

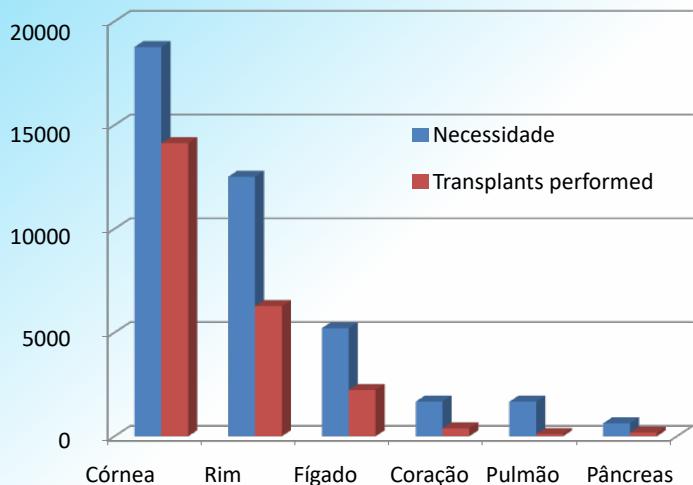
# 2019

# Organ Transplantation in Brazil

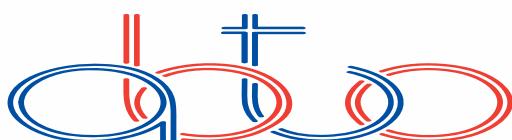
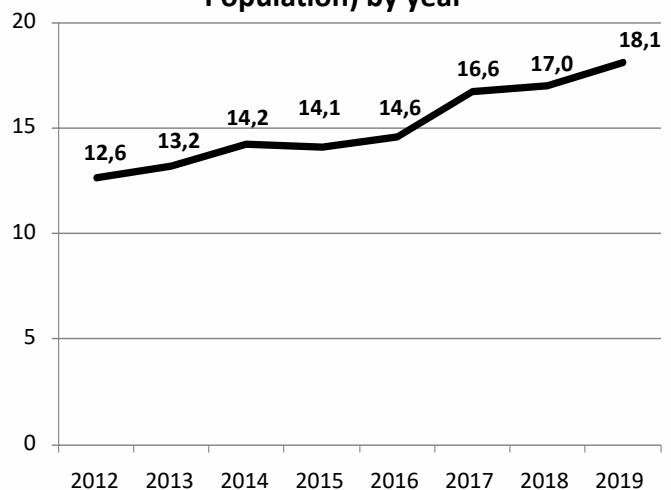
(2012-2019)

In absolute numbers Brazil holds the second largest kidney and liver transplant programs in the world. However, organ donation and the allocation systems still have to improve and there are regional disparities to be solved. The Population trust in organ donation and fairness of the system, along with government and medical societies support, as much as the dedication of health care professionals, are of utmost importance for the success of the Brazilian Transplantation Program.

**Estimated demand and number of transplants performed in Brazil in 2018**



**Effective donors in Brazil - pmp (per million Population) by year**



# RBT

Brazilian Transplantation Registry  
Official report of the Brazilian Organ Transplantation Society



Associação Brasileira de Transplante de Órgãos

## Supporters



### **Board of Directors: (2018-2019)**

**President:** Paulo M. Pêgo Fernandes  
**Vice-President:** Tainá V. de Sandes Freitas  
**Secretary:** João Seda Neto  
**2<sup>nd</sup> Secretary:** Deise R. B. Monteiro Carvalho  
**Treasurer:** Eliana Régia Barbosa  
**2<sup>nd</sup> Treasurer:** Gustavo Fernandes Ferreira

### **Advisory Council:**

**President :** Lucio Pacheco  
**Secretary:** Roberto C. Manfro  
José O. Medina Pestana  
Jorge Neumann  
Mario Abbud Filho  
Valter Duro Garcia

### **Departaments**

**Transplant Coordination:** Joel de Andrade  
**Nursing:** Janine Schirmer  
**Ethics:** Joao Egidio Romao Junior  
**Immunobiology:** Maria Gerbase De Lima  
**Heart Transplantation:** Noedir Antonio Gropp Stolf  
**Liver Transplantation:** José Huygens Parente Garcia  
**Pancreas Transplantation:** Erika Bevilaqua Rangel  
**Lung Transplantation:** Marcos Naoyuki Samano  
**Tissue Transplantation:** Rafael Augusto Dantas Prinz  
**Pediatric Transplantation:** Clotilde D Garcia  
**Kidney Transplantation:** Lúcio Roberto Requião Moura  
**Expeditors:**  
**Editor:** Valter Duro Garcia  
**Associate Editor:** Lucio Pacheco

Thiago Quintas Camara ([thiago@abto.org.br](mailto:thiago@abto.org.br))  
**Data Management / Creation and Design**

### **Headquarters:**

**Brazilian Organ Transplantation Society- ABTO**  
Av. Paulista, 2001 - 17º andar - cj 1704 / 1707  
São Paulo - SP  
CEP 01311-300  
Fones: 55 11 3145-0000  
Email: [abto@abto.org.br](mailto:abto@abto.org.br)  
[www.abto.org.br](http://www.abto.org.br)

## A year with recovery at the end

Organ donation and transplant rates had a difficult year in 2019. Their increment only occurred in the last quarter possibly in association with the national donation campaign in September and the widespread publicity in the national media on the donation of organs and tissues from Gugu Liberato, a famous Brazilian TV anchor.

The rate of effective donors grew 6.5% in the year, reaching 18.1 PMP, 10.5%, below the 20 PMP predicted in 2016. This increase was due to the 5.2% increase in the rate of potential donors in brain death. It should be noted that this rate (54.7 PMP) corresponds to 78% of the estimated brain death rate for Brazil (70 PMP). A positive fact was the 7.1% increase in the family authorization rate, which, for the first time, reached 60%. Another interesting aspect to be highlighted is that in the last five years, the rate of deceased donors older than 65 years increased from 8% to 13% (62.5% increment) and that of pediatric donors decreased from 8% to 6 %.

Donor notification rates higher than 100 PMP occurred at the DF (106.6) and PR (102.7); with effective donor rates above 40 PMP, SC (47.2), and PR (43.8); with a donation effectiveness rate above 50%, SC (54%). Family consent rates above 70%, occurred in SC (75%), PR (74%), and RJ (71%). These cut-off values (PD rate> 100 PMP, DE rate> 40 PMP, TE donation rate> 50%, and family authorization rate> 70%) were chosen for representing excellence in donation parameters and serve as a model to be sought by other states.

Except for lung transplants, all solid organ transplants increased this year. Kidney transplants surpassed the 6,000 transplant barrier (30 PMP). Corneal transplantation, which had decreased by 11% from 2012 to 2018, stabilized this year (an increase of 0.6%). It should also be highlighted the consolidation, with moderate but continuous growth, of intestinal, multi-visceral, and combined heart and lung transplants.

Kidney transplantation increased by 5.2%, with the growth of deceased donor transplants (5.5%) and transplants with living donors (4.1%). Kidney transplantation with live donor seems to have stabilized in the range of the 5 PMP transplants. Another aspect that must be analyzed carefully is the growth in the rate of transplants with unrelated living donors, excluding spouses, which ranged between 4.2% and 7.1% of the LD in the last 10 years, and this year reached 7.5%. Only PR (51.7 PMP) and SP (45.3 PMP) performed more than 45 PMP kidney transplants, and PR (42.8 PMP), SC (42.7 PMP) and RS (40.4 PMP) performed more than 40 PMP deceased donor kidney transplants.

Liver transplant showed a modest increase of 2%, due to the 3% increase in the rate of transplantation with deceased donor and a decrease of 6% with living donor, which went from 7.7% to 7.1%. 86% of liver transplants with a living donor were performed in children (136), who received only 4.6% of liver transplants with a deceased donor (100). More than 20 liver transplants PMP were performed in the DF (30.3 PMP), CE (25.1 PMP), and PR (22.6 PMP).

Pancreas transplantations were performed in only seven states and with a decreasing number of teams, showed a surprising increase of 17.8%. It is interesting to note that, although the rate of simultaneous kidney and pancreas transplantation (71% and 75%) has remained stable, there has been an increase in the rate of isolated transplants from 6.2% to 14.5% and a decrease in the rate of pancreas transplant after a kidney, which went from 22.6% to 10.5%. SP (2.2 PMP) and SC (2.1 PMP) performed more than two PMP transplants.

Heart transplantation, which has grown steadily since 2011, increased by 6% in 2019 approaching the rate of 2 PMP, which is expected to be reached in 2020. DF (9.7 PMP) and PE (5.5 PMP) accomplished more than 5 PMP transplants, far above other states. The lung transplantation activity, which fell 13% this year, has two positive news: a fourth state started a transplant program (PR) and 99% of the performed transplants are included in the survival curve analysis. Only RS (4.1 PMP) performed more than 2 PMP transplants.

A negative fact, which deserves action from all sectors involved, is the ominous situation of the North Region, the most neglected in the country in terms of donation and transplantation. Between 2012 and 2019, while Brazil showed a 41% increase in the rate of effective donors, (12.8 to 18.1 PMP), the North Region presented no growth, remaining at the rate of 3.7 PMP donors, one-fifth of the national average. The most astonishing situation occurred with deceased donor kidney transplantation, while a 22% national increment occurred (20.6 to 25.0 PMP), in the North Region, a 44% decrease was observed (5.7 to 3.2 PMP). Such rate represents one-eighth of the national average occurring as a consequence of the suspension of the transplant program (AM), obstacles in some states (AC, RO) and absence of programs in others (RR, TO and AP). The positive exception is the donor procurement activity in Rondônia, which started in 2011 and, in 2019, reached 13.7 effective PMP donors, exceeding the target set for 2019 (10 PMP).

To conclude, a novelty and an optimistic expectation. The novelty is that, starting in 2020, the Brazilian Transplant Registry will have two chief editors and a group of assistant editors, seeking for improvement. The optimistic expectation is that, after a year of meetings and financial feasibility studies with the Ministry of Health, there is a good possibility of the inclusion, still in the first semester, of some transplant related procedures in the financial increment for transplantation of the MS (IFTDO). That should include monitoring post-transplantation, post-transplantation complications, pancreas and kidney transplantation and the work-up for inclusion in the transplant waiting list. These inclusions in the financial increment are of utmost importance for the maintenance of the quality of the transplants and for their growth while its cost represents a very small, around 2%, increment in the annual expenses with transplantation in Brazil.

Valter Duro Garcia  
abto@abto.org.br

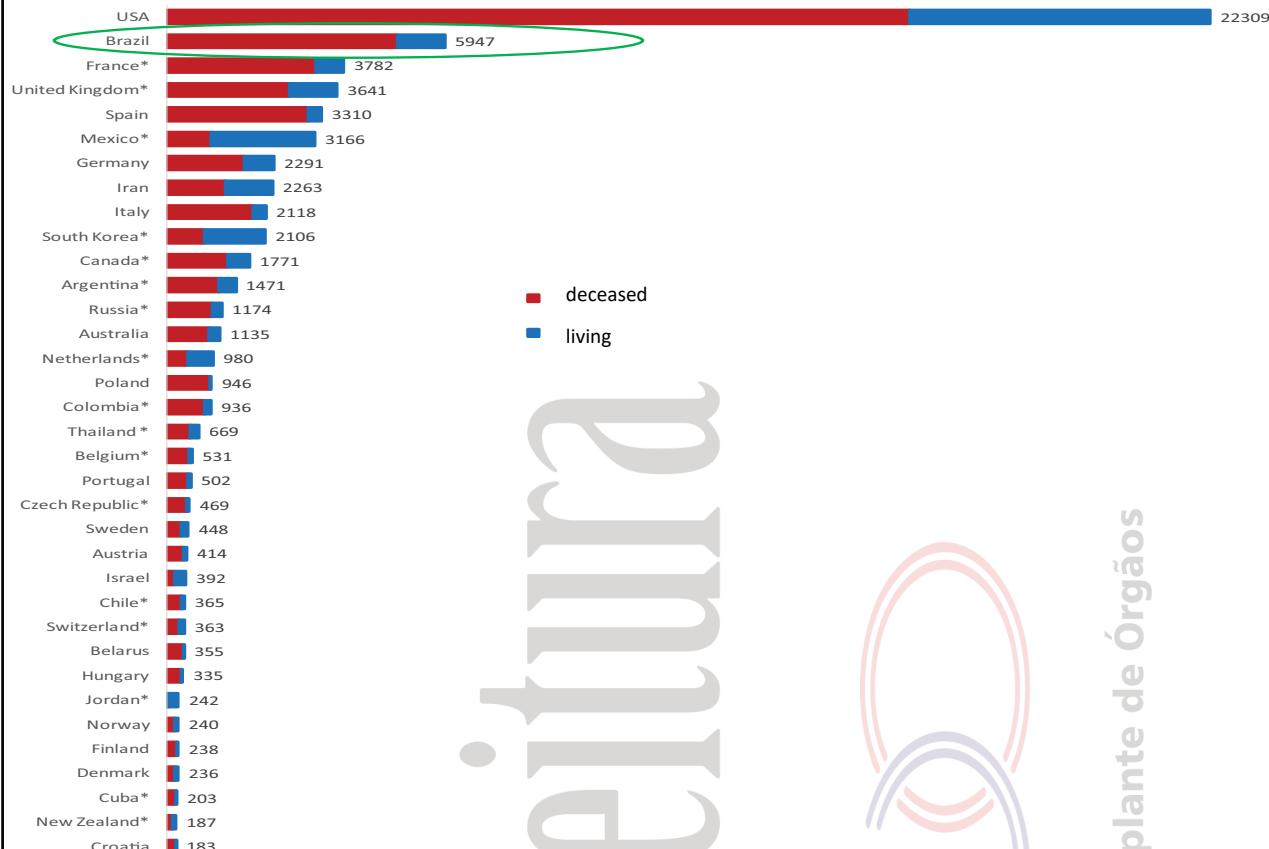
# Index

BRAZIL'S STANDING IN GLOBAL FIGURES	3
BRAZILIAN DATA	6
Annual number of transplants in Brazil between 2008 and 2018	8
KIDNEY	9
LIVER	10
HEART	11
Pancreas	12
LUNG	13
Bone Marrow, Tissue and Cell	14
CORNEA	15
Bone	15
PEDIATRIC TRANSPLANTATION	16
DATA FROM BRAZILIAN REGIONS	18
General data	18
Organ Donation	19
Tissue transplants	19
Organ transplants	20
WAITING LIST	22
Patients actives on waiting list (december 2018)	22
Pediatric Patients actives on waiting list (december 2018)	22
Number of patients who entered the waiting list and mortality during the year 2018, by state,	23
DATA FROM INDIVIDUAL STATES	24
Organ Donation for 2017	24
Number of Notifications of potential donors, effective donors and donors whose organs were transplanted by State during the year 2018	25
Causes of non-fulfillment of organ donation of notified potential donors during the year 2018	26
Profile: age, gender, cause of death and blood group of the organ donors	27
Transplantation center data	82
HEART	82
LIVER	83
Pancreas	85
MULTIVISCERAL	85
KIDNEY	86
LUNG	90
CORNEA	90
Bone Marrow	92
Skin	94
Valva	94
Bone	95
List of National and State Coordination Transplant	98

# BRAZILIAN STANDING IN GLOBAL FIGURES

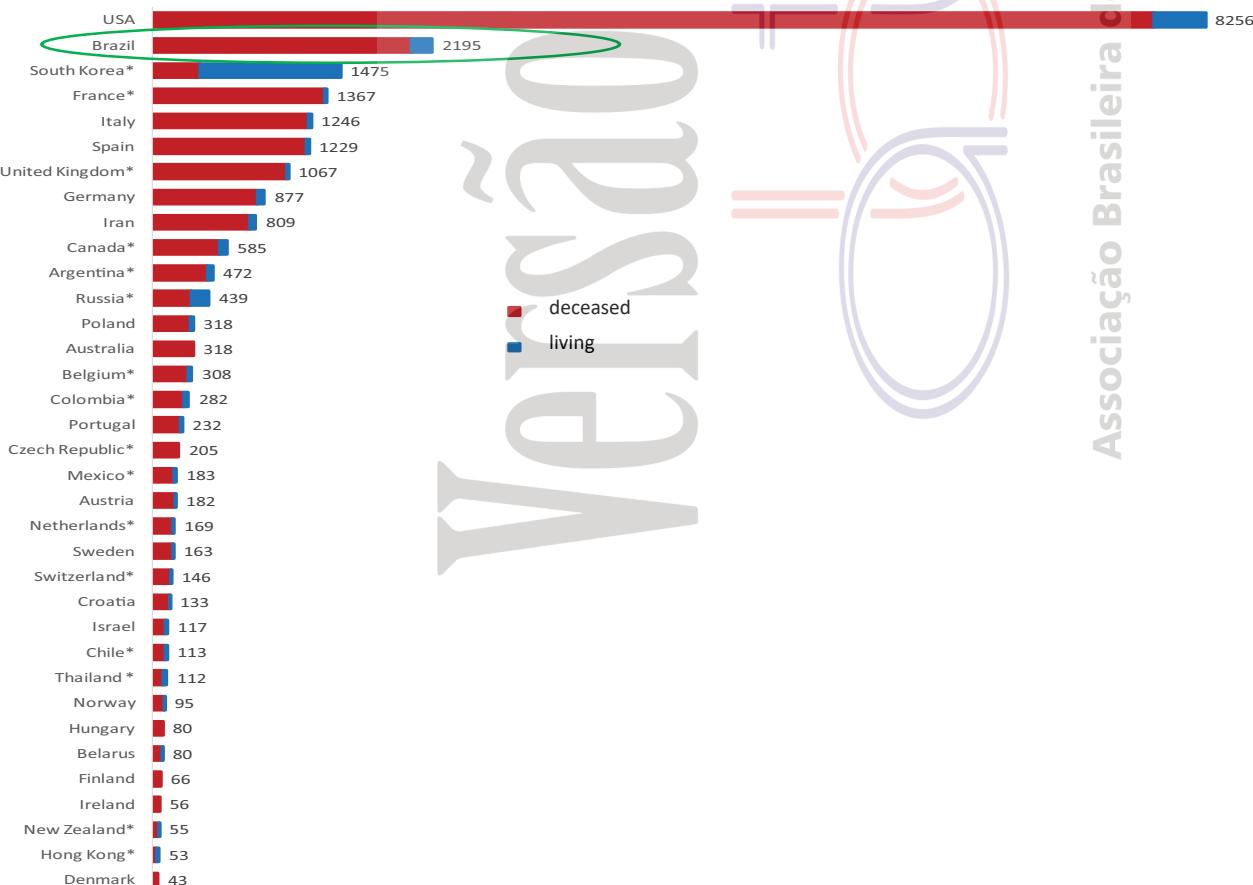
Source: IRODAT 2018

Brazil is ranked second in absolute number of kidney transplants (from 35 countries) - Year 2018



■ deceased  
■ living

Brazil is ranked second in absolute number of liver transplants (from 35 countries) - Year 2018

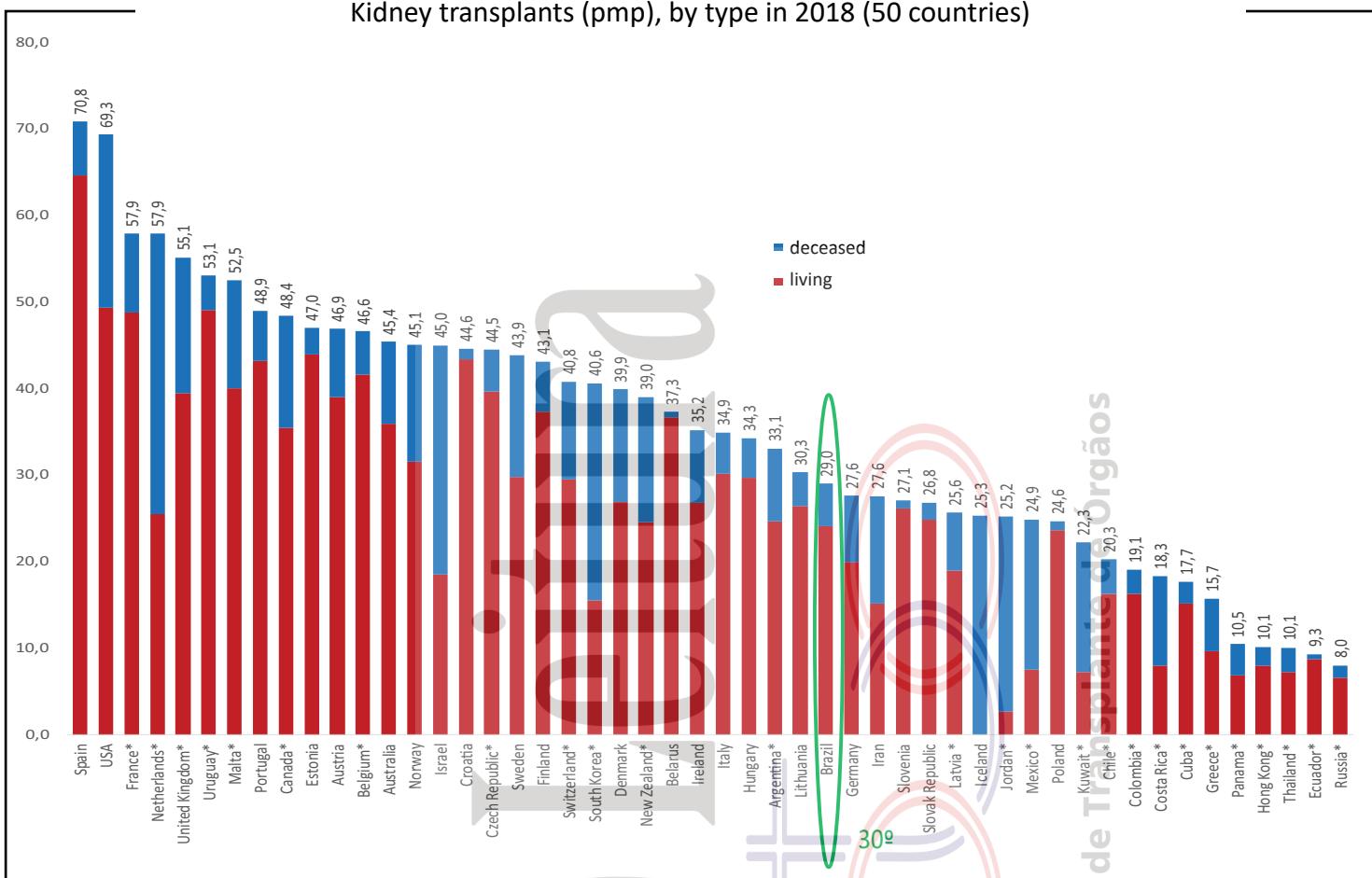


\* - 2017 data

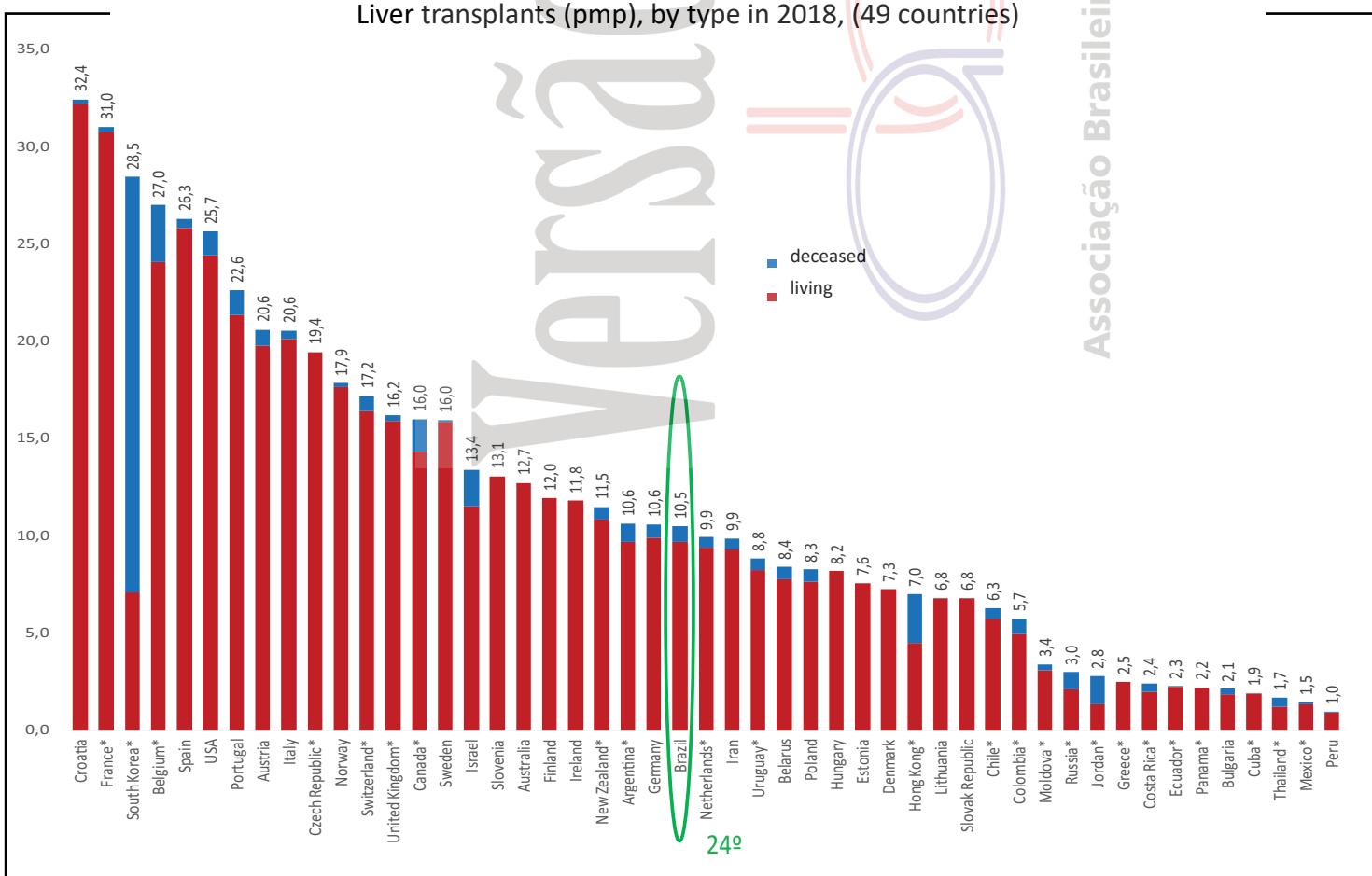
# BRAZILIAN STANDING IN GLOBAL FIGURES

Source: IRODAT 2018

Kidney transplants (pmp), by type in 2018 (50 countries)



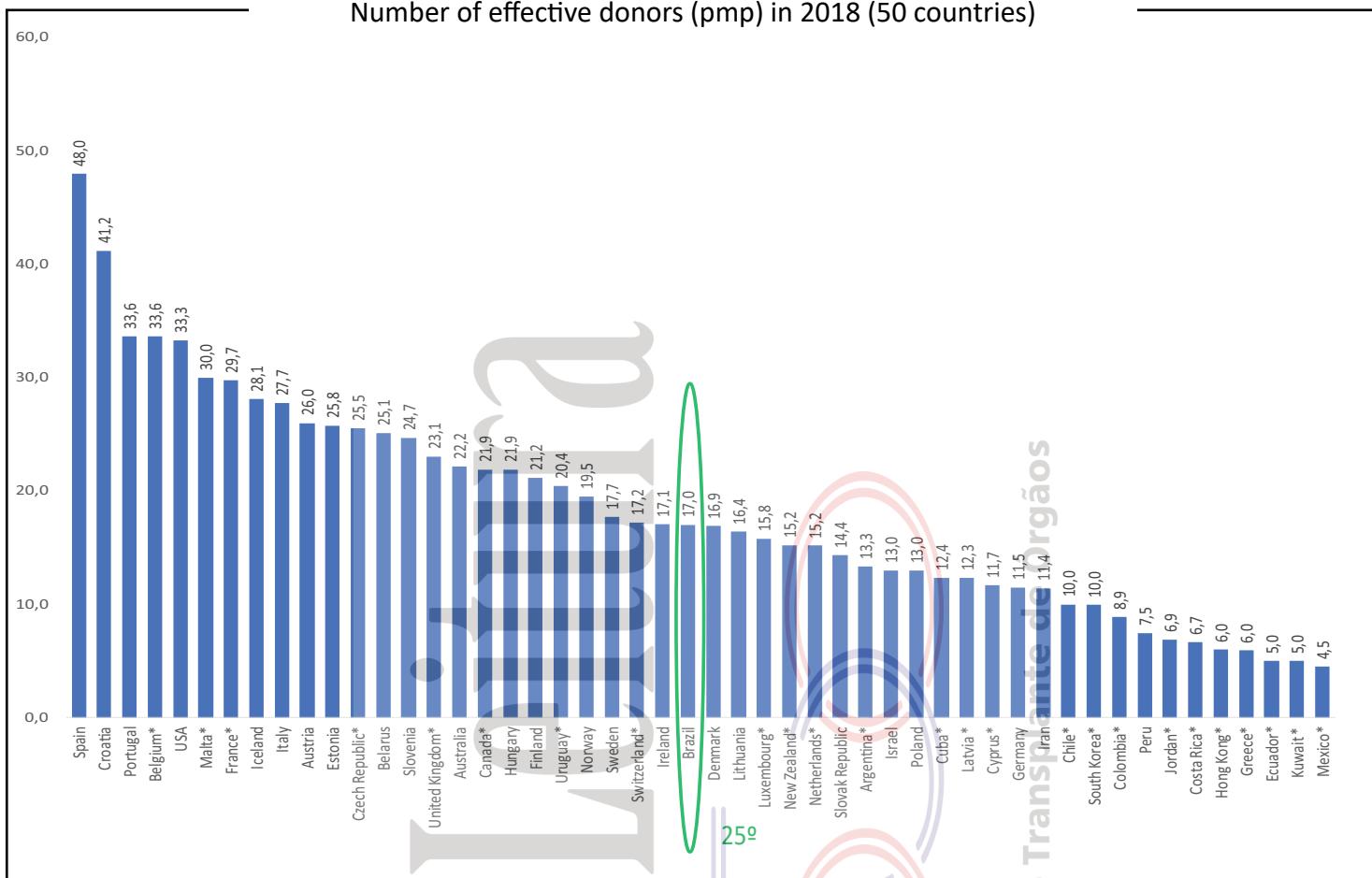
Liver transplants (pmp), by type in 2018, (49 countries)



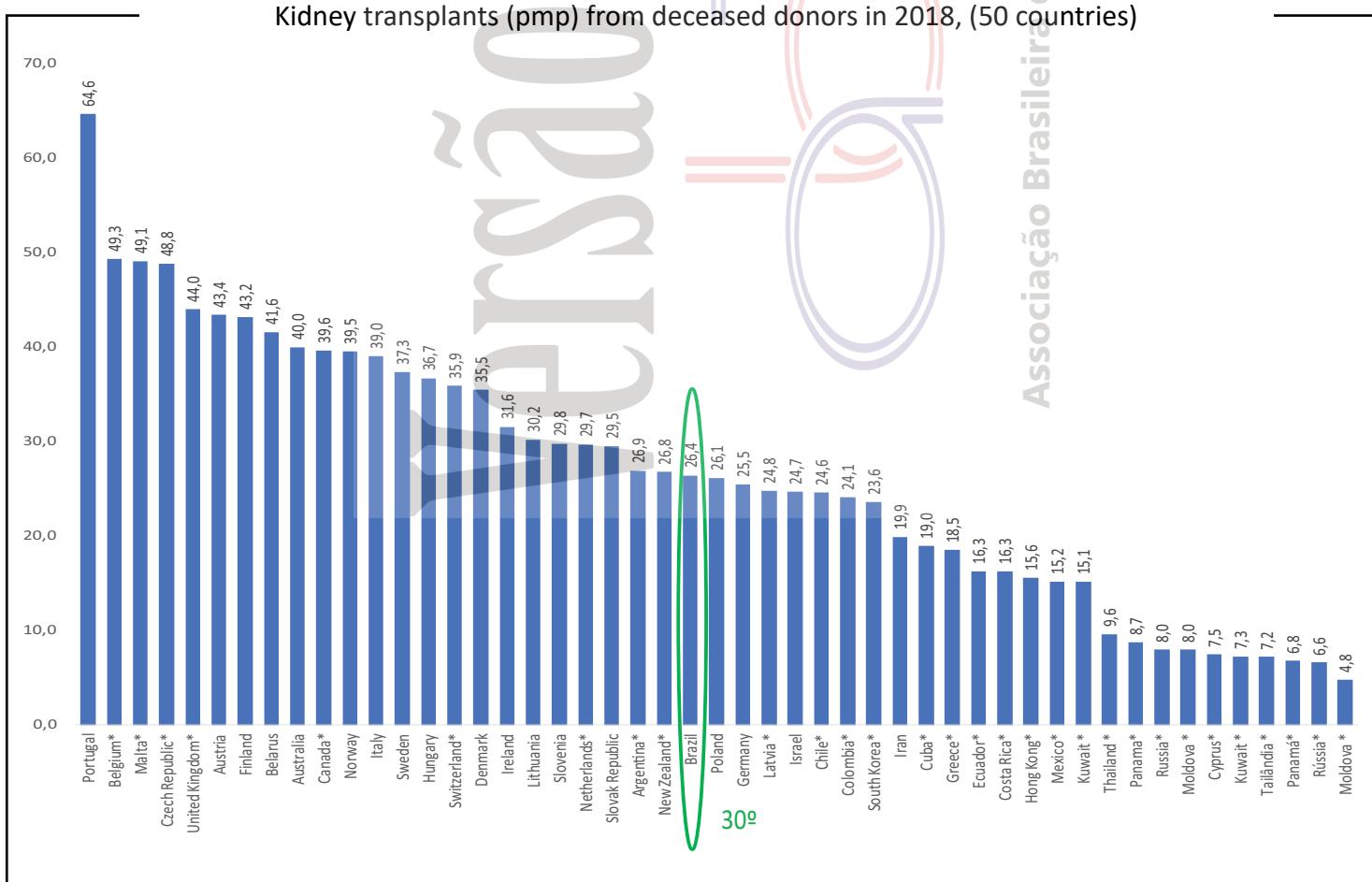
# BRAZILIAN STANDING IN GLOBAL FIGURES

Source: IRODAT 2018

Number of effective donors (pmp) in 2018 (50 countries)



Kidney transplants (pmp) from deceased donors in 2018, (50 countries)



Associação Brasileira de Transplantados de Órgãos

# BRAZILIAN DATA

População atual	208.494.900	Estimated annual need and number of transplants		Cornea	Kidney	Liver	Heart	Lung
		Estimated demand		18.765	12.510	5.212	1.876	1.668
		Transplants performed		14.943	6.283	2.245	380	106
Mortality per year	2012	2013	2014	2015	2016	2017	2018	2019
All causes	1.181.166	1.220.678	1.227.039	1.264.175	1.309.774	1.312.663	Unavailable	Unavailable
External causes	152.013	151.683	156.942	152.136	155.861	158.657	Unavailable	Unavailable
Neurological causes	28.712	30.300	32.381	34.721	36.870	38.786	Unavailable	Unavailable
Population (IBGE census)	190.755.799	190.755.799	190.755.799	202.768.562	204.450.649	206.081.432	207.660.920	208.494.900
HOSPITAL								
Total number	6.609							
State capitals	1.509							
Countryside	5.100							
Nº de beds	460.998							
Nº de ICU beds	44.503							
Hospitals over 80 beds	1.769							
Teaching hospitals	164							
Medical schools	373							
Neurosurgery services	482							
Number of CIHDOTTS	451							
Number of OPOs	58							

Source: <http://cnes.datasus.gov.br> 20/01/2020

## Facts :

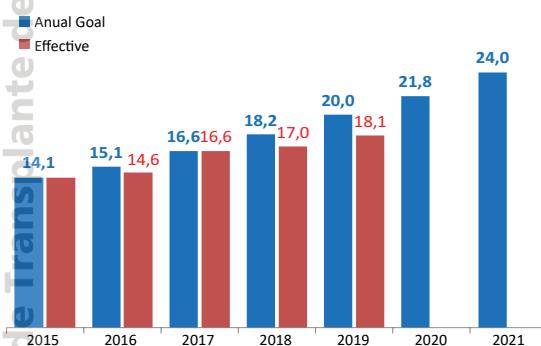
### Positive:

- Well-established and consolidated transplant system,
- Program support by public governments,
- Better results being achieved overtime,

### Negative:

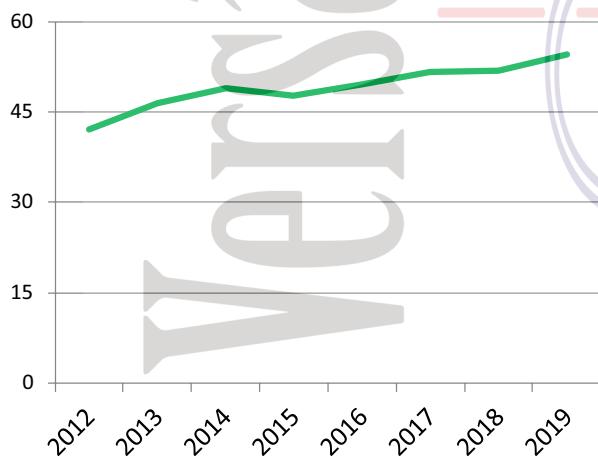
- Slow increase in donation
- Elevated frequency of non-consenting family,
- Brain death notification below expected,
- Important disparities between states,
- Financial constraints for some programs,

## Annual goal of effective donors per million population

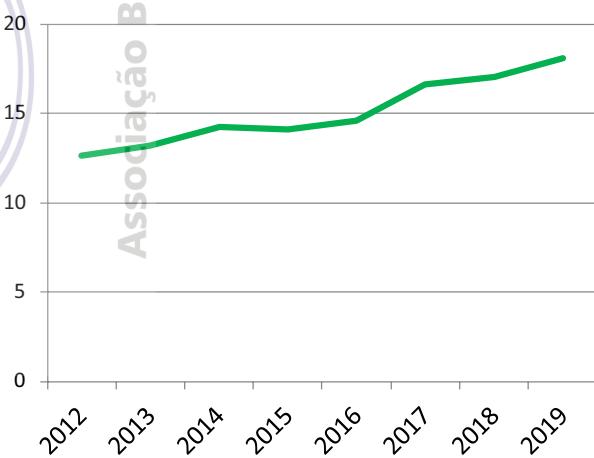


## Organ Donation

### Notified potential donors - pmp



### Effective - pmp

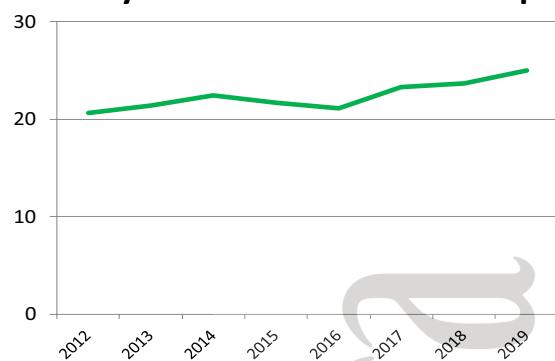


	2012	2013	2014	2015	2016	2017	2018	2019
Number of effective donors	2.406	2.526	2.713	2.854	2.981	3.415	3.534	3.768
Number of effective donors (pmp)	12,6	13,2	14,2	14,1	14,6	16,6	17,0	18,1
Potential donors	8.025	8.871	9.351	9.698	10.158	10.629	10.782	11.399
Number of potential donors (pmp)	42,1	46,5	49,0	47,8	49,7	51,6	51,9	54,7
Non consenting families	2.315	2.622	2.610	2.613	2.571	2.740	2.753	2.674
Refusal at interviews (%)	41%	47%	46%	44%	43%	42%	43%	40%
Cardiopulmonary arrest	1.188	1.292	1.156	1.164	1.136	1.232	988	927
Medical contraindication	836	1.150	1.349	1.416	1.594	1.559	1.545	1.761
Others	1.280	1.281	1.523	1.651	1.876	1.683	1.961	2.269

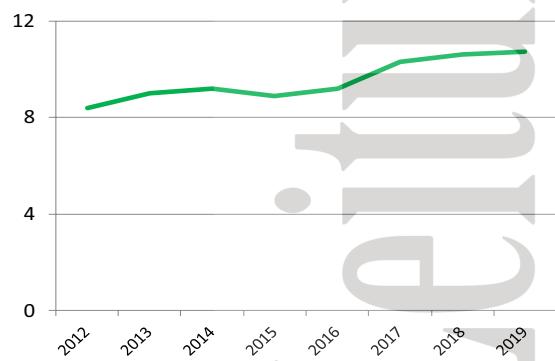
# BRAZILIAN DATA

## Organ Transplantation

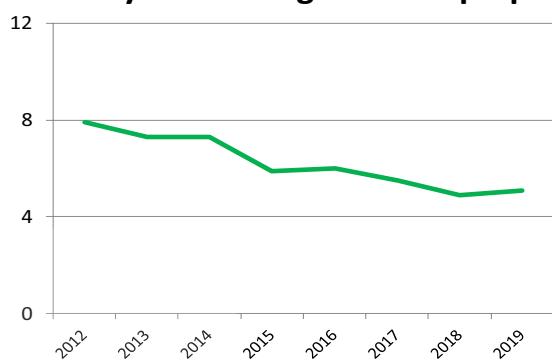
### Kidney from deceased donors - pmp



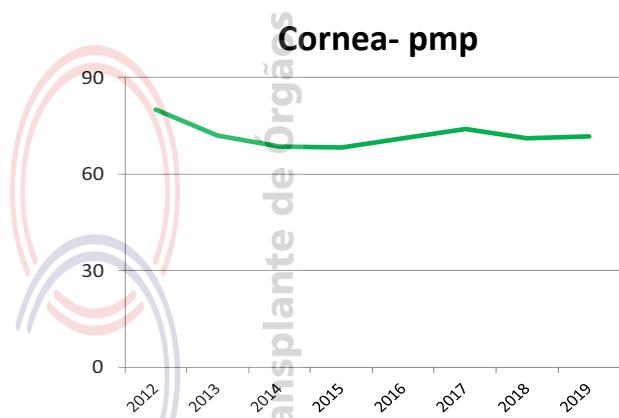
### Liver - pmp



### Kidney from living donors - pmp



### Cornea- pmp



Number of teams performing transplants during the year

	2012	2013	2014	2015	2016	2017	2018	2019
Cornea	Unavailable							
Kidney	124	129	135	131	129	131	136	143
Liver	59	60	64	62	62	69	75	74
Pancreas	19	21	15	16	16	16	15	15
Heart	27	33	31	33	31	36	34	35
Lung	6	7	6	6	6	7	6	7

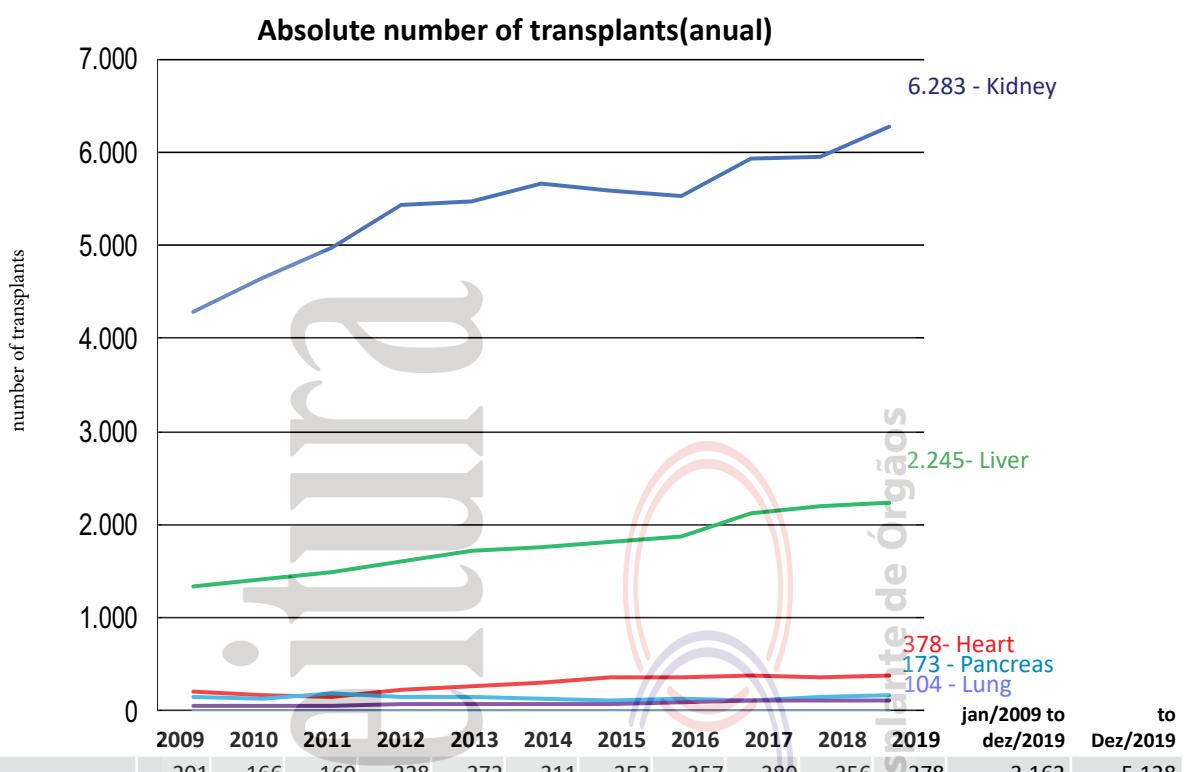
Absolute number of transplants

	2012	2013	2014	2015	2016	2017	2018	2019
Cornea	15.280	13.744	13.065	13.830	14.531	15.262	14.809	14.943
Kidney	5.431	5.465	5.661	5.591	5.532	5.930	5.949	6.283
living donors	1.501	1.386	1.385	1.189	1.219	1.136	1.024	1.073
deceased donors	3.930	4.079	4.276	4.402	4.313	4.794	4.925	5.210
Liver	1.603	1.726	1.757	1.810	1.882	2.122	2.195	2.245
Pancreas	153	143	128	121	135	113	146	173
Heart	228	272	311	353	357	380	357	380
Lung	69	80	67	74	92	112	122	106

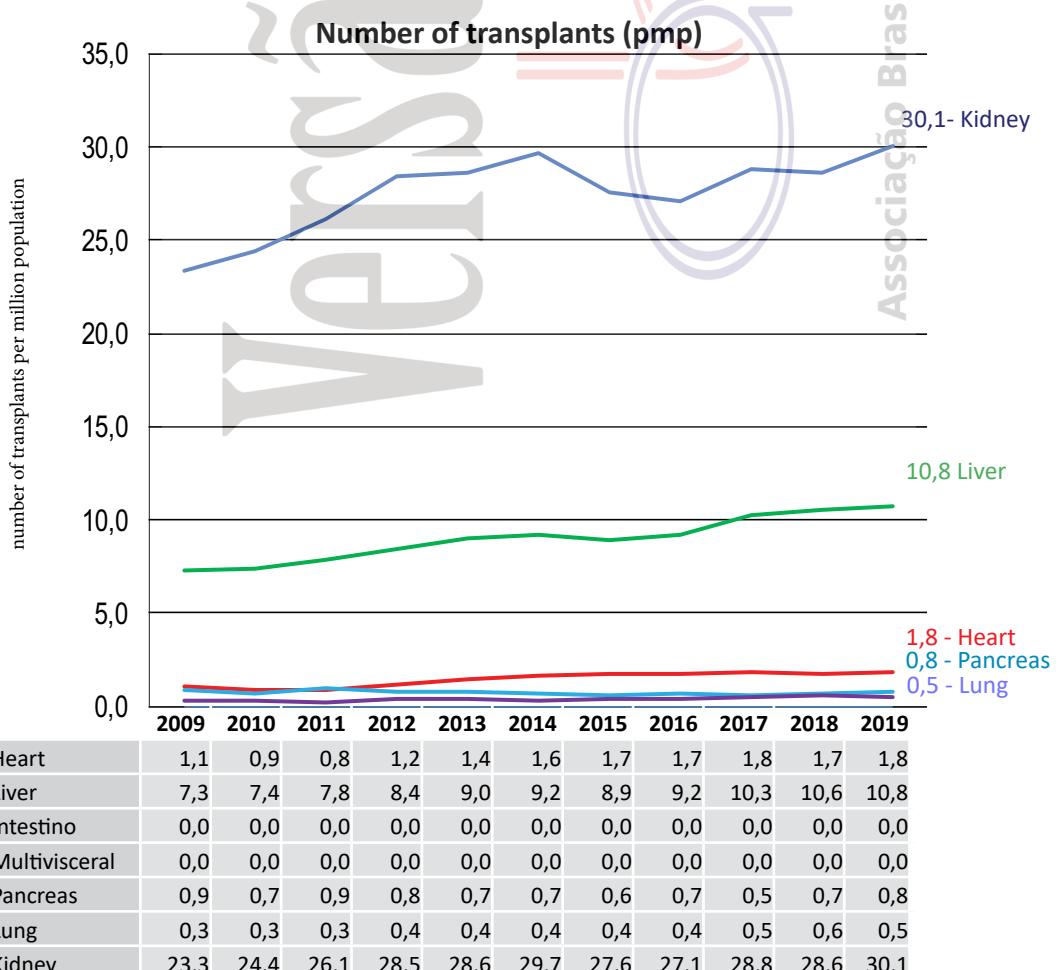
Number of transplants pmp

	2012	2013	2014	2015	2016	2017	2018	2019
Cornea	80,1	72,1	68,5	68,2	71,1	74,1	71,3	71,7
Kidney	28,5	28,6	29,7	27,6	27,1	28,8	28,6	30,1
living donors	7,9	7,3	7,3	5,9	6,0	5,5	4,9	5,1
deceased donors	20,6	21,4	22,4	21,7	21,1	23,3	23,7	25,0
Liver	8,4	9,0	9,2	8,9	9,2	10,3	10,6	10,8
Pancreas	0,8	0,7	0,7	0,6	0,7	0,5	0,7	0,8
Heart	1,2	1,4	1,6	1,7	1,7	1,8	1,7	1,8
Lung	0,4	0,4	0,4	0,4	0,4	0,5	0,6	0,5

# Annual number of transplants in Brazil between 2009 and 2019



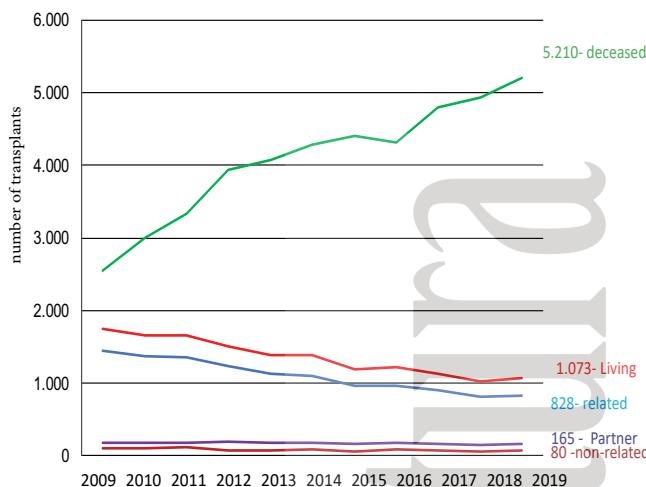
	jan/2009 to	dez/2019	to	Dez/2019
Heart	201	166	160	201
Heart/Lung	0	0	0	0
Liver	1.334	1.412	1.497	1.603
Intestino	0	0	0	0
Multivisceral	0	0	0	1
Pancreas	160	133	181	153
Lung	59	61	49	69
Kidney	4.291	4.654	4.982	5.431
				5.465
				5.661
				5.591
				5.532
				5.930
				5.949
				6.283
				59.769
				82.506



# Annual number of transplants in Brazil between 2009 and 2019

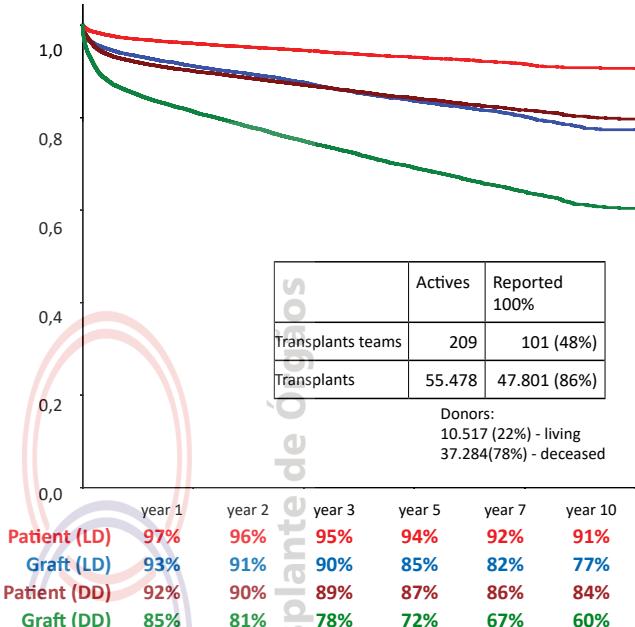
## Kidney (21 states, with 143 teams)

### Annual number of transplants by donor type



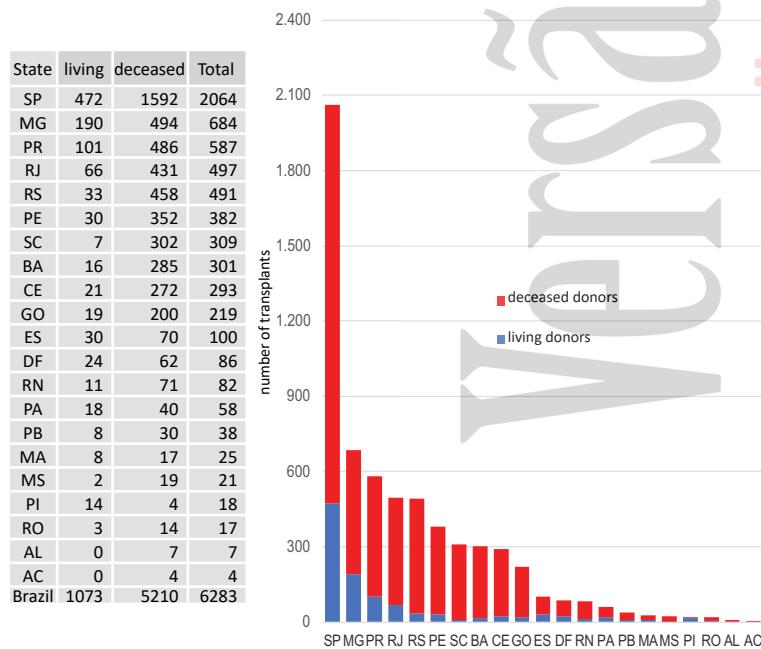
	Deceased	Living	Related	Partner	Non-related	Total
Deceased	2.548	1.743	1.447	187	109	4.291
Living	2.999	1.655	1.370	175	110	4.654
Related	3.330	1.652	1.354	185	113	4.982
Partner	3.930	1.501	1.229	196	76	5.431
Non-related	4,079	1,386	1,133	186	67	5,465
Total	4,276	1,189	1,102	187	96	5,661
	4,402	1,219	964	166	59	5,591
	4,313	1,136	962	173	84	5,532
	4,794	1,024	897	158	81	5,930
	4,925	1,073	815	147	62	5,949
	5,210	1,073	828	165	80	6,283

### Survival Curves: Prospective evaluation started in 2010

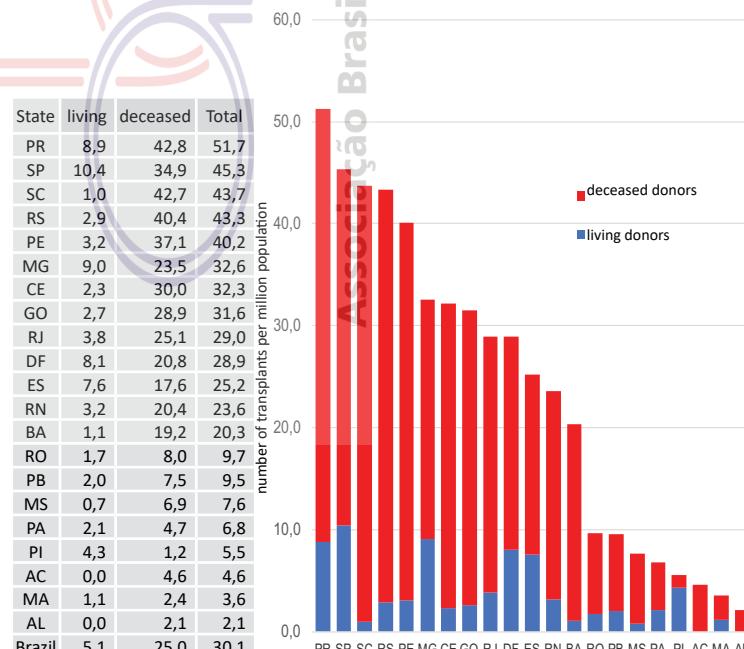


Cumulative survival include data from transplant teams who reported 100% of their results during the period

### Number of transplants by state in 2019

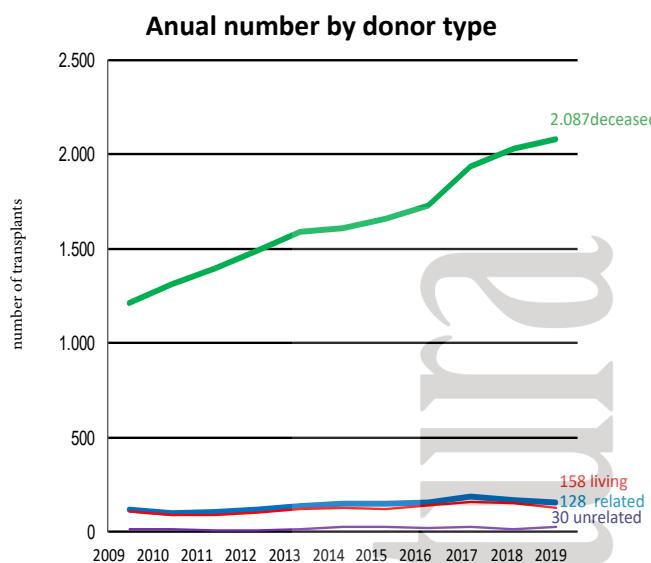


### Number of transplants per million population by state in 2019

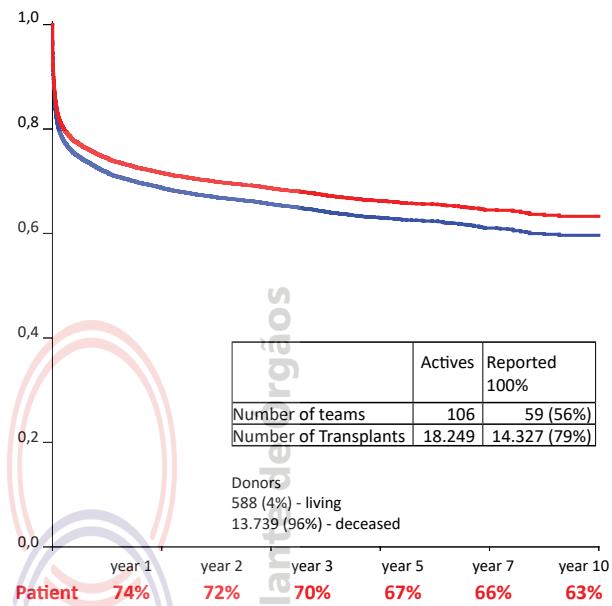


# Annual number of transplants in Brazil between 2009 and 2019

## Liver - (15 states, with 74 teams)



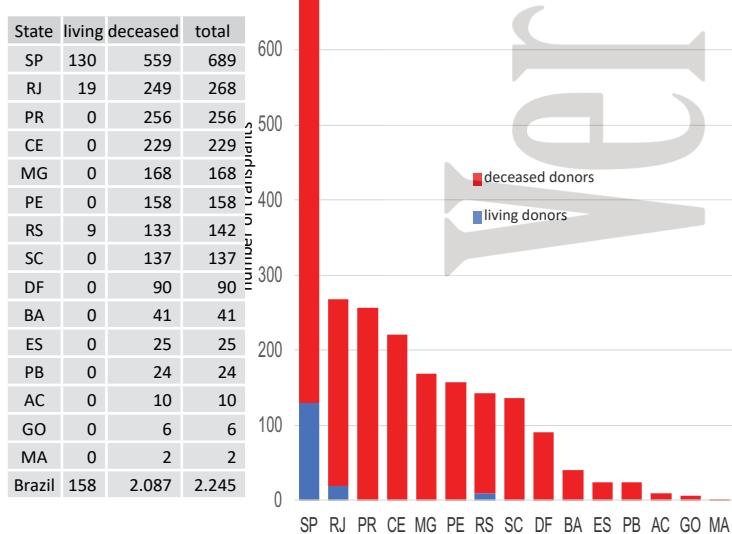
## Survival Curves: Prospective evaluation started in 2010



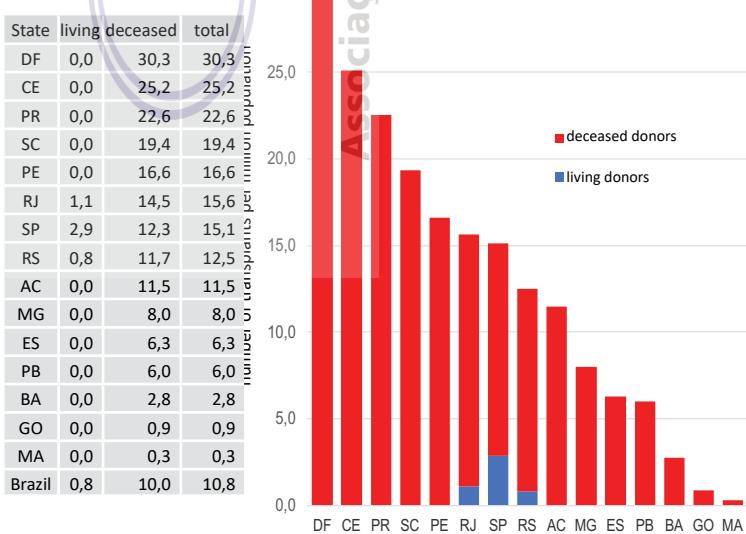
Cumulative survival include data from transplant teams who reported 100% of their results during the period



## Number of transplants by state during the year 2019

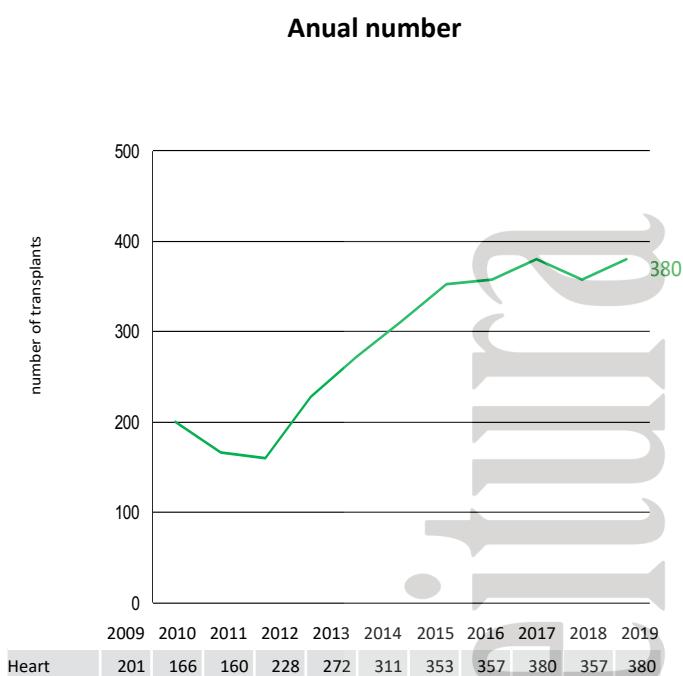


## Number of transplants per million population by state in 2019

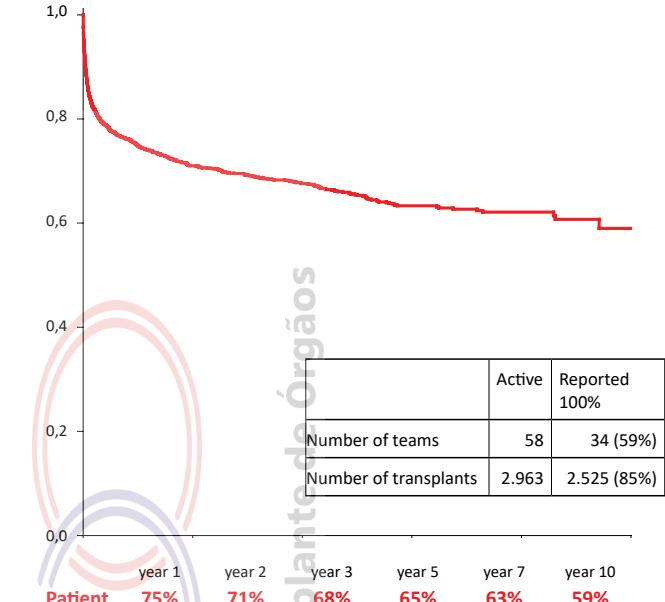


# Annual number of transplants in Brazil between 2009 and 2019

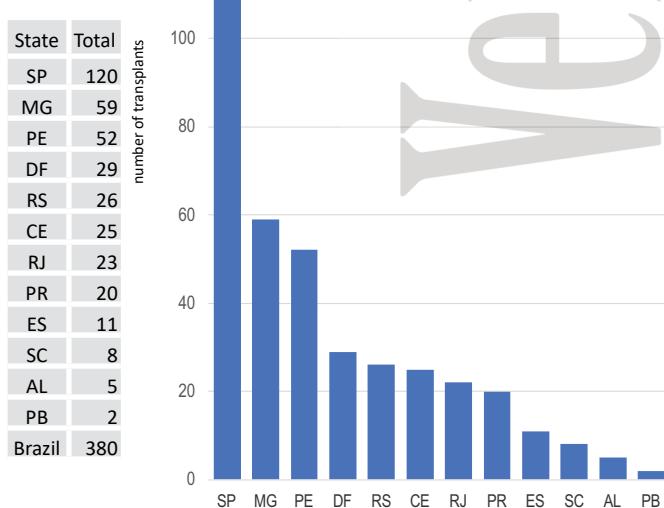
## Heart - (12 states, with 35 teams)



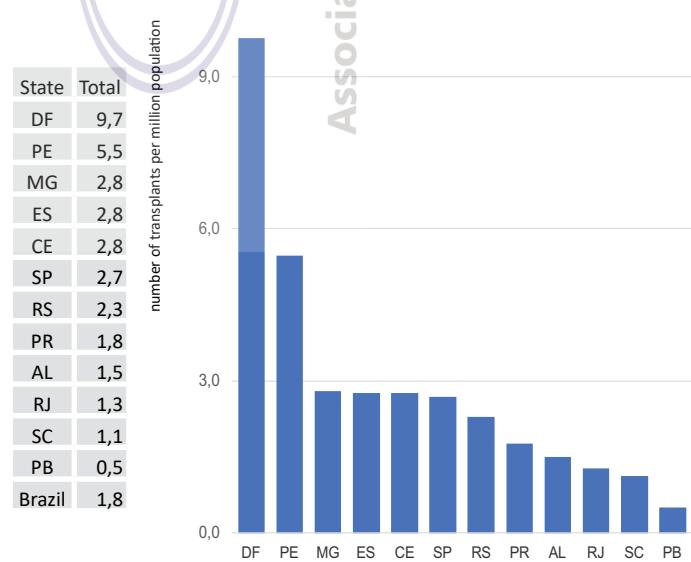
## Survival Curves: Prospective evaluation started in 2010



## Number of transplants by state in 2019

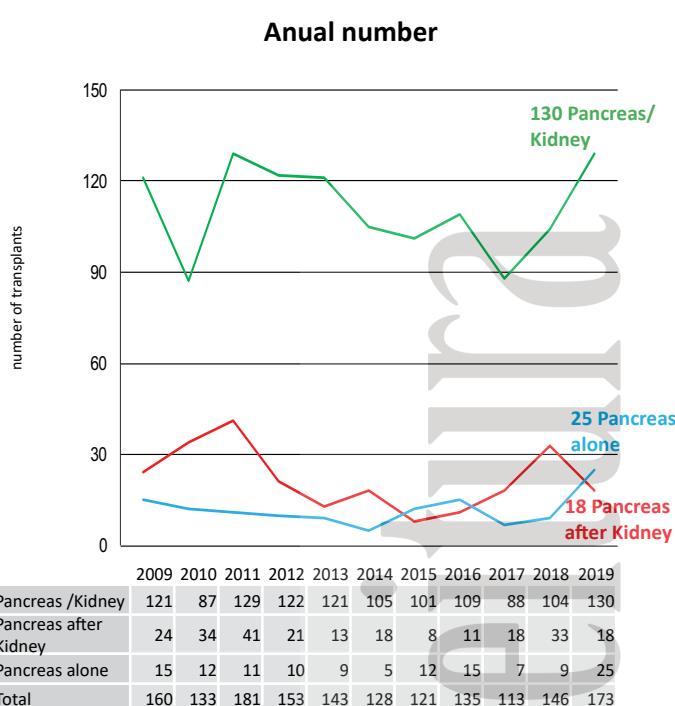


## Number of transplants per million population by state in 2019

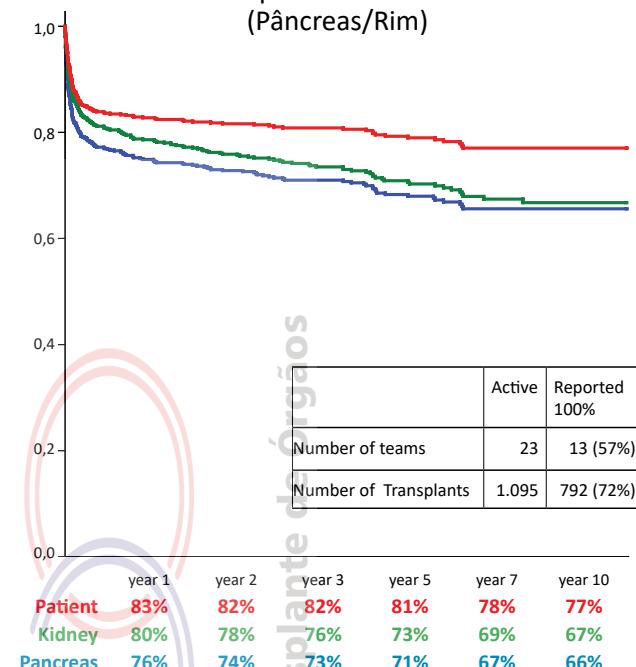


# Annual number of transplants in Brazil between 2009 and 2019

## PANCREAS - (6 states, with 15 teams)



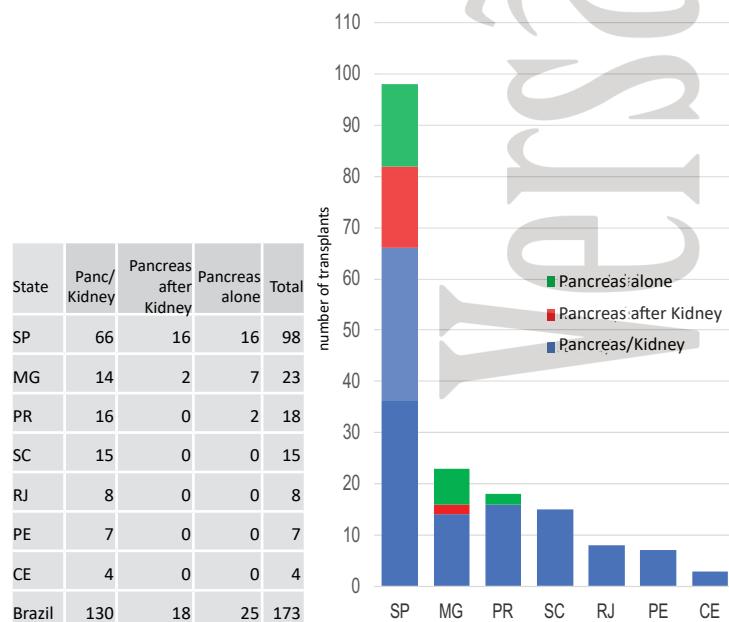
## Survival Curves: Prospective evaluation started in 2010 (Pâncreas/Rim)



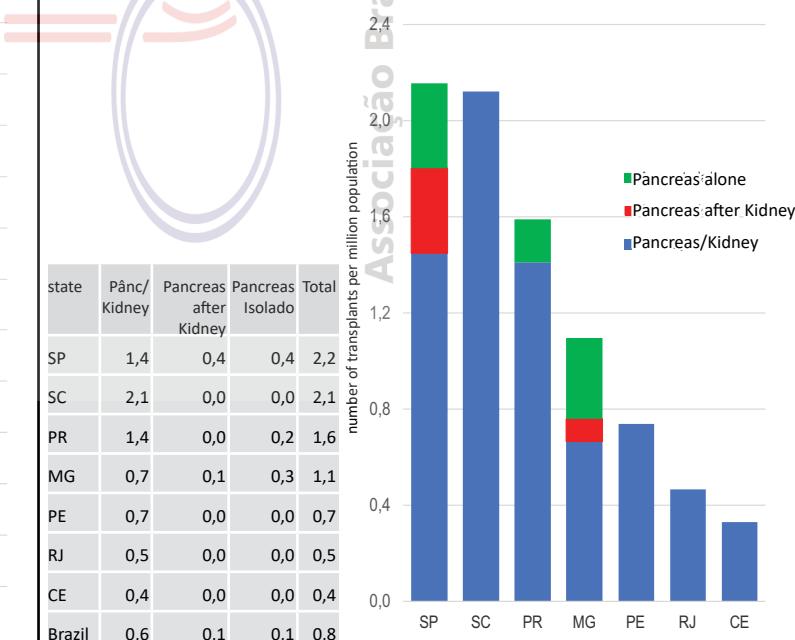
Cumulative survival include data from transplant teams who reported 100% of their results during the period



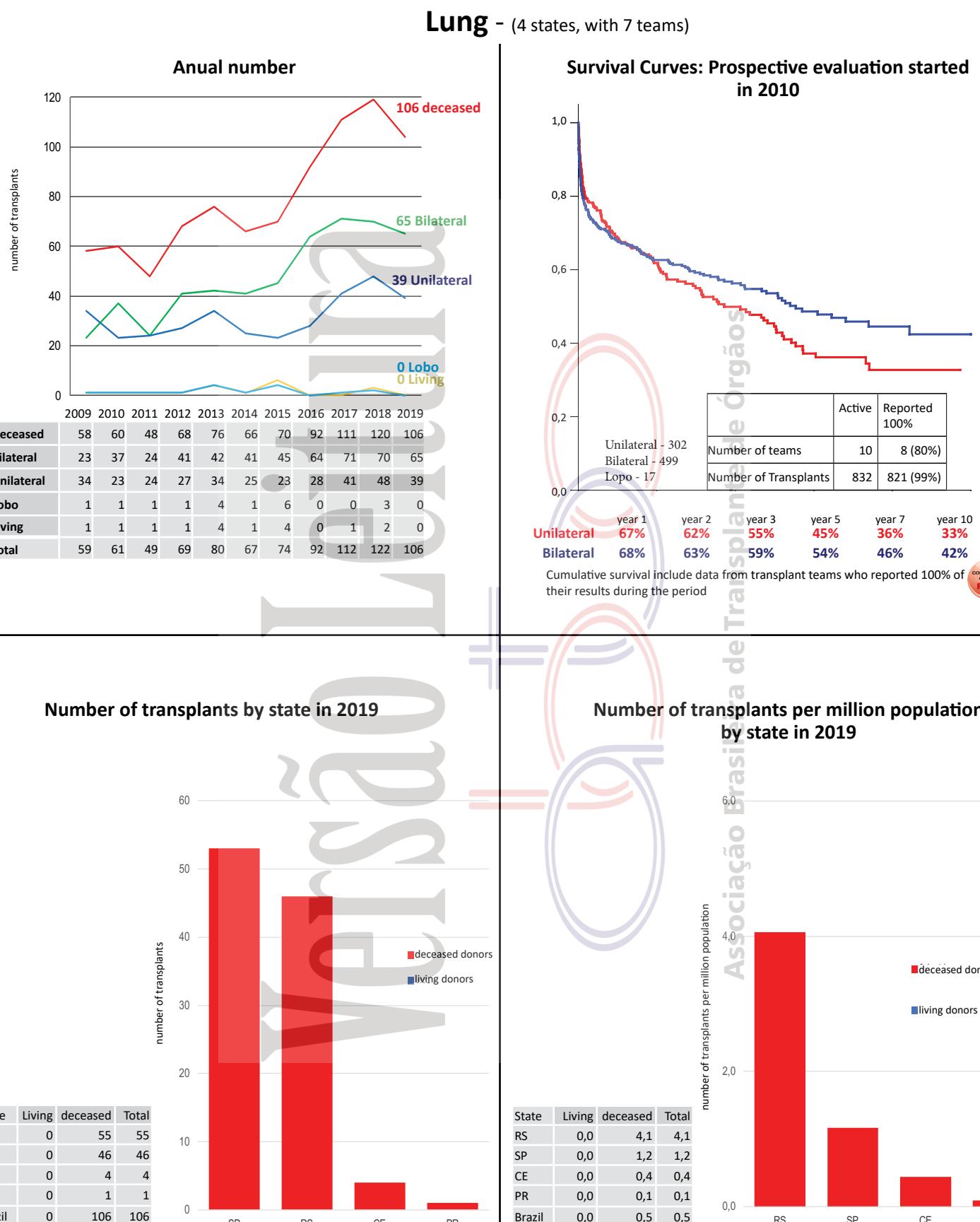
## Number of transplants by state in 2019



## Number of transplants per million population by state in 2019



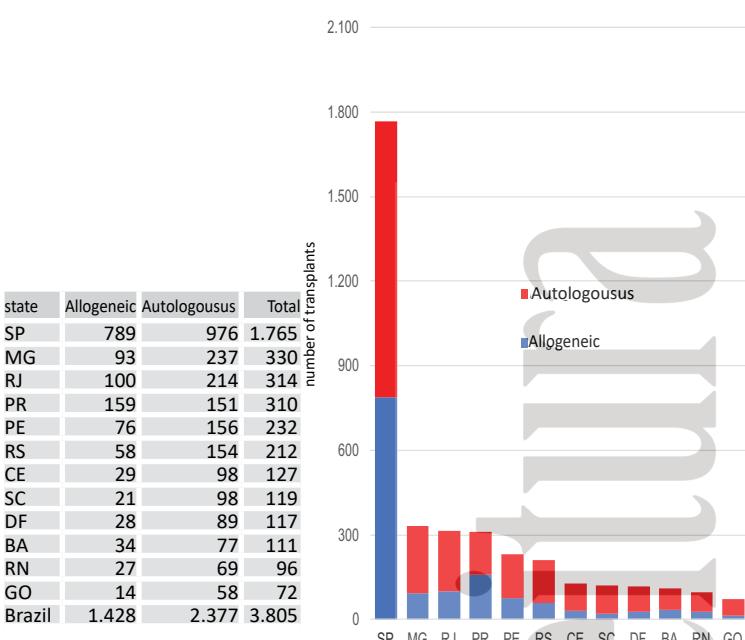
# Annual number of transplants in Brazil between 2009 and 2019



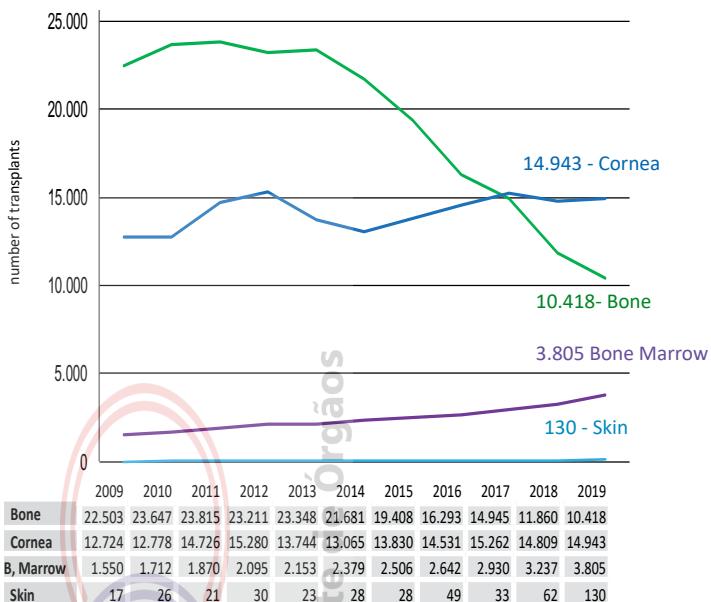
# Annual number of transplants in Brazil between 2009 and 2019

## Bone Marrow - (12 states, with 87 teams)

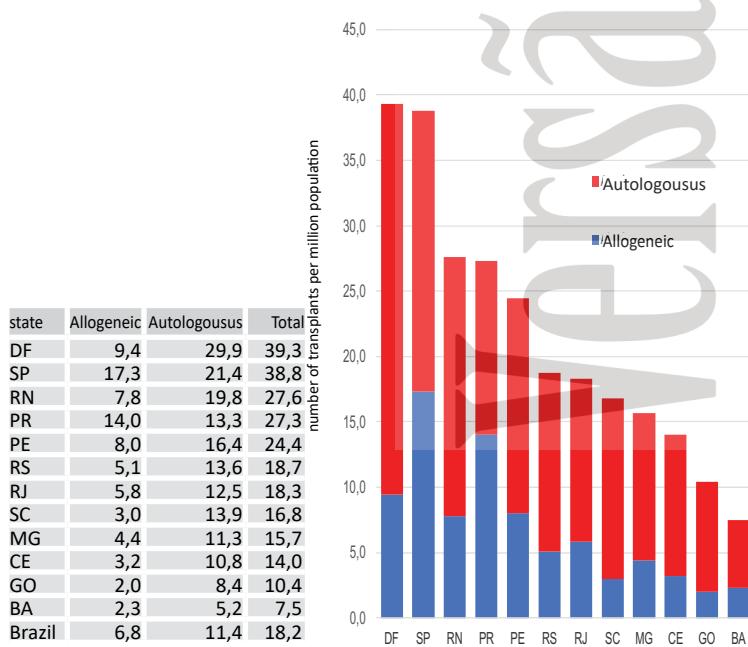
Number of bone marrow transplants by state during the year 2019



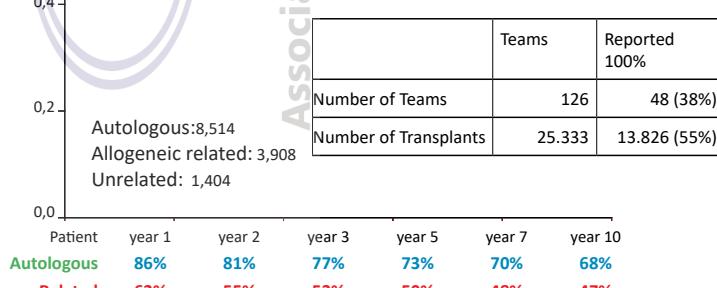
Annual number of tissue and Bone Marrow transplants



Number of bone marrow transplants per million population by state in 2019



Survival Curves: Prospective evaluation started in 2010 (Bone Marrow)



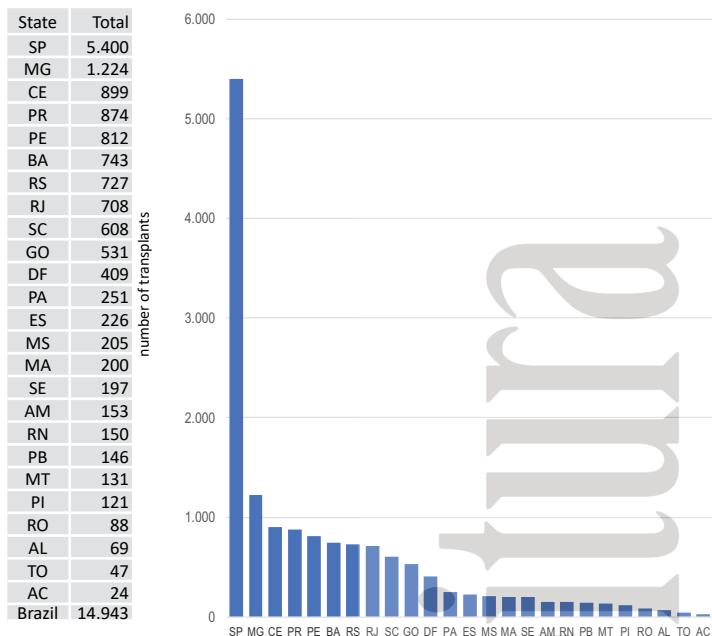
Cumulative survival include data from transplant teams who reported 100% of their results during the period



# Annual number of transplants in Brazil between 2009 and 2019

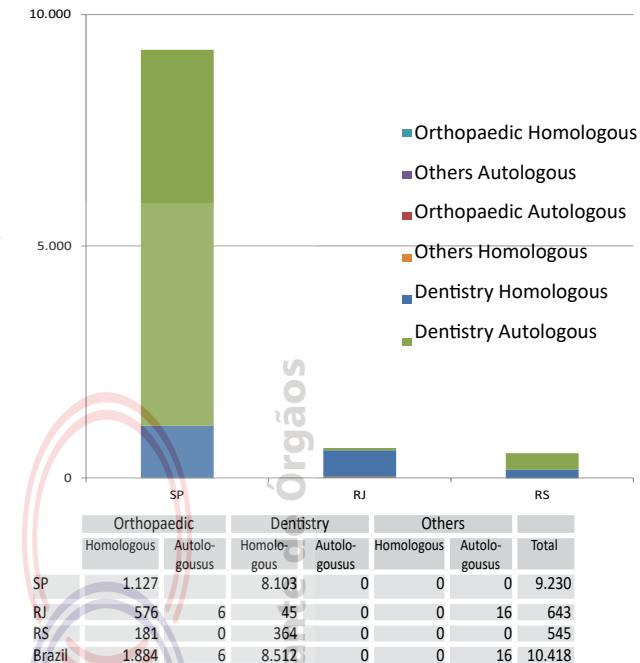
## CORNEA - (in 25 states)

Number of corneal transplants by state during the year 2019

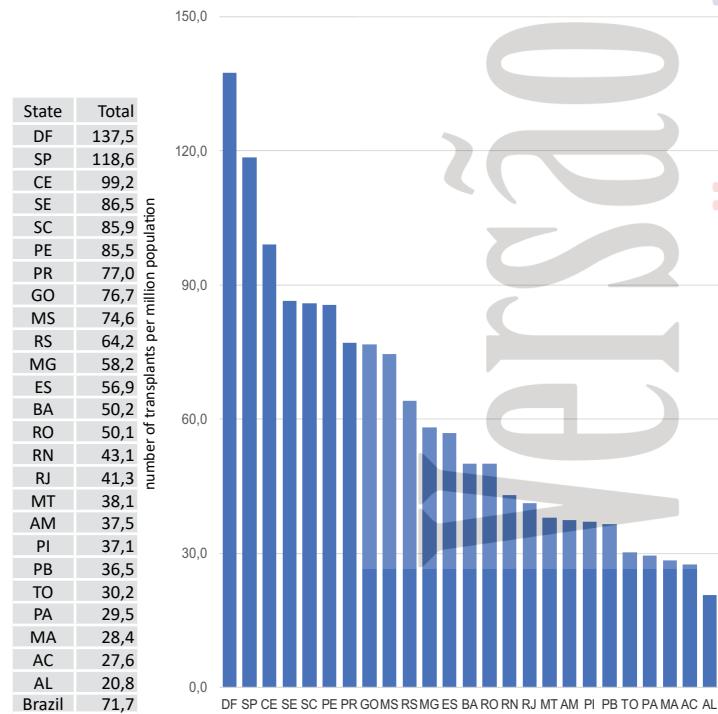


## BONE- (in 3 states)

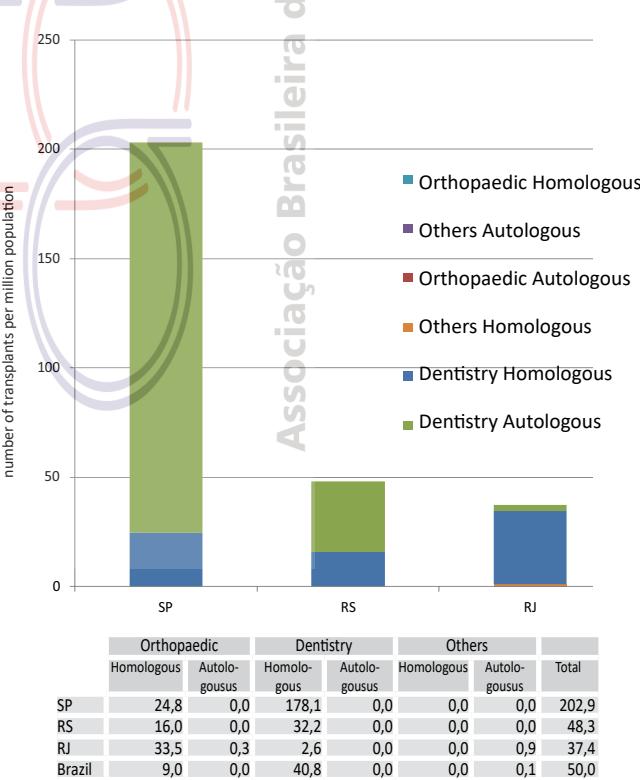
Bone transplants data available from five tissue banks in 2019



Number of corneal transplants per million population in 2019



Bone transplants per million population data available from 5 tissue banks in 2019



# PEDIATRIC TRANSPLANTATION

## Current Assessment of the State of Pediatric Organ Transplantation in Brazil: A call for action!

In 2019, 668 children entered the waitlist to perform an organ transplant and, in addition to the 425 children who still were on the list in December 2018, summing 1,093 children waiting for a transplant. Overall, 584 (53%) received a transplant and 64 children (5.8%) died while waiting. Newly, an intestinal transplant was performed in São Paulo.

**Kidney Transplants:** 310 children (52%) received a kidney transplant, and 17 (2.9%) died on the waitlist. Most of these transplants (92%) were performed in 8 Brazilian states listed in order of number per million of the pediatric population (PMPP): Rio Grande do Sul, São Paulo, Ceará, Pernambuco, Paraná, Minas Gerais, Bahia, and Rio de Janeiro.

A decrease of 4.9% in kidney transplants as compared to 2018 was observed. In the last 5 years, this was the lowest number - a decrease of 1.7% with deceased donors and 2.3% with living donors. Especially in the Southeast region, which is one of the most active in the transplant field, pediatric kidney transplantation decreased from 8.4ppm to 6.7ppm. The number of children (293) who entered the waitlist for a kidney transplant almost matched the total number of transplants performed (310). There were 235 pediatric deceased donors (age < 18 y), but only 283 children received a graft. We could have performed more kidney transplants ... How to interpret these data? Possibly, there was a lack of access to the waitlist. In Brazil, children with GFR <15 mL/min/1.73m<sup>2</sup> can be placed on the waitlist preemptively, and there is an under 18 priority share for allocation (donors under 18 years old are allocated first to recipients under 18). Therefore, the lack of access to transplant centers is the most likely hypothesis instead of a lack of indication for transplantation or donor shortage.

**Liver Transplants:** 236 liver transplants were performed in children in 2019, an increase of 4.7% as compared to 2018. Most transplants were performed with living donors (57%) and occurred in the states of São Paulo (116), Rio de Janeiro (11) and Rio Grande do Sul (9). In 2019, 306 children entered the liver transplant waiting list and in December 2018 there were still 55 patients listed, resulting in 357 children on the waitlist. Overall, 66% received a transplant and 15.6% died while on the list.

It should be emphasized that even patients with a living donor for either kidney or liver transplantation, due to regulation by the Ministry of Health, need to be included in the waiting list for a deceased donor.

**Heart Transplant:** the heart transplant rate was 0.5 pmpp. In 2019, 56 children entered the waiting list for heart, and 48 were already on the list in December 2018, resulting in 104 recipients needing transplantation.

During the year, 32 (30%) patients were transplanted and 19 (18%) died on the waiting list.

**Lung Transplant:** the lung transplant rate was 0.1 pmpp. In 2019, 13 children entered the lung waiting list and 22 were already listed in December 2018, totaling 35 on the list. Only 6 (17%) were transplanted and 3 (8.6%) died while awaiting transplantation.

Regulations and facilities are needed in order to provide the opportunity of receiving an organ graft for children living in Brazilian states that do not have hospitals performing such transplants. Accommodation and boarding may also be needed, as well as dialysis facilities, not to mention the separation of families... what makes them True Heroes!

At the end of 2019, 434 children were on the waiting list for an organ transplant: 320 for a kidney, 41 for a liver, 57 for a heart, and 16 for a lung.

There is a need for action to ensure that more children are able to reach a transplant center and successfully carry out their treatment. Brazil is a continental country and there are many difficulties, including the lack of transplant centers in the North and Central regions, which requires funding for transportation and accommodation, as well as dialysis facilities and family maintenance during the waiting period for a transplant.

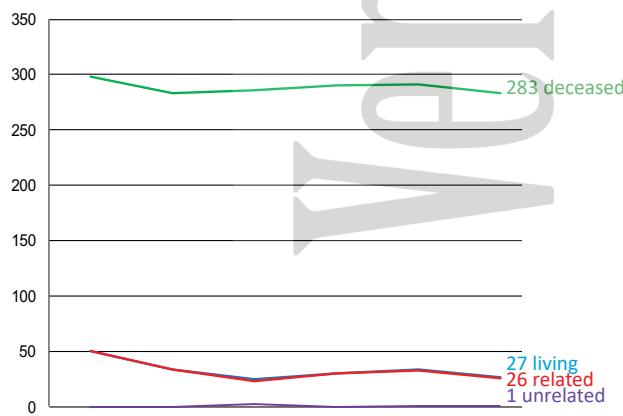
Transplantation is the treatment of choice for children with end-stage organ damage and there is an urge to increase the pediatric transplantation activity in a fair and equitable model for our country.

### Number of pediatric transplants in 2019

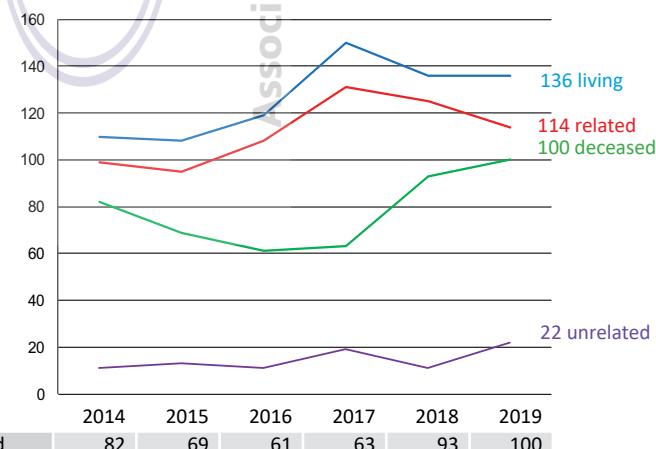
Organ	Living	Deceased	Total	PMPP*	Nº teams
Heart	0	32	32	0,5	11
Liver	136	100	236	3,8	27
Multivisceral	0	1	1	0,0	1
Lung	0	5	5	0,1	2
Kidney	27	283	310	5,0	47
<b>Total</b>	<b>163</b>	<b>421</b>	<b>584</b>	<b>9,4</b>	<b>88</b>
<b>Bone Marrow</b>	<b>Allogeneic</b>	<b>Autologous</b>	<b>Total</b>	<b>PMPP*</b>	<b>Nº teams</b>
	410	124	534	8,6	45

PMPP\*- per million of pediatric population

### Annual number of pediatric Kidney transplants



### Annual number of pediatric Liver transplants



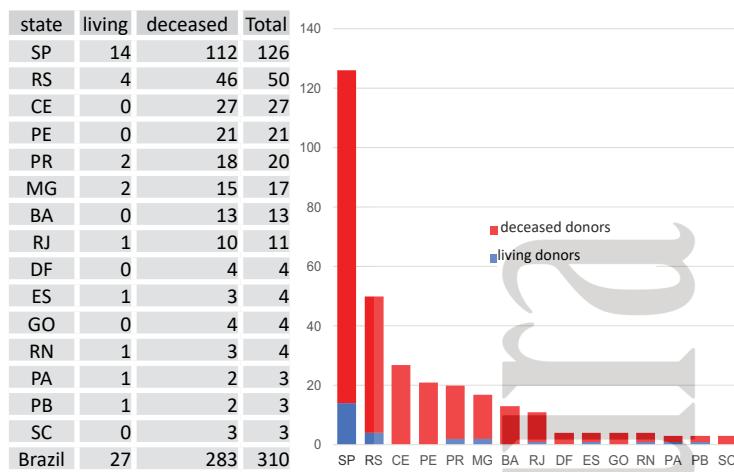
### Pediatric Population

AC	AL	AP	AM	BA	CE	DF	ES	GO	MA	MT	MS	MG	PA
354.233	1.177.598	336.791	1.639.687	4.657.714	2.915.431	867.177	1.133.349	2.059.485	2.634.063	1.091.347	848.656	5.859.120	3.217.216
PB	PR	PE	PI	RJ	RN	RS	RO	RR	SC	SP	SE	TO	Brasil
1.242.345	3.230.086	2.984.363	1.061.728	4.482.238	1.066.128	2.932.328	589.934	238.808	1.934.008	12.046.898	753.405	548.390	61.874.836

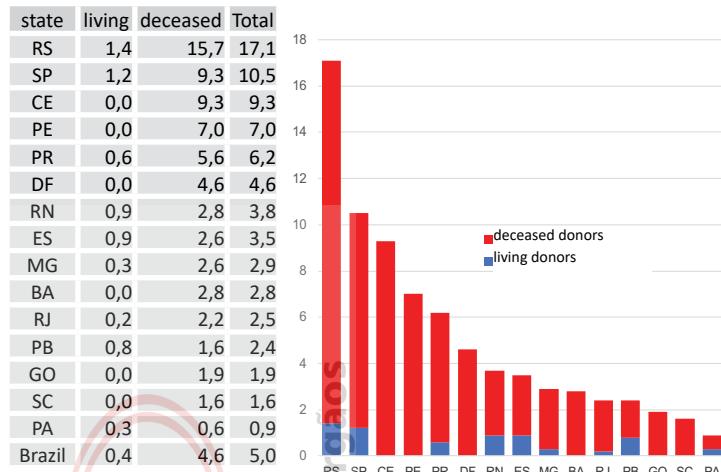
# PEDIATRIC TRANSPLANTATION

## Kidney

Number of transplants, by state, in 2019

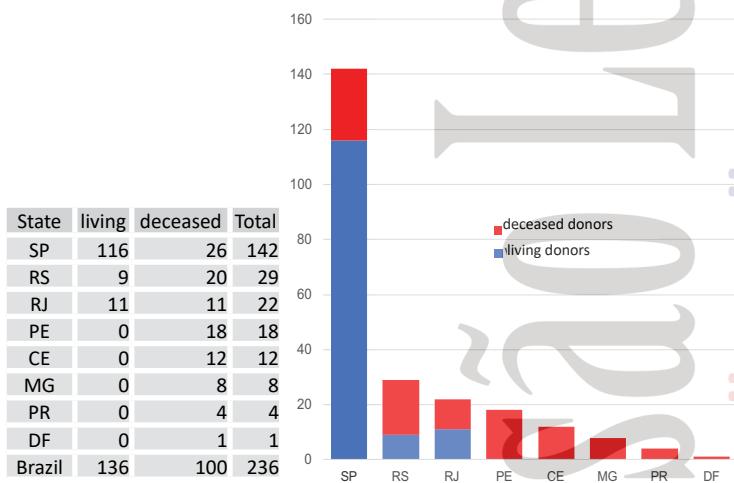


Transplants pmp pediatrics by state, 2019

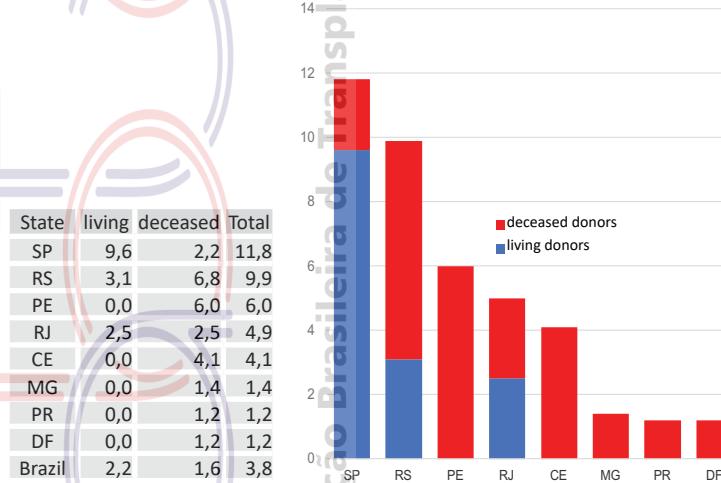


## Liver

Number of transplants, by state, in 2019

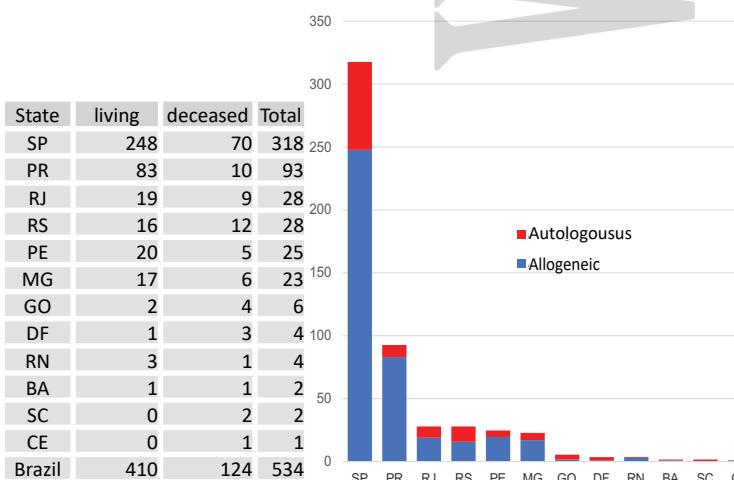


Transplants pmp pediatrics by state, 2019

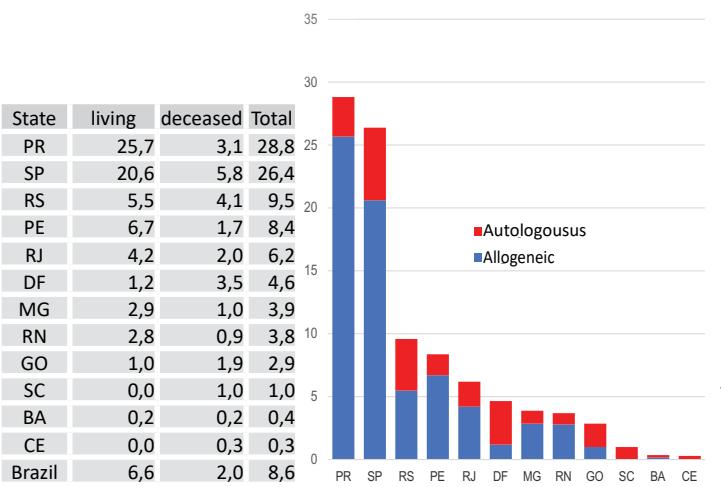


## Bone Marrow

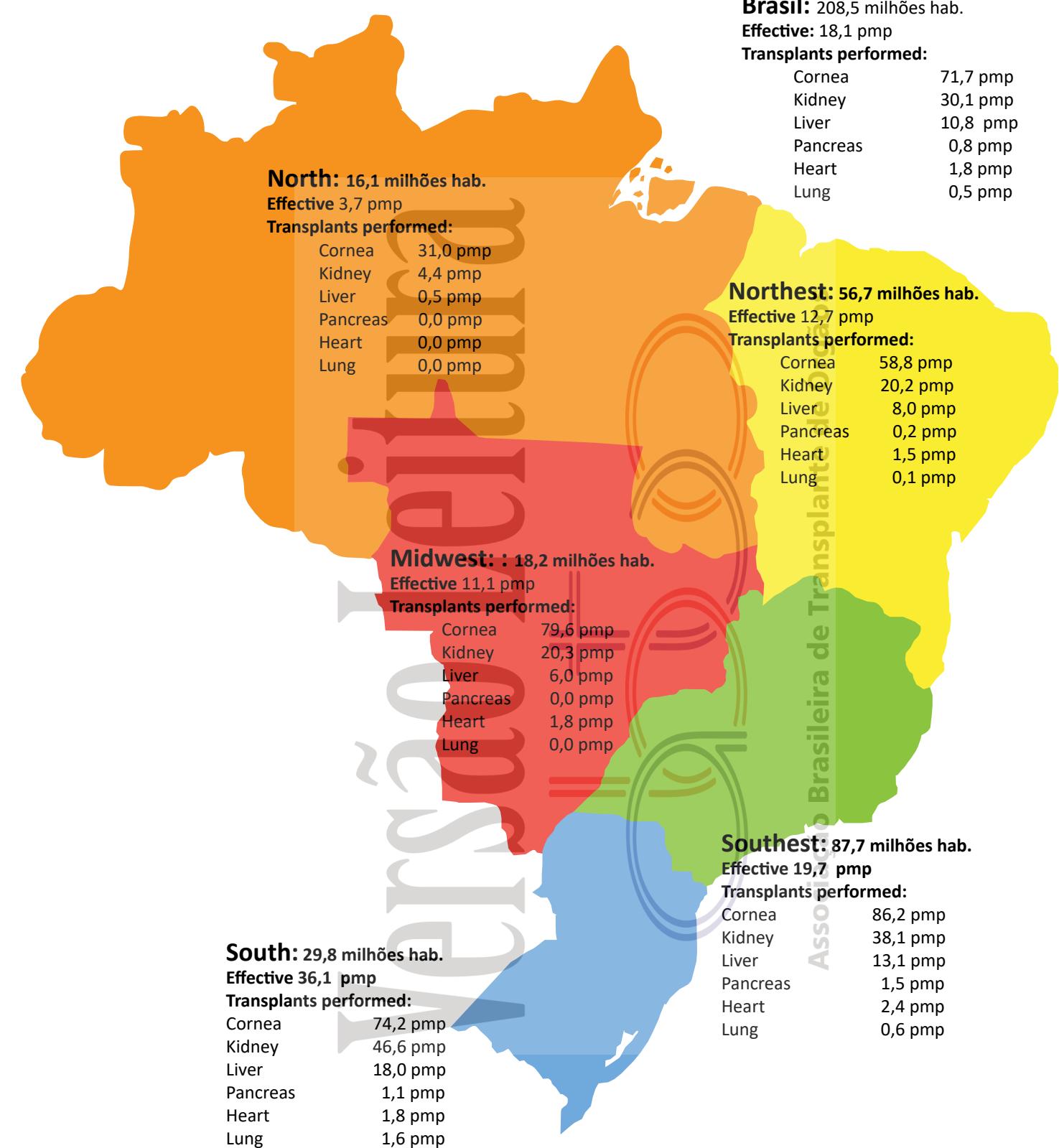
Number of transplants, by state, in 2019



Transplants pmp pediatrics by state, 2019



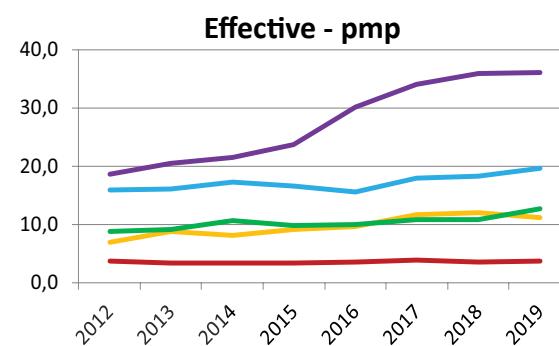
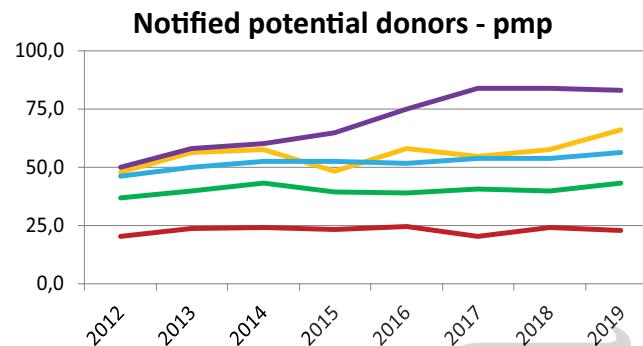
# DATA FROM BRAZILIAN REGIONS



Population	2012	2013	2014	2015	2016	2017	2018	2019
MIDWEST	14.058.094	14.058.094	14.058.094	15.219.608	15.442.232	15.660.988	15.875.907	16.085.885
NORTHEAST	53.081.950	53.081.950	53.081.950	56.186.190	56.560.081	56.915.936	57.254.159	56.760.780
NORTH	15.864.454	15.864.454	15.864.454	17.231.027	17.472.636	17.707.783	17.936.201	18.182.253
SOUTHEAST	80.364.410	80.364.410	80.364.410	85.115.623	85.745.520	86.356.952	86.949.714	87.711.946
SOUTH	27.386.891	27.386.891	27.386.891	29.016.114	29.230.180	29.439.773	29.664.948	29.754.036

# DATA FROM BRAZILIAN REGIONS

## Organ Donation



### Number of potential donors by year

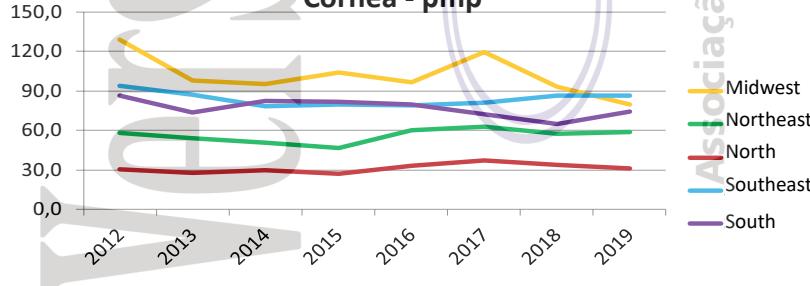
Absolute Number	2012	2013	2014	2015	2016	2017	2018	2019
MIDWEST	671	789	807	734	897	856	916	1.063
NORTHEAST	1.948	2.102	2.298	2.208	2.205	2.305	2.279	2.467
NORTH	319	378	384	401	432	357	435	418
SOUTHEAST	3.718	4.010	4.219	4.474	4.433	4.643	4.660	4.969
SOUTH	1.369	1.592	1.643	1.881	2.190	2.467	2.491	2.475
Number pmp	2012	2013	2014	2015	2016	2017	2018	2019
MIDWEST	47,7	56,1	57,4	48,2	58,1	54,7	57,7	66,1
NORTHEAST	36,7	39,6	43,3	39,3	39,0	40,5	39,8	43,4
NORTH	20,1	23,8	24,2	23,3	24,7	20,2	24,3	23,0
SOUTHEAST	46,3	49,9	52,5	52,6	51,7	53,8	53,6	56,4
SOUTH	50,0	58,1	60,0	64,8	74,9	83,8	84,0	83,2

### Number of effective donors by year

Absolute Number	2012	2013	2014	2015	2016	2017	2018	2019
MIDWEST	98	124	115	139	148	183	190	179
NORTHEAST	466	489	569	555	561	613	622	723
NORTH	58	53	53	57	62	69	64	67
SOUTHEAST	1.274	1.298	1.387	1.414	1.330	1.546	1.593	1.725
SOUTH	510	562	589	689	880	1.004	1.065	1.074
Number pmp	2012	2013	2014	2015	2016	2017	2018	2019
MIDWEST	7,0	8,8	8,2	9,1	9,6	11,7	12,0	11,1
NORTHEAST	8,8	9,2	10,7	9,9	9,9	10,8	10,9	12,7
NORTH	3,7	3,3	3,3	3,3	3,5	3,9	3,6	3,7
SOUTHEAST	15,9	16,2	17,3	16,6	15,5	17,9	18,3	19,7
SOUTH	18,6	20,5	21,5	23,7	30,1	34,1	35,9	36,1

## Tissue Transplantation

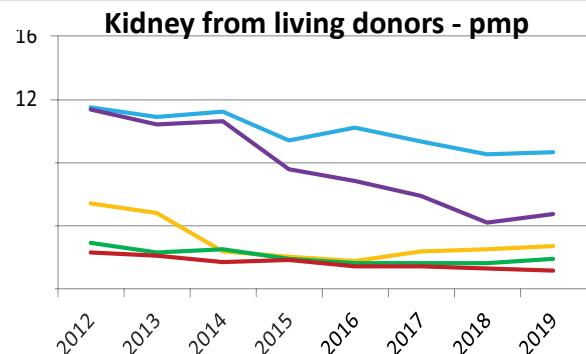
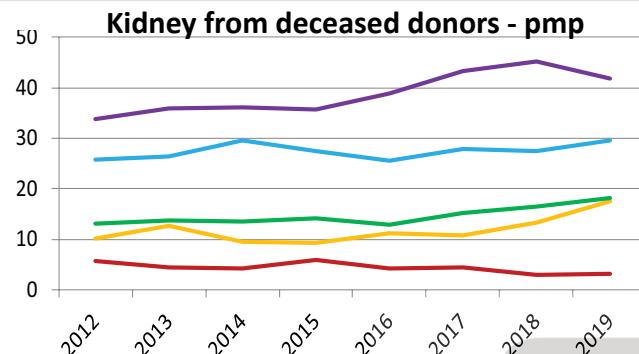
### Cornea - pmp



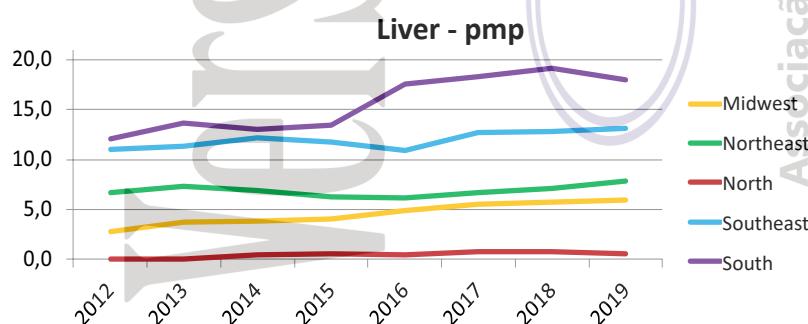
Cornea	2012	2013	2014	2015	2016	2017	2018	2019
Absolute Number	15.280	13.744	13.085	13.830	14.534	15.242	14.809	14.943
Number pmp	80,1	72,1	68,6	68,2	71,1	74,0	71,3	71,7
MIDWEST	1.811	1.377	1.341	1.579	1.491	1.871	1.478	1.276
NORTHEAST	3.087	2.883	2.697	2.625	3.387	3.570	3.289	3.337
NORTH	480	438	476	468	576	660	607	563
SOUTHEAST	7.534	7.022	6.321	6.784	6.754	7.014	7.516	7.558
SOUTH	2.368	2.024	2.250	2.374	2.326	2.127	1.919	2.209
MIDWEST	128,8	98,0	95,4	103,7	96,6	119,5	93,1	79,6
NORTHEAST	58,2	54,3	50,8	46,7	59,9	62,7	57,4	58,8
NORTH	30,3	27,6	30,0	27,2	33,0	37,3	33,8	31,0
SOUTHEAST	93,7	87,4	78,7	79,7	78,8	81,2	86,4	86,2
SOUTH	86,5	73,9	82,2	81,8	79,6	72,2	64,7	74,2

# DATA FROM BRAZILIAN REGIONS

## Organ Transplantation



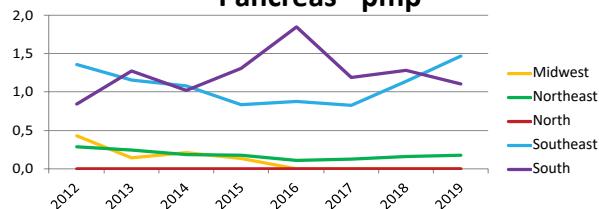
Kidney (living donors)	2012	2013	2014	2015	2016	2017	2018	2019
<b>Absolute Number</b>	1.501	1.386	1.385	1.189	1.219	1.136	1.024	1.073
MIDWEST	76	68	33	31	27	37	40	45
NORtheast	153	124	132	107	94	94	94	108
NORTH	37	33	27	31	25	25	23	21
SOUTHEst	923	876	903	800	873	807	742	758
SOUTH	312	285	290	220	200	173	125	141
<b>Number pmp</b>	7,9	7,3	7,3	5,9	6,0	5,5	4,9	5,1
MIDWEST	5,4	4,8	2,3	2,0	1,7	2,4	2,5	2,8
NORtheast	2,9	2,3	2,5	1,9	1,7	1,7	1,6	1,9
NORTH	2,3	2,1	1,7	1,8	1,4	1,4	1,3	1,2
SOUTHEst	11,5	10,9	11,2	9,4	10,2	9,3	8,5	8,6
SOUTH	11,4	10,4	10,6	7,6	6,8	5,9	4,2	4,7
Kidney (deceased donors)	2012	2013	2014	2015	2016	2017	2018	2019
<b>Absolute Number</b>	3.930	4.079	4.276	4.402	4.313	4.794	4.925	5.210
MIDWEST	143	177	134	141	172	169	212	281
NORtheast	698	730	715	793	735	868	938	1.038
NORTH	91	70	68	101	73	78	55	58
SOUTHEst	2.070	2.121	2.371	2.332	2.196	2.403	2.380	2.587
SOUTH	928	981	988	1.035	1.137	1.276	1.340	1.246
<b>Number pmp</b>	20,6	21,4	22,4	21,7	21,1	23,3	23,7	25,0
MIDWEST	10,2	12,6	9,5	9,3	11,1	10,8	13,4	17,5
NORtheast	13,1	13,8	13,5	14,1	13,0	15,3	16,4	18,3
NORTH	5,7	4,4	4,3	5,9	4,2	4,4	3,1	3,2
SOUTHEst	25,8	26,4	29,5	27,4	25,6	27,8	27,4	29,5
SOUTH	33,9	35,8	36,1	35,7	38,9	43,3	45,2	41,9



Liver	2012	2013	2014	2015	2016	2017	2018	2019
<b>Absolute Number</b>	1.603	1.726	1.757	1.810	1.882	2.122	2.195	2.245
MIDWEST	39	53	54	62	76	86	91	96
NORtheast	353	389	365	350	350	381	407	454
NORTH	0	1	7	9	7	14	14	10
SOUTHEst	881	909	976	1.000	935	1.101	1.114	1.150
SOUTH	330	374	355	389	514	540	569	535
<b>Number pmp</b>	8,4	9,0	9,2	8,9	9,2	10,3	10,6	10,8
MIDWEST	2,8	3,8	3,8	4,1	4,9	5,5	5,7	6,0
NORtheast	6,7	7,3	6,9	6,2	6,2	6,7	7,1	8,0
NORTH	0,0	0,1	0,4	0,5	0,4	0,8	0,8	0,5
SOUTHEst	11,0	11,3	12,1	11,7	10,9	12,7	12,8	13,1
SOUTH	12,0	13,7	13,0	13,4	17,6	18,3	19,2	18,0

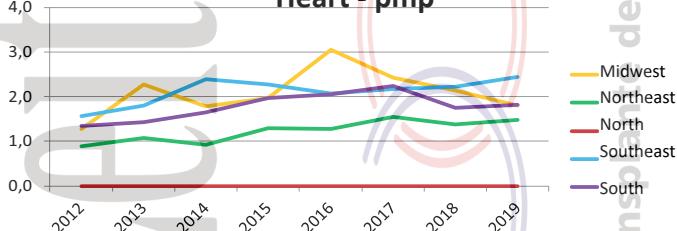
# DATA FROM BRAZILIAN REGIONS

Pancreas - pmp



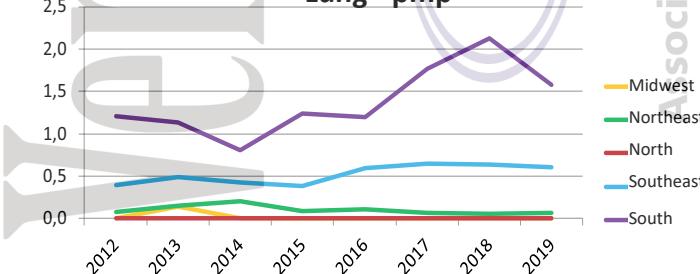
PANCREAS	2012	2013	2014	2015	2016	2017	2018	2019
<b>Absolute number</b>	153	143	128	121	135	113	146	173
MIDWEST	6	2	3	2	0	0	0	0
NORTHEAST	15	13	10	10	6	7	9	11
NORTH	0	0	0	0	0	0	0	0
SOUTHEAST	109	93	87	71	75	71	99	129
SOUTH	23	35	28	38	54	35	38	33
<b>Number pmp</b>	0,8	0,7	0,7	0,6	0,7	0,5	0,7	0,8
MIDWEST	0,4	0,1	0,2	0,1	0,0	0,0	0,0	0,0
NORTHEAST	0,3	0,2	0,2	0,2	0,1	0,1	0,2	0,2
NORTH	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
SOUTHEAST	1,4	1,2	1,1	0,8	0,9	0,8	1,1	1,5
SOUTH	0,8	1,3	1,0	1,3	1,8	1,2	1,3	1,1

Heart - pmp



Heart	2012	2013	2014	2015	2016	2017	2018	2019
<b>Absolute number</b>	228	272	311	353	357	380	357	380
MIDWEST	18	32	25	30	47	38	34	29
NORTHEAST	47	57	49	73	72	88	79	84
NORTH	0	0	0	0	0	0	0	0
SOUTHEAST	126	144	192	193	178	188	192	213
SOUTH	37	39	45	57	60	66	52	54
<b>Number pmp</b>	1,2	1,4	1,6	1,7	1,7	1,8	1,7	1,8
MIDWEST	1,3	2,3	1,8	2,0	3,0	2,4	2,1	1,8
NORTHEAST	0,9	1,1	0,9	1,3	1,3	1,5	1,4	1,5
NORTH	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
SOUTHEAST	1,6	1,8	2,4	2,3	2,1	2,2	2,2	2,4
SOUTH	1,4	1,4	1,6	2,0	2,1	2,2	1,8	1,8

Lung - pmp



Lung	2012	2013	2014	2015	2016	2017	2018	2019
<b>Absolute number</b>	69	80	67	74	92	112	122	106
MIDWEST	0	2	0	0	0	0	0	0
NORTHEAST	4	8	11	5	6	4	3	4
NORTH	0	0	0	0	0	0	0	0
SOUTHEAST	32	39	34	33	51	56	56	55
SOUTH	33	31	22	36	35	52	63	47
<b>Number pmp</b>	0,4	0,4	0,4	0,4	0,4	0,5	0,6	0,5
MIDWEST	0,0	0,1	0,0	0,0	0,0	0,0	0,0	0,0
NORTHEAST	0,1	0,2	0,2	0,1	0,1	0,1	0,1	0,1
NORTH	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
SOUTHEAST	0,4	0,5	0,4	0,4	0,6	0,6	0,6	0,6
SOUTH	1,2	1,1	0,8	1,2	1,2	1,8	2,1	1,6

# Waiting List

## Patients active on the waiting list (December 2019)

State	Kidney	Liver	Heart	Lung	Pancreas	Pancreas/ Kidney	Cornea	TOTAL
Total - Brazil	<b>25.163</b>	<b>1.178</b>	<b>276</b>	<b>187</b>	<b>18</b>	<b>383</b>	<b>10.741</b>	<b>37.946</b>
Acre	24	9	0	0	0	0	38	<b>71</b>
Alagoas	194	0	1	0	0	0	223	<b>418</b>
Amazonas	0	0	0	0	0	0	4	<b>4</b>
Bahia	1.329	37	0	0	0	0	626	<b>1.992</b>
Ceará	799	148	14	2	1	12	2	<b>978</b>
Distrito Federal	585	30	29	0	0	0	299	<b>943</b>
Espírito Santo	975	33	7	0	0	0	280	<b>1.295</b>
Goiás	205	1	0	0	0	0	436	<b>642</b>
Maranhão	146	0	0	0	0	0	530	<b>676</b>
Mato Grosso	1	0	0	0	0	0	214	<b>215</b>
Mato Grosso do Sul	135	0	0	0	0	0	147	<b>282</b>
Minas Gerais	2.714	33	18	0	0	59	1.270	<b>4.094</b>
Pará	278	0	0	0	0	0	958	<b>1.236</b>
Paraíba	153	8	1	0	0	0	382	<b>544</b>
Paraná	1.338	138	23	8	1	25	123	<b>1.656</b>
Pernambuco	880	82	7	0	0	10	17	<b>996</b>
Piauí	78	0	0	0	0	0	385	<b>463</b>
Rio de Janeiro	1.216	68	11	0	0	8	1.466	<b>2.769</b>
Rio Grande do Norte	211	0	0	0	0	0	288	<b>499</b>
Rio Grande do Sul	1.097	118	16	83	1	2	83	<b>1.400</b>
Rondonia	108	0	0	0	0	0	196	<b>304</b>
Santa Catarina	396	29	3	0	1	7	79	<b>515</b>
São Paulo	<b>12.301</b>	<b>444</b>	<b>145</b>	<b>94</b>	<b>14</b>	<b>260</b>	<b>2.439</b>	<b>15.697</b>
Sergipe	0	0	1	0	0	0	193	<b>194</b>
Tocantins	0	0	0	0	0	0	63	<b>63</b>

## Pediatric patients active on the waiting list (December 2019)

State	Kidney	Liver	Heart	Lung	Pancreas	Pancreas/ Kidney	Cornea	TOTAL
Total - Brazil	<b>320</b>	<b>41</b>	<b>57</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>410</b>	<b>844</b>
Acre	0	0	0	0	0	0	0	<b>0</b>
Alagoas	3	0	0	0	0	0	26	<b>29</b>
Amazonas	0	0	0	0	0	0	0	<b>0</b>
Bahia	0	0	0	0	0	0	0	<b>0</b>
Ceará	11	0	4	0	0	0	0	<b>15</b>
Distrito Federal	3	0	0	0	0	0	0	<b>3</b>
Espírito Santo	7	0	0	0	0	0	20	<b>27</b>
Goiás	0	0	0	0	0	0	18	<b>18</b>
Maranhão	4	0	0	0	0	0	36	<b>40</b>
Mato Grosso	0	0	0	0	0	0	12	<b>12</b>
Mato Grosso do Sul	2	0	0	0	0	0	7	<b>9</b>
Minas Gerais	12	6	12	0	0	0	153	<b>183</b>
Pará	6	0	0	0	0	0	16	<b>22</b>
Paraíba	1	0	0	0	0	0	1	<b>2</b>
Paraná	19	1	0	0	0	0	4	<b>24</b>
Pernambuco	12	3	0	0	0	0	0	<b>15</b>
Piauí	1	0	0	0	0	0	15	<b>16</b>
Rio de Janeiro	12	4	2	0	0	0	24	<b>42</b>
Rio Grande do Norte	2	0	0	0	0	0	0	<b>2</b>
Rio Grande do Sul	14	3	6	6	0	0	1	<b>30</b>
Rondonia	1	0	0	0	0	0	4	<b>5</b>
Santa Catarina	2	0	0	0	0	0	0	<b>2</b>
São Paulo	<b>208</b>	<b>24</b>	<b>33</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>73</b>	<b>348</b>
Sergipe	0	0	0	0	0	0	0	<b>0</b>
Tocantins	0	0	0	0	0	0	0	<b>0</b>

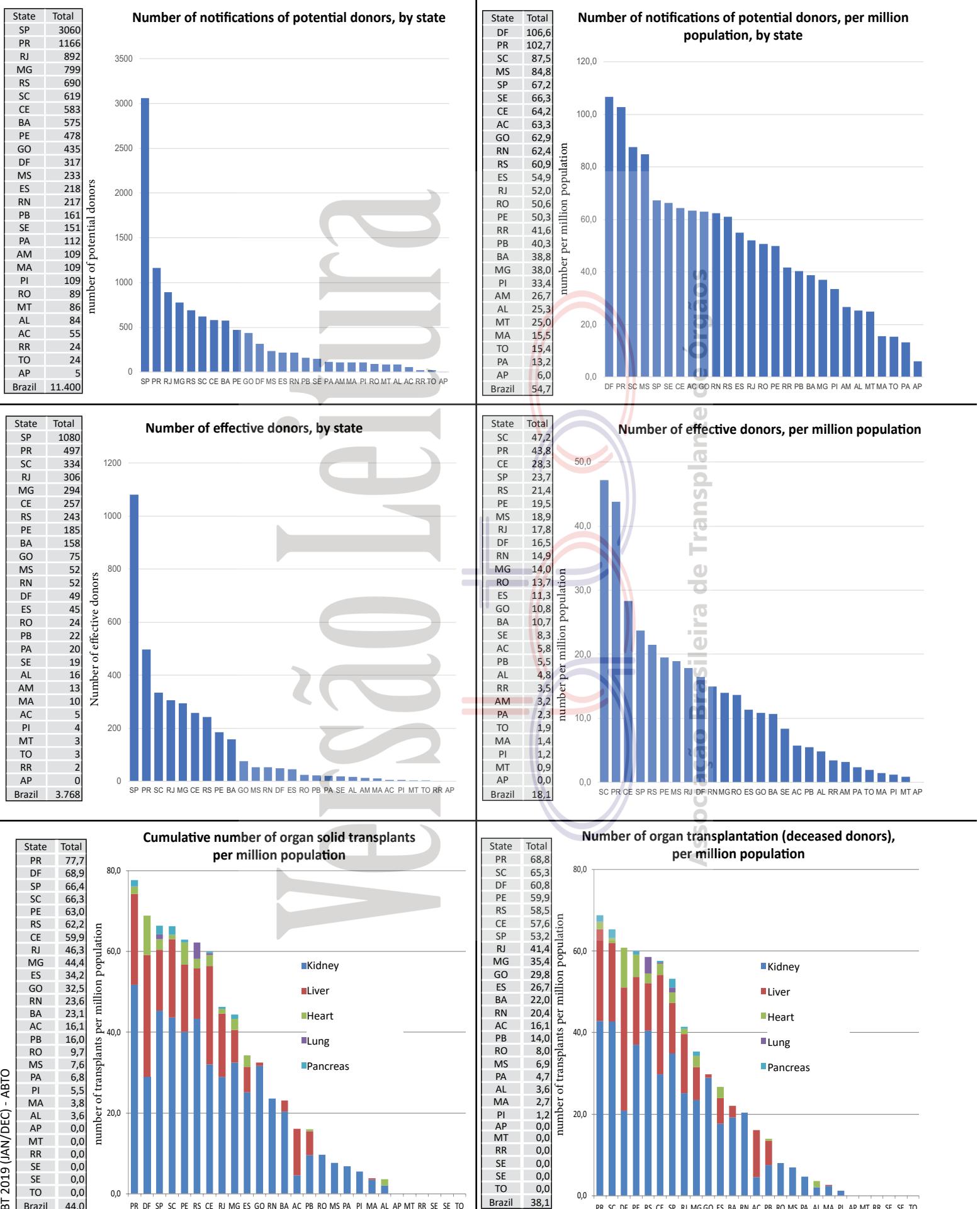
# Waiting List

## Number of patients and mortality by State (2019)

	Kidney		Liver		Heart		Lung		Pancreas		Pancreas/ Kidney		Cornea		TOTAL		
	Total	Pediatric	Total	Pediatric	Total	Pediatric	Total	Pediatric	Total	Pediatric	Total	Pediatric	Total	Pediatric	Total	Pediatric	
Total - Brazil	Entering	13.194	297	3.635	309	558	61	179	13	60	0	218	1	21.625	513	39.469	1.194
	Mortality	1.301	17	645	26	116	21	39	3	3	0	77	0	303	10	2.484	77
Acre	Entering	14	0	34	0	0	0	0	0	0	0	0	0	36	0	84	0
	Mortality	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alagoas	Entering	61	0	0	0	5	0	0	0	0	0	0	0	164	0	230	0
	Mortality	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0
Amazonas	Entering	0	0	0	0	0	0	0	0	0	0	0	0	161	8	161	8
	Mortality	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bahia	Entering	841	0	99	0	0	0	0	0	0	0	0	0	1570	0	2510	0
	Mortality	66	0	11	0	0	0	0	0	0	0	0	0	2	0	79	0
Ceará	Entering	475	19	416	15	39	9	15	0	1	0	8	0	893	16	1847	59
	Mortality	22	0	42	1	7	3	0	0	0	0	1	0	1	0	73	4
Distrito Federal	Entering	264	0	98	0	49	0	0	0	0	0	0	0	508	0	919	0
	Mortality	5	0	7	0	11	0	0	0	0	0	0	0	2	0	25	0
Espírito Santo	Entering	561	0	81	0	22	0	0	0	0	0	0	0	724	0	1388	0
	Mortality	135	3	25	0	9	1	0	0	0	0	0	0	0	0	169	4
Goiás	Entering	132	0	2	0	0	0	0	0	0	0	0	0	522	10	656	10
	Mortality	78	0	1	0	0	0	0	0	0	0	0	0	254	10	333	10
Maranhão	Entering	110	1	5	0	0	0	0	0	0	0	0	0	365	23	480	24
	Mortality	5	0	1	0	0	0	0	0	0	0	0	0	4	0	10	0
Mato Grosso	Entering	27	0	0	0	0	0	0	0	0	0	0	0	277	16	304	16
	Mortality	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0
Mato Grosso do Sul	Entering	78	2	0	0	0	0	0	0	0	0	0	0	335	14	413	16
	Mortality	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
Minas Gerais	Entering	1323	34	202	10	77	1	0	0	6	0	26	0	1837	81	3471	126
	Mortality	149	1	25	1	16	0	0	0	0	0	9	0	11	0	210	2
Pará	Entering	176	7	0	0	0	0	0	0	0	0	0	0	457	0	633	7
	Mortality	3	0	0	0	0	0	0	0	0	0	0	0	3	0	6	0
Paraíba	Entering	100	5	22	0	1	0	0	0	0	0	0	0	165	1	288	6
	Mortality	18	3	5	0	0	0	0	0	0	0	0	0	0	0	23	3
Paraná	Entering	85	3	42	0	0	0	3	0	0	0	3	0	58	2	191	5
	Mortality	4	0	8	0	0	0	2	0	0	0	0	0	0	0	14	0
Pernambuco	Entering	709	30	270	21	55	4	0	0	0	0	15	0	1165	69	2214	124
	Mortality	19	2	54	3	5	0	0	0	0	0	0	0	0	0	78	5
Piauí	Entering	140	1	0	0	0	0	0	0	0	0	0	0	249	1	389	2
	Mortality	3	0	0	0	0	0	0	0	0	0	0	0	6	0	9	0
Rio de Janeiro	Entering	1407	0	525	0	54	0	0	0	0	0	24	0	2154	0	4164	0
	Mortality	25	0	39	0	11	0	0	0	0	0	0	0	7	0	82	0
Rio Grande do Norte	Entering	118	3	0	0	0	0	0	0	0	0	0	0	226	0	344	3
	Mortality	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0
Rio Grande do Sul	Entering	827	35	277	40	39	10	84	7	0	0	0	0	1103	44	2330	136
	Mortality	37	0	50	4	6	6	17	2	0	0	1	0	1	0	112	12
Rondônia	Entering	75	0	0	0	0	0	0	0	0	0	0	0	144	0	219	0
	Mortality	5	0	0	0	0	0	0	0	0	0	0	0	1	0	6	0
Santa Catarina	Entering	415	1	144	1	9	0	0	0	1	0	15	0	613	0	1197	2
	Mortality	13	0	19	0	0	0	0	0	0	0	0	0	3	0	35	0
São Paulo	Entering	5256	156	1418	222	208	37	77	6	52	0	127	1	7690	228	14828	650
	Mortality	690	8	358	17	51	11	20	1	3	0	66	0	6	0	1194	37
Sergipe	Entering	0	0	0	0	0	0	0	0	0	0	0	0	149	0	149	0
	Mortality	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tocantins	Entering	0	0	0	0	0	0	0	0	0	0	0	0	60	0	60	0
	Mortality	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

# DATA FROM BRAZILIAN STATES

## ORGAN DONATION x TRANSPLANTS DURING YEAR 2019



# DATA FROM BRAZILIAN STATES

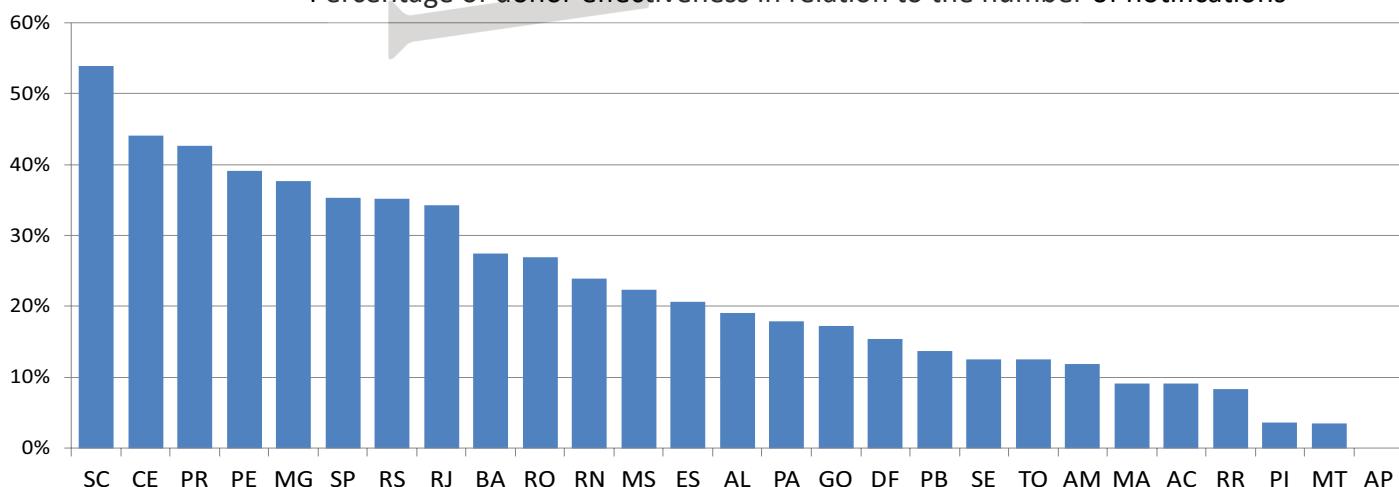
## Notifications of potential donors, effective donors and donors whose organs were transplanted by state during the year 2019

State	Notifications (potential donors)		Refused Donors		Elegible donors		Effective donors		Donors with organs transplanted		Mutiple organ donors	
	Number	pmp/year	Number	%	Number	pmp/year	Number	pmp/year	Number	pmp/year	Number	%
Total - Brazil	11.400	54,7	7.632	(67%)	6.091	37,4	3.768	18,1	3.211	15,4	2.114	(66%)
Acre	55	63,3	50	(91%)	35	40,3	5	5,8	4	4,6	3	(0%)
Alagoas	84	25,3	68	(81%)	52	15,6	16	4,8	16	4,8	15	(94%)
Amapá	5	6,0	5	(100%)	0	0,0	0	0,0	0	0,0	0	(0%)
Amazonas	109	26,7	96	(88%)	71	17,4	13	3,2	12	2,9	1	(8%)
Bahia	575	38,8	417	(73%)	378	25,5	158	10,7	158	10,7	95	(60%)
Ceará	583	64,2	326	(56%)	524	57,7	257	28,3	237	26,1	169	(71%)
Distrito Federal	317	106,6	268	(85%)	182	61,2	49	16,5	41	13,8	30	(73%)
Espírito Santo	218	54,9	173	(79%)	166	41,8	45	11,3	44	11,1	35	(80%)
Goiás	435	62,9	360	(83%)	272	39,3	75	10,8	70	10,1	39	(56%)
Maranhão	109	15,5	99	(91%)	76	10,8	10	1,4	9	1,3	4	(44%)
Mato Grosso	86	25,0	83	(97%)	29	8,4	3	0,9	2	0,6	2	(100%)
Mato Grosso do Sul	233	84,8	181	(78%)	208	75,7	52	18,9	51	18,6	22	(43%)
Minas Gerais	799	38,0	505	(63%)	392	18,6	294	14,0	284	13,5	259	(91%)
Pará	112	13,2	92	(82%)	60	7,0	20	2,3	17	2,0	6	(35%)
Paraíba	161	40,3	139	(86%)	103	25,8	22	5,5	22	5,5	20	(91%)
Paraná	1166	102,7	669	(57%)	891	78,5	497	43,8	365	32,2	249	(68%)
Pernambuco	478	50,3	293	(61%)	437	46,0	185	19,5	179	18,8	134	(75%)
Piauí	109	33,4	105	(96%)	78	23,9	4	1,2	4	1,2	3	(75%)
Rio de Janeiro	892	52,0	586	(66%)	710	41,4	306	17,8	260	15,2	172	(66%)
Rio Grande do Norte	217	62,4	165	(76%)	179	51,5	52	14,9	52	14,9	35	(67%)
Rio Grande do Sul	690	60,9	447	(65%)	580	51,2	243	21,4	191	16,9	118	(62%)
Rondonia	89	50,6	65	(73%)	54	30,7	24	13,7	22	12,5	2	(9%)
Roraima	24	41,6	22	(92%)	11	19,1	2	3,5	2	3,5	0	(0%)
Santa Catarina	619	87,5	285	(46%)	516	72,9	334	47,2	255	36,0	167	(65%)
São Paulo	3060	67,2	1980	(65%)			1080	23,7	885	19,4	515	(58%)
Sergipe	151	66,3	132	(87%)	75	32,9	19	8,3	26	11,4	16	(62%)
Tocantins	24	15,4	21	(88%)	12	7,7	3	1,9	3	1,9	3	(100%)

Excluding São Paulo state data,

source: State Transplants Centrals

Percentage of donor effectiveness in relation to the number of notifications



# DATA FROM BRAZILIAN STATES

## Reasons for non-fulfillment of organ donation by notified potential donors during the year 2019

State	Potential Donors number	Family Interview			Exclusion Reasons											
		Performed	noncon- sent	%	Medical Reasons	Number	%	Cardiopulmonary arrest	Number	%	unconfirmed brain death	Number	%	Others	Number	%
<b>Total - Brazil</b>	<b>11.400</b>	<b>6.741</b>	<b>2.674 (40%)</b>		<b>1.761 (15%)</b>			<b>927 (8%)</b>			<b>865 (8%)</b>			<b>1.405(12%)</b>		
Acre	55	21	17	(81%)	11	(20%)		2	(4%)		19	(35%)		1	(2%)	
Alagoas	84	39	17	(44%)	12	(14%)		5	(6%)		32	(38%)		2	(2%)	
Amapá	5	0	0	(0%)	0	(0%)		0	(0%)		1	(20%)		4	(80%)	
Amazonas	109	48	33	(69%)	16	(15%)		1	(1%)		37	(34%)		9	(8%)	
Bahia	575	379	210	(55%)	106	(18%)		89	(15%)		0	(0%)		12	(2%)	
Ceará	583	406	148	(36%)	102	(17%)		62	(11%)		10	(2%)		4	(1%)	
Distrito Federal	317	100	38	(38%)	86	(27%)		4	(1%)		135	(43%)		5	(2%)	
Espírito Santo	218	120	67	(56%)	39	(18%)		3	(1%)		47	(22%)		17	(8%)	
Goiás	435	262	179	(68%)	101	(23%)		1	(0%)		53	(12%)		26	(6%)	
Maranhão	109	32	22	(69%)	44	(40%)		0	(0%)		4	(4%)		29	(27%)	
Mato Grosso	86	16	11	(69%)	8	(9%)		7	(8%)		53	(62%)		4	(5%)	
Mato Grosso do Sul	233	134	78	(58%)	68	(29%)		1	(0%)		27	(12%)		7	(3%)	
Minas Gerais	799	326	138	(42%)	95	(12%)		106	(13%)		13	(2%)		153	(19%)	
Pará	112	58	36	(62%)	12	(11%)		1	(1%)		43	(38%)		0	(0%)	
Paraíba	161	74	43	(58%)	24	(15%)		5	(3%)		31	(19%)		36	(22%)	
Paraná	1166	749	191	(26%)	273	(23%)		94	(8%)		43	(4%)		68	(6%)	
Pernambuco	478	320	129	(40%)	110	(23%)		1	(0%)		38	(8%)		15	(3%)	
Piauí	109	66	49	(74%)	37	(34%)		4	(4%)		5	(5%)		10	(9%)	
Rio de Janeiro	892	495	142	(29%)	223	(25%)		138	(15%)		40	(4%)		43	(5%)	
Rio Grande do Norte	217	129	70	(54%)	42	(19%)		14	(6%)		36	(17%)		3	(1%)	
Rio Grande do Sul	690	465	189	(41%)	126	(18%)		7	(1%)		110	(16%)		15	(2%)	
Rondonia	89	37	14	(38%)	15	(17%)		2	(2%)		11	(12%)		23	(26%)	
Roraima	24	10	7	(70%)	7	(29%)		1	(4%)		5	(21%)		2	(8%)	
Santa Catarina	619	491	124	(25%)	79	(13%)		12	(2%)		16	(3%)		54	(9%)	
São Paulo	3060	1893	678	(36%)	87	(3%)		361	(12%)		0	(0%)		854	(28%)	
Sergipe	151	62	38	(61%)	34	(23%)		6	(4%)		46	(30%)		8	(5%)	
Tocatins	24	9	6	(67%)	4	(17%)		0	(0%)		10	(42%)		1	(4%)	

source: State Transplants Centrals

# National and State Procurement and Coordination Transplant organization

## Sistema Nacional de Transplantes (SNT)

Daniela Ferreira Salomão Pontes

Fone: (61) 3315-9212

e-mail: snt@saude.gov.br

## Central Nacional de Transplantes (CNT)

Patrícia Freire

Fone(61) 3315-6299 / 6294

e-mail: centralnacional@saude.gov.br

## Acre

Regiane Clélia Ferrari

Fone/Fax: (68) 3227-6399 / (68) 99985-2061

E-Mail: cncdoacre@ac.gov.br e cncdoacre@gmail.com

### OPO Acre

Rosely Barreiros Matheus da Cruz

Fone: (68) 3223-3080

E-mail: opoacre@gmail.com

## Alagoas

Daniela Barbosa Ramos

Fone/Fax: (82) 3376-8186 / (82) 3315-7440

E-Mail: doevida@saude.al.gov.br

### OPO HGE

Drº Osvaldo Brandão Vielela

Fone: (82) 3315-7440

E-mail: opoalagoas@gmail.com

## Amapá

Eduardo Monteiro Cardoso

Fone: (96) 99177-9328 / 98110-0536

E-Mail: cncdo@saude.ap.gov.br

## Amazonas

Marcos Vinicius Monteiro Lins de Albuquerque.

Fone/ Fax: (92) 3664-2616

E-Mail: cncdo.am@saude.gov.br

### OPO AM

Helen Cristine Albuquerque Figueiredo

Fone: (92) 3249-9410

E-mail: opoalpha@saude.am.gov.br

## Bahia

Coordenação Estadual de Transplantes

Rita de Cassia Martins Pinto Pedrosa

Email: sesab.transplante@saude.ba.gov.br

### Central de Notificação Captação e Doação de órgãos - CNCDO

América Carolina Melo Sodré

Fone: (71) 3356-6776 / 3117-0130 / 99956-0527

E-Mail: transplantes.ba@gmail.com

### OPO-HGE

Nair Lima Neves

Fone:(71)3117-5838

E-Mail: gadhgebahia@hotmail.com

### OPO HOSPITAL GERAL ERNESTO SIMÕES FILHO

Isilda Queiroz

Fone: (71) 3117-1730 / (71) 3117-1785

### OPO EXTREMO SUL

Raphael dos Santos Matos

Fone: (73)3112-2867

E-Mail:: gadextremosul@gmail.com

### OPO-FEIRA DE SANTANA

s/informação

Fone:(75) 3602-3300 / (75) 3602-3333

E-Mail: hgca.opo@saude.ba.gov.br

## OPO SUL (Ilheus/ITABUNA)

Naama Ramos

Fone:(73) 3214-1600 / (73) 2102-5107

## OPO-VITÓRIA DA CONQUISTA

Dra Edney Matos

Fone:(77) 3427-4584

## Ceará

Dra. Eliana Régia Barbosa de Almeida

Fone: (85) 3252-1886 / 3101-5238

E-Mail: cncdocoordenacao.ce@gmail.com

## OPO - IJF

Aline Alves Braga Solon

Fone:(85) 3255.5155

## OPO - HGF

Marcia Maria Vitorino Sampaio Passos

Fone: (85) 3265-6276

## OPO - SOBRAL

Cristiano Araújo Costa

Fone: (88) 3112-0418 / 0400

## OPO - CARIRI

Gustavo Martins dos Santos

Fone: (88) 3566-3614

## Distrito Federal

Joseane Gomes Fernandes Vasconcelos

Fone: (61) 3315-1677

E-Mail: centraldetransplantedf@gmail.com

## OPO DF

Viviane Marçal da Silva

Fone: (61) 3315-1677

E-mail: opodistritofederal@gmail.com

## Espírito Santo

Maria dos Santos Machado

Fone: (27) 3347-5624

E-Mail: cncdo@saude.es.gov.br

## Goiás

Katiuscia Christiane Freitas

Fone/Fax: (62) 3201-6720 / 3201-6721 / 3201-6722 / 99614-7990

E-Mail: transplantesgo@saude.gov.br

## Maranhão

Dra. Maria Inês Gomes de Oliveira

Fone: (98) 2109-1276 / 2109-1212

E-Mail: ctx@huufma.br

## Mato Grosso

Fabiana Regina de Souza Molina

Fone: (65) 3324-0747 / 3623-9004

E-Mail: contran@ses.mt.gov.br

## Mato Grosso do Sul

Claire Carmem Miozzo

Fone: (67) 3321-8877 / 3312-1400

E-Mail: cet@saude.ms.gov.br

## OPO Santa Casa de Campo Grande - MS

Patricia Berg Pereira Leal

Fone: (67) 3322 4314

E-Mail: opo@santacasacg.org.br

# National and State Coordination Transplant

## Minas Gerais

Omar Lopes Cançado Jr.  
Fone: (31) 3219-9200 / 0800 2837 183  
E-Mail: mgtransplantes@saude.mg.gov.br

CNCDO Metropolitano - Belo Horizonte  
Silvia Zenóbio Nascimento  
Fone: (31) 3219-9200 / (31) 3219-9211  
E-Mail: mgtransplantes@saude.mg.gov.br

CNCDO Leste - Governador Valadares  
s/informação  
Fone: (33) 3271-1909 / 99954-1569 (plantão)  
E-Mail: mgtx.gva@saude.mg.gov.br

CNCDO Oeste - Uberlândia  
s/informação  
Fone/Fax: (34) 3214-4908 / 3214-4173 / 3229-7694  
E-Mail: cncdooeste@saude.mg.gov.br

CNCDO Sul - Pouso Alegre  
José Renato Melo  
Fone/Fax: (35) 3422-0334 / 2345 R. 277  
E-Mail: cncdosul@yahoo.com.br

CNCDO Norte/Nordeste - Montes Claros  
Noasses Neiva Diamantino  
Fone: (38) 3213-3676  
E-Mail: cncdonone@ig.com.br

CNCDO Zona da Mata - Juiz de Fora  
Dr. Joseph Fredric Whitaker  
Fone: (32) 3229-2392  
E-Mail: mgtxjf@hotmail.com

## Pará

Maria Ierecê Miranda de Carvalho  
Fone/Fax: (91) 3244-9692 / 3223-8168  
E-Mail: cncdo.transplantes@gmail.com

OPO - Tapajós  
Antônio Carlos Alves da Silva  
Fone: (93)2101-0700 - Ramal 718

## Paraíba

Luiz Gustavo César de Barros Correia  
Fone/Fax: (83) 3225-6409 / 98845-3516  
Email: transplante@ses.pb.gov.br

## Paraná

Dra. Arlene Terezinha Cagol Garcia Badoch  
Fone/Fax: (41) 3304-1900/ 1909  
E-Mail: sesatran@sesa.pr.gov.br

OPO Curitiba  
Edi Glacia Repula  
Fone: (41) 3304-1922/3304-1926  
E-mail: opocuritiba@saude.mg.gov.br

OPO - Cascavel  
Patrícia dos Santos Duarte  
Fone: (45) 3321-5505  
E-Mail: opocascavel@sesa.pr.gov.br

OPO - Londrina  
Emanuelle Fiorio Zocoler  
Fone: (43) 3379-6078/3379-6092  
E-Mail: opolondrina@sesa.pr.gov.br

## OPO - Maringá

Gislaine Fusco Duarte  
Fone/Fax: (44) 3261-6250  
E-Mail: opomaringa@sesa.pr.gov.br

## Pernambuco

Noemy Gomes  
Fone: (81) 3181-6207 / 6206  
E-Mail: transplantesp@saude.gov.br

Instituto de Medicina Integral de Pernambuco - IMIP  
Petrus Moura de Andrade Lima  
Fone:(81) 2122-4110 / 8652-9134

Real Hospital Português De Beneficência Em Pernambuco  
André Bezerra Pereira do Rêgo  
Fone:(81) 3416-1878 / 99976-0147

Casa de Saúde Santa Efigênia  
Albiégio Carlos Tavares  
Fone:(81) 99927-6594

Hospital Dom Malam  
Tatiana Cerqueira da Cunha Cavalcanti  
Fone:(87) 3202-7000 / 98835-2136

## Piauí

Dra. Maria de Lourdes de Freitas Veras  
Fone/Fax: (86) 3221-7553 / 3216-3553  
E-Mail: cncdopi@saude.pi.gov.br

OPO HGV-PI  
Ricardo Cronemberger Mangueira  
Fone:(86) 3221-8109 / 99929-3397  
E-mail: opo.hgv@hotmail.com

## Rio de Janeiro

Gabriel Teixeira  
Fone: (21) 2333-7550  
E-Mail: transplantes@saude.rj.gov.br

OPO RJ - OPO SUL  
Onofre Barros  
Fone:(21)9602-7700 / 7575  
onofrebarros@yahoo.com.br

OPO RJ – OPO NORTE  
Graziela Denardin Lückemeyer  
Fone:(21) 2238-0981 / (21) 2571-6242  
opo.hsfa@alsf.org.br

OPO RJ – OPO ITAPERUNA  
Agostinho Boechat Neto  
Fone:(22) 3824-9200 - Ramal 9334  
opo@hjsa.com.br

OPO RJ – OPO BARRA MANSA  
Gilvando Dias de Sousa Filho  
Fone: (24) 3325-8300 Ramal 8418  
opo.barramansa@scbm.org.br

## Rio Grande do Norte

Raissa Medeiros Marques  
Fone: (84) 3232-7620 / 98839-8452  
E-Mail: cncdo@rn.gov.br

OPO RN  
Suzelle Freitas de Moura Oliveira  
Fone: (84) 32327545  
oponatal@gmail.com

# National and State Coordination Transplant

## Rio Grande do Sul

Sandra Lucia Coccaro de Souza  
Fone/Fax: (51) 3353-3030  
E-Mail: centraldetransplantes@saude.rs.gov.br

OPO I ISCMPA  
Dra. Fernanda Bonow  
Fone/Fax: (51) 3213-7320 / 3214-8459  
E-Mail: OPO1@santacasa.tche.br

OPO II PUC  
Dr. Mauricio Schuck  
Fone/Fax: (51) 3320-3261  
E-Mail: opo2@pucrs.br

OPO III POMPÉIA  
Dr. Thiago Passarin  
Fone/Fax: (54) 3220-8023 / 98422-9491  
E-Mail: opo3@pompeia.org.br

OPO IV SÃO VICENTE PAULO  
Dr. Cassiano Crusius  
Fone/Fax: (54) 3316-4000 / (54) 3316-8374  
E-Mail: opo4@hsvp.com.br

OPO V STA CASA RIO GRANDE  
Dr. Newton Primo  
Fone/Fax: (53) 3233-7100 / (53) 3233-7188  
E-Mail: opo@santacasarg.com.br

OPO VI BRUNO BORN  
Dr. Fábio Bonfin Fraga  
Fone/Fax: (51) 3714-7500  
E-Mail: opo6@hbb.com.br

OPO VII / INSTITUTO CARDIOLOGIA  
Dr. Edison Moraes Rodrigues Filho  
Fone: (51) 3230-3684 / 98585-0934  
E-Mail: opocirurgica@gmail.com

## Rondônia

Edcléia Gonçalves dos Santos  
Fone: (69) 3216-5738 / 3216-5747  
E-Mail: gctero@gmail.com

## Roraima

Dr. Douglas Henrique Teixeira  
Fone: (95) 3624-4049  
E-Mail: transplantesrr@gmail.com

## Santa Catarina

Dr. Joel de Andrade  
Fone: (48) 3664-7290 / 3664-7298 / 0800-6437474  
E-Mail: getra@saude.sc.gov.br / cncdoinfo@saude.sc.gov.br

## Sergipe

Benito Oliveira Fernandez  
Fone: (79) 3259-2899 / 3216-2870  
E-Mail: transplante@saude.se.gov.br

Hospital de Urgência de Sergipe  
Poliana Nunes Santos  
Tel.: (79)3216-2837  
Email: opo@fhs.saude.se.gov.br

## São Paulo

Sistema Estadual de Transplantes  
Francisco de Assis Salomão Monteiro  
Fone: (11) 3224-6373/6374/6379/6380  
E-Mail: ctrans@saude.sp.gov.br

OPO / HC - Hospital das Clínicas da Faculdade de Medicina da USP  
Dr. Leonardo Borges de Barros e Silva  
Hospital das Clínicas da Fac. de Medicina de São Paulo - Instituto Central  
Fone/Fax: (11) 2661-8004 / 2661-6543  
E-Mail: spot.ichc@hc.fm.usp.br

OPO / Santa Casa de São Paulo  
Dr. Reginaldo Carlos Boni  
Fone: (11) 2176-7185/7391/5185  
E-Mail: opo@santacasasp.org.br

OPO / Dante Pazzanese  
Dr. André Feldman  
Fone: (11) 5085-6015  
E-Mail: opo@idpc.org.br

OPO - EPM - Hospital São Paulo / UNIFESP  
Suelen B. Stopa Martins  
Fone/Fax: (11) 5572-8749 / 5081-2183  
E-Mail: opoepm@hrim.com.br

Central de Transplantes Regional  
Fone/Fax: (16) 3607-4262/4261  
E-mail: centralregional@saude.sp.gov.br

OPO / Hospital das Clínicas da UNICAMP  
Dr. Luís Antonio Costa Sardinha  
Fone: (19) 3521-8000  
E-Mail: captacao@hc.unicamp.br

OPO / Hospital Universitário de São José do Rio Preto  
Dr. João Fernando Picollo de Oliveira  
Fone: (17) 3227-7030  
E-Mail: captacaodeorgaos@hospitaldebase.com.br

OPO - Hospital das Clínicas de Botucatu  
Dr. Laércio Martins de Stefano  
Fone: (14) 3811-6386 / 3813-3344  
E-Mail: opobotucatu@hcfmb.unesp.br

OPO - Santa Casa de Itu  
Dr. Jorge Luiz Arcêncio  
Fone: (11)4013-8013 / 99489-5060  
E-Mail: ituopo@gmail.com

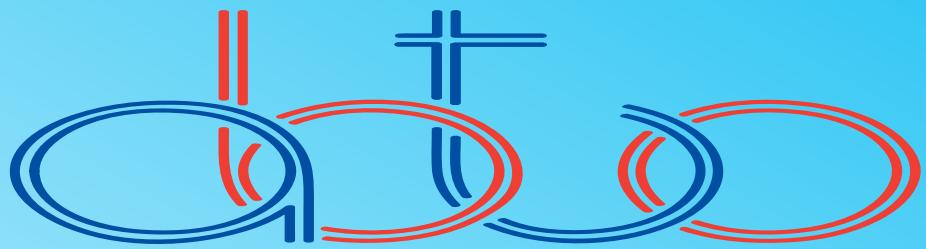
OPO - Hospital das Clínicas de Ribeirão Preto  
Dr. Jeová Nina Rocha  
Fone: (16) 3602-2777  
E-Mail: oporibeirao@yahoo.com.br

OPO - Hospital das Clínicas de Marília  
Dr. Paulo Roberto Teixeira Michelone  
Fone: (14) 3402-1748 / 1744 R: 1005  
E-Mail: spotmarilia@famema.br

## Tocantins

Suziane Aguiar Crateús Vilela  
Fone: (63) 3218-3230 / (63) 99237-6409  
E-mail: cndoto@gmail.com





## **Associação Brasileira de Transplante de Órgãos**

**Brazilian Organ Transplantation Society- ABTO**  
Av, Paulista, 2001 - 17º andar - cj 1704 / 1707  
São Paulo - SP  
CEP 01311-300  
Phone: 55 11 3145-0000  
Email: [abto@abto.org.br](mailto:abto@abto.org.br)  
[www.abto.org.br](http://www.abto.org.br)