

The Nordic Liver Transplant Registry (NLTR)

Annual report 2025

Report prepared April 2026 by
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1. Source of data

The numbers and graphs included in the present report are based on data extracted from the Nordic Liver Transplant Registry (NLTR) in March 2026. Prior to the export, data were subjected to extensive integrity and quality control. Entry of missing data and correction of all identified errors were performed at all centers prior to the final data extraction.

2. Data content NLTR 2025

The registry comprises complete data from the liver transplantation activity at all transplantation centers in Denmark, Sweden, Norway and Finland since 1982. Before 1990, only patients that were transplanted were registered. After 1990, the registry covers all patients entered to the liver transplantation waiting list, regardless of transplantation status. From September 1994, complete waiting list data are available from all patients in addition to the transplantation details. From October 1st 2017 data on patients transplanted in Estonia are prospectively included, patients transplanted in Estonia prior to this date have been retrospectively included. All data are stored securely at Scandiatransplant in Aarhus (www.scandiatransplant.org).

Up to December 31st 2025, data from a total of 10774 liver transplantations had been entered into NLTR. Of these, 8708 patients had received a first liver graft, 811 (8.4%) had been transplanted twice, and 140 (1.4%) had been transplanted more than twice. A total of 222 living donor transplantations had been

performed. Children below 18 years constituted 1001 (9.3%) of the transplanted patients in the registry.

3. Transplantation activity 2025

The total number of patients who received a first liver graft in 2025 was 394 (Figure 1). Of these, 7 were combined liver-kidney transplantations. One was a multivisceral transplantation performed in Gothenburg. Among the first liver transplantations, two were living donor transplantations, one of which was a domino transplantation. The living donor transplantations were performed in Oslo and Gothenburg. Fifty-six patients received a DCD graft. In addition, 31 re-transplantations were performed (Table 2). The total number of liver transplantations was 425, representing a slight increase compared to last year and almost matching the record year of 2023 (448 liver transplantations).

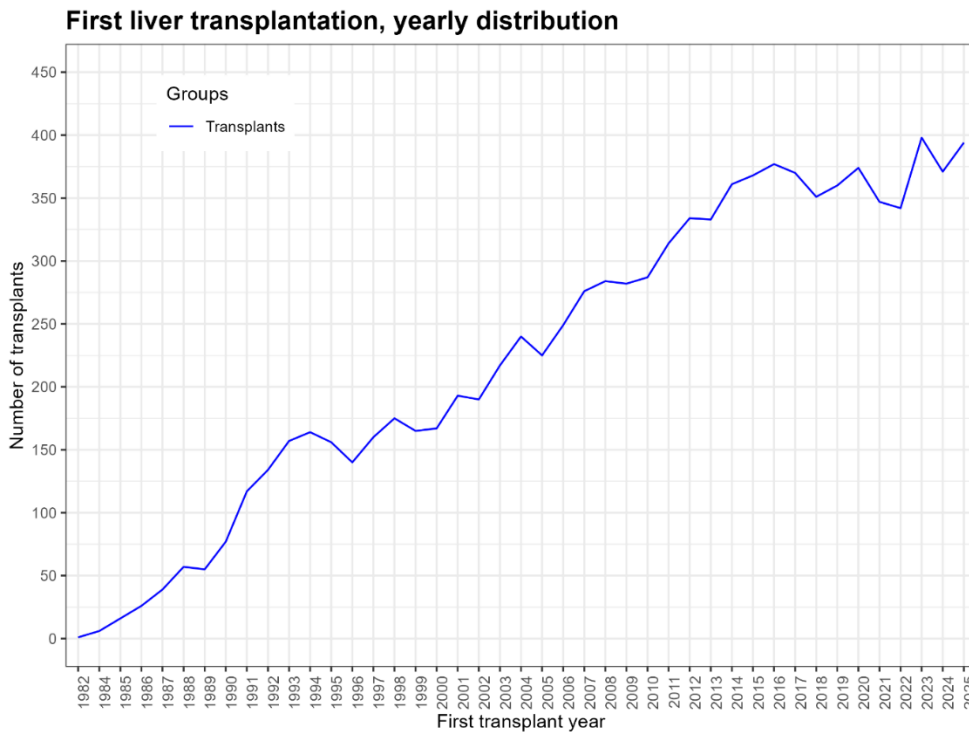


Figure 1: Annual number of first liver transplants 1982-2025

Number of first liver transplantations by center and year										
2016–2025										
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Copenhagen	51	52	39	61	59	45	41	61	52	52
Gothenburg	88	84	83	80	73	87	80	89	89	102
Helsinki	54	57	60	56	71	65	55	69	68	61
Oslo	88	85	87	75	76	83	89	83	78	82
Stockholm	86	82	73	78	84	63	68	82	74	83
Tartu	10	10	9	10	11	4	9	14	10	14

Table 1: Number of first liver transplantations performed at the individual centers during the last 10 years.

Number of retransplantations by center and year										
2016–2025										
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Copenhagen	8	5	4	3	7	5	5	2	6	5
Gothenburg	18	10	3	15	8	12	10	12	5	6
Helsinki	7	6	6	8	4	10	7	9	8	6
Oslo	12	17	8	19	12	15	3	9	5	7
Stockholm	7	5	4	10	8	8	7	15	9	6
Tartu	0	0	1	0	1	0	0	3	0	1

Table 2: Total number of re-transplantations performed at the individual centers during the last 10 years.

First liver transplantation, yearly distribution per center

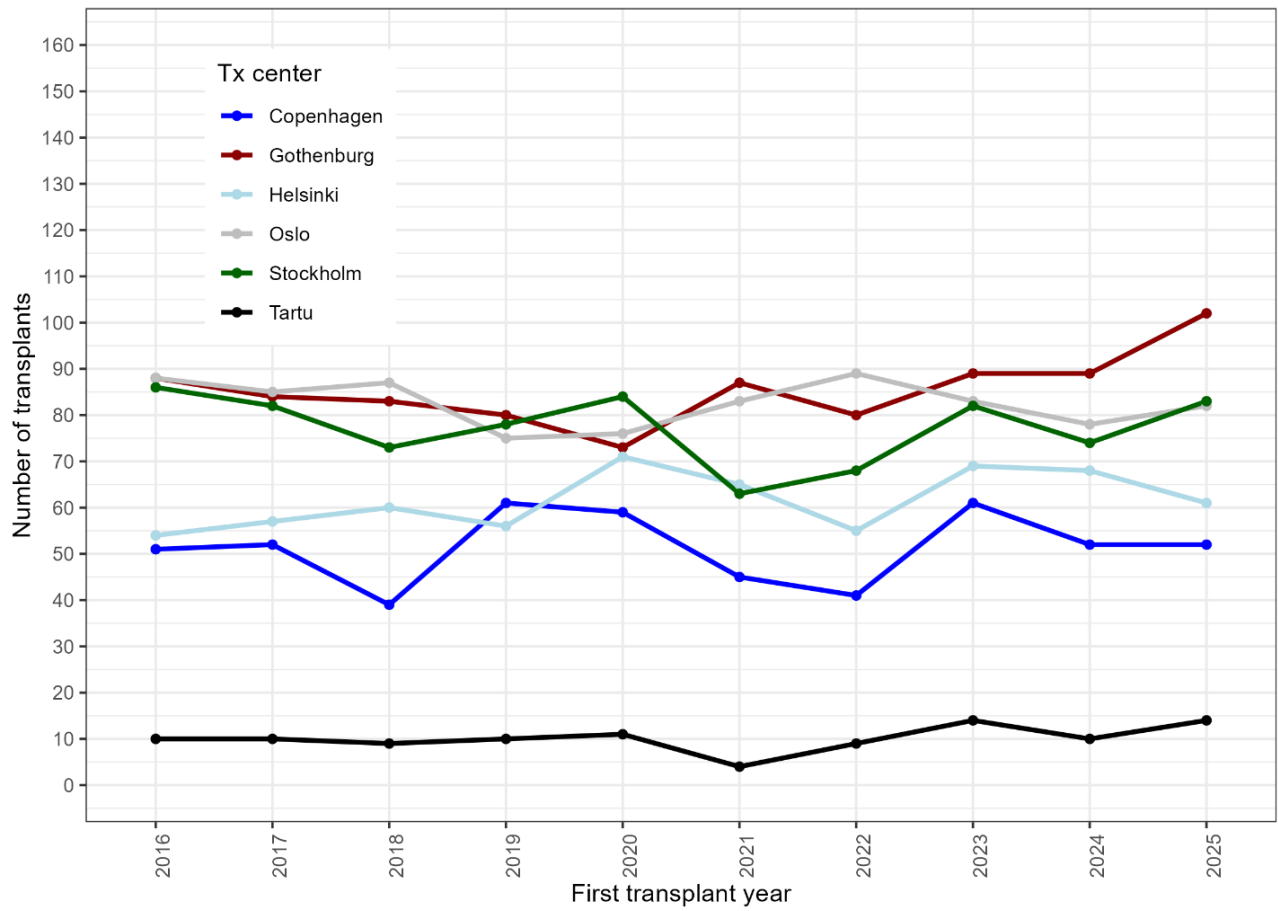


Figure 2: Number of first liver transplantations performed at the ScandiTransplant centers that are currently performing liver transplantations.

First liver transplantation, yearly distribution in PMP per country

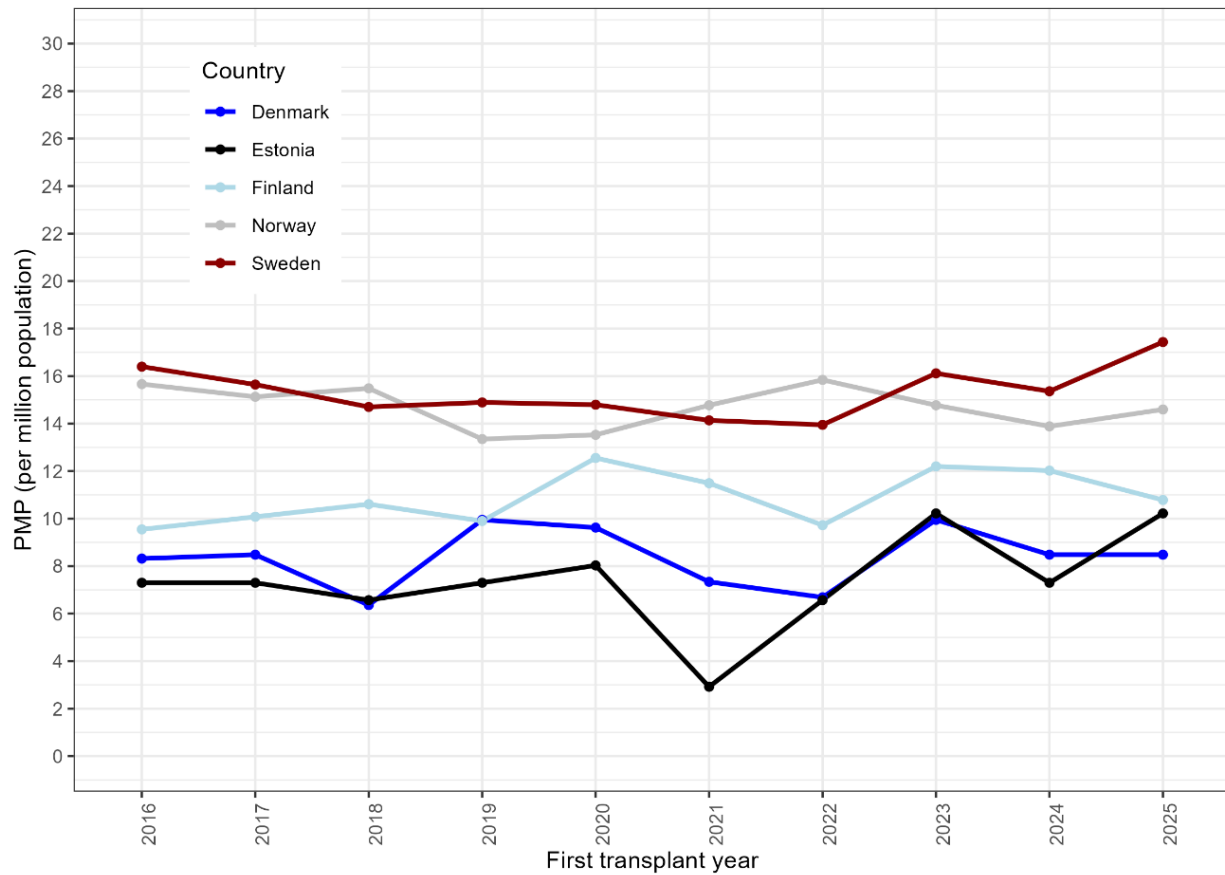


Figure 3: Number of first liver transplantations performed in the Scandi-transplant countries according to the country's population. PMP, per million population.

4. The waiting list 2025

In 2025, a total of 497 patients were entered on the waiting list for a first liver transplant (Table 3), this is an increase from the 354 entered in 2024 (Figure 4). Twelve of the patients listed for a first liver transplant in 2025 were listed as highly urgent as their latest urgency. This is a slight decrease from the numbers in 2024 (Figure 5).

Status on patients entering the waiting list in 2025					
	Dead	Deceased donor	Living donor	On waiting list	Permanent withdrawal
Number	4	351	2	166	18

Table 3: Patients entering the waiting list in 2025 classified by outcome as of December 31st 2025.

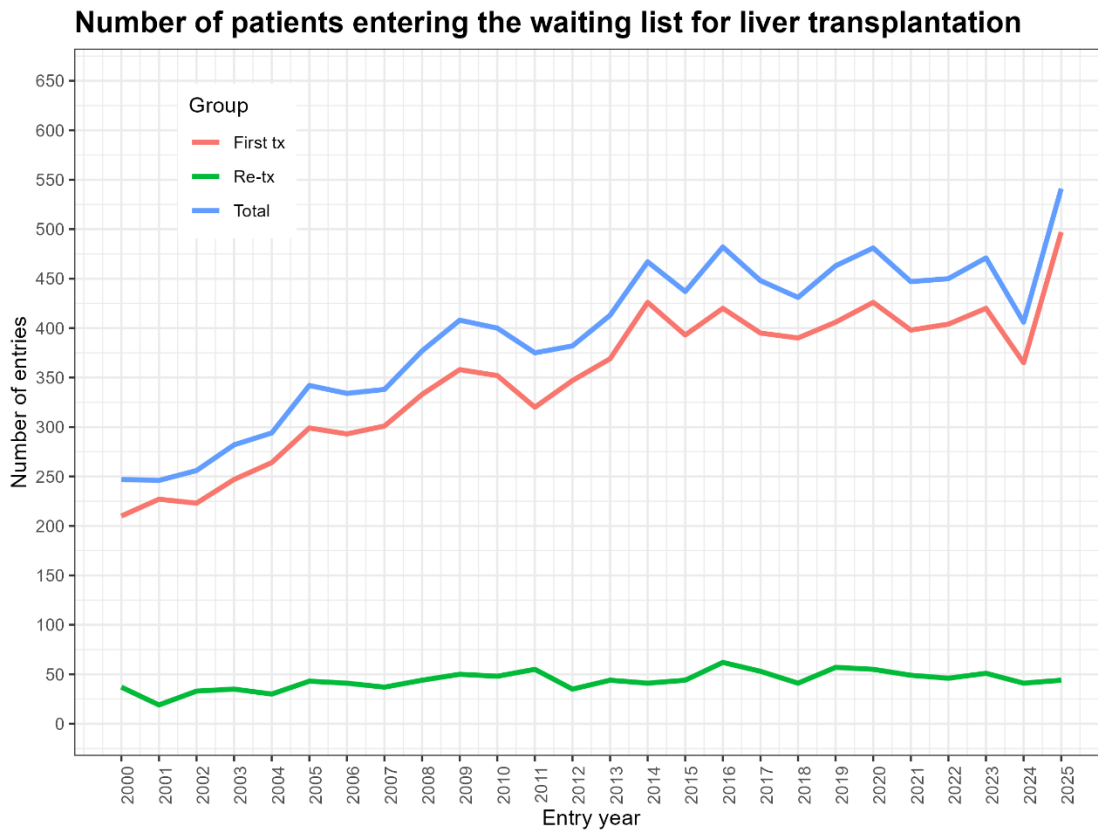


Figure 4: Number of patients entering the waiting list from 2000-2025.

Listed as highly urgent, yearly distribution

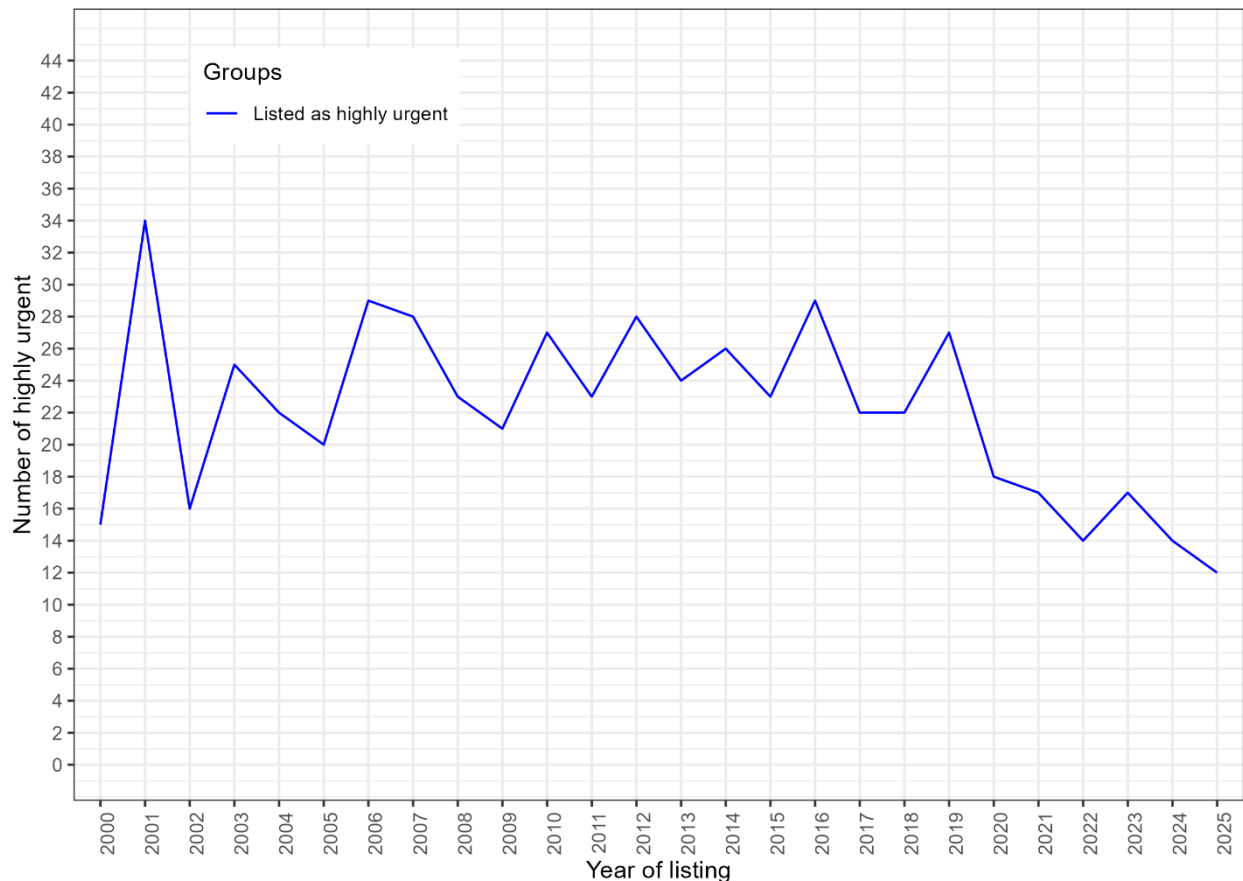


Figure 5: Number of patients listed for a first liver transplant with highly urgent as latest urgency.

The number of patients listed in 2025 for a first liver transplant and classified as dead on the waiting list by December 31st 2025. was 4 (Sweden 1, Norway 3).

The median waiting time in 2025 was 44 days - down from 57 days in 2024 - for first liver transplantation when excluding patients listed as highly urgent. Differences according to ABO blood type are illustrated in Table 4. Over the last two years, a decrease has been observed for blood types O and B following the increase in 2023 (Figure 8).

Waiting time in days by ABO blood group			
	N	Maximum	Median
O	145	963	65
A	166	509	36
AB	22	208	24
B	50	346	60

Table 4: Median time on waiting list (days) for patients receiving a first liver allograft in 2025 according to ABO blood type. (Patients listed as highly urgent are excluded from the calculations).

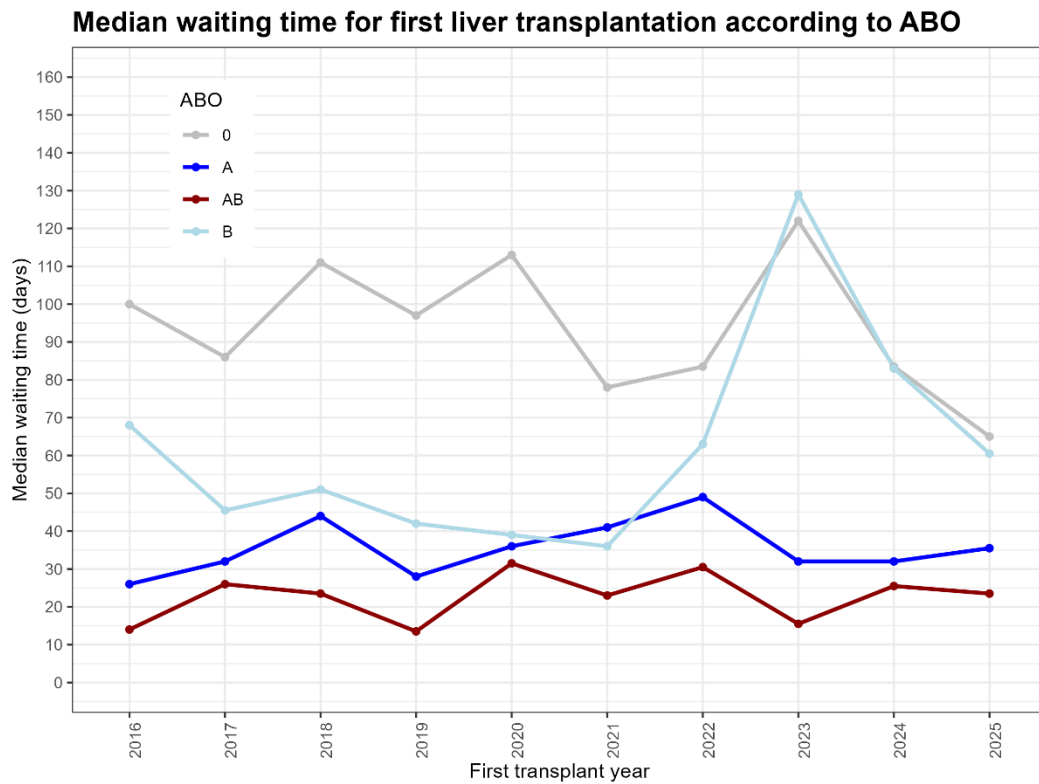


Figure 8: Median waiting time for first liver transplantation according to ABO blood type for 2016-2025. (Patients listed as highly urgent are excluded from the calculations).

Copenhagen had the longest and Stockholm the shortest waiting time in 2025 (Table 5). The median waiting times for the last 10-years for each transplant center are depicted in Figure 9. The waiting times are still low compared to other programs.

Waiting time in days by tx center			
	N	Maximum	Median
Copenhagen	51	962	121
Gothenburg	100	963	38
Helsinki	60	575	44
Oslo	80	633	66
Stockholm	80	555	30
Tartu	12	346	64

Table 5: Median time on waiting list (days) for patients receiving a first liver allograft in 2025 according to transplantation center. (Patients listed as highly urgent are excluded from the calculations).

Median waiting time for first liver transplantation according to country

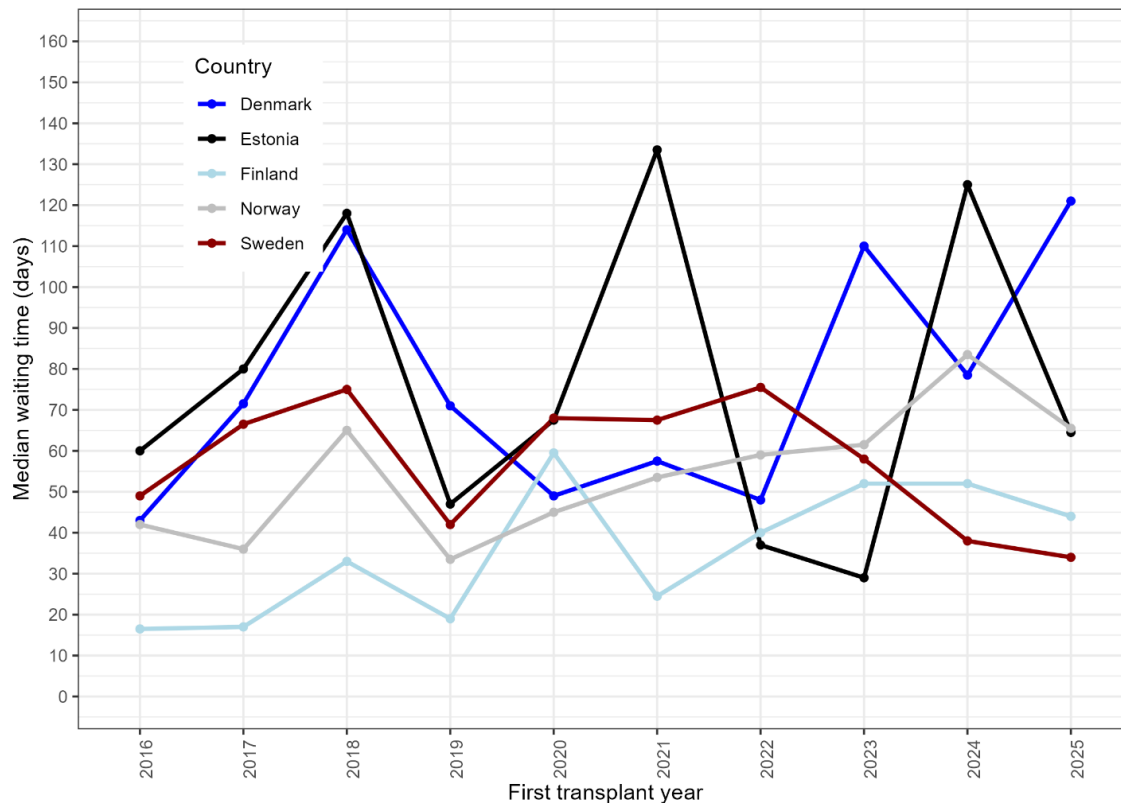


Figure 9: Median waiting time for first liver transplantation according to country for 2016-2025. (Patients listed as highly urgent are excluded from the calculations).

5. Age of recipients and donors

In 2025 the median age of adult liver recipients (≥ 18 years, first liver transplantation) was 57.0 years and the median age of children (< 18 years, first liver transplantation) was 5.5 years. Recipients between 31 and 60 years of age at the first transplantation are still the largest group (Figure 10). The median age of the donors has remained stable since 2016 ranging from 55-60 years (Figure 11).

Number of first liver transplants in the indicated age groups

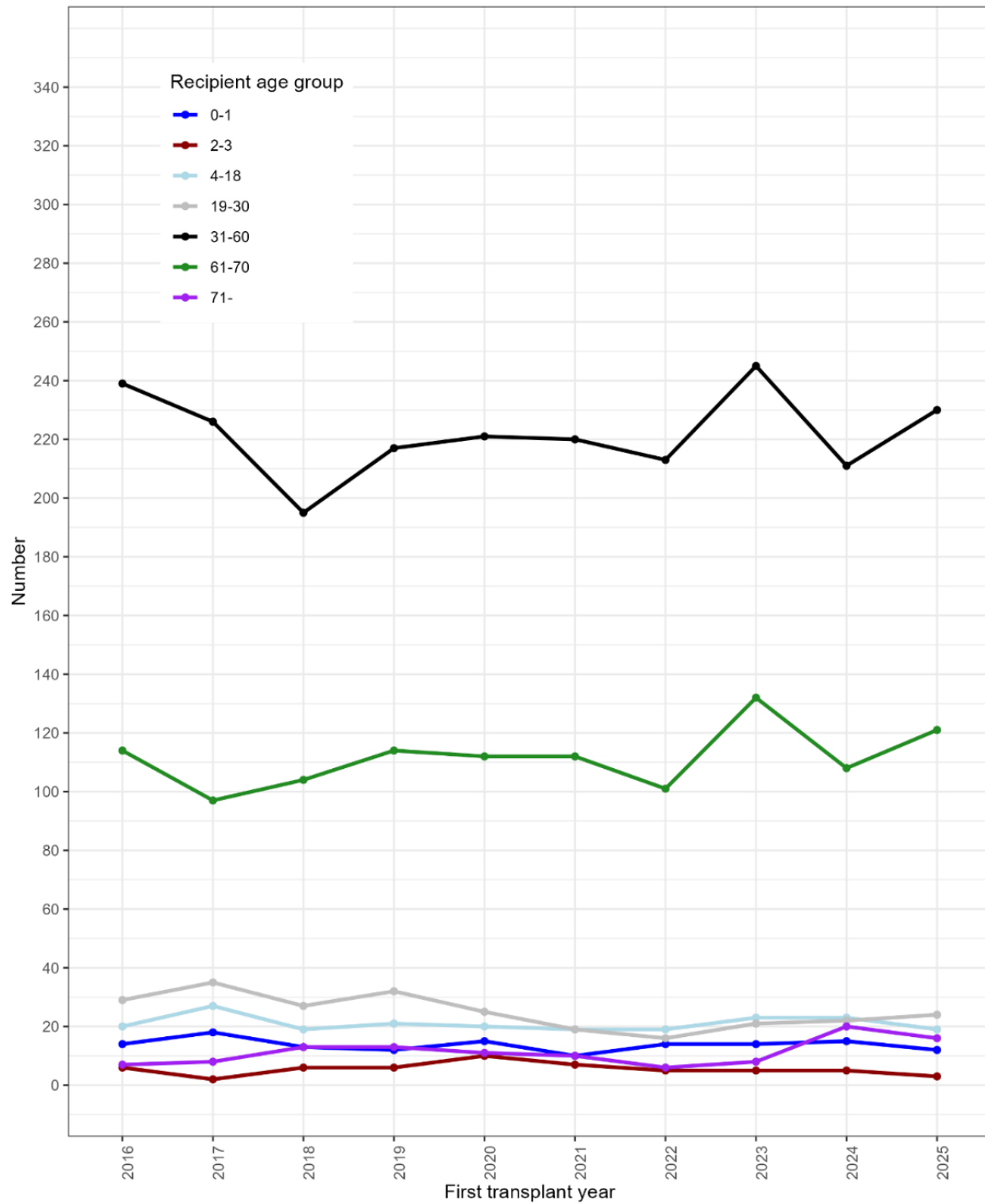


Figure 10: Number of first liver transplants in the indicated age groups.

Median donor age according to country

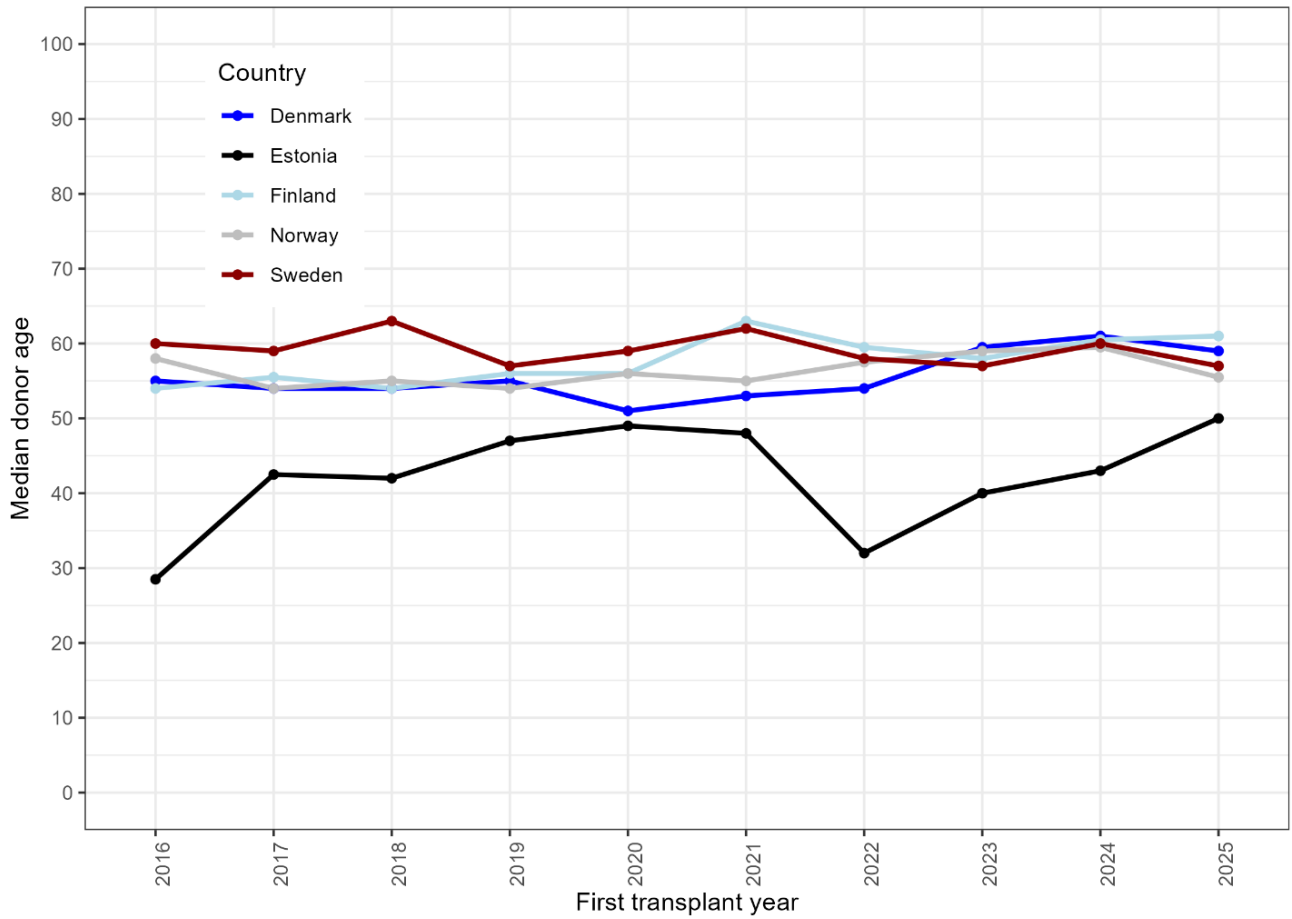


Figure 11: Median age of donors utilized in the indicated years stratified for the different countries.

6. Diagnoses

In 2025, primary sclerosing cholangitis was the leading indication for adult liver transplantation in ScandiTransplant followed by hepatocellular carcinoma in cirrhosis and alcohol associated liver disease (Table 6). For children it was metabolic disease followed by acute liver failure (Table 7).

Percentage distribution of primary diagnosis by period						
1982–2025						
	1982-90	1991-99	2000-09	2010-19	2020-24	2025
Primary sclerosing cholangitis	11.5	15.6	17.4	18.1	16.8	19.1
Hepatocellular carcinoma and cirrhosis	10.9	5.3	8.5	17.7	16.4	17.6
Alcohol associated liver disease	3.6	11.6	13.3	13.8	17.4	14.8
MASH*	–	–	–	3.3	4.8	7.7
Primary biliary cholangitis	30.3	14.2	7.8	5.4	4.6	5.6
Acute liver failure - other	11.5	8.6	5.6	5.4	4.9	3.1
Metabolic disease	6.1	5.8	5.1	3.6	2.4	2.5
Secondary liver tumors	1.8	0.6	1.4	2.0	3.0	2.8
Acute liver failure - toxic	1.2	3.7	4.1	2.8	2.4	2.5
Others	23.0	34.6	36.4	27.9	27.2	24.4

*MASH was not registered as a separate diagnosis before approximately 2007.

Table 6: Diagnoses of adult patients listed for a first liver transplantation in 2025 compared with previous time periods.

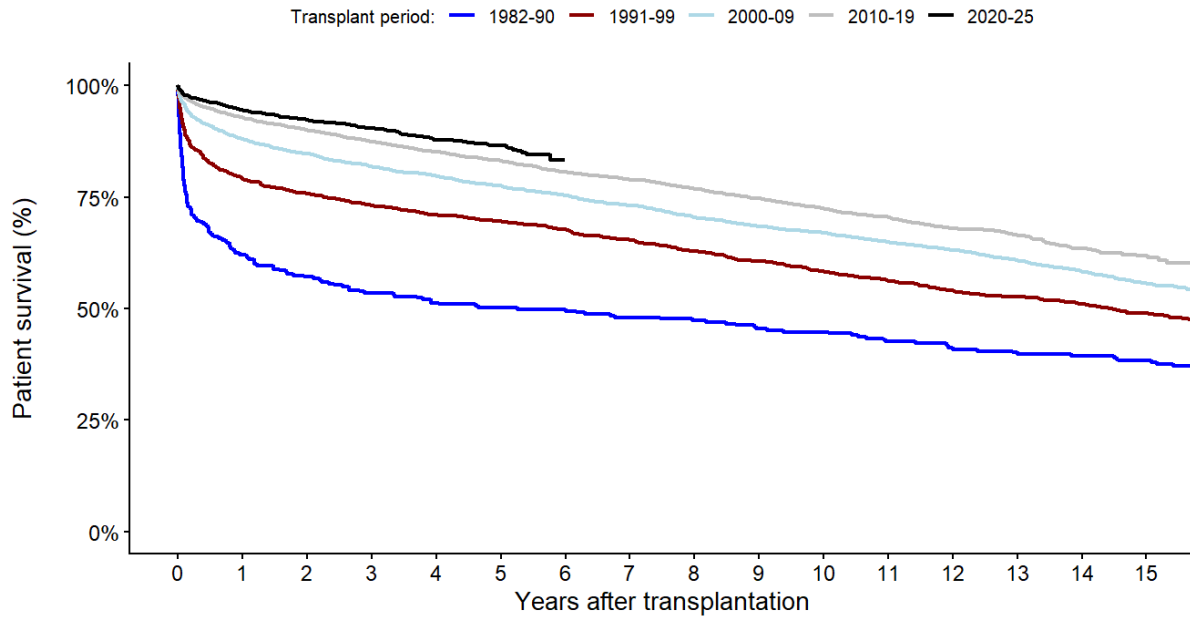
Percentage distribution of primary diagnosis by period						
1982–2025						
	1982-90	1991-99	2000-09	2010-19	2020-24	2025
Extrahepatic biliary atresia	34.5	32.0	34.5	27.5	22.6	17.1
Metabolic disease	27.6	15.2	9.8	20.6	26.7	14.3
Acute liver failure - other	5.2	12.4	10.1	10.7	13.7	11.4
Hepatocellular carcinoma and cirrhosis	6.9	4.4	2.4	2.1	0.7	5.7
Congenital disease	5.2	6.8	8.7	4.2	2.7	2.9
Primary sclerosing cholangitis	1.7	0.4	1.7	2.7	1.4	2.9
Acute liver failure - toxic	0.0	0.8	4.5	2.4	3.4	0.0
Others	19.0	28.0	28.2	29.9	28.8	45.7

Table 7: Diagnoses of children (<18 years at waiting list entry) listed for a first liver transplantation in 2025 compared with previous time periods.

7. Patient and liver graft survival

When looking at 5-years intervals, patient survival (defined as time from the first liver transplantation until death) and graft survival (defined as time from the first liver transplantation until death or retransplantation) were dramatically improving over the first years of the Nordic liver transplantation programs (Figures 13 and 14). For the last two 5-year periods the survival is quite similar. There are notable differences in the long-term patient and graft survival for different indications for transplantation (Figures 15, 16 and Table 8). The survival following retransplantation is reduced compared to the primary transplantation, this is particularly evident during the first months after the transplantation (Figure + Table 17). Survival following retransplantation is markedly better in the recent time periods compared to the start of the program (Figure 18)

Kaplan-Meier patient survival curve
Liver recipients receiving first allograft in the indicated time periods



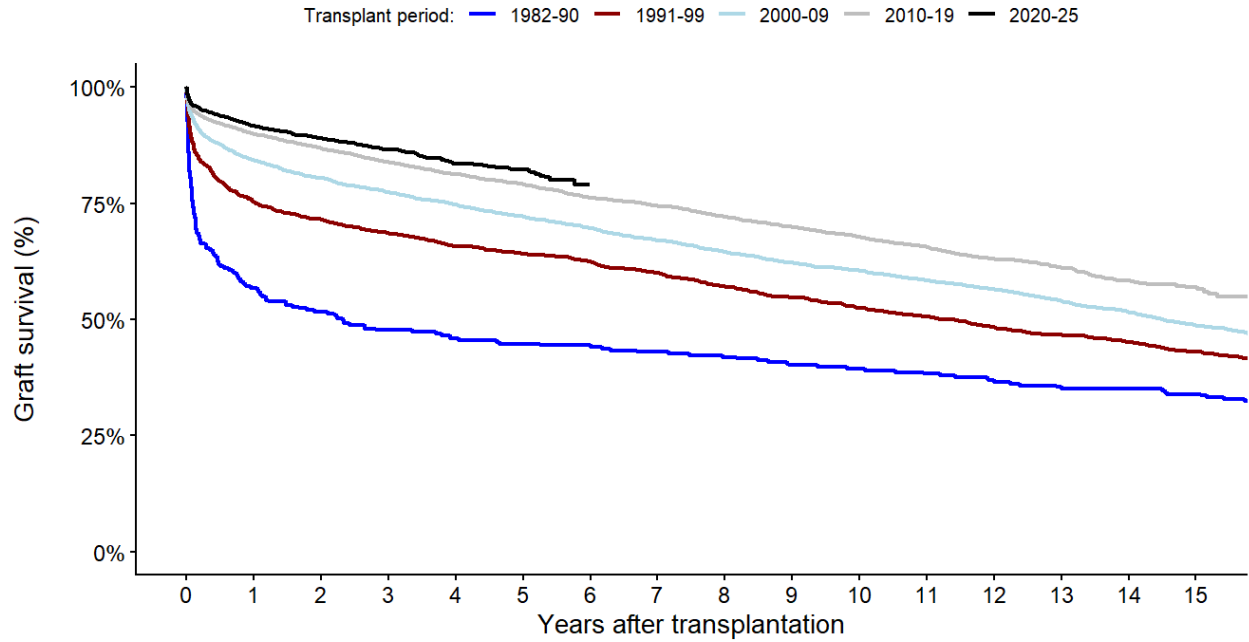
Transplant period:

	Number at risk															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1982-90	277	172	158	148	142	139	138	133	131	126	124	118	114	111	109	106
1991-99	1368	1083	1037	1001	971	952	926	894	861	829	797	769	740	720	698	670
2000-09	2323	2044	1967	1900	1853	1801	1751	1696	1637	1590	1556	1508	1466	1412	1357	1292
2010-19	3455	3206	3110	3021	2941	2873	2784	2431	2091	1753	1420	1106	828	590	346	157
2020-25	2226	1735	1352	959	620	319	0	0	0	0	0	0	0	0	0	0

	1-year survival (95% CI)	5-year survival (95% CI)
1982-90	62.1 (56.6–68.1)	50.2 (44.6–56.4)
1991-99	79.2 (77–81.3)	69.6 (67.2–72.1)
2000-09	88 (86.7–89.3)	77.5 (75.9–79.2)
2010-19	92.8 (91.9–93.7)	83.2 (81.9–84.4)
2020-25	94.4 (93.5–95.4)	86.5 (84.6–88.5)

Figure + table 13: Kaplan-Meier patient survival curve for patients receiving a first liver allograft in the indicated time periods.

Kaplan-Meier death censored graft survival
Liver recipients receiving first allograft in the indicated time periods



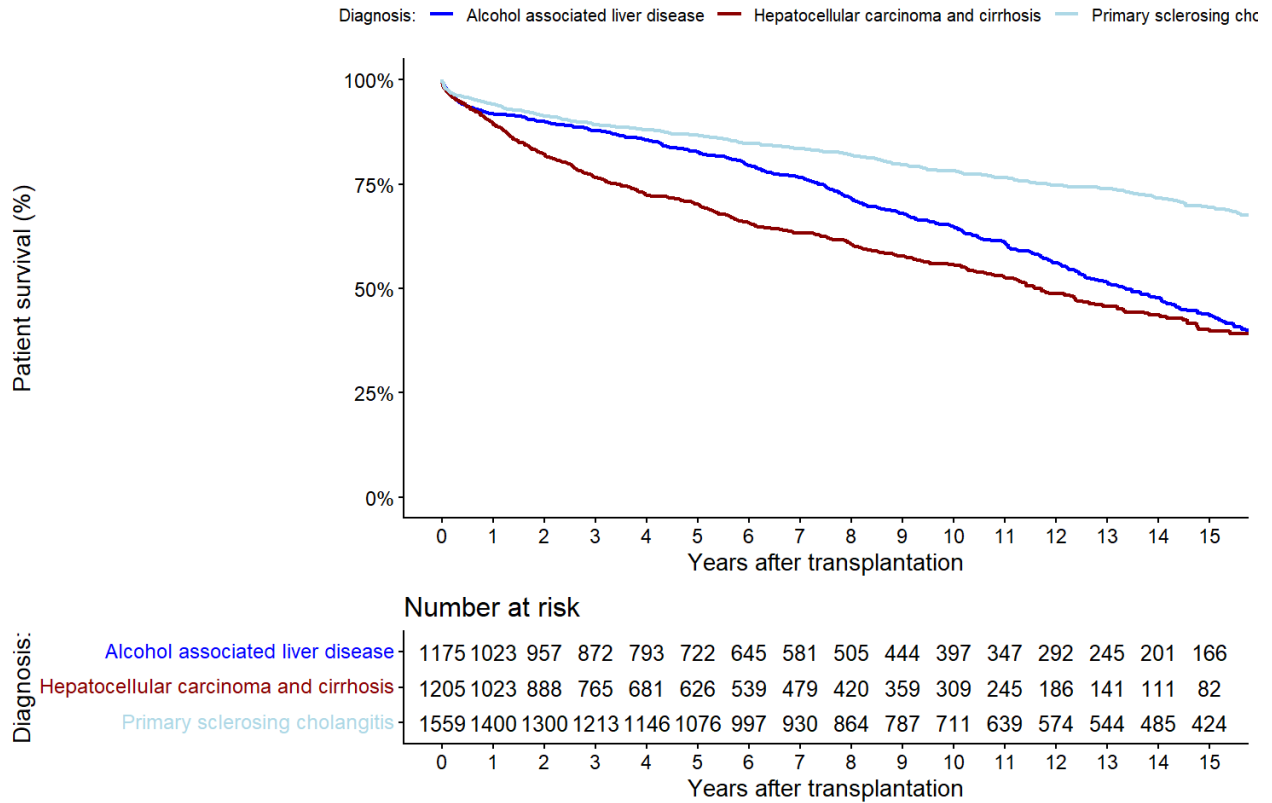
Transplant period:

Transplant period:	Number at risk															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1982-90	277	157	143	132	127	124	123	119	116	111	109	106	102	98	97	94
1991-99	1368	1030	978	938	900	878	855	820	782	749	717	692	662	638	618	590
2000-09	2323	1958	1869	1796	1736	1677	1619	1557	1498	1444	1405	1357	1312	1254	1200	1132
2010-19	3454	3107	3000	2896	2808	2734	2634	2293	1960	1631	1322	1022	763	537	316	141
2020-25	2226	1679	1301	915	585	298	0	0	0	0	0	0	0	0	0	0

	1-year survival (95% CI)	5-year survival (95% CI)
1982-90	56.7 (51.1–62.8)	44.8 (39.3–51)
1991-99	75.3 (73–77.6)	64.2 (61.7–66.8)
2000-09	84.3 (82.8–85.8)	72.2 (70.4–74)
2010-19	89.9 (88.9–90.9)	79.1 (77.8–80.5)
2020-25	91.7 (90.5–92.8)	82.2 (80.1–84.4)

Figure + table 14: Kaplan-Meier graft survival curve for patients receiving a first liver allograft in the indicated time periods.

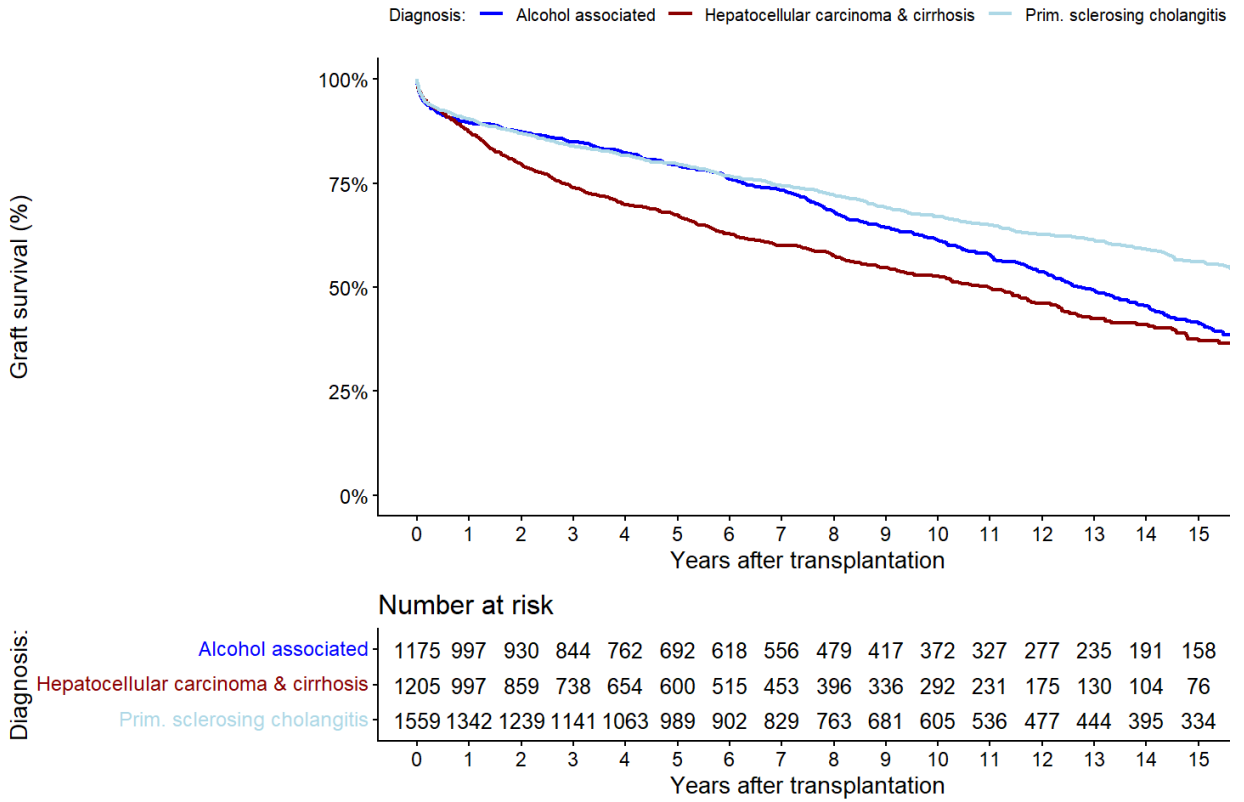
Kaplan-Meier patient survival curve
Liver recipients receiving first allograft according to diagnosis



	1-year survival (95% CI)	5-year survival (95% CI)
Alcohol associated liver disease	91.8 (90.2–93.4)	82.7 (80.5–85.1)
Hepatocellular carcinoma and cirrhosis	89.5 (87.7–91.2)	70.3 (67.6–73.1)
Primary sclerosing cholangitis	94.2 (93.1–95.4)	86.7 (85–88.5)

Figure + table 15: Kaplan-Meier patient survival curve for patients receiving a first liver allograft stratified for the three most common primary diagnoses.

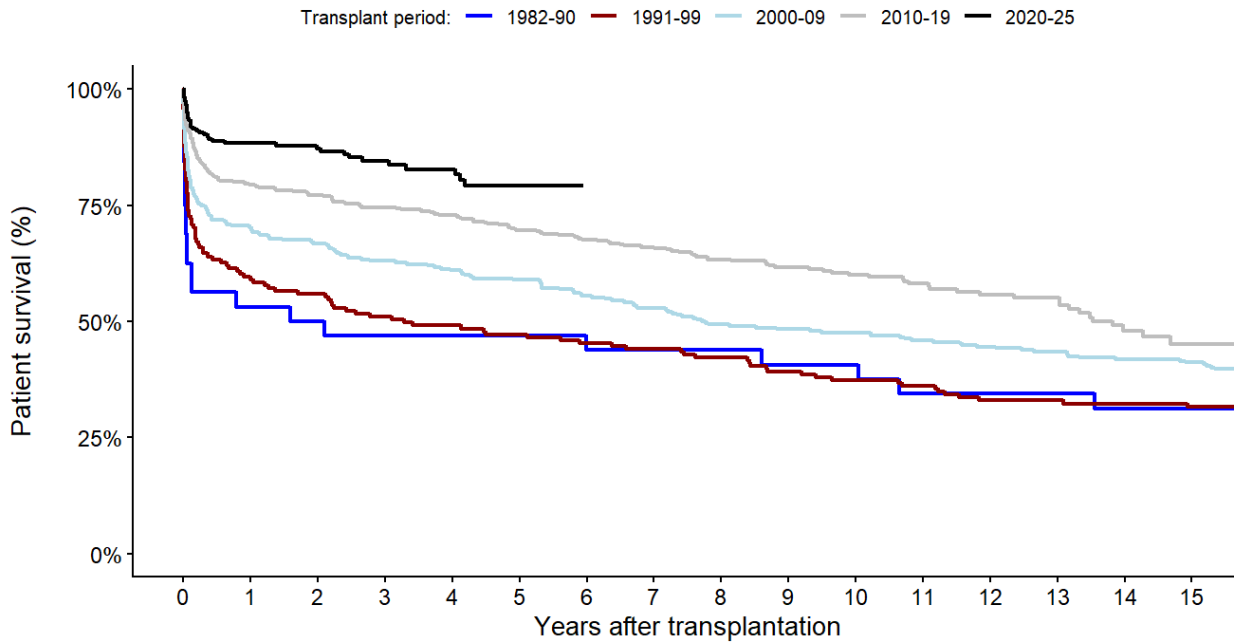
Kaplan-Meier death censored graft survival
Liver recipients receiving first allograft according to diagnosis



	1-year survival (95% CI)	5-year survival (95% CI)
Alcohol associated liver disease	89.5 (87.7–91.3)	79.3 (76.9–81.8)
Hepatocellular carcinoma and cirrhosis	87.3 (85.4–89.2)	67.4 (64.6–70.2)
Primary sclerosing cholangitis	90.4 (88.9–91.9)	79.6 (77.5–81.7)

Figure + table 16: Kaplan-Meier graft survival curve for patients receiving a first liver allograft stratified for the three most common primary diagnoses.

Kaplan-Meier patient survival curve
Liver recipients receiving re-transplantation in the indicated time periods



Transplant period:	Number at risk															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1982-90	32	17	16	15	15	15	14	14	14	13	13	11	11	11	10	10
1991-99	160	95	90	82	79	76	73	71	68	63	60	58	53	53	52	51
2000-09	292	205	195	184	178	172	162	154	144	141	139	134	130	127	122	120
2010-19	404	321	312	301	294	281	273	227	202	173	137	110	84	68	45	20
2020-25	236	181	147	101	73	33	0	0	0	0	0	0	0	0	0	0

	1-year survival (95% CI)	5-year survival (95% CI)
1982-90	53.1 (38.4–73.6)	46.9 (32.4–67.8)
1991-99	59 (51.9–67.1)	47.2 (40.1–55.6)
2000-09	70.2 (65.2–75.7)	58.9 (53.5–64.8)
2010-19	79.5 (75.6–83.5)	69.6 (65.2–74.2)
2020-25	88.4 (84.3–92.6)	79.2 (73–86)

Figure + table 17: Kaplan-Meier patient survival curve for patients following retransplantation in the indicated time periods.

	Median age	1-year survival (95% CI)	5-year survival (95% CI)
Alcohol associated liver disease	58	95.7 (94–97.5)	86 (82.5–89.6)
Autoimmune cirrhosis	51	95.7 (92.7–98.9)	85.5 (79.5–91.9)
Cirrhosis - unknown	57	90.8 (86.9–94.8)	86.5 (81.6–91.8)
Extrahepatic biliary atresia	1	93.8 (89.1–98.7)	92.4 (87.1–98)
Hepatocellular carcinoma and cirrhosis	62	93.5 (91.5–95.6)	78.7 (74.9–82.7)
Metabolic disease	24	93.2 (89.5–97)	89.1 (84.2–94.2)
Polycystic disease	55	97.2 (94.2–100)	95.7 (91.5–100)
Post hepatitis C cirrhosis	57	87.8 (81–95.2)	81.8 (73.5–91)
Primary biliary cholangitis	56	93.3 (89.6–97.2)	87.9 (82.7–93.4)
Primary sclerosing cholangitis	44	97.3 (96–98.6)	90.7 (88.1–93.3)

Table 8: Age at transplant and survival for the patients listed 2016-2025 for ten selected diagnoses.

	Median age	1-year survival (95% CI)	5-year survival (95% CI)
Listed as highly urgent	41	84.5 (79.1–90.3)	82.1 (76.3–88.4)

Table 9: Age at transplant and survival for the patients listed 2016-2025 as highly urgent.

8. Maintenance of the registry

There are differences between each center in the extent of data entered into the NLTR. As of 2025, diagnosis, waiting list/transplantation status, and survival data are complete for all patients. We are extremely grateful for the dedicated follow-up provided by transplant coordinators in response to our quality control efforts.

In Oslo, we would particularly like to thank Monika Olofsson and Hanna Klevengen; in Gothenburg, Ulrika Samuelsson; in Stockholm, Malin Aram, Marie Tranäng and Linnea Lindström; in Copenhagen, Ulla Brink Plagborg; in Helsinki, Leena Toivonen; and in Tartu, Virge Pall.

Quality control of NLTR data remains a continuous priority, with particular emphasis on ensuring the integrity of survival data, including cause of death. The remaining components of the registry are maintained at a level determined by each individual center and its designated contact person

9. Acknowledgements - financial support

The NLTR received no financial support in 2025. The maintenance of the database system has been performed by Scandiatransplant. We are extremely grateful for the help and support from Anne Ørskov Boserup, Ilse Duus Weinreich and the rest of the Scandiatransplant team in Aarhus. Without their assistance, it would very simply not have been possible to maintain the registry and we sincerely hope their efforts are recognized by the NLTG and Scandiatransplant.

10. Organization and data ownership

The registry software is the property of Scandiatransplant, while the data contained within the registry belong to the hospitals represented in the Nordic Liver Transplantation Group. The use of these data for research purposes should be approved by the latter and must comply with applicable national guidelines for research ethics and data handling.

Authorship of publications arising from such research projects, including presentations at scientific conferences, should be determined in accordance with the Vancouver guidelines. The quality statistics of transplantation activity presented in this report should not be used in other contexts without prior permission from the Nordic Liver Transplantation Group.

11. Publications based on the NLTR

Full length articles 1990-2025:

1. Keiding S, Ericzon BG, Eriksson S, Flatmark A, Hockerstedt K, Isoniemi H, Karlberg I, Keiding N, Olsson R, Samela K, Schrupf E. Survival after liver transplantation of patients with primary biliary cirrhosis in the Nordic countries. Comparison with expected survival in another series of transplantations and in an international trial of medical treatment. *Scand J Gastroenterol* 1990; 25:11-8
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use of prognostic indices for comparison with medical treatment. *Transpl Proc* 1990; 22:1499-500

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9. Bjøro K, Ericzon BG, Kirkegaard P, Höckerstedt K, Söderdahl G, Olausson M, Foss A, Schmidt LE, Brandsæter B, Friman S. Liver transplantation for fulminant hepatic failure: impact of donorrecipient ABO-matching on the outcome. *Transplantation* 2003; 75:347-53
10. Brandsæter Bjørn, Broomé Ulrika, Isoniemi Helena, Friman Styrbjörn, Hansen Bent, Schrumpf Erik, Oksanen Antti, Ericzon BoGöran, Höckerstedt Krister, Mäkisalo Heikki, Olsson Rolf, Olausson Michael, Kirkegaard Preben, Bjøro Kristian. Liver transplantation for primary sclerosing cholangitis in the Nordic countries: outcome after acceptance to the waiting list. *Liver Transpl.* 2003;9:961-9.
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