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OPTN/SRTR 2011 Annual Data Report: **international data**

ABSTRACT For the first time, OPTN/SRTR has undertaken to publish global transplant rates as part of its Annual Data Report. Understanding why rates vary from country to country may lead to a better understanding of how to improve access to transplant everywhere. Availability of information varies substantially from country to country, and how complete and accurate the data are is difficult to ascertain. For Canada, Malaysia, and the United Kingdom, data were supplied at SRTR request from well-known registries. For many other countries, SRTR was unable to obtain information, and data from the World Health Organization's Global Observatory on Donation and Transplantation were used. Transplant counts and rates vary substantially around the world, likely due to 1) differences in rates of end-organ diseases, 2) economic differences in the ability to provide transplants or other end-organ disease treatment, 3) cultural differences that might support or hinder organ donation and transplant, and 4) reporting differences.

KEY WORDS End-stage organ disease, international transplant counts, international transplant data, international transplant rates.

Life is totally different. You know, it's easy to get in a comfortable rut and not notice the clock ticking. Then, suddenly, you realize your time may run out. My new life has given me an opportunity to try new things. I don't need to be entertained anymore – there's ample entertainment in everyday things.

Dave, liver recipient

Introduction

This year, for the first time, OPTN/SRTR has undertaken to publish global transplant rates as part of its Annual Data Report.

For many reasons, comparing transplant rates between countries may be beneficial. In particular, understanding why rates differ from country to country may lead to a better understanding of how to improve access to transplants everywhere. Simply put, if one country has a successful transplant system, then other countries can learn from its techniques and approaches, thus improving transplantation around the world.

An example of how international comparisons can lead to knowledge acquisition is the story of deceased donor kidney transplant in Spain (1,2). For several years, Spain's higher rate of deceased donor transplants, in relation to most comparable countries, has been recognized. This has led to efforts to better understand the Spanish system and to study how successful features of the Spanish system can be adopted by other countries.

The availability of information on organ transplant rates varies substantially from country to country, and how complete and accurate the data are in each case is often difficult to know. Nevertheless, we have attempted to provide the best information currently available.

Methods

We contacted several registries and individual countries and asked them to share information on the number of transplants performed in their country or countries, excluding transplants in individuals from their countries that may have been performed elsewhere.

We used OPTN data for transplant counts in the United States. For Canada, Malaysia, and the United Kingdom, we used data supplied at our request from well-established registries. For many other countries, we have so far been unable to obtain information; in these cases, we used data from the World Health Organization's Global Observatory on Donation and Transplantation (3,4). These data have been collected by La Organización Nacional de Trasplantes (ONT), which operates under the auspices of the Spanish Ministry of Health. The ONT collects data annually using a survey instrument, and reports both transplant numbers and rates in the per million population unit. The ONT transplant rates per million popula-

tion are calculated using data from the United Nations Population Fund report.

In this chapter, we report transplant counts by individual organs. Counts for the more common multi-organ transplants are included in the counts for individual organs as follows:

- Kidney: transplants reported as kidney plus those reported as kidney-pancreas
- Pancreas: transplants reported as pancreas plus those reported as kidney-pancreas
- Heart: transplants reported as heart plus those reported as heart-lung
- Lung: transplants reported as lung plus those reported as heart-lung

We report our findings as both counts and rates per million population. We recognize that the per million population unit may not always be the best measure of transplant rates. In comparing transplant rates between countries, obvious differences that may affect those rates should be accounted for. However, examining differences in raw numbers and rates per million population is a place to start. These observed differences suggest that it may be useful to collect additional information worldwide.

Results and Discussion

Transplant counts and rates vary substantially between countries around the world. Reasons for this variability likely include: 1) differences in the rates of end-organ disease, 2) economic differences in the ability to provide transplants or other treatments for end-organ disease, 3) cultural differences that might support or hinder organ donation and transplant, and 4) reporting of transplants.

Country-to-country variability in the underlying incidence of end-organ disease can be expected to affect the organ transplant rates. For example, the US has one of the highest rates of end-stage renal disease (ESRD) in the world. In the US in 2009, the incidence of ESRD was 371 per million population (5). Therefore, it should not be surprising that the US also has one of the highest rates of kidney transplant in the world (Figure 2.1). However, other factors undoubtedly play a role in determining transplant rates. The incidence of ESRD in Norway in 2009 was 116 per million population, or approximately

one-third the incidence in the US. Nevertheless, in 2010, rates of kidney transplant were similar in Norway and the US: 59.2 versus 57.5 per million population, respectively (Figure 2.2).

Socioeconomic factors likely play a role in access to transplant worldwide. For example, in 2010 there was a strong correlation between the Human Development Index (HDI) and the rate of deceased and living donor kidney transplant among World Health Organization member states (6). The HDI is a composite score that includes life expectancy, adult literacy, school enrollment, and gross domestic product. Similarly, rates of liver transplant are lower in countries with lower HDIs (4). Cultural differences may influence transplant rates as well. For example, Japan has a very high HDI, but lower rates of kidney transplant compared with countries with similar HDIs. The thoroughness of transplant reporting could also vary by country; unfortunately, this is difficult to assess, with such varied systems used from country to country to collect these data.

Worldwide, use of living kidney donors varies widely (Figures 2.5, 2.6). Among countries with active kidney transplant programs in 2009-2010, defined by at least 50 transplants in those 2 years, the proportions of kidney transplants from living donors varied from less than 10% in Chile, Columbia, Croatia, Cuba, Czech Republic, Estonia, Finland, France, Italy, Poland, Portugal, Slovakia, and Uruguay, to more than 75% in Algeria, India, Iran, Japan, Kenya, Kuwait, Lebanon, Mexico, Nepal, Nigeria, Pakistan, Philippines, Sudan, Syria, Tunisia, and Turkey. In the US, where the most kidney transplants are performed, more than 35% are from living donors.

From 2006-2010, overall rates of kidney transplant changed little in most countries (Figure 2.2). Countries where rates increased by more than 10% per year include Croatia, Estonia, Paraguay, Thailand, Tunisia, and Turkey. On the other hand, kidney transplant rates in El Salvador, Japan, and the Philippines declined by more than 10% per year over the same period. Pancreas transplants declined by 10% or more per year in Croatia, Italy, and New Zealand from 2006-2010. Except for increases of more than 10% in Argentina, Ireland, and Sweden, pancreas transplant rates changed little in most other countries (Figure 3.2).

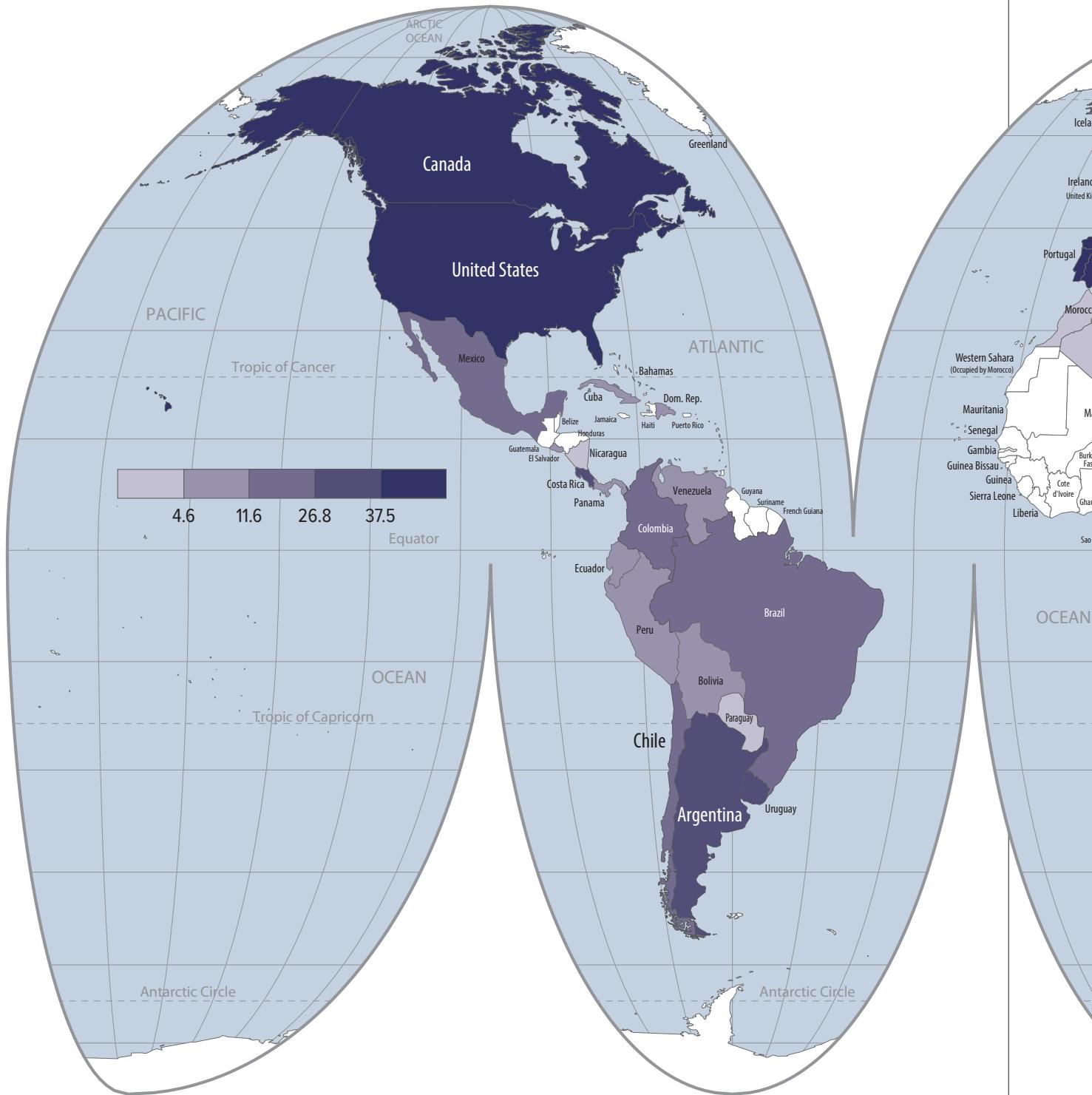
Rates of liver transplant increased by more than 20% per year from 2006-2010 in several countries, including Croatia, Iran, Lithuania, Romania, Slovenia, Thailand, and Turkey, and

declined in very few countries (Figure 4.2). In the past 5 years, lung transplant rates have remained stable, and increased by more than 10% per year only in countries that had 2006 rates of less than 0.2 transplants per million population (Figure 7.2). Heart transplant rates increased by more than 10% per year in Croatia, Slovakia, and Slovenia; however, heart transplant rates changed little in most other countries (Figure 6.2). Few countries are performing intestinal transplants; in 2010, countries performing more than one intestinal transplant included Argentina (7 transplants), Canada (3), Columbia (6), France (9), Germany (10), Iran (4), Italy (6) Japan (4), Spain (5), Turkey (3), the United Kingdom (18), and the US (151). Countries reporting one intestinal transplant in 2010 were Australia, Finland, India, Luxembourg, and Switzerland (Figure 5.4).

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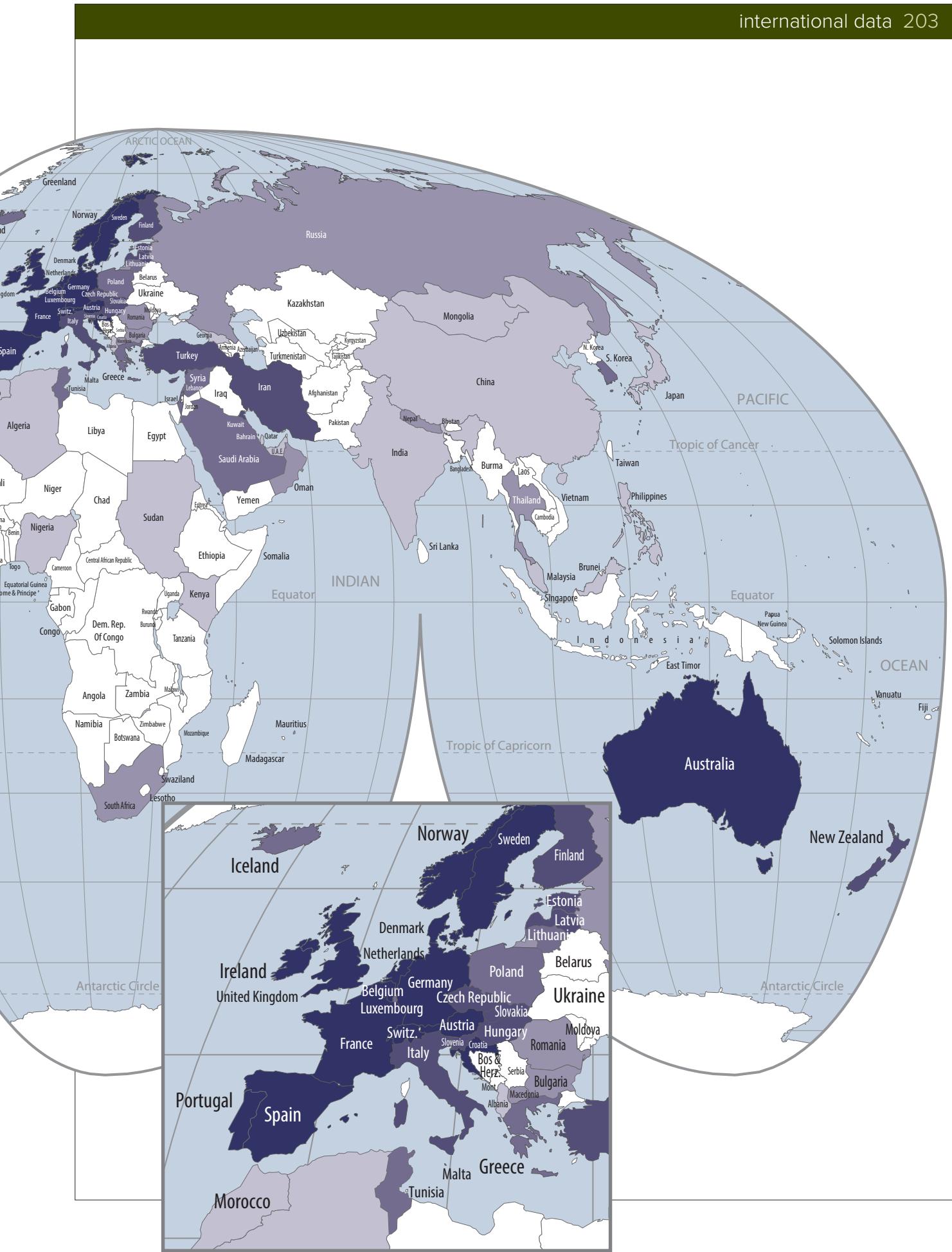
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global map: kidney transplants

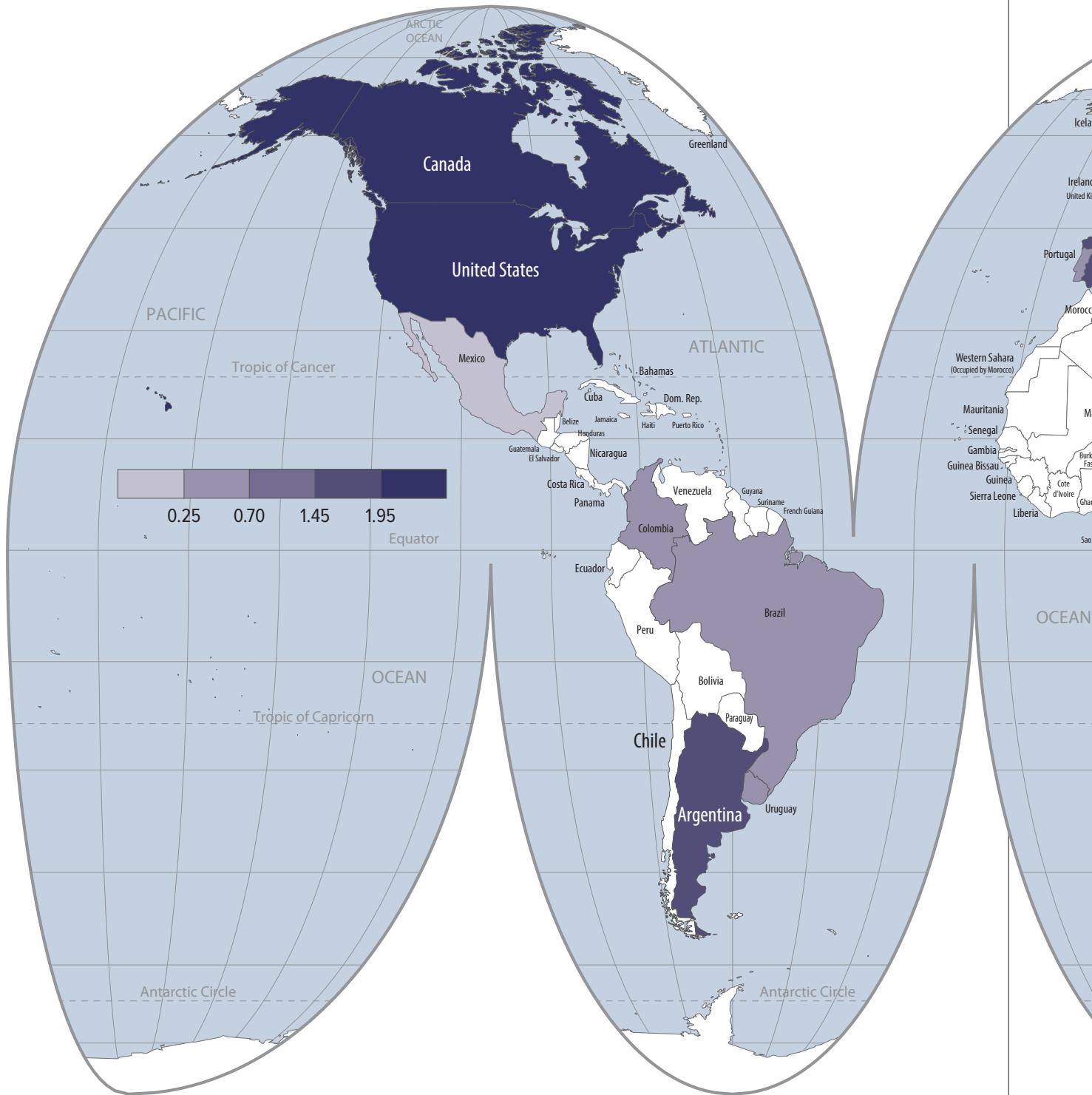


INTL 1.1 Kidney transplant rates per million population, by country, 2010

Numerator for kidney transplant rate includes kidney-alone and kidney-pancreas transplants.

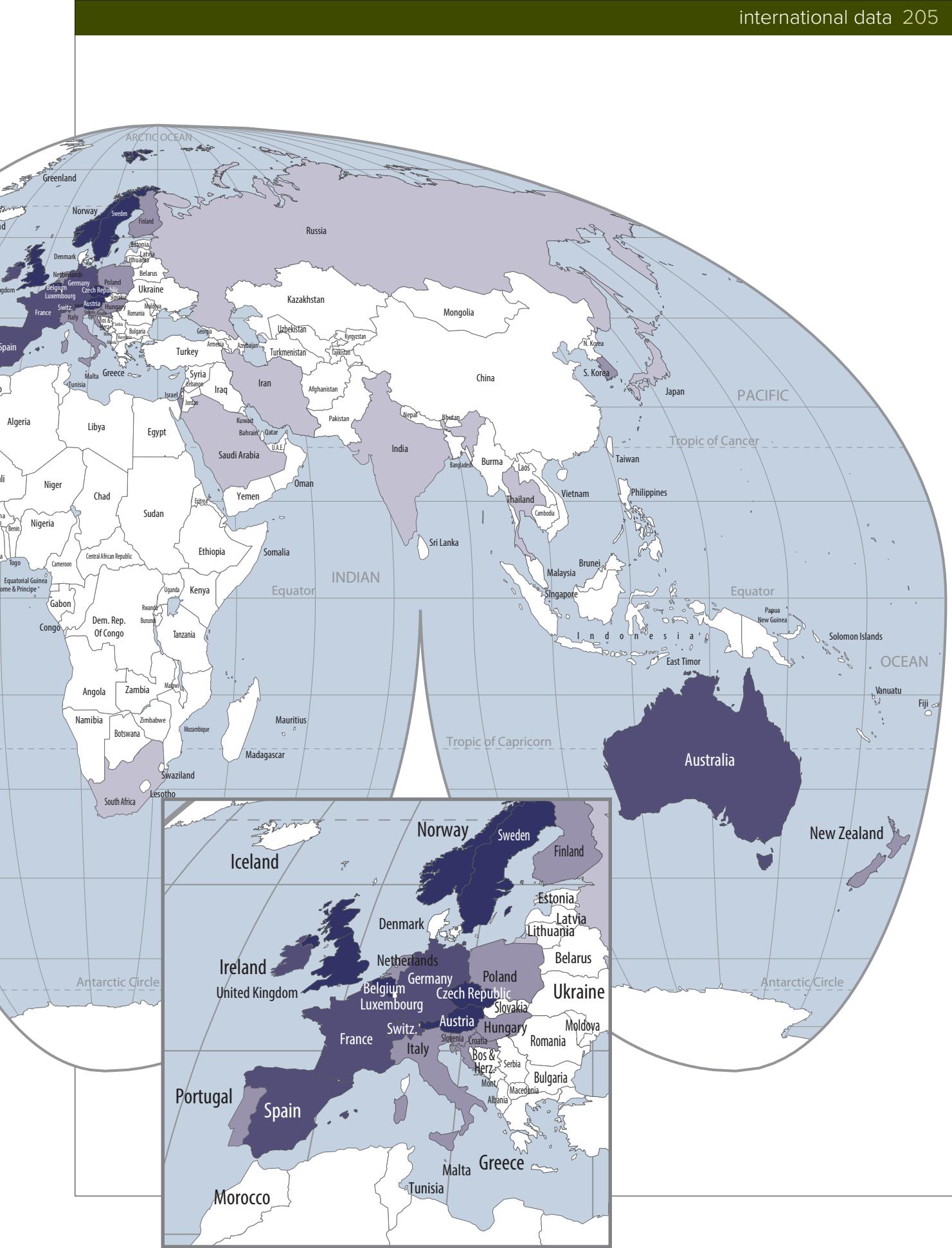


global map: pancreas transplants

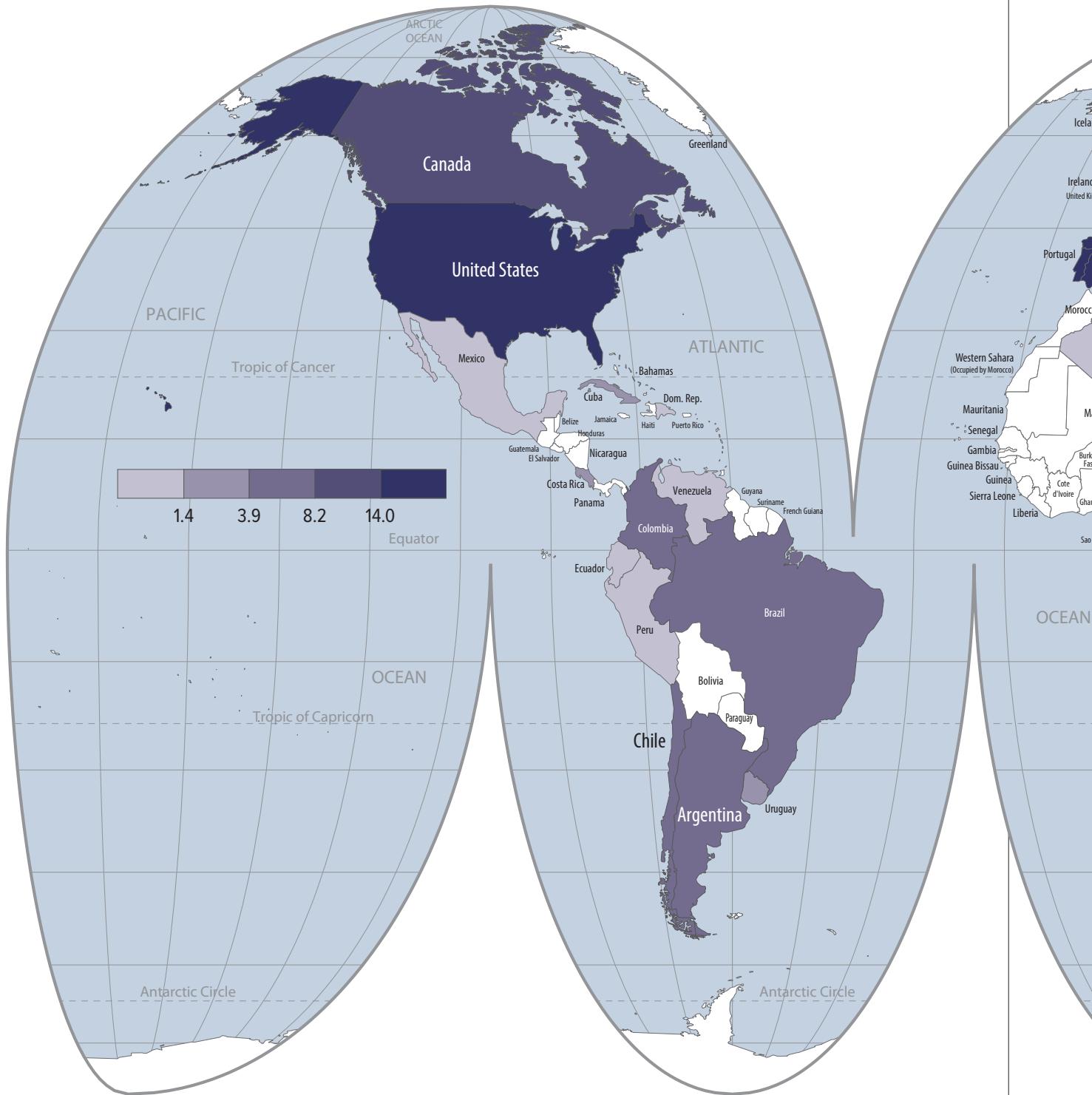


INTL 1.2 Pancreas transplant rates per million population, by country, 2010

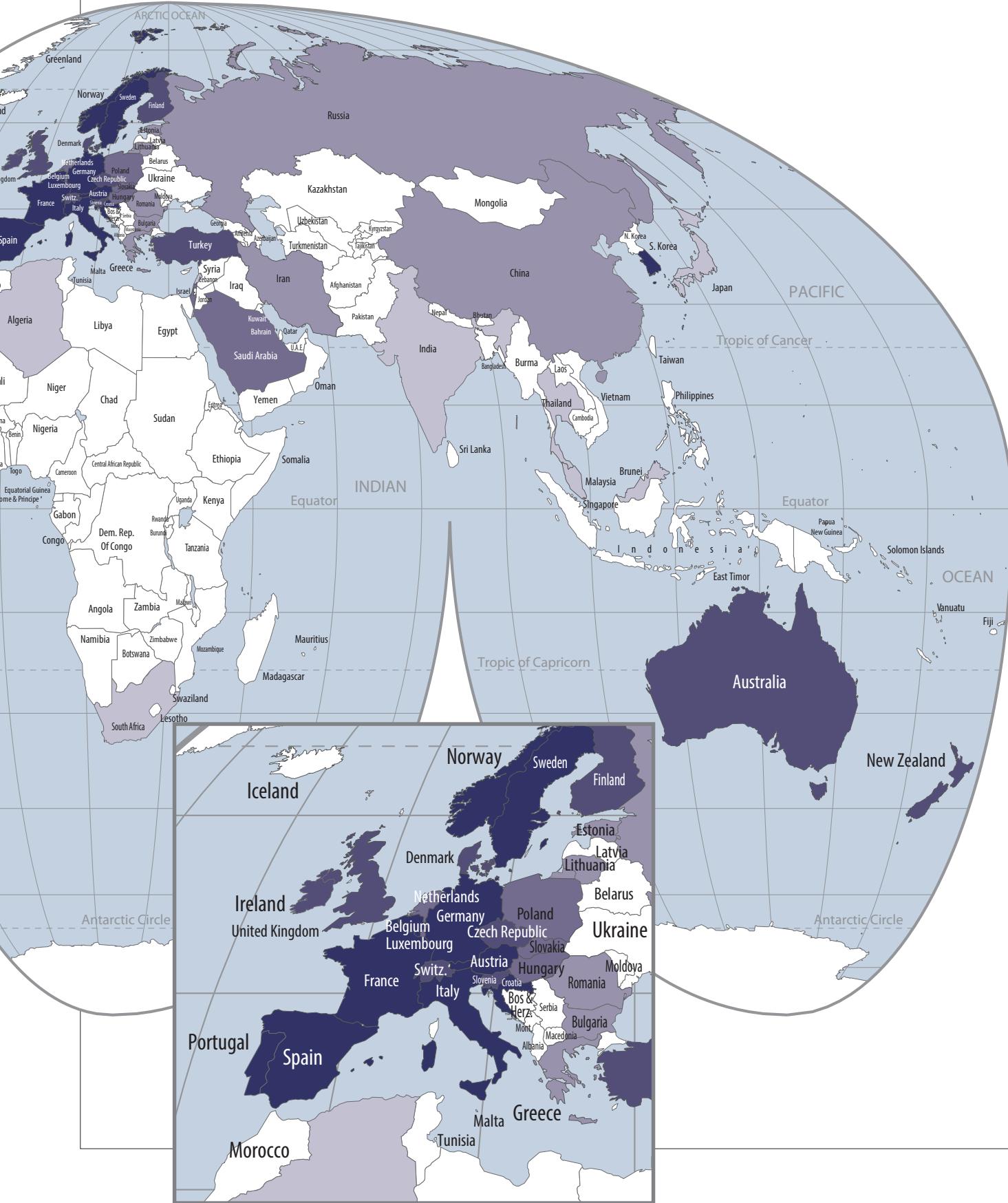
Numerator for pancreas transplant rate includes pancreas-alone and kidney-pancreas transplants.



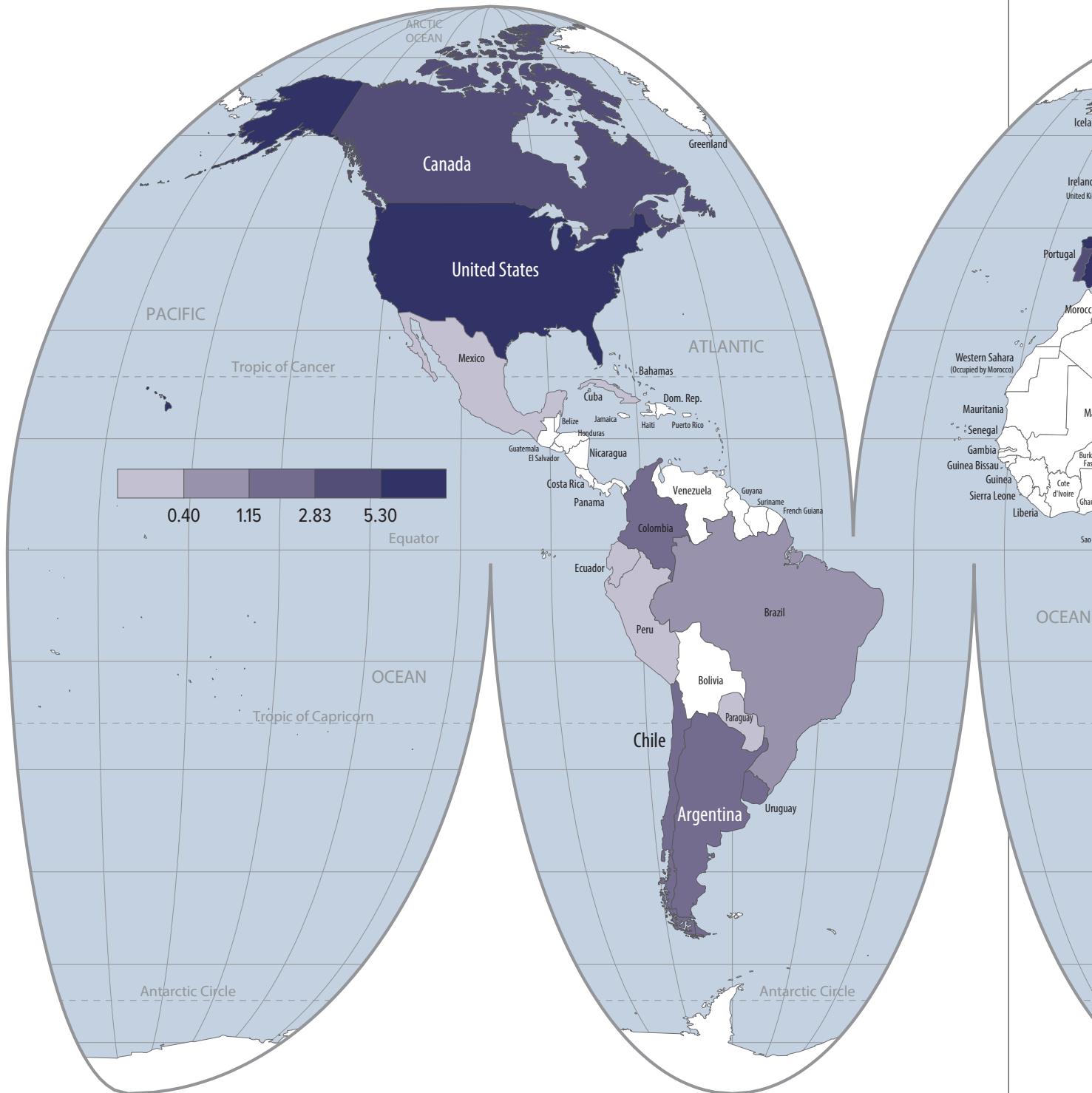
global map: liver transplants



INTL 1.3 Liver transplant rates per million population, by country, 2010

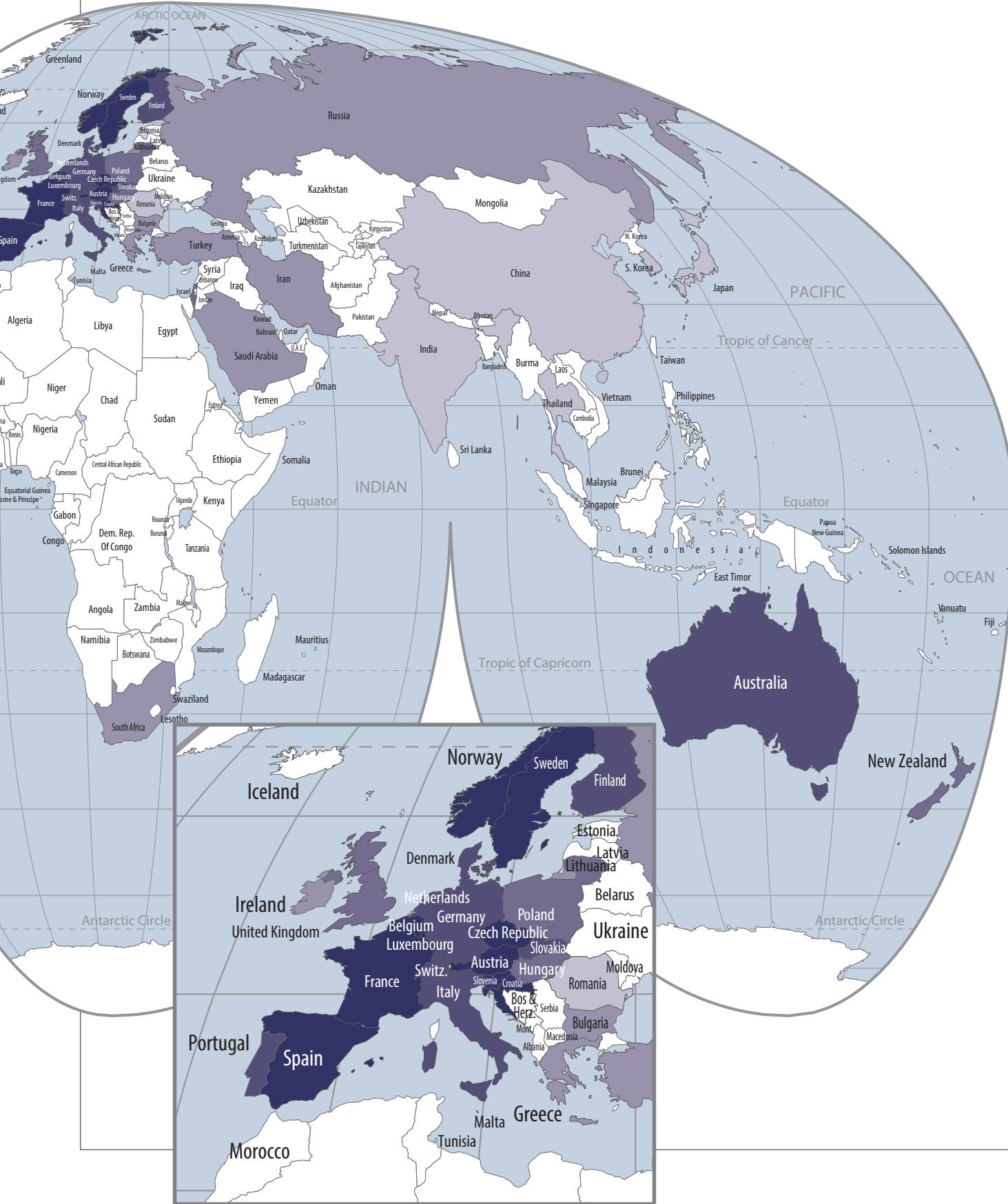


global map: heart transplants

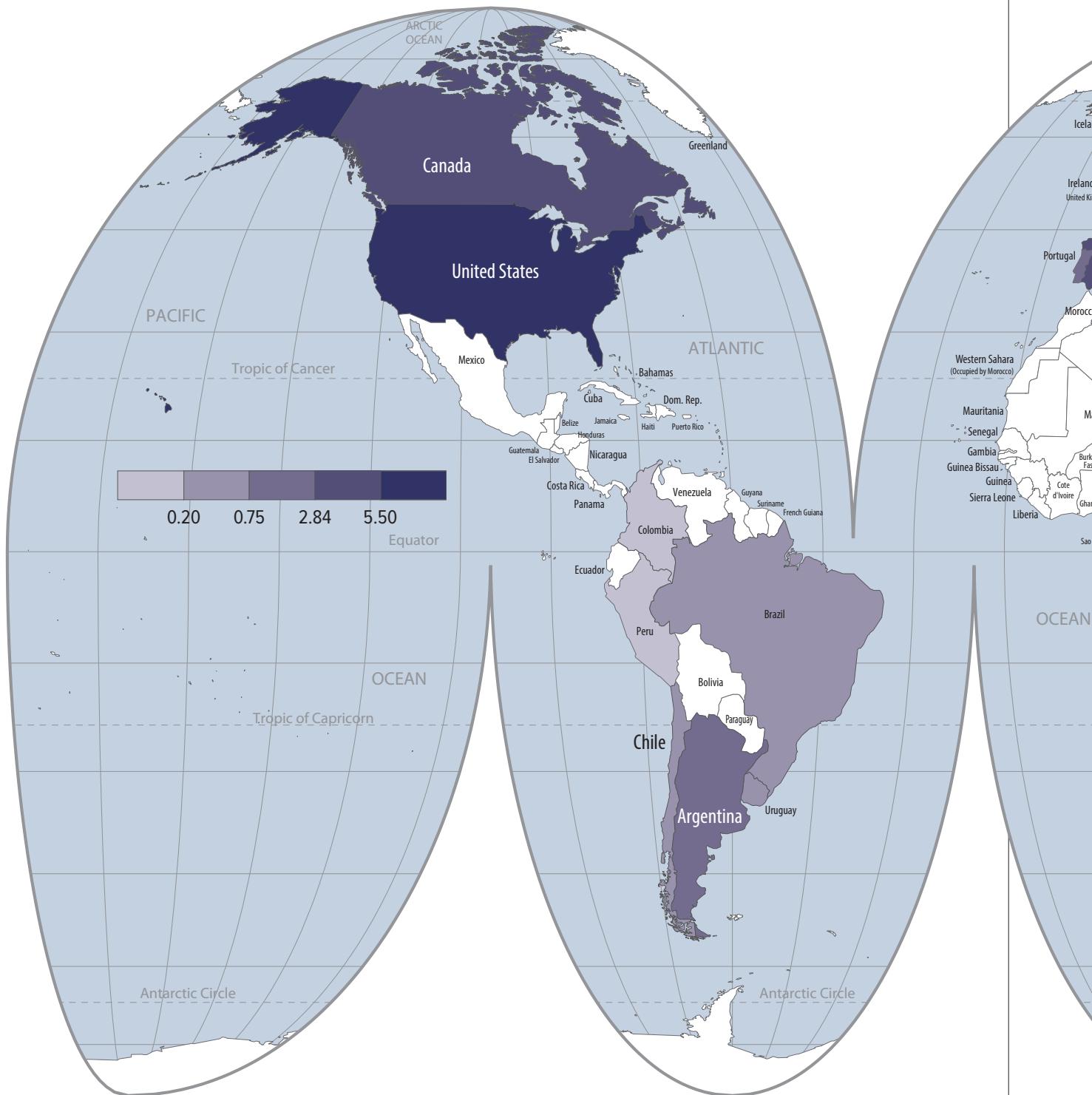


INTL 1.4 Heart transplant rates per million population, by country, 2010

Numerator for heart transplant rate includes heart-alone and heart-lung transplants.

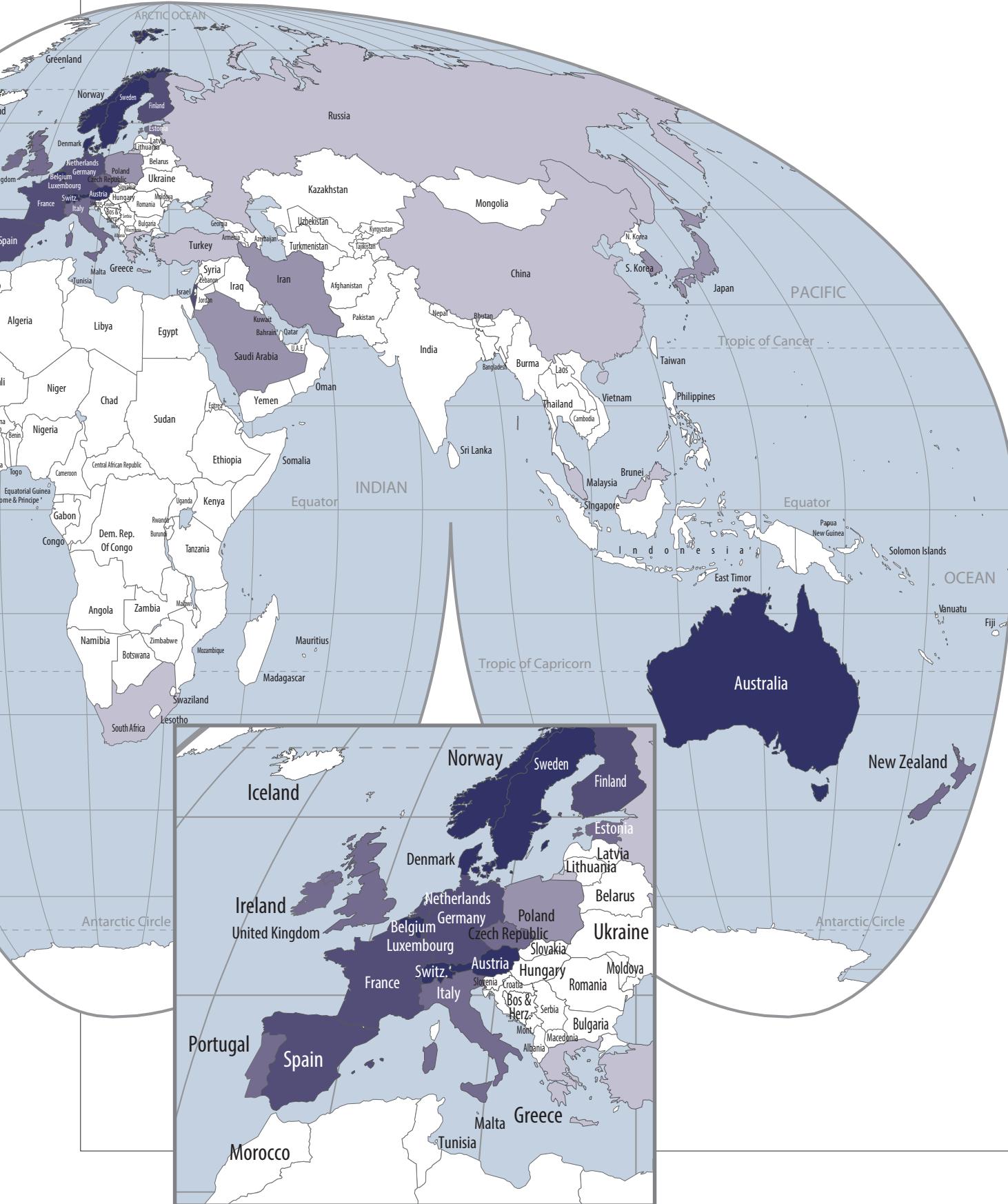


global map: lung transplants

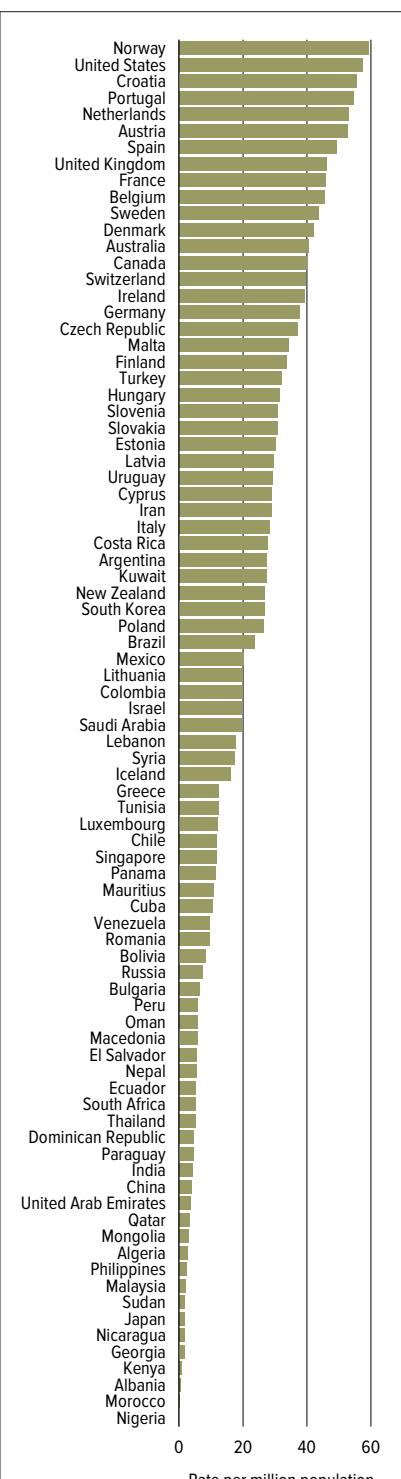


INTL 1.5 Lung transplant rates per million population, by country, 2010

Numerator for lung transplant rate includes lung-alone and heart-lung transplants.



kidney transplants



INTL 2.1 Kidney transplant rates by country, 2010

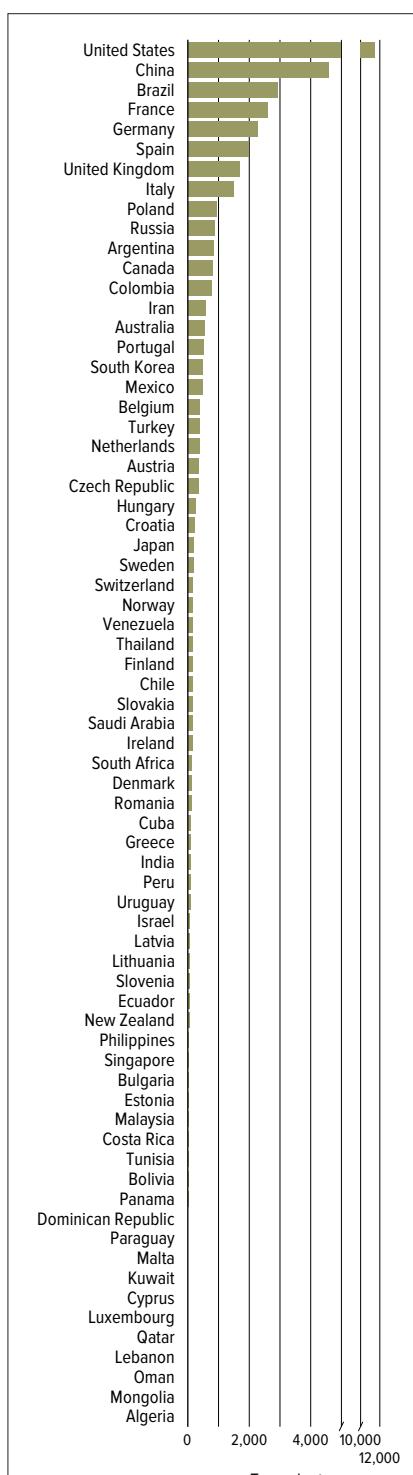
Numerator for kidney transplant rate includes kidney-alone and kidney-pancreas transplants.

	2006	2007	2008	2009	2010		2006	2007	2008	2009	2010	
Albania	.	.	3.32	3.07	2.83		Latvia	32.97	32.30	24.49	31.37	29.76
Algeria	.	23.35	25.62	27.33	27.57		Lebanon	.	20.54	.	18.30	17.94
Argentina	22.19	23.35	25.62	27.33	27.57		Libya	9.13	8.27	8.89	8.86	
Armenia	4.70	.	2.70	.	.		Lithuania	16.73	25.73	15.43	24.75	20.03
Australia	32.90	38.84	38.46	37.91	40.62		Luxembourg	18.97	24.99	6.17	4.07	12.06
Austria	55.90	50.98	47.77	56.52	52.84		Macedonia	.	.	.	.	5.79
Bahrain	2.03	.	.	.	.		Malaysia	1.89	2.57	2.08	2.52	2.16
Bangladesh	.	.	0.19	.	.		Maldives	.	0.00	0.00	0.00	0.00
Belgium	48.75	48.79	48.35	46.96	45.57		Mali	.	.	0.00	.	.
Bhutan	.	0.00	0.00	0.00	0.00		Malta	.	.	0.00	29.62	34.42
Bolivia	.	7.64	8.23	4.81	8.24		Mauritius	.	.	.	15.57	10.82
Brazil	18.05	16.95	19.42	21.34	23.61		Mexico	17.99	19.24	20.56	20.53	20.38
Brunei	.	.	0.00	.	.		Moldova	.	0.00	0.00	0.00	0.00
Bulgaria	4.60	3.69	2.62	4.44	6.71		Mongolia	.	.	.	0.66	3.24
Burma/Myanmar	.	0.73	.	0.04	.		Morocco	.	.	.	0.32	.
Cameroun	.	.	0.00	0.00	.		Nepal	.	.	0.75	0.56	5.53
Canada	40.05	41.02	40.44	39.42	39.93		Netherlands	41.18	51.92	47.23	50.03	53.16
Chile	18.51	14.05	12.52	12.05	11.94		New Zealand	23.47	30.01	29.95	29.19	26.81
China	4.98	4.81	4.63	4.17	.		Nicaragua	.	.	0.00	1.78	.
Colombia	14.53	17.98	16.46	19.58	19.91		Nigeria	0.14	0.09	0.23	0.19	0.16
Costa Rica	.	8.77	.	29.18	27.68		Norway	47.50	59.21	61.79	66.09	59.24
Croatia	30.70	15.36	38.29	40.76	55.50		Oman	5.46	3.93	5.26	7.91	6.07
Cuba	10.82	14.87	13.02	12.06	10.54		Pakistan	13.62	.	4.34	4.71	.
Cyprus	44.62	51.48	54.37	32.27	29.02		Panama	.	9.51	7.25	12.80	11.44
Czech	40.74	40.67	34.93	39.07	37.25		Paraguay	1.99	.	4.35	8.90	4.55
Republic	.	.	.	.	.		Peru	.	.	.	5.55	6.08
Denmark	32.66	31.27	35.74	42.00	42.06		Philippines	7.48	12.17	6.96	5.22	2.57
Dominican Republic	5.27	6.26	10.67	6.19	4.58		Poland	23.82	18.04	21.56	20.92	26.47
Ecuador	9.63	3.61	.	3.98	5.34		Portugal	38.56	47.17	50.01	57.34	54.68
Egypt	.	.	15.53	.	.		Qatar	.	.	2.55	3.49	.
El Salvador	13.90	6.35	4.83	.	5.62		Romania	9.30	10.09	10.29	8.90	9.65
Estonia	14.35	39.52	43.59	40.79	30.21		Russia	.	3.73	.	7.58	.
Ethiopia	.	.	0.00	0.00	0.00		Saudi Arabia	15.45	15.63	15.85	15.20	19.70
Fiji	.	0.00	0.00	.	.		Senegal	.	0.00	.	.	.
Finland	40.14	33.03	28.60	34.28	33.68		Singapore	18.03	15.97	26.16	13.70	11.87
France	43.28	47.02	46.18	44.94	45.93		Slovakia	25.55	38.37	30.43	31.48	30.89
Georgia	1.93	.	1.51	1.73	1.74		Slovenia	23.88	15.43	25.90	22.94	30.95
Germany	35.27	36.76	35.02	35.13	37.74		South Africa	4.65	4.32	4.53	5.97	5.29
Ghana	.	.	0.04	0.04	0.00		South Korea	19.85	19.42	23.77	24.53	26.73
Greece	19.37	17.56	22.29	14.25	12.56		Spain	50.44	50.41	50.49	52.06	49.37
Guatemala	6.50	10.84	6.54	5.20	.		Sri Lanka	.	.	14.49	.	.
Honduras	.	0.53	.	.	.		Sudan	1.88	1.60	1.63	2.64	1.98
Hungary	32.15	28.60	26.35	28.28	31.62		Sweden	41.15	43.07	46.32	45.59	43.64
Iceland	26.72	23.18	16.43	22.82	16.19		Switzerland	37.61	34.55	39.70	39.45	39.75
India	.	.	4.91	4.02	4.26		Syria	.	17.04	12.15	15.62	17.34
Indonesia	.	2.06	2.08	.	.		Tajikistan	.	0.00	0.41	.	.
Iran	25.48	25.79	25.67	28.18	28.96		Thailand	1.76	2.53	5.16	4.72	5.29
Ireland	34.81	34.16	34.97	39.30	39.37		Tunisia	6.92	8.72	12.31	.	12.54
Israel	23.59	19.03	21.51	23.36	19.85		Turkey	12.83	17.56	21.97	30.75	32.16
Italy	31.13	29.22	28.34	30.50	28.33		United Arab Emirates	.	.	.	.	3.82
Ivory Coast	.	.	0.00	.	.		United Kingdom	36.26	39.41	42.96	44.50	46.11
Japan	8.96	9.64	9.45	10.33	1.82		United States	60.34	58.02	57.03	57.60	57.50
Jordan	.	1.67	30.98	.	.		Uruguay	45.24	31.72	38.64	40.99	29.38
Kenya	0.61	0.70	0.60	0.63	0.91		Uzbekistan	.	.	0.00	.	.
Kuwait	41.87	31.15	31.65	30.13	27.53		Venezuela	10.57	13.26	10.52	9.55	9.66
Kyrgyzstan	.	.	0.00	0.00	.		Vietnam	0.05	0.02	.	.	.

INTL 2.2 Kidney transplant rates per million population, by year & country

Numerator for kidney transplant rate includes kidney-alone and kidney-pancreas transplants.

kidney transplants

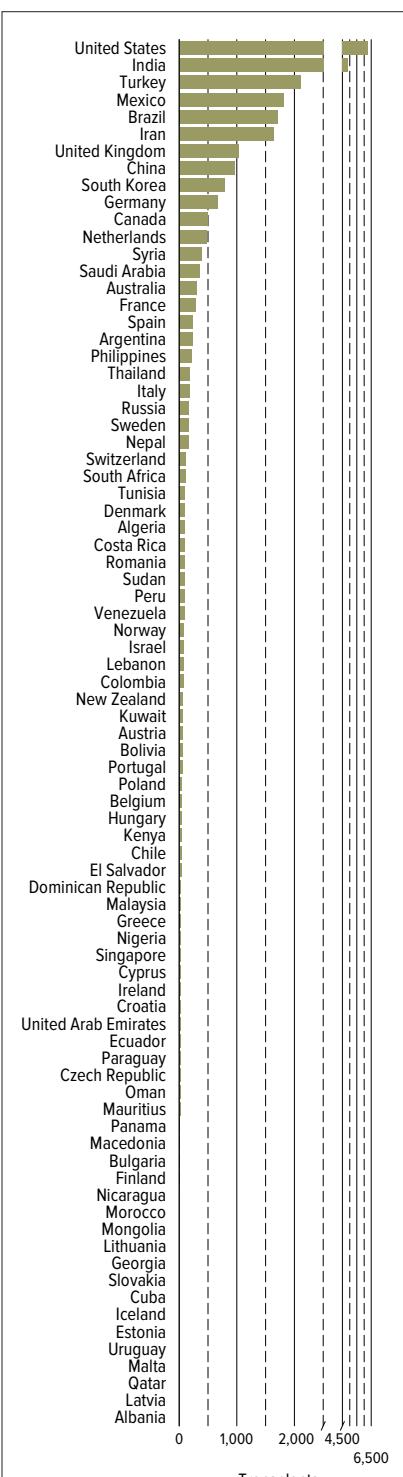


INTL 2.3 Kidney transplant counts by country, 2010: deceased donor
Includes counts of kidney-pancreas transplants.

	2006	2007	2008	2009	2010		2006	2007	2008	2009	2010
Albania	.	.	.	0	0	Latvia	75	72	53	64	64
Algeria	.	.	0	2	0	Lebanon	.	.	0	0	4
Argentina	662	714	753	839	846	Libya	0	0	0	0	0
Australia	368	342	424	446	548	Lithuania	54	83	46	75	63
Austria	374	336	303	363	348	Luxembourg	9	12	3	2	6
Bahrain	2	.	.	.	.	Macedonia	.	.	.	0	0
Bangladesh	.	.	.	.	.	Malaysia	26	27	24	35	34
Belgium	445	449	442	428	404	Maldives	.	.	0	0	0
Bhutan	.	0	0	0	0	Mali	.	.	0	.	.
Bolivia	.	23	38	31	30	Malta	.	.	6	11	11
Brazil	1,520	1,883	2,033	2,524	2,946	Mauritius	.	.	.	0	0
Brunei	.	0	.	.	.	Mexico	505	526	562	495	484
Bulgaria	30	11	8	17	36	Moldova	.	.	0	0	0
Burma/	.	0	.	0	.	Mongolia	.	.	1	2	2
Cameroon	.	.	0	0	.	Morocco	.	.	.	0	0
Canada	767	819	801	814	805	Nepal	.	.	0	0	0
Chile	263	228	206	199	163	Netherlands	378	464	352	397	394
China	5,900	4,500	3,500	.	4,577	New Zealand	41	65	53	54	52
Colombia	534	695	641	777	798	Nicaragua	.	.	0	0	0
Costa Rica	.	18	.	46	32	Nigeria	.	0	0	0	0
Croatia	106	66	149	156	224	Norway	132	174	180	188	180
Cuba	111	150	136	130	111	Oman	0	0	0	0	2
Cyprus	8	18	24	15	8	Pakistan	0	.	0	0	.
Czech	362	360	305	346	347	Panama	.	22	12	26	26
Republic	.	.	.	.	.	Paraguay	2	.	6	19	11
Denmark	120	115	122	141	130	Peru	.	.	.	158	91
Dominican	0	1	7	17	16	Philippines	37	29	30	65	48
Republic	.	.	.	.	.	Poland	899	652	790	762	949
Ecuador	.	10	.	33	60	Portugal	358	446	475	531	522
Egypt	.	.	.	.	.	Qatar	.	.	2	4	4
El Salvador	18	.	0	.	.	Romania	39	70	115	83	124
Estonia	18	47	54	49	35	Russia	.	527	.	867	.
Ethiopia	.	.	0	0	0	Saudi Arabia	151	122	166	111	156
Fiji	.	.	0	0	.	Senegal	.	.	0	.	.
Finland	207	168	141	174	164	Singapore	56	46	46	41	36
France	2,484	2,676	2,663	2,603	2,609	Slovakia	110	195	145	153	162
Georgia	0	.	0	0	.	Slovenia	48	30	52	43	61
Germany	2,254	2,340	2,188	2,172	2,272	South Africa	132	124	127	140	135
Ghana	.	.	0	0	.	South Korea	263	280	481	488	491
Greece	144	101	186	116	108	Spain	2,055	2,074	2,073	2,093	1,985
Guatemala	6	36	14	12	.	Sri Lanka	.	.	.	.	.
Honduras	.	.	.	.	.	Sudan	0	0	0	0	0
Hungary	296	265	235	250	265	Sweden	234	256	283	229	202
Iceland	0	.	.	0	.	Switzerland	159	162	170	189	180
India	.	.	100	150	100	Syria	.	0	0	0	0
Indonesia	.	0	0	.	.	Tajikistan	.	.	0	.	.
Iran	243	311	381	401	592	Thailand	114	164	149	155	166
Ireland	142	141	136	154	151	Tunisia	7	14	28	.	30
Israel	99	59	86	93	65	Turkey	257	399	414	431	395
Italy	1,665	1,585	1,533	1,650	1,512	United Arab Emirates	.	.	.	.	.
Ivory Coast	.	.	0	.	.	United Kingdom	1,397	1,414	1,562	1,617	1,698
Japan	197	187	210	189	209	United States	11,583	11,455	11,390	11,296	11,450
Jordan	.	0	0	.	.	Uruguay	134	96	114	123	90
Kenya	.	0	0	0	0	Uzbekistan	.	.	0	.	.
Kuwait	28	23	26	8	10	Venezuela	118	186	178	169	179
Kyrgyzstan	.	.	0	0	.	Vietnam	0	0	.	.	.

INTL 2.4 Kidney transplant counts by year & country: deceased donor
Includes counts of kidney-pancreas transplants.

kidney transplants

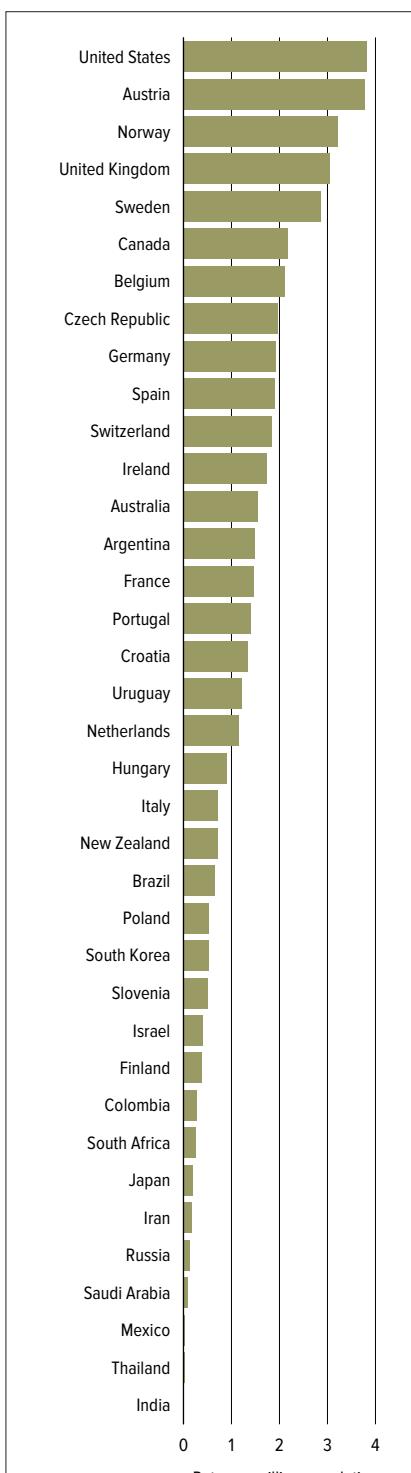


INTL 2.5 Kidney transplant counts by country, 2010: living donor
Includes counts of kidney-pancreas transplants.

	2006	2007	2008	2009	2010		2006	2007	2008	2009	2010	
Albania	.	.	112	105	96	2	Latvia	.	1	1	6	2
Algeria	.	188	153	207	212	236	Lebanon	.	80	.	75	70
Argentina	14	.	8	.	.	Argentina	54	50	55	56	56	
Armenia	273	268	352	324	293	Australia	6	9	5	9	8	
Austria	57	62	58	69	59	Austria	.	0	0	0	0	
Bahrain	.	.	.	.	.	Bahrain	.	.	.	.	12
Bangladesh	.	.	28	.	.	Bangladesh	24	42	33	35	27	
Belgium	41	42	45	49	49	Belgium	0	0	0	0	0	
Bhutan	.	0	0	0	0	Bhutan	.	.	0	6	3	
Bolivia	.	49	41	16	52	Bolivia	.	.	.	20	14	
Brazil	1,763	1,287	1,747	1,717	1,714	Brazil	1,426	1,561	1,698	1,785	1,806	
Brunei	.	.	0	.	.	Brunei	.	.	0	0	0	
Bulgaria	4	16	11	15	12	Bulgaria	.	.	.	1	8	
Burma/Myanmar	.	38	.	2	.	Burma/Myanmar	.	.	.	.	10
Cameroon	487	483	478	458	493	Cameroon	2,348	.	775	855	.	
Canada	35	.	.	.	37	Canada	653	1,117	639	446	209	
Chile	600	1,800	2,600	.	963	Chile	58	56	74	90	102	
China	74	63	64	70	70	China	20	14	35	30	26	
Colombia	.	20	.	84	93	Colombia	80	86	98	104	83	
Costa Rica	20	0	9	14	20	Costa Rica	15	11	15	23	16	
Croatia	8	16	8	4	6	Croatia	.	.	.	.	.
Cuba	38	36	34	20	24	Cuba	10	.	21	37	18	
Cyprus	33	34	29	27	17	Cyprus	.	.	.	.	.
Czech Republic	134	41	.	25	19	Czech Republic	653	1,117	639	446	209	
Ecuador	.	.	1,200	.	.	Ecuador	58	56	74	90	102	
El Salvador	65	38	29	.	34	El Salvador	49	58	95	43	29	
Egypt	1	5	3	4	4	Egypt	220	260	228	272	349	
Estonia	.	.	0	0	0	Estonia	.	.	0	.	.	
Ethiopia	.	.	0	0	0	Ethiopia	29	31	83	28	25	
Fiji	.	.	0	0	.	Fiji	29	14	21	19	7	
Finland	3	5	9	6	11	Finland	0	1	0	1	0	
France	247	235	222	223	283	France	91	85	90	142	113	
Georgia	9	.	7	8	8	Georgia	672	648	650	687	796	
Germany	522	567	565	600	665	Germany	102	137	156	235	240	
Ghana	.	.	1	1	0	Ghana	.	.	300	.	.	
Greece	75	102	71	57	.	Greece	74	65	68	113	87	
Guatemala	.	4	.	.	.	Guatemala	131	123	136	164	168	
Honduras	14	17	24	24	42	Honduras	117	99	116	102	114	
Hungary	8	7	5	7	5	Hungary	.	349	259	340	385	
Iceland	.	.	5,500	4,500	4,900	Iceland	.	.	0	3	.	
India	484	494	.	.	.	India	.	.	189	156	185	
Indonesia	1,615	1,600	1,545	1,740	1,636	Indonesia	63	75	99	.	102	
Iran	4	5	10	18	23	Iran	685	911	1,248	1,931	2,107	
Ireland	54	68	56	69	78	Ireland	.	.	.	.	19
Israel	117	99	123	136	182	Israel	671	804	924	983	1,026	
Ivory Coast	.	.	0	.	.	Ivory Coast	United States	6,435	6,043	5,968	6,388	6,277
Japan	939	1,037	991	1,123	.	Japan	Jordan	8	6	7	7	3
Jordan	.	.	10	190	.	Jordan	Kenya	22	26	23	.	.
Kenya	69	51	50	67	60	Kenya	Kuwait	153	159	100	87	84
Kyrgyzstan	.	.	0	0	.	Kyrgyzstan	Kyrgyzstan	4	2	.	.	.
Lithuania	Lithuania	Vietnam
Macedonia	.	.	.	.	.	Macedonia	.	.	.	.	.
Mauritania	.	.	.	.	.	Mauritania	.	.	.	.	.
Mauritius	.	.	.	.	.	Mauritius	.	.	.	.	.
Mexico	.	.	.	.	.	Mexico	.	.	.	.	.
Moldova	.	.	.	.	.	Moldova	.	.	.	.	.
Mongolia	.	.	.	.	.	Mongolia	.	.	.	.	.
Nicaragua	.	.	.	.	.	Nicaragua	.	.	.	.	.
Nigeria	.	.	.	.	.	Nigeria	.	.	.	.	.
North Macedonia	.	.	.	.	.	North Macedonia	.	.	.	.	.
Poland	.	.	.	.	.	Poland	.	.	.	.	.
Portugal	.	.	.	.	.	Portugal	.	.	.	.	.
Romania	.	.	.	.	.	Romania	.	.	.	.	.
Russia	.	.	.	.	.	Russia	.	.	.	.	.
Saint Lucia	.	.	.	.	.	Saint Lucia	.	.	.	.	.
Saint Vincent and the Grenadines	.	.	.	.	.	Saint Vincent and the Grenadines	.	.	.	.	.
Serbia	.	.	.	.	.	Serbia	.	.	.	.	.
Singapore	.	.	.	.	.	Singapore	.	.	.	.	.
Slovenia	.	.	.	.	.	Slovenia	.	.	.	.	.
Slovakia	.	.	.	.	.	Slovakia	.	.	.	.	.
Slovenia	.	.	.	.	.	Slovenia	.	.	.	.	.
South Africa	.	.	.	.	.	South Africa	.	.	.	.	.
Spain	.	.	.	.	.	Spain	.	.	.	.	.
Sweden	.	.	.	.	.	Sweden	.	.	.	.	.
Taiwan	.	.	.	.	.	Taiwan	.	.	.	.	.
Togo	.	.	.	.	.	Togo	.	.	.	.	.
Tunisia	.	.	.	.	.	Tunisia	.	.	.	.	.
Ukraine	.	.	.	.	.	Ukraine	.	.	.	.	.
Uzbekistan	.	.	.	.	.	Uzbekistan	.	.	.	.	.
Yemen	.	.	.	.	.	Yemen	.	.	.	.	.

INTL 2.6 Kidney transplant counts by year & country: living donor
Includes counts of kidney-pancreas transplants.

pancreas transplants

**INTL 3.1** Pancreas transplant rates by country, 2010

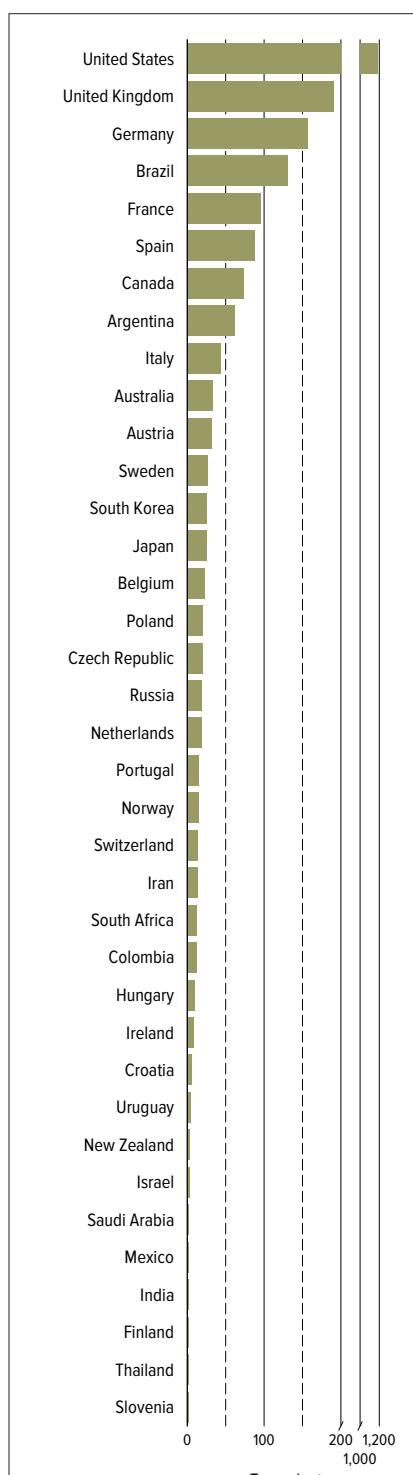
Numerator for pancreas transplant rate includes pancreas-alone and kidney-pancreas transplants.

	2006	2007	2008	2009	2010		2006	2007	2008	2009	2010
Albania	.	.	.	0.00	0.00	Lithuania	.	.	1.12	1.13	0.00
Algeria	.	.	.	0.00	0.00	Luxembourg	.	.	0.00	0.00	0.00
Argentina	0.73	1.75	2.10	1.71	1.48	Macedonia	.	.	.	0.00	0.00
Australia	1.66	11.90	1.52	1.74	1.53	Malaysia	0.00	0.00	0.00	0.00	0.00
Austria	4.76	3.05	4.14	4.02	3.77	Maldives	.	.	.	0.00	0.00
Bahrain	0.00	.	.	.	.	Malta	.	.	.	0.00	0.00
Bangladesh	.	.	0.00	.	.	Mauritius	.	.	.	0.00	0.00
Belgium	2.31	1.73	1.73	2.40	2.11	Mexico	0.02	0.04	0.01	0.03	0.02
Bhutan	.	0.00	.	0.00	0.00	Moldova	.	.	0.00	0.00	0.00
Brazil	0.90	0.92	0.16	.	0.65	Mongolia	.	.	.	0.00	0.00
Bulgaria	.	0.00	0.00	0.00	0.00	Morocco	.	.	.	0.00	0.00
Burma/	.	0.00	.	.	.	Nepal	.	.	0.00	0.00	0.00
Myanmar	.	.	.	.	.	Netherlands	1.41	1.71	0.85	1.21	1.15
Cameroon	.	.	0.00	0.00	.	New Zealand	1.47	0.24	0.96	0.48	0.71
Canada	2.76	2.22	2.56	2.09	2.16	Nicaragua	.	.	.	0.00	0.00
Chile	0.06	0.06	.	0.06	.	Nigeria	.	0.00	0.00	0.00	0.00
Colombia	0.07	0.19	0.12	0.23	0.27	Norway	2.17	3.03	2.15	3.43	3.21
Costa Rica	.	.	.	0.00	0.00	Oman	0.00	.	0.00	0.00	0.00
Croatia	2.89	0.67	3.12	2.90	1.34	Pakistan	0.00	.	0.00	0.00	0.00
Cuba	0.18	.	0.09	.	.	Paraguay	.	.	0.00	.	.
Czech Republic	2.44	2.64	2.54	2.74	1.96	Peru	.	.	.	0.04	.
Denmark	0.00	.	.	0.00	.	Philippines	.	.	.	0.00	.
El Salvador	.	.	0.00	.	.	Poland	0.96	0.55	0.52	0.52	0.52
Ethiopia	.	.	0.00	0.00	0.00	Portugal	1.23	1.79	1.31	1.87	1.40
Fiji	.	.	.	0.00	.	Qatar	.	.	0.00	0.00	0.00
Finland	.	.	0.00	0.38	.	Romania	0.09	0.05	0.00	0.00	0.00
France	1.42	1.48	1.26	1.32	1.47	Russia	.	.	.	0.14	.
Georgia	.	.	0.00	0.00	.	Saudi Arabia	0.08	0.04	0.04	0.16	0.08
Germany	1.70	1.64	1.63	1.36	1.92	Senegal	.	.	0.00	.	.
Ghana	.	.	0.00	0.00	.	Singapore	.	0.00	.	.	.
Greece	.	.	0.19	0.28	.	Slovakia	0.00	0.00	0.00	0.00	0.00
Hungary	1.29	0.50	0.50	0.90	0.90	Slovenia	.	.	.	1.00	0.50
Iceland	.	.	.	0.00	.	South Africa	0.19	0.21	0.08	0.22	0.24
India	.	.	.	0.00	.	South Korea	0.60	0.37	0.46	0.45	0.51
Indonesia	0.00	0.00	.	.	.	Spain	2.03	1.62	2.27	2.10	1.89
Iran	0.10	0.42	0.17	0.21	0.17	Sudan	0.00	0.00	0.00	0.00	0.00
Ireland	0.93	1.13	2.66	1.97	1.73	Sweden	0.67	1.11	.	2.21	2.87
Israel	1.60	1.14	1.55	0.97	0.41	Switzerland	1.33	.	2.24	1.32	1.84
Italy	1.47	1.29	0.98	1.16	0.71	Syria	.	0.00	0.00	0.00	0.00
Ivory Coast	.	.	0.00	.	.	Thailand	0.00	0.02	0.00	0.00	0.02
Japan	0.07	0.09	0.08	0.06	0.20	Tunisia	0.00	0.00	0.00	.	0.00
Jordan	.	.	0.00	.	.	Turkey	0.10	0.12	0.13	0.23	.
Kenya	0.00	0.00	0.00	0.00	.	United Kingdom	2.68	4.03	3.50	3.34	3.05
Kuwait	0.00	.	0.41	0.00	0.00	United States	4.66	4.42	4.18	4.00	3.82
Kyrgyzstan	.	.	.	0.00	.	Uruguay	1.83	0.61	1.83	1.52	1.21
Latvia	0.00	0.45	0.00	0.00	.	Venezuela	.	0.00	0.00	0.00	0.00
Lebanon	.	.	0.00	0.00	.	Vietnam	0.00	0.00	.	.	.
Libya	0.00	0.00	0.00	.	.						.

INTL 3.2 Pancreas transplant rates per million population, by year & country

Numerator for pancreas transplant rate includes pancreas-alone and kidney-pancreas transplants.

pancreas transplants

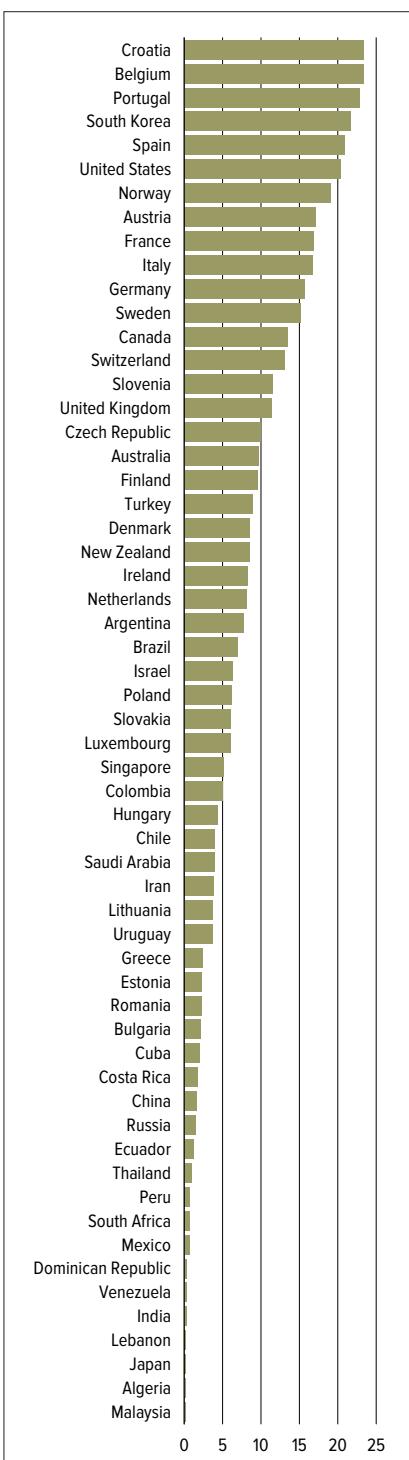


INTL 3.3 Pancreas transplant counts by country, 2010
Includes counts of kidney-pancreas transplants.

	2006	2007	2008	2009	2010		2006	2007	2008	2009	2010
Albania	.	.	.	0	0	Lithuania	.	.	4	4	0
Algeria	.	.	.	0	0	Luxembourg	.	.	0	.	0
Argentina	29	70	85	70	61	Macedonia	.	.	.	.	0
Australia	34	247	32	37	33	Malaysia	0	0	0	0	0
Austria	39	25	34	33	31	Maldives	.	.	.	0	0
Bahrain	0	.	.	.	.	Malta	.	.	.	0	0
Bangladesh	.	.	0	.	.	Mauritius	.	.	.	.	0
Belgium	24	18	18	25	22	Mexico	2	4	1	3	2
Bhutan	.	0	.	0	0	Moldova	.	.	0	0	0
Brazil	173	178	32	.	131	Mongolia	.	.	.	.	0
Bulgaria	.	0	0	0	0	Morocco	.	.	.	.	0
Burma/Myanmar	.	0	.	.	.	Nepal	.	.	0	0	0
Cameroon	.	.	0	0	.	Netherlands	23	28	14	20	19
Canada	90	73	85	70	73	New Zealand	6	1	4	2	3
Chile	1	1	.	1	.	Nicaragua	.	.	0	0	0
Colombia	3	8	5	10	12	Nigeria	.	0	0	0	0
Costa Rica	.	.	0	0	.	Norway	10	14	10	16	15
Croatia	13	3	14	13	6	Oman	0	.	0	0	0
Cuba	2	.	1	.	.	Pakistan	0	.	0	0	.
Czech Republic	25	27	26	28	20	Paraguay	.	.	0	.	.
Denmark	0	.	0	0	.	Peru	.	.	1	.	.
El Salvador	.	.	0	.	.	Philippines	.	.	.	0	0
Ethiopia	.	.	0	0	0	Poland	37	21	20	20	20
Fiji	.	.	.	0	.	Portugal	13	19	14	20	15
Finland	.	.	0	2	.	Qatar	.	.	0	0	0
France	90	94	81	85	95	Romania	2	1	0	0	0
Georgia	.	.	0	0	.	Russia	.	.	.	19	.
Germany	140	135	134	111	157	Saudi Arabia	2	1	1	4	2
Ghana	.	.	2	3	.	Senegal	.	.	0	.	.
Hungary	13	5	5	9	9	Singapore	.	0	.	.	.
Iceland	.	.	0	.	.	Slovakia	0	0	0	0	0
India	.	0	0	.	2	Slovenia	.	.	2	1	.
Indonesia	.	0	0	.	.	South Africa	9	10	4	11	12
Iran	7	31	13	16	13	South Korea	29	18	22	22	25
Ireland	4	5	12	9	8	Spain	90	73	104	97	88
Israel	11	8	11	7	3	Sudan	0	0	0	0	0
Italy	87	77	59	70	43	Sweden	6	10	.	20	26
Ivory Coast	.	.	0	.	.	Switzerland	10	.	17	10	14
Japan	9	12	10	7	25	Syria	.	0	0	0	0
Jordan	.	.	0	.	.	Taiwan	0	1	0	0	1
Kenya	.	0	0	0	0	Tunisia	0	0	0	.	0
Kuwait	0	.	1	0	0	Turkey	7	9	10	18	.
Kyrgyzstan	.	.	0	0	.	United Kingdom	163	247	216	207	190
Latvia	.	0	1	0	0	United States	1,390	1,332	1,271	1,229	1,177
Lebanon	.	.	0	0	0	Uruguay	6	2	6	5	4
Libya	.	0	0	0	.	Venezuela	.	.	0	0	0
						Vietnam	0	0	.	.	.

INTL 3.4 Pancreas transplant counts by year & country
Includes counts of kidney-pancreas transplants.

liver transplants

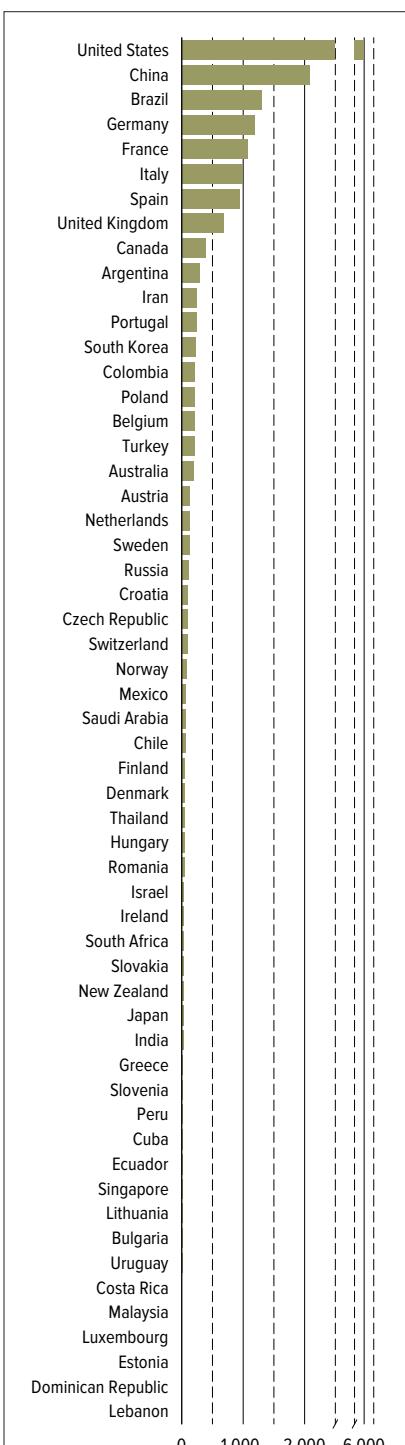


INTL 4.1 Liver transplant rates by country, 2010

	2006	2007	2008	2009	2010		2006	2007	2008	2009	2010
Albania	.	.	0.09	0.15	0.17	Lebanon	.	.	0.00	0.24	
Algeria	5.96	6.69	6.92	6.48	7.79	Libya	1.69	0.99	0.32	0.00	
Argentina	8.00	7.28	9.28	8.80	9.67	Lithuania	0.84	2.52	1.68	1.97	3.67
Austria	16.97	14.51	14.14	18.64	17.17	Luxembourg	.	0.00	0.00	0.00	6.03
Bahrain	0.00	.	.	.	.	Macedonia	.	.	.	0.00	
Bangladesh			0.00	.	.	Malaysia	0.30	0.26	0.18	0.22	0.14
Belgium	22.74	25.69	22.11	23.53	23.31	Maldives	.	.	0.00	0.00	0.00
Bhutan	.	0.00	.	0.00	0.00	Mali	.	.	0.00	.	
Brazil	5.33	5.04	5.36	6.02	6.98	Malta	.	.	22.21	0.00	
Bulgaria	1.35	0.96	1.24	1.80	2.10	Mauritius	.	.	.	0.00	
Burma/Myanmar	.	0.02	.	0.02	.	Mexico	0.96	0.91	0.87	0.71	0.71
Cameroon			0.00	0.00	.	Moldova	.	.	0.00	0.00	0.00
Canada	14.33	14.63	13.64	13.53	13.42	Mongolia	.	.	.	0.00	
Chile	5.33	4.60	4.50	4.16	4.00	Morocco	.	.	.	0.00	
China	1.88	1.53	1.51	.	1.61	Nepal	.	.	0.00	0.00	
Colombia	4.04	4.53	4.59	5.61	4.98	Netherlands	6.01	9.11	7.98	8.01	8.15
Costa Rica				3.59	1.77	New Zealand	6.85	8.23	5.75	9.73	8.47
Croatia	10.90	5.12	14.47	13.81	23.40	Nicaragua	.	.	0.00	0.00	
Cuba	2.59	3.50	2.52	2.25	1.98	Nigeria	0.00	0.00	0.00	0.00	0.00
Czech Republic	9.67	11.24	9.49	9.99	10.00	Norway	13.45	15.56	17.01	17.60	19.03
Denmark	6.61	7.86	8.02	7.27	8.52	Oman	0.00	.	0.00	0.00	0.00
Dominican Republic	.	.	0.11	0.21	0.31	Pakistan	0.00	.	0.00	0.00	.
Ecuador	.	.	.	0.07	1.22	Paraguay	.	.	0.00	.	
El Salvador	.	.	0.00	.	.	Peru	.	.	.	0.45	0.76
Estonia	.	1.52	1.53	3.08	2.32	Philippines	0.02	0.02	.	.	0.00
Ethiopia	.	.	0.00	0.00	0.00	Poland	5.19	5.09	6.36	6.13	6.16
Fiji	.	.	0.00	.	.	Portugal	21.22	24.90	25.66	23.81	22.82
Finland	10.13	10.12	8.96	9.14	9.52	Qatar	.	.	0.00	0.00	
France	16.38	16.66	15.78	16.25	16.86	Romania	0.90	1.72	1.95	1.45	2.32
Georgia	.	1.94	0.00	0.00	.	Russia	.	0.00	.	1.50	
Germany	12.91	14.06	12.50	14.41	15.70	Saudi Arabia	3.57	3.80	3.89	4.30	3.96
Greece	.	.	0.00	0.00	.	Senegal	.	0.00	.	.	
Ghana	.	.	0.00	0.00	.	Singapore	2.55	3.32	10.14	4.96	5.06
Greece	2.53	2.99	5.41	3.07	2.33	Slovakia	0.00	0.00	2.20	4.39	6.03
Hungary	4.68	4.09	3.59	4.00	4.30	Slovenia	3.98	4.98	10.96	8.97	11.48
Hungary	.	.	0.00	.	.	South Africa	0.46	0.74	0.59	0.75	0.73
Iceland	.	.	0.22	0.39	0.26	South Korea	14.09	15.38	19.68	20.99	21.71
India	.	0.00	0.01	.	.	Spain	23.65	24.60	24.13	23.74	20.88
Indonesia	1.48	2.19	2.47	2.66	3.89	Sudan	0.00	0.00	0.00	0.00	0.00
Iran	13.35	12.84	13.97	8.22	.	Sweden	14.09	15.06	16.14	16.12	15.10
Iceland	8.45	6.15	7.87	7.05	6.26	Switzerland	12.49	11.52	10.95	13.41	13.12
Iceland	18.96	17.93	16.89	17.80	16.69	Syria	0.00	0.00	0.00	0.00	0.00
Ivory Coast	.	.	0.00	.	.	Tajikistan	.	0.00	.	.	
Japan	3.99	3.47	3.73	3.69	0.24	Thailand	0.37	0.48	0.76	0.83	0.95
Jordan	.	0.00	3.26	.	.	Tunisia	0.49	0.39	0.39	.	0.00
Kenya	.	0.00	0.00	0.00	0.00	Turkey	4.33	6.46	7.94	7.72	8.93
Kuwait	0.00	.	0.41	0.00	0.00	United	10.62	10.51	11.66	11.05	11.42
Kyrgyzstan	.	.	0.00	.	.	Kingdom	.	.	.	.
Latvia	0.00	0.00	0.00	0.00	.	United States	22.27	21.53	20.76	20.59	20.41
					.	Uruguay	.	1.22	0.91	3.04	3.64
					.	Venezuela	0.23	0.38	0.38	0.45	0.29
					.	Vietnam	0.07	0.07	.	.	

INTL 4.2 Liver transplant rates per million population, by year & country

liver transplants

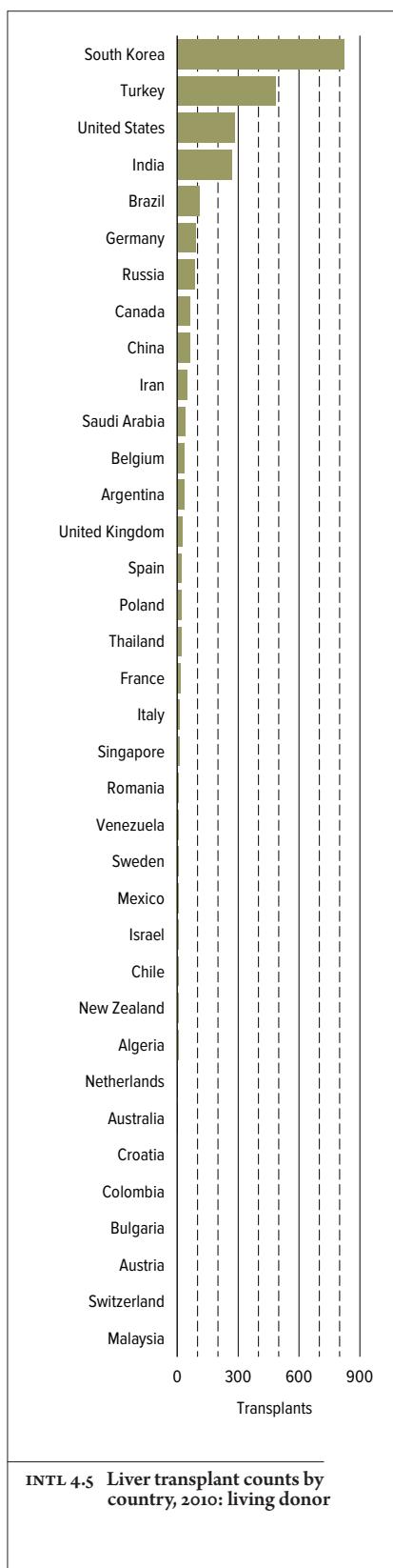


	2006	2007	2008	2009	2010		2006	2007	2008	2009	2010
Albania	.	.	.	.	0	Lebanon	.	.	0	0	1
Algeria	.	.	.	0	0	Libya	0	0	0	0	.
Argentina	236	247	247	245	289	Lithuania	3	8	6	7	13
Australia	161	147	192	185	204	Luxembourg	.	0	0	0	3
Austria	137	116	112	146	139	Macedonia	.	.	.	.	0
Bahrain	0	.	.	.	.	Malaysia	4	4	4	6	3
Bangladesh	.	.	0	.	.	Maldives	.	.	0	0	0
Belgium	218	241	217	222	210	Mali	.	.	0	.	.
Bhutan	.	0	.	0	0	Malta	.	.	.	9	0
Brazil	1,020	864	1,053	1,197	1,295	Mauritius	.	.	.	.	0
Bulgaria	9	6	5	9	13	Mexico	92	87	88	73	72
Burma/	.	1	.	.	.	Moldova	.	.	0	0	0
Myanmar	.	.	0	0	.	Mongolia	.	.	.	.	0
Cameroon	.	.	0	0	.	Morocco	.	.	.	.	0
Canada	401	411	385	396	389	Nepal	.	.	0	0	0
Chile	86	75	74	69	60	Netherlands	94	147	129	129	131
China	2,400	1,550	1,500	.	2,082	New Zealand	24	30	17	33	30
Colombia	170	193	198	237	218	Nicaragua	.	.	0	0	0
Costa Rica	.	.	.	15	8	Nigeria	.	0	0	0	0
Croatia	.	.	1	2	3	Norway	62	72	79	82	89
Czech Republic	.	.	.	.	.	Oman	0	.	0	0	0
Denmark	36	43	44	40	47	Pakistan	0	.	0	0	.
Dominican Republic	.	.	1	2	3	Paraguay	.	.	0	.	.
Ecuador	.	.	.	1	18	Peru	.	.	.	9	22
El Salvador	.	.	0	.	.	Philippines	2	2	.	.	0
Estonia	.	2	2	4	3	Poland	180	178	224	214	217
Ethiopia	.	.	0	0	0	Portugal	223	263	269	254	245
Fiji	.	.	0	.	.	Qatar	.	.	0	0	0
Finland	53	53	47	48	50	Romania	17	31	35	29	42
France	1,001	1,043	1,001	1,035	1,075	Russia	.	0	.	.	121
Georgia	.	.	0	0	.	Saudi Arabia	49	54	59	51	62
Germany	980	1,096	971	1,119	1,192	Senegal	.	.	0	.	.
Ghana	.	.	.	0	0	Singapore	7	12	17	17	15
Greece	27	32	58	33	25	Slovakia	0	0	12	24	33
Hungary	45	40	36	40	43	Slovenia	8	10	22	18	23
Iceland	.	.	.	0	.	South Africa	22	36	29	37	36
India	.	.	40	50	30	South Korea	118	122	227	236	232
Indonesia	.	0	0	.	.	Spain	1,033	1,087	1,080	1,070	951
Iran	97	148	147	168	251	Sudan	0	0	0	0	0
Ireland	.	59	58	64	38	Sweden	121	132	140	144	129
Israel	53	37	54	47	39	Switzerland	86	79	71	95	99
Italy	1,091	1,041	996	1,061	1,002	Syria	.	0	0	0	0
Ivory Coast	.	.	0	.	.	Tajikistan	.	.	0	.	.
Japan	5	10	13	7	30	Thailand	24	27	45	55	44
Jordan	.	0	0	.	.	Tunisia	2	3	4	.	0
Kenya	.	0	0	0	0	Turkey	114	209	212	229	209
Kuwait	0	.	1	0	0	United	634	627	683	660	688
Kyrgyzstan	.	.	0	0	.	Kingdom	.	.	.	.	.
Latvia	.	0	0	0	0	United States	6,363	6,228	6,070	6,101	6,009

INTL 4.3 Liver transplant counts by country, 2010: deceased donor

INTL 4.4 Liver transplant counts by year & country: deceased donor

liver transplants

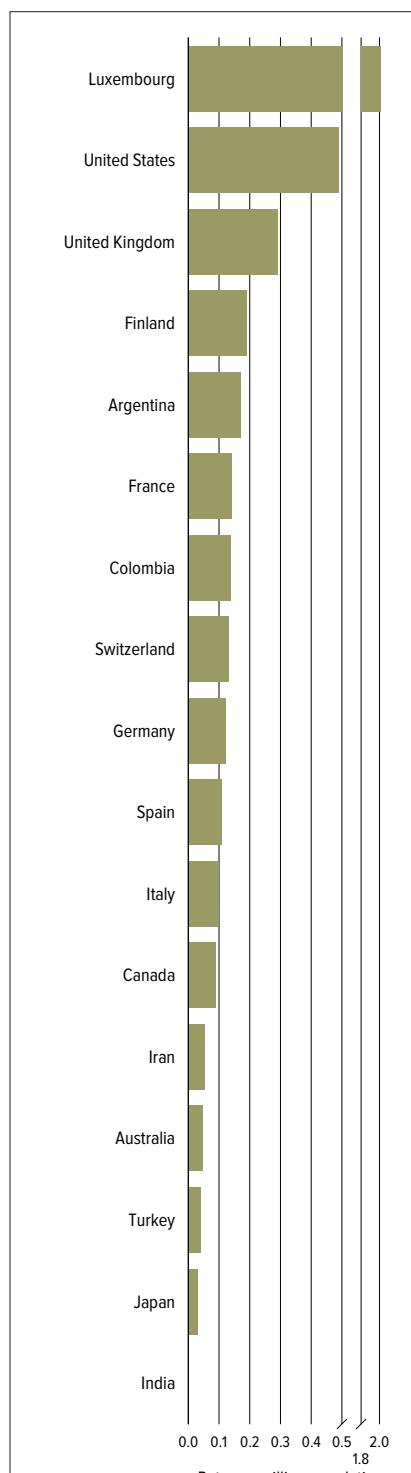


INTL 4.5 Liver transplant counts by country, 2010: living donor

	2006	2007	2008	2009	2010		2006	2007	2008	2009	2010
Albania	.	.	.	.	0	Lebanon	.	.	.	0	.
Algeria	.	.	3	5	6	Libya	10	6	2	0	.
Argentina	.	21	33	20	33	Lithuania	.	1	.	.	0
Australia	3	4	3	2	4	Luxembourg	.	0	0	0	0
Austria	2	3	4	7	2	Macedonia	.	.	.	.	0
Bahrain	0	.	.	.	.	Malaysia	4	3	1	0	1
Bangladesh	.	.	0	.	.	Maldives	.	.	0	0	0
Belgium	18	26	13	23	33	Mali	.	.	0	.	.
Bhutan	.	0	.	0	0	Malta	.	.	.	.	0
Brazil	.	114	.	.	109	Mauritius	.	.	.	.	0
Bulgaria	1	1	4	4	2	Mexico	11	12	8	6	8
Burma/Myanmar	.	0	.	1	.	Moldova	.	.	0	0	0
Cameroon	.	.	0	0	.	Mongolia	.	.	.	0	0
Canada	67	71	68	57	64	Morocco	.	.	.	0	0
China	.	.	.	.	7	Nepal	.	.	0	0	0
Iran	50	450	490	.	62	Netherlands	4	2	2	3	4
Saudi Arabia	.	.	.	8	2	New Zealand	4	4	7	8	6
Belgium	.	4	0	1	2	Nicaragua	.	.	0	0	0
Argentina	.	.	0	0	0	Nigeria	0	0	0	0	0
United Kingdom	0	0	0	0	0	Norway	.	0	0	0	.
Spain	.	.	.	0	.	Oman	0	.	0	0	0
Poland	.	.	0	.	.	Pakistan	0	.	0	0	.
Thailand	.	.	0	.	.	Paraguay	.	.	0	.	.
France	.	.	0	0	0	Peru	.	.	.	4	.
Italy	36	18	10	12	17	Philippines	.	.	.	0	0
Singapore	.	9	0	0	.	Poland	20	18	21	22	20
Romania	.	60	55	60	90	Ecuador	2	2	5	1	0
Venezuela	83	60	55	60	90	El Salvador	.	.	0	0	0
Sweden	.	.	0	0	.	Estonia	.	.	8	3	9
Mexico	2	1	0	0	0	Ethiopia	.	0	.	0	88
Israel	.	.	0	.	0	Fiji	37	39	38	58	40
Chile	.	5	6	2	7	Finland	.	.	0	.	.
New Zealand	33	28	19	15	12	France	5	4	33	8	11
Algeria	.	.	0	.	.	Georgia	0	0	0	.	0
Netherlands	.	.	0	0	0	Germany	0	0	0	0	0
Australia	.	.	0	0	0	Ghana	.	.	0	0	0
Croatia	.	.	0	.	0	Greece	.	.	0	.	.
Colombia	.	.	0	.	0	Hungary	560	620	725	782	824
Bulgaria	.	.	0	.	0	Iceland	18	25	28	29	20
Austria	.	.	0	.	0	India	0	0	0	0	0
Switzerland	.	.	0	.	0	Indonesia	6	4	6	2	8
Malaysia	.	.	0	.	0	Iran	8	8	12	7	1
	0	300	600	900		Ireland	.	0	0	0	0
						Israel	4	5	0	0	19
						Italy	3	1	0	.	0
						Ivory Coast	205	274	390	364	486
						Japan	288	266	249	219	282
						Jordan	28	20	.	.	.
						Kenya	1	0	0	0	0
						Kuwait	6	8	12	12	8
						Kyrgyzstan	6	6	0	.	.
						Latvia	22	17	36	25	24

INTL 4.6 Liver transplant counts by year & country: living donor

intestinal transplants

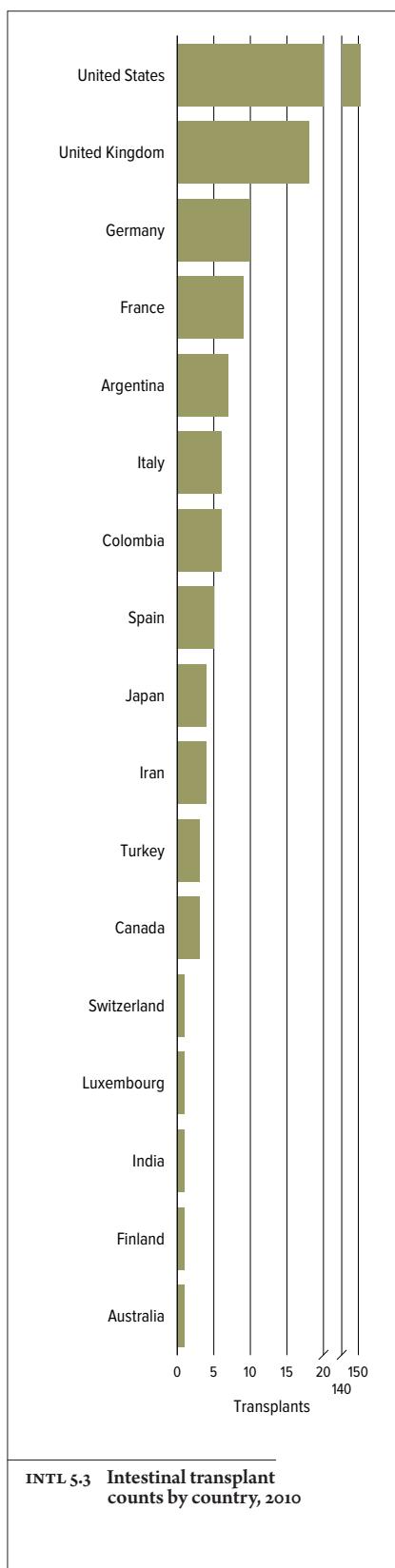


INTL 5.1 Intestinal transplant rates by country, 2010

	2006	2007	2008	2009	2010		2006	2007	2008	2009	2010
Albania	.	.	.	.	0.00	Lithuania	.	.	0.00	.	0.00
Algeria	.	.	.	0.00	0.00	Luxembourg	.	.	0.00	.	2.01
Argentina	.	0.15	0.20	0.07	0.17	Macedonia	.	.	.	.	0.00
Australia	0.00	.	.	.	0.05	Malaysia	0.00	0.00	0.00	0.00	0.00
Austria	0.00	.	.	.	.	Maldives	.	.	.	0.00	0.00
Bahrain	0.00	.	.	.	.	Malta	.	.	.	0.00	0.00
Bangladesh	.	.	0.00	.	.	Mauritius	.	.	.	.	0.00
Belgium	0.00	.	.	.	.	Mexico	.	.	.	0.00	0.00
Bhutan	.	0.00	.	0.00	0.00	Moldova	.	.	0.00	0.00	0.00
Bulgaria	.	0.00	0.00	0.00	0.00	Mongolia	.	.	.	.	0.00
Burma/Myanmar	.	0.00	.	.	.	Morocco	.	.	.	.	0.00
Cameroon	.	.	0.00	0.00	.	Nepal	.	.	.	0.00	0.00
Canada	0.21	0.12	0.12	0.09	0.09	Netherlands	0.00	.	.	0.06	.
Colombia	.	.	.	0.00	0.14	New Zealand	0.00	.	.	.	.
Costa Rica	.	.	.	0.00	0.00	Nicaragua	.	.	.	0.00	0.00
Croatia	0.00	.	.	.	.	Nigeria	.	0.00	0.00	0.00	0.00
Czech Republic	0.00	0.00	0.00	0.00	0.00	Oman	0.00	.	0.00	0.00	0.00
Denmark	0.00	.	.	.	.	Pakistan	0.00	.	0.00	0.00	.
El Salvador	.	.	0.00	.	.	Paraguay	.	.	0.16	.	.
Ethiopia	.	.	0.00	0.00	0.00	Philippines	.	.	.	.	0.00
Fiji	.	.	.	0.00	.	Poland	0.00	0.00	0.00	0.00	0.00
Finland	.	.	.	.	0.19	Portugal	0.00	0.00	0.00	0.00	0.00
France	0.13	0.09	0.20	0.11	0.14	Qatar	.	.	.	0.00	0.00
Georgia	.	.	0.00	0.00	.	Romania	0.00	0.00	0.00	0.00	0.00
Germany	0.01	.	.	0.10	0.12	Saudi Arabia	0.00	0.00	0.00	0.00	0.00
Ghana	.	.	.	0.00	0.00	Senegal	.	.	.	.	.
Greece	.	.	0.00	.	.	Singapore	.	0.00	.	.	.
Iceland	.	.	.	0.00	.	Slovakia	0.00	0.00	0.00	0.00	0.00
India	.	.	.	.	0.00	South Africa	0.00	0.00	0.00	0.00	0.00
Indonesia	.	.	0.00	.	.	Spain	0.29	0.11	0.31	0.24	0.11
Iran	0.00	0.00	0.00	0.00	0.05	Sudan	0.00	0.00	0.00	0.00	0.00
Ireland	.	0.00	0.00	0.00	0.00	Sweden	0.00	.	.	.	.
Israel	0.00	.	0.14	.	.	Switzerland	.	.	0.13	0.00	0.13
Italy	0.07	0.03	0.05	0.07	0.10	Syria	.	0.00	0.00	0.00	0.00
Ivory Coast	.	.	0.00	.	.	Thailand	0.00	.	0.00	0.00	0.00
Japan	0.00	0.02	0.01	0.01	0.03	Tunisia	.	.	0.00	.	0.00
Kenya	.	0.00	0.00	0.00	0.00	Turkey	.	0.00	0.04	0.01	0.04
Kuwait	0.00	.	0.00	0.00	0.00	United Kingdom	0.07	.	0.23	0.36	0.29
Kyrgyzstan	.	.	.	0.00	.	United States	0.59	0.66	0.61	0.59	0.49
Latvia	.	0.00	0.00	0.00	0.00	Uruguay	.	.	.	0.00	0.00
Lebanon	.	.	0.00	0.00	0.00	Venezuela	.	.	0.00	0.00	0.00
Libya	.	0.00	0.00	0.00	.	Vietnam	0.12	0.14	.	.	.

INTL 5.2 Intestinal transplant rates per million population, by year & country

intestinal transplants

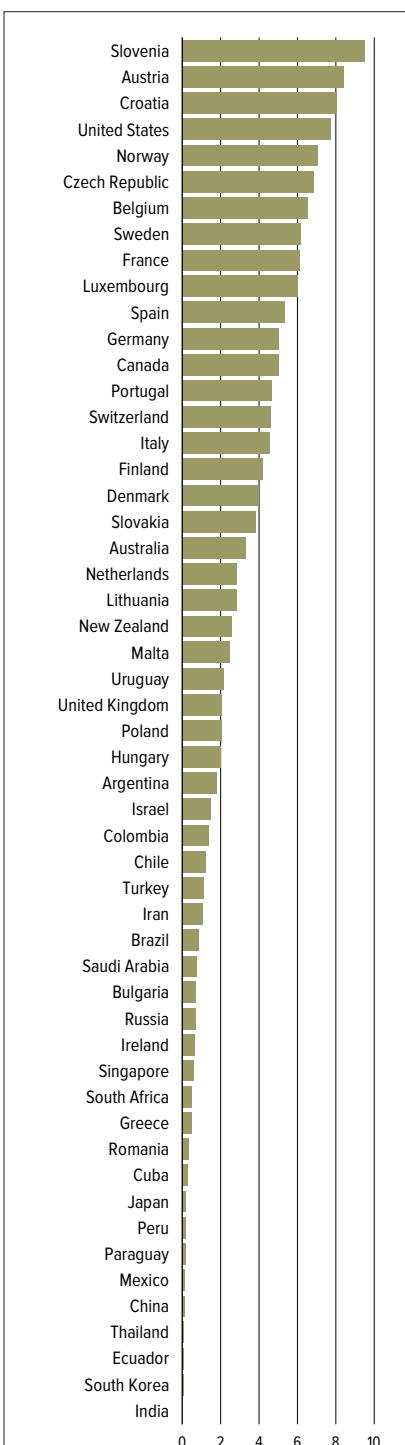


INTL 5.3 Intestinal transplant counts by country, 2010

	2006	2007	2008	2009	2010		2006	2007	2008	2009	2010
Albania	.	.	.	.	0	Lithuania	.	.	.	.	0
Algeria	.	.	.	0	0	Luxembourg	.	.	0	.	1
Argentina	.	6	8	3	7	Macedonia	.	.	.	.	0
Australia	0	.	.	.	1	Malaysia	0	0	0	0	0
Austria	0	.	.	.	.	Maldives	.	.	.	0	0
Bahrain	0	.	.	.	.	Malta	.	.	.	0	0
Bangladesh	.	.	0	.	.	Mauritius	.	.	.	.	0
Belgium	0	.	.	0	.	Mexico	.	.	.	0	0
Bhutan	.	0	.	0	0	Moldova	.	.	0	0	0
Bulgaria	.	0	0	0	0	Mongolia	.	.	.	.	0
Burma/Myanmar	.	0	.	.	.	Morocco	.	.	.	.	0
Cambodia	.	.	.	.	.	Nepal	.	.	.	0	0
Cameroon	.	.	0	0	.	Netherlands	0	.	.	1	.
Canada	7	4	4	3	3	New Zealand	0	.	.	.	.
Colombia	.	.	.	0	6	Nicaragua	.	.	.	0	0
Costa Rica	.	.	.	0	0	Nigeria	.	0	0	0	0
Croatia	0	.	.	.	.	Oman	0	.	0	0	0
Czech Republic	0	0	0	0	0	Pakistan	0	.	0	0	.
Denmark	0	.	.	.	.	Paraguay	.	.	1	.	.
El Salvador	.	.	0	.	.	Philippines	.	.	.	.	0
Ethiopia	.	.	0	0	0	Poland	0	0	0	0	0
Fiji	.	.	.	0	.	Portugal	0	0	0	0	0
Finland	.	.	.	.	1	Qatar	.	.	0	0	0
France	8	6	13	7	9	Romania	0	0	0	0	0
Georgia	.	.	0	0	.	Saudi Arabia	0	0	0	0	0
Germany	1	.	.	8	10	Senegal	.	.	0	.	.
Ghana	.	.	.	0	0	Singapore	.	0	.	.	.
Greece	.	.	0	.	.	Slovakia	0	0	0	0	0
Iceland	.	.	.	0	.	South Africa	0	0	0	0	0
India	.	.	.	.	1	Spain	13	5	14	11	5
Indonesia	.	.	0	.	.	Sudan	0	0	0	0	0
Iran	0	0	0	0	4	Sweden	0	.	.	.	.
Ireland	.	0	0	0	0	Switzerland	.	.	1	0	1
Israel	0	.	1	.	.	Syria	.	0	0	0	0
Italy	4	2	3	4	6	Thailand	0	.	0	0	0
Ivory Coast	.	.	0	.	.	Tunisia	.	.	0	.	0
Japan	0	2	1	1	4	Turkey	.	0	3	1	3
Kenya	.	0	0	0	0	United Kingdom	4	.	14	22	18
Kuwait	0	.	0	0	0	United States	175	198	185	180	151
Kyrgyzstan	.	.	.	0	.	Uruguay	.	.	0	0	0
Latvia	.	0	0	0	0	Venezuela	.	.	0	0	0
Lebanon	.	.	.	0	0	Vietnam	10	12	.	.	.
Libya	.	0	0	0	.						.

INTL 5.4 Intestinal transplant counts by year & country

heart transplants

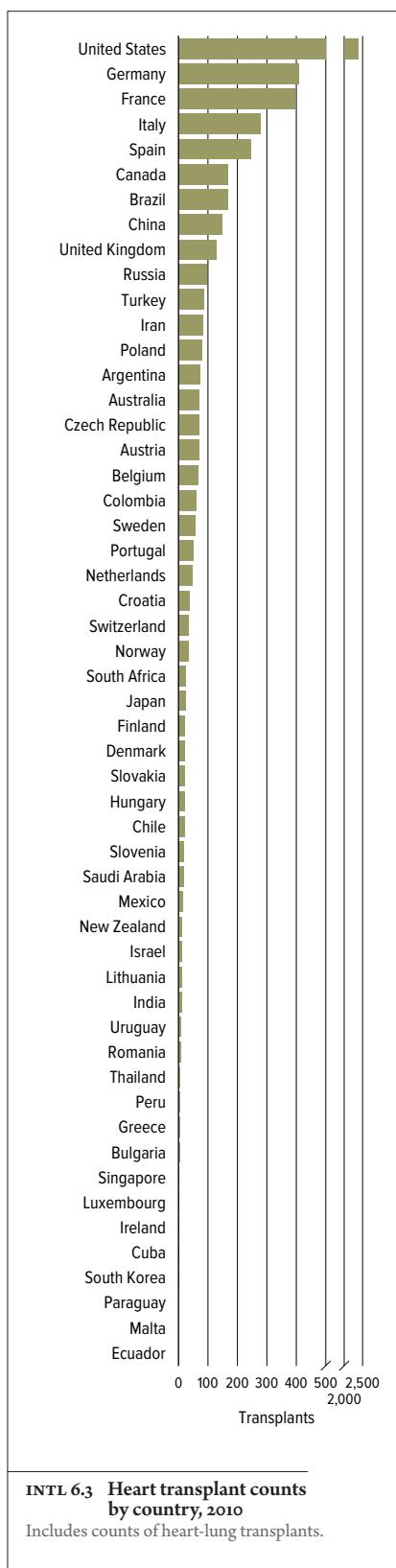


INTL 6.1 Heart transplant rates by country, 2010
Numerator for heart transplant rate includes heart-alone and heart-lung transplants.

	2006	2007	2008	2009	2010		2006	2007	2008	2009	2010
Albania	.	.	0.00	0.00	0.00	Lebanon	.	.	0.00	0.00	0.00
Algeria	.	.	0.00	0.00	0.00	Libya	0.00	0.00	0.00	0.00	0.00
Argentina	2.10	2.10	2.54	2.37	1.79	Lithuania	2.79	4.48	1.40	2.53	2.82
Australia	4.00	3.28	4.28	2.96	3.30	Luxembourg	.	.	0.00	.	6.03
Austria	7.32	6.95	7.92	9.01	8.40	Macedonia	.	.	.	0.00	0.00
Bahrain	0.00	.	.	.	.	Malaysia	0.04	0.11	0.00	0.04	0.00
Bangladesh	.	.	0.00	.	.	Maldives	.	.	0.00	0.00	0.00
Belgium	7.80	7.31	7.31	6.63	6.52	Malta	.	.	2.47	2.46	2.46
Bhutan	.	0.00	.	0.00	0.00	Mauritius	.	.	.	0.00	0.00
Brazil	0.72	0.82	1.02	1.01	0.83	Mexico	0.12	0.14	0.13	0.15	0.13
Bulgaria	0.41	0.41	0.41	0.69	0.70	Moldova	.	.	0.00	0.00	0.00
Burma/Myanmar	.	0.00	.	.	.	Mongolia	.	.	.	0.00	0.00
Cameroon	.	.	0.00	0.00	.	Morocco	.	.	.	0.00	0.00
Canada	5.63	5.07	5.06	5.14	5.01	Nepal	.	.	0.00	0.00	0.00
Chile	1.24	0.98	1.16	1.08	1.19	Netherlands	2.45	3.30	2.01	2.30	2.84
China	.	.	0.10	.	0.11	New Zealand	2.20	2.90	2.40	2.61	2.59
Colombia	1.38	1.41	1.92	1.35	1.36	Nicaragua	.	.	0.00	0.00	0.00
Costa Rica	.	0.23	.	0.67	0.00	Nigeria	.	0.00	0.00	0.00	0.00
Croatia	3.12	1.34	4.45	4.46	8.02	Norway	6.94	8.00	9.04	5.79	7.06
Cuba	0.27	0.63	0.27	0.27	0.27	Oman	0.00	.	0.00	0.00	0.00
Czech Republic	5.57	6.84	5.77	7.83	6.86	Pakistan	0.00	.	0.00	0.00	0.00
Denmark	5.14	5.30	3.65	4.91	3.99	Paraguay	.	0.16	0.16	0.16	0.16
Ecuador	.	.	.	0.07	0.07	Peru	.	.	.	0.17	0.17
El Salvador	.	.	0.00	.	.	Philippines	.	.	.	0.00	0.00
Estonia	.	.	.	.	0.00	Poland	2.52	1.66	1.58	1.85	2.05
Ethiopia	.	.	0.00	0.00	0.00	Portugal	3.58	4.79	3.93	4.39	4.66
Fiji	.	.	0.00	.	.	Qatar	.	0.00	0.00	0.00	0.00
Finland	3.63	4.96	4.00	2.48	4.19	Romania	0.32	0.41	0.27	0.45	0.32
France	6.35	6.38	6.21	6.23	6.08	Russia	.	.	.	0.70	0.70
Georgia	.	.	0.00	0.00	.	Saudi Arabia	0.54	0.49	0.76	0.59	0.74
Germany	5.30	5.23	4.89	4.63	5.01	Senegal	.	.	0.00	0.00	0.00
Ghana	.	.	0.00	0.00	.	Singapore	1.27	0.83	0.61	0.99	0.58
Greece	0.66	0.47	1.49	0.75	0.47	Slovakia	1.84	4.04	4.77	4.21	3.84
Hungary	2.19	2.19	2.20	2.40	2.00	Slovenia	3.48	5.48	2.99	8.97	9.49
Iceland	.	.	.	0.00	.	South Africa	0.44	0.54	0.47	0.53	0.51
India	.	.	0.00	0.00	0.01	South Korea	0.02	0.02	0.04	0.00	0.04
Indonesia	.	0.00	0.00	.	.	Spain	6.32	5.38	6.45	5.94	5.31
Iran	0.25	0.50	0.69	0.62	1.07	Sudan	0.00	0.00	0.00	0.00	0.00
Ireland	.	1.58	0.89	2.40	0.65	Sweden	4.44	5.09	5.09	6.29	6.17
Israel	3.50	2.58	2.95	2.63	1.50	Switzerland	3.59	3.84	3.83	3.95	4.59
Italy	5.80	5.23	5.46	5.89	4.56	Syria	.	0.00	0.00	0.00	0.00
Ivory Coast	.	.	0.00	.	.	Thailand	0.08	0.09	0.09	0.14	0.08
Japan	0.08	0.08	0.09	0.06	0.18	Tunisia	0.00	0.00	0.00	.	0.00
Jordan	.	0.00	0.00	.	.	Turkey	0.61	0.86	0.69	0.72	1.11
Kenya	.	0.00	0.00	0.00	0.00	United Kingdom	2.68	2.38	2.14	2.27	2.07
Kuwait	0.00	.	0.00	0.00	0.00	United States	7.45	7.43	7.20	7.30	7.70
Kyrgyzstan	.	.	0.00	.	.	Uruguay	2.14	1.53	3.35	2.13	2.12
Latvia	0.88	1.33	0.00	0.45	0.00	Venezuela	.	0.00	0.00	0.00	0.00
						Vietnam	0.00	0.00	.	.	.

INTL 6.2 Heart transplant rates per million population, by year & country
Numerator for heart transplant rate includes heart-alone and heart-lung transplants.

heart transplants



INTL 6.3 Heart transplant counts by country, 2010

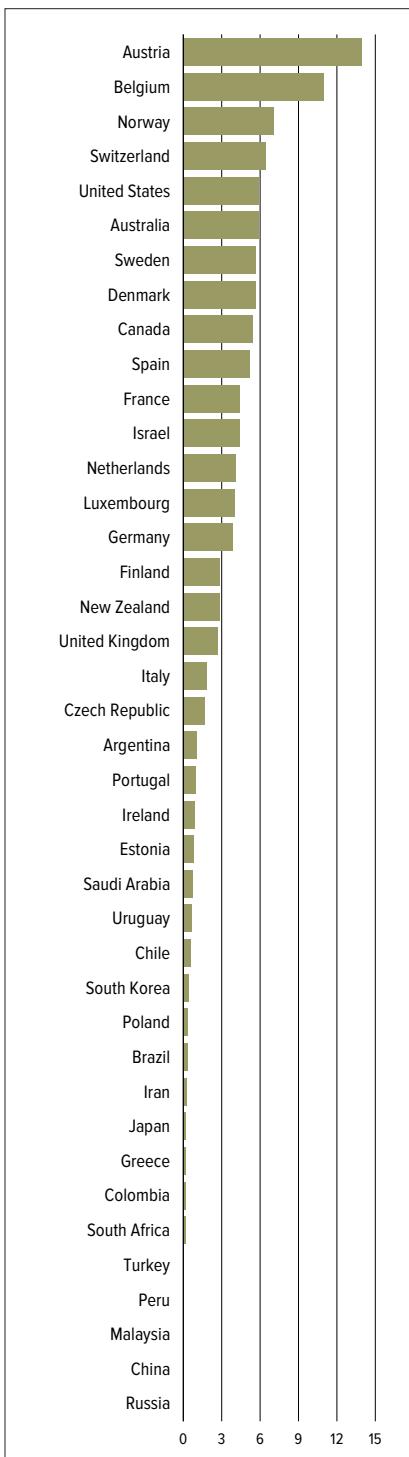
Includes counts of heart-lung transplants.

	2006	2007	2008	2009	2010		2006	2007	2008	2009	2010
Albania	.	.	0	0	0	Lebanon	.	.	.	0	0
Algeria	.	84	103	97	74	Libya	0	0	0	0	.
Argentina	83	84	103	97	74	Lithuania	10	16	5	9	10
Australia	82	68	90	63	71	Luxembourg	.	.	0	.	3
Austria	60	57	65	74	69	Macedonia	.	.	.	.	0
Bahrain	0	.	.	.	.	Malaysia	1	3	0	1	0
Bangladesh	.	.	0	.	.	Maldives	.	.	0	0	0
Belgium	81	76	76	69	68	Malta	.	.	.	1	1
Bhutan	.	0	.	0	0	Mauritius	.	.	.	0	0
Brazil	138	159	200	200	167	Mexico	13	15	14	17	15
Bulgaria	3	3	3	5	5	Moldova	.	.	0	0	0
Burma/Myanmar	.	0	.	.	.	Mongolia	.	.	.	0	0
Cameroon	.	.	0	0	.	Morocco	.	.	.	0	0
Canada	184	167	168	172	169	Nepal	.	.	0	0	0
Chile	20	16	19	18	20	Netherlands	40	54	33	38	47
China	.	.	130	.	147	New Zealand	9	12	10	11	11
Colombia	58	60	83	59	60	Nicaragua	.	.	0	0	0
Costa Rica	.	1	.	3	0	Nigeria	.	0	0	0	0
Croatia	14	6	20	20	36	Norway	32	37	42	27	33
Cuba	3	7	3	3	3	Oman	0	.	0	0	0
Czech Republic	57	70	59	80	70	Pakistan	0	.	0	0	.
Denmark	28	29	20	27	22	Paraguay	.	.	1	1	1
Ecuador	.	.	.	1	1	Peru	.	.	.	5	.
El Salvador	.	.	0	.	.	Philippines	.	.	.	0	0
Estonia	.	.	.	.	0	Ecuador	97	64	61	71	79
Ethiopia	.	.	0	0	0	El Salvador	38	51	42	47	50
Fiji	.	.	0	.	.	Egypt	.	.	0	0	0
Finland	19	26	21	13	22	Egypt	.	.	0	0	0
France	402	406	398	401	394	Egypt	.	.	0	0	0
Germany	436	430	401	379	409	Egypt	.	.	0	0	0
Ghana	.	.	0	0	.	Egypt	.	.	0	0	0
Greece	7	5	16	8	5	Egypt	.	.	0	0	0
Hungary	22	22	22	24	20	Egypt	.	.	0	0	0
Iceland	.	.	0	.	.	Egypt	.	.	0	0	0
India	.	.	5	5	10	Egypt	.	.	0	0	0
Indonesia	.	0	0	.	.	Egypt	.	.	0	0	0
Iran	18	37	52	47	82	Egypt	.	.	0	0	0
Ireland	.	7	4	11	3	Egypt	.	.	0	0	0
Israel	24	18	21	19	11	Egypt	.	.	0	0	0
Italy	344	312	328	356	277	Egypt	.	.	0	0	0
Ivory Coast	.	.	0	.	.	Egypt	.	.	0	0	0
Japan	10	10	11	8	23	Egypt	.	.	0	0	0
Jordan	.	0	0	.	.	Egypt	.	.	0	0	0
Kenya	.	0	0	0	0	Egypt	.	.	0	0	0
Kuwait	0	.	0	0	0	Egypt	.	.	0	0	0
Kyrgyzstan	.	.	0	0	.	Egypt	.	.	0	0	0
Latvia	2	3	0	1	0	Egypt	.	.	0	0	0
United Kingdom	.	.	.	.	.	Egypt	.	.	0	0	0
United States	2,224	2,240	2,190	2,241	2,374	Egypt	.	.	0	0	0
Uruguay	7	5	11	7	7	Egypt	.	.	0	0	0
Venezuela	.	.	0	0	0	Egypt	.	.	0	0	0
Vietnam	0	0	.	.	.	Egypt	.	.	0	0	0

INTL 6.4 Heart transplant counts by year & country

Includes counts of heart-lung transplants.

Lung transplants

**INTL 7.1 Lung transplant rates by country, 2010**

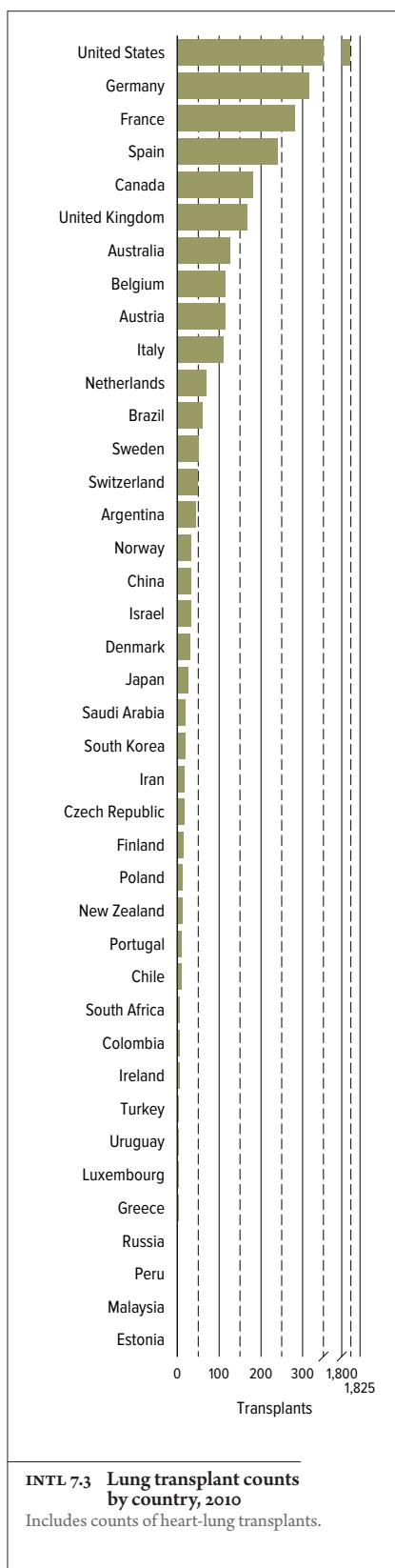
Numerator for lung transplant rate includes lung-alone and heart-lung transplants.

	2006	2007	2008	2009	2010		2006	2007	2008	2009	2010
Albania	.	.	.	0.00	0.00	Libya	.	0.00	0.00	0.00	0.00
Algeria	.	0.62	0.87	0.83	1.06	Lithuania	.	0.28	0.56	1.13	0.00
Argentina	5.08	4.10	5.71	5.46	5.86	Luxembourg	.	.	0.00	.	4.02
Australia	12.82	10.00	14.87	13.40	13.88	Macedonia	.	.	.	.	0.00
Austria	0.00	.	.	0.00	0.00	Malaysia	0.00	0.00	0.00	0.00	0.04
Bahrain	8.77	9.14	7.98	8.74	10.94	Maldives	.	.	0.00	0.00	0.00
Bangladesh	.	0.00	.	0.00	0.00	Malta	.	.	0.00	0.00	0.00
Bhutan	5.33	5.68	4.19	5.73	5.39	Mauritius	.	.	0.00	0.00	0.00
Brazil	.	0.27	0.14	0.30	0.00	Mexico	.	0.02	0.01	0.01	0.00
Bulgaria	.	0.00	0.00	0.00	0.00	Moldova	.	.	0.00	0.00	0.00
Burma/Myanmar	.	0.00	.	0.00	0.00	Mongolia	.	.	.	0.00	0.00
Cameroon	.	.	0.00	0.00	0.00	Morocco	.	.	0.00	0.00	0.00
Canada	1.47	1.27	1.96	2.15	1.67	Nepal	.	0.00	0.00	0.00	0.00
Chile	6.05	6.04	3.28	5.27	5.62	Netherlands	3.43	4.10	3.47	4.18	4.10
China	.	0.03	0.03	0.03	0.03	New Zealand	3.18	3.15	3.36	3.80	2.82
Colombia	.	0.33	0.16	0.14	0.00	Nicaragua	.	.	0.00	0.00	0.00
Costa Rica	.	.	.	0.00	0.00	Nigeria	7.59	6.48	7.11	5.15	7.06
Croatia	0.00	.	.	0.00	0.00	Norway	0.00	.	0.00	0.00	0.00
Czech Republic	.	0.00	.	0.00	0.00	Oman	.	.	0.00	0.00	0.00
Denmark	.	0.00	.	0.00	0.00	Pakistan	0.00	.	0.00	0.00	0.00
El Salvador	.	0.00	.	0.00	0.00	Paraguay	.	.	0.00	.	.
Estonia	.	.	.	0.77	0.77	Peru	.	.	.	0.04	0.00
Ethiopia	.	0.00	0.00	0.00	0.00	Philippines	.	.	.	0.00	0.00
Fiji	.	.	0.00	0.00	0.00	Poland	0.18	0.18	0.29	0.26	0.31
Finland	2.87	3.63	2.29	2.67	2.85	Portugal	.	0.38	0.38	1.03	0.93
France	3.57	3.82	3.65	4.24	4.35	Qatar	.	.	0.00	0.00	0.00
Germany	3.36	3.67	3.52	3.52	3.85	Romania	0.00	0.00	0.00	0.00	0.00
Greece	0.00	0.00	0.28	0.28	0.19	Russia	.	.	.	0.01	0.00
Hungary	.	.	.	0.00	0.00	Saudi Arabia	0.08	0.00	0.04	0.16	0.74
Iceland	.	.	.	0.00	0.00	Senegal	.	0.00	.	.	.
India	.	.	.	0.00	0.00	Singapore	0.21	0.21	0.41	0.00	0.00
Indonesia	0.10	0.04	0.15	0.09	0.22	Slovakia	0.00	0.00	0.00	0.00	0.00
Iran	6.55	5.15	7.31	6.77	4.35	South Africa	0.10	0.15	0.18	0.16	0.12
Ireland	1.55	1.90	1.60	1.87	1.83	South Korea	0.06	0.19	0.19	0.17	0.37
Ivory Coast	.	0.00	.	0.00	0.00	Spain	3.96	4.14	4.27	4.75	5.14
Japan	0.05	0.07	0.11	0.09	0.20	Sudan	0.00	0.00	0.00	0.00	0.00
Jordan	.	0.00	0.00	0.00	0.00	Sweden	5.55	4.76	5.86	5.74	5.62
Kenya	.	0.00	0.00	0.00	0.00	Switzerland	4.79	.	5.28	5.13	6.43
Kuwait	0.00	.	0.00	0.00	0.00	Syria	.	0.00	0.00	0.00	0.00
Kyrgyzstan	.	.	.	0.00	0.00	Thailand	0.00	0.03	0.02	0.02	0.00
Latvia	.	0.00	0.00	0.00	0.00	Tunisia	0.00	0.00	0.00	.	0.00
Lebanon	.	0.00	0.00	0.00	0.00	Turkey	.	0.03	0.03	0.09	0.04

INTL 7.2 Lung transplant rates per million population, by year & country

Numerator for lung transplant rate includes lung-alone and heart-lung transplants.

lung transplants



INTL 7.3 Lung transplant counts by country, 2010

Includes counts of heart-lung transplants.

	2006	2007	2008	2009	2010		2006	2007	2008	2009	2010
Albania	.	.	.	0	0	Libya	.	0	0	0	0
Algeria	.	.	0	0	0	Lithuania	.	1	2	4	0
Argentina	.	25	35	34	44	Luxembourg	.	.	0	.	2
Australia	104	85	120	116	126	Macedonia	.	.	.	.	0
Austria	105	82	122	110	114	Malaysia	0	0	0	0	1
Bahrain	0	.	.	.	.	Maldives	.	.	.	0	0
Bangladesh	.	.	0	.	.	Malta	.	.	.	0	0
Belgium	91	95	83	91	114	Mauritius	.	.	.	.	0
Bhutan	.	0	.	0	0	Mexico	.	2	1	1	0
Brazil	.	.	53	28	60	Moldova	.	.	0	0	0
Bulgaria	.	0	0	0	0	Mongolia	.	.	.	.	0
Burma/Myanmar	.	0	.	.	.	Morocco	.	.	.	.	0
Cameroon	.	.	0	0	.	Nepal	.	0	0	0	0
Canada	174	187	139	192	182	Netherlands	56	67	57	69	68
Chile	.	.	9	.	9	New Zealand	13	13	14	16	12
China	.	.	35	.	33	Nicaragua	.	.	0	0	0
Colombia	.	.	14	7	6	Nigeria	.	0	0	0	0
Costa Rica	.	.	.	0	0	Norway	35	30	33	24	33
Croatia	0	.	.	.	.	Oman	0	.	0	0	0
Czech Republic	15	13	20	22	17	Pakistan	0	.	0	0	.
Denmark	33	33	18	29	31	Paraguay	.	.	0	.	.
El Salvador	.	.	0	.	.	Peru	.	.	.	.	1
Estonia	.	.	.	.	1	Philippines	.	.	.	.	0
Ethiopia	.	.	0	0	0	Poland	7	7	11	10	12
Fiji	.	.	.	0	.	Portugal	.	4	4	11	10
Finland	15	19	12	14	15	Qatar	.	.	0	0	0
France	226	243	234	273	282	Romania	0	0	0	0	0
Georgia	.	.	0	0	.	Russia	.	.	.	.	1
Germany	277	302	289	288	314	Saudi Arabia	2	0	1	4	19
Ghana	0	0	3	3	2	Senegal	.	.	0	.	.
Greece	0	0	3	3	2	Singapore	1	1	2	0	0
Hungary	.	.	.	0	0	Slovakia	0	0	0	0	0
Iceland	.	.	.	0	.	South Africa	5	7	9	8	6
India	.	.	.	0	.	South Korea	3	9	9	8	18
Indonesia	.	0	0	.	.	Spain	176	187	196	220	239
Iran	7	3	11	7	17	Senegal	.	.	0	.	.
Ireland	.	.	4	5	4	Sweden	50	43	53	52	51
Israel	45	36	52	49	32	Switzerland	36	.	40	39	49
Italy	92	113	96	113	111	Turkey	.	2	2	7	3
Ivory Coast	.	.	0	.	.	United Kingdom	124	128	144	152	167
Japan	6	9	14	11	25	Jordan	.	.	.	.	.
Jordan	.	0	0	.	.	Kenya	.	.	.	.	.
Kenya	.	0	0	0	0	United States	1,437	1,502	1,505	1,690	1,811
Kuwait	0	.	0	0	0	Uruguay	.	3	4	0	2
Kyrgyzstan	.	.	.	0	.	Venezuela	.	.	0	0	0
Latvia	.	0	0	0	0	Vietnam	0	0	.	.	.
Lebanon	.	.	.	0	0						

INTL 7.4 Lung transplant counts by year & country

Includes counts of heart-lung transplants.

