



# Liver Donation and Transplantation in Poland: Numbers, Indicators, and Trends

J. Czerwiński<sup>a,b,\*</sup>, D. Lewandowska<sup>a,c</sup>, P. Małkowski<sup>b</sup>, and R. Danielewicz<sup>a,b</sup>

From the <sup>a</sup>Polish Transplant Coordinating Center Poltransplant, Warsaw, Poland; <sup>b</sup>Department of Surgical and Transplant Nursing, Medical University of Warsaw, Warsaw, Poland; and <sup>c</sup>Department of Transplantation Medicine and Nephrology, Medical University of Warsaw, Poland

---

## ABSTRACT

We aim to provide a panorama of liver donation and transplantation in Poland, where each year around 300 liver transplantations from deceased donors and 20 liver fragment transplantations from living donors are performed. This means about 9 transplantations per population of 1 million.

Each year, the number of deceased donors reaches more than 500. In more than 50% of cases, livers are used. The law allows liver procurement from living donors. Until the end of 2013, liver fragments were recovered from 236 living donors and transplanted mainly to pediatric recipients ( $n = 232$ ). A living-donor registry was created to monitor and assess the health condition of donors.

The range of the national waiting list and allocation is nationwide. It is managed with the use of the Web tool [www.rejstry.net](http://www.rejstry.net). There are 2 modes of recipient referral: “urgent” and “elective.” Allocation is either patient oriented and center oriented. Disease groups, which comprise the most frequent indications for transplantation in adults, include the cirrhosis group (48%), in which the highest number of procedures was performed for patients with hepatitis C virus (24%); alcohol-induced cirrhosis (14%); alcohol-induced hepatitis (8%), and hepatitis B virus cirrhosis (7%). Among pediatric recipients, the most frequent indications were congenital cholestatic diseases, which made up 38% of all transplantation indications.

The results of liver transplantations are collected in the national transplant register. The 1-year graft and recipient survival with deceased donor transplantation are 81% and 84% and with living donor transplantation 86% and 89%. The 5-year graft and recipient survival in deceased donor transplantation are 69% and 73%, and in living donor transplantation are 80% and 83%.

---

**I**N THIS article, we present a panorama of liver donation and transplantation in Poland from the viewpoint of the Polish Transplant Coordinating Center Poltransplant, which is a national transplantation organization and competent authority in the field of organ donation and transplantation in Poland.

Each year in Poland, around 300 liver transplantations from deceased donors and 20 liver fragment transplantations from living donors are performed, about 9 transplantations per population of 1 million. Treatment by means of a liver transplantation can be achieved at 1 of the best transplant programs in Poland. The number of

surgeries has increased twice during the last 10 years. The first liver transplantation in Poland was performed in 1987 in Medical Academy in Szczecin (the center is not active currently). From that time, the number of transplanted organs reached 3135 to the end of 2013, and these data include fragments of organ from living donors [1,2]. The

---

\*Address correspondence to Jarosław Czerwiński, Polish Transplant Coordinating Center Poltransplant, Al. Jerozolimskie 87, 02-001 Warszawa, Poland. E-mail: [jczerwinski@poltransplant.pl](mailto:jczerwinski@poltransplant.pl)

**Table 1. Liver Transplantations From Deceased and Living Donors in Poland**

Year	No. of Liver Transplantations From Deceased Donors	No. of Liver Fragment Transplantations From Living Donors	Total	No. of Transplants per 1 Million Citizens
1987–2000	200	12	212	–
2001	106	15	121	3
2002	133	13	146	4
2003	156	13	169	4
2004	179	18	197	5
2005	200	13	213	6
2006	180	21	201	5
2007	178	18	196	5
2008	224	21	245	6
2009	214	22	236	6
2010	217	20	237	6
2011	282	18	300	8
2012	314	14	328	9
2013	318	18	336	9
All	2899	236	3135	–

first pediatric liver transplantation from a deceased donor was performed at the Children's Memorial Health Institute, Warsaw, in 1990. Until then, 326 surgeries of this type had been performed. The Children's Memorial Health Institute was also the first center in which liver fragments from living liver donors were transplanted. This surgery was performed in 1999, and to the present, 232 such procedures have been done [3]. In 2001, in the Department of General, Transplant and Liver Surgery, Medical University of Warsaw, the first liver fragment transplantation in an adult patient was performed. Up to the present, 4 such procedures have been done (Tables 1 and 2).

#### LIVER DONATION FROM DECEASED DONORS

Until now, all transplanted livers from deceased donors were procured from donors who died of brain death. Although, since 2009, regulations have allowed organs to be

**Table 2. Liver Transplantations in Poland According to Donor Type for Adults and Children in 1987–2013**

	No. of Transplanted Organs From Deceased Donors	No. of Transplanted Liver Fragments From Living Donors	Total
Pediatric recipient	326 (10%)	232 (7%)	558 (17%)
Adult recipient	2573 (83%)	4 (0.1%)	2577 (83%)
Total	2899 (93%)	236 (7%)	3135 (100%)

taken from donors who died, according to circulatory criteria, this has not been done [4]. Each year, the number of deceased donors reaches more than 500. In more than 50% of cases, livers are taken and transplanted. Among the reasons for the constant increase in this percentage is the extension of criteria for organ donation and transplantation; the higher age of the deceased donors (age 34 years in 2001 and 43 years in 2013); commonly known risk factors recognized (94% of liver donors); an increase in the use of anti-HBc-positive organs (in 2001–2005 the number of anti-HBc-positive deceased donors was 20%, and in 2006–2008 it was 33%). However, use of organs from donors who fulfill the extended criteria has increased slowly; in 2001 to 2013, only 20% of deceased donors were older than 60 years (171 of 850). This means that only 171 of 2701 transplanted livers (6%) were taken from that age group. There is no tendency for criteria extension for recipients from urgent waiting lists in comparison to recipients from elective lists [5,6].

#### DONATION OF LIVER FRAGMENTS FROM LIVING DONORS AND LIVING DONOR REGISTRY

Polish law allows for organ, tissue, and cell procurement from living donors. The regulations are compatible with international regulations, resolutions, and statements (World Health Organization Guiding Principles, Regulations of The Council, Parliament, and Committee of Europe) and recommendations of scientific societies, Code

**Table 3. Number of Recipients on a National Transplant Waiting List and Number of Transplant Procedures Performed**

	No. of De Novo Referrals for Transplantation	Total No. of Waiting Recipients	Index No. of Transplantations/No. De Novo Referrals	Index: No. of Transplantations/Total No. of Waiting Potential Recipients	Index: No. of Deaths on List/Total No. of Waiting Potential Recipients	Index: No. of Waiting Recipients at End of Year/Total No. of Waiting Recipients
2004	No data	No data	–	–	No data	148
2005	251	399	213/251 = 85%	213/399 = 53%	29/399 = 7%	106/399 = 27%
2006	311	417	200/311 = 64%	200/417 = 48%	19/417 = 5%	151/417 = 36%
2007	269	420	196/269 = 73%	196/420 = 47%	30/420 = 7%	165/420 = 39%
2008	274	439	245/274 = 89%	245/439 = 56%	35/439 = 8%	123/439 = 28%
2009	318	441	236/318 = 74%	236 = 441 = 54%	15/441 = 3%	170/441 = 39%
2010	345	515	237/345 = 69%	237/515 = 46%	No data	195/515 = 38%
2011	335	530	300/335 = 90%	300/530 = 57%	37/530 = 7%	179/530 = 34%
2012	435	614	328/435 = 75%	328/614 = 53%	38/614 = 6%	152/614 = 25%
2013	396	548	336/396 = 85%	336/548 = 61%	38/548 = 7%	133/548 = 24%
Trend	Increasing	Increasing	Increasing	Increasing	Decreasing	Decreasing

Download English Version:

<https://daneshyari.com/en/article/4256027>

Download Persian Version:

<https://daneshyari.com/article/4256027>

[Daneshyari.com](https://daneshyari.com)