERLAND	TURKEY
Population (Font: eurostat)	4.412.137	318.452	2.057.284		4.920.305	7.870.134	73.722.988
CATEGORY OF DATA	TYPE OF DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	
POTENTIAL DONATION AND SEARCHING IN THE NATIONAL REGISTRIES	N° of potential donors at 31.12	26.787		0	33.180		NO DATA
	N° of cord blood unit at 31.12	1.561		0	40		NO DATA
	N° of searches requested	265		0	6.792		NO DATA
	N° of unrelated donation	21		0	252		1.032
DONATION	N° of donation - Autologous	994		0	400		NO DATA
	N° of donation - Allogenic	1.938		0	40		NO DATA
	N° of donation - Allogenic, related	39		0	0		NO DATA
	N° of donation - Allogenic, unrelated	1.899		0	40		NO DATA
BANKING of CORD BLOOD	N° of unrelated cord blood units collected	1.895		0	0		NO DATA
	N° of unrelated cord blood units distributed	1		0	0		NO DATA
	N° of unrelated cord blood units at 31.12	1.815		0	0		NO DATA
	N° of related cord blood units collected	15		0	0		1.803
	N° of related cord blood units distributed	0		0	0		7
	N° of related cord blood units at 31.12	140		0	0		11.497
	Total N° of cord blood units collected	1.910		0	0		1.803
	Total N° of cord blood units distributed	1		0	0		7
	Total N° of cord blood units at 31.12	1.955		0	0		11.497
TRANSPLANT	N° of transplants - Autologous	160		0	43		1.135
	N° of patients transplanted - Autologous	132		0	43		0
	N° of transplants - Allogenic	45		0	0		865
	N° of patients transplanted - Allogenic	39		0	0		0
	N° of transplants - Allogenic, related	29		0	NO DATA		785
	N° of patients transplanted - Allogenic, related	23		0	0		0
	N° of transplants - Allogenic, unrelated	16		0	0		80
	N° of patients transplanted - Allogenic, unrelated	16		0	0		0

PRELIMINARY DATA ON HPC CELLS - YEAR 2011

LATINAMERICAN COUNTRIES

Country	ARGENTINA	BOLIVIA	BRASIL	CHILE	COLOMBIA	COSTA RICA	CUBA	DOMINICANA
Population (Font: UNFPA)	40,6	10,1	196,7	17,3	46,9	4,7	11,3	10,1
CATEGORY OF DATA	TYPE OF DATA	NO DATA	NO DATA					
POTENTIAL DONATION AND SEARCHING IN THE NATIONAL REGISTRIES	N° of potential donors at 31.12							
	N° of coord blood unit at 31.12							
	N° of searches requested							
	N° of unrelated donation							
DONATION	N° of donation - Autologous							
	N° of donation - Allogenic							
	N° of donation - Allogenic, related							
	N° of donation - Allogenic, unrelated							
BANKING of CORD BLOOD	N° of unrelated coord blood units collected							
	N° of unrelated coord blood units distributed							
	N° of unrelated coord blood units at 31.12							
	N° of related coord blood units collected							
	N° of related coord blood units distributed							
	N° of related coord blood units at 31.12							
	Total N° of coord blood units collected							
Total N° of coord blood units distributed								
Total N° of coord blood units at 31.12								
TRANSPLANT	N° of transplants - Autologous	0	1018		216	15	21	2
	N° of patients transplanted - Autologous							
	N° of transplants - Allogenic	0	714		104	30	4	0
	N° of patients transplanted - Allogenic							
	N° of transplants - Allogenic, related	0	517		80	30	4	0
	N° of patients transplanted - Allogenic, related							
	N° of transplants - Allogenic, unrelated	0	197		24	0	NO DATA	0
	N° of patients transplanted - Allogenic, unrelated							

**PRELIMINARY DATA ON HPC CELLS - YEAR 2011**

## LATINAMERICAN COUNTRIES

Country	Population (Font: UNFPA)	ECUADOR	MEXICO	NICARAGUA	PANAMA	PARAGUAY	PERU	URUGUAY	VENEZUELA
CATEGORY OF DATA		TYPE OF DATA							
POTENTIAL DONATION AND SEARCHING IN THE NATIONAL REGISTRIES		14,7	114,8	5,9	3,4	6,6	29,4	3,4	29,4
N° of potential donors at 31.12									
N° of coord blood unit at 31.12									
N° of searches requested									
N° of unrelated donation									
DONATION									
N° of donation - Autologous									
N° of donation - Allogenic									
N° of donation - Allogenic, related									
N° of donation - Allogenic, unrelated									
BANKING of CORD BLOOD									
N° of unrelated coord blood units collected									
N° of unrelated coord blood units distributed									
N° of unrelated coord blood units at 31.12									
N° of related coord blood units collected									
N° of related coord blood units distributed									
N° of related coord blood units at 31.12									
Total N° of coord blood units collected									
Total N° of coord blood units distributed									
Total N° of coord blood units at 31.12									
TRANSPLANT									
N° of transplants - Autologous		18	174		18	5	0	77	39
N° of patients transplanted - Autologous									
N° of transplants - Allogenic		10	141		11	0	0	19	14
N° of patients transplanted - Allogenic									
N° of transplants - Allogenic, related		9			11	0	0	19	14
N° of patients transplanted - Allogenic, related									
N° of transplants - Allogenic, unrelated		1			NO DATA	0	0	0	0
N° of patients transplanted - Allogenic, unrelated									

# Good Practice Guidelines in the Process of Organ Donation.



# Good Practice Guidelines in the Process of Organ Donation

*That “Spain is the leader in organ donations” has become a national and international slogan. It is quite clear that our system has given ample proof of effectiveness and soundness and that our donation and transplantation activity has become a reference worldwide and is motive of pride for our professionals and our society. Furthermore, our system is also characterized by its continuous evaluation and improvement.*

*Our donation and transplantation activity, although growing in absolute terms, has remained stabilized in relative terms over the last decade. A significant number of patients are faced with long periods on the waiting list and, depending on the organ, 6 to 8% of these patients on the list die before receiving a transplant.*

*We are also experiencing times of fortunate epidemiological changes and changes in how society treats and confronts the end of life, changes that give rise to doubts on the stability over time of our brain death donation potential.*

*It was within this context that the initiative of the present project was born: Benchmarking applied to organ donation, specifically, to brain death donation. ‘Benchmarking’ is a modern word used to refer to a practice that is as old as the human being: innately, we establish and try to learn from those who do it the best. The project has tried to identify those differentiating factors that justify some excellence results in the brain death donation process by our coordination team.*

*These factors are summarized in the present document with the single, and we believe commendable purpose, of helping our entire coordination network to improve their results in the process. These lines serve to acknowledge that this help is supported by the fantastic work carried out by the network and its continuing enthusiasm.*

Rafael Matesanz  
Director National Transplant Organization

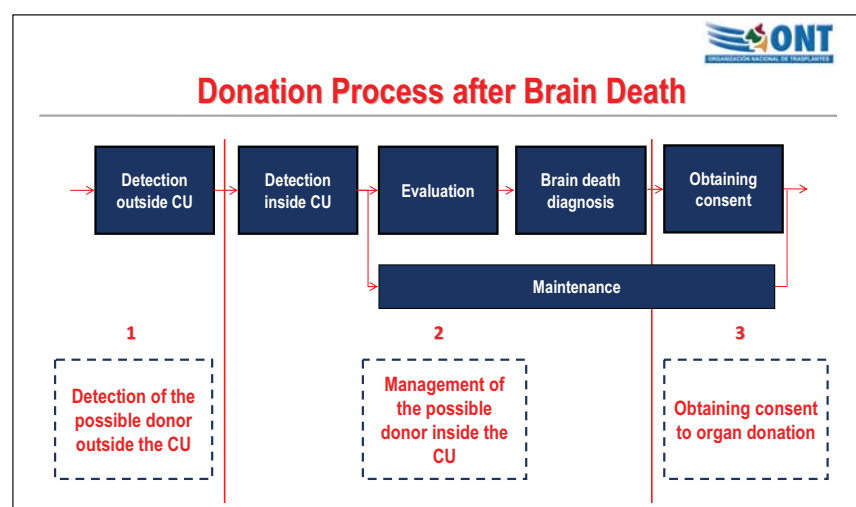
## INTRODUCTION

Within the context of the *Plan Donación 40* (Donation 40 Plan) propelled by the National Transplant Organization (NTO) (in Spanish, Organización Nacional de Trasplantes) to improve the organ donation and transplant activity in our country, one of the strategies proposed is that of identifying, disseminating and implementing better practices applied to the **brain death donation** process.

The *benchmarking*<sup>1</sup> methodology has been used in order to achieve this objective. This methodology consists in defining a process and/or subprocesses, construct some indicators that represent the effectiveness in their development, identify

the study units (in this case, hospitals authorized for the donation of the deceased persons) with the best indicators (references or *benchmarks*) and to investigate and describe the practices that may justify these excellence results, subsequently favoring their implementation, by adapting them to the needs and characteristics of other centers.

In order to put this initiative into practice, a committee formed by hospital and regional transplant coordinators and by members of the ONT was summoned. This committee designed the project and participated in the writing of the recommendations derived from it. The list of the *Benchmarking* Committee members is given in **Annex 1**.



**Figure 1:** Structure of the donation process in brain death donation: ICU: Intensive care unit.

<sup>1</sup> Camp RC. Benchmarking: The search for industry best practices that lead to superior performance. Milwaukee: Quality Press, American Society for Quality Control; 1989.



For this project, the brain death donation process within the hospital setting was structured into three subprocesses (**Figure 1**):

- 1. REFERRAL OF THE POSSIBLE DONOR TO CRITICAL UNITS (CU):** Detection of possible donors outside of the CU has not been an usual area of work in our setting, at least not in a generalized way. However, early detection and subsequent referral to the CU of possible donors may account for important differences in the **potential for brain death donation** and therefore, in the final outcome of the process. The possible donor was defined as a **person with serious brain damage and possible evolution to brain death in a short period of time**. The indicator used to evaluate effectiveness in this phase of the donation process was the percentage of deaths in the CU out of all the deaths in the hospital with at least one of a series of ICD-9 codes among their primary or secondary diagnoses. This series of codes represents the etiology of 95% of brain deaths in our country.<sup>2</sup>
- 2. MANAGEMENT OF THE POSSIBLE DONOR IN THE CU:** This is a subprocess which, in turn, includes a series of phases. Specifically, these are the detection of the potential intra-hospital CU donor, clinical evaluation and maintenance of a person with brain death, as well as its diagnosis. As an indicator of the effectiveness of this subprocess, the percentage of appropriate donors for the extraction (pending familial consent) was calculated out of the total number of persons with clinical examination consistent with brain death within the CU. The data were obtained from the *Quality Assurance Program* in the *Donation Process*.<sup>3</sup>
- 3. OBTAINING CONSENT TO PROCEED TO DONATION:** Effectivity in this phase was evaluated using the percentage of consents to donation obtained from the total number of adequate donors for the extraction, pending consent. Once again, the data needed for the construction of the indicator were obtained from the *Quality Assurance Program* in the *Donation Process*.

The study setting included all those hospitals authorized for organ donation in Spain. In order to participate in the project, the hospitals had to fulfill the requirement of having participated in the *Quality Assurance Program* in the *Donation*

*Process* for at least 3 years out of the 5 included in the study period, this including the years 2003 to and including the year 2007. A total of 104 hospitals participated in the study, this number accounting for 68% of the hospitals authorized for donation in our country, although these hospitals accounted for approximately 80% of the donors of the period studied.

After having constructed the indicators for each one of the participating hospitals, each one of the subprocesses and each one of the years of study, those centers with excellence results in each one of the phases were identified, considering those determining hospital factors of the value of each indicator (homotecia elements). Next, a questionnaire designed for the description of their practices was sent to the intra-hospital coordination teams of these centers. Each one of these hospitals was visited by two members of the *benchmarking* Committee, and the corresponding questionnaire was filled out between them and the hospital coordination of the center. After, the *Benchmarking* committee analyzed and discussed these questionnaires in order to extract information on the practices that could justify these excellence results.

As a consequence of this exercise, the Committee has elaborated a series of recommendations to achieve greater effectiveness in the donation process in brain death and that are expressed in this document. A justification has been provided for each one of the recommendations, mentioning the description of the findings in the hospital selected by their results, when pertinent. It is important to stress that it was not aimed to offer detailed step-by-step information of each one of the subprocesses analyzed but rather of those **actions differentiating them** from those performed in the rest of the hospitals, probably **keys for obtaining excellent results**.

The recommendations derived from this project are aimed at the entire coordination network, at the hospital administrations and at the heads of the hospital units, directly or indirectly involved in the donation process.<sup>4</sup>

The purpose is to communicate these practices so that the recipients of these recommendations can evaluate the possibility of incorporating them as far as possible and with the necessary adaptations to their work methodology.

## RECOMMENDATION ON THE COMPOSITION OF THE HOSPITAL COORDINATION TEAM

### RECOMMENDATION 1: THE NUMBER OF MEMBERS AND THE COMPOSITION OF THE COORDINATION TEAMS SHOULD BE ADAPTED TO THE COORDINATION NEEDS OF EACH HOSPITAL

**Addressed to:** *Hospital Administration, CU responsible persons, Hospital Transplant Coordination; Regional Transplant Coordination.*

There is a variable number of members and composition of the coordination team in the hospitals selected based on the coordination needs of each hospital. The number and characteristics of the teams have varied over time, this responding to the characteristics of each hospital.

<sup>2</sup> Cuende, N, Sánchez, J, Cañón, JF, et al. Mortalidad hospitalaria en unidades de críticos y muertes encefálicas según los códigos de la Clasificación Internacional de Enfermedades. *Med Intensiva*, 2004; 23(1): 1-10.

<sup>3</sup> Programa de Garantía de Calidad en el Proceso de la Donación. Web page of the Organización Nacional de Trasplantes. Available in: Last access: November 2010.

<sup>4</sup> Those readers of this guide who are interested in having more detailed information on the methodology used, on the actions performed in the hospitals identified in this study, on the protocols or guidelines used in them, or any additional information, please do not hesitate to consult at: ont@mspsi.es

It is very important for the regional coordinator and existing coordination team to have in-depth knowledge about the possibilities and needs of the center. Furthermore, a very good relationship needs to be established with the hospital administration so that it understands the importance of the donation and transplant and therefore understands and allots the necessary human and material requirements to cover these activities.

In most of the centers selected, the team is formed by **medical and nursing personnel**, with a greater percentage of physicians in the first two subprocesses (referral to CU and intra-CU management). Most of the **medical staff are intensivists**, although it should be stressed that **in the first subprocess there are only emergency physicians**, and that in the **second subprocess there are only intensivists with some nephrologists** and in the third subprocess **anesthetists**. The origin of the **nursing staff** is more **varied**, these more frequently being from **surgery in the second indicator and from nephrology in the third**.

**RECOMMENDATION 2: ALL OF THE TEAM MEMBERS SHOULD RECEIVE TRAINING IN COORDINATION AND COMMUNICATION COURSES**

**Addressed to:** Hospital Administration, Hospital Transplant Coordination; Regional Transplant Coordination.

Almost all of the coordination team members of the centers selected have taken training courses as transplant coordinators and communication courses. In many cases, the team members are even teachers of these courses.

**RECOMMENDATION 3: IT IS RECOMMENDED THAT THERE SHOULD BE A STABLE COORDINATION TEAM OVER TIME**

**Addressed to:** Hospital Administration; Hospital Transplant Coordination; Regional Transplant Coordination

In most of the coordination teams, there is at least one **professional with more than 10 years of coordination experience**, the mean years of sonority of the team being superior in the third subprocess, especially in regards to the nursing staff. Therefore, the existence of certain stability in the coordination team is important. Experience plays an essential role in all of the project phases and very especially in the obtaining of consent for the donation.

**RECOMMENDATION 4: IT IS RECOMMENDED THAT THERE BE PERSONS WITH HIERARCHICAL RESPONSIBILITY IN THE HOSPITAL IN THE COORDINATION TEAM**

**Addressed to:** Hospital Administration, Hospital Transplant Coordination; Regional Transplant Coordination.

In several of the hospitals selected as having excellence in the three subprocesses, section/service chiefs were included among the medical staff making up the transplant coordination team. This occurred in a lower proportion in subprocess 1, and in half of the hospitals in the subprocesses 2 and 3. There were also supervisors among the nursing staff, especially in phases 2 and 3 of the donation process.

The recommendation provided does not imply that having a position of responsibility in the hospital is a requirement to opt for transplant coordination. However, based on the observation of the centers, it is deduced that matching the coordination of the transplant and hierarchy facilitates decision making and therefore, the improvement of the effectiveness in the donation process.

**RECOMMENDATION 5: IT IS RECOMMENDABLE FOR THE COORDINATORS TO HAVE PARTIAL DEDICATION TO THE COORDINATION TASKS**

**Addressed to:** Hospital Administration, Hospital Transplant Coordination; Regional Transplant Coordination.

Most of the transplant coordination staff of the centers identified have partial dedication to the coordination tasks, all of them in the case of subprocess two. In the hospitals that have a person with full-time dedication, this is generally because of the extra workload related with the transplantations teams. Therefore, **full-time dedication of some of the team members is recommended in those centers having a large work load associated to the transplant activity**.

In every case, the part time dedication of the professionals is combined with activities related to their professional category.

**RECOMMENDATION 6: DUTIES SHOULD BE BASED ON THE CONCEPT OF AVAILABILITY, ASSUMING RESPONSIBILITY IF A DONOR APPEARS**

**Addressed to:** Hospital Administration, Hospital Transplant Coordination; Regional Transplant Coordination.

The number of duties is generally distributed based on the number of team members. In general, they are based more on the availability concept than on that of physical presence, assuming responsibility when any donor appears. On occasions, the coordination duties are shared with care work, although these remain on a second plane if a possible donor appears.

In the second subprocess, the duties are always performed by at least one physician.

**RECOMMENDATION 7: THE COORDINATORS MUST HAVE FULL DECISION CAPACITY**

**Addressed to:** Hospital Administration, Hospital Transplant Coordination; Regional Transplant Coordination.

To achieve good results in the donation process, it is essential to have full decision capacity regarding the possible donor in all of the phases of the process. It is desirable for the Coordination Team to be able to participate in the decision making when the patient is admitted to the CU and the autonomy to request the necessary tests, to negotiate the availability of the operating room, etc.

Depending on the structure of the coordination teams, the work distribution is different. The teams made up of a physician-nurse share the clinical and logistic work, respectively.

**RECOMMENDATION 8: IT IS ADVISABLE FOR THE COORDINATORS TO CONSIDER THAT THEY ARE CORRECTLY PAID AND RECOGNIZED PROFESSIONALLY**

*Addressed to: Hospital Administration, Hospital Transplant Coordination; Regional Transplant Coordination.*

In practically all of the centers analyzed, the coordination teams felt that they were somehow compensated for the large workload entailed by the coordination.

It is important for the administrations to recognize that the transplant coordination work within the hospital is essential. That is why it is important to not only recognize this work economically but also as a merit within the professional career.

**RECOMMENDATION 9: THE COORDINATION TEAM MUST BUILD AND MAINTAIN A GOOD RELATIONSHIP WITH ALL THE HOSPITAL PERSONNEL**

*Addressed to: Hospital Transplant Coordination; Hospital Administration; Responsible for other units.*

It is advisable for the coordination team to attend to all of the queries received from the hospital staff with a positive attitude, helping to resolve any problem. They become **SOLVERS AND FACILITATORS** in all of the subjects related with donation and transplant. The coordination team should be known and be a **reference for all the hospital**, constituting the contact point for any problem or doubt related with the coordination.

A good relationship must be maintained with the rest of the hospital and to make them aware about the donation and transplant, facilitating the fluid course of all the process. Participation of several hospital services in the donation process is increasingly more frequent. It is considered to be advisable to go towards collaboration-type models with these units, this favoring the sensitivity of the hospital as a whole.

Although it is considered important to act on all the hospital, some centers stress the importance of sharing their statistics with the management and with other services, presenting them in a session, especially with those who most frequently collaborate with the transplant coordination (Laboratories, Pathology, Radiology, Emergency Service, Internal Medicine, Neurology, etc.).

**RECOMMENDATIONS ON THE SUITABLE PROFILE OF THE HOSPITAL TRANSPLANT COORDINATION**

As a common element to the three process phases in the hospitals selected, it has been seen that the coordinator forms a central axis around which all the donation process structure is constructed. Although some specific characteristics of the aspects analyzed appear in each one of the subprocesses, a series of **common traits and skills** that frequently appear in the individuals making up the coordination team of the selected hospitals are found. These are considered to be important in order to achieve excellent results in the coordination tasks.

It is very difficult to speak about recommendations in this case, although these characteristics should be taken into account when selecting a new transplant coordinator or when training them to improve these qualities. The fundamental importance of the **work of the regional transplant coordinator and the hospital administration** in the selection of the hospital coordinators and their capacity to motivate them should be stressed.

**RECOMMENDATION 10: SUITABLE PROFILE OF THE HOSPITAL TRANSPLANT COORDINATOR**

*Addressed to: Hospital Administration, Hospital Transplant Coordination; Regional Transplant Coordination.*

**MOTIVATION, DEDICATION AND WORK CAPACITY**, words that are often heard when speaking about the activity of the coordinators interviewed, stand out. The enthusiasm and capacity to transmit this in order to successfully perform the work characteristic of the coordination and to achieve a **GOOD RESPONSE IN THE FACE OF THE PRESSURE**, so often present in the donation process, is very positive.

Another highly valued quality is the **CAPACITY FOR RESPONSE**. The components of the team should be persons with **problem-solving capacity**, this implying **KNOWLEDGE**, both of the hospital setting as well as the characteristics of the donation process, for which extensive training and pedagogic attitudes are required.

**VERSATILITY** is greatly related to the above, as each process is different. The search for solutions for the diversity of situations requires great **CREATIVITY** and **CAPACITY FOR IMPROVISATION**. The coordinator should be capable of coping with any new situation that may arise.

It is very important for the members of the coordination team to have **LEADERSHIP** qualities, with **PRESENCE AND AVAILABILITY** for the hospital staff, having **COMMUNICATION SKILLS, GOOD CAPACITY FOR RELATIONSHIPS AND EMPATHY** being of great help.

**RECOMMENDATIONS TO IMPROVE THE EFFECTIVENESS OF THE REFERRAL OF THE POSSIBLE DONORS TO THE CRITICAL UNITS**

**RECOMMENDATION 11: THE EXISTENCE OF A PROGRAM SPECIFICALLY ORIENTED TOWARDS THE TREATMENT OF THE NEUROCRITICAL PATIENT IMPROVES THE EFFECTIVENESS OF THE REFERRAL OF POSSIBLE DONORS TO THE CRITICAL UNITS (CU)**

*Addressed to: Hospital Administration; Responsible person outside the CU Units that attend to patients with severe brain damage; CU responsible persons, Hospital Transplant Coordination; Regional Transplant Coordination*

The hospitals with the best results in this phase of the process stand out for having developed a **program oriented towards the optimization of the treatment of the neurocritical patient**, and not a specific program for referral to the CU of possible donors.



In the optimization of the treatment of the neurocritical patient, identification of the patient with severe brain damage and its early communication to the CU for the subsequent evaluation of the case and possible admission to said units is contemplated as a fundamental step.

In the following, the recommendations oriented towards the development, implementation and maintenance of said program are specified.

**Recommendation 11.1: In the development, implementation and maintenance of said program, all of units outside the CU units attending to patients with serious brain damage must be involved.**

**Addressed to:** Hospital Administration; Responsible persons outside the CU Units attending to patients with serious brain damage; CU responsible persons

For a program oriented towards the optimization of the treatment of the neurocritical patient to function adequately, it is important for **ALL OF THE UNITS OUTSIDE OF THE CU THAT USUALLY ATTEND TO THE PATIENT WITH SERIOUS BRAIN DAMAGE** to be involved in its development, implementation and maintenance.

The unit that must be counted on fundamentally is the **EMERGENCY SERVICE**. However, there are other units that can be potentially involved in this program, depending on the type of hospital, such as the following:

- Neurosurgery Service
- Neurology Service (including the emerging Stroke Units).
- Internal Medicine Service

The possibility of including **other hospitals, both private and public**, in this program, **for which a specific hospital acts as reference**, for the care of neurocritical patients, should also be evaluated.

On the other hand, participation of the **Community Emergency Services** should be promoted.

**Recommendation 11.2: In the CUs, it is essential to generate the habit of decisions based on discussion and for which a consensus has been reached in regards to the action for each patient, in general, and in regards to the neurocritical patient and possible donor, specifically.**

**Addressed to:** Responsible persons and personnel of the CUs.

Generating the habit of making decisions after having a discussion and reaching a consensus can be achieved by holding **periodic clinical sessions** that include all of the CU personnel. However, it is important to favor **fluid communication** within the units as well as outside of these sessions. Doing so helps to generate common practices and attitudes, including those regarding organ donation.

**Recommendation 11.3: The donation should be included in the CU service portfolio.**

**Addressed to:** Hospital Administration; Regional Transplant Coordination; CU responsible persons

In relationship to the organ donation, in order to favor common attitudes in the hospital and within the CUs, it is very important for the institution to consider it as a **COMPREHENSIVE MEDICAL PROCESS WITHIN THE PORTFOLIO OF THE CU SERVICES**.

**Recommendation 11.4: It is recommendable to implement an action protocol oriented towards the identification of patients with serious brain damage and its early communication to the CUs.**

**Addressed to:** Hospital Administration; Responsible persons outside the CU Units attending patients with serious brain damage; CU responsible persons. Hospital Transplant Coordination; Regional Transplant Coordination; Care Ethics Committee.

It is important for the hospital to have an action protocol oriented towards the identification of patients with serious brain damage and its immediate communication to the CUs. Such a protocol does not necessarily imply the admission of the patient in the CU. However, it does imply the evaluation of the case and therefore of the individual benefit of each admission with therapeutic objective or donation, according to the patient's baseline condition and prognosis. Regarding this action protocol:

- It should be put into practice as a **CARE CONCEPT**, with the specific purpose of **optimizing the management of the neurocritical patient**, and in which this type of patients are considered to be of **PRIORITY**.
- All of the units attending to this type of patients should participate in its elaboration. It must be a protocol that has been reached by **CONSENSUS**.
- The **CLINICAL TRIGGERS** that should activate the communication of the existence of these patients to the CU by the units *outside the CU unit* must be clearly defined. Specifically, the protocol should specify what the starting point is on the Glasgow Scale (e.g.  $\leq 8$ ) to activate this communication. Furthermore, this communication should always occur, **INDEPENDENTLY OF THE PATIENT'S AGE, ASSOCIATED COMORBIDITY AND PROGNOSIS**.
- Once the *clinical trigger* has been specified, the protocol should detail the action that the physician and/or nurse who identifies the corresponding case must carry out and special emphasis should be placed on the **NOTIFICATION SYSTEM (IMMEDIATE CALL)**, using the mechanism foreseen in the hospital, **to the CU**.
- The action protocol must also contemplate the **IMMEDIATE CALL TO THE TRANSPLANT COORDINATION TEAM WHEN THERE ARE POSSIBLE DONORS**, if this is not automatically represented in the previously-mentioned CU. This call can be applied to all patients with **SERIOUS BRAIN DAMAGE** and not be exclusively limited to possible donors. The call to Transplant Coordination can be made either directly from the unit *outside of the CU Unit* that has identified the

case or from the CU once alerted. It is recommendable for the Transplant Coordination to form a part of the decision-making process for the admission of possible donors in the CU, this being especially important in those cases in which there are doubts about the presence of absolute or relative contraindications for the donation. In this way, the Transplant Coordinators can make an early and individualized evaluation of the cases, which facilitates the decision for the rest of the units involved. In any case, the intervention of the Transplant Coordination must always be understood as by consensus with all the professionals involved.

- It should be implemented **INDEPENDENTLY OF WHETHER THE POSSIBLE DONOR IS** either inside and outside of the hospital (hospitalization units, emergencies, peripheral hospitals, etc.).
- It should be **AVAILABLE IN WRITING**.
- The protocol should include the **POSSIBILITY OF ORGAN DONATION** as a medical reason for admission of a patient in the CU.
- The **INFORMATION TO THE FAMILY** on the prognosis and admission of a patient in a CU as a possible donor should be **TRUTHFUL** and be provided **CLEARLY, ALTHOUGH PROGRESSIVELY, AND SHOULD BE ADAPTED TO THE RHYTHM OF ASSIMILATION OF THE SITUATION**. Therefore, it is recommended to make an individualized evaluation of the time and circumstances in which this information is provided.
- The **TRAINING ACTIVITY** oriented at its practical implementation, an activity that must be aimed at units that attend to patients with serious brain damage (and peripheral hospitals and community emergency services, if appropriate), should be promoted. The distribution of **TRAINING MATERIAL** on this action protocol is very adequate. Training material must include decision algorithms that stand out for their **SIMPLICITY AND RAPID UNDERSTANDING**.

**Recommendation 11.5: It is recommendable to have protocols on the limitation of life support treatment (LLST)**

**Addressed to:** *CU ad hoc Committee; Care Ethics Committee*

These protocols must also be by **CONSENSUS** with all the CU staff. A **MULTIDISCIPLINARY** committee should be available for its preparation, including the nursing staff and experts in bioethics.

The protocol should specify the importance of decision making reached by consensus for the application of the LLST, in which all the personnel attending to the corresponding patient are involved.

The existence of these protocols greatly helps the staff participating in the admission of possible donors in the CU in clinical decision making, systematization of the information

to be provided to the relatives of the possible donors and the action to take if there is no evolution to brain death.

**Recommendation 11.6: Performing audits outside the CU units to evaluate and monitor the effectiveness of referral to the CU of possible donors and identify areas of improvement is a recommendable activity**

**Addressed to:** *Hospital Administration; Responsible CU; Responsible person outside the CU units that attend to patients with serious brain damage; Hospital Transplant Coordination; Regional Transplant Coordination*

The performing of periodic audits consisting in the retrospective evaluation of clinical histories of patients attended to outside the CU units that attend to neurocritical patients is a necessary task to evaluate and monitor the effectiveness of this phase of the process and to identify areas of possible improvement. In most of the cases, said audit should be done by consensus with the units involved and with the sole purpose of continuing improvement.

This work can be extended to the peripheral, public and private hospitals (and their critical units) for which a certain center is of reference.

**Recommendation 11.7: It is recommendable to manage the CU resources in such a way as to facilitate care to the possible donor.**

**Addressed to:** *Responsible persons outside the CU Units attending to patients with serious brain damage; CU responsible person. Hospital Transplant coordination*

**BED AVAILABILITY** for admission of the possible donor to the CU is considered one of the main limitations for good effectiveness in this donation process phase. The generalization of the concept of neurocritical patient (including possible donors) as a priority patient is of special relevance. This must be complemented with good management of the CU beds, which is generally sufficient to solve this potential problem, including the authorization of beds belonging to the intermediate units. In this sense, the support of the Center administration is fundamental. Under the possibility of lack of beds in a CU and a possible donor identified outside of the unit:

- The development of the donation process outside of the CU must be facilitated with adequate cooperation between the CU-unit outside of the CU-Transplant Coordination.
- When it is impossible to carrying out any of the previous measures, it is recommended to negotiate the transfer of the possible donor to a nearby hospital with immediate capacity of admission in the CU.

**RECOMMENDATION 12: THE DEVELOPMENT OF TRAINING ACTIONS, PROMOTION, AND EDUCATION AND DONATION MATERIAL AND TRANSPLANT AIMED AT THE PROFESSIONALS OF THE CU AND THE UNITS OUTSIDE OF THE CU THAT ATTEND TO NEUROCRITICAL PATIENTS IS RECOMMENDABLE.**

**Addressed to:** *Hospital Administration; CU responsible person; Responsible persons outside the CU Units attending to patients with serious brain damage; Hospital Transplant Coordination*

The **CONCEPT OF DONATION** must be promoted as:

- **A MEDICAL PROCESS THAT FORMS A PART OF THE USUAL END-OF-LIFE CARE**
- **MEDICAL CAUSE OF ADMISSION IN A CU**
- **SHARED PROCESS**, not exclusive to the Transplant Coordination.

In the following, specific recommendations are provided aimed at promoting this concept in the hospital setting, in general, and in the outside of the CU setting, specifically.

**Recommendation 12.1: The development of training sessions oriented at the units outside of the CU that attend to neurocritical patients on the donation process and transplant is a highly recommendable activity.**

*Addressed to:* Responsible persons outside the CU Units attending to patients with serious brain damage; Transplant Hospital Coordination; Hospital Administration

The performing of **TRAINING SESSIONS** oriented at the units outside of CU that attend to neurocritical patients (including peripheral hospitals and community emergency services, if appropriate) on the donation process and transplant is a highly recommendable activity. These training sessions must systematically include all the staff, both medical and nonmedical, of these units.

Within the training sessions, the teaching support that may be provided to these units in aspects regarding **THE DYING PROCESS AND ACCOMPANYING MOURNING** by The Transplant Coordination staff can be important. This is an area in which the Transplant Coordinators have privileged training and experience and which, at the same time, is fundamental in the day-to-day work of the professionals in the units outside of the CU that attend to critical patients.

This training effort can be complemented with the distribution of **WRITTEN TRAINING MATERIAL** to the units outside of the CU on donation and transplant. In this sense, the material produced periodically by the hospital, regional and national coordinations, should be proactively distributed among the personnel of the Units outside of the CU that attend to patients with serious brain damage.

**Recommendation 12.2: The performance of periodic visits by the Transplant Coordination to the units outside of the CU that attend to patients with serious brain damage is fundamental.**

*Addressed to:* Hospital Transplant Coordination

The performance of **PERIODIC VISITS** to the units outside of the CU that attend to neurocritical patients by Transplant Coordination is fundamental. In this way, fluid personal relationships are promoted and a reminder function is made on the important role played by the personnel of these units in the early detection phase and that of referral of the potential donors to the CU.

**Recommendation 12.3: Performing continuing feedback work to the units outside of the CU on the donation and transplant activity is important**

*Addressed to:* Hospital Transplant Coordination; Regional Transplant Coordination

**THE PERIODIC FEEDBACK TO THE UNITS OUTSIDE OF THE CU** on the donation and transplant activity is an activity considered to be very important, either carried out within the previously-mentioned training sessions or in a more informal way. This *feedback* should consist in providing information on:

- The donation and results of the transplant, in general.
- The specific cases of potential donors referred to the CU in the corresponding hospital: if they become donors or not, the reasons and the patients who have benefited from the donation act.

This activity is considered important in order for the personnel from the units outside of the CU who attend to neurocritical patients to feel that they are fully involved in the process and to generate a “feeling of pride” in said personnel by their active participation.

The ways of reinforcing this *feedback* activity are varied. For example, mention can be made of the sending of letters in a short time period by the Transplant Coordination to the unit that has participated in the detection of a potential donor and in its referral to the CU, informing them of the result of the donation, when it exists.

### **RECOMMENDATIONS TO IMPROVE EFFECTIVENESS IN THE MANAGEMENT OF THE POSSIBLE DONOR IN THE CRITICAL CARE UNITS**

**RECOMMENDATION 13: ALL THE MEDICAL PROFESSIONALS FROM THE CRITICAL UNITS MUST ACTIVELY PARTICIPATE IN THE DETECTION OF POSSIBLE DONORS WITHIN THE CUs**

*Addressed to:* CU medical professionals, CU responsible persons, Hospital Transplant Coordination

In regards to the detection of potential donors, it is recommended that all of the CU medical professionals should be actively involved in the identification of patients with serious brain damage, in general, and in the identification of potential donors, specifically. In order to facilitate this involvement:

- Spreading the idea that the **DONATION FORMS A PART OF THE CU FUNCTIONS** and of the **END-OF-LIFE CARES** is essential. To do so, it is important for the hospital to recognize that the donation forms a part of the CU service portfolio.
- It would also be useful to hold **CLINICAL SESSIONS IN THE CU IN WHICH THE CASES ADMITTED TO HOSPITAL ARE DISCUSSED**, including those with possible evolution to brain death. In these sessions, it is important to facilitate decision-making reached by consensus on the



clinical approach, the possibility of donation or the need for LLST, according to the circumstances of the case.

**RECOMMENDATION 14: TO FACILITATE DETECTION OF THE POSSIBLE DONORS, IT IS RECOMMENDABLE FOR THE HOSPITAL TRANSPLANT COORDINATOR PER SE TO BE INVOLVED IN THE FOLLOW-UP OF ALL THE NEUROCRITICAL PATIENTS**

**Addressed to:** CU medical professionals, CU responsible persons, Hospital Transplant Coordination

Several of the hospitals with better results in this phase of the process consider it to be advisable for **THE TRANSPLANT COORDINATOR (WHEN HE/SHE IS AN INTENSIVIST) TO ALSO BE ATTENTIVE TO THE FOLLOW-UP OF EVERY NEUROCRITICAL PATIENT** in order to facilitate the detection of possible donors in the CU.

**RECOMMENDATION 15: IT IS ESSENTIAL THAT ALL OF THE MEDICAL PROFESSIONALS OF THE CUs TAKE RESPONSIBILITY FOR THE DIAGNOSIS OF BRAIN DEATH, THE CLINICAL EVALUATION AND MAINTENANCE OF THE POTENTIAL DONOR, THIS ALWAYS BEING DONE IN COLLABORATION WITH THE TRANSPLANT COORDINATOR**

**Addressed to:** CU medical professionals, CU responsible persons, Hospital Transplant Coordination It is essential for the medical professionals of the CUs to take responsibility of a potential donor in all of the phases of the process, counting on, of course, adequate nursing staff at all times and on the Transplant Coordinator.

The decision to rule out a donor should always be reached by consensus with the Transplant Coordinator. Although it is important for all the medical professionals of the CUs to participate in the evaluation of the potential donors and to be familiarized with absolute contraindications regarding organ donation, said evaluation should always be performed in close collaboration with the Transplant Coordinator. In this way, losses in the process due to inadequate medical contraindications are avoided or minimized.

**RECOMMENDATION 16: IT IS IMPORTANT TO DEFINE THE PERMANENT AVAILABILITY OF MEDICAL SPECIALISTS IN NEUROLOGY, NEUROSURGERY AND/OR NEUROPHYSIOLOGY FOR THE DIAGNOSIS OF BRAIN DEATH**

**Addressed to:** Hospital Administration; Hospital Transplant Coordination; Regional Transplant Coordination

If this center cannot count on the permanent presence of these professionals (24h/365d), specifying the shift of the specialist available as well as the way to contact them in order to be able to request their collaboration, if necessary, is recommended. This information should be easily assessable for all of the CU staff.

**RECOMMENDATION 17: IT IS RECOMMENDED THAT THE HEALTH CARE CENTER HAVE A TRANSCRANIAL DOPPLER**

**Addressed to:** Hospital Administration; CU responsible person

When providing the diagnosis of brain death, it is essential to be able to count on the possibility of a flow test. In this sense, it is recommended that the centers authorized for the donation process should have a transcranial Doppler as well as professionals trained in the management and interpretation of this diagnostic technique.

**RECOMMENDATION 18: IT IS ESSENTIAL TO PERMANENTLY HAVE AVAILABLE A MICROBIOLOGY LABORATORY AND A PATHOLOGY LABORATORY**

**Addressed to:** Hospital Administration; Regional Transplant Coordination; Hospital Transplant Coordination

If the center does not have a permanent microbiology laboratory or a pathology laboratory (24h/365d), then it is recommended that this center should have a plan established for the sending of samples to a reference laboratory. In this way, the need to improvise when faced with complicated or special situations when making an adequate clinical evaluation of a possible donor is avoided. This information should be easily assessable to all of the CU personnel.

**RECOMMENDATION 19: IT IS IMPORTANT TO HAVE WRITTEN PROTOCOLS REGARDING THE DETECTION, EVALUATION AND MAINTENANCE OF POSSIBLE DONOR AND THE DIAGNOSIS OF BRAIN DEATH**

**Addressed to:** CU responsible persons; CU Medical Professionals, Hospital Transplant Coordination

Those hospital standing out for their effectiveness in the intra-CU management of possible donors have written protocols regarding the different phases of the donation process that take place within the CUs.

It is not only recommendable to have these protocols but also for the medical personnel or nonmedical personnel of the CUs to be familiarized with them, for the protocols to be easily accessible to all of the professionals involved and that these protocols be periodically updated.

Training should be carried out for all of the CU personnel that would make it possible to put these protocols into practice.

**RECOMMENDATION 20: IT IS IMPORTANT TO HAVE A GOOD WORK ENVIRONMENT AND FLUID COMMUNICATION WITHIN THE CUs**

**Addressed to:** CU responsible persons; CU Medical Professionals, Hospital Transplant Coordination

It has been seen that the best results are registered in units with a good work ambient between all of the professionals involved. This facilitates the active involvement of all the professionals in the donation process.

Several aspects have been identified as having been identified by the professionals of the center selected as key points:

- Good work environment between the medical professionals.

- Good medical-nurse communication/relationship.
- Team work.

**RECOMMENDATION 21: CONTINUING EDUCATION OF ALL THE PERSONNEL IN THE CRITICAL UNITS IN THE ORGAN DONATION PROCESS IS AN ESSENTIAL ELEMENT**

*Addressed to: CU responsible persons; CU Medical Professionals, Regional Transplant Coordination; Hospital Transplant Coordination*

It is recommended that specific and continuing education in donation and transplant of all the health care professionals working in the CU be promoted.

The training of the resident physicians in the setting should be encouraged.

It is recommended that the origin of this training effort should begin on all the levels of health care administration: that is, national, regional and hospital.

**RECOMMENDATIONS TO IMPROVE EFFECTIVENESS IN OBTAINING CONSENT FOR DONATION**

**RECOMMENDATION 22: THE INTERVIEW WITH THE FAMILY MEMBERS OF THE POSSIBLE DONOR SHOULD FOLLOW A SPECIFIC METHODOLOGY AND SHOULD BE PLANNED AS MUCH AS POSSIBLE**

*Addressed to: CU Responsible persons; CU Medical Professionals, Hospital Transplant Coordination*

Although each interview is different, a methodology with sequential, clearly defined phases that should not be mixed should be used.

**Recommendation 22.1:** The interview should always be *prepared*. It is important to obtain information on the family, plan the site where the interview will be conducted and how the death will be communicated, advise the family in good time and organize the necessary human and material resources.

*Addressed to: CU Personnel; Hospital Transplant Coordination*

The centers consulted recommend **preparing any aspect related with the interview that may influence its result**, reducing the need to improvise as much as possible.

Those elements that these centers recommend to prepare ahead of time are mentioned in the following:

- It is important to speak with the professionals who have attended to the possible donor to **gather information on the family** (without interpreting or prejudging the result). It is possible to know in advance if it will be necessary to count on **cultural cooperators** and/or **translators**, or who are the **persons who are necessary** for the decision on donation.
- It is recommended to **communicate in good time to all of the direct family members regarding the importance of**

**their coming to the center** to receive information regarding the situation and prognosis of the patient. This request to appear makes it possible for all of those who should be included in the decision to come. If necessary, it should be stress that it is important that all of the family members come with sentences such as “*It would be best if they come,*” “*it is better that I explain it to them.*”

- When there are social, cultural or idiomatic type barriers or difficulties, the **support of a cooperating person, translator and friends** of the possible donor with a greater level of integration or of **religious references** whose cooperation may be beneficial for the family can be **foreseen**. These persons should be previously informed about the donation so that they can support the family and maintain a favorable attitude and not be limited to making a simple translation.
- It is important that the family be gathered together in a **relaxed** atmosphere, where they can speak **in privacy**, and **not far from the donor**, since they frequently may want to see him/her.
- The **interview should be prepared with the professional who is going to communicate the death**. This is usually the medical professional who has been responsible for the patient. However, if this is not possible, a medical professional from the same service should be sought, ideally someone trained in communication techniques. **The information that will be given to the family and how to communicate it, including the communication of the death, should be prepared.**
- If the condition of the donor or the situation of the family allows for it, it is preferable **to avoid conducting the interview at night**. They are generally more rested and more receptive during daylight. (See recommendation 24.2).

**Recommendation 22.2:** It is considered appropriate to **not limit the number of persons who participate in the interview**. All those persons who are important for the decision should be present and contact should be maintained with them.

*Addressed to: CU personnel; Transplant Hospital Coordination*

**All those persons who are important when making the decision should be present.** The exclusion of anyone could entail the risk of excluding those who are relevant.

It is recommendable to **identify all those who**, due to their close relationship to the donor or their leadership position or capacity, **may have greater influence in the decision of the group**.

The coordinators **should not lose contact with anyone in the group**. During the interview, the group should not be allowed to disintegrate. Therefore, if anyone wants to leave for a short time, they should not be prevented from doing so (one of the coordinators can accompany this person), but they should return, since a unanimous decision is desirable, without discrepancies within the group.



**Recommendation 22.3:** It is recommended that prejudging the result of the interview should be avoided and an attempt should always be made (except in those cases in which it is known with certainty that the transplant cannot be performed). Furthermore, no *maximum time for the interview should be pre-established.*

**Addressed to:** CU Personnel; Hospital Transplant Coordination

The hospitals consulted answered unanimously that the **interview should always be conducted, except when it is known that the transplant cannot be done, for example**, when there are no appropriate recipients in the case of an infant donor.

The variability in the interview duration is considered to be enormous. Limits regarding the duration of the interview should not be established beforehand.

**Recommendation 22.4:** It is very important to establish a *professional relationship of help* that facilitates the necessary trust so that the relatives accept the option for donation. To do so, it is *essential to know and to use the communication tools*

**Addressed to:** CU Personnel ; Hospital Transplant Coordination

Establishing a good relationship with the family based on transparency, empathy, emotional support and the relationship of professional help is considered to be very important. **The relationship of help should be created with the relatives from the beginning and maintained during the entire interview.** It is also recommendable to use **communication elements**, such as open questions, reflection of emotions, active listening or paraphrasing.

During the interview, it is advisable to allow them to speak without interfering while they are speaking and to respect their silences. Physical contact is important if the family shows that they require it.

At the end of the interview, it is important to continue maintaining the relationship of help to the relatives until the end. This should end with signs of condolence and affect, independently of its outcome.

**Recommendation 22.5:** The interview is structured into a series of *successive and independent sentences: initiation, communication of death, request for consent to donation, and completion.* Different phases of the interview should not be mixed and it is important to make sure that the family has understood the fact of death before requesting the consent.

**Addressed to:** CU Personnel ; Hospital Transplant Coordination

Several teams consulted recommend that the **team that intervenes in the interview** should be made up of the **medical professional** who has been responsible for the patient (or another from the same service, if this is not possible) who will be **in charge of communicating the death** and by **two persons from the transplant coordination team**, usually one physician and one nurse, with training in communication

techniques. Alternatively, if there are only two persons, one will communicate the death and the other will request the consent for donation.

It is considered to be very important **to establish the relationship of help with the family from the beginning and to maintain it to the end**, since according to the experience of the centers interviewed, in addition to the support that this relationship supposes for the family in very difficult moments, it increases the likelihood that the family will accept the donation.

**The medical professional who is responsible for the patient should be the one who begins the interview and presents the coordinator team by their first and last names. However, that fact that they are transplant coordinators should not be revealed**, except under exceptional situations (for example, the previous request for donation by the family).

**Once the interview has been initiated, the communication of death can be made by the intensivist with the support of the coordinators** (See Recommendation 22.6.)

Once the death has been communicated, the responsibility of directing the interview should undergo a change, **so that the coordinators can assume a more important role in the communication with the family.** The person who has communicated the death can leave the room and attend to other work, explaining it to the family.

Before going on to the request for donation, it is very important for the coordinators **to assure that the family has understood the fact of the death.** If this is not so, they should continue to give the necessary explanations that will help them to accept the situation, maintaining the relationship of help. **The family should set the rhythm. Only after the family expresses, through their manifestations of recovery of emotional control and approach to action, that it has understood and assumed the death of their relative, can the coordinator continue with the next phase.**

**Recommendation 22.6:** The communication of death should be made by the patient's physician, who will answer any questions the family may have. There is no clear recommendation on the communication of death, simply, or brain death.

**Addressed to:** CU Personnel ; Hospital Transplant Coordination

**Once the presentations have been made, the communication of the death should be made by the intensivist** with the support of the coordinators who, apart from exceptions, will not identify themselves as such at the beginning of the presentations (See Recommendation 22.5)

It is recommended that the communication of death begins with **established communication formulae** similar to "as you already know, the situation of your relative was very serious," "unfortunately we have bad news," or "the situation, unfortunately, has worsened," that give rise to the **communication and explanation of the death**, answering all of the questions asked by the relatives and encouraging, with open questions, the relatives to clarify their doubts.

**There is no clear recommendation on the communication of death, simply, or brain death.**

Once the death has been communicated, it is recommended that the coordinators **take charge of the interview, assuming a greater role in the communication with the family, asking about any problems and needs they have and offering the necessary help.** As previously mentioned, the person who has communicated the death can leave the room and attend to other tasks, explaining this to the family.

**Recommendation 22.7: The request for consent for donation should be made clearly, directly and plainly by the coordinator, as an option, a right, a privilege, or way of helping others. This should always occur after verifying that the family has understood the fact of death.**

*Addressed to: Hospital Transplant Coordination*

Before requesting the donation, it is very important for the coordinators **to ensure that the family has understood the fact of death and that they have no other problem or concern that may be interfering with it.** On the contrary, the problems should be discovered through open questions and support, explanations or different ways of approaching the problems (relationship of help) should be offered. As has already been mentioned, the family should set the rhythm, and only when they have expressed, through their manifestations of recovery of emotional control and action approach, that they have understood and assumed the death of their relative, can the coordinator continue on to the next phase.

The request for donation should be stated **clearly, directly and in plain language.** Exaltation of values is important: it is recommended that **an option, right, privilege, or a possibility of helping others** be offered. It is very important to ask what **opinion** the **deceased** had (or could have) regarding donation.

**Recommendation 22.8: In the case of a negative response, rejection reversal techniques are recommended. The family will establish when the interview ends.**

*Addressed to: Hospital Transplant Coordination*

In the case of a negative response, the centers consulted used different techniques:

- Asking the family to express the reasons for the rejection. Once they are expressed, they can be analyzed and appropriately refuted. Solidarity reasons can be used.
- If lack of empathy is detected, it is advisable to make a change in the person steering the interview and for that person to act in the background.
- Give them time, approaching arguments that seem important for the family and maintaining contact, leaving aside the donation, without insisting on it, for some time.
- Identify the persons involved in the rejection and their role within the family, attempting to communicate separately with the negative member, so that this member does not hide and reaffirm in the group and so that the discrepancy can be reduced, everyone assuming the final decision.

**The family should set the limit of the interview.** The centers consulted state that they stop trying it when the family show signs that **there is no progression, empathy is lost, and or if it is not providing any benefit to them.**

**Recommendation 22.9: Regardless of the outcome of the interview, it should end with signs of condolences and affect, maintaining the relationship of help until the final moment**

*Addressed to: CU Personnel ; Hospital Transplant Coordination*

The relationship of help is a benefit for the family that should be maintained until the end.

**Recommendation 22.10: It is recommended that some days later the family should be thanked for the donation through a letter or telephone call**

*Addressed to: Hospital Transplant Coordination*

This makes it possible to formally close the relationship established with the family and generate a positive opinion on the donation.

**Recommendation 22.11: The interviews should be documented and then analyzed, especially the rejections**

*Addressed to: Hospital Transplant Coordination*

Recording the activity performed makes it possible to evaluate the opportunities to improve, since it facilitates the analysis *a posteriori* of the case and of the possible alternatives to the approach taken. Furthermore, it makes it possible to provoke an educational discussion in the team on ways to respond to the rejection presented.

**RECOMMENDATION 23: IT IS IMPORTANT FOR THE TEAM INTERVENING IN THE INTERVIEW TO HAVE SPECIFIC TRAINING**

*Addressed to: Hospital Administration; CU responsible person; CU Medical Professional; CU Personnel ; Hospital Transplant Coordination; Regional Transplant Coordination*

**It is very important** for the persons who participate in the interview to have specific training for the roles they assume. These involve **elevated difficulty** and require **specific attitudes.**

**Recommendation 23.1: It is advisable for the medical professional who communicates the death to have training in the techniques of communicating bad news**

*Addressed to: Hospital Administration; CU responsible person; CU Medical Professional; Hospital Transplant Coordination*

The teams interviewed consider that training in communication of bad news is essential. If, due to exceptional circumstances, the medical professional selected does not have this training, the coordination team should carefully prepare the approach to the family, the information that must be given and on how to communicate it (See recommendation 22.1.)

It is important for the co-coordinators to promote specific training of the professionals in the critical units in these subject matters through courses and seminars held within the hospital.

**Recommendation 23.2: The transplant coordination team should have experience and receive continuing education in all of the aspects related with the interview**

**Addressed to:** Hospital Administration; CU responsible person; CU Medical Professional; Hospital Transplant Coordination; Regional Transplant Coordination

The persons who request the consent for donation should be **transplant coordinators with specific training in donation and transplant, relationship of help and techniques of communicating bad news**. In order to renew and update concepts, the personnel of the centers consulted **periodically receive training**, even if they have previously received this training.

At least one of the coordinators should have **experience**, which is highly considered by the centers.

Equally, in the centers consulted, the **active participation of the nursing service** belonging to the coordination teams in the request is stated. Their skill to develop complicity and to establish relationship of help in some very difficult moments is recognized.

It is important for the professionals involved to receive specific training in order to avoid the emotional **overload** that this type of work may give rise to.

**Recommendation 23.3: There is no clear recommendation on the profile of the cooperator personnel**

**Addressed to:** Hospital Administration; CU responsible person; Hospital Transplant Coordination; Regional Transplant Coordination

Except for one of the hospitals with excellence results in the consent obtaining phase for the donation, the centers do not have their own cooperator personnel. The ideal situation would be for the translator who generally cooperates with the coordinators to receive specific training in donation and transplant and in the relationship of help, and not be only limited to translating.

**RECOMMENDATION 24: IT IS IMPORTANT TO HAVE RESOURCES FOR CARRY OUT THE INTERVIEW**

**Addressed to:** Hospital Administration; Responsible person outside the CU units; Hospital Transplant Coordination

**Recommendation 24.1: It is recommended to always make the interview in a separate place, with privacy and resources that cover the minimum needs**

**Addressed to:** Hospital Administration; CU responsible person; Responsible person outside the CU units; Hospital Transplant Coordination

It is important to have privacy to allow the family to express their emotions and freely communicate among themselves and with the interviewers.

It is advisable to have resources that cover the minimum needs (telephone, handkerchiefs, water, some food, etc.)

Some centers consider it important to have several rooms that make it possible to change sites if the coordinator considers it to be necessary. For such effect, they distinguish between the room for information to the family and the mourning room.

It is recommended to conduct the interview in a place where the family is not far from the donor. They may frequently request to see the donor.

**Recommendation 24.2: It is advised to conduct the interview in the morning, with daylight**

**Addressed to:** CU Medical Professionals; Hospital Transplant Coordination

At this time of the day, they are generally more rested and more receptive. However, it is not uncommon for reasons to exist, such as emotional condition of the family, distance, availability of flights, etc., that make it impossible to do so in the morning. In these cases, the situation of the family and the relationship of help established with them comes first and the interviews should be made when necessary.

**Recommendation 10: Recommendation 24.3: If there are incentives for the family, it is recommended to not use them as an argument to obtain donation or reverse a rejection**

**Addressed to:** Hospital Transplant Coordination

The centers consulted that may have incentives for the family, such as transfer of the cadaver or coverage of some of the funeral costs, do not use this argument to obtain consent. This possibility should be commented, when it can be applied, after having obtained consent for donation.

**RECOMMENDATION 25: OTHER RECOMMENDATIONS OR SUGGESTIONS**

**Recommendation 25.1: It would be desirable to have counseling available on material of interviews, religion, language, etc.**

**Addressed to:** Hospital Transplant Coordination; Regional Transplant Coordination; National Transplant Organization

Without detriment to the training received in the capacity to improvise, the centers consulted consider that it would be convenient to have specific counseling when there are cultural, linguistic difficulties or others.

**Recommendation 25.2: The relationship of help is a great benefit for the family. It should not only be applied to donation.**

Some centers consider that the outcome of the relationship of help is positive, and recommend that using it should not be limited only to those cases in which the possibility of donation.

## ANNEX 1: BENCHMARKING COMMITTEE MEMBERS

<b>Arráez Jarque, Vicente</b>	Hospital General Universitario de Elche
<b>Bouzas Caamaño, Encarnación</b>	Coordinación Autonómica de Galicia (Regional Coordination of Galicia)
<b>Castro de la Nuez, Pablo</b>	Coordinación Autonómica de Andalucía (Regional Coordination of Andalusia)
<b>Coll Torres, Elisabeth</b>	Organización Nacional de Trasplantes (National Transplant Organization)
<b>de la Concepción Ibáñez, Manuel</b>	Coordinación Autonómica de la Comunidad Valenciana (Regional Coordination of the Valencian Community)
<b>de la Rosa Rodríguez, Gloria</b>	Organización Nacional de Trasplantes (National Transplant Organization)
<b>Domínguez-Gil González, Beatriz</b>	Organización Nacional de Trasplantes (National Transplant Organization)
<b>Elorrieta Goitia, Pilar</b>	Hospital de Cruces
<b>Fernández García, Antón</b>	Hospital Universitario La Coruña
<b>Fernández Renedo, Carlos</b>	Coordinación Autonómica de Castilla y León (Regional Coordination of Castilla y Leon)
<b>Galán Torres, Juan</b>	Hospital Universitario La Fe
<b>Getino Melián, María Adela</b>	Hospital Nuestra Señora de la Candelaria
<b>Gómez Marinero, Purificación</b>	Hospital General de Alicante
<b>Marazuela Bermejo, Rosario</b>	Organización Nacional de Trasplantes (National Transplant Organization)
<b>Martín Delagebasala, Carmen</b>	Organización Nacional de Trasplantes (National Transplant Organization)
<b>Martín Jiménez, Silvia</b>	Organización Nacional de Trasplantes (National Transplant Organization)
<b>Martínez Soba, Fernando</b>	Coordinación Autonómica de La Rioja (Regional Coordination of La Rioja)
<b>Masnou Burallo, Núria</b>	Hospital de Vall d'Hebrón
<b>Rodríguez Hernández, Aurelio</b>	Coordinación Autonómica de Canarias
<b>Salamero Baró, Pedro</b>	Hospital de Vall d'Hebrón
<b>Sánchez Ibáñez, Jacinto</b>	Coordinación Autonómica de Galicia (Regional Coordination of Galicia)
<b>Serna Martínez, Emilio</b>	Organización Nacional de Trasplantes

(National Transplant Organization) Special thanks is given to **Adela Moñino Martínez**, a psychologist from the Diputación Provincial (Regional Council) of Alicante, for her contribution to the design and writing of the questionnaire for the study on the effectiveness in obtaining the consent to donation and the contents of the recommendations in the mentioned subprocess.

# Co-operation between countries of the Black Sea Area (BSA Project): Development of the activities related to donation and transplantation





# Co-operation between countries of the Black Sea Area (BSA Project): Development of the activities related to donation and transplantation

## PROJECT BACKGROUND

The Council of Europe, based in Strasbourg (France), is an inter-governmental organisation that covers, by virtue of its 47 member states, the entire European continent. Founded in 1949, the Council of Europe promotes human rights, democracy and the rule of law. The work of the Council of Europe in the area of organ transplantation started in the 1980s. In particular, blood transfusion and organ transplantation activities are managed from the European Directorate for the Quality of Medicines & HealthCare (EDQM), a Directorate of the Council of Europe. The EDQM is a leading organisation that protects public health by supporting the development, implementation and application of quality standards for medicines and healthcare.

The European Committee on Organ Transplantation (CD-P-TO) is the steering committee in charge of organ transplantation activities at the EDQM. It actively promotes the non-commercialisation of organ donation, the fight against organ trafficking and the development of ethical, quality and safety standards in the field of organ, tissue and cell transplantation. Its activities include the collection of international data and monitoring of practices in Europe, the transfer of knowledge and expertise between organisations and experts through training and networking and the elaboration of reports, surveys and recommendations.

The development of organ transplantation activities in the countries of the Black Sea Area (BSA) date back from the late 1970s but, from the early 1990s, they began to decline and, in some countries, even ceased. Therefore, it has become extremely crucial to identify and share experience with them from countries with well-developed and established transplantation programmes and from other local initiatives, which could provide models for the implementation of safe donation and transplantation programmes in the BSA countries, according to their developmental and cultural backgrounds.

In this context, in 2011, the Council of Europe launched a three-year collaborative project that aims to battle organ shortages and to improve access to transplant health services in the Council of Europe BSA member states (Armenia, Azerbaijan, Bulgaria, Georgia, Moldova, Romania, Russian Federation, Turkey and Ukraine) through the development of safe and ethical donation and transplantation programmes. Efforts are mainly being directed towards the development of effective legislative frameworks and the establishment of national transplant authorities and national transplant programmes and infrastructures. Specialists in the field of transplantation from countries with established transplant

systems, such as France, Italy, Czech Republic, Portugal and Spain, are participating and supporting experts from the BSA countries. The intention is to create a permanent network of national experts that will allow the participating countries to co-ordinate their efforts and pool resources.

## PROJECT STRUCTURE AND ACTION PLAN

The BSA Project has been organised into several Work Packages that focus on different aspects of the various donation and transplantation processes, which are based on the level of development of the already existing transplantation activities in each BSA member state.

### WP1: Project Management

The Council of Europe is in charge of the overall management of the project. A Steering Committee, consisting of experts from national transplant authorities and organisations from countries with well-developed transplant programs, has been constituted to guide and ensure the successful development of the project.

### WP2: Development and implementation of an effective legislative and financial framework

**Participating member states:** Armenia, Azerbaijan and Georgia. **Work package leaders:** Agence de la Biomédecine (France) and Czech Transplantations Co-ordinating Centre (Czech Republic).

This Work Package focuses on the development and implementation of effective legislative and financial frameworks for transplantation activities. The countries participating in this Work Package have legislation on organ transplantation, but no established national transplant organisations. There is some existing organ transplantation activity from living donations, but no deceased donation programmes. This Work Package focusses on the assessment of existing transplant legislation, the financial provisions in each country relative to health programmes and transplantation activities, the institutional and structural obstacles for the development of transplantation and the political will to develop such programmes.

Between December 2011 and March 2012, information about the countries was collected using a number of questionnaires and subsequently analysed. On April 2012, a delegation of experts visited the three countries to complete data collection. Based on the country reports elaborated, a number of individual recommendations were produced for each country. These recommendations will be submitted to the three countries and discussed further.

### WP3: Establishment of National Transplant Authorities

**Participating member states:** Bulgaria, Moldova and Ukraine.  
**Work package leaders:** Centro Nazionale Trapianti (Italy) and the Autoridade para os Serviços de Sangue e da Transplantação (Portugal).

This Work Package focuses on the establishment of National Transplant Authorities. The countries participating in this Work Package have already established National Transplant Organisations and, some of them, minimal deceased donation activity. This Work Package focuses on the evaluation of these existing organisational systems and their functionality in order to identify areas for intervention and improvement.

Between December 2011 and March 2012, information about the countries was collected using a number of questionnaires and subsequently analysed. The planned site visits will be essential to complete the country evaluations and for the elaboration of individual recommendations and national action plans.

### WP4: Clinical Practices

**Participating member states:** Romania, Russian Federation and Turkey. **Work package leaders:** DTI Foundation and Organización Nacional de Trasplantes (Spain).

This Work Package focuses on analysis of the clinical practices for the donation-transplantation process inside hospitals. The countries participating in this Work Package have established National Transplant Organisations and have fully functional living and deceased donation programmes.

Between December 2011 and January 2012, information about the countries was collected using a number of questionnaires and analysed. A delegation of experts visited Turkey in March 2012 to assess existing clinical practices and to speak to representatives from the Ministry of Health. Site visits to Romania and Russian Federation will be scheduled shortly and will allow completion of the country evaluations. Individual recommendations and national action plans will be elaborated thereafter.

### NEXT ACTIONS

Two courses of action will be established for each of the participating countries:

- Governmental level -> working with the governments and Ministries of Health to engage political involvement through site visits and direct meetings.
- Technical level -> working directly with the national technical experts at a practical level. Specific tasks and goals will be defined for each country and appropriate training will be provided to accomplish them. There will be continuous follow-up of progress and the results will be evaluated after the first year.

### CONTACT

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# Transplantation of Non-Nationals and Non-Residents in the Countries of the Council of Europe: Results of a Survey Conducted in the Context of the Initiatives of the European Committee on Organ Transplantation (CD-P-TO)



# Transplantation of Non-Nationals and Non-Residents in the Countries of the Council of Europe: Results of a Survey Conducted in the Context of the Initiatives of the European Committee on Organ Transplantation (CD-P-TO)

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This study on transplantation for non-nationals/non-residents in the member states of the Council of Europe commenced in 2008 as an initiative of the European Committee (Partial Agreement) on Organ Transplantation (CD-P-TO) of the Council of Europe and was co-ordinated by the Italian National Transplant Centre (CNT).

The CNT circulated a questionnaire to the health authorities of the 35 member states of the Council of Europe, to members of the CD-P-TO and to two trans-national transplant organisations.

The main objective of the survey was to investigate various aspects related to transplantation in non-nationals/non-residents, especially with regard to access to waiting lists, transplantation (including from living donors), allocation and health and social assistance provided to non-nationals/non-resident patients.

Twenty-nine of the 37 agencies contacted returned the questionnaire (Table 1) and the results of the survey are presented in this report.

Austria	Medical University Wien
Belgium	Ministère de Santé Publique
Bulgaria	Executive Agency of Transplantation
Cyprus	Paraskevaïdion surgical and transplant center of Cyprus
Czech Republic	National Transplantations Coordinating Center
Denmark	Rigshospitalet
Estonia	Tartu University Hospital
Eurotransplant	
Finland	Division of Transplantation, Helsinki University
France	Agence de la Biomédecine
Georgia	Georgian Association of Transplantologists
Germany	Deutsche Stiftung Organtransplantation
Greece	Hellenic Transplant Organization
Hungary	Department Of Transplantation and Surgery, Semmelweis University
Iceland	Ministry of Health
Ireland	Department of Public Health
Italy	Italian National Transplant Centre
Luxembourg	Luxembourg Transplant
Moldova	Republican Clinical Hospital
Netherlands	National Board of Health and Welfare
Norway	Oslo University Hospital
Poland	Poltransplant
Portugal	Autoridade Dos Serviços De Sangue E Transplantação
Romania	National Transplant Agency
Slovenia	Institute for Transplantation of Organs and Tissues of the Republic of Slovenia
Spain	Organización Nacional de Trasplantes
Sweden	National Board of Health and Welfare
Switzerland	Swisstransplant
United Kingdom	National Health Service

**Table 1.** List of countries/authorities participating in the survey.

## Definitions:

For the purpose of this survey, the status of non-residents and non-nationals was defined according to the current definitions in the Italian legislation and these definitions were made available to the participating countries when the questionnaire was distributed.

In particular, **residency** is defined as the act of establishing or maintaining a residence in a given place, regardless of nationality and race. Residency can be either *legal* (through nationality, permanent or temporary residency card or asylum seeker or refugee status) or *illegal*. In case of legal residency, citizens are obliged to be registered by national authorities and pay insurance or social security fees, health care coverage and/or taxes, depending on the national laws. A **resident** can either be a national or an alien with legal temporary or permanent residency status. In the case of asylum seekers and refugees, the resident status is automatically granted.

**Non-residents** are individuals who are not residing where official duties require them to reside. A non-resident could be a national citizen living abroad or an alien without temporary or permanent residency status. Tourists and people residing illegally in a country are considered non-residents.

## ACCESS TO WAITING LISTS AND TO TRANSPLANTATION

With regard to access to waiting lists and to transplantation, all but seven of the national health authorities that returned the questionnaire declared that there was a restricting law/regulation in force in the country regarding non-resident/non-national individuals (Table 2).

Countries with restricting laws/regulations	Countries without a restricting laws/regulations
Austria	Cyprus
Belgium	Estonia
Bulgaria	Georgia
Czech Republic	Ireland
Denmark	Moldova
Finland	Portugal
France	Romania
Germany	
Greece	
Hungary	
Iceland	
Italy	
Luxembourg	
Netherlands	
Norway	
Poland	
Slovenia	
Spain	
Sweden	
Switzerland	
United Kingdom	

**Table 2.** Countries with or without a restricting law/regulation in force for transplantation of non-resident/non-national patients.

Different restricting criteria, however, are used in the 21 remaining countries and, in some cases, more than one set of restricting criteria are applied (Table 3). In 77.3% of the countries answering the questionnaire, residency is used as a restricting criterion, and in 3 countries, nationality or citizenship is an additional restricting element. Fifty per cent of respondents had other restricting criteria, including having health insurance coverage or coverage by a social security system or private funding. Evidence of financial coverage (health insurance, social security system or private funding) was the unique restricting element in just one country. Finally, the presence of a bilateral health co-operation agreement was reported as an additional restricting criterion by 22.7% of respondents. It is noteworthy that none of the countries replying to the survey reported patients' ethnic origin as a restricting criterion.

RESTRICTING CRITERION	PERCENTAGE
Residency	77.3%
Nationality	14%
Ethnic origin	None
Health insurance, social security system or private funding	50%
Bilateral health agreement	22.7%

**Table 3.** Restricting criteria that impact on access to transplantation waiting lists for non-resident/non-national patients.

The national parliament was reported as the institution issuing the regulations in place for non-resident/non-national individuals in 61.5% of countries whilst, in 23% of countries, a specific ministry was the primary promoter of the legal framework through decrees, guidelines, by-laws or other instruments. In the remaining countries, a central role for a National Organ Transplant/Procurement Organisation or a role for regional/administrative/local authorities was reported.

The regulations in place are legally-binding in 86.9% of those countries that responded, of which 90% have a mechanism to ensure compliance.

Interestingly, the countries within Eurotransplant (ET) are expected to adhere to the "5% non-resident rule", which requires that the number of non-resident listings per centre for liver, heart and lung transplantation should not exceed 5% per year of the total number of patients transplanted with an organ from a deceased donor in the previous calendar year. All transplantations from deceased donors are used for the determination of compliance with the "5% non-resident rule", with the exception of:

Paediatric patients who are successfully transplanted with a left lateral liver split, in the event that the (extended) right lobe of the same donor organ is also transplanted;

Patients from a non-ET twinned country or centre who are listed on the waiting list or the ET twinning centre, in case of an approved twinning agreement.

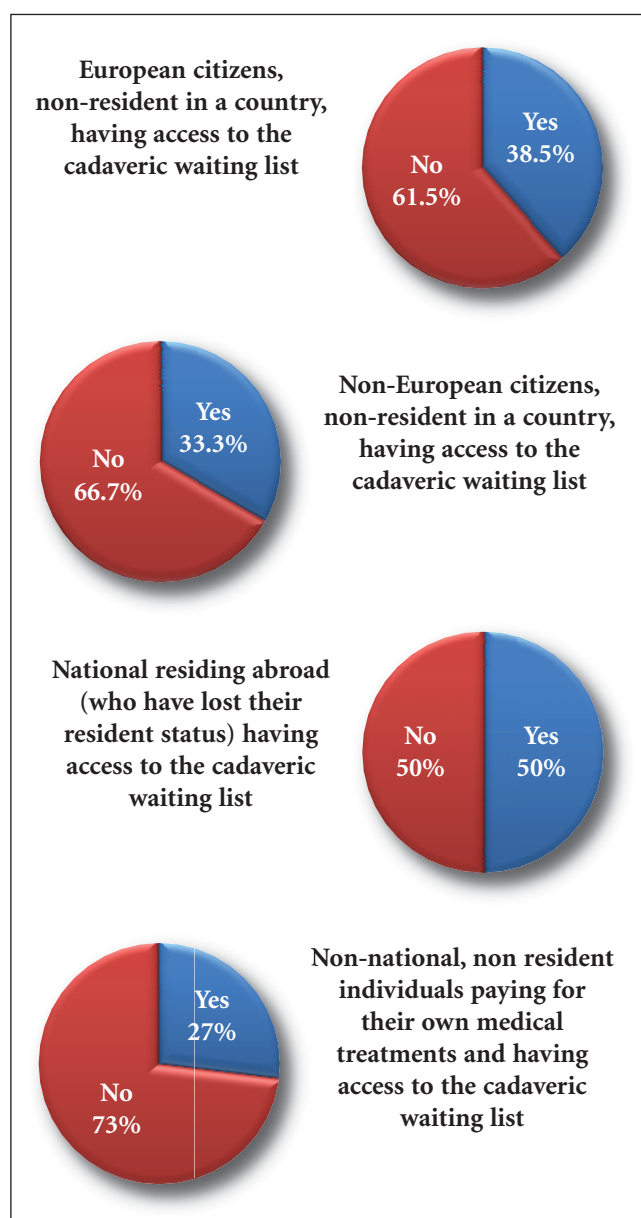
Non-compliance with the "5% non-resident rule" is communicated by ET to the centre concerned and to the Board of ET on a regular basis (at least annually). The "5% non-

resident rule” does not apply to kidney and pancreas recipients, on the understanding that these patients are not allowed to be registered on the ET waiting list.

In the ET countries (where the “5% non-resident rule” is applied), and in Cyprus and Romania due to the absence of a regulatory framework or specific restrictions, virtually any person (including non-nationals and non-residents) in the country can have access to transplantation.

The existence of special provisions at a national or local level for asylum seekers, refugees and non-residents in a country for humanitarian reasons were reported in 58.3% of the respondents.

In order to fully comprehend the situation in terms of access to the deceased waiting list in the various Council of Europe member states according to citizenship and residency status, the questionnaire included specific questions, summarised in Figure 1.



**Figure 1.** Access to cadaveric waiting lists for different patient categories in European countries.

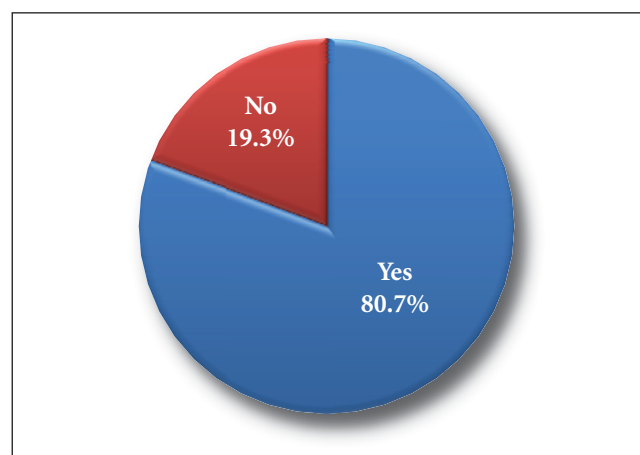
## ALLOCATION

In 91.6% of cases, non-nationals and non-residents are not disadvantaged compared to residents in terms of organ allocation. However, in Poland, non-residents can only receive an organ if a suitable Polish recipient does not exist. Similarly, in the United Kingdom, non-EU residents can receive a graft from a deceased donor only if there is no suitable national recipient.

It is encouraging, however, that in 85.7% of countries with restrictions on access to transplantation for non-nationals and non-residents, this does not apply to paediatric cases. Similarly, 66.6% of countries with restrictions on access to transplantation for non-nationals and non-resident individuals would consider enabling access to transplantation for such individuals in the case of a medical emergency associated with life-threatening conditions. In most of these cases, however, access to transplantation for such individuals is only allowed if the life-threatening condition arose suddenly whilst in the country.

## TRANSPLANTATION FROM LIVING DONORS

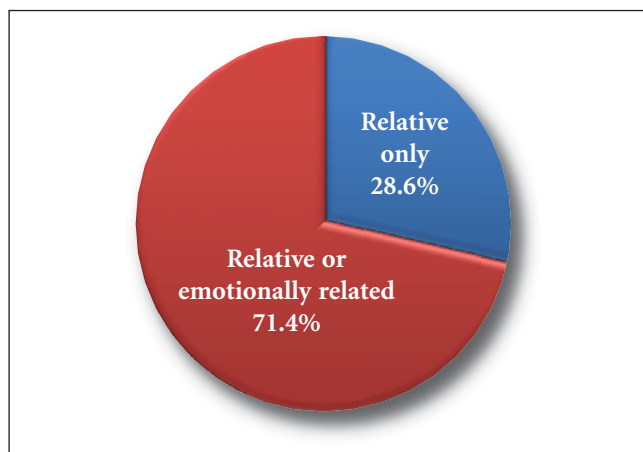
With regard to organ transplantation from living donors, 80.7% of the respondent countries indicated that they would consider it even in cases where the living donor, the recipient or both were non-resident/non-national individuals (Figure 2).



**Figure 2.** Countries that would consider organ transplantation using a living donor even in the cases where the living donor, the recipient or both were non-resident/non-nationals.

It should be clarified, however, that in the vast majority of cases, a thorough assessment of both the donor and recipient profiles, including technical and non-technical aspects, would be undertaken in advance. In addition, the financial aspects of the procedures would also be closely analysed prior to proceeding with the transplant.

A familial relationship is required in all cases to perform living donor organ transplantation if the living donor, the recipient or both are non-resident/non-national, where this is allowed (Figure 3). However, 71.4% of these countries would also consider living donor organ transplantation involving non-residents/non-nationals if a close emotional relationship between donor and recipient existed.



**Figure 3.** Relationship required between donor and recipient in the countries that perform living donor organ transplantations where the living donor, the recipient or both are non-resident/non-nationals.

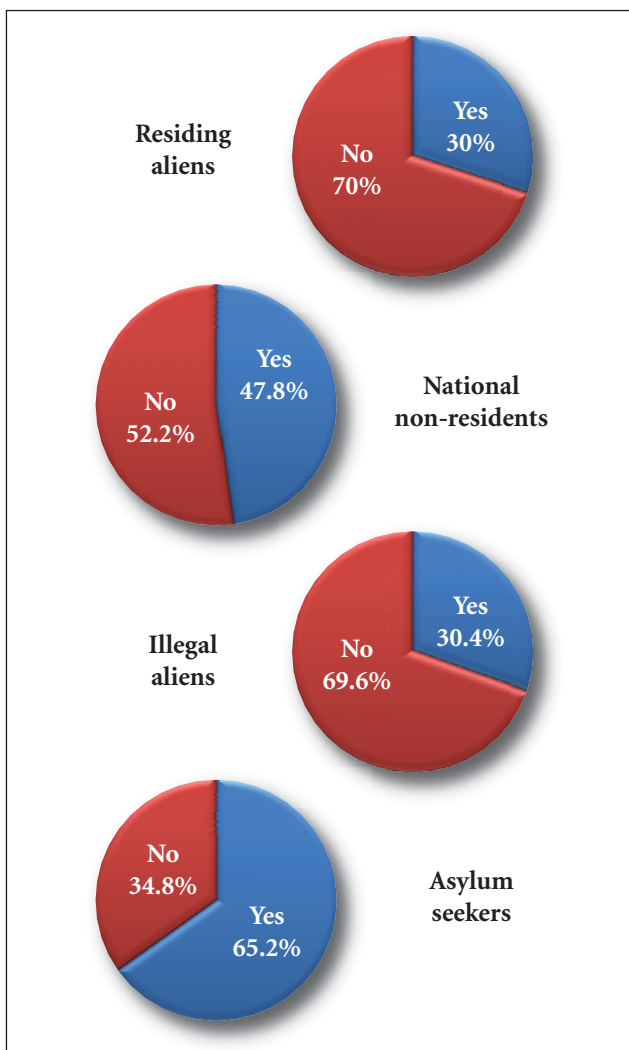
The questionnaire also explored the provisions in place in each country in case of acute graft failure following living donor organ transplantation and where the living donor, the recipient or both are non-resident/non-national. In 50% of the countries, recipients of an acutely failed graft from a living donor are legally entitled to have access to the national waiting list; in another 10%, this would be possible only for a failed liver transplant, whilst in 5% access to the national waiting list would be possible only if the recipient was otherwise qualified. In 35% of the countries, however, recipients of an acutely failed living donor graft, where the living donor, the recipient or both are non-resident/non-national, are not entitled to have access to the national waiting list.

Finally, the survey also explored whether, in a given country, non-nationals and non-resident patients could undergo transplantation from a living donor at his/her own expense. More than one third of the respondent countries stated that, even at their own expense, non-resident patients were not authorised to undergo transplantation from a living donor.

## HEALTH & SOCIAL ASSISTANCE

The questionnaire also looked into the financial coverage of the transplantation amongst the various categories of individuals in need of a transplant. As far as residents are concerned, whilst cost coverage is guaranteed for all nationals undergoing transplantation in their own country, this was extended to residing aliens in only one third of the countries. As far as residing aliens, national non-residents, illegal aliens and asylum seekers the situation is summarised in Figure 4.

Interestingly, financial coverage is also provided to non-resident/non-nationals in 2 countries, a benefit that is also extended to non-EU citizen in one of these. Healthcare assistance rules for non-resident/non-nationals asking for admission to deceased waiting lists do not differ in public versus private hospitals in 77% of countries, whereas only 23% of countries declared that transplantation takes place exclusively in public institutions. The financial scheme reported above is independent of whether the transplant takes place in a private or public hospital.



**Figure 4.** Financial coverage of the transplantation procedures for different patient categories.

## CONCLUSIONS

This brief report highlights the significant degree of diversity with regard to access to transplantation for non-resident/non-national patients in member states of the Council of Europe. Indeed, the spectrum of transplantation opportunities provided to non-resident/non-national citizens by European countries goes from granting rights similar to those reserved for nationals to denying access to transplantation.

However, it is encouraging to note that in many, but not all countries, very specific circumstances, such as paediatric transplantation, life-threatening emergencies and immediate failure of a transplanted organ, may allow to by-pass the existing regulatory frameworks and grant access to transplantation to patients with special needs. It is anticipated that activities such as those conducted and promoted by the CD-P-TO will be instrumental to better appreciate the heterogeneity of the European landscape with regard to transplantation, to identify possible areas of intervention and to facilitate the transfer of know-how across Europe. Together, such efforts are expected to contribute to the harmonisation of transplantation access and practices across the member states of the Council of Europe.





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