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2011



INTERNATIONAL FIGURES ON  
DONATION AND TRANSPLANTATION - 2010

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# NEWSLETTER TRANSPLANT



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OF EUROPE

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DE SANIDAD, POLÍTICA SOCIAL  
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# INTERNATIONAL FIGURES ON ORGAN, TISSUE & HEMATOPOIETIC STEM CELL DONATION & TRANSPLANTATION ACTIVITIES. DOCUMENTS PRODUCED BY THE COMMITTEE OF EXPERTS ON THE ORGANISATIONAL ASPECTS OF CO-OPERATION IN ORGAN TRANSPLANTATION (2010)

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### Foot Note- For the purposes of this Newsletter the following definitions were used:

An **actual donor** (HBD and NHBD) is a deceased person from whom at least one organ has been recovered for the purpose of solid organ transplantation, in contrast to a **utilised donor**, who is an actual donor from whom at least one solid organ has been transplanted.

The **number of utilised donors is therefore lower than the number of actual donors.**

**Multiorgan donor:** An actual donor from whom at least two different types of organs have been recovered for the purpose of transplantation.

One double-kidney transplant (TX) and one double-lung TX are counted as 1 TX.

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

**Absolute number:** Include all figures corresponding to all donors/patients adults and children.

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

**N° TX Centres:** One centre can include adult and pediatric program for each organ - type transplant.



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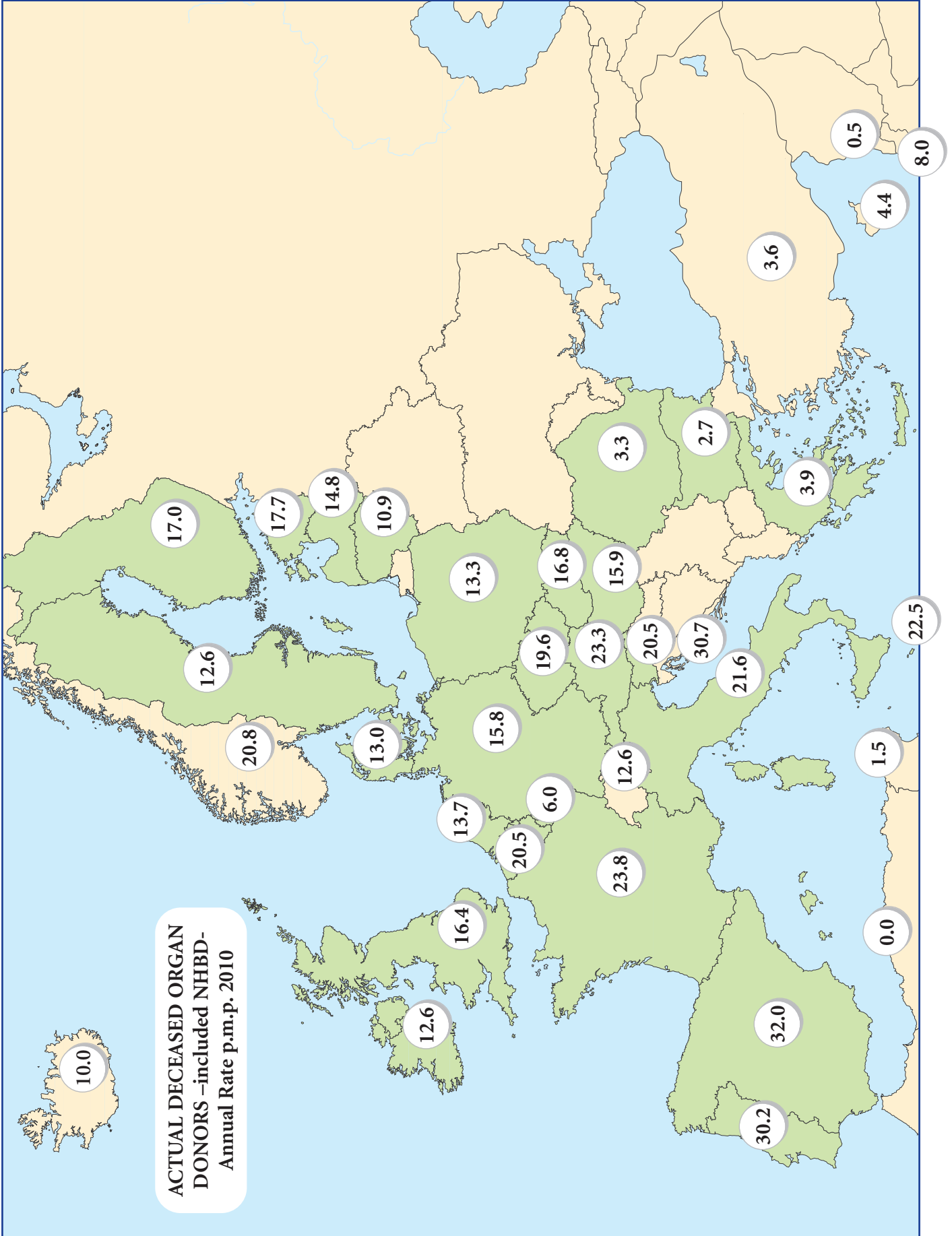


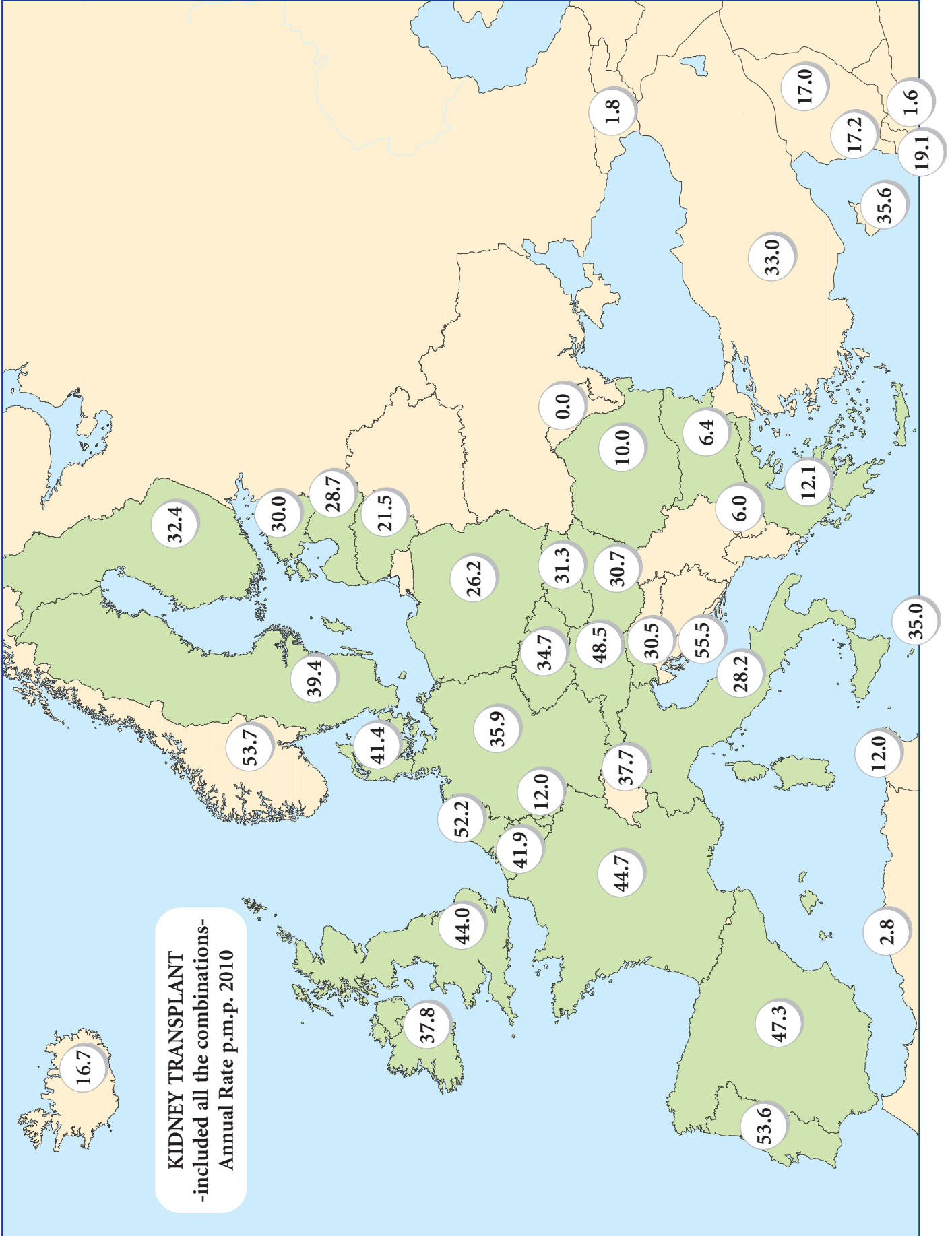
International Figures  
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and Transplantation Activity.  
Year 2010

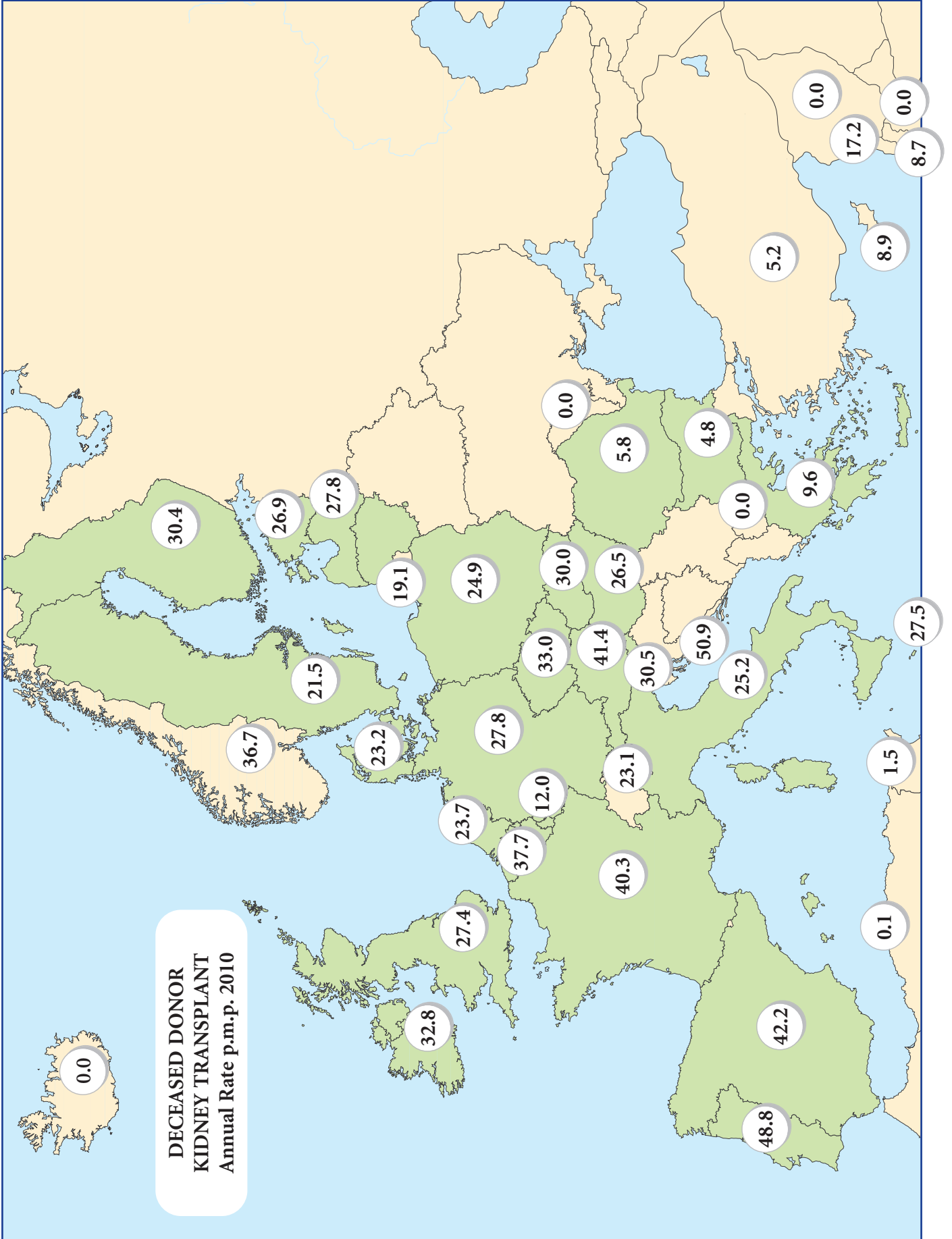


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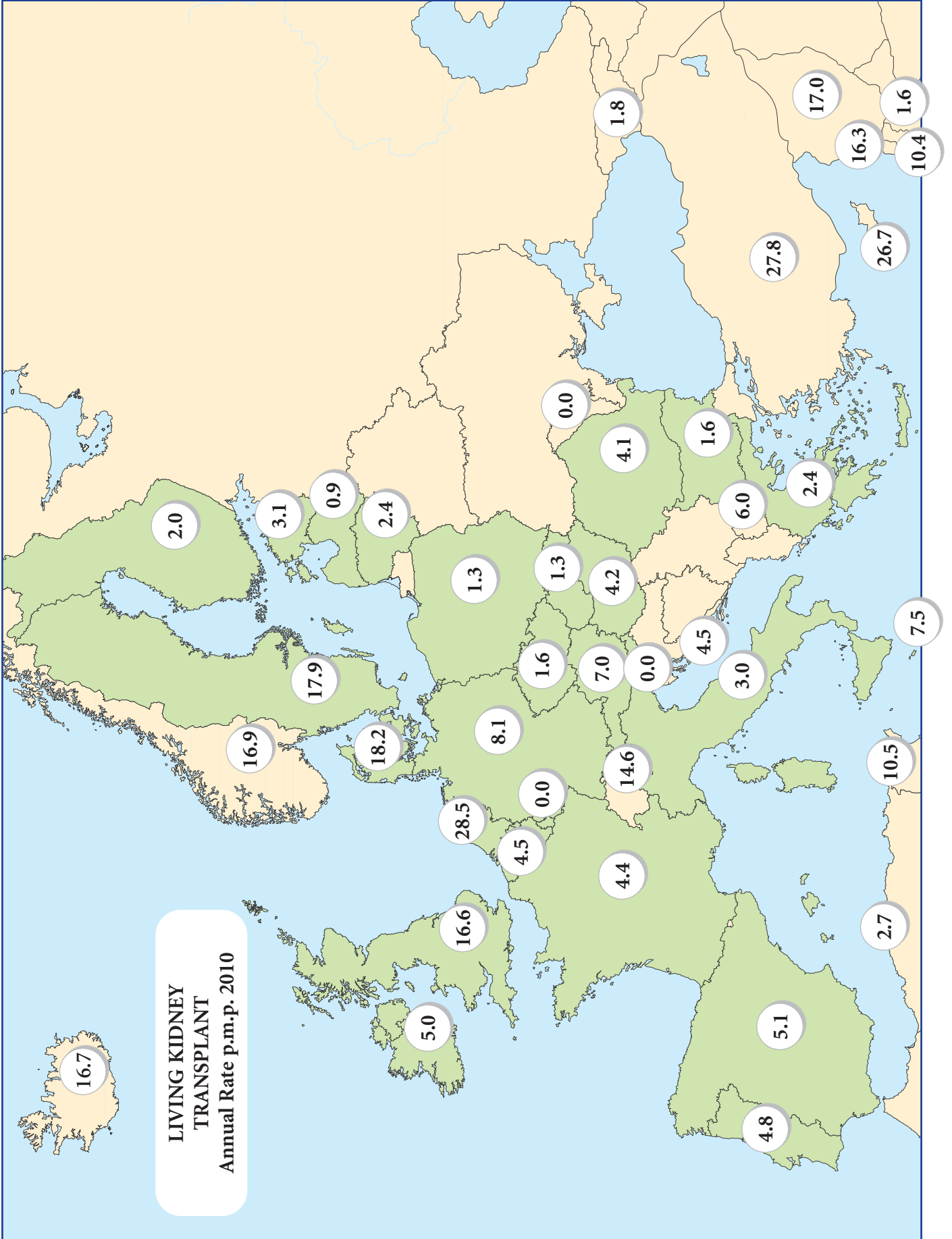
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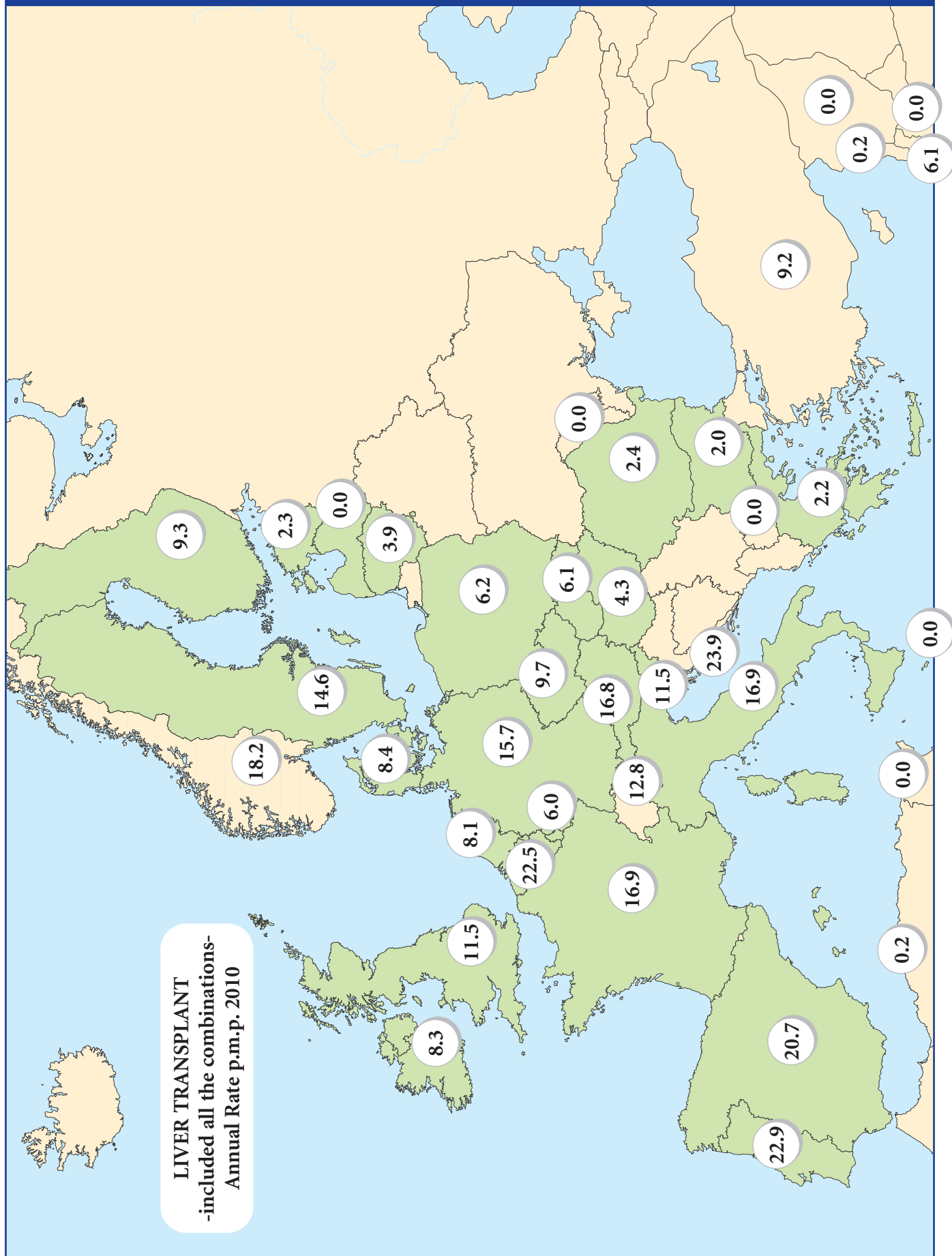


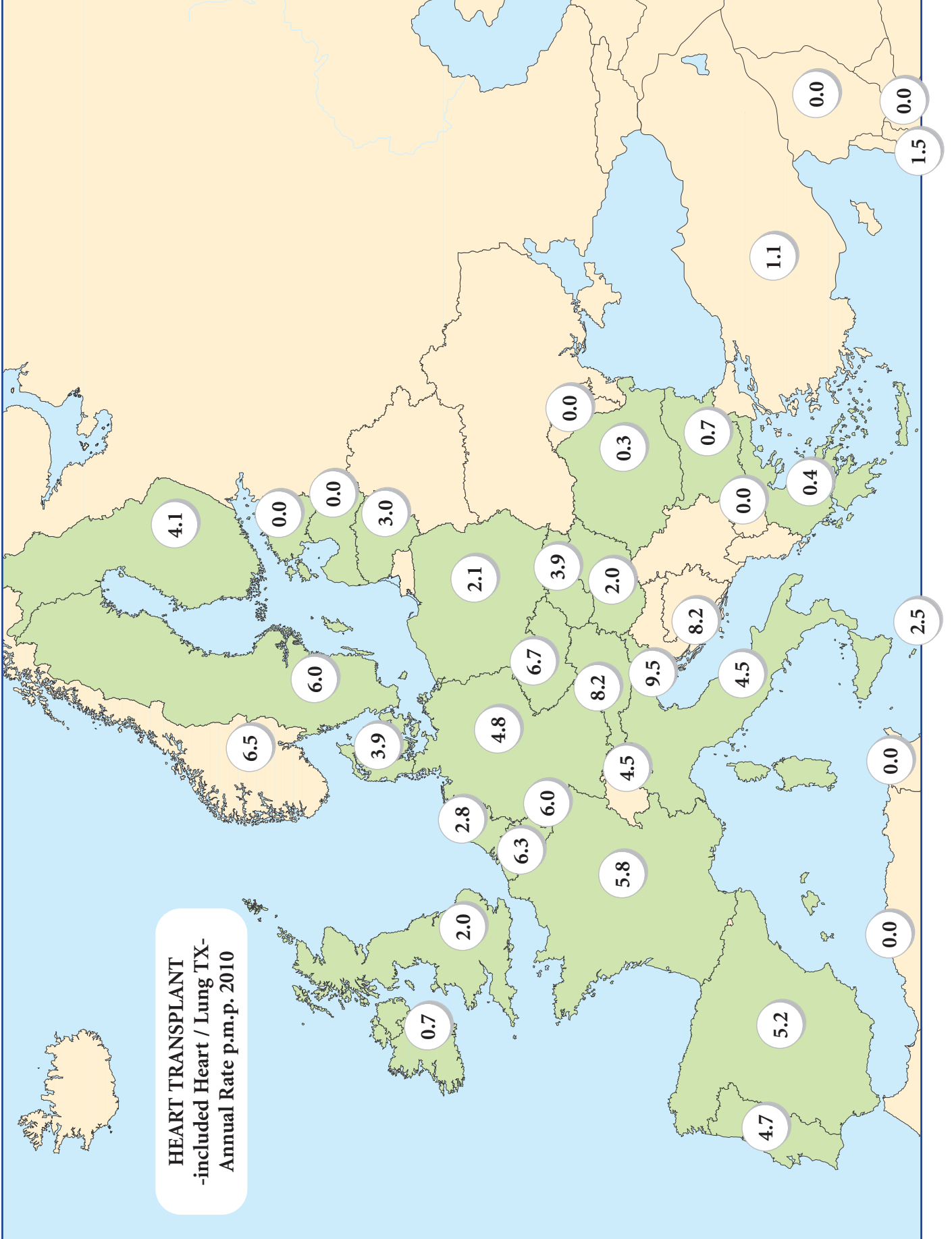


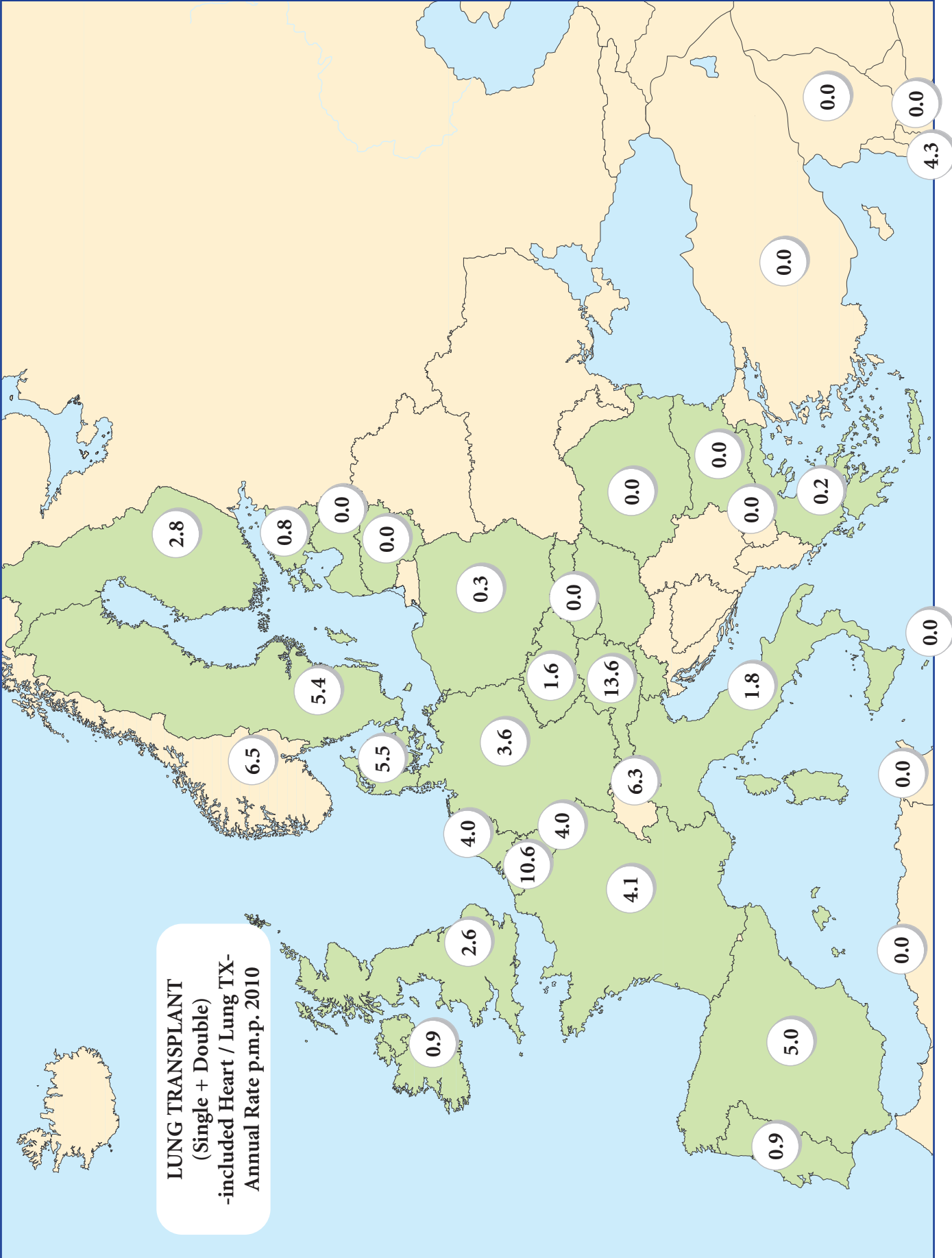


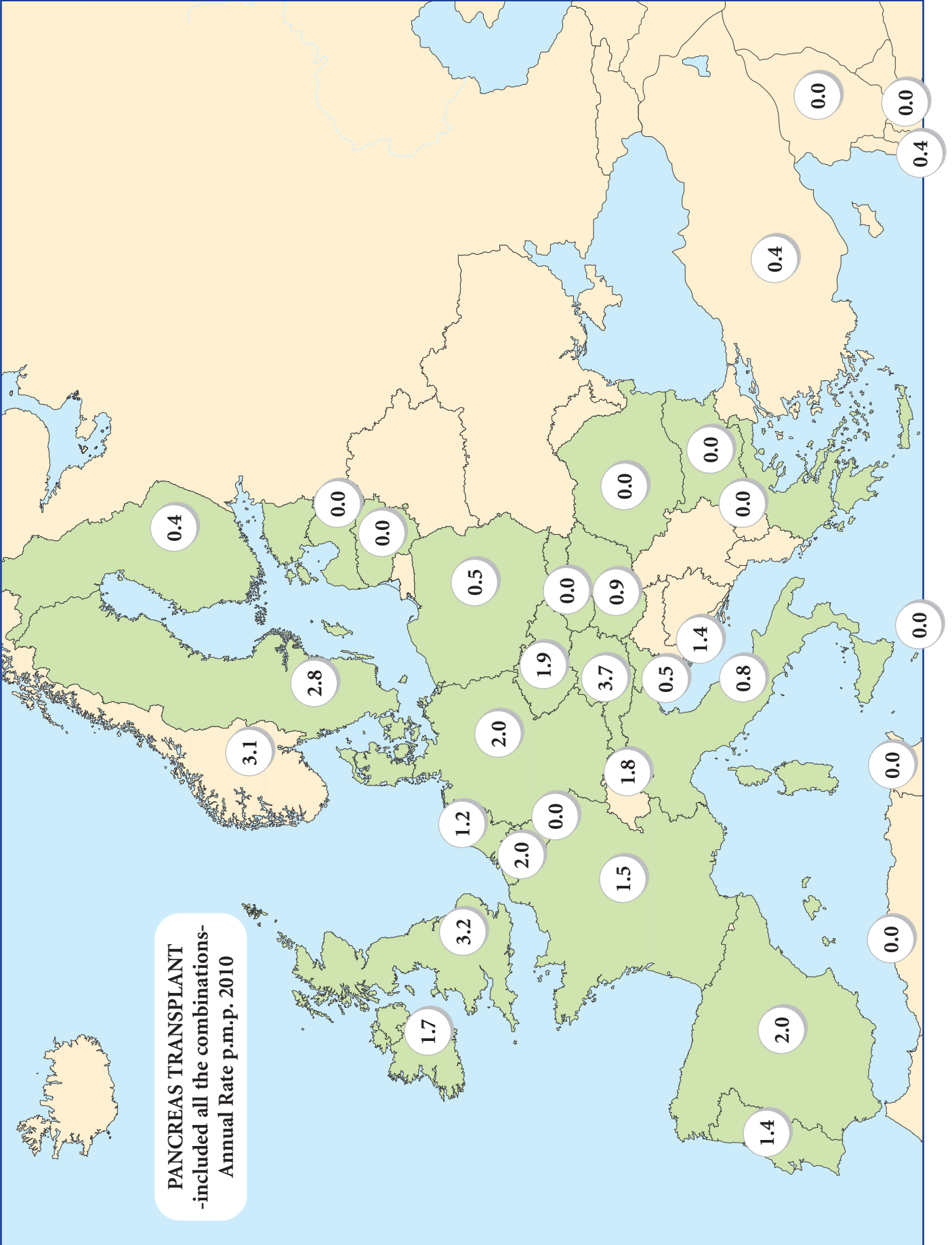


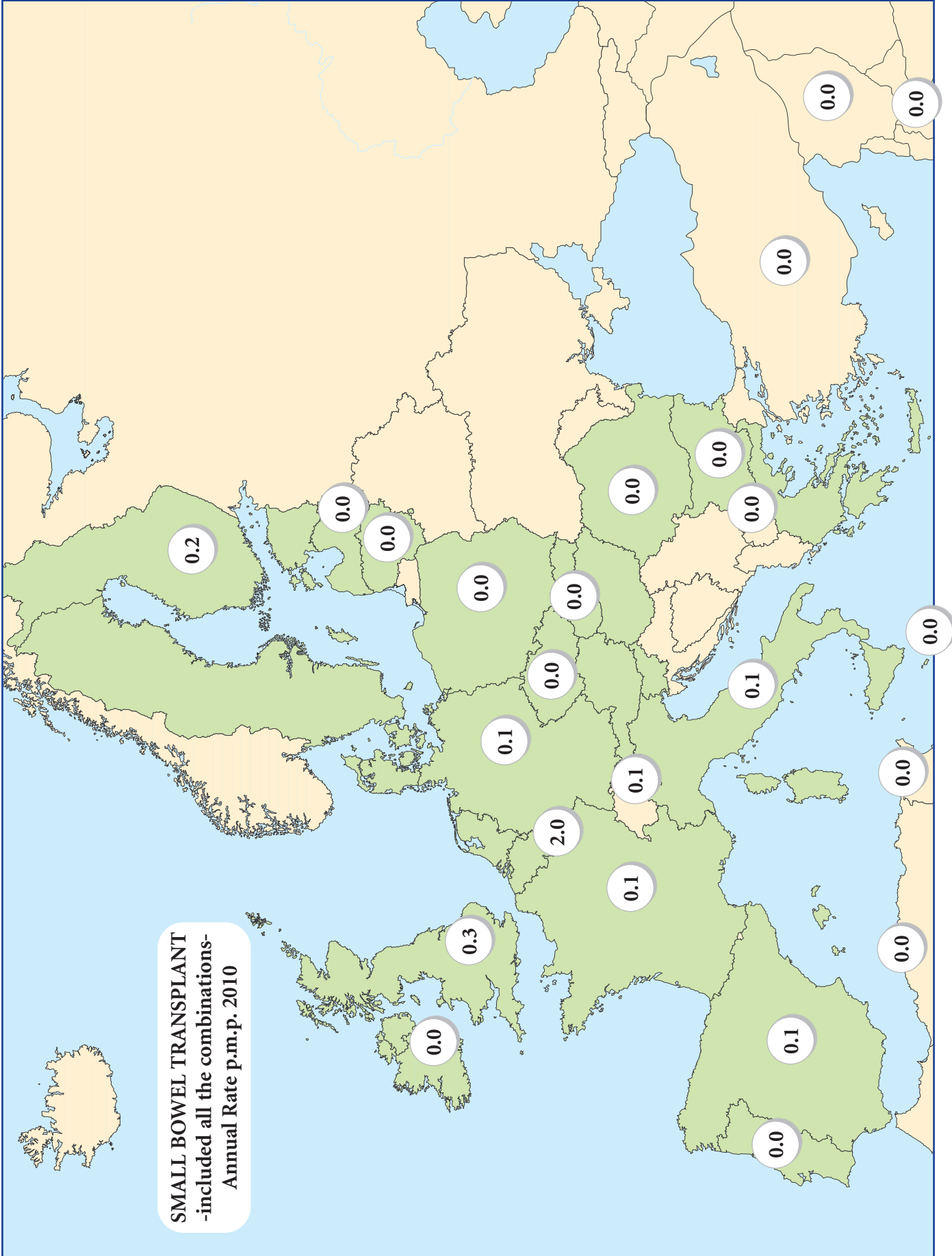
LIVER TRANSPLANT  
-included all the combinations-  
Annual Rate p.m.p. 2010



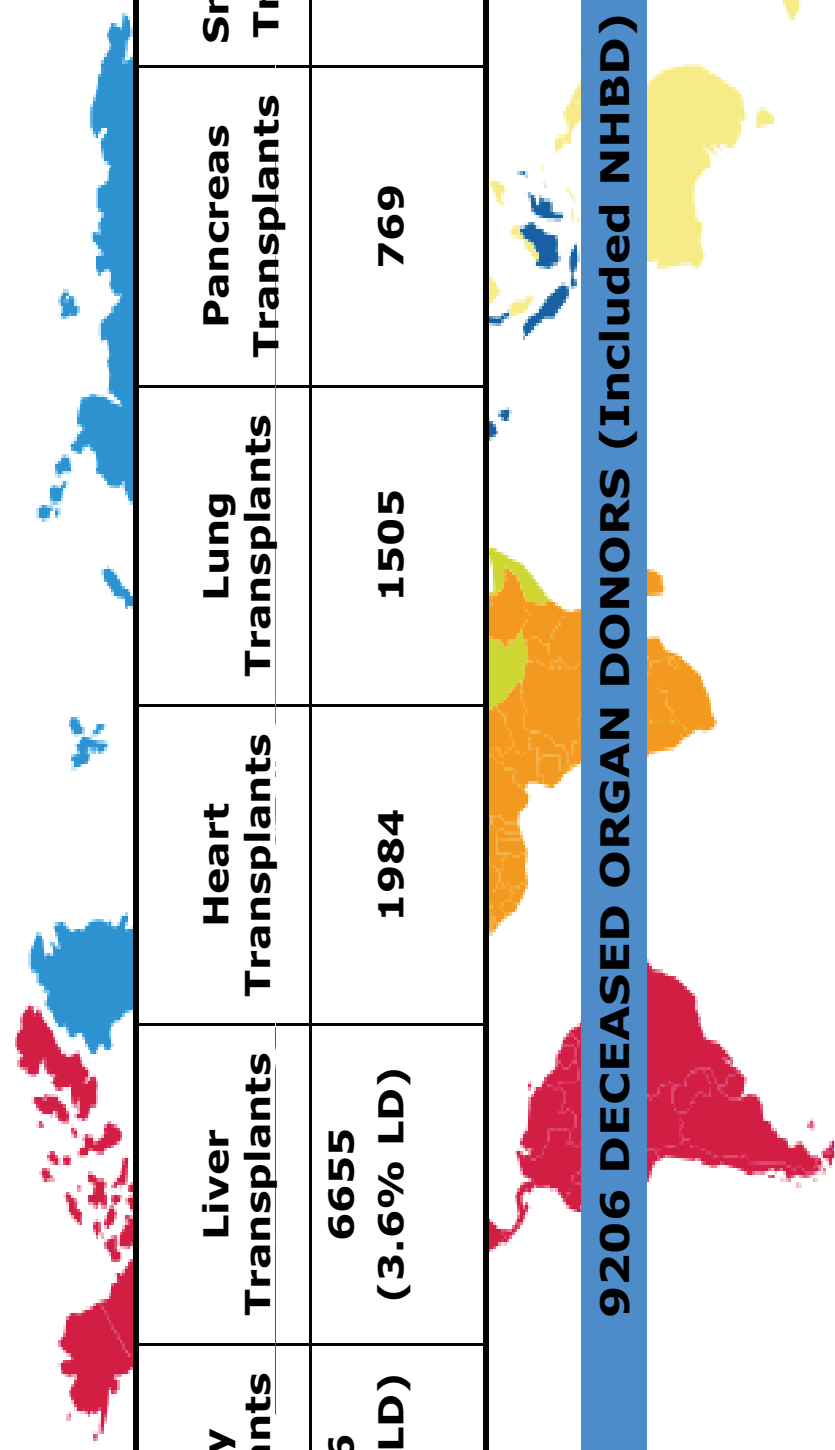








## EUROPEAN UNION DATA



Kidney Transplants	Liver Transplants	Heart Transplants	Lung Transplants	Pancreas Transplants	Small Bowel Transplants
18246 (19.8% LD)	6655 (3.6% LD)	1984	1505	769	50

**9206 DECEASED ORGAN DONORS (Included NHBD)**

*\*2010 data*

*N= 27 COUNTRIES (501.6 million inhabitants)*



**Population (million inhabitants):**

Actual Deceased Donors - included NHBD - (pmp)	34.1
Deceased Donor Kidney TX (pmp)	495 (14.5)
Living Kidney TX (pmp)	749 (22.0)
Liver TX - included all the combinations - (pmp)	485 (14.2)
Heart TX - included Heart/Lung TX - (pmp)	451 (13.2)
Heart/Lung TX (pmp)	170 (5.0)
Lung TX - included all the combinations - (pmp)	2 (0.1)
Pancreas TX - included all the combinations - (pmp)	180 (5.3)
Small Bowel TX - included all the combinations - (pmp)	73 (2.1)
	1 (0.0)

**Population (million inhabitants):**

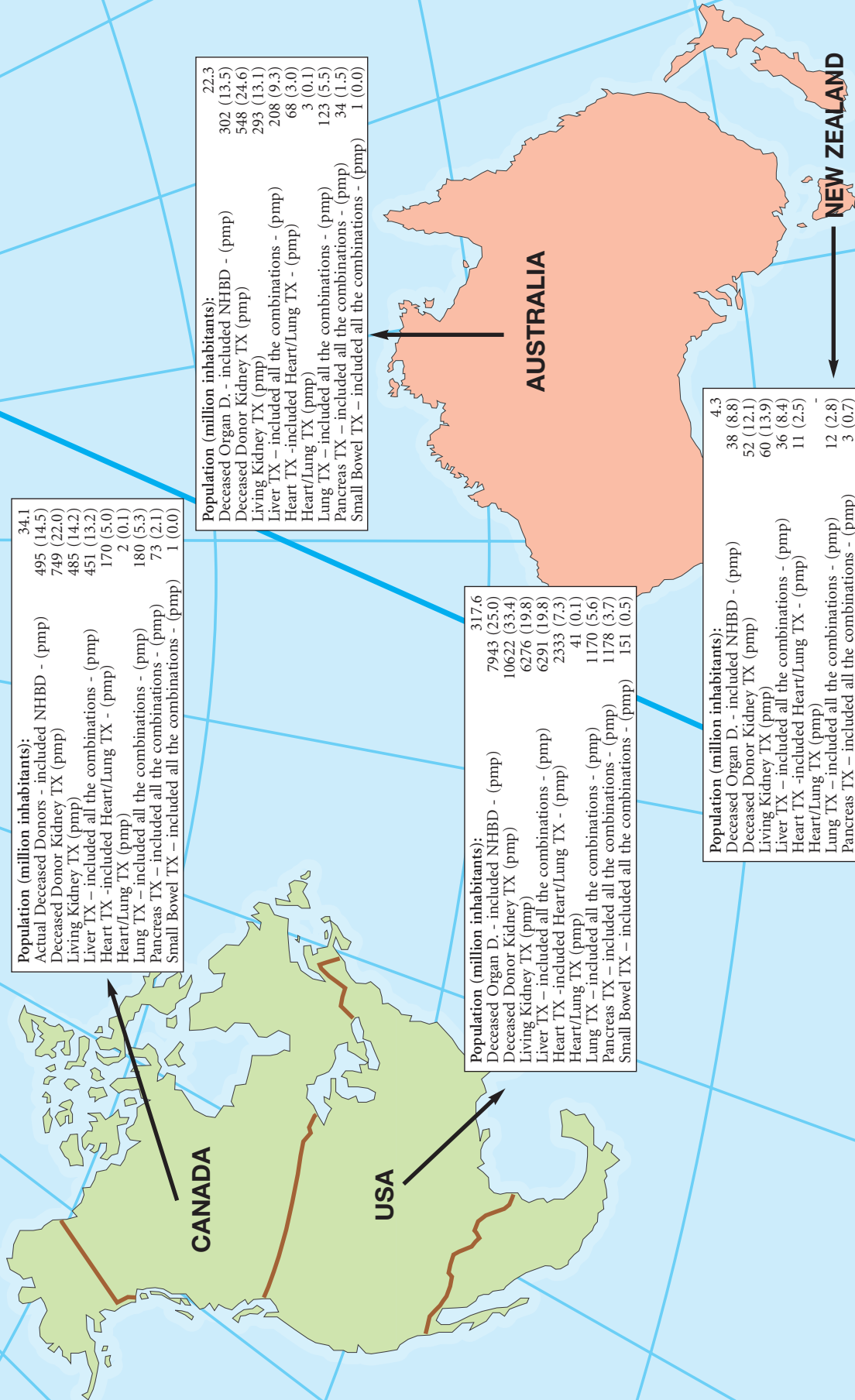
Deceased Organ D. - included NHBD - (pmp)	22.3
Deceased Donor Kidney TX (pmp)	302 (13.5)
Living Kidney TX (pmp)	548 (24.6)
Liver TX - included all the combinations - (pmp)	293 (13.1)
Heart TX - included Heart/Lung TX - (pmp)	208 (9.3)
Heart/Lung TX (pmp)	68 (3.0)
Lung TX - included all the combinations - (pmp)	3 (0.1)
Pancreas TX - included all the combinations - (pmp)	123 (5.5)
Small Bowel TX - included all the combinations - (pmp)	34 (1.5)
	1 (0.0)

**Population (million inhabitants):**

Actual Deceased Donors - included NHBD - (pmp)	317.6
Deceased Donor Kidney TX (pmp)	7943 (25.0)
Living Kidney TX (pmp)	10622 (33.4)
Liver TX - included all the combinations - (pmp)	6276 (19.8)
Heart TX - included Heart/Lung TX - (pmp)	6291 (19.8)
Heart/Lung TX (pmp)	2333 (7.3)
Lung TX - included all the combinations - (pmp)	41 (0.1)
Pancreas TX - included all the combinations - (pmp)	1170 (5.6)
Small Bowel TX - included all the combinations - (pmp)	1178 (3.7)
	151 (0.5)

**Population (million inhabitants):**

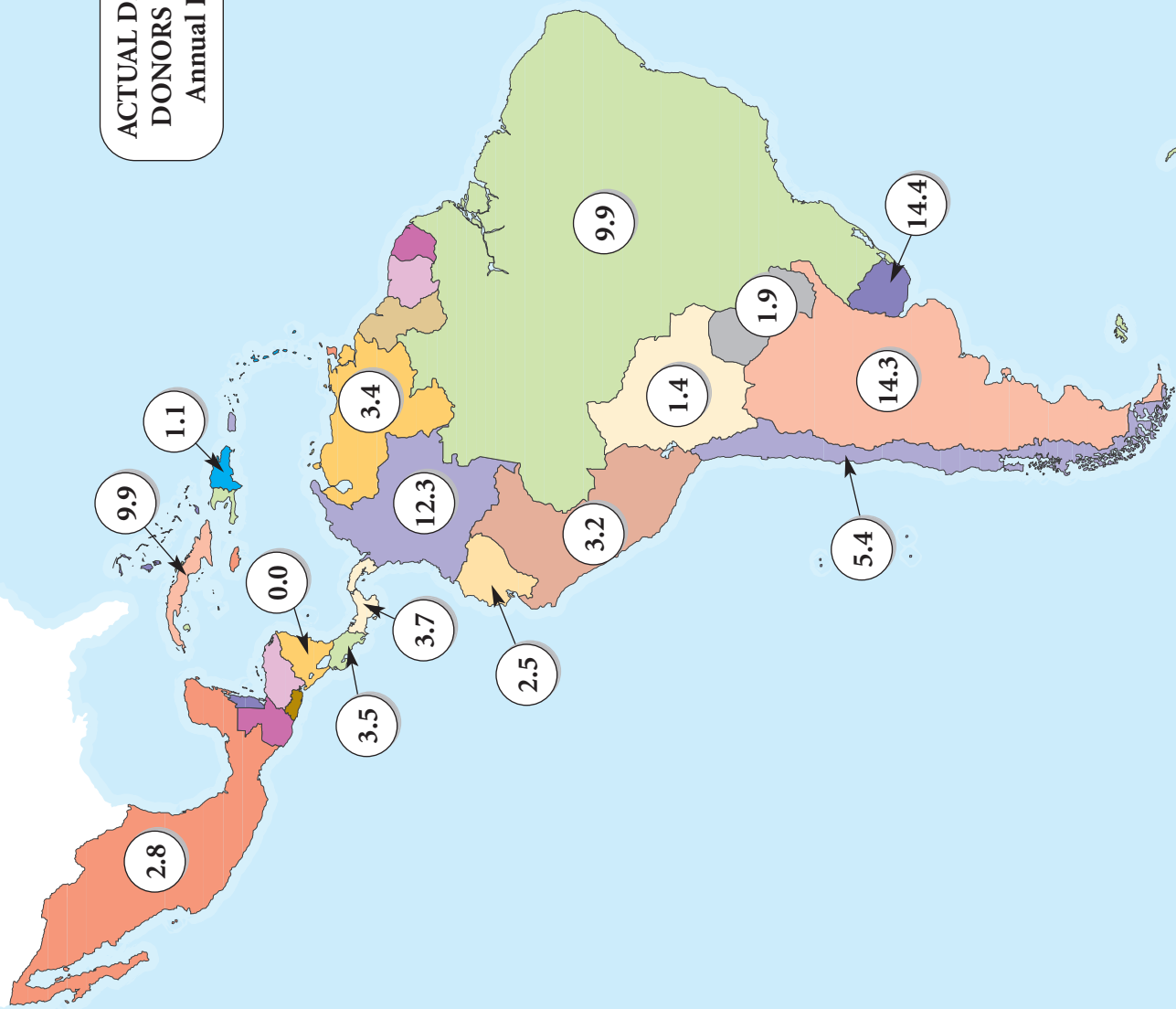
Deceased Organ D. - included NHBD - (pmp)	4.3
Deceased Donor Kidney TX (pmp)	38 (8.8)
Living Kidney TX (pmp)	52 (12.1)
Liver TX - included all the combinations - (pmp)	60 (13.9)
Heart TX - included Heart/Lung TX - (pmp)	36 (8.4)
Heart/Lung TX (pmp)	11 (2.5)
Lung TX - included all the combinations - (pmp)	-
Pancreas TX - included all the combinations - (pmp)	12 (2.8)
Small Bowel TX - included all the combinations - (pmp)	3 (0.7)
	-





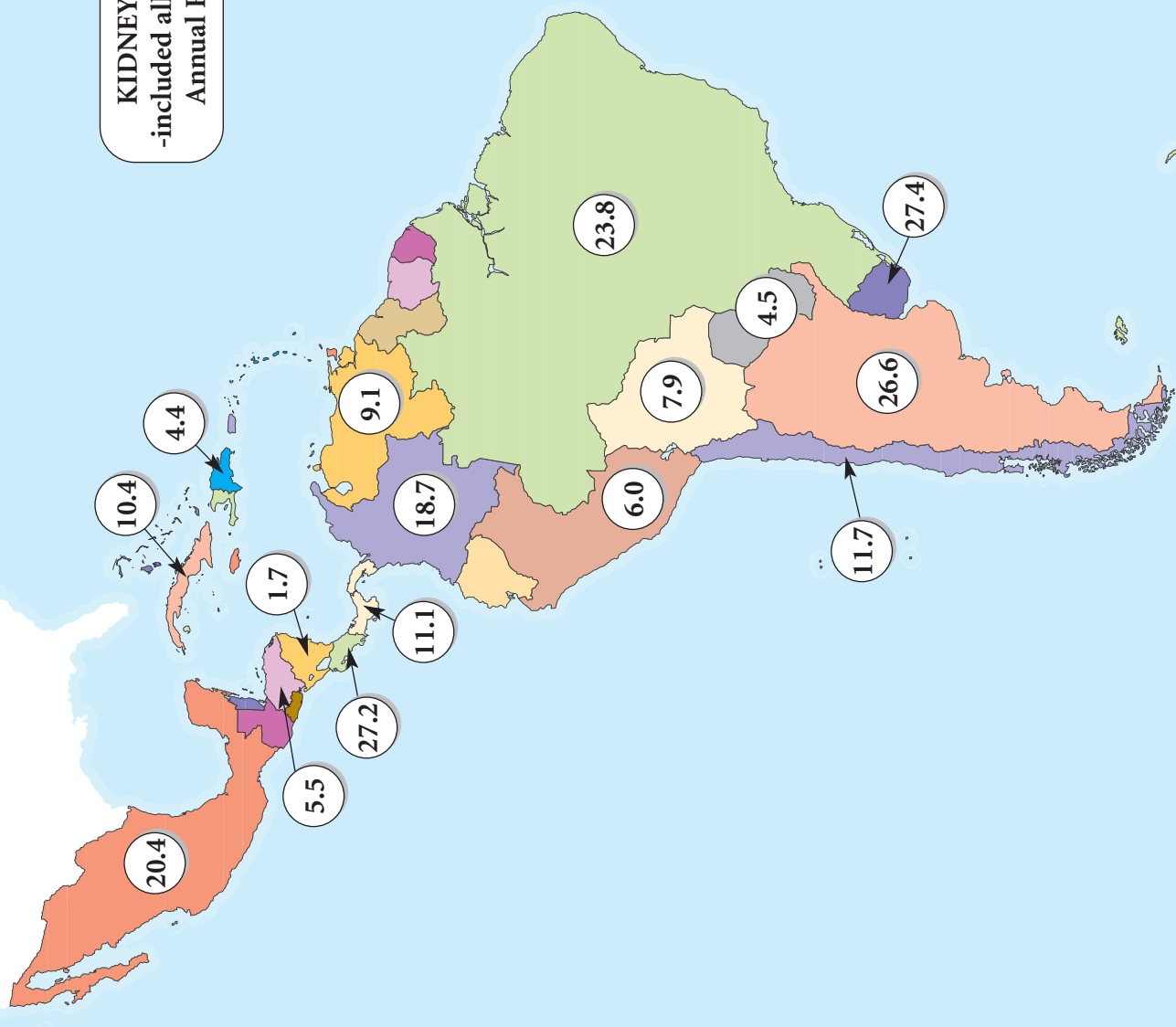


**ACTUAL DECEASED ORGAN  
DONORS -included NHBD-  
Annual Rate p.m.p. 2010**



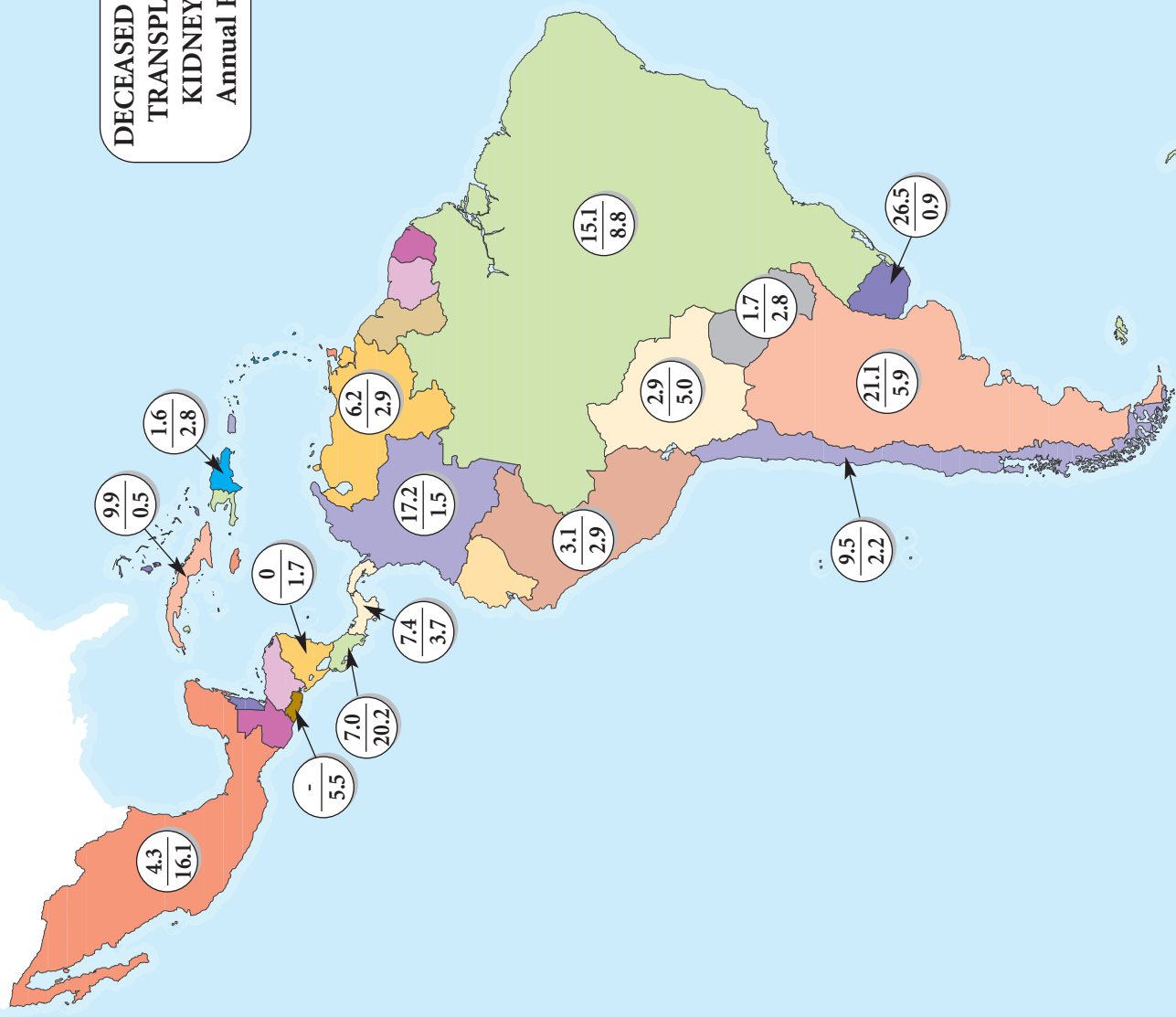


**KIDNEY TRANSPLANT**  
-included all the combinations-  
Annual Rate p.m.p. 2010



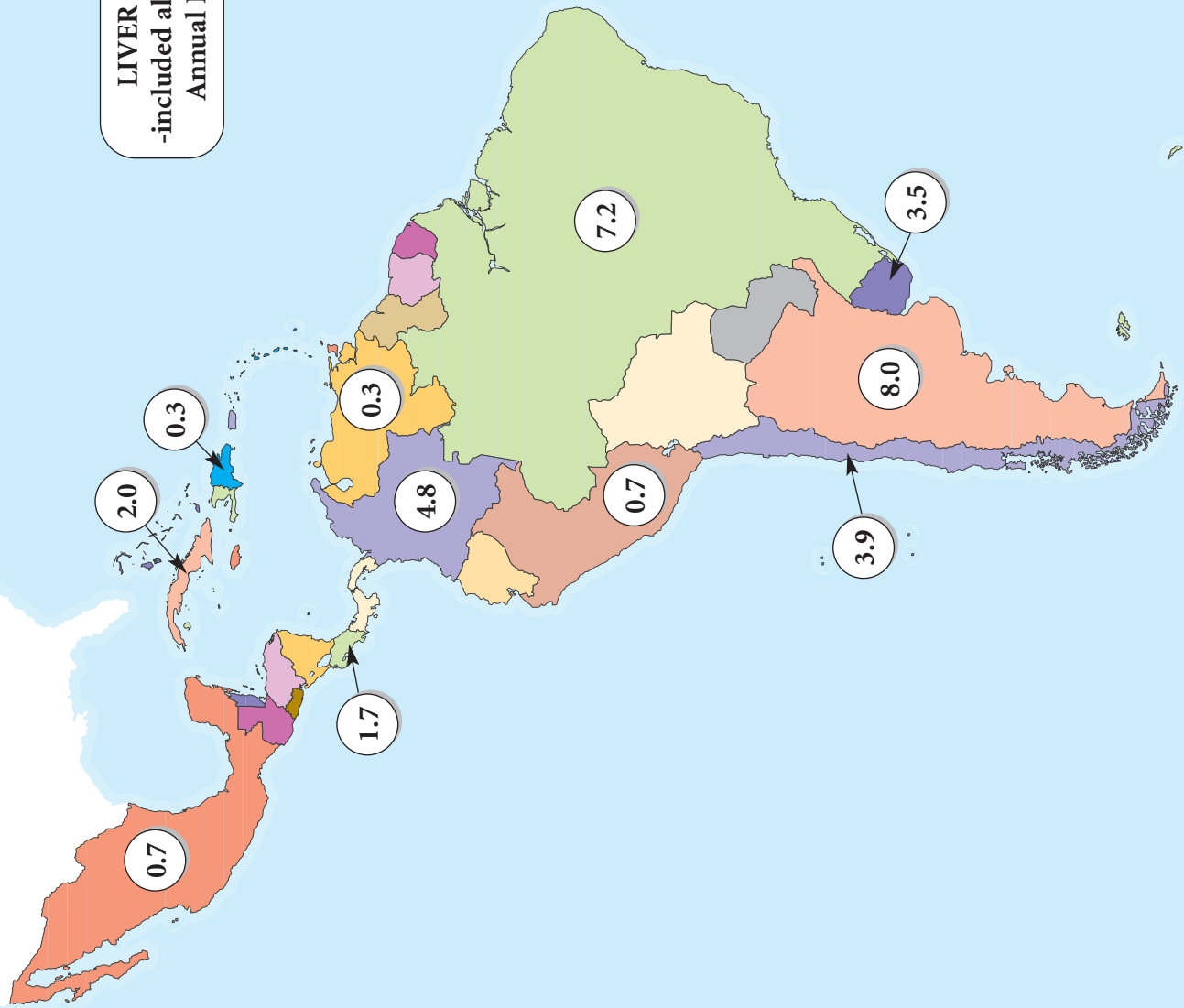


**DECEASED DONORS KIDNEY  
TRANSPLANT & / LIVING  
KIDNEY TRANSPLANT  
Annual Rate p.m.p. 2010**



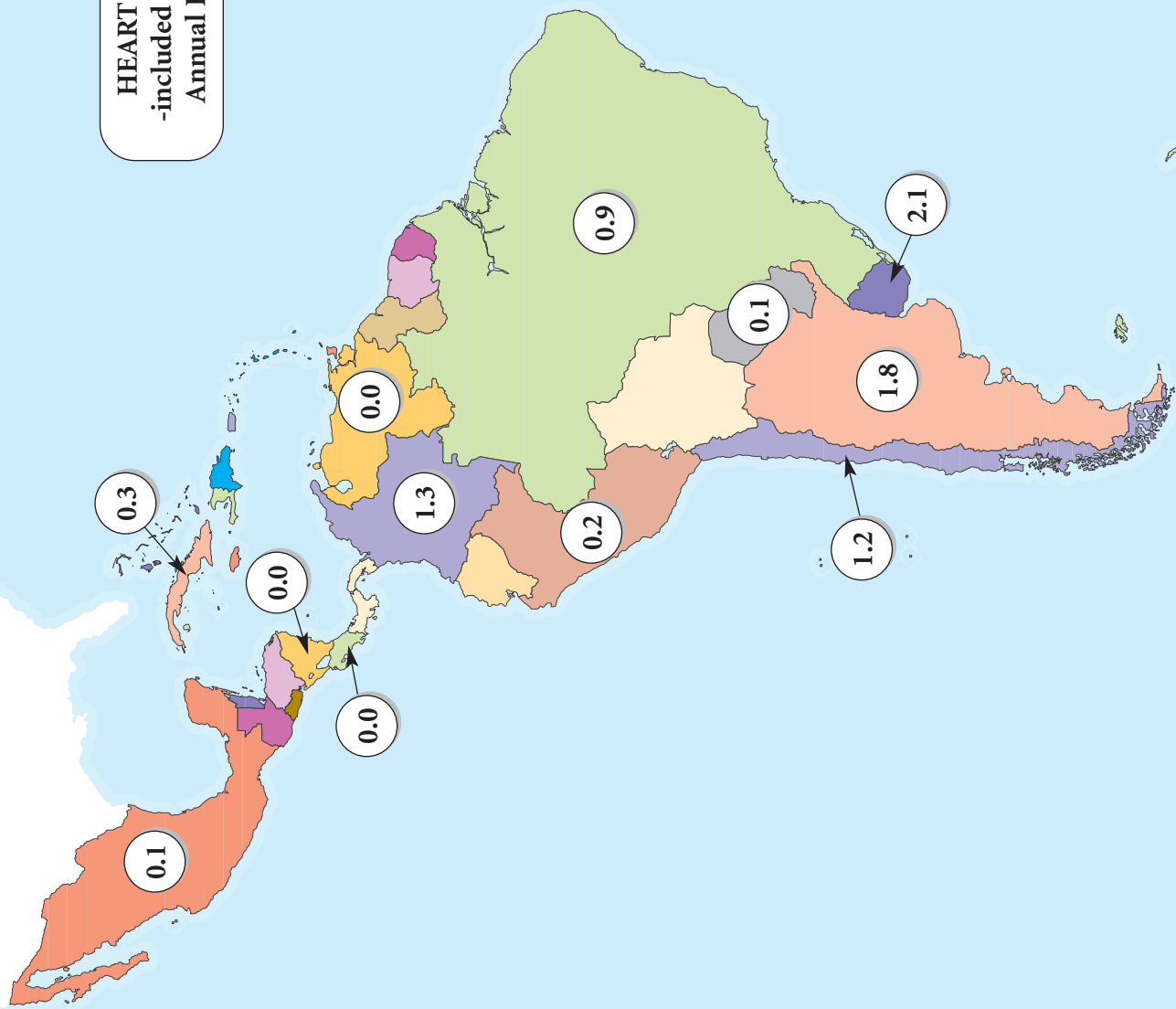


**LIVER TRANSPLANT**  
-included all the combinations-  
Annual Rate p.m.p. 2010



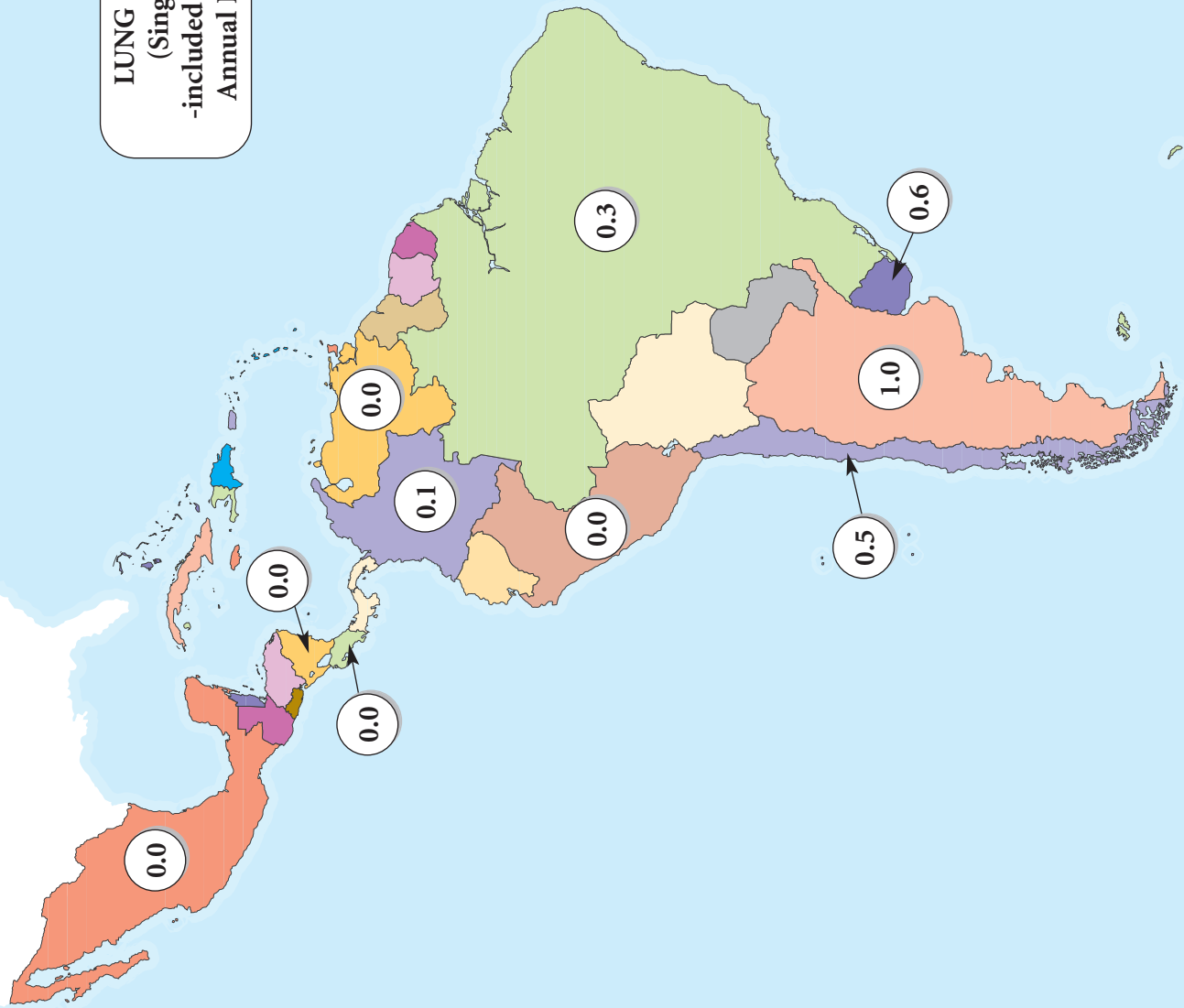


**HEART TRANSPLANT  
-included Heart / Lung TX-  
Annual Rate p.m.p. 2010**



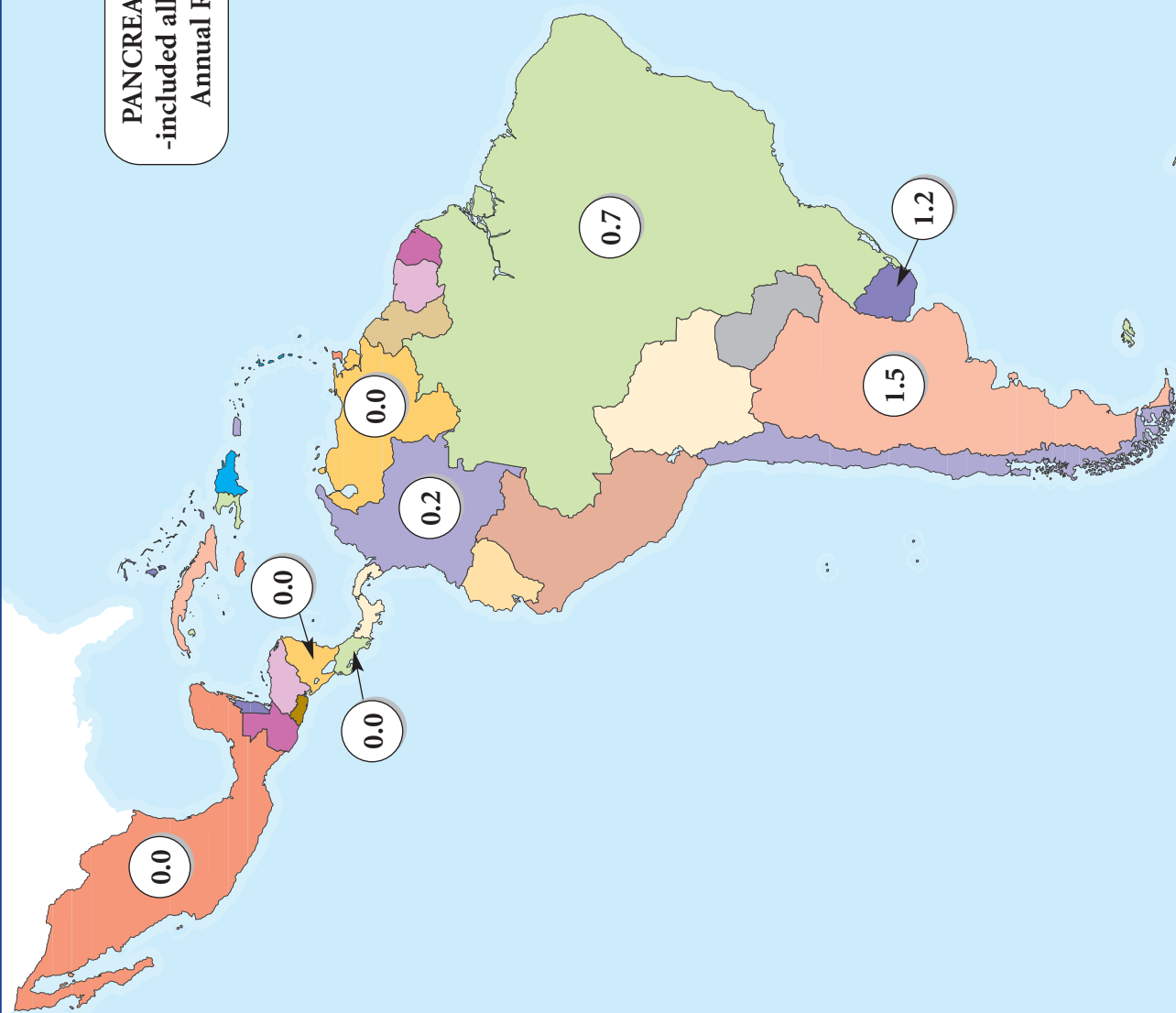


**LUNG TRANSPLANT  
(Single + Double)  
-included Heart / Lung TX-  
Annual Rate p.m.p. 2010**



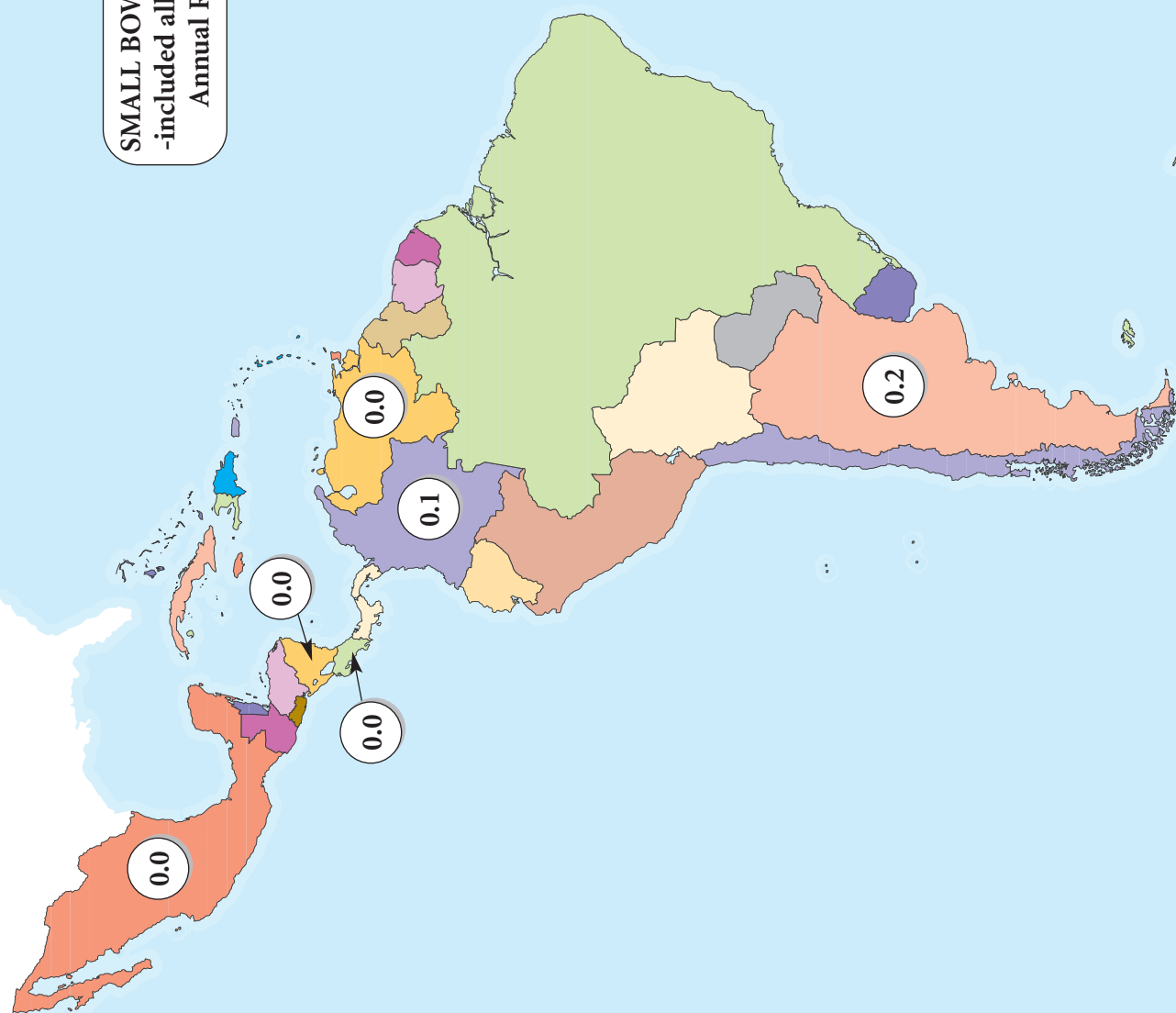


**PANCREAS TRANSPLANT**  
-included all the combinations-  
Annual Rate p.m.p. 2010





**SMALL BOWEL TRANSPLANT**  
-included all the combinations-  
Annual Rate p.m.p. 2010





## LATINAMERICAN COUNTRIES



	Kidney Transplants	Liver Transplants	Heart Transplants	Lung Transplants	Pancreas Transplants	Small Bowel Transplants
	10112 (42.4% LD)	2168 (7.7% LD)	350	120	210	13

*\*2010 data*

**N= 17 COUNTRIES (545 million inhabitants)**

## GLOBAL DATA

WHO Region (N) <sup>1</sup>	Kidney N (pmp) <sup>2</sup>	Liver N (pmp) <sup>2</sup>	Heart N (pmp) <sup>2</sup>	Lung N (pmp) <sup>2</sup>	Pancreas N (pmp) <sup>2</sup>	Total N (pmp) <sup>2</sup>
<b>AFR (9)</b>	LD: 323 (0.8) DD: 140 (0.3)	LD: 5 (0.01) DD: 37 (0.09)	26 (0.06)	8 (0.02)	11 (0.03)	550 (1.3)
<b>AMR (21)</b>	LD: 11036 (12.1) DD: 16692(18.4)	LD: 336 (0.4) DD: 8405 (9.2)	2784 (3.1)	1913 (2.1)	1393 (1.5)	42743 (47.0)*
<b>EMR (14)</b>	LD: 5032 (10.1) DD: 550 (1.1)	LD: 192 (0.4) DD: 223 (0.4)	61 (0.1)	10 (0.02)	20 (0.04)	6088 (12.3)
<b>EUR (38)</b>	LD: 5597 (7.2) DD: 16116 (20.7)	LD: 583 (0.75) DD: 6994 (9.0)	2239 (2.9)	1535 (2.0)	824 (1.05)	33942 (43.6)**

**\*2009 data**

## GLOBAL DATA

WHO Region (N) <sup>1</sup>	Kidney N (pmp) <sup>2</sup>	Liver N (pmp) <sup>2</sup>	Heart N (pmp) <sup>2</sup>	Lung N (pmp) <sup>2</sup>	Pancreas N (pmp) <sup>2</sup>	Total N (pmp) <sup>2</sup>
<b>SEAR (9)</b>	LD: 5496 (3.1) DD: 305 (0.17)	LD: 403 (0.23) DD: 105 (0.06)	13 (0.007)	-	-	6322 (3.6)
<b>WPR (11)</b>	LD: 5313 (3.0) DD: 4818 (2.7)	LD: 1760 (1.0) DD: 1984 (1.1)	280 (0.16)	183 (0.10)	68 (0.04)	14420 (8.2)***
<b>TOTAL (102)</b>	<b>71418 (11.6)</b> LD: 32797 (5.3) DD: 38621 (6.3)	<b>21027 (3.4)</b> LD: 3279 (0.5) DD: 17748 (2.9)	<b>5403 (0.9)</b>	<b>3649 (0.6)</b>	<b>2316 (0.4)</b>	<b>104065 (17.0)***</b>

<sup>1</sup> Number of countries included in the analysis. <sup>2</sup> Absolute number (rate pmp- based on the population from the countries with transplantation activity data).

\*184 small bowel tx included included

\*\*54 small bowel tx included

\*\*\*14 small bowel tx included

\*\*\*\*252 small bowel tx

**\*2009 data**



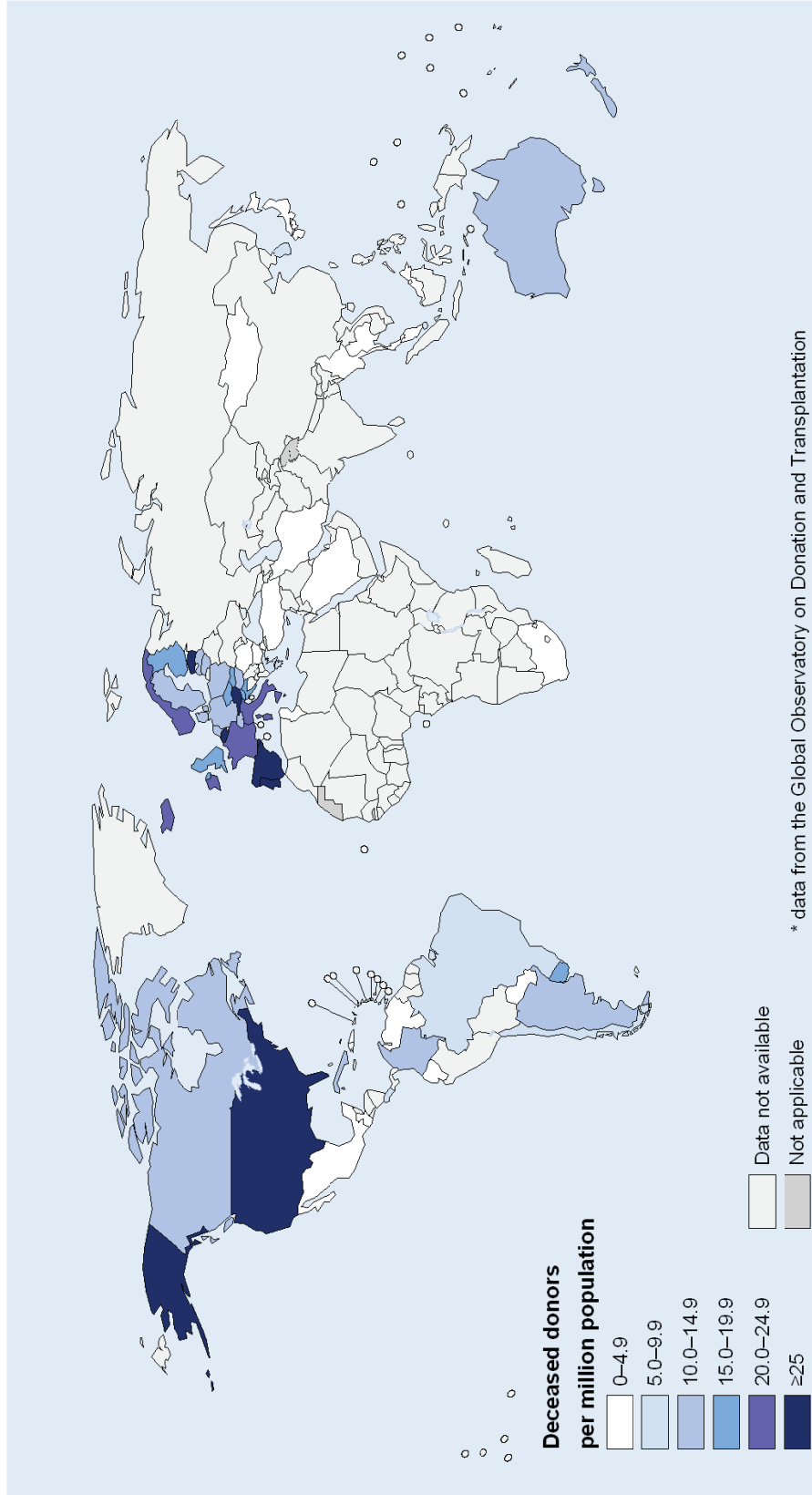
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### Donors from deceased persons, 2009\*



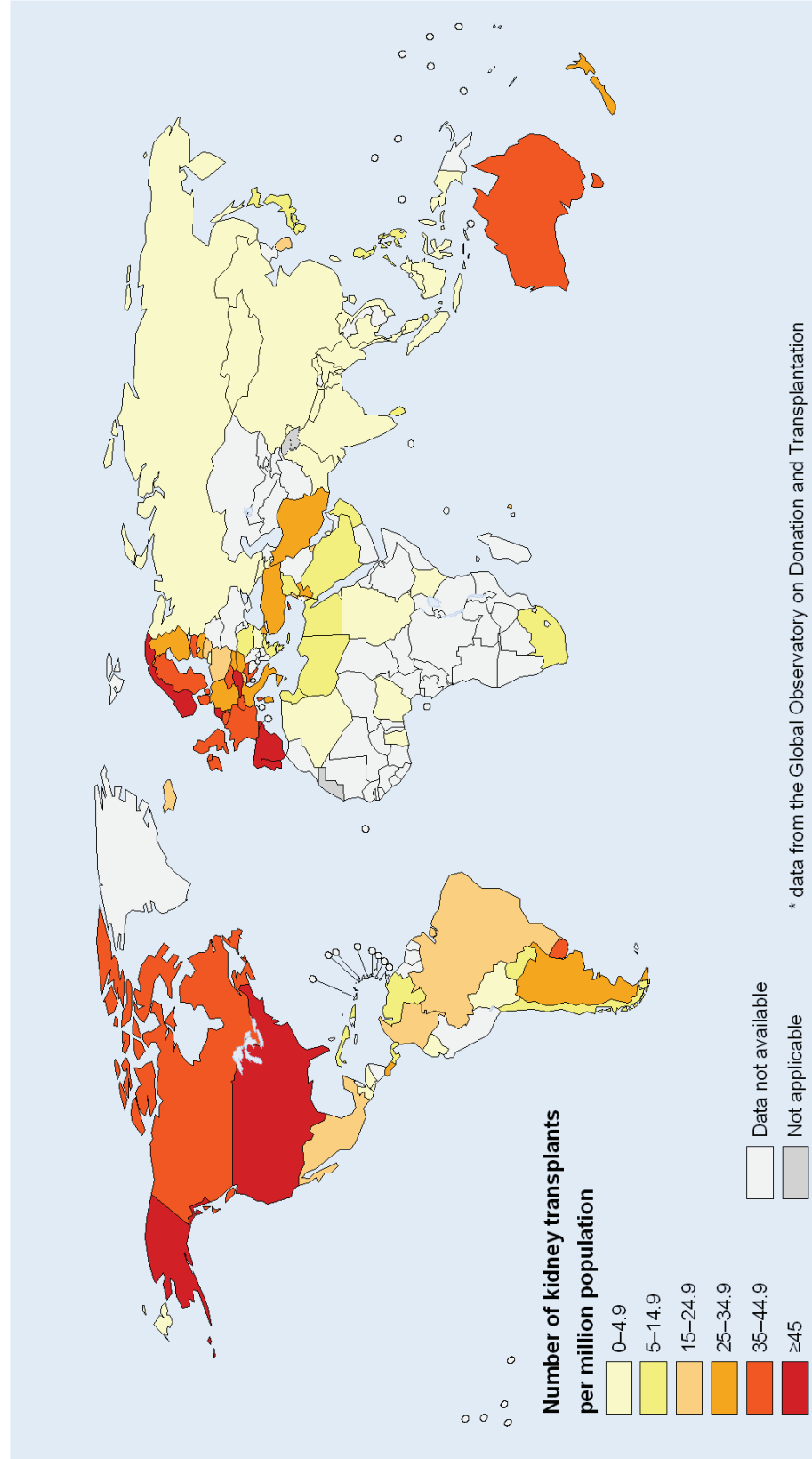
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Data Source: Global Observatory on Donation & Transplantation. Map Production: Public Health Information and Geographic Information Systems (GIS), World Health Organization



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## Kidney transplantation activities, 2009\*



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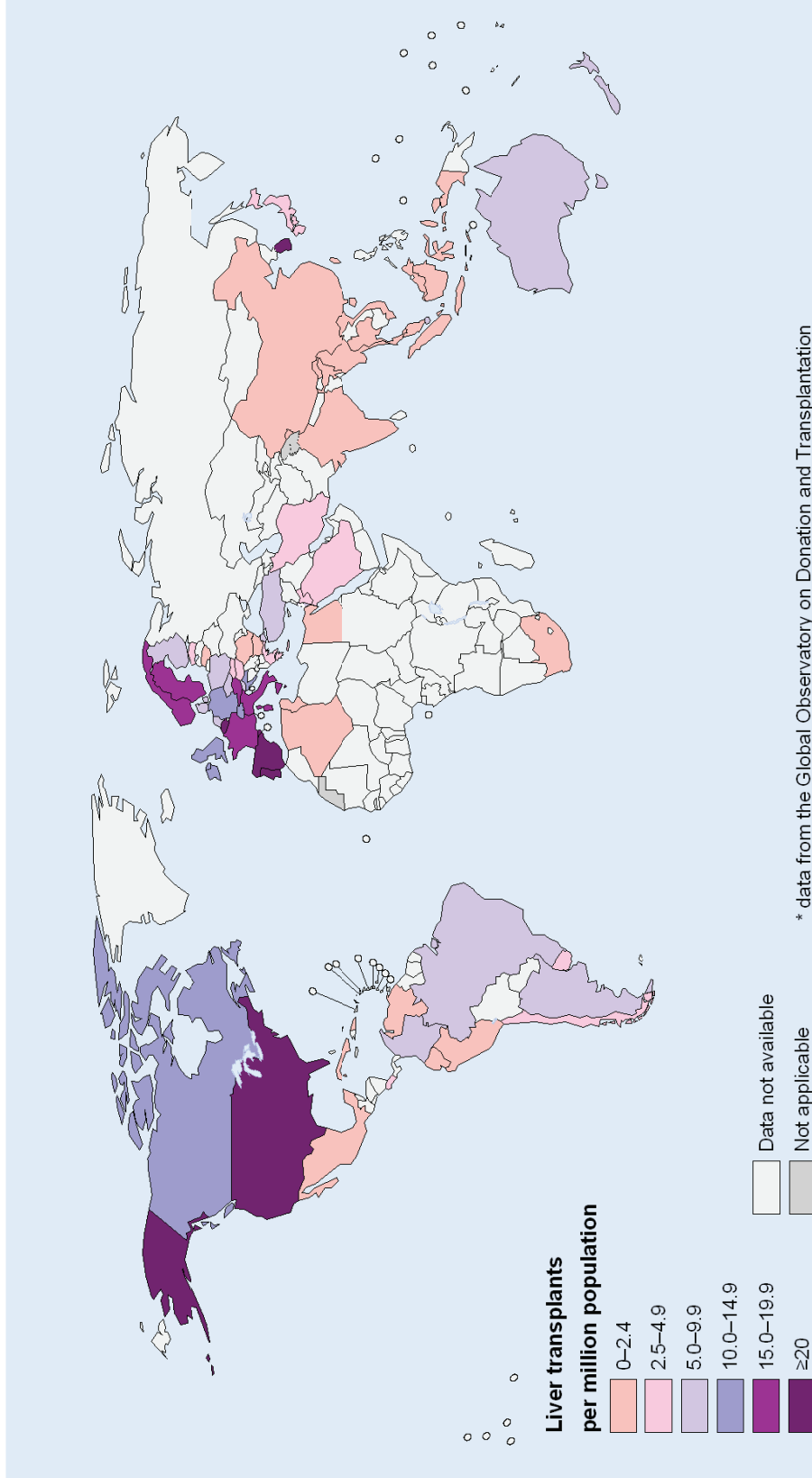
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## Liver transplantation activities, 2009\*



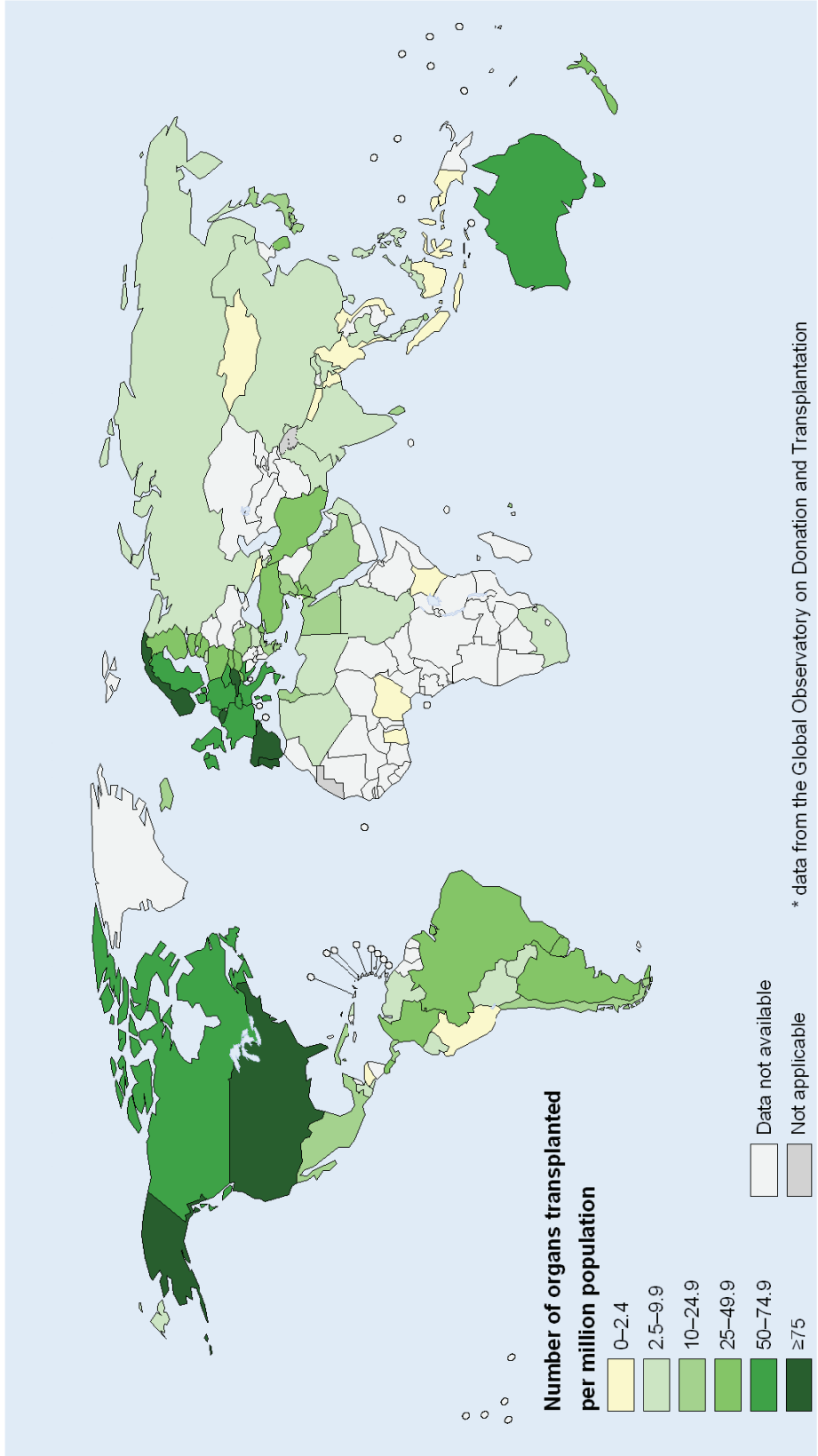
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Data Source: Global Observatory on Donation & Transplantation. Map Production: Public Health Information and Geographic Information Systems (GIS), World Health Organization



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## Global transplantation activities of solid organs, 2009\*



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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 and Family Refusals.  
Year 2010





## 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	10.8	7.5	0.9	10.5	5.6	1.3	5.4	64.7
<b>DONATION</b>									
Actual Deceased Donors -included NHD-	196 (23.3)	221 (20.5)	20 (2.7)	4 (4.4)	206 (19.6)	73 (13.0)	23 (17.7)	92 (17.0)	1538 (23.8)
NHB Actual Donors (pmp)	-	50 (4.6)	0	0	2 (0.2)	0	0	0	62 (1.0)
% Multitorgan donors	81.6	77.9	80	100	58.3	70	6	63	86.4
<b>TRANSPLANTATION</b>									
<b>KIDNEY</b>									
TX. -included all the combinations- (pmp)	407 (48.5)	453 (41.9)	48 (6.4)	32 (35.6)	364 (34.7)	232 (41.4)	39 (30.0)	175 (32.4)	2892 (44.7)
% (Living TX. / Total TX.)	14.5	10.8	25	75	4.7	44	10.3	6.3	9.8
Paediatric <15 years	10	9	-	2	2	8	-	3	63
Deceased Donor TX. (pmp)	348 (41.4)	404 (37.7)	36 (4.8)	8 (8.9)	347 (33.0)	130 (23.2)	35 (26.9)	164 (30.4)	2609 (40.3)
-Single TX. (pmp)	346 (41.2)	400 (37.0)	36 (4.8)	8 (8.9)	341 (32.5)	130 (23.2)	35 (26.9)	164 (2.0)	2553 (39.5)
-Double TX. (pmp)	2 (0.2)	4 (0.4)	0	-	6 (0.6)	0	0	0	56 (0.9)
Living TX. (pmp)	59 (7.0)	49 (4.5)	12 (1.6)	24 (26.7)	17 (1.6)	102 (18.2)	4 (3.1)	11 (2.0)	283 (4.4)
NHB Kidney TX. (pmp)	5 (0.6)	61 (5.6)	-	-	4 (0.4)	-	-	-	79 (1.2)
<b>LIVER</b>									
TX. -included all the combinations- (pmp)	141 (16.8)	243 (22.5)	15 (2.0)	-	102 (9.7)	47 (8.4)	3 (2.3)	50 (9.3)	1092 (16.9)
Paediatric <15 years	6	35	3	-	0	10 (1.8)	-	5 (0.9)	69
Split Liver TX. (pmp)	3 (0.4)	3 (0.3)	13 (1.7)	-	0	0	-	0	80 (1.2)
Domino Liver TX. (pmp)	0	0	0	-	1 (0.1)	0	-	0	8 (0.1)
Living Liver TX. (pmp)	2 (0.2)	33 (3.0)	2 (0.3)	-	0	0	-	0	17 (0.3)
NHB Liver TX. (pmp)	1 (0.1)	25 (2.3)	0	-	0	-	-	-	3 (0.0)
<b>HEART</b>									
TX. -included Heart/ Lung TX.- (pmp)	69 (8.2)	68 (6.3)	5 (0.7)	-	70 (6.7)	22 (3.9)	0	22 (4.1)	375 (5.8)
Paediatric <15 years	5	2	-	-	-	3	-	0	12
<b>HEART-LUNG</b>									
Transplants (pmp)	-	-	0	-	0	0	-	0	19 (0.3)
Paediatric <15 years	-	-	-	-	-	-	-	-	0
<b>LUNG</b>									
TX. -included all the combinations- (pmp)	114 (13.6)	114 (10.6)	0	-	17 (1.6)	31 (5.5)	1 (0.8)	15 (2.8)	263 (4.1)
Paediatric <15 years	2	-	0	-	-	0	-	0	6
Single (pmp)	5 (0.6)	21 (1.9)	0	-	6 (0.6)	7 (1.3)	1 (0.8)	0	60 (0.9)
Double -included Heart/ Lung TX.- (pmp)	109 (13.0)	93 (8.6)	0	-	11 (1.0)	24 (4.3)	-	15 (2.8)	203 (3.1)
NHB -double + single- Lung TX. (pmp)	-	13 (1.2)	0	-	0	0	-	0	0
<b>PANCREAS</b>									
TX. -included all the combinations- (pmp)	31 (3.7)	22 (2.0)	0	-	20 (1.9)	-	-	2 (0.4)	96 (1.5)
Paediatric <15 years	0	0	0	-	-	-	-	-	1
Kidney - Pancreas TX. (pmp)	27 (3.2)	22 (2.0)	0	-	16 (1.5)	-	-	2 (0.4)	83 (1.3)
Pancreas TX. Alone (pmp)	4 (0.5)	-	0	-	4 (0.4)	-	-	-	12 (0.2)
<b>SMALL BOWEL</b>									
TX. -included all the combinations- (pmp)	-	-	0	-	0	-	-	1 (0.2)	9 (0.1)
Paediatric <15 years	-	-	0	-	0	-	-	-	7
Liver + Small Bowel (pmp)	-	-	0	-	0	-	-	-	4 (0.1)
Small Bowel TX. Alone (pmp)	-	-	0	-	0	-	-	1 (0.2)	4 (0.1)
<b>MULTIVISCERAL (pmp)</b>									
	-	-	0	-	0	-	-	-	1 (0.0)



**DONATION AND TRANSPLANTATION ACTIVITY**

**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	11.2	10.0	4.6	60.1	2.3	3.3	0.5	0.4

**DONATION**

Actual Deceased Donors -included NHBd- (pmp)	1296 (15.8)	44 (3.9)	159 (15.9)	58 (12.6)	1298 (21.6)	34 (14.8)	36 (10.9)	3 (6.0)	9 (22.5)
NHB Actual Donors (pmp)	0	0	0	0	3 (0.1)	11 (4.8)	0	0	0
% Multitorgan donors	87	39	43.4	-	75.4	2.5	58.3	100	100

**TRANSPLANTATION**

<b>KIDNEY</b>									
TX. -included all the combinations- (pmp)	2937 (35.9)	135 (12.1)	307 (30.7)	174 (37.8)	1694 (28.2)	66 (28.7)	71 (21.5)	6 (12.0)	14 (35.0)
% (Living TX. / Total TX.)	22.6	20	13.7	13.2	10.7	3.0	11.3	0	21.4
Paediatric <15 years	-	2	7	2	43	0	1	0	0
Deceased Donor TX. (pmp)	2272 (27.8)	108 (9.6)	265 (26.5)	151 (32.8)	1512 (25.2)	64 (27.8)	63 (19.1)	6 (12.0)	11 (27.5)
-Single TX. (pmp)	2250 (27.5)	-	265 (26.5)	147 (32.0)	1386 (23.1)	64 (27.8)	63 (19.1)	6 (12.0)	11 (27.5)
-Double TX. (pmp)	22 (0.3)	-	0	4 (0.9)	126 (2.1)	0	0	0	0
Living TX. (pmp)	665 (8.1)	27 (2.4)	42 (4.2)	23 (5.0)	182 (3.0)	2 (0.9)	8 (2.4)	0	3 (7.5)
NHB Kidney TX. (pmp)	0	0	0	-	0	17 (7.4)	0	0	0

**LIVER**

TX. -included all the combinations- (pmp)	1282 (15.7)	25 (2.2)	43 (4.3)	38 (8.3)	1014 (16.9)	0	13 (3.9)	3 (6.0)	0
Paediatric <15 years	-	1	3	0	67	0	0	0	0
Split Liver TX. (pmp)	107 (1.3)	0	0	0	84 (1.4)	0	0	0	0
Domino Liver TX. (pmp)	5 (0.1)	0	0	0	0	0	0	0	0
Living Liver TX. (pmp)	90 (1.1)	0	0	0	12 (0.2)	0	0	0	0
NHB Liver TX. (pmp)	0	0	0	0	0	0	0	0	0

**HEART**

TX. -included Heart/ Lung TX.- (pmp)	383 (4.8)	5 (0.4)	20 (2.0)	3 (0.7)	273 (4.5)	0	10 (3.0)	3 (6.0)	1 (2.5)
Paediatric <15 years	-	1	4	0	19	0	0	0	0

**HEART-LUNG**

Transplants (pmp)	16 (0.2)	0	0	0	4 (0.1)	0	0	0	0
Paediatric <15 years	-	0	0	0	0	0	0	0	0

**LUNG**

TX. -included all the combinations- (pmp)	298 (3.6)	2 (0.2)	-	4 (0.9)	107 (1.8)	0	0	2 (4.0)	0
Paediatric <15 years	-	1	-	0	3	0	0	0	0
Single (pmp)	44 (0.5)	-	-	0	37 (0.6)	0	0	2 (4.0)	0
Double -included Heart/ Lung TX.- (pmp)	254 (3.1)	-	-	4 (0.9)	70 (1.2)	0	0	0	0
NHB -double + single- Lung TX. (pmp)	0	-	-	0	0	0	0	0	0

**PANCREAS**

TX. -included all the combinations- (pmp)	163 (2.0)	-	9 (0.9)	8 (1.7)	47 (0.8)	0	0	0	0
Paediatric <15 years	-	-	0	0	1	0	0	0	0
Kidney - Pancreas TX. (pmp)	144 (1.8)	-	9 (0.9)	8 (1.7)	27 (0.4)	0	0	0	0
Pancreas TX. Alone (pmp)	13 (0.2)	-	0	0	16 (0.3)	0	0	0	0

**SMALL BOWEL**

TX. -included all the combinations- (pmp)	10 (0.1)	-	-	0	6 (0.1)	0	0	1 (2.0)	0
Paediatric <15 years	-	-	-	0	3	0	0	0	0
Liver + Small Bowel (pmp)	5 (0.1)	-	-	0	1 (0.0)	0	0	0	0
Small Bowel TX. Alone (pmp)	4 (0.0)	-	-	0	4 (0.1)	0	0	1 (2.0)	0

**MULTIVISCERAL (pmp)**

	5 (0.1)	-	-	0	1 (0.0)	0	0	0	0
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**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>	16.6	38.1	10.7	21.2	5.4	2.0	47.0	9.4	61.9
<b>DONATION</b>									
Actual Deceased Donors -included NHBd- (pmp)	227 (13.7)	509 (13.3)	323 (30.2)	70 (3.3)	91 (16.8)	41 (20.5)	1502 (32.0)	118 (12.6)	1015 (16.4)
NHB Actual Donors (pmp)	84 (5.1)	0	0	0	0	0	130 (2.7)	0	373 (6.0)
% Multitorgan donors	76.2	47.0	69.0	75.0	54	87.8	81.0	89.0	72.3
<b>TRANSPLANTATION</b>									
<b>KIDNEY</b>									
TX. -included all the combinations- (pmp)	867 (52.2)	999 (26.2)	573 (53.6)	212 (10.0)	169 (31.3)	61 (30.5)	2225 (47.3)	370 (39.4)	2724 (44.0)
% (Living TX. / Total TX.)	54.6	5	8.9	41.5	4.1	0	10.8	45.4	37.7
Paediatric <15 years	28	39	16	2	3	0	58	10	101
Deceased Donor TX. (pmp)	394 (23.7)	949 (24.9)	522 (48.8)	124 (5.8)	162 (30.0)	61 (30.5)	1985 (42.2)	202 (21.5)	1688 (27.4)
-Single TX. (pmp)	391 (23.5)	947 (24.8)	520 (48.6)	123 (5.8)	157 (29.1)	61 (30.5)	1960 (41.7)	199 (21.2)	1676 (27.1)
-Double TX. (pmp)	3 (0.2)	2 (0.1)	2 (0.2)	1 (0.0)	5 (0.9)	0	25 (0.5)	3 (0.3)	22 (0.3)
Living TX. (pmp)	473 (28.5)	50 (1.3)	51 (4.8)	88 (4.1)	7 (1.3)	0	240 (5.1)	168 (17.9)	1026 (16.6)
NHB Kidney TX. (pmp)	129 (7.8)	0	0	4 (0.2)	0	0	158 (3.4)	-	580 (9.4)
<b>LIVER</b>									
TX. -included all the combinations- (pmp)	135 (6.1)	237 (6.2)	245 (22.9)	51 (2.4)	33 (6.1)	23 (11.5)	971 (20.7)	137 (14.6)	712 (11.5)
Paediatric <15 years	23	34	15	0	0	0	46	9	91
Split Liver TX. (pmp)	8 (0.5)	0	0	0	0	0	20 (0.4)	-	113 (1.8)
Domino Liver TX. (pmp)	1 (0.1)	0	37 (3.5)	0	0	0	8 (0.2)	7 (0.7)	4 (0.1)
Living Liver TX. (pmp)	4 (0.2)	20 (0.5)	0	9 (0.4)	0	0	20 (0.4)	8 (0.9)	24 (0.4)
NHB Liver TX. (pmp)	16 (1.0)	0	0	0	0	0	18 (0.4)	-	104 (1.7)
<b>HEART</b>									
TX. -included Heart/ Lung TX.- (pmp)	46 (2.8)	79 (2.1)	50 (4.7)	7 (0.3)	21 (3.9)	19 (9.5)	243 (5.2)	56 (6.0)	124 (2.0)
Paediatric <15 years	2	6	2	0	1	-	0	6	30
<b>HEART-LUNG</b>									
Transplants (pmp)	1 (0.1)	0	0	0	0	-	4 (0.1)	0	5 (0.1)
Paediatric <15 years	-	0	0	0	0	-	0	0	0
<b>LUNG</b>									
TX. -included all the combinations- (pmp)	67 (4.0)	12 (0.3)	10 (0.9)	0	0	-	235 (5.0)	51 (5.4)	162 (2.6)
Paediatric <15 years	3	0	0	0	0	-	4	0	5
Single (pmp)	5 (0.3)	7 (0.2)	5 (0.5)	0	0	-	105 (2.2)	15 (1.6)	26 (0.4)
Double -included Heart/ Lung TX.- (pmp)	62 (3.7)	5 (0.1)	5 (0.5)	0	0	-	130 (2.8)	36 (3.8)	136 (2.2)
NHB -double + single- Lung TX. (pmp)	-	0	0	0	0	-	8 (0.2)	0	22 (0.4)
<b>PANCREAS</b>									
TX. -included all the combinations- (pmp)	20 (1.2)	20 (0.5)	15 (1.4)	0	0	1 (0.5)	94 (2.0)	26 (2.8)	195 (3.2)
Paediatric <15 years	0	0	0	0	0	0	0	0	5
Kidney - Pancreas TX. (pmp)	14 (0.8)	19 (0.5)	14 (1.3)	0	0	1 (0.5)	71 (1.5)	26 (2.8)	151 (2.4)
Pancreas TX. Alone (pmp)	5 (0.3)	1 (0.0)	1 (0.1)	0	0	0	17 (0.4)	0	39 (0.6)
<b>SMALL BOWEL</b>									
TX. -included all the combinations- (pmp)	-	0	0	0	0	-	5 (0.1)	-	18 (0.3)
Paediatric <15 years	-	0	0	0	0	-	3	-	11
Liver + Small Bowel (pmp)	-	0	0	0	0	-	-	-	2 (0.0)
Small Bowel TX. Alone (pmp)	-	0	0	0	0	-	1 (0.0)	-	10 (0.2)
<b>MULTIVISCERAL (pmp)</b>									
	-	0	0	0	0	-	4 (0.1)	1	6 (0.1)



**DONATION AND TRANSPLANTATION ACTIVITY**

**OTHER COUNTRIES**

COUNTRIES	ALGERIA	AUSTRALIA	CANADA	CROACIA	GEORGIA	ICELAND	ISRAEL	LEBANON	MACEDONIA
Population (million inhabitants)									
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	35.4	22.3	34.1	4.4	4.5	0.3	7.5	4.3	2.0
	<b>DONATION</b>								
Actual Deceased Donors -included NHBD- (pmp)	1 (0.0)	302 (13.5)	495 (14.5)	135 (30.7)	-	3 (10.0)	60 (8.0)	2 (0.5)	0
NHB Actual Donors (pmp)	1 (0.0)	67 (3.0)	72 (2.1)	0	-	0	2 (0.3)	-	0
% Multitorgan donors	0	80	-	85.8	-	100	62	100	0
	<b>TRANSPLANTATION</b>								
<b>KIDNEY</b>									
TX. -included all the combinations- (pmp)	98 (2.8)	841 (37.7)	1234 (36.2)	244 (55.5)	8 (1.8)	5 (16.7)	143 (19.1)	74 (17.2)	12 (6.0)
% (Living TX. / Total TX.)	97.9	34.8	39.3	8.2	100	100	54.5	94.6	100
Paediatric <15 years	22	14	-	-	1	-	11	0	2
Deceased Donor TX. (pmp)	2 (0.1)	548 (24.6)	749 (22.0)	224 (50.9)	-	-	65 (8.7)	74 (17.2)	0
-Single TX. (pmp)	2 (0.1)	542 (24.3)	737 (21.6)	214 (48.6)	-	-	63 (8.4)	4 (0.9)	0
-Double TX. (pmp)	0	6 (0.3)	12 (0.4)	3 (0.7)	-	-	2 (0.3)	-	0
Living TX. (pmp)	96 (2.7)	293 (13.1)	485 (14.2)	20 (4.5)	8 (1.8)	5 (16.7)	78 (10.4)	70 (16.3)	12 (6.0)
NHB Kidney TX. (pmp)	0	117 (5.2)	80 (2.3)	-	-	-	3 (0.4)	-	0
<b>LIVER</b>									
TX. -included all the combinations- (pmp)	6 (0.2)	208 (9.3)	451 (13.2)	105 (23.9)	-	-	46 (6.1)	1 (0.2)	0
Paediatric <15 years	0	5	-	-	-	-	5	-	0
Split Liver TX. (pmp)	0	31 (1.4)	17 (0.5)	2 (0.4)	-	-	1 (0.1)	-	0
Domino Liver TX. (pmp)	0	-	0 (0.0)	-	-	-	-	-	0
Living Liver TX. (pmp)	6 (0.2)	4 (0.2)	64 (1.9)	2 (0.4)	-	-	7 (0.9)	-	0
NHB Liver TX. (pmp)	0	12 (0.5)	16 (0.5)	-	-	-	-	-	0
<b>HEART</b>									
TX. -included Heart/ Lung TX.- (pmp)	0	68 (3.0)	170 (5.0)	36 (8.2)	-	-	11 (1.5)	-	0
Paediatric <15 years	0	2	-	-	-	-	2	-	0
<b>HEART-LUNG</b>									
Transplants (pmp)	0	3 (0.1)	2 (0.1)	-	-	-	-	-	0
Paediatric <15 years	0	-	-	-	-	-	-	-	0
<b>LUNG</b>									
TX. -included all the combinations- (pmp)	0	123 (5.5)	180 (5.3)	-	-	-	32 (4.3)	-	0
Paediatric <15 years	0	3	-	-	-	-	2	-	0
Single (pmp)	0	10 (0.4)	25 (0.7)	-	-	-	22 (2.9)	-	0
Double -included Heart/ Lung TX.- (pmp)	0	113 (5.1)	155 (4.5)	-	-	-	10 (1.4)	-	0
NHB -double + single- Lung TX. (pmp)	0	27 (1.2)	9 (0.3)	-	-	-	-	-	0
<b>PANCREAS</b>									
TX. -included all the combinations- (pmp)	0	34 (1.5)	73 (2.1)	6 (1.4)	-	-	3 (0.4)	-	0
Paediatric <15 years	0	-	-	-	-	-	0	-	0
Kidney - Pancreas TX. (pmp)	0	33 (1.5)	50 (1.5)	5 (1.1)	-	-	3 (0.4)	-	0
Pancreas TX. Alone (pmp)	0	-	23 (0.7)	1 (0.2)	-	-	0	-	0
<b>SMALL BOWEL</b>									
TX. -included all the combinations- (pmp)	0	1 (0.0)	1 (0.0)	-	-	-	-	-	0
Paediatric <15 years	0	-	-	-	-	-	-	-	0
Liver + Small Bowel (pmp)	0	-	0 (0.0)	-	-	-	-	-	0
Small Bowel TX. Alone (pmp)	0	-	1 (0.0)	-	-	-	-	-	0
<b>MULTIVISCERAL</b> (pmp)	0	1 (0.0)	3 (0.1)	-	-	-	-	-	0



## DONATION AND TRANSPLANTATION ACTIVITY

## OTHER COUNTRIES

COUNTRIES Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	MOLDOVA	NEW ZEALAND	NORWAY	PALESTINE	SWITZERLAND	SYRIA	TUNISIA	TURKEY	USA
	3.8	4.3	4.9	4.5	7.8	22.5	11.0	75.7	317.6
<b>DONATION</b>									
Actual Deceased Donors -included NHD- (pmp)	0	38 (8.8)	102 (20.8)	0	98 (12.6)	0	16 (1.5)	272 (3.6)	7943 (25.0)
NHB Actual Donors (pmp)	0	1 (0.2)	0	0	0	0	0	-	-
% Multitorgan donors	0	76	92	0	99	0	0	232	-
<b>TRANSPLANTATION</b>									
<b>KIDNEY</b>									
TX. -included all the combinations- (pmp)	0	112 (26.0)	263 (53.7)	7 (1.6)	294 (37.7)	385 (17.0)	132 (12.0)	2502 (33.0)	16898 (53.2)
% (Living TX. / Total TX.)	0	53.6	31.6	100	38.8	100	87.9	84.2	37.1
Paediatric <15 years	0	-	-	0	8	24	7	-	748
Deceased Donor TX. (pmp)	0	52 (12.1)	180 (36.7)	0	180 (23.1)	0	16 (1.5)	395 (5.2)	10622 (33.4)
-Single TX. (pmp)	0	48 (11.2)	179 (36.5)	0	176 (22.6)	0	-	-	-
-Double TX. (pmp)	0	4 (0.9)	1 (0.2)	0	4 (0.5)	0	0	-	-
Living TX. (pmp)	0	60 (13.9)	83 (16.9)	7 (1.6)	114 (14.6)	385 (17.0)	116 (10.5)	2107 (27.8)	6276 (19.8)
NHB Kidney TX. (pmp)	0	-	-	0	0	0	0	-	-
<b>LIVER</b>									
TX. -included all the combinations- (pmp)	0	36 (8.4)	89 (18.2)	0	100 (12.8)	0	0	695 (9.2)	6291 (19.8)
Paediatric <15 years	0	-	7	0	9	0	0	-	560
Split Liver TX. (pmp)	0	4 (0.9)	-	0	11 (1.4)	0	0	-	-
Domino Liver TX. (pmp)	0	-	0	0	1 (0.1)	0	0	-	-
Living Liver TX. (pmp)	0	6 (1.4)	0	0	1 (0.1)	0	0	486 (6.4)	282 (0.9)
NHB Liver TX. (pmp)	0	1 (0.2)	-	0	0	0	0	-	-
<b>HEART</b>									
TX. -included Heart/ Lung TX.- (pmp)	0	11 (2.5)	32 (6.5)	0	35 (4.5)	0	0	86 (1.1)	2333 (7.3)
Paediatric <15 years	0	-	0	0	2	0	0	-	359
<b>HEART-LUNG</b>									
Transplants (pmp)	0	-	1	0	0	0	0	-	41 (0.1)
Paediatric <15 years	0	-	0	0	0	0	0	-	1
<b>LUNG</b>									
TX. -included all the combinations- (pmp)	0	12 (2.8)	32 (6.5)	0	49 (6.3)	0	0	3 (0.0)	1770 (5.6)
Paediatric <15 years	0	-	0	0	2	0	0	-	56
Single (pmp)	0	1 (0.2)	1 (0.2)	0	2 (0.3)	0	0	-	-
Double -included Heart/ Lung TX.- (pmp)	0	12 (2.8)	31 (6.3)	0	47 (6.0)	0	0	-	-
NHB -double + single- Lung TX. (pmp)	0	-	0	0	0	0	0	-	-
<b>PANCREAS</b>									
TX. -included all the combinations- (pmp)	0	3 (0.7)	15 (3.1)	0	14 (1.8)	0	0	29 (0.4)	1178 (3.7)
Paediatric <15 years	0	-	-	0	0	0	0	-	41
Kidney - Pancreas TX. (pmp)	0	2 (0.5)	14 (2.9)	0	9 (1.2)	0	0	-	828 (2.6)
Pancreas TX. Alone (pmp)	0	1 (0.2)	1 (0.2)	0	5 (0.6)	0	0	-	350 (1.1)
<b>SMALL BOWEL</b>									
TX. -included all the combinations- (pmp)	0	-	-	0	1 (0.1)	0	0	3 (0.0)	151 (0.5)
Paediatric <15 years	0	-	-	0	0	0	0	-	-
Liver + Small Bowel (pmp)	0	-	-	0	0	0	0	-	-
Small Bowel TX. Alone (pmp)	0	-	-	0	0	0	0	-	-
<b>MULTIVISCERAL (pmp)</b>									
	0	-	-	0	0	0	0	-	-



**DONATION AND TRANSPLANTATION ACTIVITY**

**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>	40.1	10.4	195.4	17.1	46.3	4.6	11.2	10.2	13.8
<b>DONATION</b>									
Actual Deceased Donors -included NHBD- (pmp)	583 (14.5)	15 (1.4)	1934 (9.9)	92 (5.4)	570 (12.3)	16 (3.5)	111 (9.9)	11 (1.1)	35 (2.5)
NHB Actual Donors (pmp)	0	0		-	0	0	-	-	-
% Multiorgan donors	51.1	0		73	25	50	-	63.3	-
<b>TRANSPLANTATION</b>									
<b>KIDNEY</b>									
TX. -included all the combinations- (pmp)	1082 (26.6)	82 (7.9)	4660 (23.8)	200 (11.7)	867 (18.7)	125 (27.2)	117 (10.4)	45 (4.4)	-
% (Living TX. / Total TX.)	21.8	63.4	36.8	18.5	8.0	74.4	5.4	64.4	-
Paediatric <15 years	77	-	-	24	69	8	-	-	-
Deceased Donor TX. (pmp)	846 (21.1)	30 (2.9)	2946 (15.1)	163 (9.5)	798 (17.2)	32 (7.0)	111 (9.9)	16 (1.6)	-
-Single TX. (pmp)	839 (20.9)	30 (2.9)	-	162 (9.5)	796 (17.2)	32 (7.0)	-	16 (1.6)	-
-Double TX. (pmp)	7 (0.2)	-	-	1 (0.0)	2 (0.0)	0	-	-	-
Living TX. (pmp)	236 (5.9)	52 (5.0)	1714 (8.8)	37 (2.2)	69 (1.5)	93 (20.2)	6 (0.5)	29 (2.8)	-
NHB Kidney TX. (pmp)	-	0	-	-	0	-	-	-	-
<b>LIVER</b>									
TX. -included all the combinations- (pmp)	322 (8.0)	-	1404 (7.2)	67 (3.9)	220 (4.8)	8 (1.7)	22 (2.0)	3 (0.3)	-
Paediatric <15 years	44	-	-	18	28 (0.6)	1	-	-	-
Split Liver TX. (pmp)	33 (0.8)	-	-	-	0	0	-	-	-
Domino Liver TX. (pmp)	1 (0.0)	-	-	-	0	0	-	-	-
Living Liver TX. (pmp)	33 (0.8)	-	109 (0.6)	7 (0.4)	2 (0.0)	0	-	-	-
NHB Liver TX. (pmp)	-	-	-	-	0	0	-	-	-
<b>HEART</b>									
TX. -included Heart/ Lung TX.- (pmp)	72 (1.8)	-	167 (0.9)	20 (1.2)	60 (1.3)	0	3 (0.3)	-	-
Paediatric <15 years	5	-	-	-	4	0	-	-	-
<b>HEART-LUNG</b>									
Transplants (pmp)	2 (0.0)	-	-	-	0	0	-	-	-
Paediatric <15 years	-	-	-	-	0	0	-	-	-
<b>LUNG</b>									
TX. -included all the combinations- (pmp)	42 (1.0)	-	60 (0.3)	9 (0.5)	6 (0.1)	0	-	-	-
Paediatric <15 years	0	-	-	-	0	0	-	-	-
Single (pmp)	30 (0.7)	-	-	-	3 (0.1)	0	-	-	-
Double -included Heart/ Lung TX.- (pmp)	12 (0.3)	-	-	-	3 (0.1)	0	-	-	-
NHB -double + single- Lung TX. (pmp)	-	-	-	-	0	0	-	-	-
<b>PANCREAS</b>									
TX. -included all the combinations- (pmp)	61 (1.5)	-	131 (0.7)	-	12 (0.2)	0	-	-	-
Paediatric <15 years	-	-	-	-	0	0	-	-	-
Kidney - Pancreas TX. (pmp)	58 (1.4)	-	87 (0.4)	-	12 (0.2)	0	-	-	-
Pancreas TX. Alone (pmp)	3 (0.1)	-	44 (0.2)	-	0	0	-	-	-
<b>SMALL BOWEL</b>									
TX. -included all the combinations- (pmp)	7 (0.2)	-	-	-	6 (0.1)	0	-	-	-
Paediatric <15 years	3	-	-	-	1	0	-	-	-
Liver + Small Bowel (pmp)	2 (0.0)	-	-	-	0	0	-	-	-
Small Bowel TX. Alone (pmp)	4 (0.1)	-	-	-	4 (0.1)	0	-	-	-
<b>MULTIVISCERAL</b> (pmp)	3 (0.1)	-	-	-	2 (0.0)	0	-	-	-



## DONATION AND TRANSPLANTATION ACTIVITY

## LATINAMERICAN COUNTRIES

COUNTRIES Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	EL SALVADOR	MEXICO	NICARAGUA	PANAMA	PARAGUAY	PERU	URUGUAY	VENEZUELA
	6.2	112	5.8	3.5	6.5	29.5	3.4	29.0
	<b>DONATION</b>							
Actual Deceased Donors -included NHBD- (pmp)	-	315 (2.8)	0	13 (3.7)	12 (1.9)	94 (3.2)	49 (14.4)	100 (3.4)
NHB Actual Donors (pmp)	-	0	0	-	-	-	0	0
% Multitorgan donors	-	-	0	-	-	-	97.9	8
	<b>TRANSPLANTATION</b>							
<b>KIDNEY</b>								
TX. -included all the combinations- (pmp)	34 (5.5)	2290 (20.4)	10 (1.7)	39 (11.1)	29 (4.5)	176 (6.0)	93 (27.4)	263 (9.1)
% (Living TX. / Total TX.)	100	78.9	0	33.3	62	48.3	3.2	31.9
Paediatric <15 years	-	-	0	0	-	-	3	30
Deceased Donor TX. (pmp)	-	484 (4.3)	0	26 (7.4)	11 (1.7)	91 (3.1)	90 (26.5)	179 (6.2)
-Single TX. (pmp)	-	-	0	26 (7.4)	-	-	90 (26.5)	179 (6.2)
-Double TX. (pmp)	-	-	0	-	-	-	0	0
Living TX. (pmp)	34 (5.5)	1806 (16.1)	10 (1.7)	13 (3.7)	18 (2.8)	85 (2.9)	3 (0.9)	84 (2.9)
NHB Kidney TX. (pmp)	-	0	0	-	-	-	0	0
<b>LIVER</b>								
TX. -included all the combinations- (pmp)	-	80 (0.7)	0	-	-	22 (0.7)	12 (3.5)	8 (0.3)
Paediatric <15 years	-	-	-	-	-	-	0	4
Split Liver TX. (pmp)	-	-	-	-	-	-	0	0
Domino Liver TX. (pmp)	-	-	-	-	-	-	0	0
Living Liver TX. (pmp)	-	8 (0.1)	-	-	-	-	0	8 (0.3)
NHB Liver TX. (pmp)	-	0	-	-	-	-	0	0
<b>HEART</b>								
TX. -included Heart/ Lung TX.- (pmp)	-	15 (0.1)	0	-	1 (0.1)	5 (0.2)	7 (2.1)	0
Paediatric <15 years	-	-	-	-	-	-	0	-
<b>HEART-LUNG</b>								
Transplants (pmp)	-	0	0	-	-	-	0	0
Paediatric <15 years	-	0	-	-	-	-	0	-
<b>LUNG</b>								
TX. -included all the combinations- (pmp)	-	0	0	-	-	1 (0.0)	2 (0.6)	0
Paediatric <15 years	-	0	-	-	-	-	0	-
Single (pmp)	-	0	-	-	-	-	2 (0.6)	-
Double -included Heart/ Lung TX.- (pmp)	-	0	-	-	-	-	0	-
NHB -double + single- Lung TX. (pmp)	-	0	-	-	-	-	0	-
<b>PANCREAS</b>								
TX. -included all the combinations- (pmp)	-	2 (0.0)	0	-	-	-	4 (1.2)	0
Paediatric <15 years	-	-	-	-	-	-	0	-
Kidney - Pancreas TX. (pmp)	-	2 (0.0)	-	-	-	-	4 (1.2)	-
Pancreas TX. Alone (pmp)	-	0	-	-	-	-	0	-
<b>SMALL BOWEL</b>								
TX. -included all the combinations- (pmp)	-	0	0	-	-	-	0	0
Paediatric <15 years	-	0	-	-	-	-	0	-
Liver + Small Bowel (pmp)	-	0	-	-	-	-	0	-
Small Bowel TX. Alone (pmp)	-	0	-	-	-	-	0	-
<b>MULTIVISCERAL</b> (pmp)	-	0	-	-	-	-	0	-





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	10.8	7.5	0.9	10.5	5.6	1.3	5.4	64.7
<b>KIDNEY</b>									
<b>N° TX CENTRES</b>	-	-	4	1	7	3	1	1	44
Patients included on the WL for the first time in the course of 2010	360	488	250	19	400	204	51	154	4043
Total number of patients active on the WL during 2010	-	-	850	100	992	536	53	434	11659
Patients awaiting for a transplant (only active candidates) on 31/12/2010	810	914	600	100	651	337	47	267	8397
Patients who died while on the WL during 2010	39	34	76	5	25	5	3	4	193
Patients on dialyses on 31/12/2010	-	-	2521	500	-	-	323	-	-
<b>LIVER</b>									
<b>N° TX CENTRES</b>	-	-	2	-	2	1	1	1	23
Patients included on the WL for the first time in the course of 2010	221	295	13	-	16	44	-	41	1579
Total number of patients active on the WL during 2010	-	-	49	-	188	77	-	46	2385
Patients awaiting for a transplant (only active candidates) on 31/12/2010	137	193	26	-	66	32	-	7	932
Patients who died while on the WL during 2010	40	47	10	-	14	5	-	0	169
<b>HEART</b>									
<b>N° TX CENTRES</b>	-	-	2	-	2	2	-	1	26
Patients included on the WL for the first time in the course of 2010	87	101	13	-	90	23	3	20	462
Total number of patients active on the WL during 2010	-	-	33	-	169	31	4	37	766
Patients awaiting for a transplant (only active candidates) on 31/12/2010	74	67	25	-	89	17	2	20	283
Patients who died while on the WL during 2010	7	18	8	-	5	2	0	4	76
<b>LUNG</b>									
<b>N° TX CENTRES</b>	-	-	1	-	1	1	1	1	13
Patients included on the WL for the first time in the course of 2010	114	115	6	-	40	27	4	17	270
Total number of patients active on the WL during 2010	-	-	6	-	81	75	4	20	448
Patients awaiting for a transplant (only active candidates) on 31/12/2010	58	90	6	-	43	43	3	9	163
Patients who died while on the WL during 2010	9	6	0	-	20	9	0	4	21
<b>PANCREAS</b>									
<b>N° TX CENTRES</b>	-	-	0	-	1	0	-	1	12
Patients included on the WL for the first time in the course of 2010	27	26	-	-	35	-	-	1	118
Total number of patients active on the WL during 2010	-	-	-	-	71	-	-	1	276
Patients awaiting for a transplant (only active candidates) on 31/12/2010	26	39	-	-	41	-	-	0	145
Patients who died while on the WL during 2010	1	-	-	-	3	-	-	0	9
<b>SMALL BOWEL</b>									
<b>N° TX CENTRES</b>	-	-	0	-	1	-	-	1	6
Patients included on the WL for the first time in the course of 2010	-	-	1	-	0	-	-	-	7
Total number of patients active on the WL during 2010	-	-	1	-	0	-	-	-	28
Patients awaiting for a transplant (only active candidates) on 31/12/2010	-	-	1	-	0	-	-	-	12
Patients who died while on the WL during 2010	-	-	0	-	0	-	-	-	3

## 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	11.2	10.0	4.6	60.1	2.3	3.3	0.5	0.4
<b>KIDNEY</b>									
<b>N° TX CENTRES</b>	40	-	4	1	43	1	2	0	1
Patients included on the WL for the first time in the course of 2010	3137	-	351	224	2588	34	76	0	40
Total number of patients active on the WL during 2010	-	-	1245	550	9586	231	299	-	156
Patients awaiting for a transplant (only active candidates) on 31/12/2010	7869	-	771	564	7126	65	155	0	95
Patients who died while on the WL during 2010	-	-	20	10	159	12	13	0	10
Patients on dialyses on 31/12/2010	-	-	5532	1782	-	500	1391	320	232
<b>LIVER</b>									
<b>N° TX CENTRES</b>	23	-	1	1	22	1	2	0	-
Patients included on the WL for the first time in the course of 2010	1846	-	73	46	1229	3	20	0	3
Total number of patients active on the WL during 2010	-	-	149	20	2670	3	55	-	4
Patients awaiting for a transplant (only active candidates) on 31/12/2010	2161	-	83	20	1297	3	27	0	2
Patients who died while on the WL during 2010	-	-	16	5	195	0	7	0	0
<b>HEART</b>									
<b>N° TX CENTRES</b>	24	-	2	-	19	1	2	0	1
Patients included on the WL for the first time in the course of 2010	716	-	20	9	465	5	12	0	2
Total number of patients active on the WL during 2010	-	-	38	23	1161	8	49	-	3
Patients awaiting for a transplant (only active candidates) on 31/12/2010	981	-	14	16	726	6	27	0	1
Patients who died while on the WL during 2010	-	-	1	2	98	0	5	0	1
<b>LUNG</b>									
<b>N° TX CENTRES</b>	13	-	0	-	13	0	1	0	0
Patients included on the WL for the first time in the course of 2010	416	-	8	18	219	0	2	0	-
Total number of patients active on the WL during 2010	-	-	13	45	522	0	5	-	-
Patients awaiting for a transplant (only active candidates) on 31/12/2010	642	-	3	33	342	0	2	0	-
Patients who died while on the WL during 2010	-	-	1	8	59	0	0	0	-
<b>PANCREAS</b>									
<b>N° TX CENTRES</b>	24	-	2	1	13	0	1	0	0
Patients included on the WL for the first time in the course of 2010	187	-	13	-	87	0	3	0	-
Total number of patients active on the WL during 2010	-	-	35	-	320	0	25	-	-
Patients awaiting for a transplant (only active candidates) on 31/12/2010	304	-	19	-	259	0	15	0	-
Patients who died while on the WL during 2010	-	-	2	0	1	0	0	0	-
<b>SMALL BOWEL</b>									
<b>N° TX CENTRES</b>	4	-	-	-	3	0	0	0	0
Patients included on the WL for the first time in the course of 2010	-	-	-	8	13	0	0	0	-
Total number of patients active on the WL during 2010	-	-	-	25	33	0	0	-	-
Patients awaiting for a transplant (only active candidates) on 31/12/2010	-	-	-	20	24	0	0	0	-
Patients who died while on the WL during 2010	-	-	-	0	2	0	0	0	-





WAITING LIST

EUROPEAN UNION COUNTRIES

COUNTRIES	NETHERLANDS	POLAND	PORTUGAL	ROMANIA	SLOVAKIA	SLOVENIA	SPAIN	SWEDEN	U. K.
Population (million inhabitants)	16.6	38.1	10.7	21.2	5.4	2.0	47.0	9.4	61.9
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>									
<b>KIDNEY</b>									
<b>N° TX CENTRES</b>	-	18	8	5	4	-	44	4	27
Patients included on the WL for the first time in the course of 2010	1000	1340	597	386	145	57	-	323	2630
Total number of patients active on the WL during 2010	-	2581	2708	2661	633	-	-	656	8603
Patients awaiting for a transplant (only active candidates) on 31/12/2010	892	1457	1935	2418	388	53	4434	415	7013
Patients who died while on the WL during 2010	92	48	54	14	101	1	-	2	290
Patients on dialyses on 31/12/2010		20000	9000	7500	2400	-	23348	-	48000
<b>LIVER</b>									
<b>N° TX CENTRES</b>	-	5	3	1	2	-	25	2	7
Patients included on the WL for the first time in the course of 2010	164	345	205	162	65	18	1313	131	445
Total number of patients active on the WL during 2010	-	515	338	453	95	-	2092	193	1348
Patients awaiting for a transplant (only active candidates) on 31/12/2010	121	170	108	351	30	8	772	67	472
Patients who died while on the WL during 2010	17	34	24	38	13	5	140	10	115
<b>HEART</b>									
<b>N° TX CENTRES</b>	-	5	4	2	1	-	18	2	7
Patients included on the WL for the first time in the course of 2010	64	166	62	35	28	40	307	58	104
Total number of patients active on the WL during 2010	-	242	81	166	49	-	399	83	301
Patients awaiting for a transplant (only active candidates) on 31/12/2010	67	415	23	125	22	26	96	29	139
Patients who died while on the WL during 2010	11	55	5	20	5	4	15	7	24
<b>LUNG</b>									
<b>N° TX CENTRES</b>	-	2	1	0	0	-	7	2	6
Patients included on the WL for the first time in the course of 2010	120	34	15	0	-	0	276	56	128
Total number of patients active on the WL during 2010	-	66	31	0	-	-	455	73	468
Patients awaiting for a transplant (only active candidates) on 31/12/2010	214	29	22	0	-	0	173	33	250
Patients who died while on the WL during 2010	18	4	1	0	-	0	16	1	48
<b>PANCREAS</b>									
<b>N° TX CENTRES</b>	-	4	2	1	0	-	13	3	10
Patients included on the WL for the first time in the course of 2010	28	48	23	9	-	1	133	20	200
Total number of patients active on the WL during 2010	-	80	37	73	-	-	271	33	562
Patients awaiting for a transplant (only active candidates) on 31/12/2010	35	34	47	58	-	-	163	11	313
Patients who died while on the WL during 2010	3	3	0	6	-	-	2	0	14
<b>SMALL BOWEL</b>									
<b>N° TX CENTRES</b>	-	1	0	0	0	-	2	1	4
Patients included on the WL for the first time in the course of 2010	-	2	0	0	-	-	-	-	29
Total number of patients active on the WL during 2010	-	2	0	0	-	-	-	-	43
Patients awaiting for a transplant (only active candidates) on 31/12/2010	-	2	0	0	-	-	-	-	19
Patients who died while on the WL during 2010	-	0	0	0	-	-	-	-	2



## WAITING LIST

## OTHER COUNTRIES

COUNTRIES	ALGERIA	AUSTRALIA	CANADA	CROACIA	GEORGIA	ICELAND	ISRAEL	LEBANON	MACEDONIA
Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	35.4	22.3	34.1	4.4	4.5	0.3	7.5	4.3	2.0
<b>KIDNEY</b>									
<b>N° TX CENTRES</b>	10	20	25	4	-	1	6	7	2
Patients included on the WL for the first time in the course of 2010	45	-	-	-	-	-	72	118	0
Total number of patients active on the WL during 2010	400	-	-	-	-	-	747	187	0
Patients awaiting for a transplant (only active candidates) on 31/12/2010	360	1223	2360	225	-	-	682	182	-
Patients who died while on the WL during 2010	00	-	91	-	-	-	40	0	-
Patients on dialyses on 31/12/2010	14000	-	23647	4000	-	0	658	2265	1400
<b>LIVER</b>									
<b>N° TX CENTRES</b>	1	8	9	3	-	-	3	1	0
Patients included on the WL for the first time in the course of 2010	14	-	-	-	-	-	41	11	0
Total number of patients active on the WL during 2010	96	-	-	-	-	-	192	13	0
Patients awaiting for a transplant (only active candidates) on 31/12/2010	76	184	378	75	-	-	153	10	0
Patients who died while on the WL during 2010	16	-	74	-	-	-	14	1	-
<b>HEART</b>									
<b>N° TX CENTRES</b>	0	5	11	2	-	-	3	2	0
Patients included on the WL for the first time in the course of 2010	0	-	-	-	-	-	24	6	0
Total number of patients active on the WL during 2010	0	-	-	-	-	-	127	8	0
Patients awaiting for a transplant (only active candidates) on 31/12/2010	0	84	104	11	-	-	144	7	-
Patients who died while on the WL during 2010	0	-	23	-	-	0	17	1	-
<b>LUNG</b>									
<b>N° TX CENTRES</b>	0	5	6	0	-	-	2	-	0
Patients included on the WL for the first time in the course of 2010	0	-	-	-	-	-	28	-	0
Total number of patients active on the WL during 2010	0	-	-	-	-	-	98	-	0
Patients awaiting for a transplant (only active candidates) on 31/12/2010	0	157	254	0	-	-	79	-	-
Patients who died while on the WL during 2010	0	-	51	-	-	-	30	-	-
<b>PANCREAS</b>									
<b>N° TX CENTRES</b>	0	2	8	1	-	-	6	-	0
Patients included on the WL for the first time in the course of 2010	0	-	-	-	-	-	3	-	0
Total number of patients active on the WL during 2010	0	-	-	-	-	-	21	-	0
Patients awaiting for a transplant (only active candidates) on 31/12/2010	0	33	131	1	-	-	18	-	-
Patients who died while on the WL during 2010	0	-	11	-	-	-	-	-	-
<b>SMALL BOWEL</b>									
<b>N° TX CENTRES</b>	0	1	3	1	-	-	-	-	0
Patients included on the WL for the first time in the course of 2010	0	-	-	-	-	-	-	-	0
Total number of patients active on the WL during 2010	0	-	-	-	-	-	-	-	0
Patients awaiting for a transplant (only active candidates) on 31/12/2010	0	2	3	0	-	-	-	-	-
Patients who died while on the WL during 2010	0	-	0	-	-	-	-	-	-



**WAITING LIST**

**OTHER COUNTRIES**

COUNTRIES	MOLDOVA	NEW ZEALAND	NORWAY	PALESTINE	SWITZERLAND	SYRIA	TUNISIA	TURKEY	USA
Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	3.8	4.3	4.9	4.5	7.8	22.5	11.0	75.7	317.6
<b>KIDNEY</b>									
<b>N° TX CENTRES</b>	1	3	1	1	6	8	6	59	250
Patients included on the WL for the first time in the course of 2010	40	-	182	-	346	-	213	4657	34422
Total number of patients active on the WL during 2010	160	-	355	-	1171	-	897	16357	35847
Patients awaiting for a transplant (only active candidates) on 31/12/2010	140	663	223	300	780	-	774	16103	89002
Patients who died while on the WL during 2010	12	-	4	-	26	-	-	34	4634
Patients on dialyses on 31/12/2010	386	-	-	500	-	5000	8550	55000	-
<b>LIVER</b>									
<b>N° TX CENTRES</b>	-	1	1	0	3	0	2	34	117
Patients included on the WL for the first time in the course of 2010	-	-	65	-	143	-	-	1426	11353
Total number of patients active on the WL during 2010	-	-	77	-	254	-	-	2200	12007
Patients awaiting for a transplant (only active candidates) on 31/12/2010	-	28	10	-	104	-	-	1354	16253
Patients who died while on the WL during 2010	-	-	3	-	21	-	-	-	1464
<b>HEART</b>									
<b>N° TX CENTRES</b>	-	1	1	0	3	0	1	14	131
Patients included on the WL for the first time in the course of 2010	-	-	24	-	56	-	-	410	3476
Total number of patients active on the WL during 2010	-	-	35	-	76	-	-	-	3526
Patients awaiting for a transplant (only active candidates) on 31/12/2010	-	12	11	-	31	-	-	-	3183
Patients who died while on the WL during 2010	-	-	2	-	7	-	-	-	303
<b>LUNG</b>									
<b>N° TX CENTRES</b>	-	1	1	0	2	0	1	2	67
Patients included on the WL for the first time in the course of 2010	-	-	22	-	64	-	-	25	2421
Total number of patients active on the WL during 2010	-	-	77	-	116	-	-	-	2469
Patients awaiting for a transplant (only active candidates) on 31/12/2010	-	8	42	-	59	-	-	-	1772
Patients who died while on the WL during 2010	-	-	2	-	5	-	-	-	232
<b>PANCREAS</b>									
<b>N° TX CENTRES</b>	-	1	1	0	2	0	-	4	141
Patients included on the WL for the first time in the course of 2010	-	-	7	-	18	-	-	134	2197
Total number of patients active on the WL during 2010	-	-	13	-	81	-	-	-	2289
Patients awaiting for a transplant (only active candidates) on 31/12/2010	-	8	4	-	19	-	-	-	3567
Patients who died while on the WL during 2010	-	-	0	-	0	-	-	-	230
<b>SMALL BOWEL</b>									
<b>N° TX CENTRES</b>	-	-	-	0	1	0	-	-	18
Patients included on the WL for the first time in the course of 2010	-	-	-	-	1	-	-	-	235
Total number of patients active on the WL during 2010	-	-	-	-	1	-	-	-	241
Patients awaiting for a transplant (only active candidates) on 31/12/2010	-	-	-	-	1	-	-	-	264
Patients who died while on the WL during 2010	-	-	-	-	0	-	-	-	15



## WAITING LIST

## LATINAMERICAN COUNTRIES

COUNTRIES	ARGENTINA	BOLIVIA	BRASIL	CHILE	COLOMBIA	COSTA RICA	CUBA	DOMINICANA	ECUADOR
Population (million inhabitants)	40.1	10.4	195.4	17.1	46.3	4.6	11.2	10.2	13.8
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>									
<b>KIDNEY</b>									
<b>N° TX CENTRES</b>	51	0	127	-	23	-	-	8	-
Patients included on the WL for the first time in the course of 2010	1959	0	7077	-	-	-	-	62	-
Total number of patients active on the WL during 2010	6908	0	22624	-	-	-	-	92	-
Patients awaiting for a transplant (only active candidates) on 31/12/2010	5383	0	22624	-	932	-	-	-	-
Patients who died while on the WL during 2010	761	0	2405	-	-	-	-	6	-
Patients on dialyses on 31/12/2010	26033	0	73469	-	17157	277	-	1400	-
<b>LIVER</b>									
<b>N° TX CENTRES</b>	21	-	58	-	5	-	-	1	-
Patients included on the WL for the first time in the course of 2010	511	-	1983	-	242	-	-	14	-
Total number of patients active on the WL during 2010	1094	-	1976	-	316	-	-	45	-
Patients awaiting for a transplant (only active candidates) on 31/12/2010	632	-	1976	-	62	-	-	-	-
Patients who died while on the WL during 2010	244	-	681	-	-	-	-	4	-
<b>HEART</b>									
<b>N° TX CENTRES</b>	23	-	46	-	6	-	-	-	-
Patients included on the WL for the first time in the course of 2010	143	-	270	-	79	-	-	-	-
Total number of patients active on the WL during 2010	252	-	231	-	84	-	-	-	-
Patients awaiting for a transplant (only active candidates) on 31/12/2010	109	-	231	-	9	-	-	-	-
Patients who died while on the WL during 2010	133	-	148	-	-	-	-	-	-
<b>LUNG</b>									
<b>N° TX CENTRES</b>	11	-	8	-	1	-	-	-	-
Patients included on the WL for the first time in the course of 2010	77	-	56	-	6	-	-	-	-
Total number of patients active on the WL during 2010	178	-	137	-	10	-	-	-	-
Patients awaiting for a transplant (only active candidates) on 31/12/2010	101	-	137	-	2	-	-	-	-
Patients who died while on the WL during 2010	51	-	15	-	2	-	-	-	-
<b>PANCREAS</b>									
<b>N° TX CENTRES</b>	13	-	17	-	3	-	-	-	-
Patients included on the WL for the first time in the course of 2010	104	-	55	-	-	-	-	-	-
Total number of patients active on the WL during 2010	226	-	684	-	-	-	-	-	-
Patients awaiting for a transplant (only active candidates) on 31/12/2010	122	-	684	-	2	-	-	-	-
Patients who died while on the WL during 2010	10	-	9	-	0	-	-	-	-
<b>SMALL BOWEL</b>									
<b>N° TX CENTRES</b>	2	-	0	-	2	-	-	-	-
Patients included on the WL for the first time in the course of 2010	19	-	0	-	3	-	-	-	-
Total number of patients active on the WL during 2010	27	-	0	-	5	-	-	-	-
Patients awaiting for a transplant (only active candidates) on 31/12/2010	8	-	0	-	0	-	-	-	-
Patients who died while on the WL during 2010	3	-	0	-	1	-	-	-	-



WAITING LIST

LATINAMERICAN COUNTRIES

COUNTRIES	EL SALVADOR	MEXICO	NICARAGUA	PANAMA	PARAGUAY	PERU	URUGUAY	VENEZUELA
Population (million inhabitants)	6.2	112	5.8	3.5	6.5	29.5	3.4	29.0
UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>								
<b>KIDNEY</b>								
<b>N° TX CENTRES</b>	-	204	3	1	-	-	4	10
Patients included on the WL for the first time in the course of 2010	-	-	-	96	-	-	105	363
Total number of patients active on the WL during 2010	-	-	-	228	-	-	516	1074
Patients awaiting for a transplant (only active candidates) on 31/12/2010	-	7240	-	171	-	-	413	542
Patients who died while on the WL during 2010	-	-	-	2	-	-	10	26
Patients on dialyses on 31/12/2010	3653	-	600	1502	683	-	2490	12000
<b>LIVER</b>								
<b>N° TX CENTRES</b>	-	53	0	-	-	-	1	1
Patients included on the WL for the first time in the course of 2010	-	-	-	-	-	-	17	6
Total number of patients active on the WL during 2010	-	-	-	-	-	-	35	12
Patients awaiting for a transplant (only active candidates) on 31/12/2010	-	333	-	-	-	-	16	3
Patients who died while on the WL during 2010	-	-	-	-	-	-	6	1
<b>HEART</b>								
<b>N° TX CENTRES</b>	-	35	0	-	-	-	2	0
Patients included on the WL for the first time in the course of 2010	-	-	-	-	-	-	12	-
Total number of patients active on the WL during 2010	-	-	-	-	-	-	32	-
Patients awaiting for a transplant (only active candidates) on 31/12/2010	-	39	-	-	-	-	23	-
Patients who died while on the WL during 2010	-	-	-	-	-	-	2	-
<b>LUNG</b>								
<b>N° TX CENTRES</b>	-	6	0	-	-	-	0	0
Patients included on the WL for the first time in the course of 2010	-	-	-	-	-	-	1	-
Total number of patients active on the WL during 2010	-	-	-	-	-	-	3	-
Patients awaiting for a transplant (only active candidates) on 31/12/2010	-	3	-	-	-	-	1	-
Patients who died while on the WL during 2010	-	-	-	-	-	-	0	-
<b>PANCREAS</b>								
<b>N° TX CENTRES</b>	-	13	0	-	-	-	1	0
Patients included on the WL for the first time in the course of 2010	-	-	-	-	-	-	3	-
Total number of patients active on the WL during 2010	-	-	-	-	-	-	18	-
Patients awaiting for a transplant (only active candidates) on 31/12/2010	-	0	-	-	-	-	14	-
Patients who died while on the WL during 2010	-	-	-	-	-	-	0	-
<b>SMALL BOWEL</b>								
<b>N° TX CENTRES</b>	-	3	0	-	-	-	0	0
Patients included on the WL for the first time in the course of 2010	-	-	-	-	-	-	0	-
Total number of patients active on the WL during 2010	-	-	-	-	-	-	0	-
Patients awaiting for a transplant (only active candidates) on 31/12/2010	-	0	-	-	-	-	0	-
Patients who died while on the WL during 2010	-	-	-	-	-	-	0	-



## FAMILY REFUSALS

### EUROPEAN UNION COUNTRIES

COUNTRIES Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	AUSTRIA	BELGIUM	BULGARIA	CYPRUS	CZECH. R.	DENMARK	ESTONIA	FINLAND	FRANCE
	8.4	10.8	7.5	0.9	10.5	5.6	1.3	5.4	64.7
Number of interviews, asking for consent to donation	-	-	24	7	278	-	30	-	-
Number of family refusals (%)	-	-	4 (16.7)	3 (42.9)	13 (4.7)	-	7 (23.3)	-	559
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	11.2	10.0	4.6	60.1	2.3	3.3	0.5	0.4
Number of interviews, asking for consent to donation	-	-	243	119	2289	19	75	7	10
Number of family refusals (%)	-	-	14 (5.8)	23 (19.3)	722 (31.5)	9 (47.4)	25 (33.3)	3 (42.9)	1 (10.0)
COUNTRIES Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	NETHERLANDS	POLAND	PORTUGAL	ROMANIA	SLOVAKIA	SLOVENIA	SPAIN	SWEDEN	U. K.
	16.6	38.1	10.7	21.2	5.4	2.0	47.0	9.4	61.9
Number of interviews, asking for consent to donation	-	587	-	117	98	-	1855	-	2348
Number of family refusals (%)	-	51 (8.7)	-	35 (29.9)	7 (7.1)	-	353 (19.0)	-	1009 (43.0)

### OTHER COUNTRIES

COUNTRIES Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	ALGERIA	AUSTRALIA	CANADA	CROACIA	GEORGIA	ICELAND	ISRAEL	LEBANON	MACEDONIA
	35.4	22.3	34.1	4.4	4.5	0.3	7.5	4.3	2.0
Number of interviews, asking for consent to donation	-	-	-	167	-	-	122	218	-
Number of family refusals (%)	-	-	-	32 (19.2)	-	-	62 (50.8)	181 (83.0)	-
COUNTRIES Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	MOLDOVA	NEW ZEALAND	NORWAY	PALESTINE	SWITZERLAND	SYRIA	TUNISIA	TURKEY	USA
	3.8	4.3	4.9	4.5	7.8	22.5	11.0	75.7	317.6
Number of interviews, asking for consent to donation	-	-	-	-	-	-	48	-	-
Number of family refusals (%)	-	-	-	-	-	-	32 (66.7)	-	-

### LATINAMERICAN COUNTRIES

COUNTRIES Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	ARGENTINA	BOLIVIA	BRASIL	CHILE	COLOMBIA	COSTA RICA	CUBA	DOMINICANA	ECUADOR
	40.1	10.4	195.4	17.1	46.3	4.6	11.2	10.2	13.8
Number of interviews, asking for consent to donation	1252	50	6979	-	-	-	-	28	-
Number of family refusals (%)	582 (46.5)	35 (70.0)	1800 (25.8)	(37.0)	(25.5)	-	(22.0)	15 (53.6)	-
COUNTRIES Population (million inhabitants) UNFPA: <a href="http://www.unfpa.org/public/">http://www.unfpa.org/public/</a>	EL SALVADOR	MEXICO	NICARAGUA	PANAMA	PARAGUAY	PERU	URUGUAY	VENEZUELA	
	6.2	112	5.8	3.5	6.5	29.5	3.4	29.0	
Number of interviews, asking for consent to donation	-	-	-	27	-	-	193	198	
Number of family refusals (%)	-	-	-	10 (37.0)	-	-	31 (16.1)	54 (27.3)	





International Data on Tissue  
and Hematopoietic Stem Cell  
Donation and Transplantation Activity.  
Year 2010





## TISSUE & HEMATOPOIETIC STEM CELL NATIONAL DATA PROVIDED BY:

### **AUSTRIA**

### **BELGIUM**

### **BULGARIA**

Iordan Peev

### **CYPRUS**

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### **CZECH REPUBLIC**

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Eva Kremenová

### **DENMARK**

### **ESTONIA**

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### **FINLAND**

### **FRANCE**

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### **GREECE**

### **HUNGARY**

### **IRELAND**

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### **DOMINICANA**

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### **MEXICO**

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### **NICARAGUA**

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### **PANAMA**

Cesar Cuero Zambrano

### **URUGUAY**

Inés Alvarez

Raul José Mizraji

### **VENEZUELA**

Carmen Luisa Lattuf de Milanés

Zoraida Pacheco Graterol





PRELIMINARY DATA ON TISSUES - YEAR 2010

EUROPEAN UNION COUNTRIES

Country Population (Font: eurostat)	AUSTRIA 8,375,290	BELGIUM 10,839,905	BULGARIA 7,563,710	CYPRUS 803,147	CZECH R. 10,506,813	DENMARK 5,529,449	ESTONIA 1,340,127	FINLAND 5,351,427	FRANCE 64,716,310
TYPE OF TISSUE	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
<b>CORNEA</b>									
N. of tissue donations		133	42	0	47	0	0	34	4,890
Tissue donation PMP		17,6	5,6	0,0	4,5	0,0	0,0	25,4	75,6
N° of tissue retrieved		0	0	0	56,1	0	0	40	9,790
N° tissue processed (units)		133	42	0	1,181	0	0	40	9,790
N° tissue distributed (units)		95	29	0	918	0	0	40	4,037
N° tissue imported (units)				0	852	0	0	0	0
N° tissue exported (units)				25	0	0	0	0	0
N° of tissues transplanted		0	0	0	289	0	0	0	204
N° of patients transplanted		0	0	0	0	0	0	0	2,848
N° of transplants		0	0	0	564	0	0	0	NR
		0	0	0	564	0	0	0	2,848
<b>SKIN</b>									
N. of tissue donations		42	42	0	47	0	0	0	184
Tissue donation PMP		17,6	5,6	0,0	4,5	0,0	0,0	0	2,8
N° of tissue retrieved		0	0	0	95,320	0	0	0	374,060
N° tissue processed (units)		42	42	0	32	0	0	0	398,413
N° tissue distributed (units)		29	29	0	903	0	0	0	237,977 cm2
N° tissue imported (units)		0	0	0	0	0	0	0	55,630
N° tissue exported (units)		29	29	0	903	0	0	0	0
N° of tissues transplanted		0	0	0	0	0	0	0	NR
N° of patients transplanted		0	0	0	0	0	0	0	NR
N° of transplants		0	0	0	0	0	0	0	NR
<b>CARDIAC TISSUE</b>									
N. of tissue donations		0	0	0	6	0	0	0	147
Tissue donation PMP		0,0	0,0	0,0	0,6	0,0	0,0	0	2,3
N° of tissue retrieved		0	0	0	113	0	0	0	417
N° tissue processed (units)		0	0	0	56	0	0	0	417
N° tissue distributed (units)		0	0	0	89	0	0	0	178
N° tissue imported (units)				0	35	0	0	0	60
N° tissue exported (units)				0	0	0	0	0	0
N° of tissues transplanted		0	0	0	0	0	0	0	NR
N° of patients transplanted		0	0	0	54	0	0	0	NR
N° of transplants		0	0	0	54	0	0	0	NR
<b>BLOOD VESSEL</b>									
N. of tissue donations		0	0	0	74	0	0	9	277
Tissue donation PMP		0,0	0,0	0,0	7,0	0,0	0,0	6,7	4,3
N° of tissue retrieved		0	0	0	10	0	0	16	0
N° tissue processed (units)		0	0	0	4	0	0	16	3,807
N° tissue distributed (units)		0	0	0	4	0	0	14	1,093
N° tissue imported (units)				0	0	0	0	0	40
N° tissue exported (units)				0	0	0	0	0	14
N° of tissues transplanted		0	0	0	0	0	0	0	NR
N° of patients transplanted		0	0	0	0	0	0	0	NR
N° of transplants		0	0	0	4	0	0	30	NR
<b>MUSCULOSKELETAL</b>									
N. of tissue donations		3,190	0	0	750	0	0	159	60
Tissue donation PMP		421,8	0	0	74,4	0	0	118,6	0,9
N° of tissue retrieved		0	0	0	1,844	0	0	159	19,329
N° tissue processed (units)		3,032	0	0	2,039	0	0	228	678
N° tissue distributed (units)		2,982	0	0	2,022	0	0	135	229
N° tissue imported (units)		0	0	0	0	0	0	0	14
N° tissue exported (units)		2,972	0	0	39	0	0	84	0
N° of tissues transplanted		0	0	0	0	0	0	0	NR
N° of patients transplanted		0	0	0	1,993	0	0	0	NR
N° of transplants		0	0	0	1,993	0	0	135	NR
<b>PLACENTA/MNIOIOTIC MEMBRANE</b>									
N. of tissue donations		0	0	0	14	0	0	24	NE
Tissue donation PMP		0,0	0,0	0,0	1,3	0,0	0,0	17,9	NE
N° of tissue retrieved		0	0	0	14	0	0	24	77
N° tissue processed (units)		29	0	0	765	0	0	55	2,450
N° tissue distributed (units)		31	0	0	602	0	0	48	2,331
N° tissue imported (units)				0	0	0	0	0	0
N° tissue exported (units)				28	0	0	0	0	0
N° of tissues transplanted		0	0	0	0	0	0	0	NR
N° of patients transplanted		0	0	0	574	0	0	48	NR
N° of transplants		0	0	0	574	0	0	48	NR
<b>OTHERS</b>									
N. of tissue donations		0	0	0	0	0	0	0	0
Tissue donation PMP		0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
N° of tissue retrieved		0	0	0	0	0	0	0	161
N° tissue processed (units)		0	0	0	0	0	0	0	161
N° tissue distributed (units)		0	0	0	0	0	0	0	20
N° tissue imported (units)				0	0	0	0	0	0
N° tissue exported (units)				0	0	0	0	0	0
N° of tissues transplanted		0	0	0	0	0	0	0	NR
N° of patients transplanted		0	0	0	0	0	0	0	NR
N° of transplants		0	0	0	0	0	0	0	NR



PRELIMINARY DATA ON TISSUES - YEAR 2010

EUROPEAN UNION COUNTRIES

Country Population (Font: eurostat)	GERMANY 81.802.257	GREECE 11.305.118	HUNGARY 10.014.324	IRELAND 4.467.854	ITALY 60.340.328	LATVIA 2.248.374	LITHUANIA 3.329.039	LUXEMBOURG 502.066	MALTA 414.372
TYPE OF TISSUE	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TYPE OF DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
<b>CORNEA</b>									
N. of tissue donations	6.521				6.776	23	22		5
Tissue donation PMP	79,7				112,3	10,2	6,6		12,1
N° of tissue retrieved	0				13.341	36	44		9
N° tissue processed (units)	0				13.107	36	44		9
N° tissue distributed (units)	0				6.694	36	48		9
N° tissue imported (units)	480				25	0	0		0
N° tissue exported (units)	252				353	0	0		0
N° of tissues transplanted	3.890				NO DATA	36	48		9
N° of patients transplanted	0				NO DATA	36	47		9
N° of transplants	0				5.184	36	48		9
<b>SKIN</b>									
N. of tissue donations	NO DATA				379	0	0		0
Tissue donation PMP	0,0				6,3	0,0	0,0		0,0
N° of tissue retrieved (cm2)	74.504				1.179.862	0	0		0
N° tissue processed (units)	0				0	0	0		0
N° tissue distributed (units)	0				0	0	0		0
N° tissue imported (units)	189.970				0	0	0		0
N° tissue exported (units)	5.070				0	0	0		0
N° of tissues transplanted	196.441				0	0	0		0
N° of patients transplanted	0				0	0	0		0
N° of transplants	0				1.640	0	0		0
<b>CARDIAC TISSUE</b>									
N. of tissue donations	175				199	0	0		0
Tissue donation PMP	2,1				3,3	0,0	0,0		0,0
N° of tissue retrieved	0				371	0	0		0
N° tissue processed (units)	0				388	0	0		0
N° tissue distributed (units)	0				181	0	0		0
N° tissue imported (units)	8				0	0	0		0
N° tissue exported (units)	0				0	0	0		0
N° of tissues transplanted	7				0	0	0		0
N° of patients transplanted	0				0	0	0		0
N° of transplants	0				216	0	0		0
<b>BLOOD VESSEL</b>									
N. of tissue donations	16				837	0	0		0
Tissue donation PMP	0,2				13,9	0,0	0,0		0,0
N° of tissue retrieved	0				1.133	0	0		0
N° tissue processed (units)	0				520	0	0		0
N° tissue distributed (units)	4				15	0	0		0
N° tissue imported (units)	0				0	0	0		0
N° tissue exported (units)	19				0	0	0		0
N° of tissues transplanted	0				0	0	0		0
N° of patients transplanted	0				0	0	0		0
N° of transplants	0				313	0	0		0
<b>MUSCULOSKELETAL</b>									
N. of tissue donations	5.628				3.036	66	93		0
Tissue donation PMP	68,8				29,4	2,4	27,9		0,0
N° of tissue retrieved	0				7.089	66	93		0
N° tissue processed (units)	0				0	179	112		0
N° tissue distributed (units)	0				33.823	0	87		1
N° tissue imported (units)	907				0	0	0		0
N° tissue exported (units)	687				570	0	0		0
N° of tissues transplanted	3.769				0	180	93		1
N° of patients transplanted	0				0	161	79		1
N° of transplants	0				6.537	180	83		1
<b>PLACENTA/MNIOIOTIC MEMBRANE</b>									
N. of tissue donations	469				228	73	11		0
Tissue donation PMP	5,7				3,8	32,5	3,3		0,0
N° of tissue retrieved	0				228	73	11		0
N° tissue processed (units)	0				244	73	172		0
N° tissue distributed (units)	0				0	61	79		0
N° tissue imported (units)	0				0	0	0		0
N° tissue exported (units)	75				36	0	0		0
N° of tissues transplanted	2.381				0	0	79		0
N° of patients transplanted	0				0	0	68		0
N° of transplants	0				1.078	73	79		0
<b>OTHERS</b>									
N. of tissue donations	236				0	0	0		0
Tissue donation PMP	2,9				0,0	0,0	0,0		0,0
N° of tissue retrieved	0				0	0	0		0
N° tissue processed (units)	0				0	0	0		0
N° tissue distributed (units)	0				0	0	0		0
N° tissue imported (units)	0				0	0	0		0
N° tissue exported (units)	157				0	0	0		0
N° of tissues transplanted	0				0	0	0		0
N° of patients transplanted	0				0	0	0		0
N° of transplants	0				0	0	0		0



PRELIMINARY DATA ON TISSUES - YEAR 2010

EUROPEAN UNION COUNTRIES

Country Population (Font: eurostat)	NETHERLANDS 16.574.989	POLAND 38.167.329	PORTUGAL 10.637.713	ROMANIA 21.462.186	SLOVAKIA 5.424.925	SLOVENIA 2.046.976	SPAIN 45.989.016	SWEDEN 9.340.682	U. K. 62.008.048
TYPE OF TISSUE	NO DATA								
<b>CORNEA</b>									
N. of tissue donations	480	520	13	114	63	202	3.556	0	0
Tissue donation PMP	12,6	48,9	0,6	21,0	30,8	77,3	77,3	21,6	0,0
N° of tissue retrieved	716	1.002	26	216	123	403	5.182	403	12.423
N° tissue processed (units)	831	1.002	26	216	123	403	3.426	403	7.100
N° tissue distributed (units)	638	828	26	175	72	364	3.582	364	2.699
N° tissue imported (units)	0	109	0	0	0	0	5	0	489
N° tissue exported (units)	0	0	0	0	0	0	6	0	2.699
N° of tissues transplanted	0	937	26	176	72	364	0	364	0
N° of patients transplanted	0	937	26	176	72	364	0	364	0
N° of transplants	0	937	26	176	72	364	0	364	0
<b>SKIN</b>									
N. of tissue donations	40	1	11	15	45	60	266	60	0
Tissue donation PMP	1,0	0,1	0,5	2,8	5,8	6,4	5,8	6,4	0,0
N° of tissue retrieved (cm2)	104.364	1.200	16.069	84.431	0	0	704.850	0	0
N° tissue processed (units)	945	11	0	0	60	0	0	60	569
N° tissue distributed (units)	405	0	0	0	10	0	0	20	742
N° tissue imported (units)	0	4.753cm2	0	0	0	0	0	0	3.227
N° tissue exported (units)	0	0	0	0	0	0	8	0	742
N° of tissues transplanted	0	4.205 cm2	0	0	0	0	195.299	0	0
N° of patients transplanted	0	3	5	2	0	0	60	0	0
N° of transplants	0	3	5	2	0	0	60	0	0
<b>CARDIAC TISSUE</b>									
N. of tissue donations	151	18	0	14	0	244	227	244	0
Tissue donation PMP	4,0	1,7	0,0	2,6	0,0	4,9	4,9	26,1	0,0
N° of tissue retrieved	302	36	0,0	22	0	244	344	244	1.207
N° tissue processed (units)	151	10	0	22	0	244	251	244	1.028
N° tissue distributed (units)	133	6	0	4	0	154	179	154	486
N° tissue imported (units)	0	0	0	0	0	0	0	0	121
N° tissue exported (units)	21	0	0	0	0	0	91	0	511
N° of tissues transplanted	0	6	0	0	0	151	177	151	0
N° of patients transplanted	0	NO DATA	0	4	0	56	56	0	0
N° of transplants	0	NO DATA	0	4	0	0	0	0	0
<b>BLOOD VESSEL</b>									
N. of tissue donations	9	190	0	2	0	6	235	6	0
Tissue donation PMP	0,2	17,9	0,0	0,4	0,0	0,6	5,1	0,6	0,0
N° of tissue retrieved	10	190	0	2	0	6	396	6	394
N° tissue processed (units)	2	0	0	2	0	3	333	3	18
N° tissue distributed (units)	0	0	0	0	0	0	255	0	596
N° tissue imported (units)	0	0	0	0	0	0	0	0	45
N° tissue exported (units)	0	0	0	0	0	0	39	0	0
N° of tissues transplanted	0	24	0	0	0	3	245	3	0
N° of patients transplanted	0	NO DATA	0	0	0	0	112	0	0
N° of transplants	0	NO DATA	0	0	0	0	0	0	0
<b>MUSCULOSKELETAL</b>									
N. of tissue donations	432	47	32	747	0	2.204	2.204	1.659	0
Tissue donation PMP	11,3	4,4	1,5	137,7	0,0	47,9	177,6	177,6	0,0
N° of tissue retrieved	3.153	403	29	1.753	0	13.043	13.043	1.659	12.820
N° tissue processed (units)	9.228	403	29	1.004	44	13.356	13.356	1.659	7.739
N° tissue distributed (units)	9.370	1.297	19	342	57	9.764	9.764	1.013	7.790
N° tissue imported (units)	0	718	0	0	0	0	0	0	13.720
N° tissue exported (units)	0	0	0	4.012	0	0	0	0	7.964
N° of tissues transplanted	0	349	29	0	0	5	75	5	0
N° of patients transplanted	0	NO DATA	14	0	0	9.579	9.579	1.013	0
N° of transplants	0	NO DATA	14	0	0	9.504	9.504	0	0
<b>PLACENTA/AMNIOTIC MEMBRANE</b>									
N. of tissue donations	80	102	0	12	0	7	49	7	0
Tissue donation PMP	2,1	9,6	0,0	2,2	0,0	0,7	11	0,7	0,0
N° of tissue retrieved	60	103	0	12	0	7	49	7	0
N° tissue processed (units)	860	402	0	0	0	418	2.372	418	99
N° tissue distributed (units)	817	169	0	0	0	364	1.451	364	246
N° tissue imported (units)	0	0	0	0	0	0	0	0	128
N° tissue exported (units)	0	0	0	0	0	0	0	0	246
N° of tissues transplanted	0	169	0	0	0	364	1.493	364	0
N° of patients transplanted	0	NO DATA	0	119	0	0	1.365	0	0
N° of transplants	0	NO DATA	0	119	0	0	0	0	0
<b>OTHERS</b>									
N. of tissue donations	0	1	0	0	0	40	0	40	0
Tissue donation PMP	0,0	0,1	0,0	0,0	0,0	0,0	0,0	4,3	0,0
N° of tissue retrieved	16	1	0	749	0	40	0	40	8.931
N° tissue processed (units)	0	1	0	0	0	0	0	0	8.428
N° tissue distributed (units)	0	32	0	0	0	0	0	0	16
N° tissue imported (units)	0	0	0	0	0	0	0	0	1.138
N° tissue exported (units)	0	0	0	0	0	0	0	0	16
N° of tissues transplanted	0	0	0	0	0	0	0	0	0
N° of patients transplanted	0	NO DATA	0	0	0	0	0	0	0
N° of transplants	0	NO DATA	0	0	0	0	0	0	0

## PRELIMINARY DATA ON TISSUES - YEAR 2010

## OTHER COUNTRIES

Country Population (Font: eurostat)	CROATIA 4.425.747	ICELAND 317.630	MACEDONIA 2.052.722	NORWAY 4.858.199	SWITZERLAND 7.785.806	TURKEY 72.561.312
TYPE OF TISSUE	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
<b>CORNEA</b>						
N. of tissue donations	64					870
Tissue donation PMP	14,5					12,0
N° of tissue retrieved	126					1.735
N° tissue processed (units)	126					1.735
N° tissue distributed (units)	92					1.542
N° tissue imported (units)	58					0
N° tissue exported (units)	0					0
N° of tissues transplanted	153					0
N° of patients transplanted	149					0
N° of transplants	153					1.542
<b>SKIN</b>						
N. of tissue donations	8					0
Tissue donation PMP	1,8					0,0
N° of tissue retrieved (cm2)	24					0
N° tissue processed (units)	0					0
N° tissue distributed (units)	0					0
N° tissue imported (units)	0					0
N° tissue exported (units)	0					0
N° of tissues transplanted	27					0
N° of patients transplanted	1					0
N° of transplants	2					0
<b>CARDIAC TISSUE</b>						
N. of tissue donations	0					18
Tissue donation PMP	0,0					0,2
N° of tissue retrieved	0					0
N° tissue processed (units)	0					0
N° tissue distributed (units)	0					0
N° tissue imported (units)	0					0
N° tissue exported (units)	0					0
N° of tissues transplanted	0					18
N° of patients transplanted	0					18
N° of transplants	0					18
<b>BLOOD VESSEL</b>						
N. of tissue donations	0					0
Tissue donation PMP	0,0					0,0
N° of tissue retrieved	0					0
N° tissue processed (units)	0					0
N° tissue distributed (units)	0					0
N° tissue imported (units)	0					0
N° tissue exported (units)	0					0
N° of tissues transplanted	0					0
N° of patients transplanted	0					0
N° of transplants	0					0
<b>MUSCULOSKELETAL</b>						
N. of tissue donations	161					0
Tissue donation PMP	96,4					0,0
N° of tissue retrieved	161					0
N° tissue processed (units)	385					0
N° tissue distributed (units)	263					0
N° tissue imported (units)	0					0
N° tissue exported (units)	0					0
N° of tissues transplanted	280					0
N° of patients transplanted	235					0
N° of transplants	235					0
<b>PLACENTA/AMNIOTIC MEMBRANE</b>						
N. of tissue donations	0					0
Tissue donation PMP	0,0					0,0
N° of tissue retrieved	0					0
N° tissue processed (units)	0					0
N° tissue distributed (units)	0					0
N° tissue imported (units)	31					0
N° tissue exported (units)	0					0
N° of tissues transplanted	31					0
N° of patients transplanted	18					0
N° of transplants	31					0
<b>OTHERS</b>						
N. of tissue donations	0					0
Tissue donation PMP	0,0					0,0
N° of tissue retrieved	0					0
N° tissue processed (units)	0					0
N° tissue distributed (units)	0					0
N° tissue imported (units)	0					0
N° tissue exported (units)	0					0
N° of tissues transplanted	0					0
N° of patients transplanted	0					0
N° of transplants	0					0





PRELIMINARY DATA ON TISSUES - YEAR 2010

LATINAMERICAN COUNTRIES

Country Population (Font: UNFPA)	ARGENTINA 40,1	BOLIVIA 10,4	BRASIL 195,4	COLOMBIA 46,3	COSTA RICA 4,6	DOMINICANA 10,2	MEXICO 112,0	NICARAGUA 5,8	PANAMA 3,5	URUGUAY 3,4	VENEZUELA 29,0
TYPE OF TISSUE	TYPE OF DATA										
CORNEA	N. of tissue donations	712	0	11.750	1.405	114	774	0	48	62	64
	Tissue donation PMP	17,8	0,0	60,1	30,9	25,3	6,9	0,0	13,7	18,8	2,3
	N° of tissue processed (units)	1.426	0	19.751	2.697	227	-	0	96	120	122
	N° tissue distributed (units)										
	N° tissue imported (units)										
	N° tissue exported (units)										
N° of tissues transplanted	943	0	12.923	2.332	187	162	2.175	0	94	107	122
N° of patients transplanted											
SKIN	N. of tissue donations	29	0	23	24	5	26	0	0	9	0
	Tissue donation PMP	0,7	0,0	0,1	0,5	1,1	0,2	0,0	0,0	2,7	0,0
	N° of tissue processed (cm2)	21.945	0	22.548	24	5.060	-	0	0	11.500	0
	N° tissue distributed (units)										
	N° tissue imported (units)										
	N° tissue exported (units)										
N° of tissues transplanted	33	0	19	33	1	0	-	0	0	14	0
N° of patients transplanted											
CARDIAC TISSUE	N. of tissue donations	1	0	0	48	1	0	0	0	3	9
	Tissue donation PMP	0,02	0,0	0,0	1,1	0,2	0,0	0,0	0,0	0,9	0,3
	N° of tissue processed (units)	1	0	0	64	2	0	0	0	6	18
	N° tissue distributed (units)										
	N° tissue imported (units)										
	N° tissue exported (units)										
N° of tissues transplanted	1	0	0	48	0	0	0	0	0	3	0
N° of patients transplanted											
BLOOD VESSEL	N. of tissue donations	303	0	72	0	0	0	0	0	14	0
	Tissue donation PMP	7,6	0,0	0,4	0,0	0,0	0,0	0,0	0,0	4,2	0,0
	N° of tissue processed (units)	651	0	137	0	0	0	0	0	27	0
	N° tissue distributed (units)										
	N° tissue imported (units)										
	N° tissue exported (units)										
N° of tissues transplanted	216	0	72	0	0	0	0	0	0	18	0
N° of patients transplanted											
MUSCULOSKELETAL	N. of tissue donations	1.454	0	87	255	0	160	10	0	23	0
	Tissue donation PMP	36,3	0,0	0,4	5,6	0,0	1,4	1,7	0,0	7,0	0,0
	N° of tissue processed (units)	1.645	0	16.656	4.048	0	-	0	0	0	0
	N° tissue distributed (units)										
	N° tissue imported (units)										
	N° tissue exported (units)										
N° of tissues transplanted	1.486	0	16.514	17.115	0	0	-	0	0	151	0
N° of patients transplanted											
PLACENTA/AMNIOTIC MEMBRANE	N. of tissue donations										
	Tissue donation PMP										
	N° of tissue processed (units)										
	N° tissue distributed (units)										
	N° tissue imported (units)										
	N° tissue exported (units)										
N° of tissues transplanted											
N° of patients transplanted											
OTHERS	N. of tissue donations										
	Tissue donation PMP										
	N° of tissue processed (units)										
	N° tissue distributed (units)										
	N° tissue imported (units)										
	N° tissue exported (units)										
N° of tissues transplanted											
N° of patients transplanted											



PRELIMINARY DATA ON TISSUES - YEAR 2010

EUROPEAN UNION COUNTRIES

Country	AUSTRIA	BELGIUM	BULGARIA	CYPRUS	CZECH R.	DENMARK	ESTONIA	FINLAND	FRANCE
Population (Font: eurostat)	8.375.290	10.839.905	7.563.710	803.147	10.506.813	5.529.449	1.340.127	5.351.427	64.716.310

CATEGORY OF DATA	TYPE OF DATA	NO DATA	NO DATA	NO DATA	NO DATA
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POTENTIAL DONATION	N° of potential donors at 31.12	0	123.037	20.199	0	0	0	0	187.519
AND SEARCHING	N° of coord blood unit at 31.12	839	133	3.612	0	0	0	0	10.906
IN THE NATIONAL	N° of searches requested	0	0	0	0	0	0	0	18.523
REGISTRIES	N° of unrelated donation	0	0	0	0	0	0	0	1.221

DONATION	N° of donation - Autologous	63	30	0	0	29	0	0	3.102
	N° of donation - Allogenic	7	28	22	0	0	0	0	1.036
	N° of donation - Allogenic, related	7	0	0	0	0	0	0	681
	N° of donation - Allogenic, unrelated	0	28	22	0	0	0	0	355

BANKING of CORD	N° of unrelated coord blood units collected	0	1.041	0	0	0	0	0	2.562
BLOOD	N° of unrelated coord blood units distributed	0	1	14	0	0	0	0	146
	N° of unrelated coord blood units at 31.12	0	1.344	14	0	0	0	0	10.906
	N° of related coord blood units collected	1.351	2.026	0	0	0	0	0	0
	N° of related coord blood units distributed	0	0	0	0	0	0	0	0
	N° of related coord blood units at 31.12	0	13.697	0	0	0	0	0	0
	Total N° of coord blood units collected	1.351	3.067	0	0	0	0	0	2.562
	Total N° of coord blood units distributed	0	1	14	0	0	0	0	146
	Total N° of coord blood units at 31.12	0	15.041	14	0	0	0	0	10.906

TRANSPLANT	N° of transplants - Autologous	63	15	0	0	0	0	0	3.047
	N° of patients transplanted - Autologous	0	15	0	0	37	0	0	2.890
	N° of transplants - Allogenic	0	0	0	0	0	0	0	1.671
	N° of patients transplanted - Allogenic	0	0	0	0	0	0	0	1.644
	N° of transplants - Allogenic, related	0	0	0	0	0	0	0	723
	N° of patients transplanted - Allogenic, related	0	0	0	0	15	0	0	NA
	N° of transplants - Allogenic, unrelated	0	0	0	0	3	0	0	948
	N° of patients transplanted - Allogenic, unrelated	0	0	0	0	12	0	0	NA





PRELIMINARY DATA ON TISSUES - YEAR 2010

EUROPEAN UNION COUNTRIES

Country	GERMANY	GREECE	HUNGARY	IRELAND	ITALY	LATVIA	LITHUANIA	LUXEMBOURG	MALTA
Population (Font: eurostat)	81.802.257	11.305.118	10.014.324	4.467.854	60.340.328	2.248.374	3.329.039	502.066	414.372
CATEGORY OF DATA	TYPE OF DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
POTENTIAL DONATION	N° of potential donors at 31.12	NO DATA			332.492	0	5.169		0
AND SEARCHING	N° of cord blood unit at 31.12	NO DATA			22.772	0	0		0
IN THE NATIONAL	N° of searches requested	NO DATA			2.685	0	0		0
REGISTRIES	N° of unrelated donation	NO DATA			676	0	0		0
DONATION	N° of donation - Autologous	14.107			2.764	0	302		117
	N° of donation - Allogenic	10.586			21.016	0	21		0
	N° of donation - Allogenic, related	1.025			1.080	0	14		0
	N° of donation - Allogenic, unrelated	9.561			19.936	0	7		0
BANKING of CORD	N° of unrelated cord blood units collected	3.250			19.764	0	0		0
BLOOD	N° of unrelated cord blood units distributed	122			129	0	0		0
	N° of unrelated cord blood units at 31.12	NO DATA			32.003	0	0		0
	N° of related cord blood units collected	16			243	0	225		0
	N° of related cord blood units distributed	0			13	0	0		0
	N° of related cord blood units at 31.12	NO DATA			2.163	0	552		0
	Total N° of cord blood units collected	3.266			20.007	0	225		0
	Total N° of cord blood units distributed	122			142	0	0		0
	Total N° of cord blood units at 31.12	NO DATA			34.166	0	552		0
TRANSPLANT	N° of transplants - Autologous	3.255			2.763	0	83		0
	N° of patients transplanted - Autologous	2.776			2.264	0	68		0
	N° of transplants - Allogenic	2.525			1.605	0	63		0
	N° of patients transplanted - Allogenic	791			852	0	15		0
	N° of transplants - Allogenic, related	1.734			753	0	48		0
	N° of patients transplanted - Allogenic, related	2.431			1.529	0	59		0
	N° of transplants - Allogenic, unrelated	739			789	0	13		0
	N° of patients transplanted - Allogenic, unrelated	1.692			740	0	46		0

## PRELIMINARY DATA ON TISSUES - YEAR 2010

## EUROPEAN UNION COUNTRIES

Country	NETHERLANDS	POLAND	PORTUGAL	ROMANIA	SLOVAKIA	SLOVENIA	SPAIN	SWEDEN	U. K.
Population (Font: eurostat)	16.574.989	38.167.329	10.637.713	21.462.186	5.424.925	2.046.976	45.989.016	9.340.682	62.008.048

CATEGORY OF DATA	TYPE OF DATA	NO DATA	NO DATA
POTENTIAL DONATION	N° of potential donors at 31.12	0	15.773
AND SEARCHING	N° of coord blood unit at 31.12	0	47.324
IN THE NATIONAL	N° of searches requested	0	122
REGISTRIES	N° of unrelated donation	0	9
DONATION	N° of donation - Autologous	1.692	397
	N° of donation - Allogenic	6.415	181
	N° of donation - Allogenic, related	6.414	113
	N° of donation - Allogenic, unrelated	1	68
BANKING of CORD	N° of unrelated coord blood units collected	1	10.359
BLOOD	N° of unrelated coord blood units distributed	0	0
	N° of unrelated coord blood units at 31.12	494	5.715
	N° of related coord blood units collected	6.414	17.500
	N° of related coord blood units distributed	0	5
	N° of related coord blood units at 31.12	30.913	66.932
	Total N° of coord blood units collected	6.415	27.859
	Total N° of coord blood units distributed	0	5
	Total N° of coord blood units at 31.12	31.407	72.647
TRANSPLANT	N° of transplants - Autologous	0	286
	N° of patients transplanted - Autologous	0	237
	N° of transplants - Allogenic	0	124
	N° of patients transplanted - Allogenic	0	124
	N° of transplants - Allogenic, related	0	82
	N° of patients transplanted - Allogenic, related	0	76
	N° of transplants - Allogenic, unrelated	0	50
	N° of patients transplanted - Allogenic, unrelated	0	48
	N° of transplants - Autologous	0	83
	N° of patients transplanted - Autologous	0	0
	N° of transplants - Allogenic	0	25
	N° of patients transplanted - Allogenic	0	8
	N° of transplants - Allogenic, related	0	17
	N° of patients transplanted - Allogenic, related	0	0
	N° of transplants - Allogenic, unrelated	0	0
	N° of patients transplanted - Allogenic, unrelated	0	0
	N° of transplants - Autologous	0	1.680
	N° of patients transplanted - Autologous	0	0
	N° of transplants - Allogenic	0	866
	N° of patients transplanted - Allogenic	0	467
	N° of transplants - Allogenic, related	0	399
	N° of patients transplanted - Allogenic, related	0	0
	N° of transplants - Allogenic, unrelated	0	0
	N° of patients transplanted - Allogenic, unrelated	0	0
	N° of transplants - Autologous	0	5.666
	N° of patients transplanted - Autologous	0	0
	N° of transplants - Allogenic	0	3.003
	N° of patients transplanted - Allogenic	0	821
	N° of transplants - Allogenic, related	0	2.182
	N° of patients transplanted - Allogenic, related	0	0
	N° of transplants - Allogenic, unrelated	0	0
	N° of patients transplanted - Allogenic, unrelated	0	0



PRELIMINARY DATA ON TISSUES - YEAR 2010

OTHER COUNTRIES

Country	CROATIA	ICELAND	MACEDONIA	NORWAY	SWITZERLAND	TURKEY
Population (Font: eurostat)	4.425.747	317.630	2.052.722	4.858.199	7.785.806	72.561.312

CATEGORY OF DATA	TYPE OF DATA	NO DATA	NO DATA	NO DATA	NO DATA
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POTENTIAL DONATION	N° of potential donors at 31.12	19.315			0
AND SEARCHING	N° of coord blood unit at 31.12	1.004			0
IN THE NATIONAL	N° of searches requested	0			0
REGISTRIES	N° of unrelated donation	0			0

DONATION	N° of donation - Autologous	151			0
	N° of donation - Allogenic	1.295			0
	N° of donation - Allogenic, related	52			0
	N° of donation - Allogenic, unrelated	1.243			0

BANKING of CORD	N° of unrelated coord blood units collected	1.238			0
BLOOD	N° of unrelated coord blood units distributed	1			0
	N° of unrelated coord blood units at 31.12	1.409			0
	N° of related coord blood units collected	21			1.414
	N° of related coord blood units distributed	2			0
	N° of related coord blood units at 31.12	121			0
	Total N° of coord blood units collected	1.259			1.414
	Total N° of coord blood units distributed	3			0
	Total N° of coord blood units at 31.12	1.530			0

TRANSPLANT	N° of transplants - Autologous	91			851
	N° of patients transplanted - Autologous	85			0
	N° of transplants - Allogenic	48			615
	N° of patients transplanted - Allogenic	21			557
	N° of transplants - Allogenic, related	27			58
	N° of patients transplanted - Allogenic, related	48			0
	N° of transplants - Allogenic, unrelated	21			0
	N° of patients transplanted - Allogenic, unrelated	27			0



## PRELIMINARY DATA ON TISSUES - YEAR 2010

## LATINAMERICAN COUNTRIES

Country	ARGENTINA	BOLIVIA	BRASIL	COLOMBIA	COSTA RICA	DOMINICANA	MEXICO	NICARAGUA	PANAMA	URUGUAY	VENEZUELA
Population (Font: UNFPA)	40,1	10,4	195,4	46,3	4,6	10,2	112,0	5,8	3,5	3,4	29,0
<b>TYPE OF DATA</b>	<b>NO DATA</b>										
POTENTIAL DONATION	N° of potential donors at 31.12										
AND SEARCHING	N° of coord blood unit at 31.12										
IN THE NATIONAL	N° of searches requested										
REGISTRIES	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	N° of unrelated coord blood units collected										
BLOOD	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										
	N° of patients transplanted - Autologous										
	N° of transplants - Allogenic										
	N° of patients transplanted - Allogenic										
	N° of transplants - Allogenic, related										
	N° of patients transplanted - Allogenic, related										
	N° of transplants - Allogenic, unrelated										
	N° of patients transplanted - Allogenic, unrelated										





The Madrid Resolution on Organ Donation  
and Transplantation. National Responsibility  
in Meeting the Needs of Patients,  
Guided by the WHO Principles





# The Madrid Resolution on Organ Donation and Transplantation. National Responsibility in Meeting the Needs of Patients, Guided by the WHO Principles

The Third Global Consultation on Organ Donation and Transplantation was organized by the WHO in collaboration with the ONT and TTS and supported by the European Commission. The Consultation, held in Madrid on March 23 to 25, 2010, brought together 140 government officials, ethicists, and representatives of international scientific and medical bodies from 68 countries.

Participants in the Madrid Consultation urged the WHO, its MS, and professionals in the field to regard organ donation and transplantation as a part of every nation's responsibility to meet the health needs of its population in a comprehensive manner and address the conditions leading to transplantation from prevention to treatment. Donation from deceased persons, as a consequence of death determined by neurologic criteria (brain death) or by circulatory criteria (circulatory death), was affirmed as the priority source of organs and as having a fundamental role in maximizing the therapeutic potential of transplantation.

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

when needed. The strategy of striving for self-sufficiency encompasses the following features: actions should (1) begin locally, (2) include broad public health measures both to decrease the disease burden in a population and to increase the availability of organ transplantation, (3) enhance cooperation among the stakeholders involved, and (4) be carried out based on the WHO Guiding Principles and the Declaration of Istanbul, in particular emphasizing voluntary donation, non-commercialization, maximization of donation from the deceased, support for living kidney donation, and meeting the needs of the local population in preference to "transplant tourists."

This new paradigm calls for the development of a comprehensive strategic framework for policy and practice, directed at the global challenges created by an increasing incidence of chronic diseases and a shortage of organs for transplantation. Self-sufficiency advocates national accountability for the establishment of an effective planning context for diseases treatable through organ transplantation and characterized by adequate capacity management, regulatory control, and an appropriate normative environment (Fig. 1).

1. National capacity management involves: (a) development of an adequate and appropriate healthcare infrastructure



Figure 1. Schematic representation of the concept of national accountability in meeting the donation and transplantation needs of the population. CKD-chronic kidney disease; CVD-cardiovascular disease; COPD-chronic obstructive pulmonary disease.



and workforce consistent with the country's level of development and economic capacity; (b) adequate and appropriate financing of organ donation and transplantation programme; and (c) management of need by investment in chronic disease prevention and vaccination.

2. National regulatory control consists of (a) adequate legislation, covering declaration of death, organ procurement, fair and transparent allocation, consent, establishment of transplant organizations, and penalties for organ trafficking and commercialization; (b) regulations covering procedures for organ procurement, reimbursement, and allocation rules; and (c) systems for monitoring and evaluation, including traceability and surveillance, and for enabling evaluation of programme performance.
3. National authorities need to lead normative change, from a perception of organ donation as a matter of the rights of donor and recipient to one of responsibility across all levels of society, through unambiguous legislation, committed support, and ongoing education and public information campaigns. Meeting needs of patients while avoiding the harms of transplant tourism and commercial donation from living persons is an ethical imperative that relies on the assumption of a collective responsibility for donation after death by all citizens and residents, thereby contributing to the common good of transplantation for all.

The health of all populations will benefit from a comprehensive response to diseases contributing to endstage organ failure, from prevention to access to effective organ transplantation programmes made possible by a sufficient supply of donor organs. There is also a strong economic imperative to improve rates of transplantation and therefore organ donation: kidney transplantation is less costly to provide than dialysis, and therefore, maximizing rates of kidney transplantation would significantly reduce overall expenditure on renal replacement therapies. Kidney transplantation also results in better survival and quality of life outcomes and enables greater productivity and community participation. The perception of organ transplantation as an expensive and luxury clinical practice is invalid; rather it is cost effective, mainstream, and a cardinal feature of comprehensive health services. Beyond the unmistakable medical benefits to patients affected by end-stage organ failure, organ transplantation is a key to the challenge facing healthcare providers worldwide of unsustainable expenditures on dialysis services and has potential to generate further practical consequences for health systems.

From a public perspective, the pursuit of self-sufficiency relies on a communal appreciation of the value of organ donation after death. The concept of donating human body parts to save the life of another as a civic gesture is one that should be taught at school alongside health education to decrease the need for transplants. The pursuit of self-sufficiency in organs for transplantation exemplifies the public health and community values of equity, transparency, reciprocity, and solidarity, while it is the only safeguard against the temptation of yielding to trade in human organs.

In preparation for and during the meeting in Madrid, eight Working Groups identified specific goals and challenges and proposed solutions and recommendations from a number of perspectives. The Working Groups identified the common challenges faced by both developing and developed countries, the unique issues of particular societies and regions, and provided a rich and extensive set of recommendations directed at governments, international organizations, and healthcare professionals regarding how to best maximize donations from deceased persons (including the development of The Critical Pathway for organ donation; Fig. 2) and how to successfully progress toward meeting the needs of patients.

### **IMPLEMENTING SELF-SUFFICIENCY: RECOMMENDATIONS FROM THE MADRID CONSULTATION**

The human right to health and dignity includes the recognition of all human needs for transplantation. While self-sufficiency is conceived as a common global goal, the capacity to meet patients' needs should be found primarily within each country's own resources, involving regulated regional or international cooperation when appropriate. The requirements of organ donation and transplantation programmes with respect to resourcing, proper organization, regulation and the oversight of procurement, processing and transplantation of human body components from living and deceased persons are matters that rightly come under the responsibility of governments, as outlined in Resolution WHA57.18.

Consistent with the political and ethical obligations of governments toward their citizens, the pursuit of self-sufficiency promotes the health and protects the interests of populations. Although the practical implementation of self-sufficiency will vary for different countries, influenced by economic factors, health sector development, and existing health priorities, the inherent values of the self-sufficiency paradigm and the WHO Guiding Principles on human cells, tissues and organs should guide organ donation and transplantation policy and practice in all contexts. The following overarching aspects of self-sufficiency were identified during The Madrid Consultation as subject to specific recommendations:

#### **Preventing the Need for Transplantation and Increasing Organ Availability are National Responsibilities**

- Organ donation and transplantation have a role in the national health policies of all countries, regardless of current transplant capability.
- Of equal importance to infrastructure and professional development in organ donation and transplantation is sustained investment in prevention to reduce future needs for transplantation, through intervention in the major risk factors for end-stage organ failure and the development of health systems able to meet the challenges of chronic diseases such as diabetes, cardiovascular disease (CVD), and hepatitis.

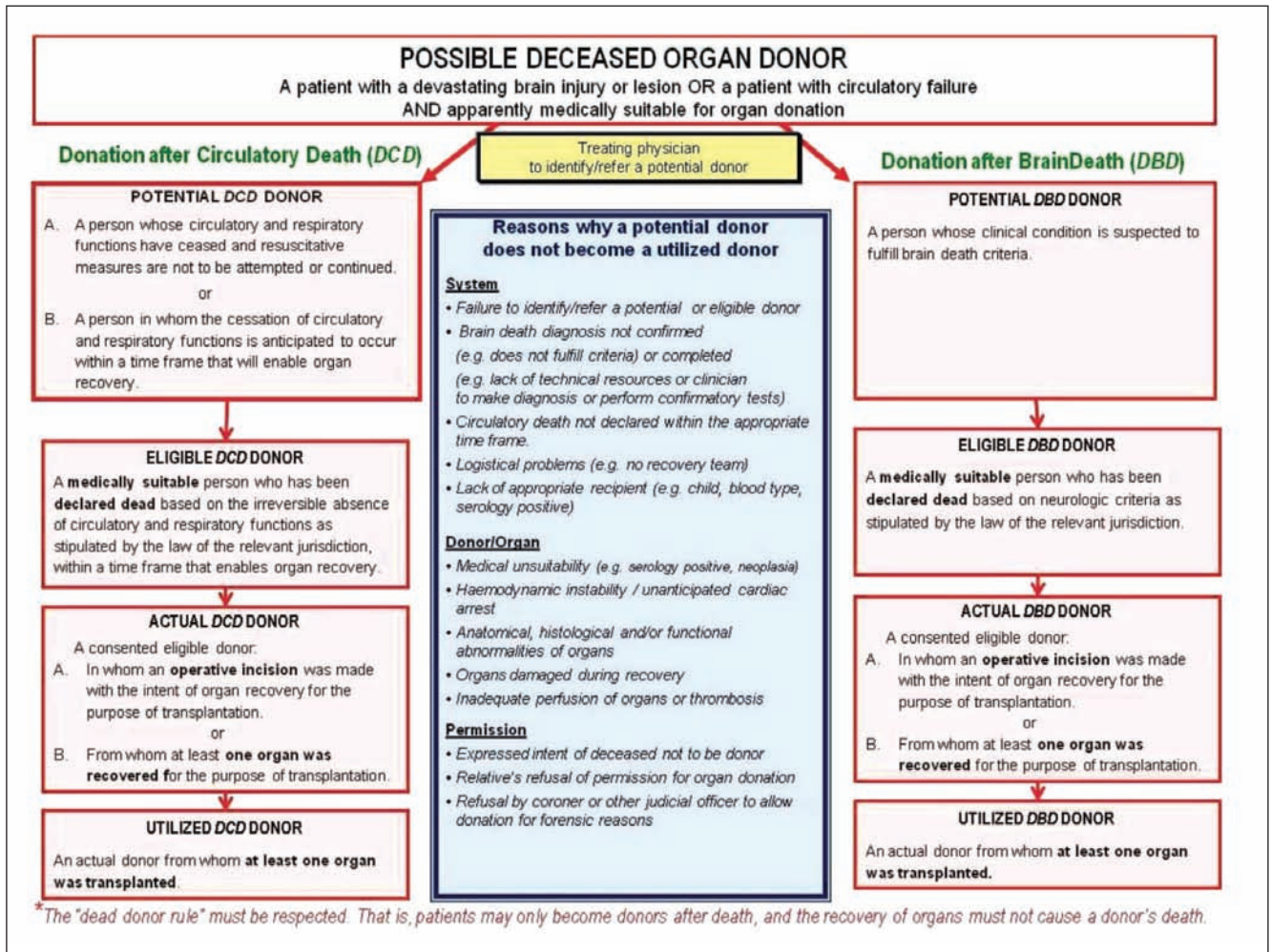


Figure 2. The critical pathway for organ donation. This figure was published in *Transplant Int* 2011; 24: 373–378. The figure has been reproduced with permission granted by Wiley-Blackwell.

- National transplantation legislation consistent with the WHO Guiding Principles is fundamental. It provides adequate protection from exploitation and unethical practices and eliminates legislative impediments constraining the science and medicine of donation from deceased persons.
- Public support for organ donation necessitates normative change. To this end, education of the public should begin in school, emphasizing individual and community ethical values such as solidarity and reciprocity. Self-sufficiency is founded in three main ethical premises:
  - The human right to health encompasses transplantation and disease prevention.
  - Organs should be understood as a social resource; equity must therefore govern both procurement and allocation.
  - Organ donation should be perceived as a civic responsibility.

### Donation and Transplantation Reflect Comprehensive Health Care

- The critical functions of oversight, maintenance of professional standards and ethics, regulation, policy setting,

and monitoring and evaluation of organ donation and transplantation programmes are most effectively managed by a National Transplant Organization (NTO).

- Data registries are necessary for operational support (waiting list management and organ allocation) and for monitoring and surveillance of practices and outcomes.
- Monitoring and surveillance should encompass the following data: national prevalence and incidence of end-stage organ failure and diseases contributing to end-stage organ failure (need); availability of related infrastructure and access to organ replacement therapies; outcomes of organ replacement therapy; acceptance onto transplant waiting lists and time to receipt of an organ; organ donation practices, standards and activities; practices, standards and activities in organ donation from living persons; and outcomes of transplantation (patient and graft survival). International harmonization of such metrics would facilitate comparisons between systems and international benchmarking, identify regions in need of data, guide national policy making, and enable research.





## Opportunities to Donate Should Be Provided in as Many Circumstances of Death as Possible

- The critical pathway provides a framework for the process of donation from deceased persons, which will aid global harmonization of practice.
- The key to self-sufficiency is maximizing donation from deceased persons: facilitating donation in as many circumstances of death as possible, maximizing the outcomes from each donor, and optimizing the results of transplantation. Donation after both brain death and circulatory death should be regarded as ethically proper. Organ donation from living persons should be encouraged as complementary to donation after death, by providing appropriate regulatory frameworks and donor care.
- Physicians and nurses involved in acute care have a central role in identifying possible donors and facilitating donation after death, and therefore should be supported by the necessary educational, technical, legal and ethical tools to assume leadership in this regard within their facility.

## EXECUTIVE SUMMARY

### PREAMBLE

In response to the global disparities in access to transplantation, a growing demand for organs, and the self-evident harms of transplant tourism, a meeting of 140 representatives of international scientific and medical bodies, government officials, and ethicists was held in Madrid, Spain, on March 23 to 25, 2010. This Third Global Consultation was organized by the WHO, TTS and ONT, and supported by the European Commission. The purpose of the meeting was to call for a global goal of national responsibility in satisfying organ donation and transplantation needs, with sufficiency based on resources obtained within a country for that country and through regulated and ethical regional or international cooperation, when needed. The concept of a national responsibility encompasses the following features: (1) action should begin locally (not precluding international cooperation); (2) strategies should be targeted to decrease the transplantation needs of a population and increasing organ availability, and should enhance cooperation between stakeholders involved; (3) these strategies must be based on solid ethical principles: solidarity, voluntary donation, and non-commercialization (1); and (4) strategies should be tailored to the local realities.

The Third WHO Global Consultation carries forward the principles laid out in the WHO Guiding Principles for Human Cell, Tissue and Organ Transplantation, and the Declaration of Istanbul on Organ Trafficking and Transplant Tourism (1, 2). The WHO Guiding Principles articulate the importance of pursuing national or subregional self-sufficiency in organs for transplantation, in particular through increased efforts to promote donation after death. The Declaration of Istanbul further states that “Jurisdictions, countries and regions should strive to achieve self-sufficiency in organ donation by providing

a sufficient number of organs for residents in need from within the country or through regional cooperation.” The goal of the Madrid consultation was to confront the self-sufficiency paradigm from a practical perspective, developing a comprehensive strategic framework for policy and practice directed at the global challenges of a shortage of organs for transplantation and unmet patient needs. Therefore, the Madrid Resolution expresses both a pledge to progress in satisfying organ donation and transplantation needs, and a roadmap of how this may be achieved.

It was the intent that the consultation process should be comprehensive and holistic, encompassing different perspectives studied and discussed during the meeting. Eight different working groups were convened, with group members chosen to represent a variety of different clinical experiences and geographical regions, and to provide an interdisciplinary understanding of the issues. The eight groups identified specific goals and challenges, and proposed solutions and recommendations with respect to the following topics:

1. Assessing needs for transplantation.
2. System requirements.
3. Meeting needs through donation.
4. Monitoring outcomes.
5. Fostering professional ownership in the emergency department (ED) and intensive care unit (ICU).
6. The role of public health and society.
7. Ethics.
8. Measuring progress.

Each group was led by three individuals, who in advance of the meeting, worked together to guide the preparation of a draft document for discussion and refinement during the meeting. The outcomes of the working groups were also discussed in a plenary session. The final eight documents produced by the working groups complete the *Madrid Resolution on Organ Donation and Transplantation* and are based on a large body of evidence collected by participants before the consultation and reflecting their particular experiences representing 68 nations. The *Madrid Resolution* identifies the common challenges faced by both developing and developed countries, and the unique issues of particular societies and regions, and provides a diverse body of recommendations to governments, international organizations, and healthcare professionals regarding how to successfully meet the needs of patients. This document represents an immediate resource for policy makers and guide for practical initiatives. It is hoped that the *Madrid Resolution* will also inspire new work in this emerging and important field.

### The Resolution

Meeting the needs of patients with respect to organ donation and transplantation is a national responsibility that should be met primarily through a country’s own resources, with specific



regulated and ethical regional or international cooperation when appropriate. National accountabilities can be broadly defined as the creation of a national planning context for chronic diseases treatable through organ transplantation that encompasses capacity control, regulatory control, and determination of the appropriate ethical environments.

1. National capacity control involves: (a) development of adequate and appropriate healthcare infrastructure and workforce development, consistent with development level and economic capacity; (b) adequate and appropriate financing of organ donation and transplantation programmes; and (c) management of need by investment in chronic disease prevention and vaccination.
2. National regulatory control consists of: (a) adequate legislation, covering declaration of death, organ procurement, fair and transparent allocation, consent, establishment of transplant organizations, penalty of organ trafficking, and commercialization; (b) regulation covering procedures for organ procurement, reimbursement, and allocation rules; (c) systems for monitoring and evaluation, including traceability and surveillance, and enabling evaluation of programme performance.
3. National authorities need to lead normative change, from organ donation as a right of donor and recipient to a responsibility across all levels of society, through education, unambiguous legislation, and committed support. Meeting needs of patients while avoiding the harms of transplant tourism and commercial donation from living persons is an ethical imperative that relies on collective responsibility for donation after death, thereby contributing to the common good of transplantation for all. The WHO Guiding Principles for Human Cell, Tissue and Organ Transplantation provide the foundation for all efforts toward progress in meeting transplantation needs.

## Recommendations

Informing The Resolution are the detailed recommendations of the eight working groups convened as a part of the Third WHO Global Consultation on organ donation and transplantation. The key recommendations of these working groups are as follows:

### Recommendations With Respect to Assessment of Transplantation Needs

1. True need for transplantation cannot be defined by availability of treatment. Instead assessment of need must be multifactorial and take into account:
  - a) True incidence of end-stage organ failure, irrespective of treatment availability (in all age groups and for all organs).
  - b) Complexity of conditions and the drivers of need.
  - c) Nonmedical factors (e.g., economic, cultural, attitudinal, competing health priorities) that modify actual transplant needs within that setting.

2. Internationally consistent definitions, data, and tools need to be developed to accurately and comprehensively measure transplantation needs, thereby enabling a broader understanding of the issues facing different countries and facilitating the identification of global solutions.
3. An international registry of organ donation and transplantation should be established. The following national level data should be made available for this purpose:
  - a) National prevalence and incidence of end-stage organ failure and of diseases contributing to end-stage organ failure.
  - b) Availability of treatment for end-stage organ failure (transplant and non-transplant).
  - c) Waiting-list statistics, including “true” wait times.
  - d) Progression and outcomes of organ dysfunction.
  - e) Referral to organ replacement therapy (assist devices and transplantation).
  - f) Time to workup, time to acceptance onto the waiting list, and time to receipt of an organ.
4. All countries should have the ability to assess their needs for transplantation. Governments should:
  - a) Support the identification of organ failure or replacement needs as a priority for public health improvement;
  - b) Allocate resources to registry development (operational and surveillance/monitoring) and furthermore create a registry for conditions leading to the need for organ transplantation;
  - c) Invest in prevention programmes to reduce needs;
  - d) Ensure the equity principle is applied in needs assessment;
  - e) Create or support infrastructure and allotment of resources for all aspects of needs assessment.
5. With respect to needs assessment in transplantation, WHO should:
  - a) Identify as a resolution that all countries shall have the ability to assess their needs for transplantation by 2020;
  - b) Identify and outline the need for the use of a core minimum dataset by which international comparisons will become meaningful.
6. Professional societies and healthcare providers should:
  - a) Ensure consistency of definitions and use of metrics with respect to registry data;
  - b) Support identification of organ failure as a strategic priority;
  - c) Foster international enquiry, collaboration, and development in the area of needs assessment;
  - d) Promote and support education relating to needs assessment, including technical advice regarding methodologies, data interpretation, and applications;



- e) Promote scientific enquiry in the area of needs assessment, including validation studies;
- f) Ensure linkages with governmental agencies and policy makers to support translation of research.

### Recommendations With Respect to Systems and Organization

1. Clear and unambiguous legislative and regulatory frameworks are the foundation on which successful systems for organ donation and transplantation, based on ethical and transparent practices with respect to organ procurement, recovery, allocation and transplantation, are built. Governments should therefore:

- a) Enact transplantation legislation consistent with the WHO Guiding Principles. Legislation should address:
  - Standards for determining and declaring death;
  - Organ procurement from deceased and living persons;
  - Fair and transparent allocation to wait-listed patients, based on medical criteria;
  - Respect for the wishes of the deceased concerning consent;
  - Establishment of transplant organizations;
  - Prohibition of organ trafficking and commercialization.

Governments should also:

- b) Incorporate donation and transplantation into national health policies as a priority;
  - c) Support donation after death;
  - d) Invest in basic infrastructure and professional training;
  - e) Create a national waiting list and comprehensive registry of donors and recipients;
  - f) Create the necessary systems for ongoing regulation and oversight to ensure transparency and facilitate review of progress and the implementation of new strategic policies;
  - g) Lead public awareness of organ transplantation and commit to public education.
2. NTOs responsible for coordination and oversight, ethical practice, regulation, policy setting, maintenance of national data registries, and data protection are essential. Core functions are to include:
- a) Surveillance of practices, standards, and outcomes in organ donation and transplantation;
  - b) Assurance of ethically proper organ procurement and allocation, transparency of all organ donation and transplantation processes, and traceability of donated human materials;
  - c) Standardization of procedures and performance management of Organ Procurement Organizations (OPOs), related non-government organizations (NGOs),

individual transplantation centers, ethics committees, and transplant teams;

- d) Regulation and management of the reimbursement of reasonable and verifiable expenses incurred by the living donor, and reimbursement of hospitals that incur costs in donating or procuring organs;
- e) Oversight of the division of responsibilities across all organizations involved in organ donation and transplantation;
- f) Public endorsement of organ donation and transplantation and support of the process with mass media education and promotion.

3. When organization is based on OPOs, these organizations manage procurement activities independently of hospital transplant units, subject to government approval and regulation. The nature of OPOs will vary according to different national requirements and realities, although the essential functions are the same in every setting, which are as follows:

- a) Surveillance and detection of possible/potential donors at every acute care hospital.
- b) Donor management for the recovery of viable organs.
- c) Coordination of procurement, through a designated Organ Procurement Coordinator (OPC).

4. Performance is dependent on successful integration and coordination across systems. All countries performing transplantation need to organize a unified coordination that regulates organ donation and transplantation processes. In addition, international coordination facilitates cross-border exchange of organs, information and research, and it is critical to combat organ trafficking and transplant tourism.

### Recommendations with Respect to Organ Donation

1. Countries and jurisdictions should aim to maximize donation from deceased persons, maximize the outcome from each deceased donor, and optimize results of transplantation.

- a) Donation from deceased persons is a requirement; transplantation activity cannot rely on living donors.
- b) Both donation after brain death (DBD) and donation after circulatory death (DCD) are to be considered.
- c) Countries should enable transplants from living donors, as complementary to donation from deceased persons, by providing appropriate ethical and legal frameworks and donor care.

2. Donation after death is a process, at any stage of which losses of potential donors may occur. Therefore, to maximize donation from deceased persons, an organizational approach should be adopted with explicitly defined actions, roles, and responsibilities across the entire process. The Critical Pathway for organ donation is to be considered a general



framework of reference for systematizing the deceased donation process. The objectives of The Critical Pathway are as follows:

- a) To provide a common systematic approach to the process of donation from deceased persons, both for DBD and DCD.
  - b) To create common triggers to facilitate the prospective identification and referral of the possible deceased organ donor and precipitate the deceased donation process.
  - c) To provide common procedures to estimate the potential of organ donation from deceased persons and evaluate performance in the deceased donation process.
3. With respect to organ donation from deceased persons, governments should:
- a) Eliminate legislative impediments constraining the medicine and science of donation from deceased persons and organ transplantation;
  - b) Provide adequate support (including financial support) for organ donation from deceased persons and transplantation programmes;
  - c) Ensure equitable access to transplantation therapies and transparency of the system;
  - d) Through a NTO (see Recommendations with respect to Systems and Organization, number 2) provide oversight and ensure the development and implementation of the following:
    - The Critical Pathway;
    - Protocols for all steps of the process of donation after death, especially timely identification and referral;
    - Appointment of trained professionals, including donor coordinators, who are accountable for performance;
    - A data registry for ongoing evaluation of donation processes, estimation of the potential of donation from deceased persons, evaluation of overall performance, identification of areas for improvement, and factors critical to success;
    - Professional training and promotion of a national culture of donation.
4. With respect to donation from deceased persons, the WHO should:
- a) Promote the international implementation of The Critical Pathway;
  - b) Monitor the collection of relevant data assessing performance in organ donation for international benchmarking;
  - c) Foster regional cooperation in organ sharing that preserves equity between donor and recipient populations, and the efficient transplantation of otherwise discarded organs.

5. With respect to organ donation from deceased and living persons, healthcare professions should:

- a) Make every effort to maximize the number of organs recovered and transplanted;
- b) Support and promote DCD;
- c) Present the option of donation from living persons to families, with all practices in the donation of organs from living persons consistent with the principles of The Declaration of Istanbul.

#### Recommendations with Respect to Monitoring of Outcomes in the Pursuit of Self-Sufficiency

1. The purpose of registering data on transplant activities and outcomes is to identify areas in need of improvement; to enable system transparency, equity, and compliance; and to monitor system improvement both longitudinally within a given system and between systems through international benchmarking. Registries should be not only concerned with donors and recipients but also with infrastructure availability. They are a tool for quality assurance and policy making, and registry data may furthermore be used to raise awareness of the need for organ donation among the lay public and policy makers.
2. In all countries/regions, data should ideally be collected in the following areas:
  - a) Available infrastructure (hospital and organizational);
  - b) Regulatory oversight and health policy;
  - c) Current and likely future needs for transplantation;
  - d) Access to the waiting list and to transplantation;
  - e) Waiting-list outcomes;
  - f) Travel for transplantation and transplant tourism;
  - g) Organ donation from deceased persons;
  - h) Organ donation from living persons; and
  - i) Outcomes of transplantation (patient and graft survival).
3. Two complementary data collection systems are proposed:
  - a) A national/regional system, which has operational functions (allocation) and monitoring and evaluation.
  - b) An international system with a global perspective, under an International Data Group. The International Data Group would establish standardized definitions/metrics, provide assistance to national/regional registries, facilitate comparisons between systems and international benchmarking, identify regions in need of data, guide individual nations and systems, and facilitate research into special patient groups where small patient numbers would otherwise be restrictive.
4. With respect to monitoring, governments should:
  - a) Support national/regional registries with infrastructure and human resources;



- b) Establish responsibility for operation and governance of this registry;
  - c) Facilitate cooperation between government and NGOs in monitoring outcomes and disseminating information to the scientific community, the public, and policy makers; and
  - d) Use registry data to assess the impact of policy change and inform the need and direction of new legislation and policy.
5. Professionals and professional societies should:
- a) Provide content expertise;
  - b) Cooperate on the consistency of data elements across the continuum of organ failure (i.e., chronic kidney disease, dialysis, and transplantation); and
  - c) Facilitate development of an International Data Group for the ongoing collection of data that will empower individual countries and regions in the pursuit of self-sufficiency.

#### Recommendations with Respect to Fostering Emergency and Intensive Care Department Professional Ownership of Organ Donation

1. Organ donation is a different process than organ transplantation and requires different skills and personnel to maximize its potential. Possible and potential deceased donors are found in the ICUs and increasingly in EDs. Physicians and nurses involved in acute care need to be aware of their critical role in identifying possible and potential donors and to be engaged in the development of programmes for organ donation from deceased persons. Therefore, the pursuit of self-sufficiency requires ICU and ED doctors and nurses to:
  - a) Be aware of the need for organ donation and therefore want to facilitate it;
  - b) Know how to facilitate organ donation and have the educational, technical, legal and ethical tools to do so;
  - c) Be supported by their colleagues, hospitals and health authorities in facilitating organ donation;
  - d) Be recognized as experts in this area and in educating their colleagues;
  - e) Take the lead in enabling their facility to provide this service, including appropriate counseling for families.
2. To foster professional ownership of self-sufficiency in the ED and ICU, governments should:
  - a) Under legal, ethical, and medical frameworks for practice, include:
    - Standards for determining death, enacted by the legislature, and accepted by the profession and public;
    - Evidence-based tests and methods that physicians can readily use to apply these standards in the ED and ICU;
  - b) Establish responsibility for operation and governance of this registry;
  - c) Facilitate cooperation between government and NGOs in monitoring outcomes and disseminating information to the scientific community, the public, and policy makers; and
  - d) Use registry data to assess the impact of policy change and inform the need and direction of new legislation and policy.
3. Professional bodies should:
  - a) Provide training and guidance for Emergency/Intensive Care nurses and physicians, covering:
    - The need for organ donation and the importance of the role of acute care physicians and nurses;
    - Identification of possible and potential donors;
    - Death determination;
    - Protocols on how treatment decisions (e.g., for patients with severe neurologic injuries) relate to donor status and to alternative (circulatory/respiratory and neurologic) bases for determining death;
    - Protocols on how to manage the dying process for patients whose deaths will be determined on circulatory/ respiratory or neurological grounds, and on post-death maintenance of body;
    - How to make donation an understandable and acceptable choice for families of dying patients;
    - Effective interaction with the OPO and transplantation team.
  - b) Support the development of academic and scientific research activity in the emergency and intensive care communities to create a professional investment in the best practice approaches that emerge.
4. Hospitals should:
  - a) Give local ED and ICU staff “ownership” of solving the problems and developing protocols for managing the care of potential donors;
  - b) Identify individuals within the emergency or intensive care team who can act as role models or “champions” to increase the profile of organ donation within that facility and provide education to the team on all relevant issues;
  - c) Appoint donor coordinators within hospitals to facilitate communications among emergency and intensive care staff, bereaved families and transplantation services;
  - d) Include the possibility or potential for organ donation in every end-of-life care pathway in the ED/ICU;
  - e) Improve the interface between the ED/ICU and the local transplant team and responsible National Authority;
  - f) Identify strategies to minimize the effects of lack of resources on the conversion of potential donors to actual donors;
5. Professionals and professional societies should:
  - a) Provide content expertise;
  - b) Cooperate on the consistency of data elements across the continuum of organ failure (i.e., chronic kidney disease, dialysis, and transplantation); and
  - c) Facilitate development of an International Data Group for the ongoing collection of data that will empower individual countries and regions in the pursuit of self-sufficiency.



- g) Audit outcomes of the donation process within each facility to allow identification of potential areas for improvement, set achievable targets, and formally recognize excellence.

#### Recommendations with Respect to the Role of Public Health and Society

1. Roles for public health in the pursuit of self-sufficiency include:

- a) Prevention of the frequent causes of end-stage organ failure (diabetes, hypertension, alcohol abuse, hepatitis B virus [HBV], hepatitis C virus [HCV], coronary artery disease [CAD], and chronic obstructive pulmonary disease [COPD]), including primary, secondary, and tertiary prevention;
- b) Promotion of organ donation among health professionals and the general public;
- c) Development of effective healthcare systems capable of supporting efficient organ procurement, equitable allocation, safety and quality, and national disease prevention programmes.

2. The act of donation is itself an individual decision that interacts with the social setting and the institutional and regulatory framework into which an individual is embedded. Family refusal, together with failure to identify possible and potential donors, is the most significant impediment to increase rates of donation. Roles for society in the pursuit of self-sufficiency include:

- a) Public education efforts to counter poor awareness, distrust of medicine, and misconceptions about donation and transplantation, while instilling notions of reciprocity, solidarity, and building public willingness to support organ donation;
- b) Community funding for donation and transplantation through public finance and charitable sources.

3. Recommendations for public health:

- a) Reduce demand for transplantation by prevention of major risk factors for end-stage organ failure and by developing healthcare systems able to effectively and equitably meet the challenges of chronic diseases, particularly diabetes and hypertension;
- b) Develop awareness and increased willingness of medical professionals to be involved in the donation and transplantation process, encourage a stakeholder role for ICU/ED physicians, and develop specific education programmes for primary care physicians, nurses, medical students, and allied health professionals;
- c) Develop culturally sensitive awareness programmes, using public health methodologies to promote trust and strengthen commitment to organ and tissue donation in the community;
- d) Increase the efficiency of healthcare systems and transplant programmes by using private and non-

government sources of funding as appropriate, and developing synergies between the government and NGOs.

4. Recommendations for society:

- a) Provide regular and consistent normative change communication programmes and culturally sensitive awareness programmes directed at community and faith-based organizations;
- b) Provide public recognition of donors and their families and actively manage adverse publicity;
- c) Ensure all aspects of donation and transplantation are transparent to the public, and develop educational programmes to dispel myths and misconceptions, taking into account the range of community beliefs and values.

5. In settings where resource limitations and health sector development constrain the development of organ donation and transplantation programmes, the prevention of end-stage organ failure, within the context of wider public health goals, is crucial to self-sufficiency. In such settings, delivery of transplantation therapy may be approached through locally relevant approaches to financing, using both private and non-governmental sources of funding, and developing synergies between governments, NGOs, and charities.

#### Recommendations with Respect to Ethics in the Pursuit of Self-Sufficiency

1. Self-sufficiency must be supported by normative change, reframing organ donation from a matter of the rights of donor and recipient, to a responsibility functioning at all levels of society (individual, government, professional, etc). The self-sufficiency paradigm is based on three main ethical premises:

- a) The human right to health requires that governments engage in prevention and providing transplantation services. The responsible administration of scarce resources such as organs also encompasses concerted actions directed toward prevention of end-stage organ failure.
- b) Organs should be understood as a social resource; therefore, equity should govern both procurement and allocation.
- c) Organ donation should be perceived as a civic responsibility toward fellow citizens; in contrast, organ markets and transplant tourism lead to morally unacceptable coercion and exploitation.

2. In accordance with The Declaration of Istanbul and the WHO Guiding Principles, self-sufficiency promotes the following ethical principles:

- a) Minimizing harm/reducing suffering—both decreasing need for transplantation and efforts to maximize the number of organ available for transplantation are emphasized.



- b) Justice—an equitable distribution of benefit and burden and the elimination of exploitation are central to the self-sufficiency paradigm.
  - c) Respect for persons—self-sufficiency avoids undue incentives while appealing to solidarity and civic responsibilities toward the community.
3. With respect to ethics and self-sufficiency:
    - a) Governments/health authorities should be accountable for the ethical integrity of organ donation and transplantation systems;
    - b) Health professionals should receive training in the ethical aspects of organ transplantation and be vigilant concerning unethical or illegal behavior, and professional societies should foster enquiry on questions of culture, values, and ethics relating to self-sufficiency;
    - c) Civil society should establish an ethos of social responsibility and solidarity in meeting the community's transplantation needs through participation in donation after death, necessitating the engagement of community- and faith-based organizations and NGOs.
- Overall Recommendations with Respect to Effective Progress in the Pursuit of Self-Sufficiency**
1. The capability of individual countries/regions to meet transplantation needs is determined by economic resources, systems development, and existing health priorities. The minimum level of transplantation capability is defined as the presence of a few medical professionals who have the capability to provide appropriate presurgical and postsurgical management of transplant recipients and living donors in a context of no local transplantation activity; maximum capability is defined as a comprehensive multiorgan transplant programme that provides an adequate supply of transplantable organs to meet the needs of the population. By defining successive levels of capability, the inclusive nature of the self-sufficiency paradigm is reinforced, and it is possible to describe a framework for evolution and achievement in organ donation and transplantation that is adaptable to all contexts.
  2. The pursuit of self-sufficiency involves the development and implementation of strategies aimed at increasing national/ regional transplantation capabilities to progress from one level of capability to the next, in a manner that is consistent with local realities and does not distort existing health priorities. Countries/regions evolve toward greater self-sufficiency in organ donation and transplantation through incremental achievements in each of the following domains:
    - a) Resources and professional development for donation and coordination;
    - b) Legal and regulatory frameworks;
    - c) Resources and professional development for transplant services;
    - d) Government and other resources;
    - e) Community involvement;
    - f) Assessment and minimization need for organs.
3. To enable evolution and achievement in transplantation capability, Governments should:
    - a) Acknowledge their responsibilities in managing endstage organ failure from prevention to treatment in their population and designate a focal point/coordinating authority;
    - b) Derive an integrated strategy for the care of patients with end-stage organ failure, from prevention of organ disease and organ failure to replacement therapies including transplantation, to optimize the use of resources;
    - c) Include the elements of organ donation and transplantation in their national health plan and assess their own level of transplantation capability;
    - d) Allocate resources, develop infrastructure, and strengthen health systems to support the achievement of these goals;
    - e) Report national data on organ donation and transplantation activities to the Global Observatory on Donation and Transplantation (GODT);
    - f) Participate in public education and engage professionals, professional societies, NGOs, and the community;
    - g) Foster regional and international cooperation in the pursuit of these goals.
  4. To support national/regional efforts to pursue self-sufficiency, WHO should:
    - a) Urge MS to adopt and implement the principles of the *Madrid Resolution*;
    - b) Urge MS to self-assess their level of transplantation capability, to aid the identification of areas for improvement;
    - c) Monitor progress in levels of achievement in the pursuit of self-sufficiency across MS;
    - d) Align the range of quantifiable indicators collected by the GODT to the framework of the *Madrid Resolution*;
    - e) Develop international standards, guidelines, and tools, in collaboration with professional organizations, for the advancement of transplantation policy and practice;
  5. To support national/regional efforts to pursue self-sufficiency, professionals and professional societies should:
    - a) Acknowledge their responsibilities with respect to their own professional development, adoption of ethical practices, maintenance of standards, and training for donation and procurement;
    - b) International societies should support the establishment and work of the relevant national societies to further their missions with respect to organ donation and transplantation;



- c) Provide professional advice to MS and assistance for the development of standards for accreditation and quality assurance;
- d) Participate in professional and public education and engage other professionals and the public in the advancement of organ donation and transplantation;
- e) Encourage research, especially clinical research directed at maximizing benefits, minimizing costs, and optimizing resource allocation in organ donation and transplantation.

## CONCLUSIONS

*The Madrid Resolution on Organ Donation and Transplantation* recognizes that donation and transplantation are more than a good gesture and a medical service. For patient needs to be met, all citizens and residents must be involved. From a public perspective, national attempts to meet patient needs rely on a communal appreciation of the value of organ donation. The concept of donating human body parts to save the life of another as a civic gesture is one that should be taught at school as a part of health education along with

promotion of healthy life style. The organizational requirements and allocation of resources necessary to maximize donation from deceased donors and ensure equitable access to transplantation services, and the implementation of preventive interventions to alleviate needs for transplants, mandate the active commitment of Government. The benefits to be gained extend way beyond the successful transplantation of patients. The pursuit of the goal of ensuring a national responsibility in satisfying the donation and transplantation needs of a given population, outlined in the Madrid Declaration, has the capacity to strengthen the public health and community values of reciprocity and solidarity, while it is the only safe guard against the temptation of yielding to trade in human organs.

## REFERENCES

1. Steering committee of the Istanbul Summit. Organ trafficking and transplant tourism and commercialism. *The Declaration of Istanbul*. *Lancet*, 2008;372:5 (Available at: <http://www.declarationofistanbul.org>)
2. WHO Guiding Principles; WHA 63.22/2010 (Available at: <http://www.who.int/transplantation/en/>)





Cooperation between Countries of the Black Sea  
Area (BSA): Development of the Activities  
Related to Donation and Transplantation  
of Organs, Tissues and Cells





# Cooperation between countries of the Black Sea Area (BSA): Development of the activities related to donation and transplantation of organs, tissues and cells

## PROJECT BACKGROUND

Human to human (allogeneic) transplantation of cells, tissues and organs has become the best and often the only treatment for a wide range of end stage organ failure. However, as the number of transplants has grown rapidly over the past two decades, the demand for human transplantation has also increased, resulting in a continuing shortage of human material, particularly organs, with the risk of encouraging unethical practices.

The development of organ transplantation in the countries of the Black Sea Area (BSA) dates back from the late 1970s; mainly in the form of kidney transplants from Non-Heart Beating Donors (NHBD). From the early 1990s, activities in the field of transplantation began to decline and, in some countries, have ceased.

Over the last few years, the Council of Europe (CoE) and World Health Organization (WHO) began implementing some projects that supported the development of a common and constructive attitude towards various transplantation issues in these countries. Efforts were mainly directed towards the development of effective legislative frameworks and the establishment of national transplant authorities and national transplant programmes. The cooperation with Moldova is a good example of these efforts.

It is important to note that donation and transplantation of cells, tissues and organs raise ethical and legal issues that need to be addressed according to various cultural backgrounds. Nevertheless, it is important to identify and share experiences from local initiatives which could provide models for implementation of safe donation and transplantation processes.

The work of the Council of Europe in the area of organ transplantation started in the 1950s. The relevant committee is the European Committee on Organ Transplantation (CD-P-TO), which focuses on the elaboration of high ethical, quality and safety standards in the field of organ, tissues and cells transplantation, promoting the principle of non-commercialisation of organ donation and strengthening the measures to avoid organ trafficking.

## THE PROJECT AND KEY PLAYERS

Based on the Council of Europe recommendations and the experience gained by the experts from the CD-P-TO in other programmes in the BSA, the CD-P-TO has now started a collaborative project through which a regional strategy will be channeled to promote transplantation activities in the area.

The Council of Europe member states from the BSA (Armenia, Azerbaijan, Bulgaria, Georgia, Moldova, Rumania, Russia,

Turkey and Ukraine) will, through this project, start a long term regional cooperation in order to structure, develop and strengthen activities and programmes related to the donation and transplantation of organs, tissues and cells.

A kick-off meeting, organized regionally in Chisinau (Moldova), launched the project on 1-2 July 2011. It gathered professionals from the transplantation and/or the organisational system nominated by their respective Ministries of Health. Specialists in the field of transplantation from countries with established transplant systems, such as France, Italy and Spain, participated and met together with experts from the partner countries of the Black Sea Area.

An Advisory Board of experts from France, Italy, Spain and Germany will follow and support the progress of the BSA PROJECT.

## SPECIFIC OBJECTIVES

- to review the existing laws on transplantation of organs, tissues and cells and to promote the implementation of an effective legislative framework;
- to contribute to the establishment of national transplant authorities and national transplant programmes where these do not exist, and to support efforts in strengthening existing transplant services;
- to educate the public, professionals and media about transplantation and the need for services to be developed in the countries involved in the project;
- to establish action plans for training and to identify areas where additional specialist expertise or training are required as the basis for a training and professional development strategy;
- to elaborate recommendations and documents of consensus that are agreed upon by all the participants;
- to encourage networking and enhance international co-operation;
- to establish pilot actions to be developed in specific settings.

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## BSA TRANSPLANT NETWORK DATA

Data related to national donation and transplantation activities from all the BSA countries has been collected. This information provides an updated overview of the legal and organisational

situation in the participating countries and sets ground for future regional priorities for action. Future data collections will improve the picture and allow following the trends and progress. A summary of this information is shown in the Tables below.

### SECTION 1: LEGISLATIVE ASPECTS

	<i>Armenia</i>	<i>Azerbaijan</i>	<i>Bulgaria</i>	<i>Georgia</i>	<i>Moldova</i>	<i>Romania</i>	<i>Russia</i>	<i>Turkey</i>	<i>Ukraine</i>
Regulatory framework on organ transplantation and donation	YES	YES	YES	YES	YES	YES	YES	YES	YES
Regulatory framework on death diagnosis	YES	NO	YES	YES	YES	YES	YES	YES	YES
Law concerning prohibition of organ trafficking	YES	YES	YES	YES	YES	YES	YES	YES	YES
Presumed consent (PC) or informed consent (IC) legislation	PC	PC	PC	IC	PC	IC	PC	IC	PC
Donor or non-donor registry	NO	NO	YES	YES	YES	NO	NO	YES	NO

### SECTION 2: NATIONAL AUTHORITIES

	<i>Armenia</i>	<i>Azerbaijan</i>	<i>Bulgaria</i>	<i>Georgia</i>	<i>Moldova</i>	<i>Romania</i>	<i>Russia</i>	<i>Turkey</i>	<i>Ukraine</i>
Government recognized authority responsible for overseeing & supporting donation & transplantation (national level)	YES	NO	YES	YES*	YES	YES	YES	YES	YES
Specific organization/institution responsible for national coordination of donation and transplantation activities	YES	NO	YES	NO	YES	YES	NO	YES	YES
Periodic reports on donation and transplantation	NO	NO	YES	YES	NO	YES	YES	YES	YES
Ethical Committee dealing with transplant activities nationally or regionally	NO	NO	YES	YES	YES	YES	NO	YES	YES

\* Non official.

### SECTION 3: ORGANISATIONAL ASPECTS

	<i>Armenia</i>	<i>Azerbaijan</i>	<i>Bulgaria</i>	<i>Georgia</i>	<i>Moldova</i>	<i>Romania</i>	<i>Russia</i>	<i>Turkey</i>	<i>Ukraine</i>
Training programs to harmonize practices for staff involved in <u>organ procurement</u>	NO	NO	YES	NO	NO	YES	YES	YES	YES
Training programs to harmonize practices for staff involved in <u>organ transplantation</u>	NO	NO	YES	NO	NO	YES	YES	YES	YES
Adequate and continuous education campaigns	NO	YES	YES	NO	NO	NO	NO	NO	YES
Educational campaigns in schools or universities	NO	NO	YES	NO	NO	NO	NO	YES	NO



## SECTION 4: TRANSPLANT ACTIVITY

### 4.1. Number of transplant centres in participating countries

Type of transplant activity	Armenia	Azerbaijan	Bulgaria	Georgia	Moldova	Romania	Russia	Turkey	Ukraine
Kidney	1	2	4	2	2	5	31	59	7
Liver	0	1	2	0	2	1	11	34	2
Pancreas	0	1	0	0	0	1	3	5	0
Heart / Lung	0	0	2/0	0	1	2/1	7	14	2

### 4.2. Number of transplant performed in 2010 in participating countries

Kidney	8	2	48	8	0	212	1.037	2.502	82
Liver	0	10	15	0	0	51	209	695	12
Pancreas	0	0	0	0	0	0	8	29	0
Heart / Lung	0	0	5/0	0	0	7/0	47	89	1

### 4.3. Number of patients on the waiting list at the end of 2010 in participating countries

Kidney	8	150	915	0	0	2.661	950	17.033	900
Liver	0	20	26	0	0	453	500	1.484	0
Pancreas	0	0	0	0	0	73	100	182	0
Heart / Lung	0	0	25/0	0	0	166/25	250	218	16

## LIST OF PARTICIPANTS CD-P-TO (12-13/05/2011, Strasbourg)

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### BELGIUM

### BULGARIA

### CYPRUS

### CZECH REPUBLIC

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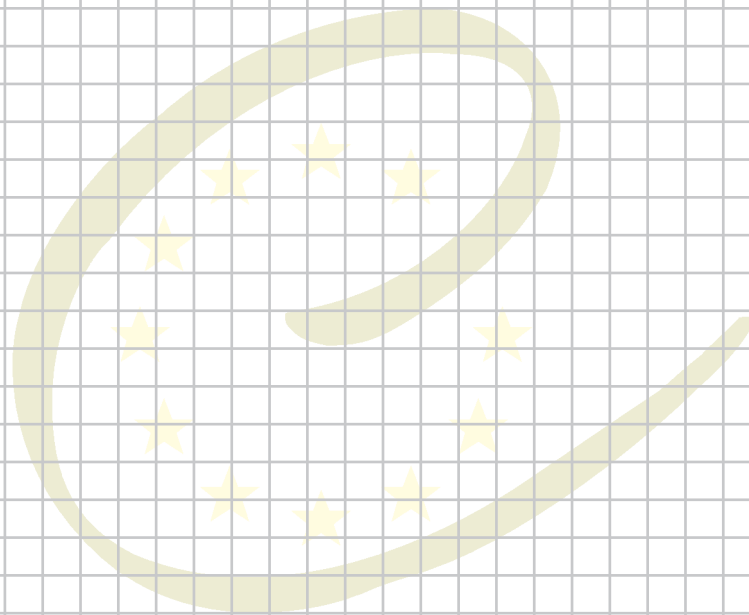
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### WHO

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# Guide to the Safety and Quality Assurance for the Transplantation of Organs, Tissues and Cells

4<sup>th</sup> Edition

## Why a European Guide?

Transplant medicine and transplantation have progressed during the last decades, in a way that nobody would have imagined before. Organ transplantation is, in many cases, the only treatment for end-stage organ failure. The number of transplantations performed is only limited by organ availability, which is very much dependant on how criteria for organ donation can be extended in relation to functional parameters and the risks of disease transmission. The transplantation of organs, tissues and cells offers major therapeutic benefits and improvements in quality of life, but raises a number of questions of ethical principles.

The Council of Europe is the leading standard-setting institution in this field since the 1950s. It approaches organ transplantation from an ethical and human rights perspective, taking compliance with the principles of non-commercialisation and voluntary donation of substances of human origin as the basis for all ethical concerns in this respect. Its work includes assuring the safety and quality of organs, tissues and cells, tackling the organ shortage, promoting living donations and preventing and minimising organ trafficking.

A priority of this work programme is the elaboration of the *Guide to the Safety and Quality Assurance for the Transplantation of Organs, Tissues and Cells*. The European Committee on Organ Transplantation (CD-P-TO), the Steering Committee in charge of transplantation activities for the European Directorate for the Quality of Medicines & HealthCare (EDQM, Council of Europe), assisted by leading European experts, is responsible for producing regular updates of the guide, in addition to other projects.

## Who is the guide designed for?

The guide collates data and gives expert opinion to provide transplant professionals with the most up-to-date information about the advances in their field. Its aim is to provide guidance for all those involved in order to maximise the quality of organs, tissues and cells and to minimise risks, and thereby increase the success rate of transplants. It includes safety and quality assurance standards for procurement, preservation, processing and distribution of organs, tissues and cells of human origin used for transplantation purposes. In order to increase safety for patients on waiting lists and recipients of organs, it is essential that physicians in charge of identifying potential donors, transplant co-ordinators involved in managing the donation process, and transplant physicians responsible for organ allocation, have easy access to this information.

## What information is contained in the guide?

The guide applies to the donation and transplantation of organs, tissues and cells of human origin for therapeutic purposes.

## Publication and purchase of the guide

The 4<sup>th</sup> Edition of the guide is now available in both paper and online versions in English, French and Russian. An online version in Spanish will be available by the end of 2011. Purchase of a printed guide gives access to the online version in all the available languages.

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