

Annual report 2021



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Introduction

The Covid-19 pandemic did not loosen its grip during 2021. Many activities in the association had to be changed. Personal contact has often been replaced by online meetings and telephone communication. Although the effect on transplantation and donation activity seems to have been less than in many other countries, it certainly has influenced some of the activities.

Tartu University Hospital (Tartu Ülikooli Kliinikum) in Estonia was accepted as a full member of Scandiatransplant at the virtual meeting of the Council of Representatives on May 19th, 2021. At the same Council meeting a working group was formed to investigate the membership possibilities for the transplant hospitals in Latvia and Lithuania.

Organisation

Scandiatransplant is the Organ Exchange Organisation (OEO) of the countries: Denmark, Finland, Iceland, Norway, Sweden, and Estonia. It is an association and the members are the 11 hospitals performing organ transplantation in these countries. According to the articles the main purposes of the association are:

- to serve as a common organ exchange organization and allocation resource for its member hospitals including kidney, liver, heart, lung, pancreas, pancreatic islet, liver cells, composite graft, intestinal and multivisceral transplantation. This is done transparently, using ethical principles and in full compliance with the national legislation of the members' countries,
- to maintain and operate a common waiting list for transplantation,
- to ensure complete traceability from organ donors to patients,
- to maintain and operate follow-up registries of transplanted patients,
- to maintain and operate follow-up registries of living donors,
- to serve as a collaborative platform through specialized working groups and advisory groups in order to facilitate best practice recommendations and policies optimizing retrieval, allocation and transplantation of organs, and
- to form a collaborative network for the member hospitals to promote research and development related to organ donation, allocation and transplantation.

The member hospitals elect representatives to the Council, which is the association's supreme authority. During 2021 the Council had 37 Representatives. The Council of Representatives approves the members of the board, which represent all the countries, and is responsible for the day to day operations of the association.

The Board members in 2021 were Johan Nilsson (Sweden), Jóhann Jónsson (Iceland), Allan Rasmussen (Denmark), Morten Hagness (Norway), Arno Nordin (Finland) and Virge Pall (Estonia). After the Council meeting in May 2021 Bo-Göran Ericzon from Sweden continued as chairman. Kaj Anker Jørgensen (Medical Director) participated in all Board meetings as observer.

Suggestions for the activity and allocation rules are brought forward by the specialised expert groups and committees, which have been active through the year despite the pandemic.

The Scandiatransplant Office is located at Aarhus University Hospital, Denmark. The primary task of the office is to maintain and develop the IT-system holding data on all patients enlisted for organ transplantation in the member hospitals. It is accessible 24/7 for all health personnel performing organ retrieval and transplantation ensuring correct allocation of organs. The IT-system also has follow-up registries for recipients and living donors. In addition to this primary task the Scandiatransplant Office takes care of many other tasks such as running follow-up registries, educate and support users, arrange meetings for council, board, groups and committees, comply with demands from owners, researchers, authorities and the public, and participate in meetings with local health competent authorities and the EU-commission.

At the end of 2021 the staff consisted of 7 people. Working full time are 3 programmers and one clinical data and office manager. A student programmer, the secretary and the Medical Director are working part-time. The total expenses during the year (4.3 mill. DKK ~ 578.000 EUR) were somewhat less than the budget also due to the Covid-19 pandemic. The maintenance costs of Scandiatransplant are fully financed by the member hospitals in relation to the number of organ transplantations performed at each hospital.

Activities in the organisation in 2021

The Covid-19 pandemic has had a great influence on the activities in the organization. During 2021 almost all meetings in the groups, meeting with competent authorities and the EU commission, Board meetings, and the yearly meeting of the Council of Representatives have been virtual meetings. This has to some extent worked and has reduced the costs of these meetings. However, it has also hampered open discussions and informal talks, important for the sense of the community and trust between members that is the backbone of Scandiatransplant.

There has been challenges due to reduced transport options. Despite this the dedicated personnel in donation and transplantation have managed to keep up close to normal activity.

The main part of the work done at the Office is customizing the IT-system to the user's wishes and optimizing security and functionality of the system. More comprehensive work has been done in Scandiatransplant living kidney donor Exchange Program (STEP) and new functionalities to make the IT-system a useful tool in the donation process. The Office has also supported resources to education and guidance in relation to the usage of the IT-

system. The personnel at the Office have been working from home in periods with intensified Covid-19 infection pressure in the region.

Transplantation and organ procurement activity

In this report we have as usual chosen to present some key figures and compare some of them with data from 2012 and onwards showing the last ten-year period.

First, we looked at the total number of transplanted organs and compared with the number of patients on the waiting list at the end of the year. Then we looked at the utilized deceased donors and the transplanted patients.

The competent authorities of the countries have requested data on import/export between Scandiatransplant and the other European organ exchange organisations as well as data on import/export within the Nordic countries. We therefore give a thorough presentation of these data. We also give a summary of the reported SAE/SARs.

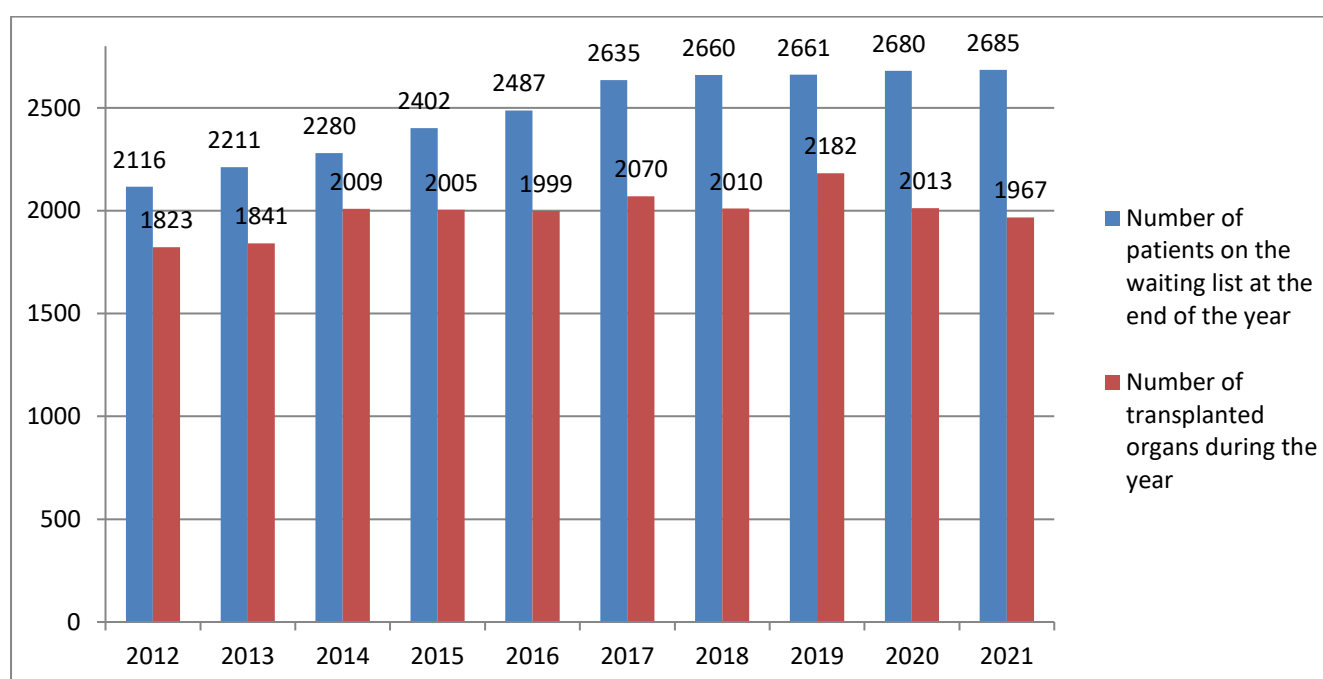
This year we are also presenting data related to STEP and numbers of DBD and cDCD donors.

Further presentation of Scandiatransplant data is available in the annual slideshow:
[Scandiatransplant annual slideshow 2021](#)

In relation with the statistics presented please keep in mind that data subjects to change based on future data submission and/or correction.

Total number of organs transplanted and patients waiting for organs within Scandiatransplant

Year	Number of waiting patients ¹	Number of transplanted organs ²
2012	2116	1823
2013	2211	1841
2014	2280	2009
2015	2402	2005
2016	2487	1999
2017	2635	2070
2018	2660	2010
2019	2661	2182
2020	2680	2013
2021	2685	1967

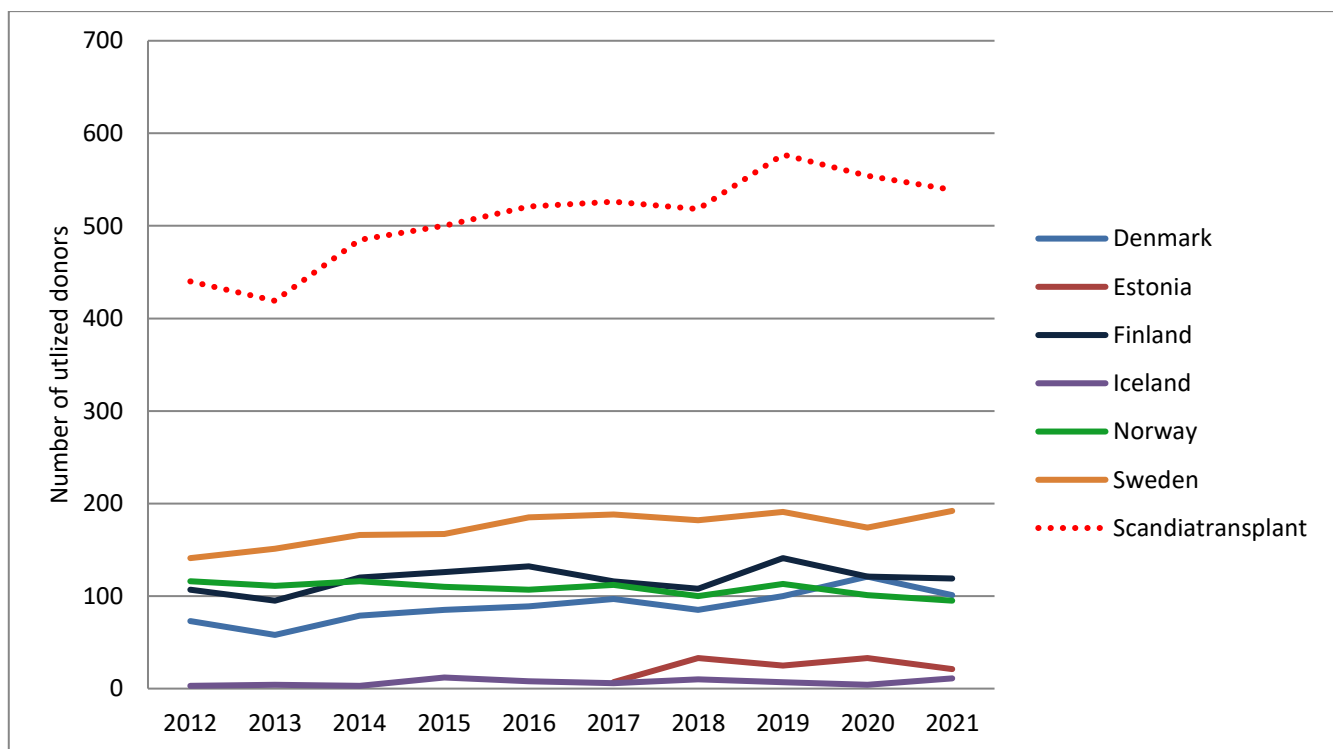


¹ Including patients (active/temp. on hold) waiting for kidney, liver, liver-kidney, heart, heart-lung, single lung, double lung, kidney-pancreas, pancreas and pancreatic islets

² Including kidney, liver, heart, lung, pancreas and pancreatic islet

Utilized deceased donors³ in numbers in Scandiatriplant

Year	Denmark	Estonia ⁴	Finland	Iceland	Norway	Sweden	Scandiatriplant
2012	73		107	3	116	141	440
2013	58		95	4	111	151	419
2014	79		120	3	116	166	484
2015	85		126	12	110	167	500
2016	89		132	8	107	185	521
2017	97	7	116	6	112	188	526
2018	85	33	108	10	100	182	518
2019	100	25	141	7	113	191	577
2020	121	33	121	4	101	174	554
2021	101	21	119	11	95	192	539

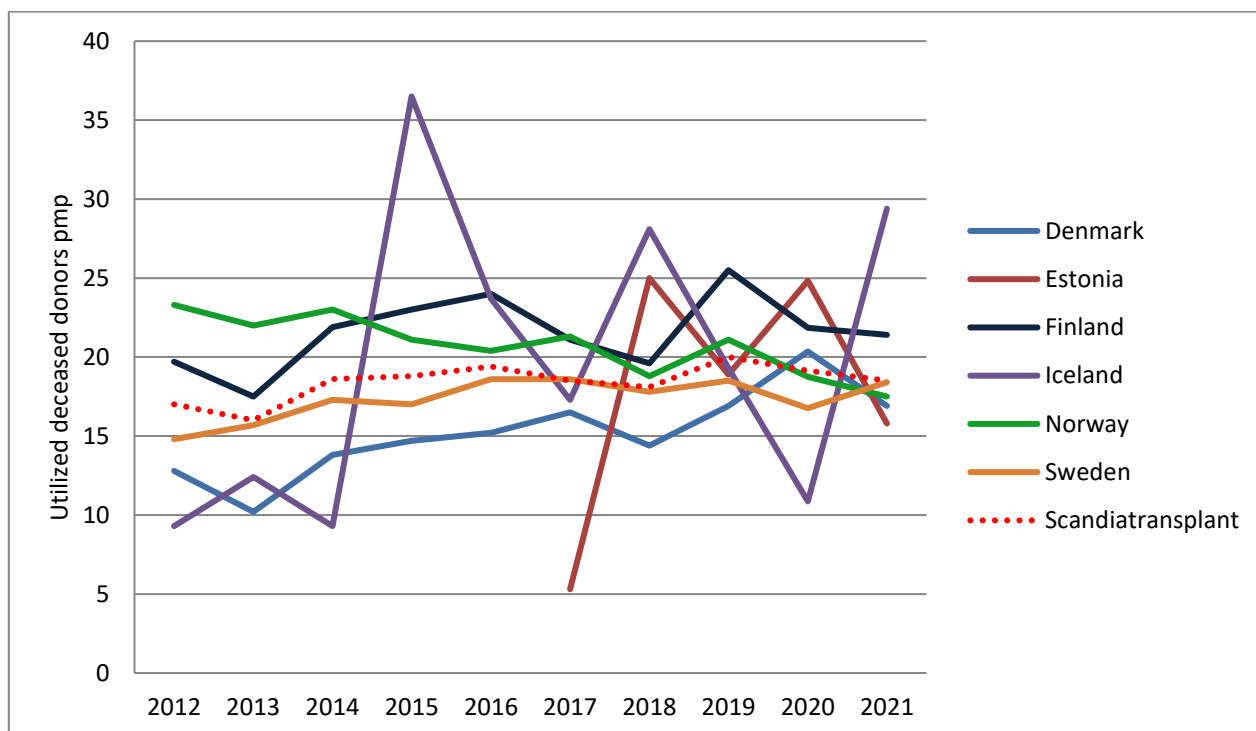


³Definition of utilized donor: An actual donor from whom at least one solid organ was transplanted.
http://www.scandiatriplant.org/data/Deceaseddonordefv_3.pdf

⁴ Figures included from Estonia year 2017 starts from October 1st 2017

Utilized deceased donors pmp⁵ in Scandiatransplant

Year	Denmark	Estonia ⁶	Finland	Iceland	Norway	Sweden	Scandiatransplant
2012	12,8		19,7	9,3	23,3	14,8	17,0
2013	10,2		17,5	12,4	22,0	15,7	16,0
2014	13,8		21,9	9,3	23,0	17,3	18,6
2015	14,7		23,0	36,5	21,1	17,0	18,8
2016	15,2		24,0	23,7	20,4	18,6	19,4
2017	16,5	5,3	21,1	17,3	21,3	18,6	18,5
2018	14,4	25,0	19,6	28,1	18,8	17,8	18,1
2019	16,9	18,9	25,5	19,3	21,1	18,5	20,0
2020	20,4	24,8	21,9	10,9	18,8	16,8	19,1
2021	16,9	15,8	21,4	29,4	17,5	18,4	18,5



⁵ pmp: per million population

⁶ Figures included from Estonia year 2017 starts from October 1st 2017

Utilized deceased donors⁷ in numbers divided into DBD and cDCD in Scandiatransplant

DBD donors

Year	Denmark	Estonia ⁸	Finland	Iceland	Norway	Sweden	Scandiatransplant
2012	73		107	3	116	141	440
2013	58		95	4	110	151	418
2014	79		120	3	114	166	482
2015	85		126	12	105	167	495
2016	89		132	8	105	185	519
2017	97	7	116	6	105	188	519
2018	85	33	108	10	100	172	508
2019	100	25	141	7	113	187	573
2020	121	33	121	4	101	163	543
2021	101	21	115	11	95	165	508

cDCD donors

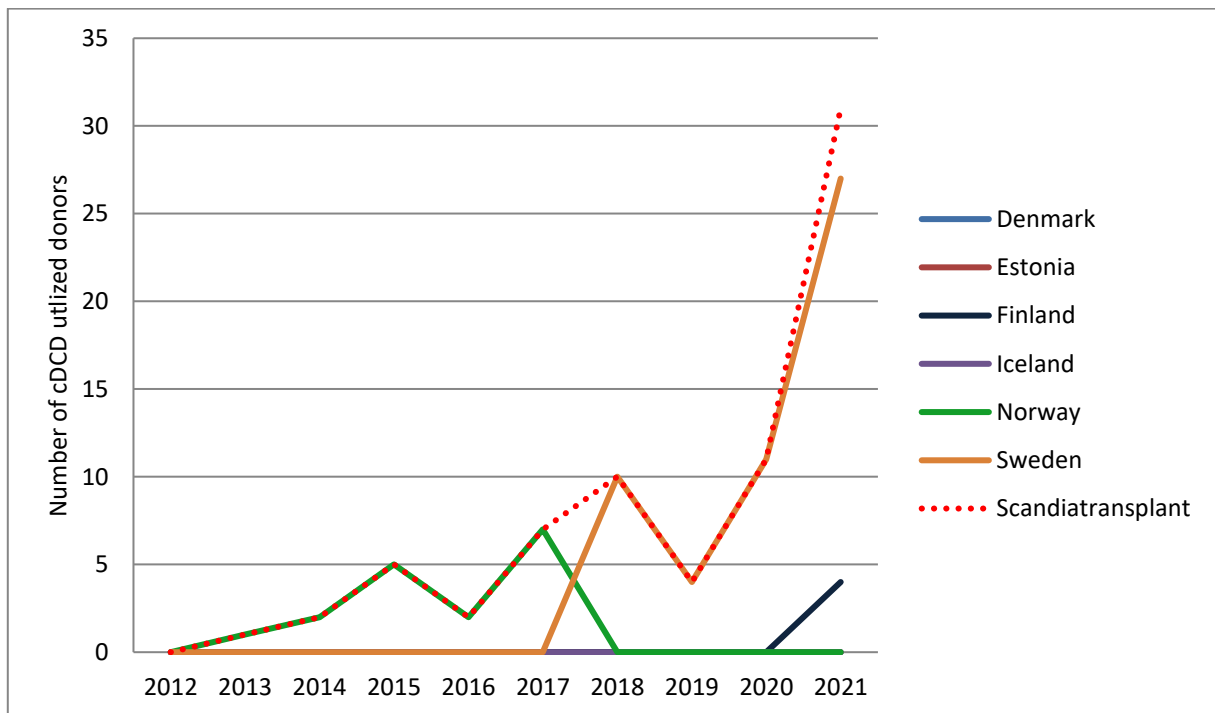
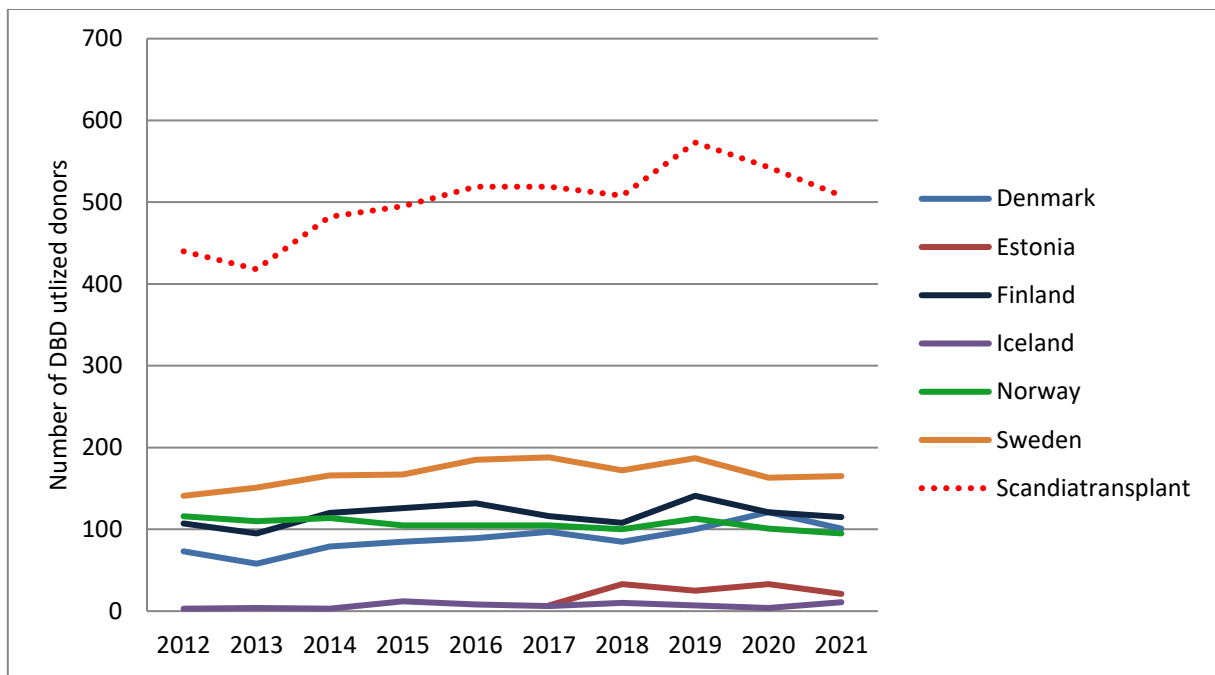
Year	Denmark	Estonia ⁹	Finland	Iceland	Norway	Sweden	Scandiatransplant
2012	0		0	0	0	0	0
2013	0		0	0	1	0	1
2014	0		0	0	2	0	2
2015	0		0	0	5	0	5
2016	0		0	0	2	0	2
2017	0	0	0	0	7	0	7
2018	0	0	0	0	0	10	10
2019	0	0	0	0	0	4	4
2020	0	0	0	0	0	11	11
2021	0	0	4	0	0	27	31

⁷Definition of utilized donor: An actual donor from whom at least one solid organ was transplanted.

http://www.scandiatransplant.org/data/Deceaseddonordefv_3.pdf

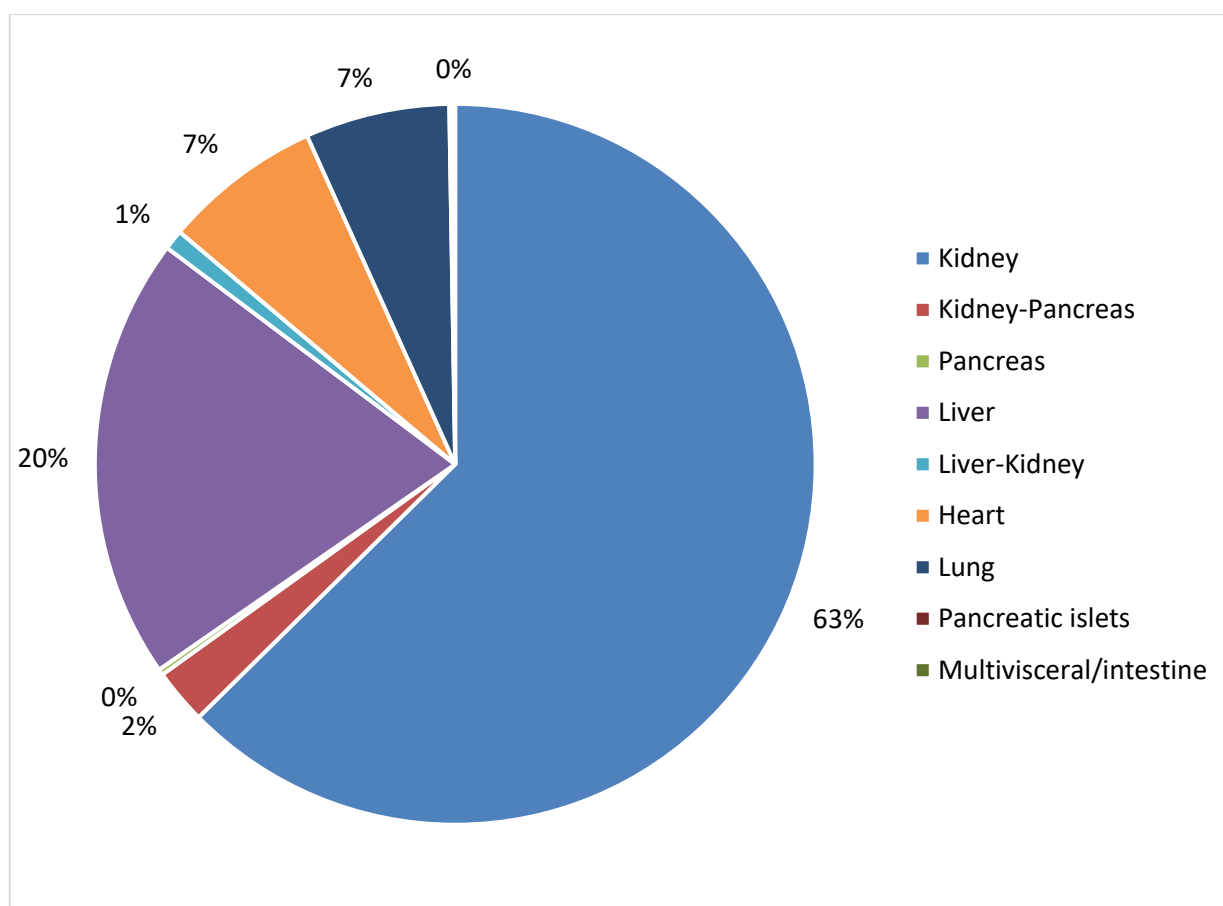
⁸ Figures included from Estonia year 2017 starts from October 1st 2017

⁹ Figures included from Estonia year 2017 starts from October 1st 2017



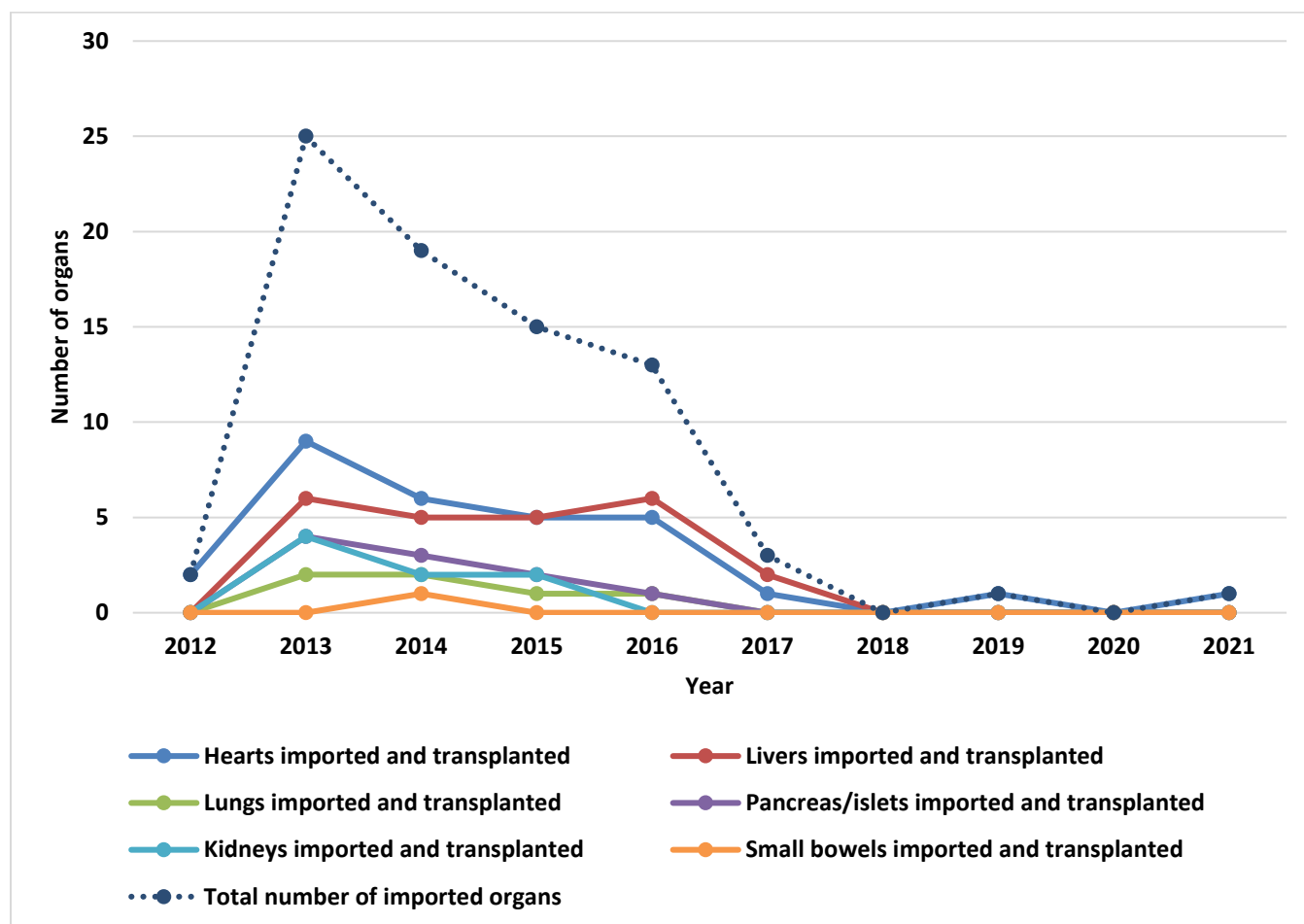
Transplanted patients in Scandiatransplant 2021

Organ(s) transplanted	Number of transplantations
Kidney	1189
Kidney-Pancreas	47
Pancreas	5
Liver	378
Liver-Kidney	17
Heart	135
Lung	123
Pancreatic islets	3
Multivisceral/intestine	2
Total transplanted patients	1899



Organs imported and exported between EOEO's¹⁰ and Scandiatransplant¹¹

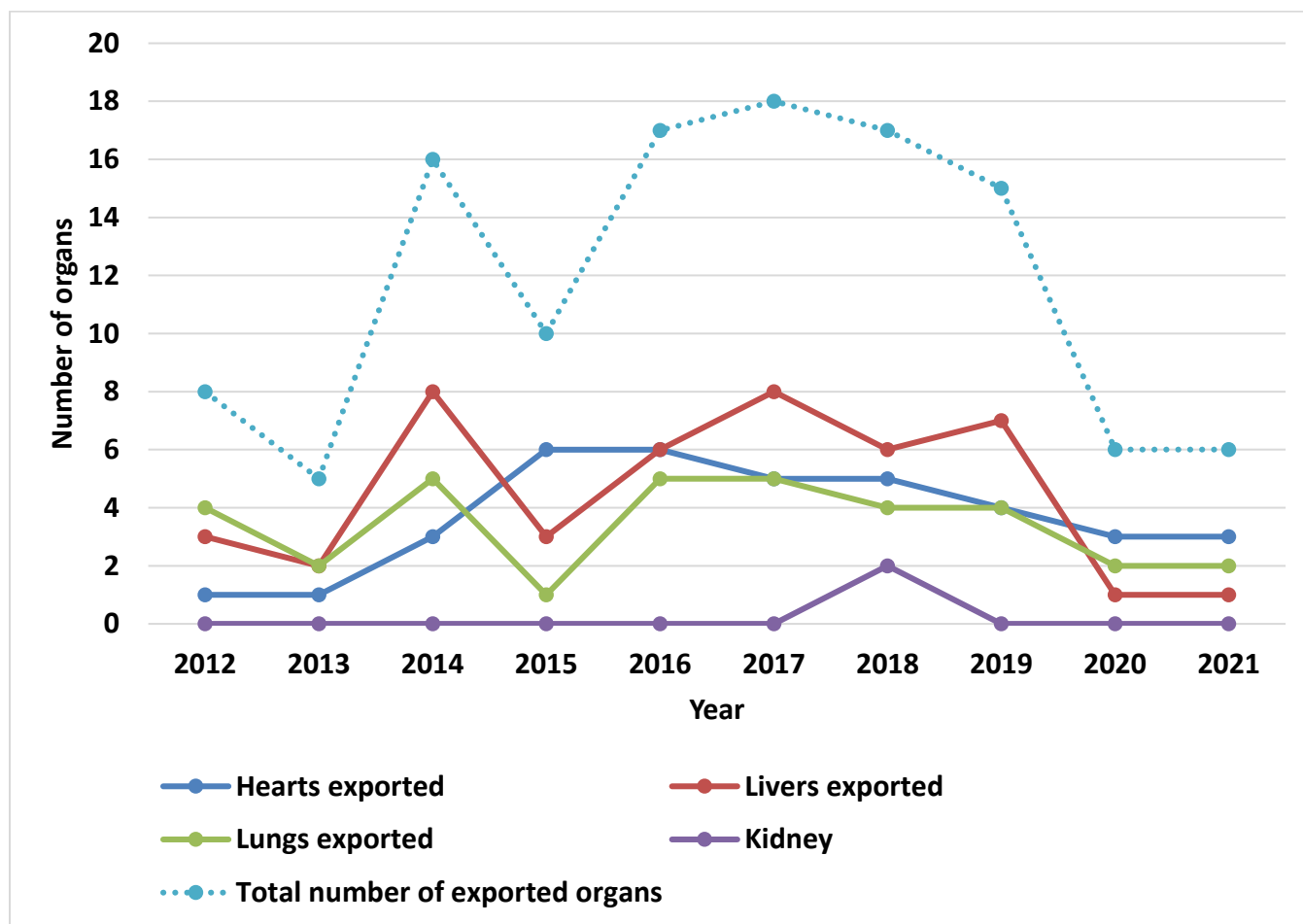
Organs imported from other EOEO's to Scandiatransplant



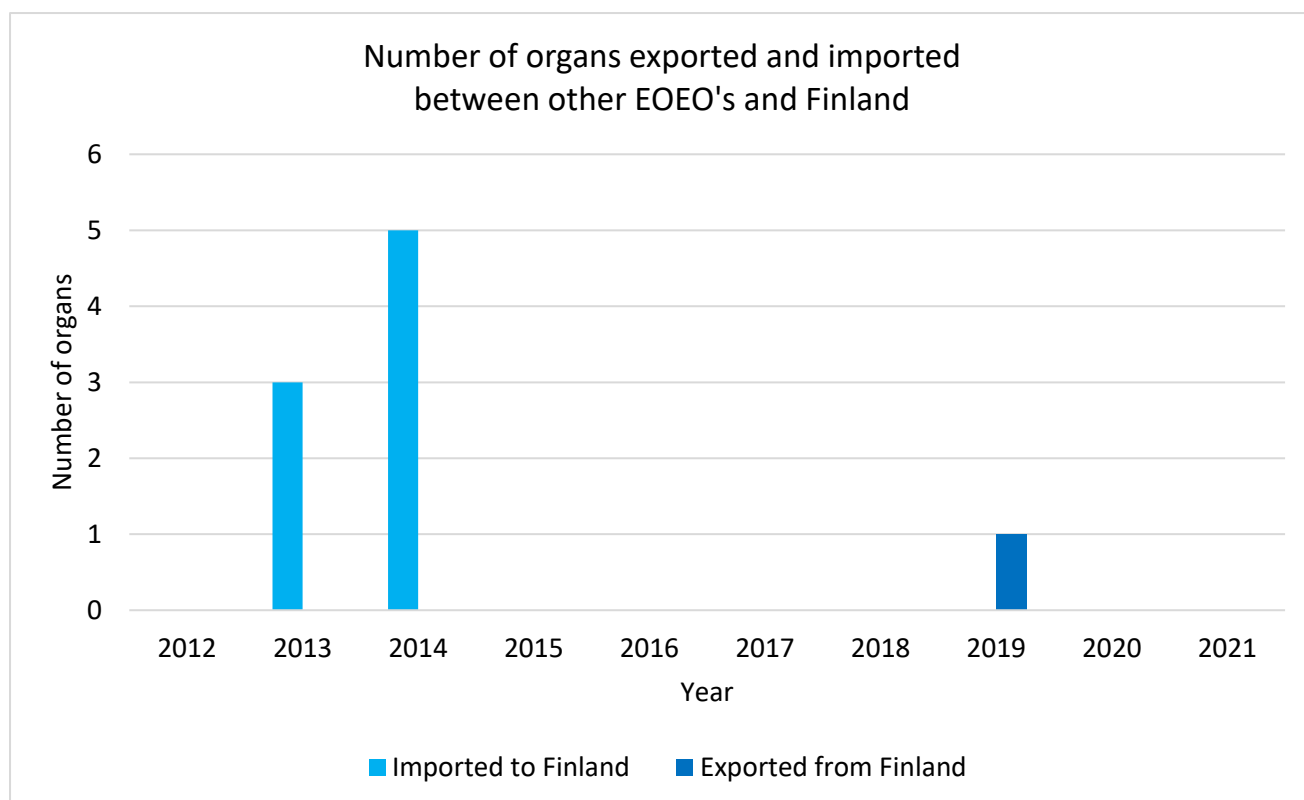
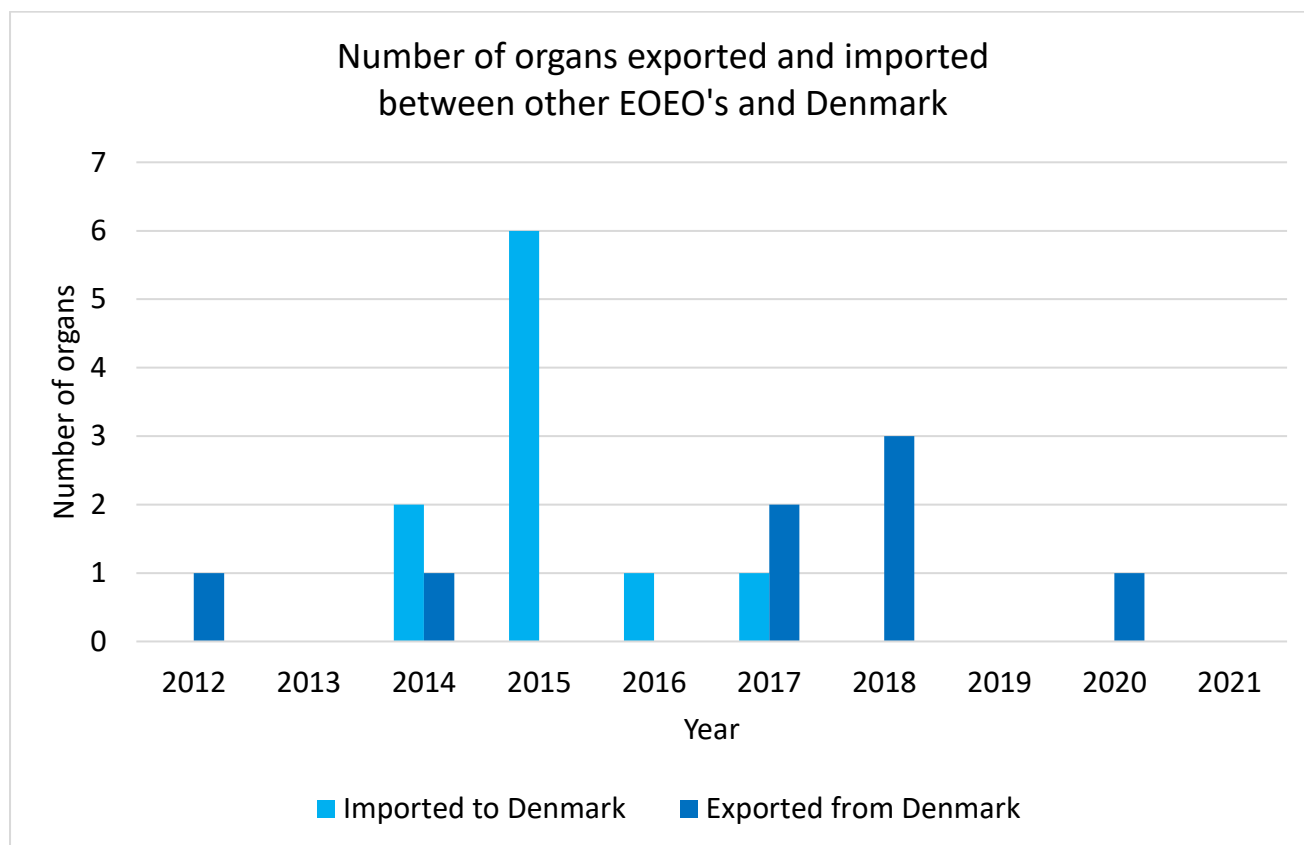
¹⁰ EOEO: European Organ Exchange Organisations (In 2019 a double lung was imported from Switzerland to Denmark, however optimization was not successful)

¹¹ From October 1st 2017 Estonia is regarded as part of Scandiatransplant

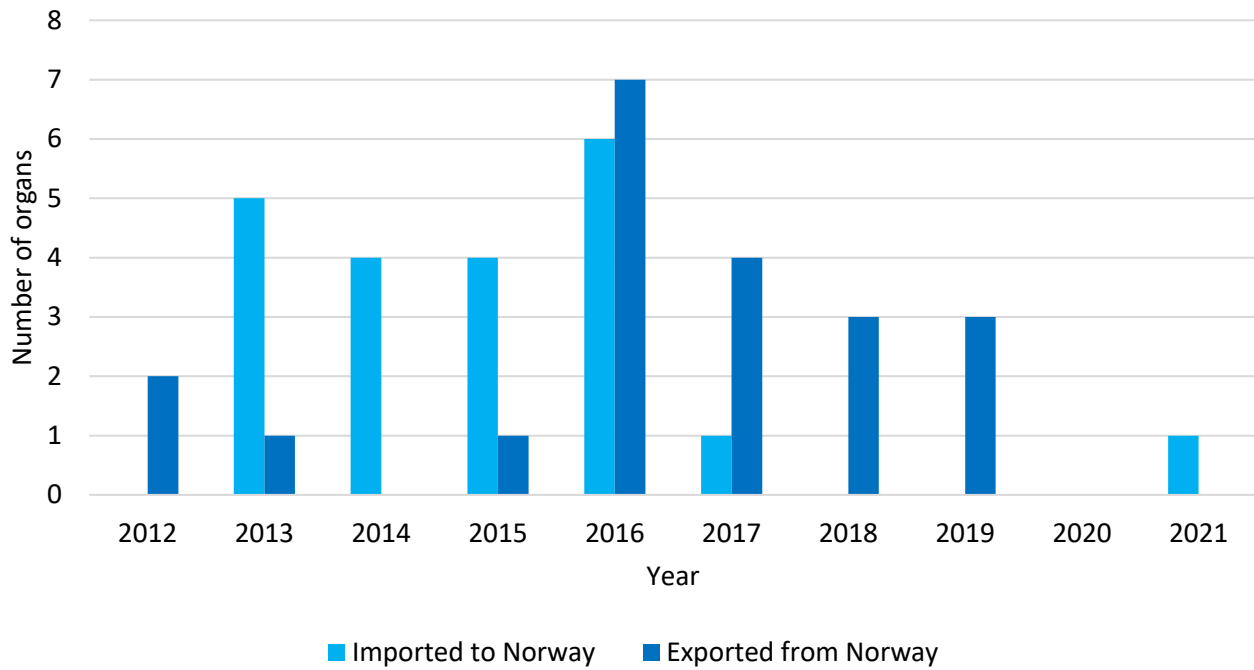
Organs exported to other EOEO's from Scandiatriplant



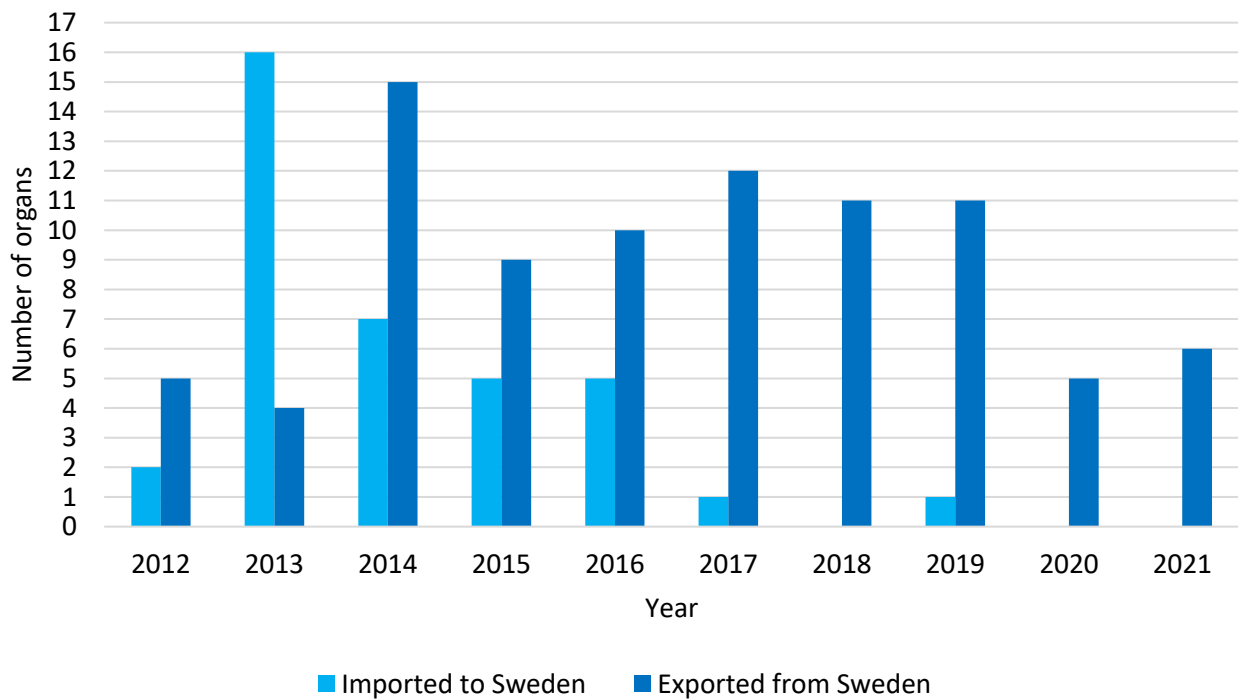
Organs exported and imported between Scandiatriansplant countries and other EOEO's



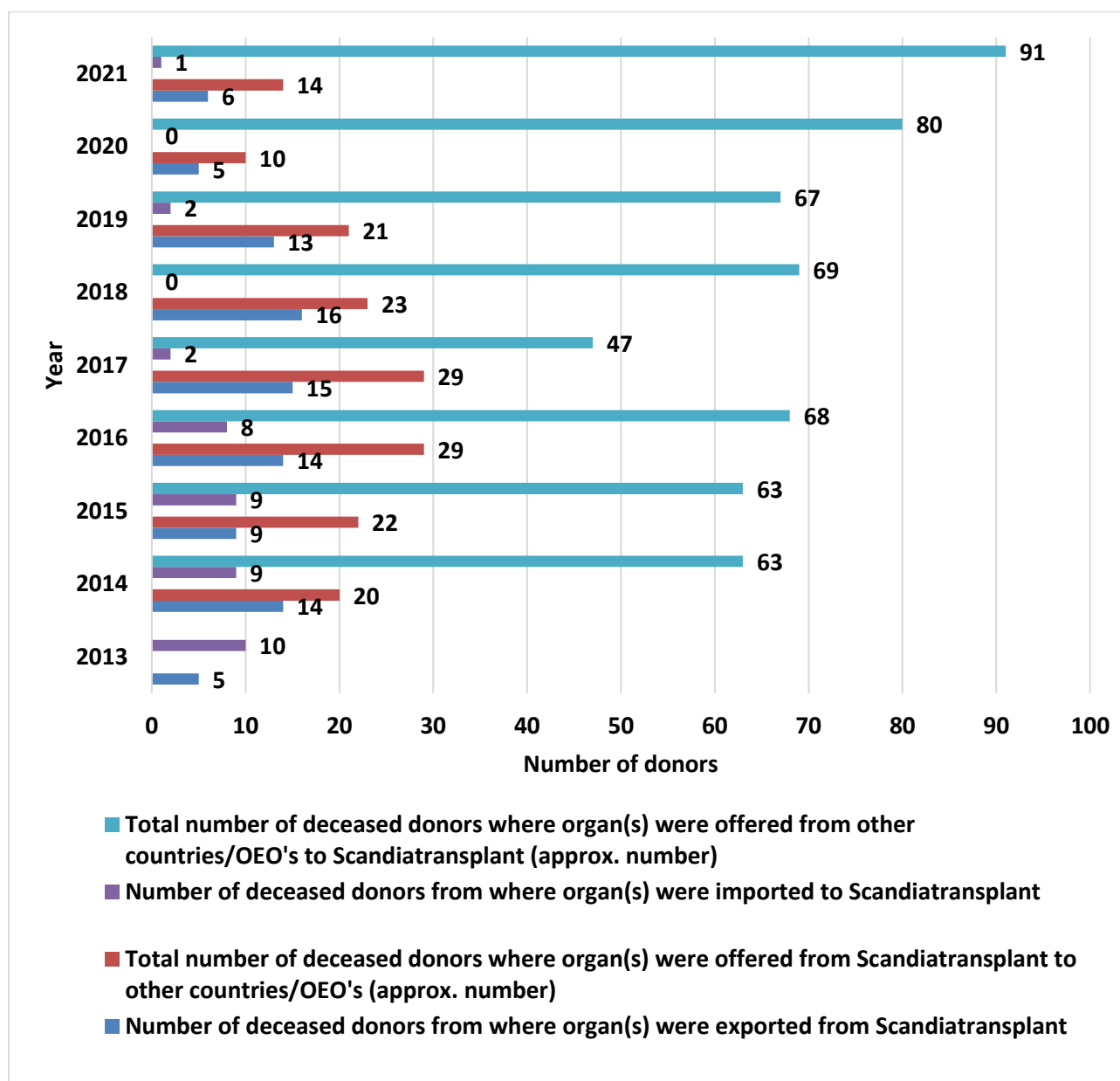
Number of organs exported and imported
between other EOEO's and Norway



Number of organs exported and imported
between other EOEO's and Sweden



Number of deceased donors where organ(s) were offered^{12,13}



¹² The web-based organ offer form and related communication systems for organ offers were introduced in year 2013

¹³ From October 1st 2017 Estonia is regarded as part of Scandiatransplant

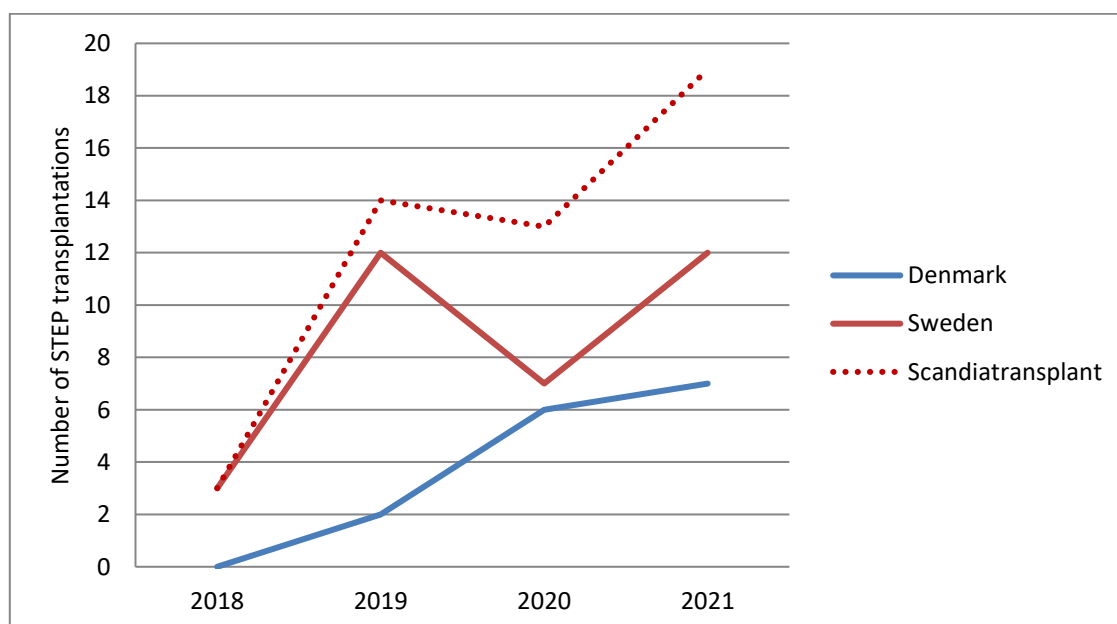
STEP kidneys exported and imported between the Scandiatransplant countries¹⁴

Denmark

	Kidneys transplanted	Import	Export
2018	0	0	0
2019	2	2	2
2020	6	1	1
2021	7	5	5

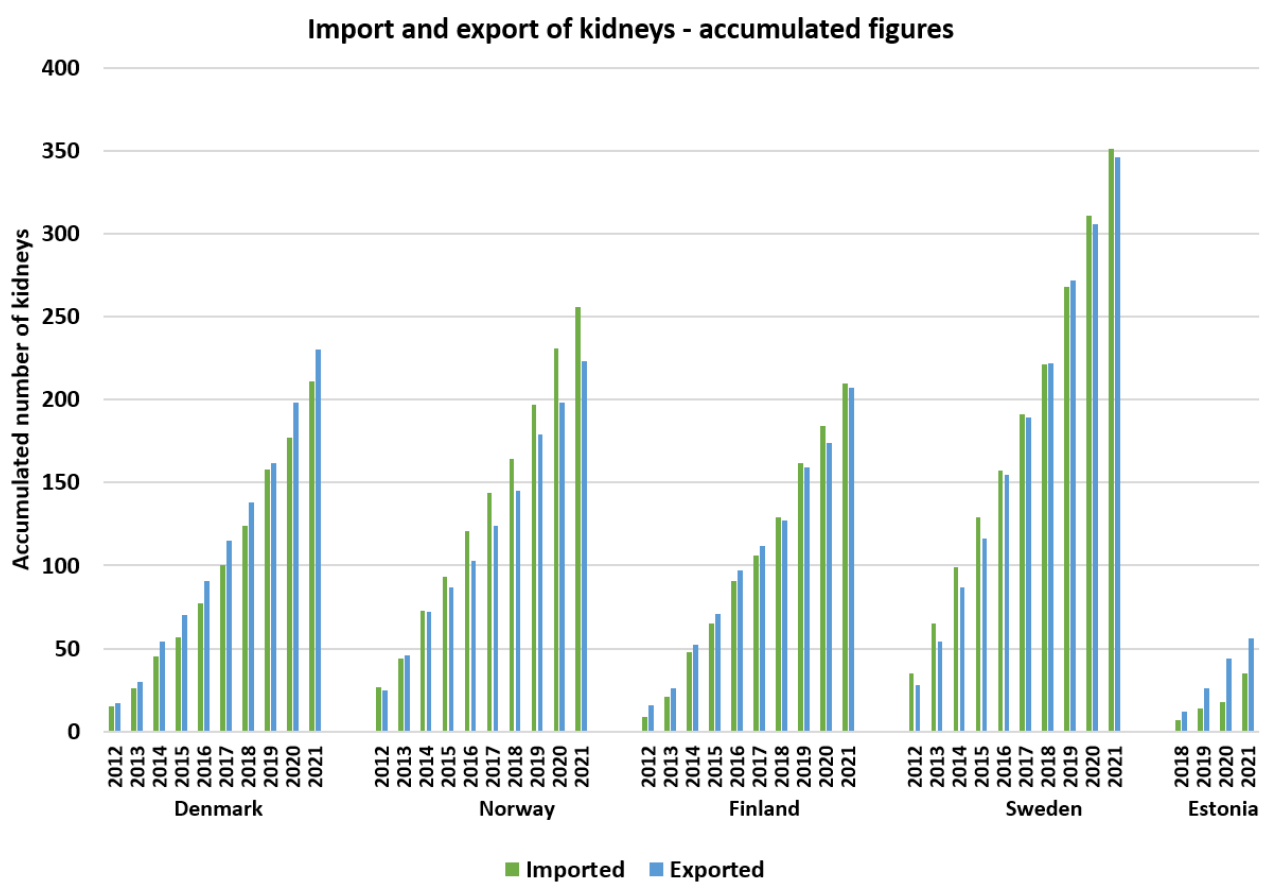
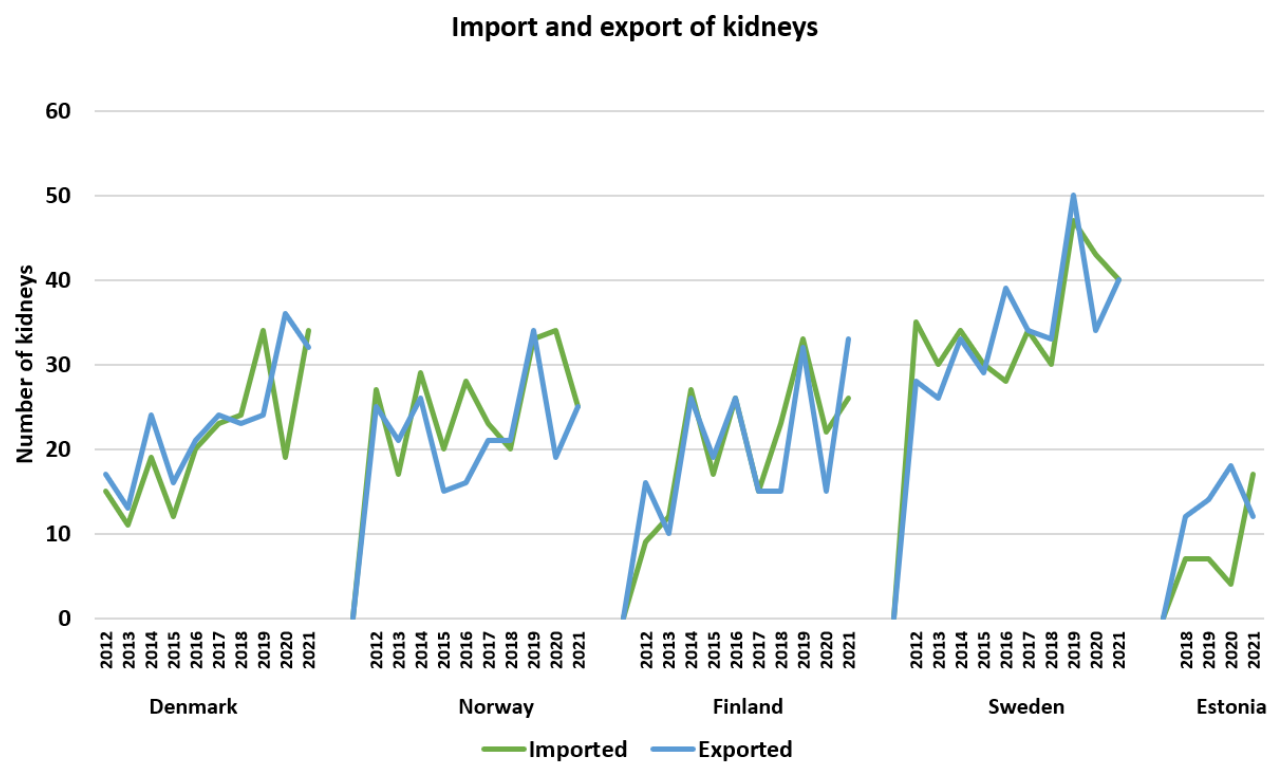
Sweden

	Kidneys transplanted	Import	Export
2018	3	0	0
2019	12	2	2
2020	7	1	1
2021	12	5	5



¹⁴ STEP is the ScandiaTransplant Paired Living Kidney Donor Exchange Program

Kidneys exported and imported between the Scandiatriplant countries¹⁵



¹⁵ Only kidneys from deceased donors and kidneys used for transplantation are included

Kidneys exported and imported¹⁶ between the Scandiatransplant countries in numbers¹⁷ (including import and export to other EOEO's)

Denmark

	Kidneys transplanted	Import	Export	Import EOEO	Export EOEO
2012	137	15	17	0	0
2013	108	11	13	0	0
2014	139	19	24	1	0
2015	154	12	16	2	0
2016	154	20	21	0	0
2017	165	23	24	0	0
2018	159	24	23	0	0
2019	189	34	24	0	0
2020	200	19	36	0	0
2021	184	34	32	0	0

Norway

	Kidneys transplanted	Import	Export	Import EOEO	Export EOEO
2012	218	27	25	0	0
2013	202	17	21	0	0
2014	206	29	26	0	0
2015	191	20	15	0	0
2016	193	28	16	0	0
2017	197	23	21	0	0
2018	168	20	21	0	0
2019	191	33	34	0	0
2020	181	34	19	0	0
2021	164	25	25	0	0

¹⁶ Only kidneys from deceased donors and kidneys used for transplantation are included

¹⁷ Kidney double transplantations are counted as 1

Finland

	Kidneys transplanted	Import	Export	Import EOEO	Export EOEO
2012	188	9	16	0	0
2013	176	12	10	0	0
2014	225	27	26	0	0
2015	229	17	19	0	0
2016	240	26	26	0	0
2017	211	15	15	0	0
2018	206	23	15	0	0
2019	268	33	32	0	0
2020	232	22	15	0	0
2021	222	26	33	0	0

Sweden

	Kidneys transplanted	Import	Export	Import EOEO	Export EOEO
2012	243	35	28	0	0
2013	270	30	26	4	0
2014	289	34	33	1	0
2015	295	30	29	0	0
2016	290	28	39	0	0
2017	349	34	34	0	0
2018	304	30	33	0	2
2019	329	47	50	0	0
2020	313	43	34	0	0
2021	327	40	40	0	0

Estonia¹⁸

	Kidneys transplanted	Import	Export	Import EOEO	Export EOEO
2017	10	0	1	0	0
2018	54	7	12	0	0
2019	39	7	14	0	0
2020	43	4	18	0	0
2021	45	17	12	0	0

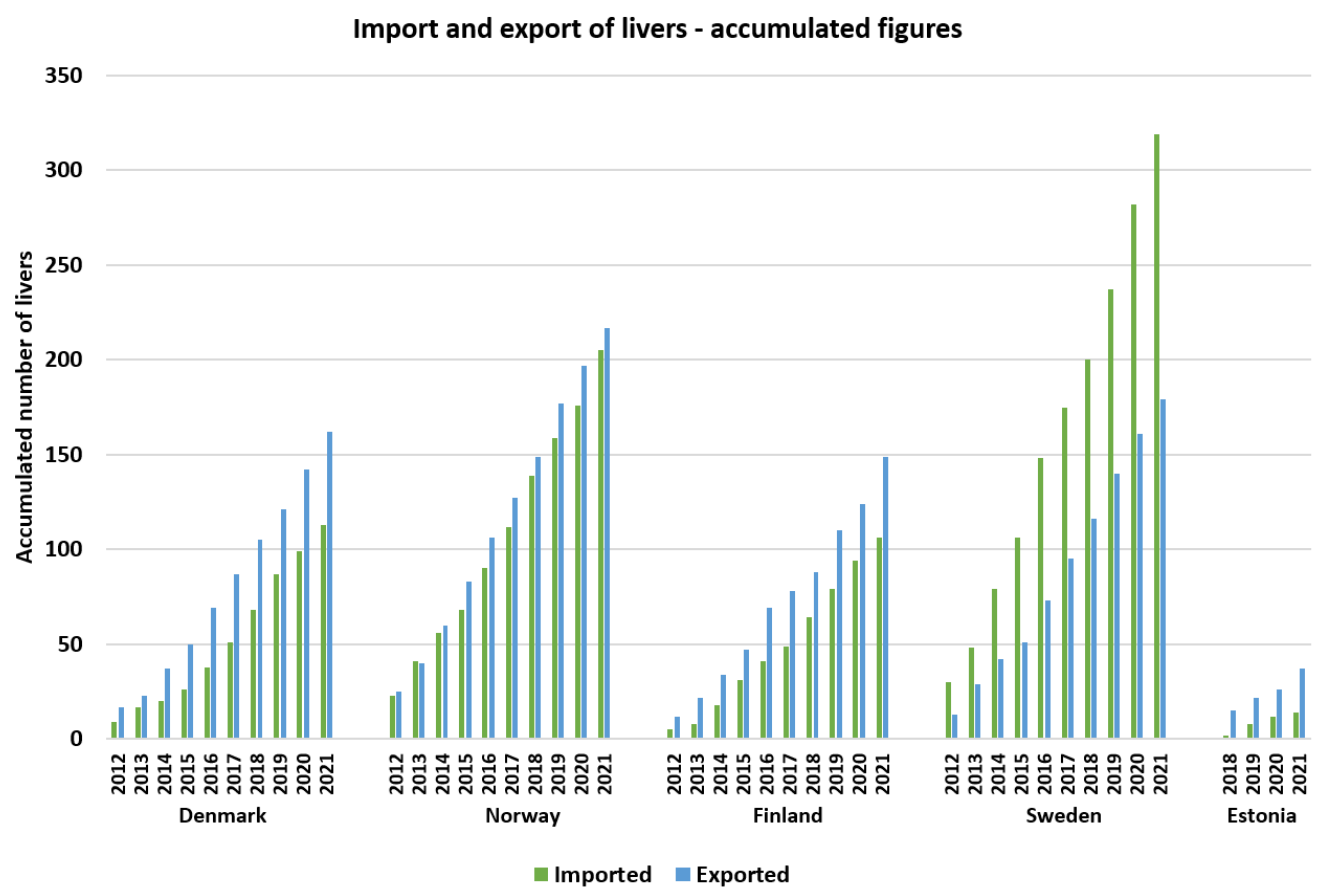
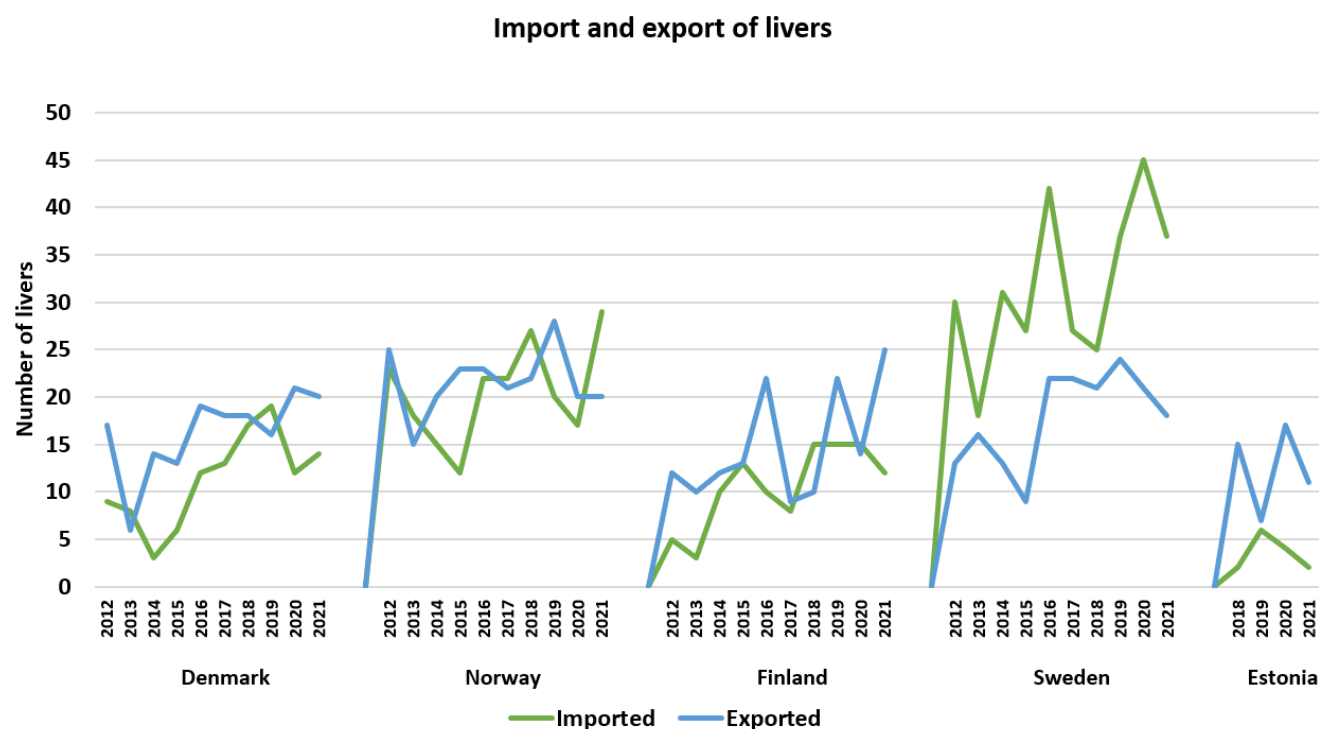
Iceland¹⁹

	Kidneys transplanted	Import	Export	Import EOEO	Export EOEO
2019	2	0	0	0	0
2020	3	0	0	0	0
2021	7	0	0	0	0

¹⁸ From October 1st 2017 Estonia is regarded as part of Scandiatransplant

¹⁹ From 2019 some of the deceased donor kidney transplantations on Icelandic patients will be made in Iceland

Livers exported and imported between the Scandiatriplant countries²⁰



²⁰ Only livers used for transplantation are included

**Livers exported and imported²¹ between the Scandiatransplant countries in numbers²²
(including import and export to other EOEO's)**

Denmark

	Livers transplanted	Import	Export	Import EOEO	Export EOEO
2012	48	9	17	0	0
2013	42	8	6	0	0
2014	47	3	14	1	0
2015	58	6	13	1	0
2016	59	12	19	0	0
2017	57	13	18	1	1
2018	43	17	18	0	1
2019	64	19	16	0	0
2020	63	12	21	0	0
2021	49	14	20	0	0

Norway

	Livers transplanted	Import	Export	Import EOEO	Export EOEO
2012	100	23	25	0	2
2013	110	18	15	2	1
2014	100	15	20	1	0
2015	83	12	23	2	1
2016	100	22	23	4	4
2017	102	22	21	1	3
2018	94	27	22	0	2
2019	94	20	28	0	2
2020	88	17	20	0	0
2021	97	29	20	0	0

²¹ Only livers used for transplantation are included

²² If the liver is transplanted as split liver, each split is counted as 1

Finland

	Livers transplanted	Import	Export	Import EOEO	Export EOEO
2012	52	5	12	0	0
2013	49	3	10	0	0
2014	59	10	12	0	0
2015	77	13	13	0	0
2016	61	10	22	0	0
2017	63	8	9	0	0
2018	66	15	10	0	0
2019	64	15	22	0	0
2020	74	15	14	0	0
2021	75	12	25	0	0

Sweden

	Livers transplanted	Import	Export	Import EOEO	Export EOEO
2012	142	30	13	0	1
2013	150	18	16	4	1
2014	171	31	13	3	3
2015	176	27	9	2	5
2016	197	42	22	2	2
2017	176	27	22	0	4
2018	162	25	21	0	3
2019	183	37	24	0	5
2020	171	45	21	0	1
2021	169	37	18	0	1

Estonia²³

	Livers transplanted	Import	Export	Import EOEO	Export EOEO
2017	6	2	2	0	0
2018	10	2	15	0	0
2019	10	6	7	0	0
2020	12	4	17	0	0
2021	4	2	11	0	0

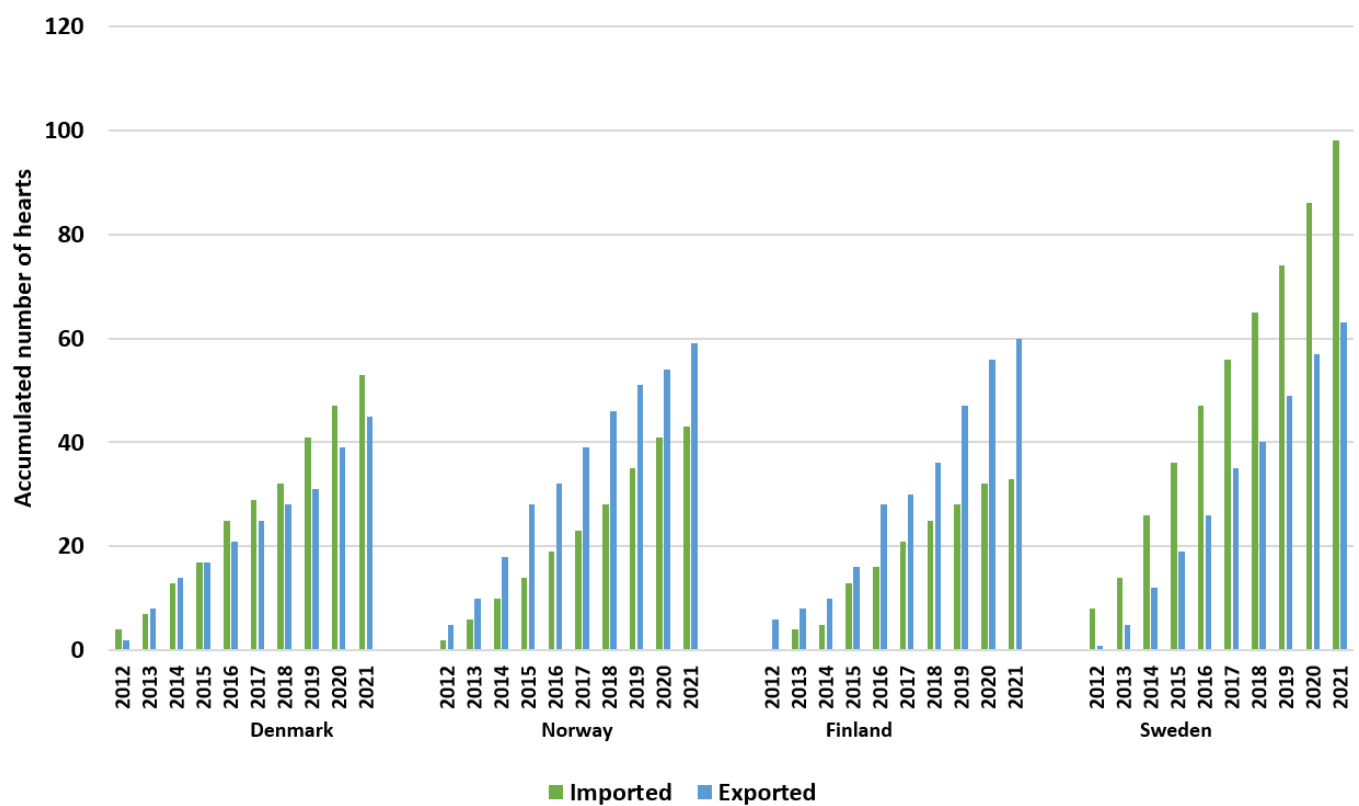
²³ From October 1st 2017 Estonia is regarded as part of Scandiatransplant

Hearts exported and imported between the Scandiatransplant countries²⁴

Import and export of hearts



Import and export of hearts - accumulated figures



²⁴ Only hearts used for transplantation are included

**Hearts exported and imported²⁵ between the Scandiatransplant countries in numbers
(including import and export to other EOEO's)**

Denmark

	Hearts transplanted	Import	Export	Import EOEO	Export EOEO
2012	26	4	2	0	0
2013	17	3	6	0	0
2014	32	6	6	0	0
2015	27	4	3	2	0
2016	29	8	4	1	0
2017	25	4	4	0	1
2018	26	3	3	0	2
2019	30	9	3	0	0
2020	32	6	8	0	1
2021	24	6	6	0	0

Norway

	Hearts transplanted	Import	Export	Import EOEO	Export EOEO
2012	32	2	5	0	0
2013	37	4	5	0	0
2014	34	4	8	1	0
2015	37	4	10	0	0
2016	21	5	4	1	2
2017	32	4	7	0	1
2018	29	5	7	0	1
2019	43	7	5	0	1
2020	30	6	3	0	0
2021	23	2	5	1	0

²⁵ Only hearts used for transplantation are included

Finland²⁶

	Hearts transplanted	Import	Export	Import EOEO	Export EOEO
2012	22	0	6	0	0
2013	21	4	2	3	0
2014	24	1	2	4	0
2015	27	8	6	0	0
2016	31	3	12	0	0
2017	26	5	2	0	0
2018	47	4	6	0	0
2019	30	3	11	0	1
2020	22	4	9	0	0
2021	22	1	4	0	0

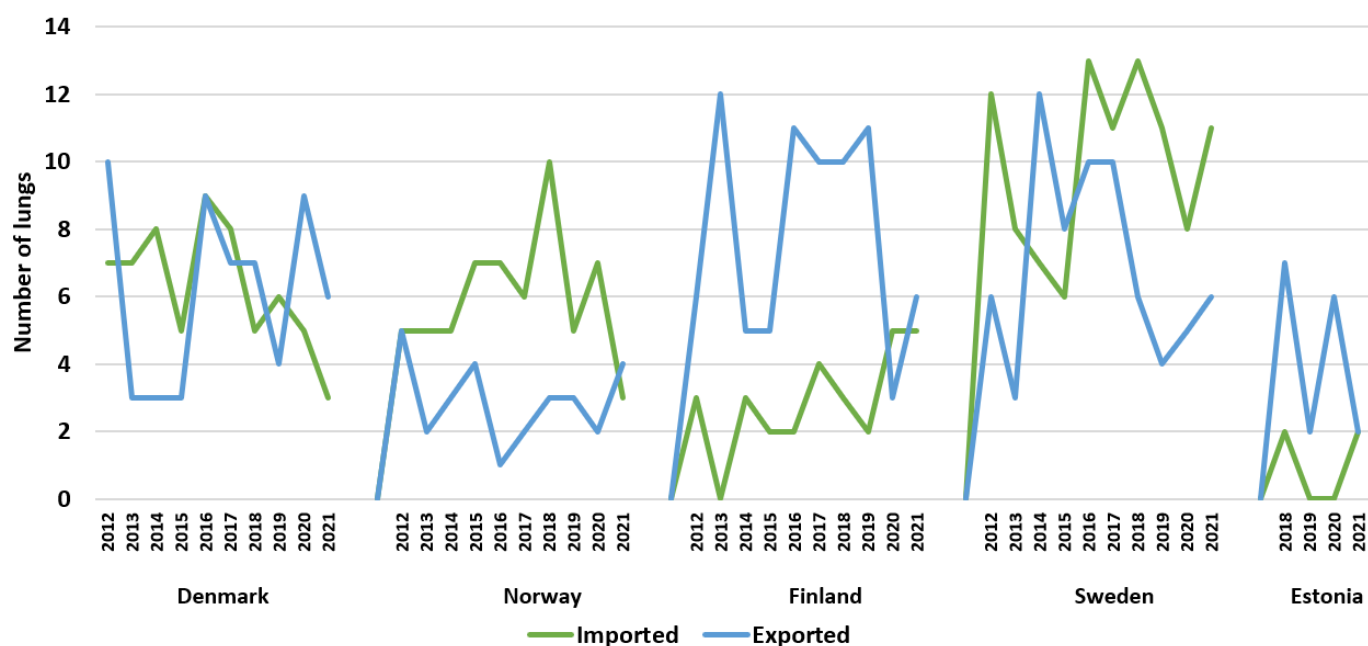
Sweden

	Hearts transplanted	Import	Export	Import EOEO	Export EOEO
2012	46	8	1	2	1
2013	55	6	4	6	1
2014	67	12	7	1	4
2015	63	10	7	3	1
2016	64	11	7	2	4
2017	62	9	9	1	3
2018	66	9	5	0	2
2019	60	9	9	1	2
2020	54	12	8	0	2
2021	66	12	6	0	3

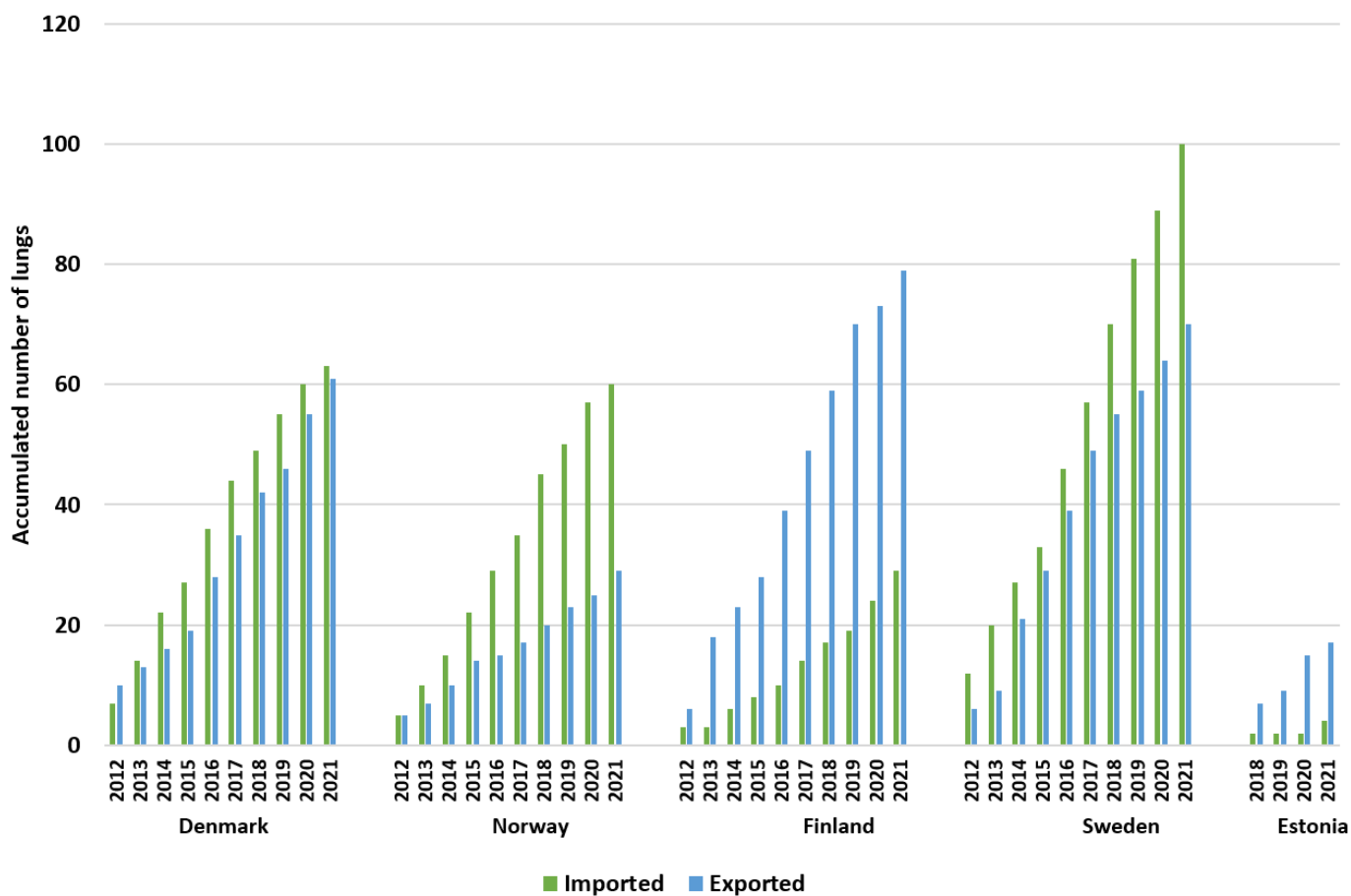
²⁶ Estonian heart transplantations are performed in Finland and included in the number of heart transplantation. Furthermore, Estonian heart donors are not calculated as import/export when used for transplantation in Finland.

Lungs exported and imported between the Scandiatriplant countries²⁷

Import and export of lungs



Import and export of lungs - accumulated figures



²⁷ Only lungs used for transplantation are included

**Lungs exported and imported²⁸ between the Scandiatransplant countries in numbers²⁹
(including import and export to other EOEO's)**

Denmark

	Lungs transplanted	Import	Export	Import EOEO	Export EOEO
2012	30	7	10	0	1
2013	31	7	3	0	0
2014	29	8	3	0	1
2015	35	5	3	1	0
2016	29	9	9	0	0
2017	35	8	7	0	0
2018	25	5	7	0	0
2019	30	6	4	0	0
2020	29	5	9	0	0
2021	22	3	6	0	0

Norway

	Lungs transplanted	Import	Export	Import EOEO	Export EOEO
2012	28	5	5	0	0
2013	33	5	2	1	0
2014	33	5	3	0	0
2015	34	7	4	0	0
2016	34	7	1	1	1
2017	35	6	2	0	0
2018	30	10	3	0	0
2019	33	5	3	0	0
2020	28	7	2	0	0
2021	24	3	4	0	0

²⁸ Only lungs used for transplantation are included

²⁹ Single lung, double lung and heart-lung transplantations are all counted as 1

Finland

	Lungs transplanted	Import	Export	Import EOEO	Export EOEO
2012	27	3	6	0	0
2013	15	0	12	0	0
2014	17	3	5	1	0
2015	24	2	5	0	0
2016	18	2	11	0	0
2017	24	4	10	0	0
2018	18	3	10	0	0
2019	27	2	11	0	0
2020	21	5	3	0	0
2021	24	5	6	0	0

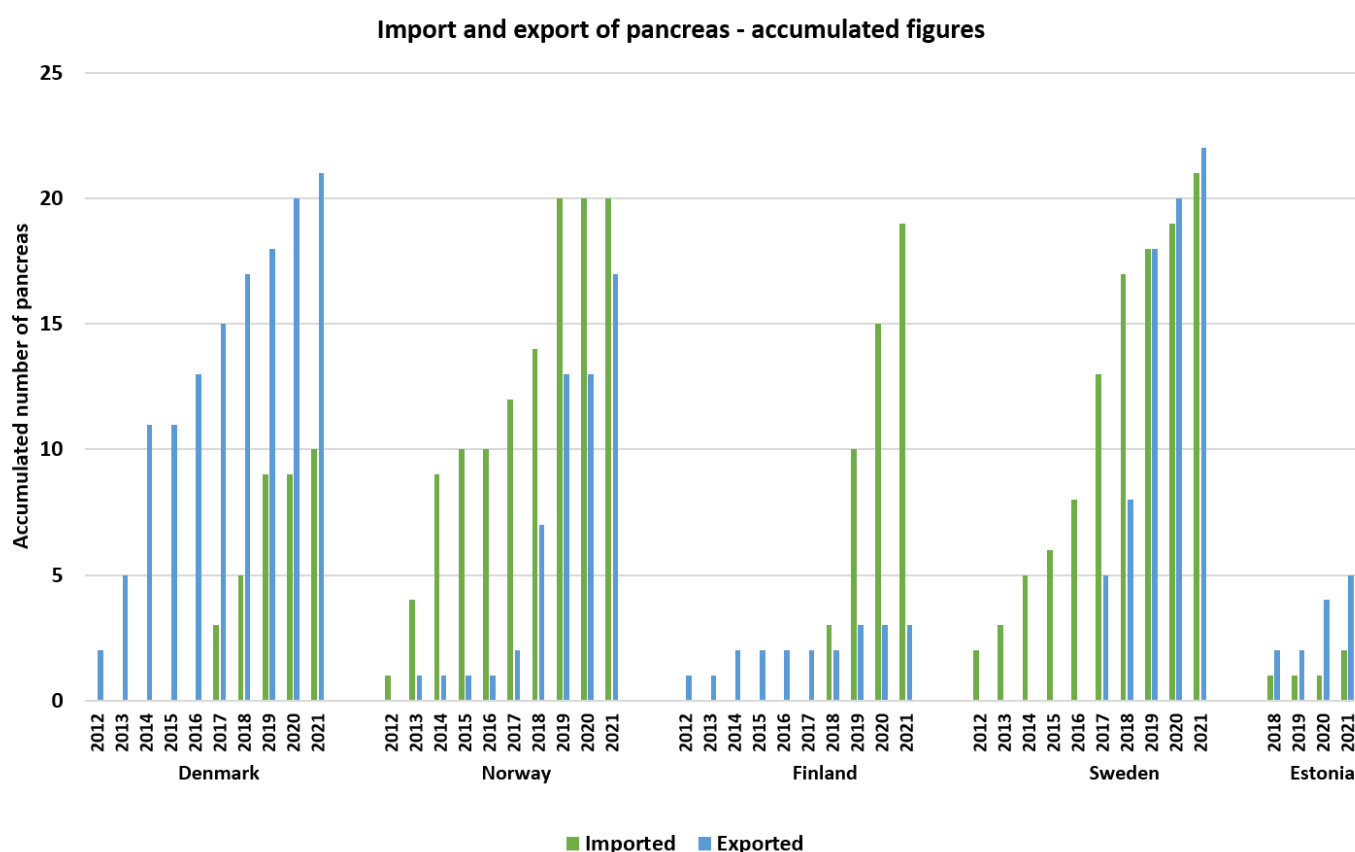
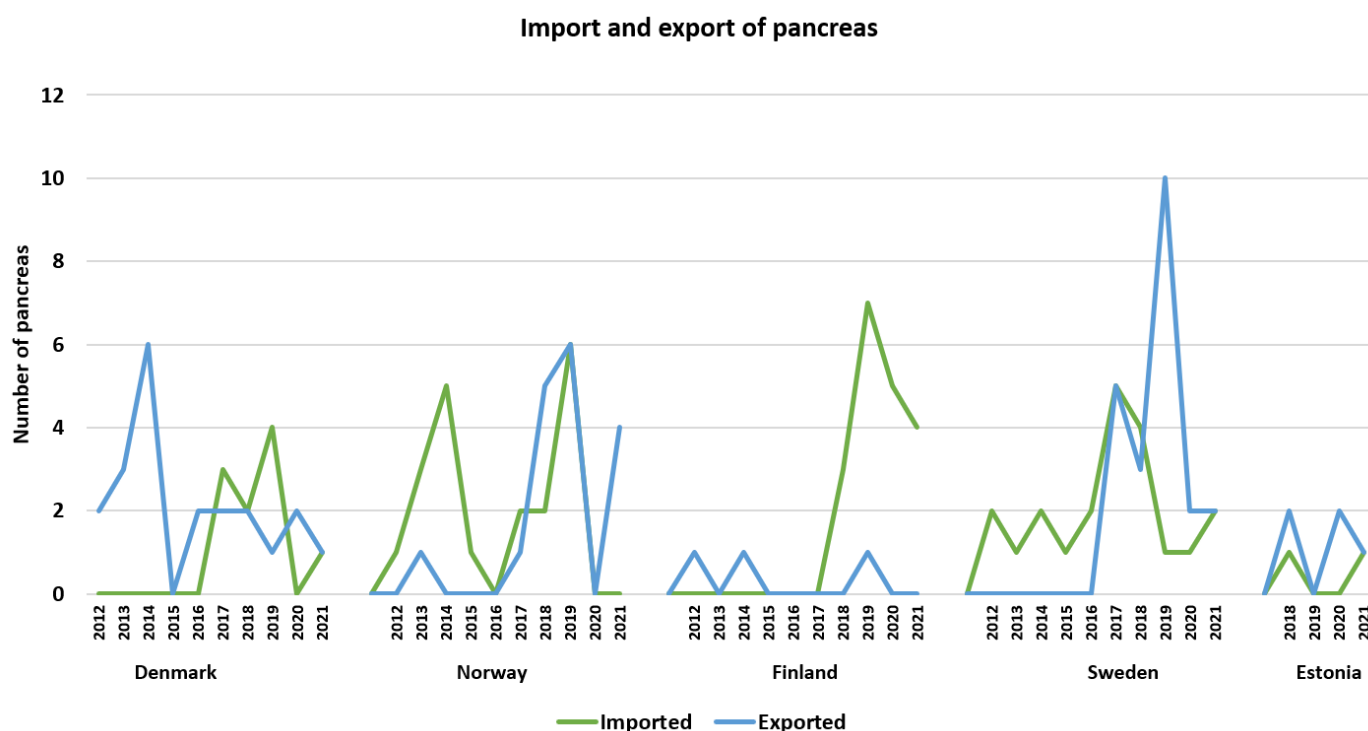
Sweden

	Lungs transplanted	Import	Export	Import EOEO	Export EOEO
2012	60	12	6	0	3
2013	58	8	3	1	2
2014	65	7	12	1	8
2015	48	6	8	0	3
2016	62	13	10	0	4
2017	65	11	10	0	5
2018	74	13	6	0	4
2019	56	11	4	0	4
2020	51	8	5	0	2
2021	51	11	6	0	2

Estonia

	Lungs transplanted	Import	Export	Import EOEO	Export EOEO
2017	2	0	0	0	0
2018	4	2	7	0	0
2019	3	0	2	0	0
2020	0	0	6	0	0
2021	2	2	2	0	0

Pancreas exported and imported between the Scandiatriplant countries^{30,31}



³⁰ Only pancreas used for whole pancreas transplantation are included

³¹ In the years 2012-2015 14 Danish patients were transplanted with kidney-pancreas/pancreas in Norway, which explains the increase in exports and imports of pancreas for these two countries.

Pancreas exported and imported³² between the Scandiatransplant countries in numbers (including import and export to other EOEO's)

Denmark

	Pancreas transplanted	Import	Export	Import EOEO	Export EOEO
2012	0	0	2	0	0
2013	0	0	3	0	0
2014	0	0	6	0	0
2015	2	0	0	0	0
2016	7	0	2	0	0
2017	9	3	2	0	0
2018	5	2	2	0	0
2019	6	4	1	0	0
2020	7	0	2	0	0
2021	4	1	1	0	0

Norway

	Pancreas transplanted	Import	Export	Import EOEO	Export EOEO
2012	28	1	0	0	0
2013	39	3	1	2	0
2014	31	5	0	2	0
2015	31	1	0	2	0
2016	20	0	0	0	0
2017	24	2	1 ³³	0	0
2018	15	2	5	0	0
2019	15	6	6	0	0
2020	6	0	0	0	0
2021	5	0	4	0	0

³² Only pancreas used for whole pancreas transplantation are included

³³ +1 for a Norwegian recipient transplanted in Sweden

Finland

	Pancreas transplanted	Import	Export	Import EOEO	Export EOEO
2012	8	0	1	0	0
2013	10	0	0	0	0
2014	15	0	1	0	0
2015	17	0	0	0	0
2016	27	0	0	0	0
2017	21	0	0	0	0
2018	23	3	0	0	0
2019	39	7	1	0	0
2020	26	5	0	0	0
2021	31	4	0	0	0

Sweden

	Pancreas transplanted	Import	Export	Import EOEO	Export EOEO
2012	28	2	0	0	0
2013	38	1	0	1	0
2014	38	2	0	1	0
2015	30	1	0	0	0
2016	24	2	0	1	0
2017	25	3	5	0	0
2018	18	4	3	0	0
2019	23	1	10	0	0
2020	13	1	2	0	0
2021	13	2	2	0	0

Estonia

	Pancreas transplanted	Import	Export	Import EOEO	Export EOEO
2017	1	0	0	0	0
2018	2	1	2	0	0
2019	2	0	0	0	0
2020	6	0	2	0	0
2021	1	1	1	0	0

Intestine exported and imported³⁴ between the Scandiatransplant countries and other EOEO's

	Import/export	Import/export EOEO
2012	0	0
2013	0	0
2014	0	1 from EOEO to Sweden
2015	0	0
2016	1 from Denmark to Sweden	0
2017	1 from Norway to Sweden (Norwegian recipient)	0
2018	1 from Denmark to Sweden	0
2019	0	0
2020	0	0
2021	0	0

³⁴ Only intestine used for transplantation is included

SAEs and SARs reported through the Scandiatransplant system in 2021

Between January 1st and December 31st, 2021 there has been 13 SAE/SARs reported through the Scandiatransplant IT-system. In 2018 there were 15 reports, in 2019 12 reports, and in 2020 5 reports.

In 2021 there were 6 reports from Sweden, 3 from Estonia, two from Norway, one from Denmark and one from Finland. In 6 reports the event involved donor or recipients from another country.

The tables below give a short summary of each reported SAE.

If the reporting center is from a different country than the donor from which the SAE originated, this is marked with an *. OIC = Other involved countries.

Reports from transplantation centers in Sweden

ID	Center	OIC	Short description of SAE/SAR
768	Stockholm*	ES	Communication problems with aircraft service resulting in delayed transplantation of liver
788	Skåne*	ES	Unstable donor resulting in coagulated blood in vessels, well functioning graft after machine perfusion
809	Skåne		Coagulation disorder in lung recipient. Donor (Trauma) has problems keeping platelet counts
868	Uppsala		Lack of communication resulted in anesthesia and skin incision in a liver waitlist patient, who was not transplanted
948	Uppsala*	DK	Left kidney 50% decapsulated during procurement
951	Uppsala		Fault first bloodgroup testing (A2) results in liver from bloodgroup A1 donor given to bloodgroup 0 recipient

Reports from transplantation center in Estonia

ID	Center	OIC	Short description of SAE/SAR
828	Tartu	S	Test performed on blood from donor to above (ID 788)
848	Tartu*	S	Donor center changed operation schedule, so that a prio 0 lung could not be exchanged due to time (airport then closed)
888	Tartu*	S	Packaging/labelling error resulted in wrong side kidney to STAMP recipient

Reports from transplantation center in Norway

ID	Center	OIC	Short description of SAE/SAR
908	Oslo		Tuberculosis in lung recipient suspected to have originated from graft
928	Oslo*	DK	Division of airways for lung transplantation not done correctly probably due to anatomy

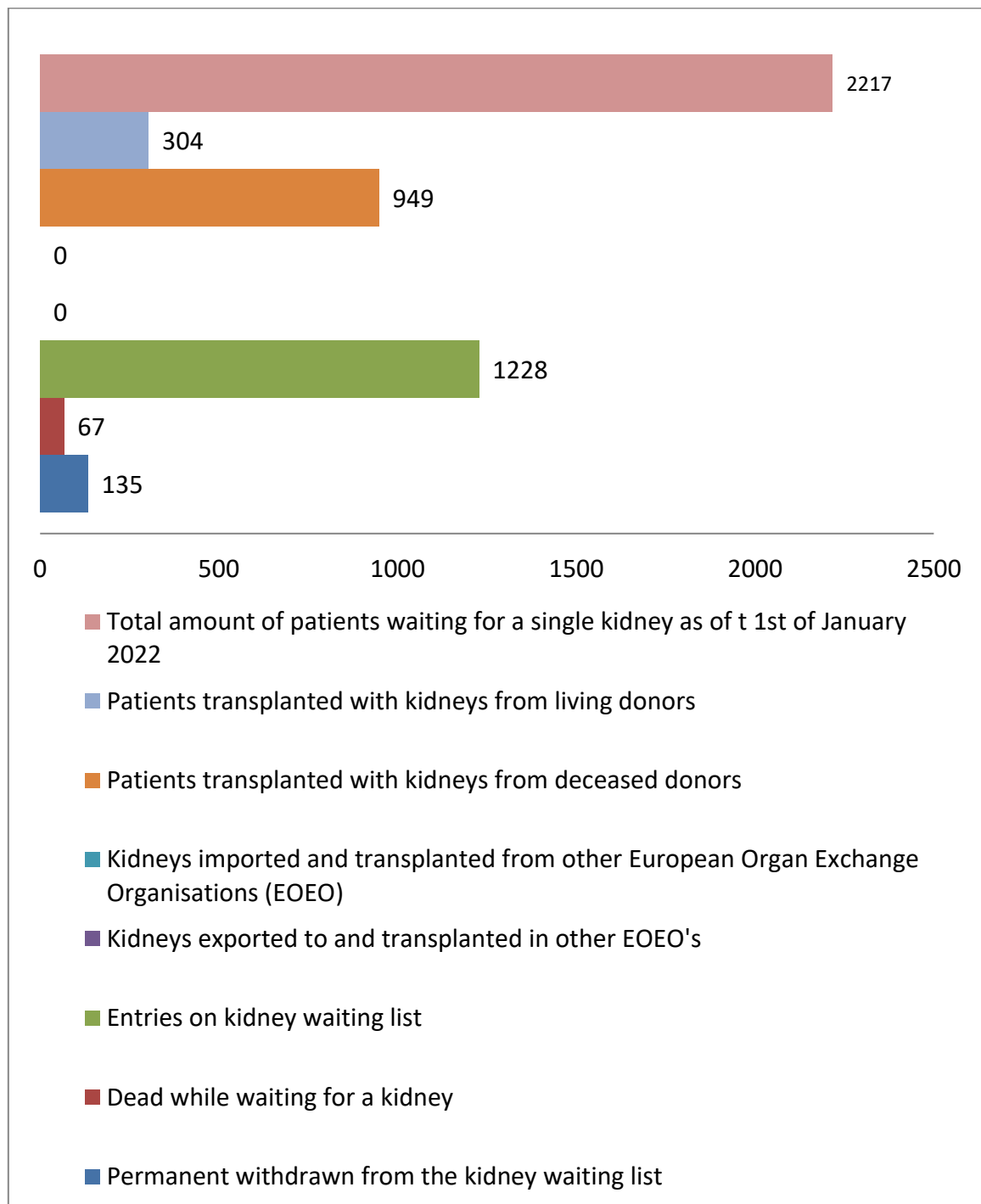
Report from transplantation center in Denmark

ID	Center	OIC	Short description of SAE/SAR
748	Copenhagen		HHV8/Kaposi Sarcoma in liver recipient diagnosed 5 months after transplatation. May have come from donor

Report from transplantation center in Finland

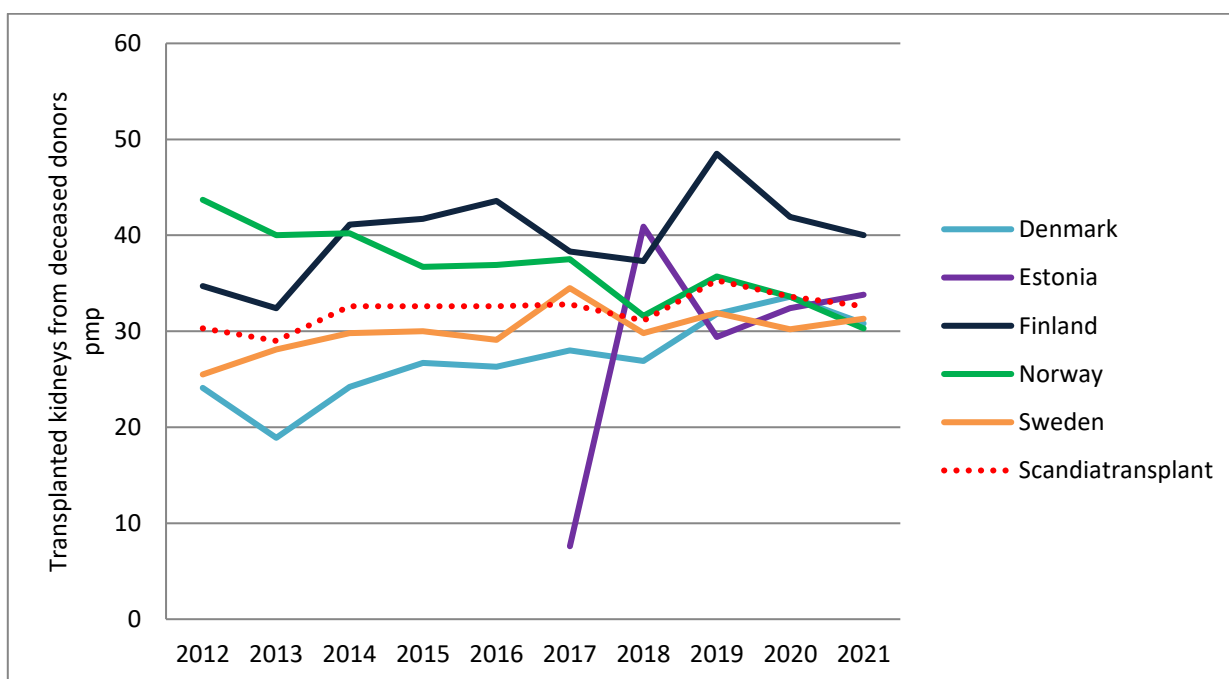
ID	Center	OIC	Short description of SAE/SAR
968	Helsinki		A lung carcinoma found in donor at autopsy performed after organ donation.

Kidneys 2021



Transplanted kidneys pmp³⁵ from deceased donors per year

Year	Denmark	Estonia	Finland	Norway	Sweden	Scandiatransplant
2012	24,1		34,7	43,7	25,5	30,3
2013	18,9		32,4	40,0	28,1	29
2014	24,2		41,1	40,2	29,8	32,6
2015	26,7		41,7	36,7	30,0	32,6
2016	26,3		43,6	36,9	29,1	32,6
2017	28,0	7,6 ³⁶	38,3	37,5	34,5	32,8
2018	26,9	40,9	37,3	31,6	29,8	31,1
2019	31,8	29,4	48,5	35,7	31,9	35,3
2020	33,6	32,4	41,9	33,6	30,2	33,6
2021	30,8	33,8	40,0	30,3	31,3	32,6

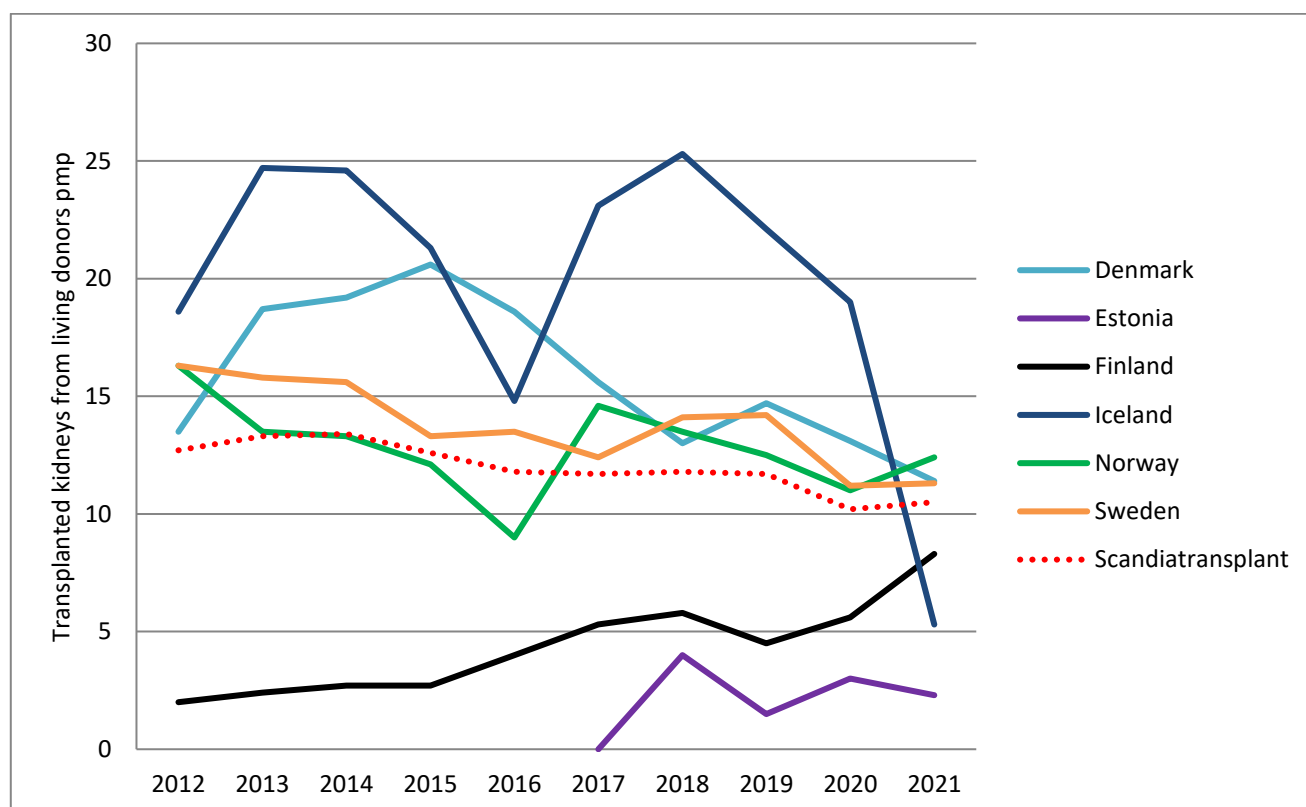


³⁵ pmp: per million population

³⁶ Figures included from Estonia year 2017 starts from October 1st 2017, which has negative impact on PMP for Estonia and Scandiatransplant this year

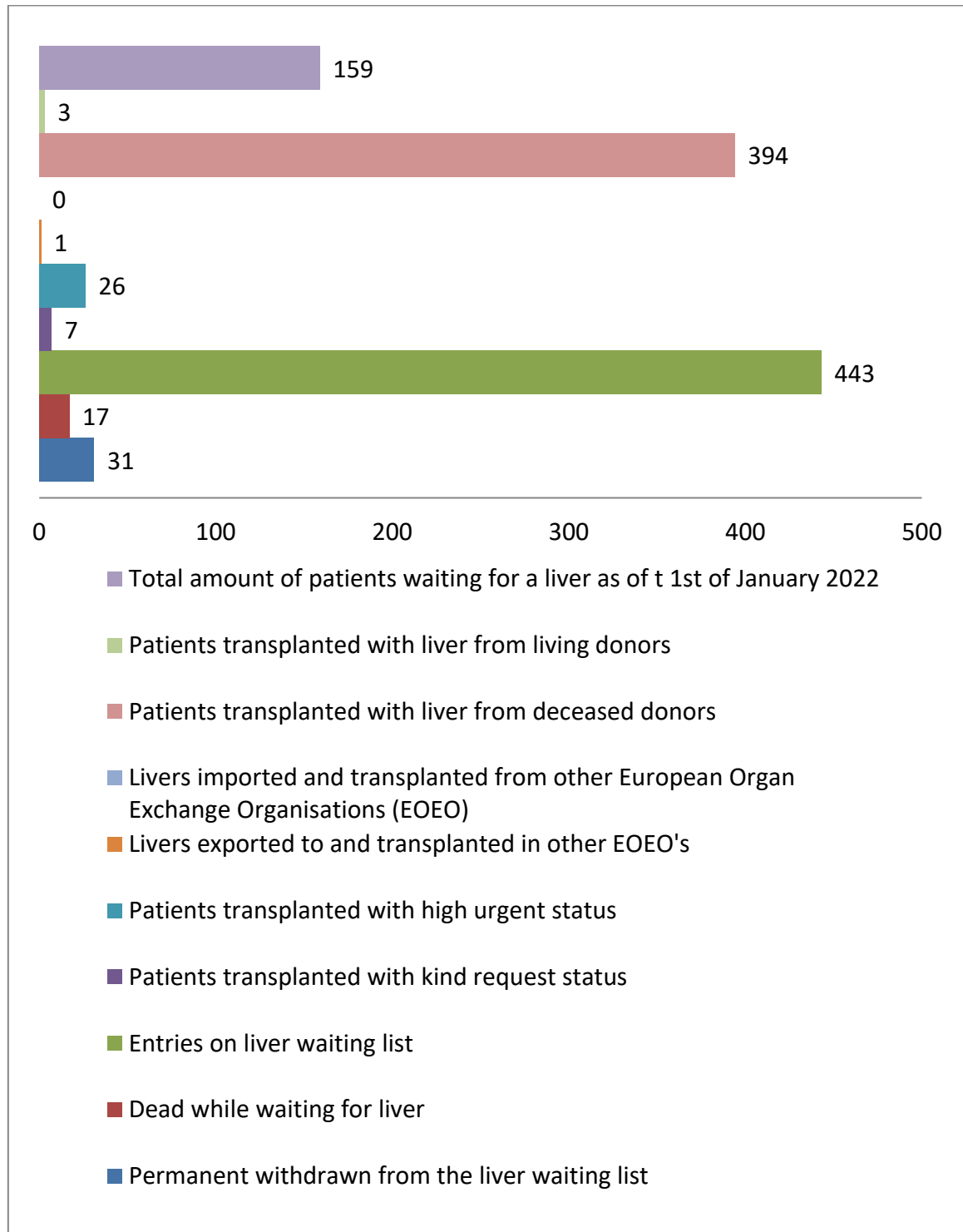
Transplanted kidneys pmp³⁷ from living donors per year

Year	Denmark	Estonia	Finland	Iceland	Norway	Sweden	Scandiatransplant
2012	13,5		2,0	18,6	16,3	16,3	12,7
2013	18,7		2,4	24,7	13,5	15,8	13,3
2014	19,2		2,7	24,6	13,3	15,6	13,4
2015	20,6		2,7	21,3	12,1	13,3	12,6
2016	18,6		4,0	14,8	9,0	13,5	11,8
2017	15,6		5,3	23,1	14,6	12,4	11,7
2018	13,0	3,0	5,8	25,3	13,5	14,1	11,8
2019	14,7	1,5	4,5	22,1	12,5	14,2	11,7
2020	13,1	3,0	5,6	19,0	11,0	11,2	10,2
2021	11,4	2,3	8,3	5,3	11,3	12,4	10,5



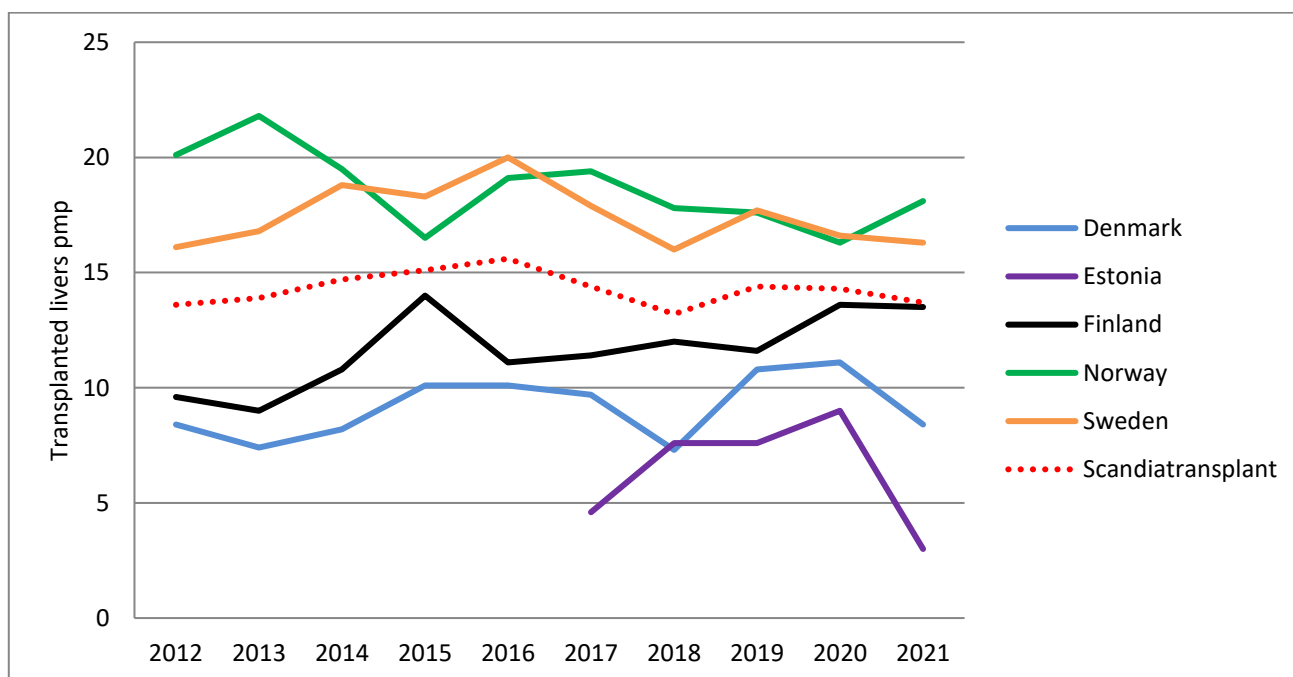
³⁷ pmp: per million population

Livers 2021



Transplanted livers (Deceased and living donors) pmp³⁸ per year

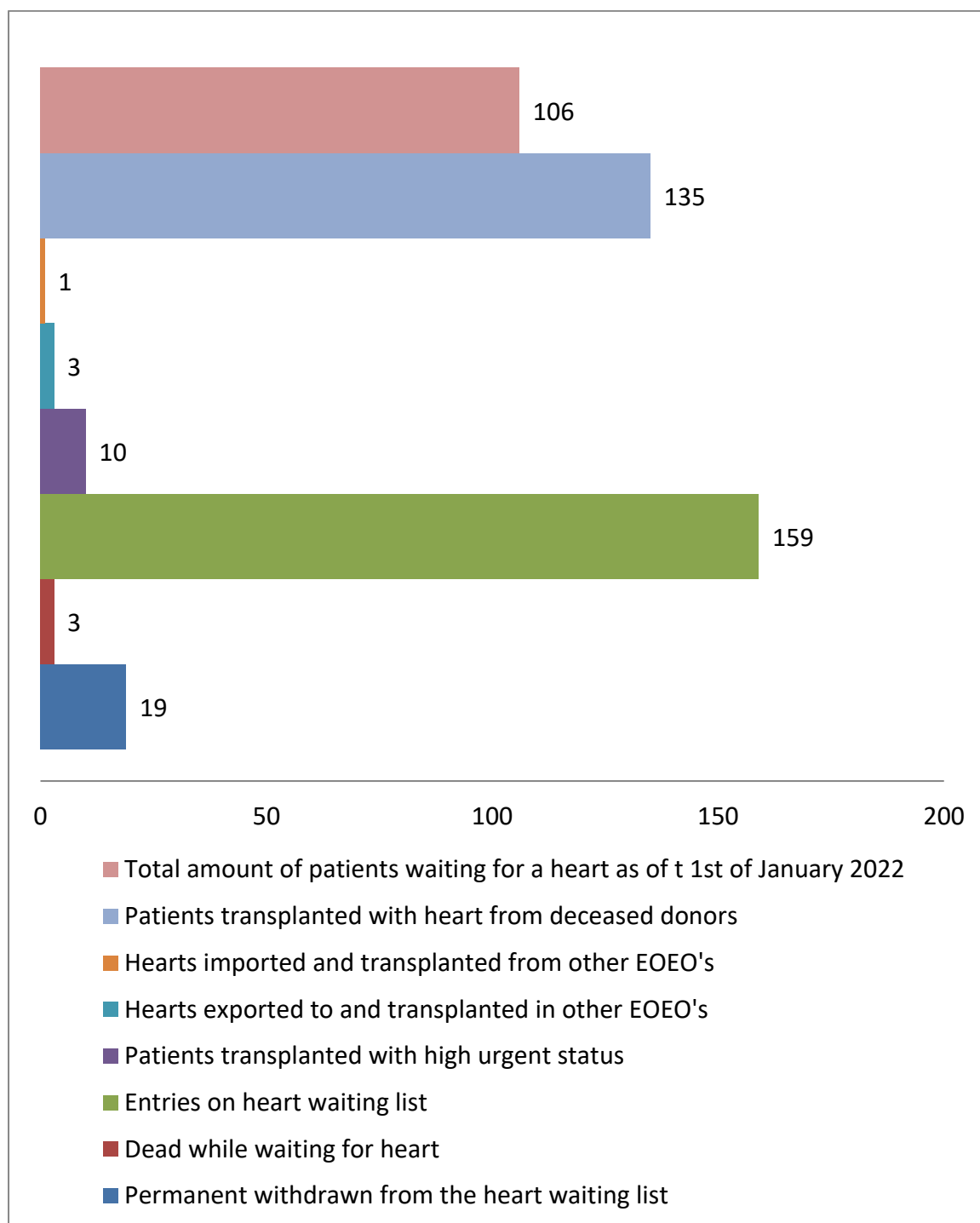
Year	Denmark	Estonia	Finland	Norway	Sweden	Scandiatransplant
2012	8,4		9,6	20,1	16,1	13,6
2013	7,4		9,0	21,8	16,8	13,9
2014	8,2		10,8	19,5	18,8	14,7
2015	10,1		14,0	16,5	18,3	15,1
2016	10,1		11,1	19,1	20,0	15,6
2017	9,7	4,6 ³⁹	11,4	19,4	17,9	14,4
2018	7,3	7,6	12,0	17,8	16,0	13,2
2019	10,8	7,6	11,6	17,6	17,7	14,4
2020	11,1	9,0	13,6	16,3	16,5	14,3
2021	8,4	3,0	13,5	18,1	16,3	13,7



³⁸ pmp: per million population

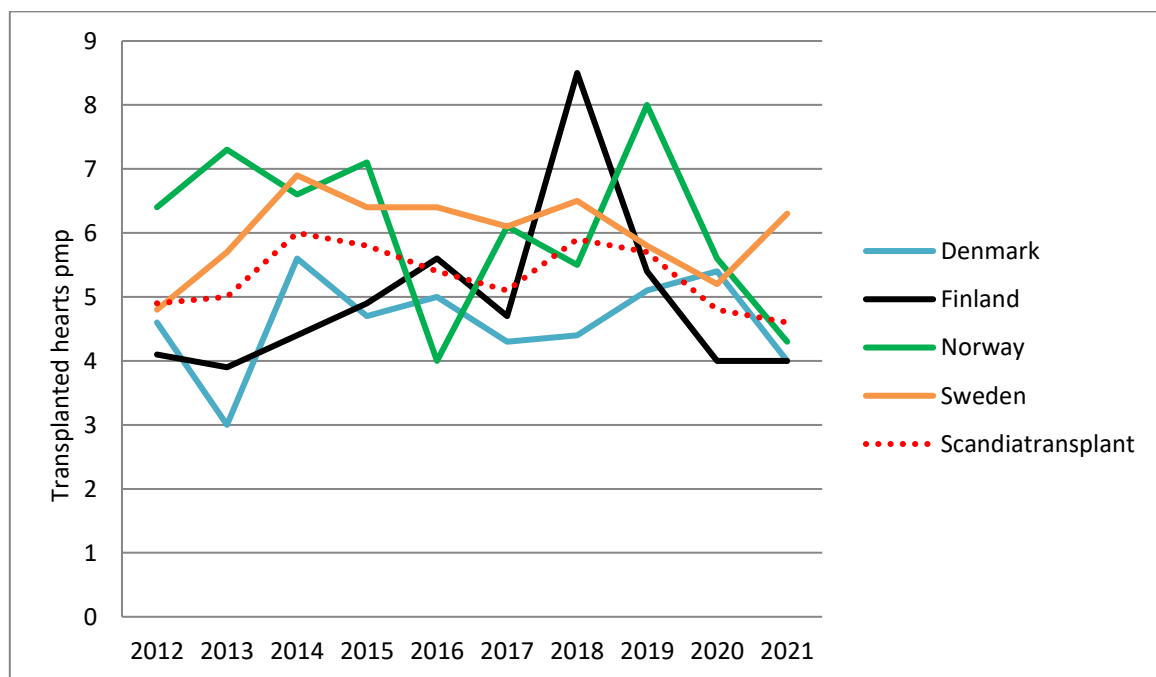
³⁹ Figures included from Estonia year 2017 starts from October 1st 2017, which has negative impact on PMP for Estonia and Scandiatransplant

Hearts 2021



Transplanted hearts pmp⁴⁰ per year⁴¹

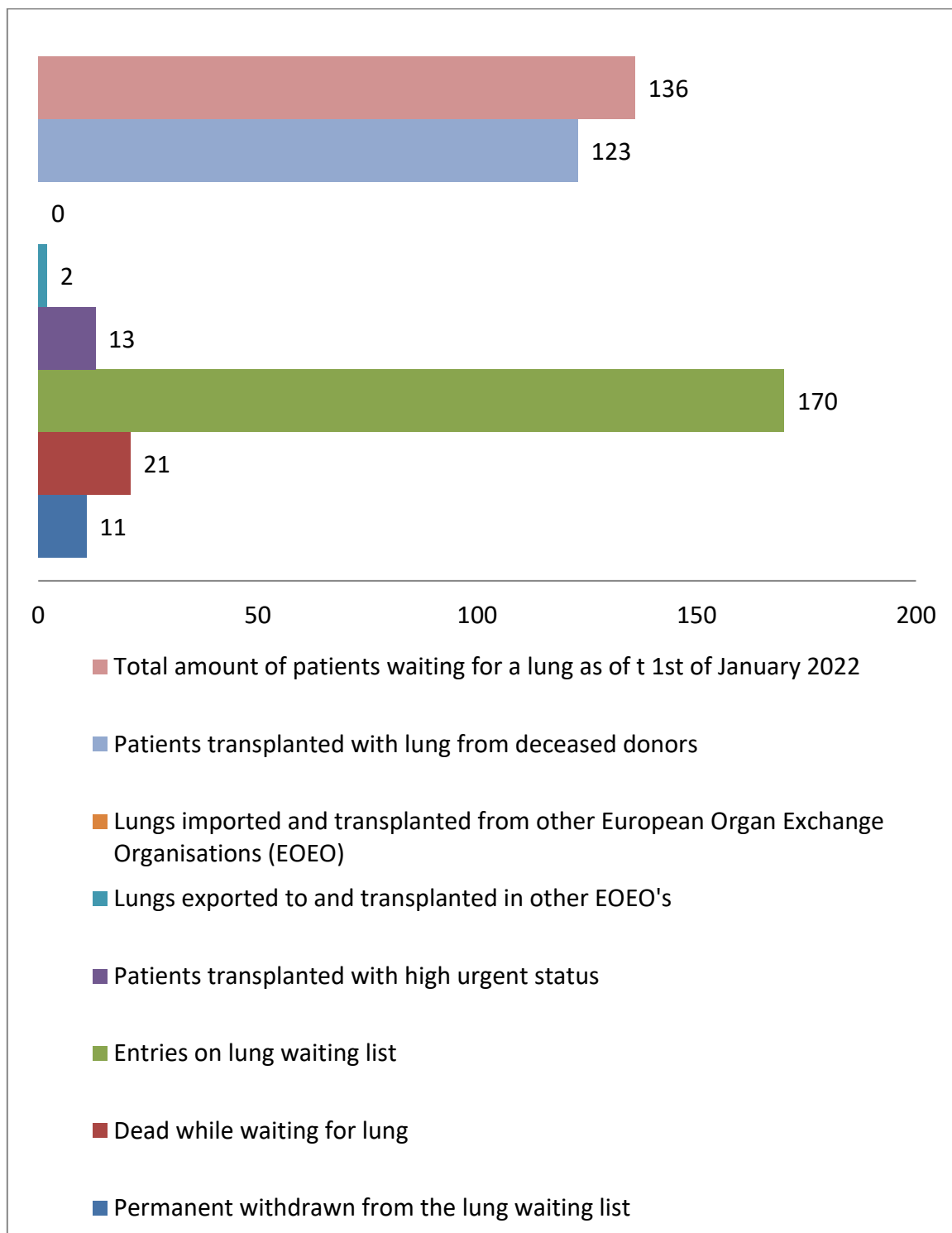
Year	Denmark	Finland	Norway	Sweden	Scandiatransplant
2012	4,6	4,1	6,4	4,8	4,9
2013	3,0	3,9	7,3	5,7	5,0
2014	5,6	4,4	6,6	6,9	6,0
2015	4,7	4,9	7,1	6,4	5,8
2016	5,0	5,6	4,0	6,4	5,4
2017	4,3	4,7	6,1	6,1	5,1
2018	4,4	8,5	5,5	6,5	5,9
2019	5,1	5,4	8,0	5,8	5,7
2020	5,4	4,0	5,6	5,2	4,8
2021	4,0	4,0	4,3	6,3	4,6



⁴⁰ pmp: per million population

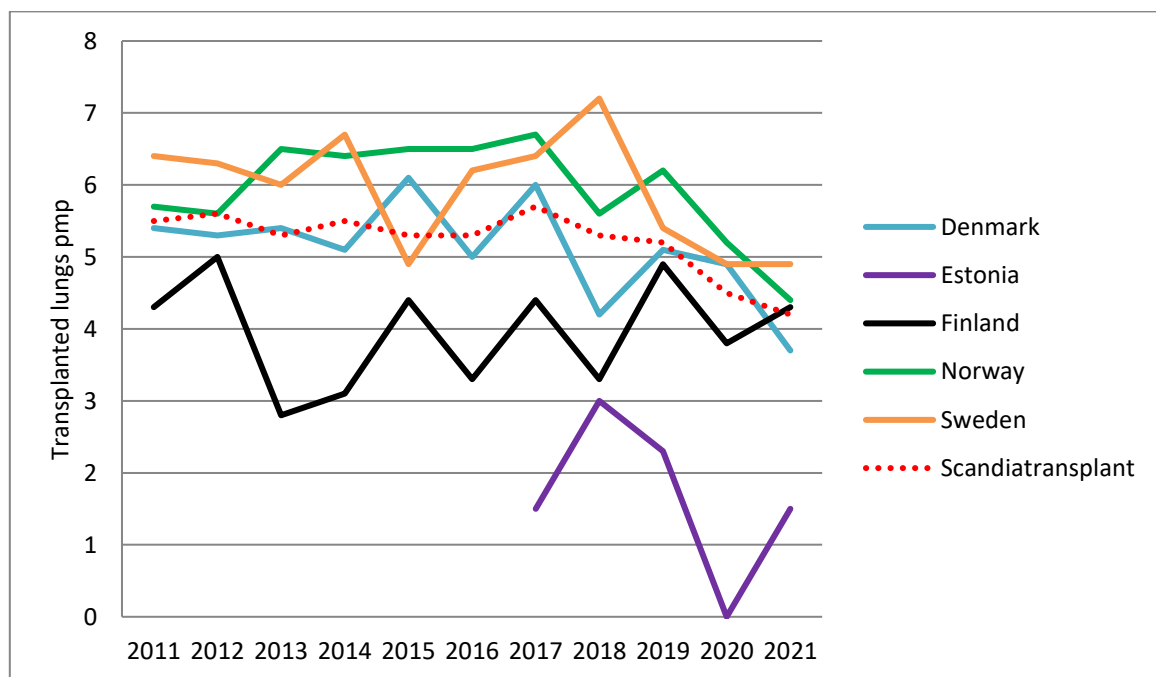
⁴¹ Estonian deceased donor heart transplantations are performed in Helsinki.

Lungs 2021



Transplanted lungs (Double, single and heart-lung) pmp⁴² per year

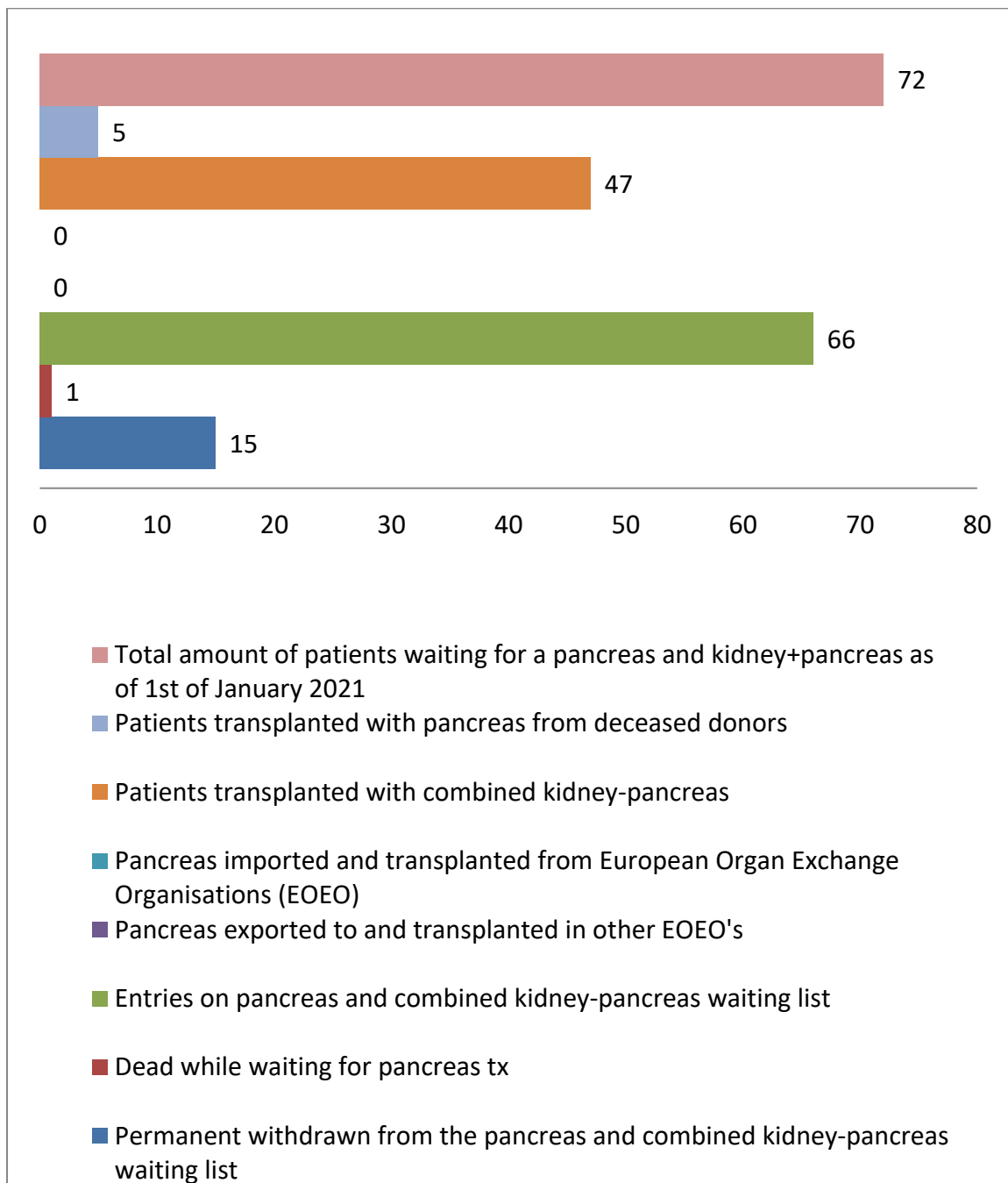
Year	Denmark	Estonia	Finland	Norway	Sweden	Scandiatransplant
2012	5,3		5,0	5,6	6,3	5,6
2013	5,4		2,8	6,5	6,0	5,3
2014	5,1		3,1	6,4	6,7	5,5
2015	6,1		4,4	6,5	4,9	5,3
2016	5,0		3,3	6,5	6,2	5,3
2017	6,0	1,5 ⁴³	4,4	6,7	6,4	5,7
2018	4,2	3,0	3,3	5,6	7,2	5,3
2019	5,1	2,3	4,9	6,2	5,4	5,2
2020	4,9	0	3,8	5,2	4,9	4,7
2021	3,7	1,5	4,3	4,4	4,9	4,2



⁴² pmp: per million population

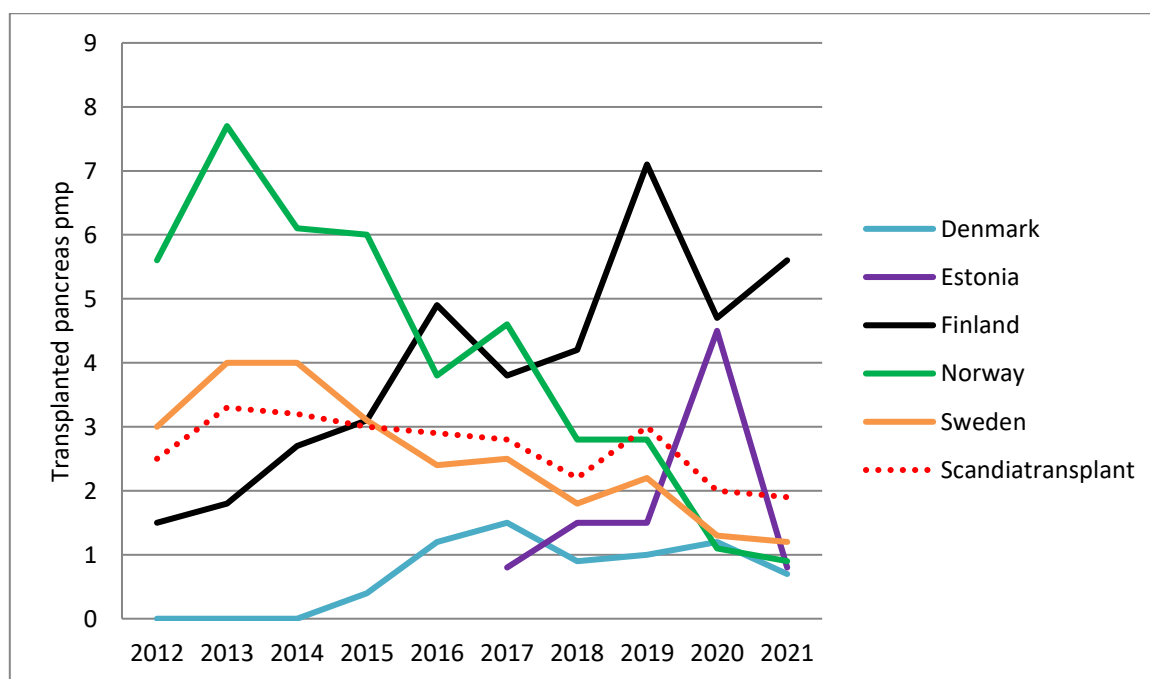
⁴³ Figures included from Estonia year 2017 starts from October 1st 2017, which has negative impact on PMP for Estonia and Scandiatransplant

Pancreas 2021



Transplanted pancreas (incl. combined kidney-pancreas) pmp⁴⁴ per year

Year	Denmark	Estonia	Finland	Norway	Sweden	Scandiatransplant
2012	0		1,5	5,6	3,0	2,5
2013	0		1,8	7,7	4,0	3,3
2014	0		2,7	6,1	4,0	3,2
2015	0,4		3,1	6,0	3,1	3,0
2016	1,2		4,9	3,8	2,4	2,9
2017	1,5	0,8 ⁴⁵	3,8	4,6	2,5	2,8
2018	0,9	1,5	4,2	2,8	1,8	2,2
2019	1,0	1,5	7,1	2,8	2,2	3,0
2020	1,2	4,5	4,7	1,1	1,3	2,0
2021	0,7	0,8	5,6	0,9	1,2	1,9

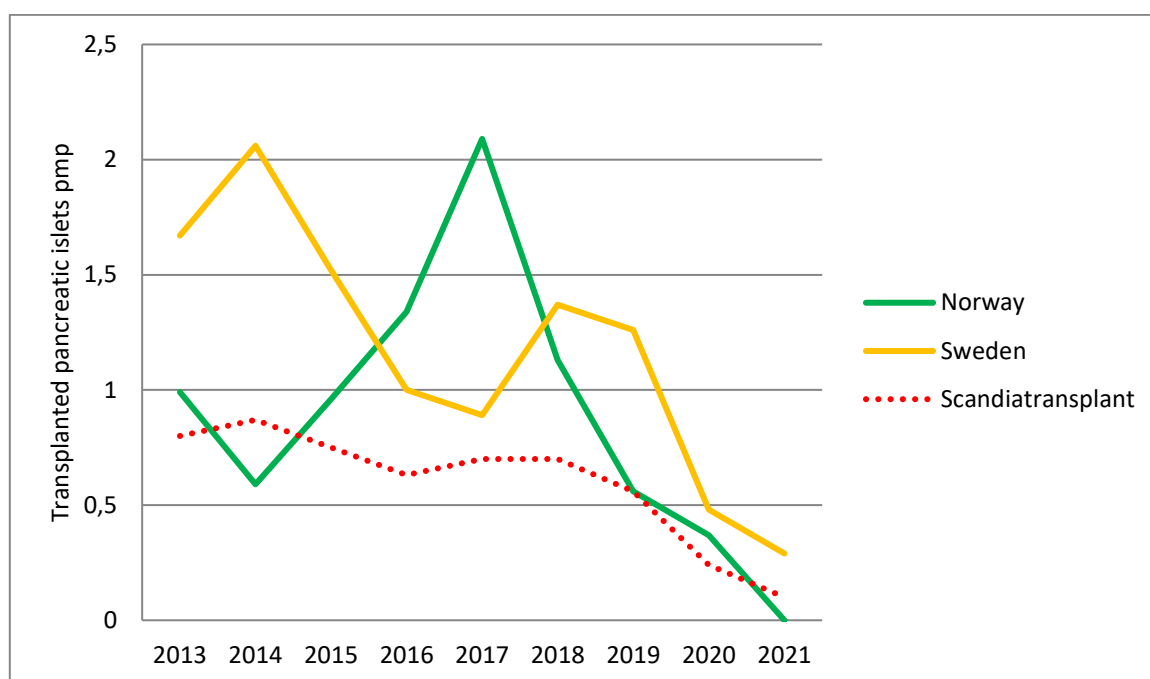


⁴⁴ pmp: per million population

⁴⁵ Figures included from Estonia year 2017 starts from October 1st 2017, which has negative impact on PMP for Estonia and Scandiatransplant

Transplanted pancreatic islets⁴⁶ pmp⁴⁷ per year

Year	Denmark	Estonia	Finland	Norway	Sweden	Scandiatransplant
2013	0		0	0,99	1,67	0,80
2014	0		0	0,59	2,06	0,87
2015	0		0	0,96	1,52	0,75
2016	0		0	1,34	1,00	0,63
2017	0	0	0	2,09	0,89	0,70
2018	0	0	0	1,13	1,37	0,70
2019	0	0	0	0,56	1,26	0,56
2020	0	0	0	0,37	0,48	0,24
2021	0	0	0	0,00	0,29	0,10



On behalf of Scandiatransplant

Bo-Göran Ericzon
(Chairman)

Kaj Anker Jørgensen
(Medical Director)

Ilse D. Weinreich
(Clinical Data Manager)

⁴⁶ Each portion is counted as one transplantation

⁴⁷ pmp: per million population