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ORGAN DONATION AND TRANSPLANTATION IN THE RUSSIAN FEDERATION IN 2024

17th Report from the Registry of the Russian Transplant Society

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Objective: to assess the current status and development trends in organ donation and transplantation in the Russian Federation based on data from the year 2024. **Materials and methods.** A survey was conducted among transplant center directors. The Russian Ministry of Health's information accounting system was used for data verification. Comparative analysis was carried out to evaluate trends over time, differences across regions of the Russian Federation, and variations among transplant centers. **Results.** Based on data retrieved from the National Registry in 2024, there were 49 kidney transplant programs, 38 liver transplant programs, and 21 heart transplant programs operating in the Russian Federation. The donor activity rate was 6.7 per million population (p.m.p.). Multi-organ procurement accounted for 78.5% of cases, with an average of 3.0 organs retrieved per effective donor. A total of 3,307 organ transplants were performed in 2024, including 1,943 kidney transplants, 894 liver transplants, and 426 heart transplants. This represents an 8.2% increase in organ transplants compared to 2023. In Moscow, organ donation activity reached 31.6 p.m.p. A total of 12 transplant centers operated in Moscow and Moscow Oblast, collectively performing 54.0% of all kidney transplants and 67.3% of all extrarenal transplants nationwide. The number of patients living with transplanted organs in the Russian Federation exceeds 155.1 p.m.p. **Conclusion.** The network of transplant centers in the Russian Federation continues to expand, with three new transplant programs launched in 2024. Over the past year, both the number of effective donors and the volume of organ transplants have increased. The resource potential of medical institutions has not yet been fully utilized, allowing for further growth in transplant activity. Moscow remains the central driver of transplant medicine in Russia. Shumakov National Medical Research Center of Transplantology and Artificial Organs and its branch account for 27.1% of all organ transplants performed nationally. Successful regional transplant programs are also underway in the Republic of Tatarstan, Kemerovo Oblast (Kuzbass), St. Petersburg and Leningrad Oblast, Novosibirsk Oblast, and Krasnoyarsk Krai. Notably, the Russian Federation places a strong priority on providing pediatric transplant care.

Keywords: organ donation, kidney, liver, heart, lung transplantation, transplant center, waiting list, registry, Shumakov National Medical Research Center of Transplantology and Artificial Organs.

INTRODUCTION

The National Registry tracks the current status and trends in organ donation and transplantation in Russia under the auspices of a dedicated transplantology commission that was established in collaboration between the Russian Ministry of Health and the Russian Transplant Society. Previous reports have been published in 2009–2024 [1–15].

Since 2016, the registry has served as a mechanism for quality assurance and for ensuring the completeness of data collection within the national information system used to register donated human organs and tissues, donors, and recipients. The system operates under executive order No. 355n of the Russian Ministry of Health, dated June 8, 2016.

Apart from statistical data for the reporting period, the Registry's annual reports include a systematic analysis with an assessment of the current status of transplant care in the Russian Federation, as well as trends and prospects for future advancements in this branch of healthcare.

Since 2019, the National Registry has also been used to monitor the implementation of the departmental target program "Organ Donation and Transplantation in the Russian Federation", approved by Order No. 365 of the Russian Ministry of Health on June 4, 2019 (since 2022 – a set of procedural measures).

Beginning in 2024, the work of the transplant registry has been coordinated with annual monitoring in the field of nephrology conducted by the Center for the Improvement of Medical Care in Nephrology at Shumakov

National Medical Research Center of Transplantology and Artificial Organs, Moscow.

Registry data are collected through standardized questionnaires completed by designated representatives at all transplant centers in the Russian Federation. The collected information is subjected to comparative analysis across different time periods, individual regions, transplant centers, and in relation to international registry data.

The working group extends its gratitude to all regular and new participants who contributed data to the Registry, as well as to the Ministry of Health of the Russian Federation and the Central Research Institute for Health Organization and Informatization for their ongoing support.

TRANSPLANT CENTERS

In the Russian Federation, transplant centers are currently operating across 38 federal subjects, also referred to as regions (Fig. 1).

In order to comply with the regional principle in assessing the status and trends in transplant care and organ donation in the federal subjects of the Russian Federation, the activities of the Shumakov National Medical Research Center of Transplantology and Artificial Organs, Moscow (hereinafter referred to as “Shumakov Center”) and its Volzhsky branch are presented in the Registry separately as for two transplant centers.

In 2024, kidney transplants (KT) were performed in 49 centers, liver transplants (LiT) in 38 centers, heart transplants (HT) in 21 centers, pancreas transplants (PaT) in 3 centers, and lung transplants (LuT) in 3 centers.

Overall, transplant procedures were carried out in 61 medical facilities, including:

20 federal institutions, among them 14 institutions under the Russian Ministry of Health, 2 institutions under the Russian Ministry of Science and Higher Education, 3 institutions under the Federal Medical and Biological

Agency, and 1 institution under the Russian Ministry of Defense; 41 institutions were operated by the federal subjects of the Russian Federation.

In 2024, a new transplant center began operating in the Donetsk People’s Republic at Kalinin Regional Clinical Hospital, where two living-donor KT were successfully performed.

Across the Russian Federation, a total of 3,307 organ transplants were carried out, including 281 procedures for children (Tables 1 and 2). This represents an 8.2% increase (+250 transplants) compared to 2023.

Table 1

Summary of organ donation and transplantation in the Russian Federation, 2024

Indicator	Number (units)
Organ donation	
Total number of organ donors	1365
Deceased donors	975
Living (related) donors	390
Organ transplantation	
Total number of organs transplanted	3307
<i>share of pediatric transplants</i>	281
Kidney	1943
from deceased donors	1720
from living-related donors	223
<i>share of pediatric transplants</i>	124
Liver	894
from deceased donor	727
from living-related donors	167
<i>share of pediatric transplants</i>	132
Heart	424
<i>share of pediatric transplants</i>	25
Heart-lung	2
Lungs	33
Pancreas	10
Small intestine	1

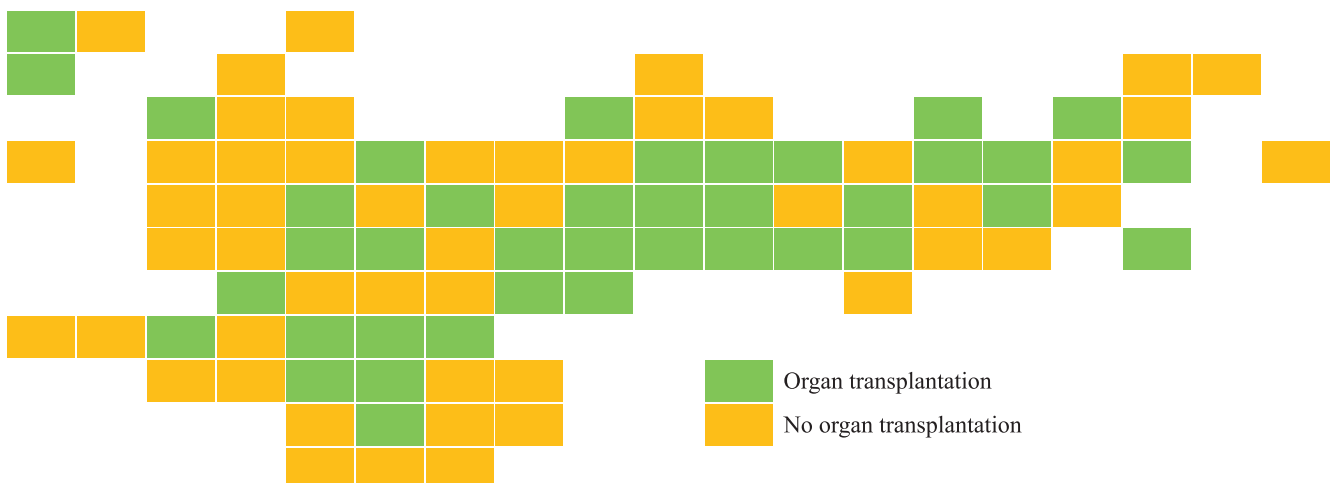


Fig. 1. Geographic spread of organ transplant centers in the Russian Federation in 2024

Table 2

Transplant activity in the Russian Federation, 2024

#	Federal District	Federal subject	Medical institutions	Total	Kidney (total)	Kidney (deceased-donor)	Kidney (living related)	Liver (total)	Liver (deceased-donor)	Liver (living related)	Heart	Pancreas	Lungs	Heart-lungs	Small intestine
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.1	Central Federal District	Moscow	Shumakov National Medical Research Center of Transplantology and Artificial Organs	794	303	197	106	187	83	104	277	5	20	2	0
1.2	Volga Federal District	Volgograd Oblast	Branch of Shumakov National Medical Research Center of Transplantology and Artificial Organs	101	70	49	21	14	14	0	17	0	0	0	0
2	Central Federal District	Moscow	Lopatkin Research Institute of Urology and Interventional Radiology, a branch of the National Medical Research Center for Radiology	82	82	77	5	0	0	0	0	0	0	0	0
3	Central Federal District	Moscow	Russian Children's Clinical Hospital	31	30	26	4	1	0	1	0	0	0	0	0
4	Central Federal District	Moscow	Petrovsky National Research Centre of Surgery	25	15	6	9	10	0	10	0	0	0	0	0
5	Central Federal District	Moscow	Burnazyan Federal Medical and Biophysical Center	55	16	10	6	39	14	25	0	0	0	0	0
6	Central Federal District	Moscow	Bakulev Scientific Center of Cardiovascular Surgery	2	0	0	0	0	0	0	2	0	0	0	0
7	Central Federal District	Moscow	National Medical Research Center for Children's Health	20	20	13	7	0	0	0	0	0	0	0	0
	Central Federal District	Moscow	Blokhin National Medical Research Center of Oncology	2	0	0	0	2	2	0	0	0	0	0	0
8	Central Federal District	Moscow	Botkin Hospital	224	147	147	0	68	68	0	9	0	0	0	0
9	Central Federal District	Moscow	Skifosovsky Research Institute of Emergency Care	419	265	265	0	135	133	2	4	3	11	0	1
10	Central Federal District	Moscow	Moscow Clinical Scientific Center	100	19	19	0	81	81	0	0	0	0	0	0
11	Central Federal District	Moscow	Vladimirsky Moscow Regional Research and Clinical Institute	90	60	60	0	30	30	0	0	0	0	0	0

Continuation of Table 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
12	Central Federal District	Moscow Oblast	Federal Clinical Center for High Medical Technologies, Federal Biomedical Agency (No. 119)	22	22	22	0	0	0	0	0	0	0	0	0
13	Central Federal District	Belgorod Oblast	St. Joasaphus Belgorod Regional Clinical Hospital	12	8	8	0	3	3	0	1	0	0	0	0
14	Central Federal District	Voronezh Oblast	Voronezh Regional Clinical Hospital No. 1	9	8	8	0	0	0	0	1	0	0	0	0
15	Central Federal District	Tula Oblast	Tula Regional Clinical Hospital	3	3	3	0	0	0	0	0	0	0	0	0
16	Central Federal District	Ryazan Oblast	Ryazan Regional Clinical Hospital	18	16	16	0	2	2	0	0	0	0	0	0
17	North-western Federal District	St. Petersburg	Granov Russian Research Center of Radiology and Surgical Technologies	22	0	0	0	22	22	0	0	0	0	0	0
18	North-western Federal District	St. Petersburg	Almazov National Medical Research Centre	38	0	0	0	0	0	0	38	0	0	0	0
19	North-western Federal District	St. Petersburg	Pavlov University	25	14	12	2	11	11	0	0	0	0	0	0
20	North-western Federal District	St. Petersburg	St. Petersburg Research Institute of Emergency Medicine	80	60	60	0	20	20	0	0	0	0	0	0
21	North-western Federal District	St. Petersburg	Mariinskaya Hospital	33	33	33	0	0	0	0	0	0	0	0	0
22	North-western Federal District	St. Petersburg	St. Luke's Clinical Hospital	36	36	35	1	0	0	0	0	0	0	0	0
23	North-western Federal District	St. Petersburg	Kirov Military Medical Academy	16	0	0	0	16	16	0	0	0	0	0	0
24	North-western Federal District	St. Petersburg	Leningrad Regional Clinical Hospital	37	35	35	0	2	2	0	0	0	0	0	0
25	North-western Federal District	Arkhangelsk Oblast	Volosevich First City Clinical Hospital	8	6	6	0	2	2	0	0	0	0	0	0
26	Southern Federal District	Krasnodar Krai	Ochapovsky Regional Clinical Hospital No. 1	24	14	14	0	8	6	2	0	0	2	0	0

Continuation of Table 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
27	Southern Federal District	Volgograd Oblast	Volzhsky Regional Center of Urology	4	4	0	4	0	0	0	0	0	0	0	0
28	Southern Federal District	Rostov Oblast	Rostov Regional Clinical Hospital	66	40	40	0	20	20	0	4	2	0	0	0
29	North Caucasian Federal District	Stavropol Krai	Stavropol Regional Clinical Hospital	17	13	13	0	4	4	0	0	0	0	0	0
30	Volga Federal District	Samara Oblast	Samara State Medical University	61	55	53	2	5	5	0	1	0	0	0	0
31	Volga Federal District	Saratov Oblast	Saratov State Medical University	6	6	0	6	0	0	0	0	0	0	0	0
32	Volga Federal District	Saratov Oblast	Regional Clinical Hospital	8	8	8	0	0	0	0	0	0	0	0	0
33	Volga Federal District	Nizhny Novgorod Oblast	Volga Regional Medical Center	30	19	14	5	11	9	2	0	0	0	0	0
34	Volga Federal District	Nizhny Novgorod Oblast	Research Institute – Korolev Specialized Cardiac Surgery Clinical Hospital	1	0	0	0	0	0	0	1	0	0	0	0
35	Volga Federal District	Republic of Tatarstan	Republican Clinical Hospital	155	99	98	1	56	56	0	0	0	0	0	0
36	Volga Federal District	Republic of Tatarstan	Interregional Clinical Diagnostic Center	17	0	0	0	0	0	0	17	0	0	0	0
37	Volga Federal District	Republic of Tatarstan	Children's Republican Clinical Hospital	1	1	1	0	0	0	0	0	0	0	0	0
38	Volga Federal District	Republic of Tatarstan	Emergency Care Hospital	6	0	0	0	0	0	0	6	0	0	0	0
39	Volga Federal District	Republic of Bashkortostan	Kuvatov Republican Clinical Hospital	45	38	38	0	7	7	0	0	0	0	0	0
40	Volga Federal District	Republic of Bashkortostan	Republican Cardiology Clinic	5	0	0	0	0	0	0	5	0	0	0	0
41	Volga Federal District	Perm Krai	Sukhanov Federal Center for Cardiovascular Surgery	2	0	0	0	0	0	0	2	0	0	0	0
42	Volga Federal District	Perm Krai	Perm Regional Clinical Hospital	8	8	6	2	0	0	0	0	0	0	0	0
43	Volga Federal District	Orenburg Oblast	Orenburg Regional Clinical Center for Surgery and Traumatology	35	35	20	15	0	0	0	0	0	0	0	0
44	Ural Federal District	Sverdlovsk Oblast	Sverdlovsk Regional Clinical Hospital No. 1	49	33	33	0	13	13	0	3	0	0	0	0

End of Table 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
45	Ural Federal District	Chelyabinsk Oblast	Chelyabinsk Regional Clinical Hospital	37	24	24	0	10	10	0	3	0	0	0	0
46	Ural Federal District	Tyumen Oblast	Regional Clinical Hospital No. 1	35	29	29	0	3	3	0	3	0	0	0	0
47	Ural Federal District	Khanty-Mansi Autonomous Okrug–Yugra	District Clinical Hospital	20	14	11	3	6	6	0	0	0	0	0	0
48	Siberian Federal District	Novosibirsk Oblast	Meshalkin National Medical Research Center	10	0	0	0	0	0	0	10	0	0	0	0
49	Siberian Federal District	Novosibirsk Oblast	State Novosibirsk Regional Clinical Hospital	89	42	33	9	47	29	18	0	0	0	0	0
50	Siberian Federal District	Kemerovo Oblast (Kuzbass)	Research Institute for Complex Issues of Cardiovascular Diseases	10	0	0	0	0	0	0	10	0	0	0	0
51	Siberian Federal District	Kemerovo Oblast (Kuzbass)	Belyaev Kemerovo Regional Clinical Hospital	82	71	68	3	11	11	0	0	0	0	0	0
52	Siberian Federal District	Kemerovo Oblast (Kuzbass)	Kuzbass Cardiology Center	1	0	0	0	1	1	0	0	0	0	0	0
53	Siberian Federal District	Irkutsk Oblast	Irkutsk Regional Clinical Hospital	53	32	31	1	21	19	2	0	0	0	0	0
54	Siberian Federal District	Altai Krai	Altai Regional Clinical Hospital	14	14	14	0	0	0	0	0	0	0	0	0
55	Siberian Federal District	Krasnoyarsk Krai	Federal Siberian Research and Clinical Center	18	17	11	6	1	1	0	0	0	0	0	0
56	Siberian Federal District	Krasnoyarsk Krai	Krasnoyarsk Clinical Hospital	50	26	26	0	14	14	0	10	0	0	0	0
57	Far Eastern Federal District	Republic of Sakha (Yakutia)	Republican Hospital No. 1 – Nikolaev National Center of Medicine	4	2	2	0	2	1	1	0	0	0	0	0
58	Far Eastern Federal District	Republic of Buryatia	Semashko Republican Clinical Hospital	6	6	3	3	0	0	0	0	0	0	0	0
59	Far Eastern Federal District	Primorsky Krai	Primorsky Regional Clinical Hospital No. 1	20	14	14	0	6	6	0	0	0	0	0	0
60	Far Eastern Federal District	Khabarovsk Krai	Regional Clinical Hospital No. 1”	14	11	9	2	3	3	0	0	0	0	0	0
Total				3307	1943	1720	223	894	727	167	424	10	33	2	1

In 2024, the number of organ transplants performed each month ranged from 131 in January to 397 in November, with an average of 276 procedures per month (Fig. 2). Over the same period, the monthly distribution by organ type was as follows: 78–224 KT, 35–104 LiT, and 18–48 HT.

Based on data obtained from the Federal Registry for High-Tech Medical Care, in 2024 a total of 3,069 organ transplants (92.8%) were performed using funds from the compulsory medical insurance system allocated for high-tech medical care in transplantation (2023 – 2,683, 87.8%), Fig. 3. Another 238 transplants (7.2%) were financed from the budgets of the federal subjects of the

Russian Federation and from the federal budget (2023 – 374, 12.2%).

Thus, the growth in the number of organ transplants in 2024 became possible, among other factors, due to an adequate increase in compulsory medical insurance funding for high-tech transplant care.

Since 2010, when this indicator was first included in the Registry, the absolute number of organ transplants financed through funds allocated for high-tech medical care has increased 3.9-fold, while their share in overall transplant activity has risen by 34.5%.

The financial cost standards per unit of high-tech medical care in transplantation for 2024 were approved by

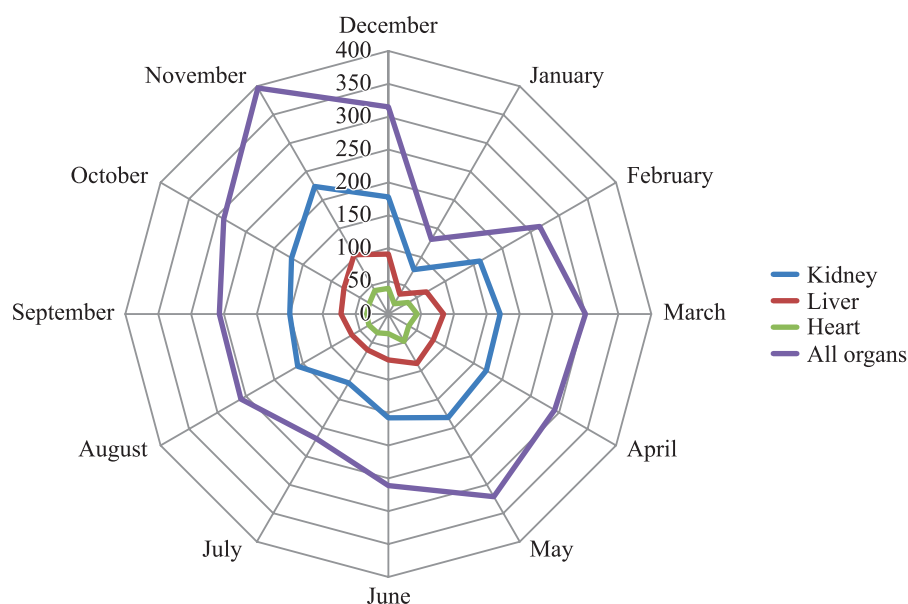


Fig. 2. Monthly distribution of organ transplants in the Russian Federation, 2024

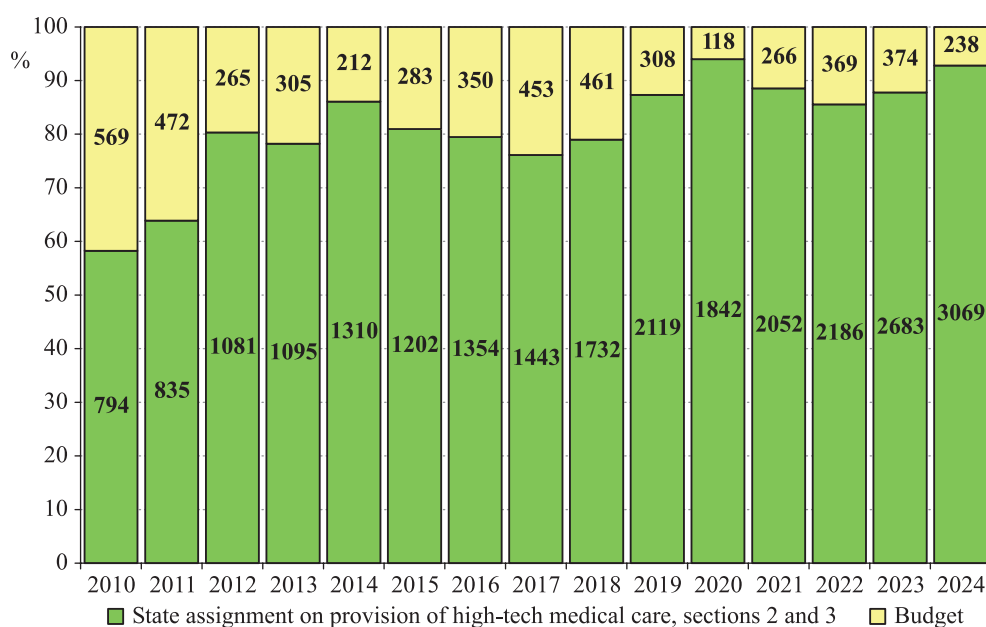


Fig. 3. Funding for organ transplantation in the Russian Federation, 2010–2023

the Government of the Russian Federation on December 28, 2023 via Resolution No. 2497.

ORGAN DONATION

In 2024, donor programs were active in 33 federal subjects of the Russian Federation. During the year, 975 effective deceased donors were recorded, corresponding to 6.7 per million population (p.m.p.); Table 3. This represents an increase of 6.3% (+58 donors) compared to 2023.

The age distribution of effective deceased organ donors is presented in Fig. 4. Among donors, 61.7% were male and 38.3% were female.

In 2024, donor activity per capita in regions implementing donor programs (population: 101.7 million) was 9.6 p.m.p. (Tables 4, 5).

Moscow posted the highest (DA) – 31.6 p.m.p. (compared to 29.1 in 2023). In both the Republic of Tatarstan and Kemerovo Oblast (Kuzbass), the rate reached 14.8 p.m.p. In five more federal subjects – St. Petersburg and Leningrad Oblast, Ryazan Oblast, Tyumen Oblast, and Novosibirsk Oblast – DA also exceeded 10.0 p.m.p.

An increase in DA was observed in 20 regions, with the most notable growth in Moscow (+39 effective donors). Conversely, a decline was noted in 11 regions, including $\geq 25\%$ reductions in Krasnodar Krai, Perm Krai, and Tula Oblast. However, given the consistently low DA in these regions, the overall national indicator was not affected.

In 2024, Moscow and Moscow Oblast accounted for 46.7% (455) of effective donors (423, or 46.1%, in 2023). Thus, 55.2% of the national increase in DA was attribu-

Table 3

Key indicators of deceased organ donation activity in the Russian Federation, 2024

#	Federal District	Federal Subject	Medical institutions	Population (million)	Number of active donor bases	Donors (absolute, per million population)		including brain-dead donors (absolute, %)		including multi-organ donors (absolute, %)	
1	2	3	4	5	6	7	8	9	10	11	12
1	Central Federal District	Moscow	Botkin Hospital	13.3	20	420	31.6	397	94.5	364	86.7
2	Central Federal District	Moscow Oblast	Vladimirsky Moscow Regional Research and Clinical Institute	8.8	16	35	4.0	35	100.0	33	94.3
3	Central Federal District	Belgorod Oblast	St. Joasaph Belgorod Regional Clinical Hospital	1.5	1	4	2.7	4	100.0	3	75.0
4	Central Federal District	Voronezh Oblast	Voronezh Regional Clinical Hospital No. 1	2.3	4	6	2.6	6	100.0	2	33.3
5	Central Federal District	Tula Oblast	Tula Regional Clinical Hospital	1.5	1	3	2.0	3	100.0	3	100.0
6	Central Federal District	Ryazan Oblast	Ryazan Regional Clinical Hospital	1.1	1	12	10.9	12	100.0	8	66.7
7	Northwestern Federal District	St. Petersburg	St. Petersburg Research Institute of Emergency Medicine	5.6	9	71	12.7	71	100.0	67	94.4
8	Northwestern Federal District	Leningrad Oblast	Leningrad Regional Clinical Hospital	2.1	1	21	10.0	21	100.0	18	85.7
9	Northwestern Federal District	Arkhangelsk Oblast	Volosevich First City Clinical Hospital	0.9	2	8	8.9	8	100.0	6	75.0
10	Southern Federal District	Krasnodar Krai	Ochapovsky Regional Clinical Hospital No. 1	5.8	1	7	1.2	7	100.0	5	71.4
11	Southern Federal District	Volgograd Oblast	Volzhsky Branch of Shumakov National Medical Research Center of Transplantology and Artificial Organs	2.4	4	16	6.7	16	100.0	14	87.5
12	Southern Federal District	Rostov Oblast	Rostov Regional Clinical Hospital	4.1	1	28	6.8	28	100.0	20	71.4
13	North Caucasian Federal District	Stavropol Krai	Stavropol Regional Clinical Hospital	2.9	1	10	3.4	10	100.0	7	70.0
14	Volga Federal District	Samara Oblast	Samara State Medical University	3.1	4	30	9.7	27	90.0	5	16.7

End of Table 3

1	2	3	4	5	6	7	8	9	10	11	12
15	Volga Federal District	Saratov Oblast	Regional Clinical Hospital	2.4	1	7	2.9	6	85.7	6	85.7
16	Volga Federal District	Nizhny Novgorod Oblast	Volga Regional Medical Center	3.0	4	8	2.7	8	100.0	7	87.5
17	Volga Federal District	Republic of Tatarstan	Republican Clinical Hospital	4.0	4	59	14.8	58	98.3	54	91.5
18	Volga Federal District	Republic of Bashkortostan	Kuvatov Republican Clinical Hospital	4.0	6	19	4.8	19	100.0	8	42.1
19	Volga Federal District	Orenburg Oblast	Orenburg Regional Clinical Center for Surgery and Traumatology	1.8	3	10	5.6	10	100.0	10	100.0
20	Volga Federal District	Perm Krai	Perm Regional Clinical Hospital	2.5	2	3	1.2	3	100.0	3	100.0
21	Ural Federal District	Sverdlovsk Oblast	Sverdlovsk Regional Clinical Hospital No. 1	4.2	5	19	4.5	19	100.0	15	78.9
22	Ural Federal District	Chelyabinsk Oblast	Chelyabinsk Regional Clinical Hospital	3.4	1	16	4.7	16	100.0	11	68.8
23	Ural Federal District	Tyumen Oblast	Regional Clinical Hospital No. 1	1.6	3	17	10.6	14	82.4	5	29.4
24	Ural Federal District	Khanty-Mansi Autonomous Okrug–Yugra	District Clinical Hospital	1.8	3	6	3.3	6	100.0	6	100.0
25	Siberian Federal District	Novosibirsk Oblast	State Novosibirsk Regional Clinical Hospital	2.8	10	28	10.0	27	96.4	22	78.6
26	Siberian Federal District	Kemerovo Oblast (Kuzbass)	Belyaev Kuzbass Regional Clinical Hospital	2.5	11	37	14.8	24	64.9	16	43.2
27	Siberian Federal District	Irkutsk Oblast	Irkutsk Regional Clinical Hospital	2.3	3	20	8.7	20	100.0	18	90.0
28	Siberian Federal District	Altai Krai	Altai Regional Clinical Hospital	2.1	1	7	3.3	7	100.0	1	14.3
29	Siberian Federal District	Krasnoyarsk Krai	Krasnoyarsk Regional Clinical Hospital	2.8	4	21	7.5	21	100.0	15	71.4
30	Far Eastern Federal District	Primorsky Krai	Primorsky Regional Clinical Hospital No. 1	1.8	1	10	5.6	10	100.0	3	30.0
31	Far Eastern Federal District	Khabarovsk Krai	Sergeev District Clinical Hospital	1.3	2	7	5.4	7	100.0	2	28.6
32	Far Eastern Federal District	Republic of Sakha	Republican Hospital No. 1 – Nikolaev National Center of Medicine	1.0	1	2	2.0	2	100.0	1	50.0
33	Far Eastern Federal District	Republic of Buryatia	Semashko Republican Clinical Hospital	1.0	1	1	1.0	1	100.0	0	0.0
34	–	Departmental program of the Federal Biomedical Agency of the Russian Federation	Burnazyan Federal Medical and Biophysical Center	-	1	2	–	2	100.0	2	100.0
35	–	Departmental program of the Federal Biomedical Agency of the Russian Federation	Federal Siberian Research and Clinical Center	-	2	5	–	5	100.0	5	100.0
			Total	146.0	135	975	6.7	930	95.4	765	78.5

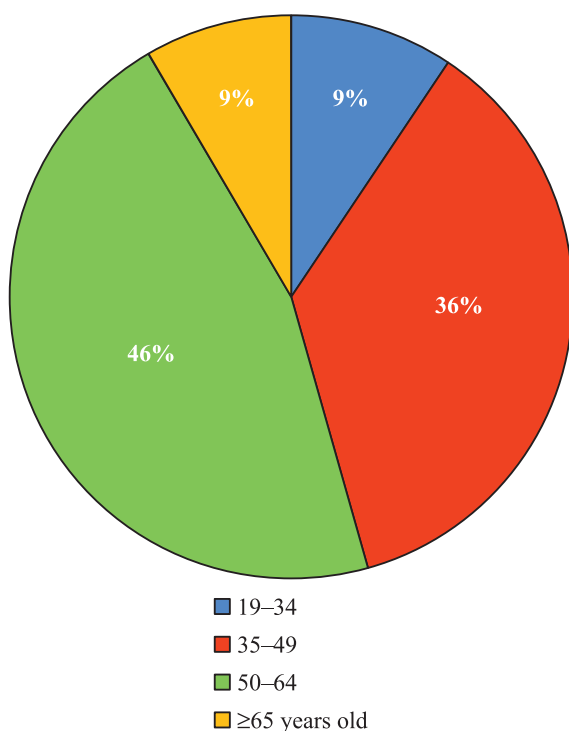


Fig. 4. Age distribution of effective organ donors in the Russian Federation, 2024

table to the Moscow agglomeration, while the remaining 44.8% came from other regions.

In 2024, 930 effective donors were diagnosed with brain death, representing 95.4% of the total donor pool (Fig. 5). In 26 regions of the Russian Federation, centers worked exclusively with brain-death donors. Only Kemerovo Oblast (Kuzbass) reported a percentage below 80% (64.9%).

A total of 765 multi-organ procurements were performed, accounting for 78.5% of all procurements (708, or 77.2%, in 2023). In 21 regions, multi-organ procurements represented $\geq 70\%$ of donor procedures. Moscow and Moscow Oblast contributed 397 multi-organ donors, or 51.9% of the national total (362, or 51.1%, in 2023).

The average number of organs retrieved per deceased donor in 2024 was 3.0 (compared to 2.9 in 2023). The utilization rate of donor kidneys remained stable at 88.2% (88.3% in 2023).

In addition, 390 organ removals from living related donors (kidneys and partial livers) were performed in 2024, representing 28.6% of all 1,365 procurements (357, or 28.0%, in 2023).

Table 4

Regional ranking by donor activity in 2024

#	Federal Subject	Population in 2024 (million)	Donor count (per million population)	
			2024	2023
1	Moscow	13.3	31.6	29.1
2	Republic of Tatarstan	4.0	14.8	17.0
3	Kemerovo Oblast (Kuzbass)	2.5	14.8	13.5
4	St. Petersburg	5.6	12.7	11.1
5	Ryazan Oblast	1.1	10.9	8.2
6	Tyumen Oblast	1.6	10.6	10.6
7	Novosibirsk Oblast	2.8	10.0	9.6
8	Leningrad Oblast	2.1	10.0	9.0
9	Samara Oblast	3.1	9.7	8.7
10	Arkhangelsk Oblast	0.9	8.9	3.0
11	Irkutsk Oblast	2.3	8.7	11.3
12	Krasnoyarsk Krai*	2.8	7.5	4.6
13	Rostov Oblast	4.1	6.8	5.7
14	Volgograd Oblast	2.4	6.7	6.0
15	Orenburg Oblast	1.8	5.6	6.1
16	Primorsky Krai	1.8	5.6	3.9
17	Khabarovsk Krai	1.3	5.4	5.4
18	Republic of Bashkortostan	4.0	4.8	4.9
19	Chelyabinsk Oblast	3.4	4.7	3.8

#	Federal Subject	Population in 2024 (million)	Donor count (per million population)	
			2024	2023
20	Sverdlovsk Oblast	4.2	4.5	4.3
21	Moscow Oblast	8.8	4.0	4.9
22	Stavropol Krai	2.9	3.4	0.7
23	Altai Krai	2.1	3.3	4.3
24	Khanty-Mansi Autonomous Okrug – Yugra	1.8	3.3	2.9
25	Saratov Oblast	2.4	2.9	3.8
26	Nizhny Novgorod Oblast	3.0	2.7	2.9
27	Belgorod Oblast	1.5	2.7	2.0
28	Voronezh Oblast	2.3	2.6	1.7
29	Tula Oblast	1.5	2.0	3.3
30	Republic of Sakha	1.0	2.0	–
31	Krasnodar Krai	5.8	1.2	2.2
32	Perm Krai	2.5	1.2	1.2
33	Republic of Buryatia	1.0	1.0	–
Russia (85 federal subjects of the Russian Federation)**		146.0	6.7	6.3
Russia (33 federal subjects of the Russian Federation)		101.7	9.6	

* – Excluding the donor program of the Federal Scientific Center of the Federal Medical and Biological Agency, Krasnoyarsk.

** – Deceased-organ donation will not be carried out in the new territories until the special military operation is completed.

Table 5

Number of deceased (effective) organ donors from 2006 to 2024

#	Region	2006	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021		2022		2023		2024	
		Donor count	Year-over-year change (abs.)		Donor count	Year-over-year change (abs.)		Donor count	Year-over-year change (abs.)		Donor count	Year-over-year change (abs.)		Donor count	Year-over-year change (abs.)		Donor count	Year-over-year change (abs.)		Donor count	Year-over-year change (abs.)		Donor count	Year-over-year change (abs.)		Donor count	Year-over-year change (abs.)		Donor count	Year-over-year change (abs.)		Donor count	Year-over-year change (abs.)		Donor count	Year-over-year change (abs.)		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
1	Moscow	87	126	+39	135	+9	136	+1	151	+15	135	-16	111	-24	125	+14	151	+26	142	-9	183	+41	195	+12	218	+23	277	+59	263	-14	298	+35	332	+34	381	+49	420	+39
2	Moscow Oblast	24	45	+21	59	+14	52	-7	71	+19	82	+11	61	-21	56	-5	51	-5	44	-7	39	-5	75	+36	68	-7	41	-27	21	-20	36	+15	30	-6	42	+12	35	-7
3	Belgorod Oblast		2	+2	3	+1	2	-1	5	+3	6	+1	3	-3	1	-2	2	+1	5	+3	4	-1	4	0	4	0	4	0	2	-2	2	0	5	+3	3	-2	4	+1
4	Voronezh Oblast	6	2	-4	8	+6	2	-6	0	-2	1	+1	6	+5	6	0	5	-1	7	+2	4	-3	1	-3	8	+7	8	0	4	-4	3	-1	3	0	4	+1	6	+2
5	Tula Oblast																										2	+2	3	+1	4	+1	3	-1	5	+2	3	-2
6	Ryazan Oblast																																					
7	Ivanovo Oblast																								2	+2	13	+11	6	-7	11	+5	7	-4	9	+2	12	+3
8	Krasnodar Krai						3	+3	39	+36	52	+13	42	-10	41	-1	23	-18	25	+2	24	-1	19	-5	20	+1	23	+3	13	-10	13	0	17	+4	13	-4	7	-6
9	Volgograd Oblast	5	0	-5	11	+11	15	+4	16	+1	17	+1	19	+2	15	-2	18	+3	8	-10	8	0	9	+1	9	0	10	+1	10	0	10	0	8	-2	15	+7	16	+1
10	Rostov Oblast																		1	+1	7	+6	13	+6	19	+6	21	+2	18	-3	21	+3	21	0	24	+3	28	+4
11	Stavropol Krai																								2	+2	3	+1	13	+10	5	-8	3	-2	2	-1	10	+8
12	St. Petersburg	30	45	+15	47	+2	47	0	41	-6	34	-7	22	-12	13	-9	23	+10	31	+8	29	-2	31	+2	34	+3	53	+19	25	-28	25	0	43	+18	62	+19	71	+9
13	Leningrad Oblast	12	8	-4	11	+3	11	0	13	+2	10	-3	10	0	10	0	9	-1	7	-2	12	+5	11	-1	15	+4	7	-8	11	+4	12	+1	17	+5	18	+1	21	+3
14	Arkhangelsk Oblast																								5	+5	5	0	1	-4	1	0	3	+2	3	0	8	+5
15	Novosibirsk Oblast	17	11	-6	18	+7	29	+11	35	+6	25	-10	20	-4	17	-3	11	-6	14	+3	9	-5	14	+5	17	+3	23	+6	15	-8	15	0	19	+4	27	+8	28	+1
16	Kemerovo Oblast	16	13	-3	18	+5	18	0	22	+4	12	-10	26	+14	26	0	31	+5	28	-3	34	+6	22	-12	30	+8	40	+10	27	-13	28	+1	41	+13	35	-6	37	+2
17	Irkutsk Oblast				4	+4	6	+2	10	+4	9	-1	8	-1	6	-2	9	+3	4	-5	3	-1	2	-1	7	+5	16	+9	16	0	8	-8	15	+7	26	+11	20	-6
18	Omsk Oblast	10	15	+5	13	-2	19	+6	19	0	14	-5	11	-3	14	+3	16	+2	11	-5	4	-7	4	0	3	-1	2	-1	2	0	0	-2	0	0	0	0	0	0
19	Altai Krai														3	+3	5	+2	4	-1	4	0	8	+4	8	0	8	0	9	+1	7	-2	10	+3	9	-1	7	-2
20	Krasnoyarsk Krai																3	+3	6	+3	18	+12	27	+9	16	Note	13	-3	10	-3	12	2	10	-2	13	+3	21	+8

End of Table 5

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
21	Sverdlovsk Oblast		14	13	-1	12	-1	13	+1	14	+1	15	+1	14	-1	18	+4	23	+5	18	-5	15	-3	22	+7	24	+2	24	0	6	-18	14	+8	10	-4	18	+8	19	+1
22	Chelyabinsk Oblast								6	+6	2	-4	7	+5	6	-1	10	+4	9	-1	11	+2	8	-3	4	-4	4	0	3	-1	3	0	9	+6	13	+4	16	+3	
23	Tyumen Oblast																						4	+4	13	+9	13	0	5	-8	8	+3	16	+8	17	+1	17	0	
24	Khanty-Mansi Autonomous Okrug – Yugra																																						
	Samara Oblast	4	17	+13	24	+7	18	-6	20	+2	21	+1	19	-2	21	+2	20	-1	18	-2	26	+8	28	+2	23	-5	25	+2	24	-1	24	0	23	-1	27	+4	30	+3	
26	Saratov Oblast														4	+4	7	+3	7	0	7	0	7	0	8	+1	10	+2	0	-10	6	+6	7	+1	9	+2	7	-2	
27	Nizhny Novgorod Oblast						7	+7	11	+4	12	+1	10	-2	8	-2	12	+4	10	-2	11	+1	10	-1	12	+2	12	0	5	-7	7	+2	7	0	9	+2	8	-1	
28	Republic of Tatarstan		3	+3	1	-2	3	+2	12	+9	16	+4	9	+7	6	-3	6	0	4	-2	1	-3	3	+2	4	+1	15	+11	21	+6	35	+14	52	+17	68	+16	59	-9	
29	Republic of Bashkortostan								2	+2	7	+5	14	+7	18	+4	19	+1	14	+5	20	+6	22	+2	20	-2	24	+4	18	-6	21	+3	20	-1	20	0	19	-1	
30	Orenburg Oblast																		3	+3	8	+5	9	+1	8	-1	11	+3	1	-10	4	+3	5	+1	11	+6	10	-1	
31	The Republic of Sakha (Yakutia)																				2	+2	4	+2	4	0	3	-1	0	-3	0	0	1	+1	0	-1	2	+2	
32	Primorsky Krai																														3	+3	7	+4	7	0	10	+3	
33	Perm Krai																																1	+1	3	+2	3	0	
34	Khabarovsk Krai																																		7	+7	7	0	
35	Republic of Buryatia																																					1	+1
36	Burmasyan Federal Medical and Biophysical Center, Moscow														6	+6	11	+5	14	+3	16	+2	9	-7	5	-4	1	-4	1	0	3	+2	2	-1	1	-1	2	+1	
37	Burmasyan Federal Medical and Biophysical Center, Krasnoyarsk																																						
	TOTAL in the Russian Federation	225	300	+75	364	+64	381	+17	487	+106	470	-17	412	-58	420	+8	465	+45	434	-31	499	+53	565	+78	639	+74	732	+93	564	-168	652	+88	763	+111	917	+154	975	+58	

Note. The donor activity of Federal Siberian Research and Clinical Center in Krasnoyarsk is presented as a separate program.

KIDNEY TRANSPLANTATION

In 2024, a total of 1,943 kidney transplants (KT) were performed in the Russian Federation (Fig. 6), representing a 6.9% increase (+126) compared to 2023. KT were carried out across 49 centers nationwide. Of these, 1,720 transplants were from deceased donors, while 223 were from living related donors (Fig. 6).

Activity levels varied across centers: 10 centers performed >50 operations per year, 10 centers performed between 30–49, 11 centers performed between 15–29, and 19 centers (38.8%) carried out fewer than 15 transplants annually.

Table 6 and Fig. 7 present the centers with the highest transplant volumes in 2024. The ranking highlights the strong performance of leading Moscow-based transplant

programs, supported by effective coordination of the Moscow Coordinating Center for Organ Donation.

Overall, Moscow and Moscow Oblast accounted for 1,049 KT (53.4% of the national total – 1,943).

Kidney transplant centers outside Moscow also demonstrated growth in 2024, with notable increases in activity in St. Petersburg, Volgograd Oblast, Orenburg Oblast, Stavropol Krai, Novosibirsk Oblast, Kemerovo Oblast (Kuzbass), and Krasnoyarsk Krai, among others.

In 2024, 23 centers (46.9%) performed KT from living related donors, totaling 223 procedures. However, only six centers carried out seven or more such operations: Shumakov National Medical Research Center of Transplantology and Artificial Organs (106) and its branch (21), Orenburg Regional Clinical Center for Surgery and Traumatology (15), Petrovsky National Research

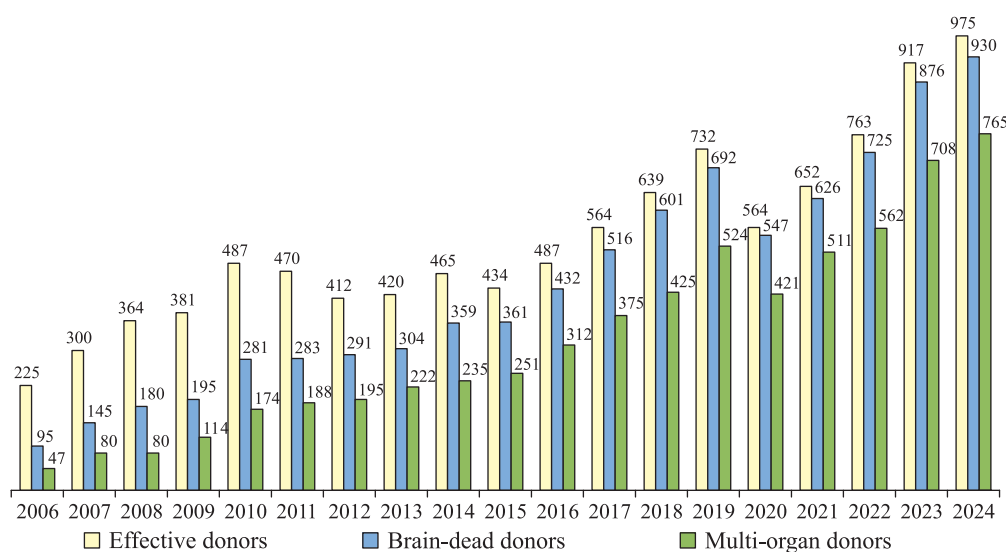


Fig. 5. Structure of effective organ donors in the Russian Federation (2006–2024)

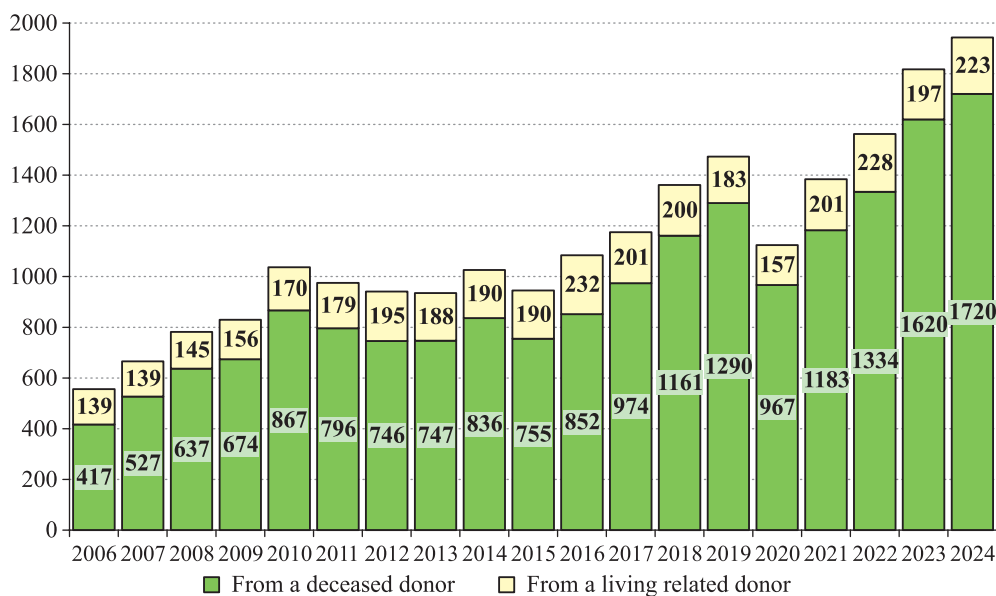


Fig. 6. Trends in kidney transplantation in the Russian Federation (2006–2024)

Centre of Surgery (9), State Novosibirsk Regional Clinical Hospital (9), and National Medical Research Center for Children's Health (7).

Altogether, the Shumakov Center and its branch accounted for 127 operations (56.9% of all related KT in the country). On average, living donor KT represented 11.5% of all KT in 2024, compared with 10.8% in 2023.

Pediatric KT (recipients under 17 years) were performed in 11 centers, totaling 124 procedures. The leading

centers were: Shumakov Center and its branch (66), Russian Children's Clinical Hospital (30), and National Medical Research Center for Children's Health (20) (Fig. 8).

EXTRARENAL ORGAN TRANSPLANTATION

In 2024, 426 heart transplants (HT) were performed in the Russian Federation, including 25 pediatric transplants and 2 combined heart–lung transplants carried out

Table 6

Leading kidney transplant centers in the Russian Federation, 2024

Rank	Medical institutions	Number of kidney transplants in 2024
1	Shumakov National Medical Research Center of Transplantology and Artificial Organs, Moscow	303
2	Sklifosovsky Research Institute for Emergency Medicine, Moscow	265
3	Botkin Hospital, Moscow	147
4	Republican Clinical Hospital, Kazan	99
5	Lopatkin Research Institute of Urology and Interventional Radiology – a branch of the National Medical Research Radiological Center, Moscow	82
6	Belyaev Kuzbass Regional Clinical Hospital, Kemerovo	71
7	Volzhsky Branch of Shumakov National Medical Research Center of Transplantology and Artificial Organs, Volzhsky	70
8	St. Petersburg Research Institute of Emergency Medicine, St. Petersburg	60
9	Vladimirsky Moscow Regional Research and Clinical Institute, Moscow	60
10	Samara State Medical University, Samara	55
	TOTAL	1212
	62.4% of the total number of kidney transplants in the Russian Federation (1943)	

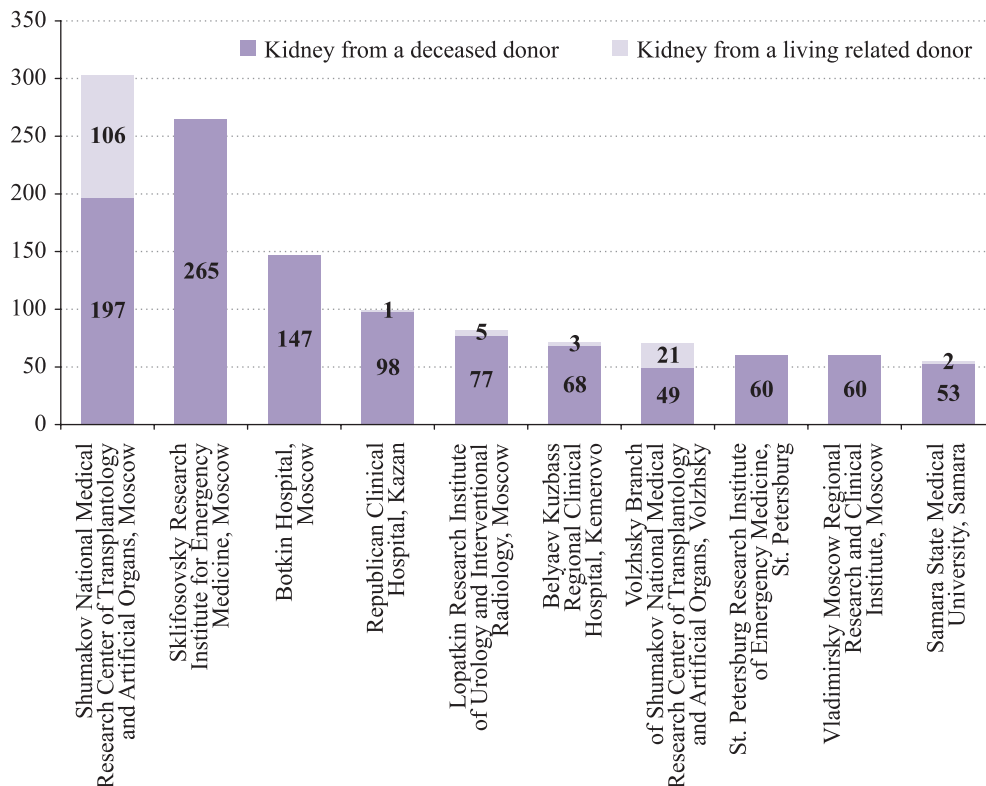


Fig. 7. Leading kidney transplant centers in the Russian Federation, 2024

at Shumakov Center. Compared to 2023, the number of HT increased by 9.8% (+38 procedures).

Heart transplants were carried out across 21 centers, with a new program launched in Naberezhnye Chelny, Republic of Tatarstan (Emergency Medical Care Hospital).

The Shumakov Center in Moscow remains the leading institution, performing 279 HT, along with 17 in its Volzhsky branch, representing 69.5% of all procedures nationwide (426 in total, including 2 heart–lung and 21 pediatric transplants). The program at this center continues to define the overall level of accessibility to heart transplantation in Russia. Other centers performing ≥ 10 HT in 2024 included Almazov National Medical Research Centre, St. Petersburg (38, Interregional Clinical Diagnostic Center in Kazan (17), Volzhsky Branch of Shumakov Center (17), Meshalkin National Medical Research Center in Novosibirsk (10), Clinical Hospital No. 1 in Krasnoyarsk (10), and the Research Institute for Complex Issues of Cardiovascular Diseases in Kemerovo (10).

In 2024, three additional transplant centers performed between 5 and 9 heart transplants: Botkin Hospital (9), Emergency Medical Center at Naberezhnye Chelny (6), and the Ufa Regional Clinical Hospital (5). The remaining 11 centers (52.4%) carried out fewer than 5 heart transplants each.

There was continued growth in activity at several leading programs: in St. Petersburg, the number of heart transplants rose from 33 to 38, and at the Volzhsky branch of Shumakov Center, the number increased from 12 to 17.

Table 7 and Fig. 9 present the thoracic organ transplant centers with the highest number of heart–lung transplants in 2024.

In 2024, 25 pediatric HT were performed in four centers (vs 17 in 2023): Shumakov Center (21), Bakulev National Medical Research Center for Cardiovascular Surgery (1), Almazov National Medical Research Centre (2), and Meshalkin National Medical Research Center (1).

In 2024, 33 lung transplants were performed in three centers (vs 19 in 2023): Shumakov Center (20), Sklifosovsky Research Institute of Emergency Care (11), and Regional Clinical Hospital No. 1 Krasnodar (2).

In addition, two more heart–lung transplants were performed at Shumakov Center.

In 2024, a total of 894 liver transplants (LiV) were performed in the Russian Federation, including 132 pediatric transplants. Procedures were carried out across 38 centers, representing a 7.8% increase (+65) compared with 2023 (829).

Two new programs for deceased-donor LiV were launched in 2024: Volosevich First City Clinical Hospital, Arkhangelsk, and Novokuznetsk branch of Barbarash Kuzbass Clinical Cardiological Center, Novokuznetsk.

The distribution of activity among centers highlights significant concentration in leading programs. Two centers performed ≥ 100 LiV: Shumakov Center (187) and Sklifosovsky Research Institute for Emergency Medicine (135). Four centers performed ≥ 40 LiV: A.S. Loginov Moscow Clinical Scientific Center (81), Botkin Hospital (68), Regional Clinical Hospital, Kazan (56), and Novosibirsk Regional Clinical Hospital (47).

Seven centers performed between 15 and 40 LiV, while the remaining 25 centers (65.8%) conducted fewer than 15 LiV per year.

Table 8 and Fig. 10 present the transplant centers that performed the highest number of LiV in 2024. The ranking underscores the leadership of the major Moscow

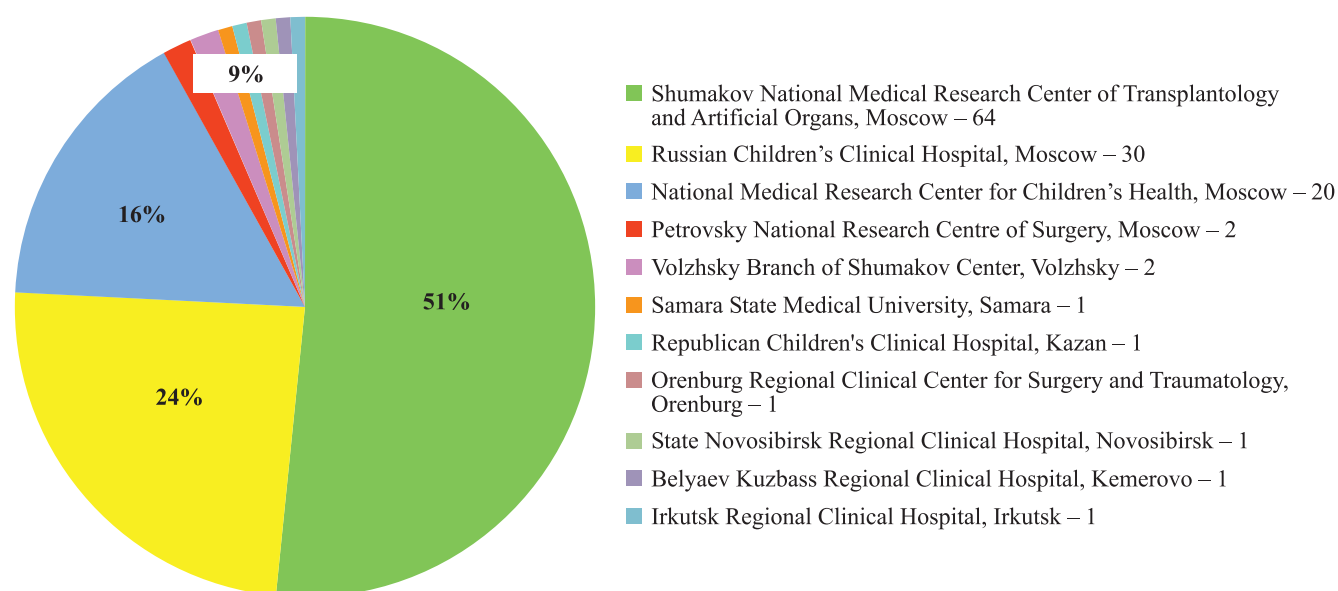


Fig. 8. Pediatric kidney transplantation in the Russian Federation, 2024

programs, reflecting the effective work of the Moscow Coordination Center for Organ Donation and the use of advanced techniques, including living donor partial liver transplantation. Positive dynamics were also observed in the development of transplant programs in St. Petersburg, Novosibirsk Oblast, and Kemerovo Oblast (Kuzbass), while Shumakov Center continues to play a leading role in pediatric living-donor LiV.

In 2024, related living-donor LiV were performed at 10 centers (26.3%), with a total of 167 operations.

Only four centers conducted ≥ 10 procedures per year: Shumakov Center (104), Burnazyan Federal Medical and Biophysical Center (25) Novosibirsk Regional Clinical Hospital (18), and Petrovsky National Research Centre of Surgery (10).

Overall, 62.3% of all related liver transplants in Russia were carried out at Shumakov Center. The average share of living donor LiV in 2024 was 18.7% of all liver transplants, slightly lower than in 2023 (19.3%).

Table 7

Leading heart transplant centers in the Russian Federation, 2024

Rank	Medical institutions	Number of heart transplants in 2024
1	Shumakov National Medical Research Center of Transplantology and Artificial Organs, Moscow	279
2	Almazov National Medical Research Centre, St. Petersburg	38
3	Volzhsy Branch of Shumakov National Medical Research Center of Transplantology and Artificial Organs, Volzhsky	17
4	Interregional Clinical and Diagnostic Center, Kazan	17
5	Research Institute for Complex Issues of Cardiovascular Diseases, Kemerovo	10
6	Meshalkin National Medical Research Center, Novosibirsk	10
7	Krasnoyarsk Regional Clinical Hospital, Krasnoyarsk	10
8	Botkin Hospital, Moscow	9
9	Emergency Care Medical Center, Naberezhnye Chelny	6
10	Republican Cardiological Center, Ufa	5
	TOTAL	401
	94.1% of the total number of heart transplants performed in the Russian Federation (426)	

* – including 2 heart-lung transplants.

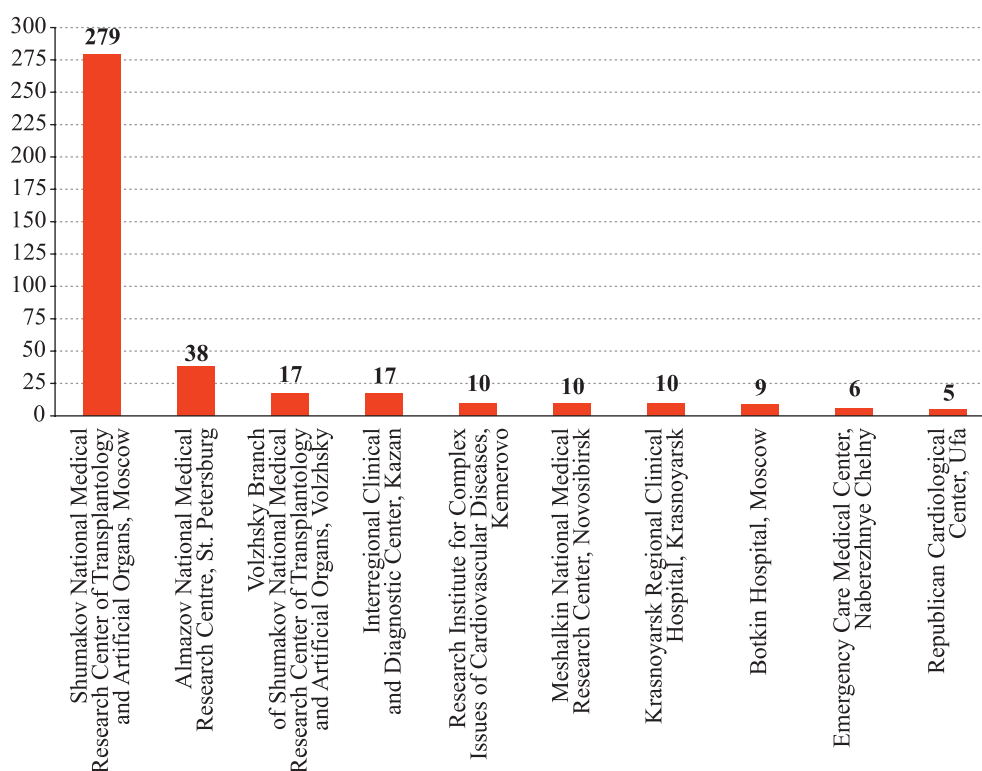


Fig. 9. Leading heart transplant centers in the Russian Federation, 2024

In 2024, a total of 132 pediatric LiV were performed, primarily in younger children. These were carried out in five centers: Shumakov Center (113), Volzhsky branch of the Shumakov Center (2), Russian Children's Clinical Hospital (1), Petrovsky National Research Centre of Surgery (10), and Novosibirsk Regional Clinical Hospital (6).

The Shumakov Center and its branch accounted for 87.1% of all pediatric LiV in 2024. The pediatric program at this center continues to define the overall avail-

ability and accessibility of this type of transplant care in the Russian Federation.

Pancreas transplants (PaT) were performed at three centers: Shumakov Center (5), Sklifosovsky Research Institute of Emergency Care (3), and Rostov Regional Clinical Hospital, Rostov-on-Don (2). In total, 10 PaT were carried out in 2024 (3 in 2023), all in combination with a kidney transplant. In addition, the Sklifosovsky Research Institute of Emergency Care performed one small bowel transplant.

Table 8

Leading liver transplant centers in the Russian Federation, 2024

Rank	Medical institutions	Number of liver transplants in 2024
1	Shumakov National Medical Research Center of Transplantology and Artificial Organs, Moscow	187
2	Sklifosovsky Research Institute for Emergency Medicine, Moscow	135
3	Loginov Moscow Clinical Research Center, Moscow	81
4	Botkin Hospital, Moscow	68
5	Republican Clinical Hospital, Kazan	56
6	State Novosibirsk Regional Clinical Hospital, Novosibirsk	47
7	Burnasyan Federal Medical and Biophysical Center, Moscow	39
8	Vladimirsky Moscow Regional Research and Clinical Institute, Moscow	30
9	Russian Research Center for Radiology and Surgical Technologies, St. Petersburg	22
10	Irkutsk Regional Clinical Hospital, Irkutsk	21
	TOTAL	686
	76.7% of the total number of liver transplants performed in the Russian Federation (894)	

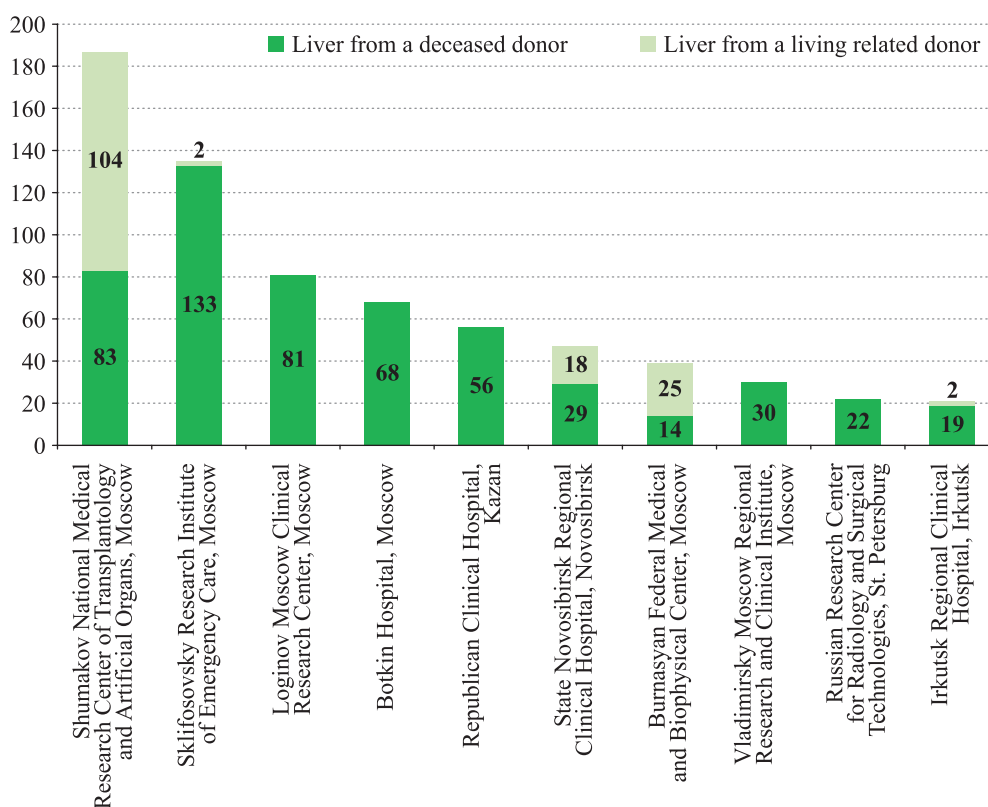


Fig. 10. Leading liver transplant centers in the Russian Federation, 2024

The total number of extra-renal transplants in 2024 reached 1,364, representing 41.2% of all transplants (3,307), compared with 1,240 (40.6%) in 2023. The Moscow agglomeration accounted for 918 procedures (67.3%) of these extra-renal transplants.

Since the beginning of the observation period in 2006, the number of extra-renal organ transplants in Russia has increased by 1,258 procedures, representing a 12.9-fold growth (Figs. 11 and 12).

Table 9 presents the dynamics of organ transplantation in the Russian Federation for the period 2006–2024.

ORGAN TRANSPLANT RECIPIENTS

As of December 2024, the number of patients living with transplanted organs in the Russian Federation was estimated at 22,750 (Table 10). Over the past ten years of follow-up, this number has increased 2.6-fold. The distribution by organ type is as follows: kidney transplants – 15,162 patients (103.8 p.m.p.), liver transplants – 5,150 patients (35.3 p.m.p.), and heart transplants – 2,332 patients (16.0 p.m.p.).

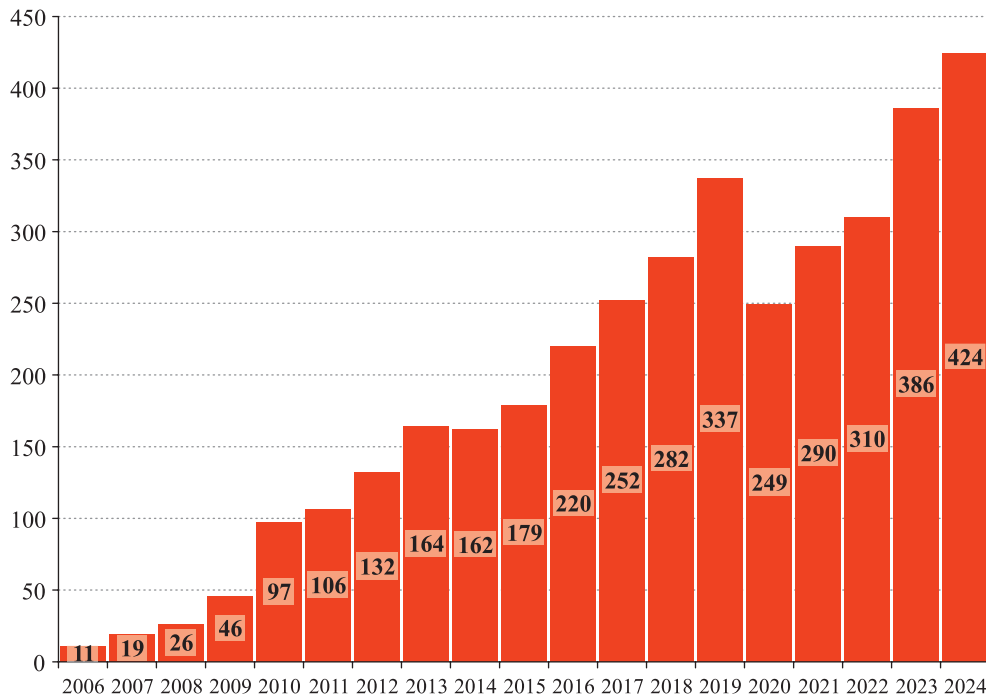


Fig. 11. Heart transplantation in the Russian Federation (2006–2024)

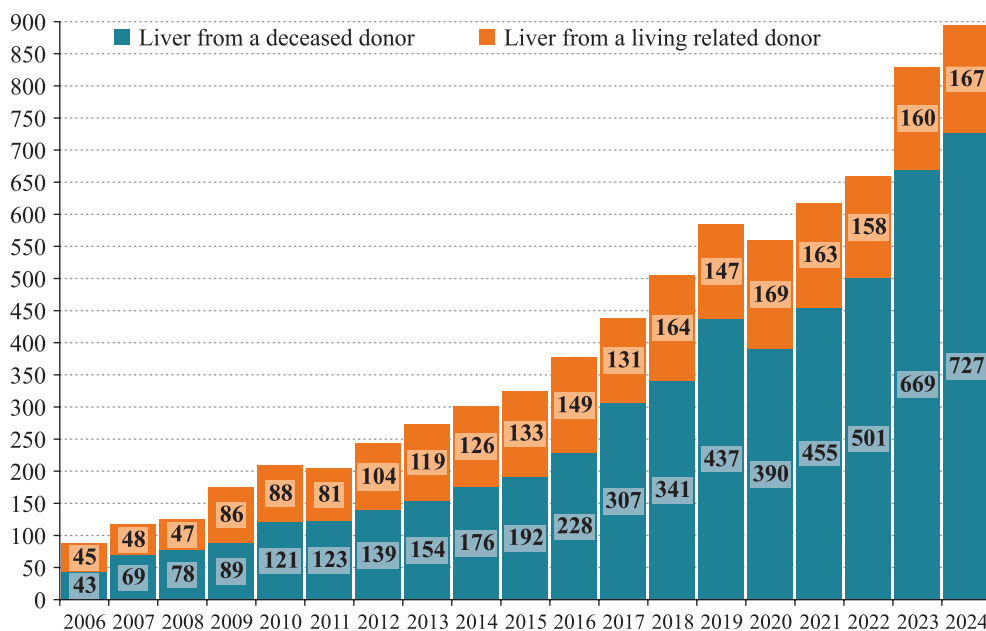


Fig. 12. Liver transplantation in the Russian Federation (2006–2024)

Table 9

Trends in organ transplantation in the Russian Federation, 2006–2024

#	Organ	2006	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021		2022		2023		2024	
		Absolute number	Absolute number	Year-over-year change	Absolute number	Year-over-year change	Absolute number	Year-over-year change	Absolute number	Year-over-year change	Absolute number	Year-over-year change	Absolute number	Year-over-year change	Absolute number	Year-over-year change	Absolute number	Year-over-year change	Absolute number	Year-over-year change	Absolute number	Year-over-year change	Absolute number	Year-over-year change	Absolute number	Year-over-year change	Absolute number	Year-over-year change	Absolute number	Year-over-year change	Absolute number	Year-over-year change	Absolute number	Year-over-year change	Absolute number	Year-over-year change		
1	Total number of kidneys transplan- ted	556	666	+110	782	+116	830	+48	1037	+207	975	-62	941	-34	935	-6	1026	+91	945	-81	1084	+139	1175	+91	1361	+186	1473	+112	1124	-349	1382	+258	1562	+180	1817	+255	1943	+126
2	from deceased donors	417	527	+110	637	+110	666	+29	867	+201	796	-71	746	-50	747	+1	836	+89	755	-81	852	+97	974	+97	1161	+187	1290	+129	967	-323	1183	+216	1334	+151	1620	+286	1720	+100
3	from living-related donors	139	139	0	145	+6	156	+11	170	+14	179	+9	195	+16	188	-7	190	+2	190	0	232	+42	201	-31	200	-1	183	-17	157	-26	201	+44	228	+27	197	-31	223	+26
4	Total number of livers transplan- ted	88	117	+29	125	+8	175	+50	209	+34	204	-5	243	+39	272	+29	302	+30	325	+23	378	+53	438	+60	505	+67	584	+79	559	-25	618	+59	659	+41	829	+170	894	+65
5	from deceased donors	43	69	+26	78	+9	89	+11	121	+32	123	+2	139	+16	154	+15	176	+22	192	+16	229	+37	307	+78	341	+34	437	+96	390	-47	455	+65	501	+46	669	+168	727	+58
6	from living-related donors	45	48	+3	47	-1	86	+39	88	+2	81	-7	104	+23	119	+15	126	+7	133	+7	149	+16	131	-18	164	+33	147	-17	169	+22	163	-6	158	-5	160	+2	167	+7
7	Heart	11	19	+8	26	+7	46	+20	97	+51	106	+9	132	+26	164	+32	162	-2	179	+17	220	+41	252	32	282	+30	335	+53	249	-86	290	+41	308	+18	386	+78	424	+38
8	Pancreas	6	11	+5	9	-2	8	-1	19	+11	14	-5	23	+9	14	-9	19	+5	12	-7	6	-6	6	0	17	+11	10	-7	16	+6	10	-6	10	0	3	-7	10	+7
9	Lungs	1	0	-1	0	0	1	+1	1	0	6	+5	5	-1	10	+5	12	+2	14	+2	16	+2	25	+9	25	0	23	-2	9	-14	13	+4	14	+1	19	+5	33	+14
10	Heart-lung										2	+2	2	0	1	-1	0	-1	0	0	0	0	0	0	3	+3	2	-1	2	0	2	0	1	-1	2	+1	2	0
11	Small intestine														1	+1	1	0	0	-1	0	0	0	0	0	0	0	0	1	+1	1	0	0	-1	1	+1	1	0
	Total	662	813	+151	942	+129	1060	+118	1363	+303	1307	-56	1345	+38	1400	+55	1522	+122	1485	-37	1704	+219	1896	+192	2193	+297	2427	+234	1960	-467	2318	+358	2555	+237	3057	+502	3307	+250

Table 10

Annual number of organ transplant recipients in the Russian Federation, 2013–2024

Annual Number of organ transplant recipients, persons																							
ICD-10 code	2013	2014		2015		2016		2017		2018		2019		2020		2021*		2022*		2023*		2024*	
		abs.	change (%)	abs.	change (%)	abs.	change (%)	abs.	change (%)	abs.	change (%)	abs.	change (%)	abs.	change (%)	abs.	change (%)	abs.	change (%)	abs.	change (%)	abs.	change (%)
Z94.0 Kidney transplant status	6651	7502	12.8	8164	8.8	9063	11.0	9658	6.6	10,851	12.4	11,880	9.5	12,563	5.7	12,969	—	13,514	—	14,258	—	15,162	—
Z94.1 Heart transplant status	416	520	25.0	639	22.9	803	25.7	952	18.6	1164	22.3	1355	16.4	1524	12.5	1687	—	1855	—	2084	—	2332	—
Z94.2 Lung transplant status	2	3	50.0	4	33.3	5	25.0	8	60.0	28	250.0	26	−7.1	24	−7.7	—	—	—	—	—	—	—	—
Z94.4 Liver transplant status	1150	1406	22.3	1649	17.3	1948	18.1	2152	10.5	2632	22.3	3032	15.2	3489	15.1	3820	—	4165	—	4644	—	5150	—
Z94.8 Other transplanted organ and tissue status (bone marrow, intestines, pancreas)	334	467	39.8	654	40.0	808	23.5	909	12.5	1135	24.9	1344	18.4	1497	11.4	—	—	—	—	—	—	—	—
TOTAL	8553	9898	15.7	11,110	12.2	12,627	13.7	13,679	8.3	15,810	15.6	17,637	11.6	19,097	8.3	—	—	—	—	—	—	—	—

* – The number of organ transplant recipients is estimated as it is calculated from the figures of the previous year based on data on the number of organ transplants in 2021–2024 and data on average patient survival.

CONCLUSION

In 2024, the number of organ transplants in the Russian Federation increased by 8.2% (+250) compared to the record year of 2023, consolidating the achievements of previous years. By organ type, kidney transplants increased by 6.9% (+126), heart transplants increased by 7.8% (+38), liver transplants increased by 25.8% (+65). The number of effective post-mortem donors also rose by 6.3% (+58) compared to 2023.

In 2024, the primary goals and trends in the development of organ donation and transplantation across the various regions in the Russian Federation remained consistent and highly relevant:

- expansion of the geographic footprint and increase in the number of transplant centers;
- efficient identification of patients in need of transplantation and their inclusion in the waiting list, supported by the use of information systems and registries;
- increase in the number of deceased organ donors in line with available donor resources, with justified expansion of donor criteria and a higher proportion of multi-organ donors;
- increase in the number of organ transplants to meet the actual needs of the population, including the introduction of extra-renal transplant technologies;
- a focus on providing transplant care to the pediatric population;
- 100.0% coverage of medical screening, including medication support and laboratory monitoring, for transplant recipients.

Current trends also include the accumulation of positive experience and wider adoption of advanced practices, such as the use of perfusion systems for rehabilitating organs from suboptimal donors and the application of long-term mechanical circulatory support systems as a bridge to heart transplantation in children.

In 2024, several new organ transplant programs were launched:

At Emergency Medical Center (Naberezhnye Chelny, Republic of Tatarstan), 6 heart transplants were performed.

At Republican Clinical Hospital (Kazan, Republic of Tatarstan), a deceased-donor kidney transplant was performed on a child.

At Volosevich First City Clinical Hospital (Arkhangelsk, Arkhangelsk Oblast), 2 deceased-donor liver transplants were performed.

At the Novokuznetsk branch of Barbarash Kuzbass Clinical Cardiological Center (Novokuznetsk, Kemerovo Oblast – Kuzbass), 1 deceased-donor liver transplant was performed.

Moscow remains the undisputed leader in terms of organ donation and transplantation in the Russian Federation, consistently demonstrating donor and transplant activity at a level comparable to global standards. Among

the regions, the Republic of Tatarstan, Kemerovo Oblast (Kuzbass), St. Petersburg and Leningrad Oblast, Novosibirsk Oblast, Krasnoyarsk Krai, and the Volzhsky branch of Shumakov Center (Volzhsky, Volgograd Oblast) also demonstrate high activity.

Shumakov Center and its branch in Volzhsky together account for 27.1% of all organ transplants performed in the country, 56.9% of related kidney transplants, 69.5% of heart transplants, and 62.3% of related liver transplants.

The Shumakov Center also houses a specialized unit for improving medical care in the field of nephrology. Its priority tasks include timely identification of patients requiring kidney transplantation, harmonization of renal replacement therapy modalities, and enhancement of long-term monitoring of kidney recipients. This nephrology monitoring program is closely integrated with the national transplant registry.

Further increasing donor activity remains a priority task for most regions in the Russian Federation where organ donation and transplantation are organized. Achieving this goal requires oversight by regional health authorities and adequate financial support for medical activities related to organ donation.

In 2024, the average proportion of effective brain-dead organ donors in the Russian Federation exceeded 95.0%, while that of multi-organ donors was above 75.0%. These indicators reflect the efficient use of donor resources in most regions actively engaged in organ donation activities.

Overall, the number of organ transplants in the Russian Federation continues to grow steadily. The existing capacity of medical institutions performing donor and recipient surgeries provides a solid foundation for further expansion of transplant care, provided that adequate funding, systematic work with the waiting list, and sustained support for donor programs are ensured.

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