

Annual report 2020



ScandiTransplant office

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Introduction

The year of 2020 will go down in history as the year where the Covid-19 pandemic came down on the Scandiatransplant countries and the rest of the world. The pandemic has had a severe effect on donation and transplantation activity in heavily affected countries. Covid-19 has also affected the donation and transplantation activity in our member hospitals, but the impairment seems to be smaller than in many other countries. The total number of deceased donors in Scandiatransplant was 4% less compared to 2019, but 2.6 % higher than the mean number of donors 2017-2019. The number of transplanted patients was 7.4% less than the previous year and 3.5% less than the mean number of patients transplanted 2017-2019. The number of patients on the waiting list at the end of 2020 was only slightly increased compared to previous year.

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 2020 the council had 33 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 were the same through 2020, namely Johan Nilsson (Sweden), Jóhann Jónsson (Iceland), Allan Rasmussen (Denmark), Morten Hagness (Norway) and Arno Nordin (Finland). Bo-Göran Ericzon from Sweden continued as chairman. Virge Pall (Estonia) and Kaj Anker Jørgensen (Medical Director) participated in all Board meetings as observers.

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. 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.

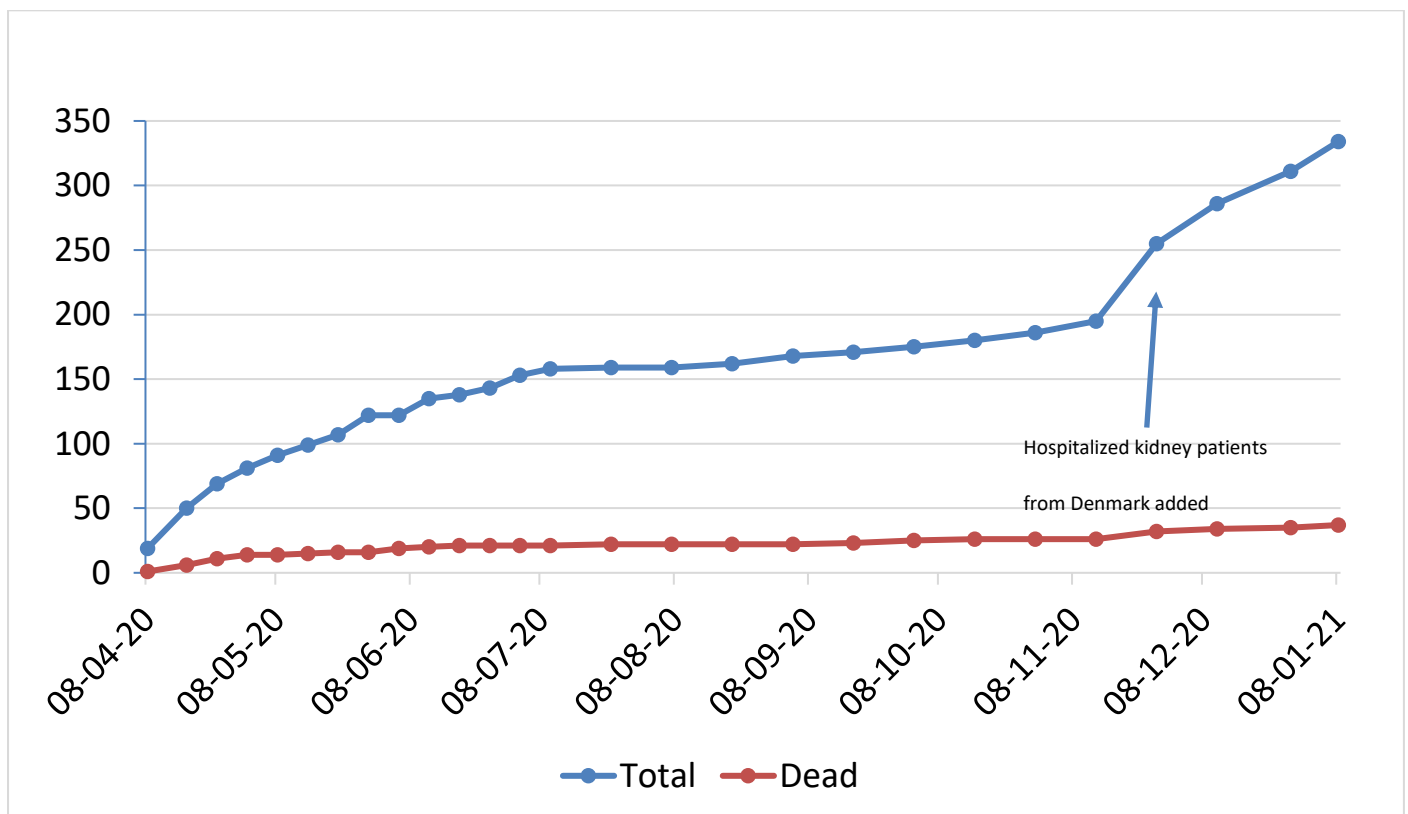
At the end of 2020 the staff consisted of 8 people. Working full time are 3 programmers, one quality assurance coordinator, and one clinical data and office manager. A student programmer, the secretary and the Medical Director are working part-time. The total expenses during the year (5 mill. DKK ~ 672.000 EUR) were somewhat less than 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 2020

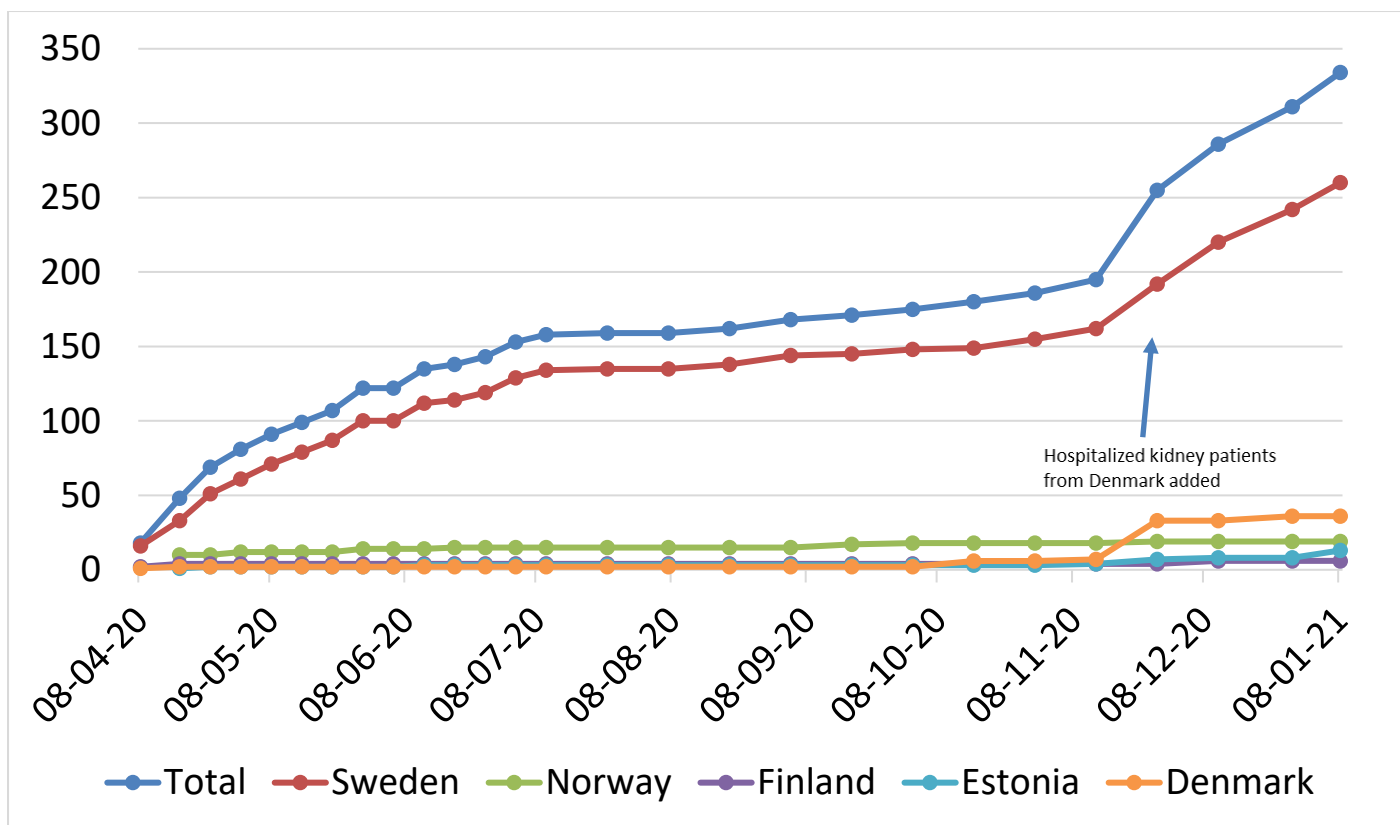
The Covid-19 pandemic has had a great influence on the activities in the organization. Since the middle of March 2020 all meetings in the groups, meeting with competent authorities and the EU commission, Board meetings, and the yearly meeting of the Council of Representatives have been virtual meetings. This has worked OK to some extent 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 and closing of small airfields. Despite this the dedicated personnel in donation and transplantation have managed to keep up almost normal activity and in some places the activity was increased compared to last year. The mainpart 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. 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.

Covid-19

March 16th, 2020 the ScandiTransplant IT-system (YASWA) made it possible to register the result of SARS-CoV-2 testing in donors and pretransplant patients and on April 4th, 2020 this was also made possible for posttransplant patients. Possibility for registration of antibodies was introduced later. It is voluntary to register, but the Board of ScandiTransplant encouraged everybody to register. March 26th, 2020 it was added to the guidelines on infections, that all donors should be tested for SARS-CoV-2 and if positive organs should not be accepted. Registering of Danish renal transplant patients did not take place until November 27th, 2020 and only patients hospitalized were then registered. The two figures below may not cover 100% of infected patients, since they rely on the willingness to register. , Moreover, the dates are the day the of registration and not the date the test was made. However, we believe they do give a picture of how the evolution of Covid-19 was in the transplant population.

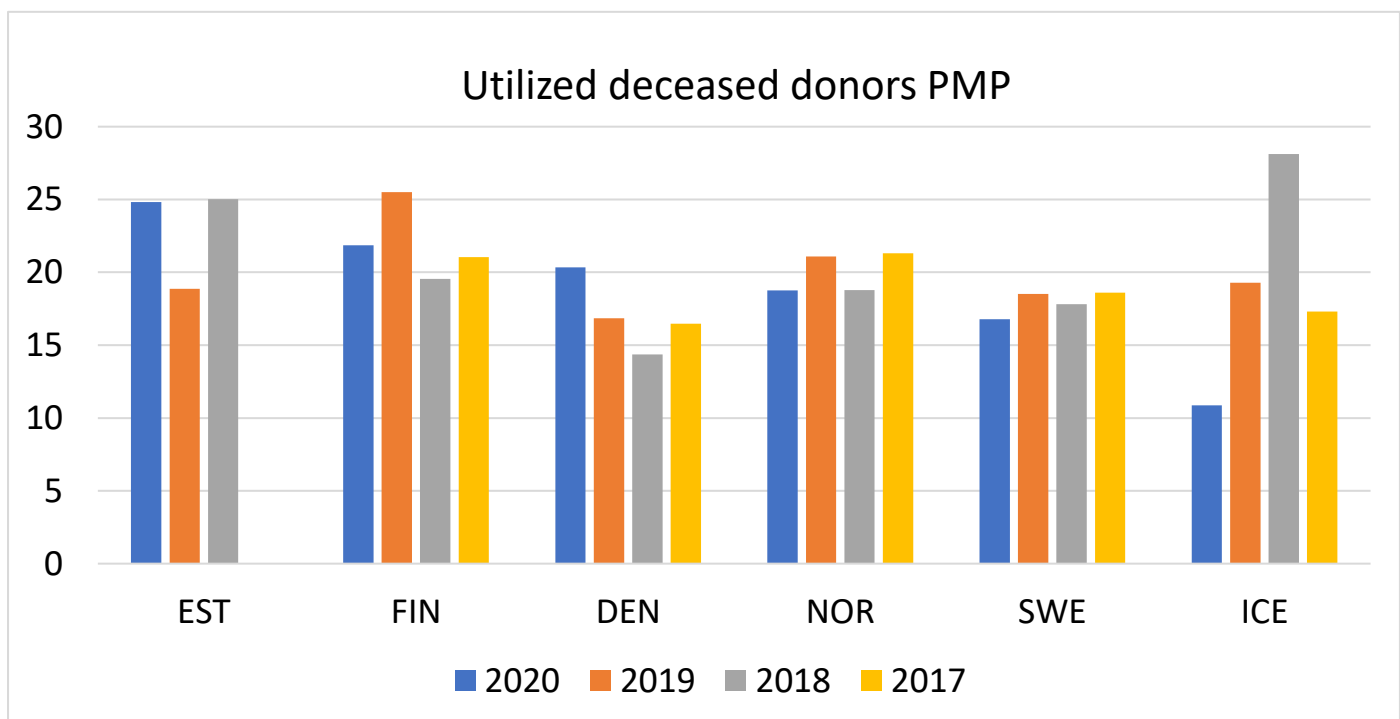


The total number of transplanted patients tested positive for Covid-19 and the total number of transplanted patients, who died after being tested positive for Covid-19.



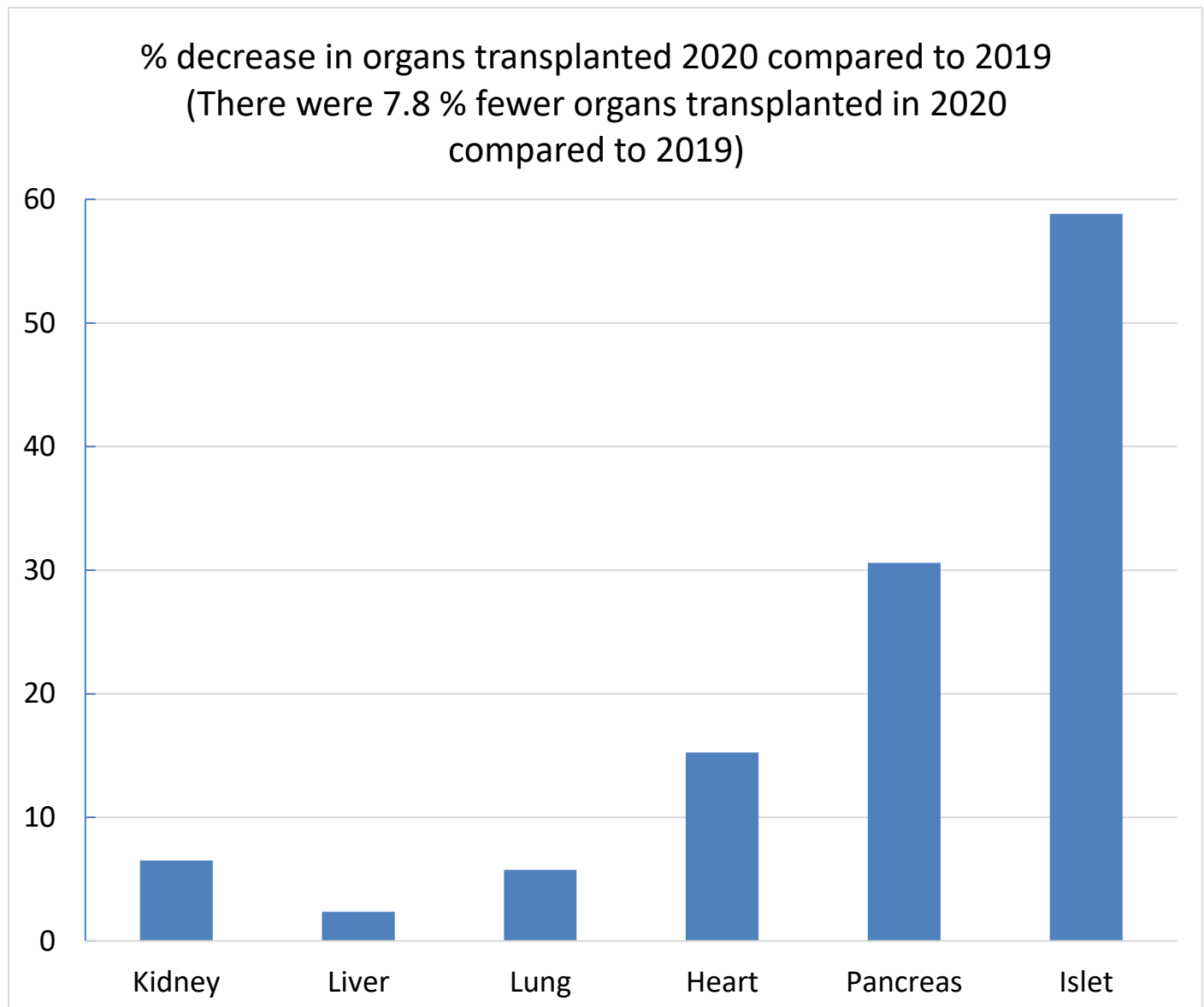
The total number of transplanted patients registered Covid-19 positive in ScandiTransplant and in each country.

These figures show that there was a wave of infection in the spring and again a second wave starting in the beginning of December. The situation seemed stable during the summer and fall. Sweden has until now been the country most heavily affected.



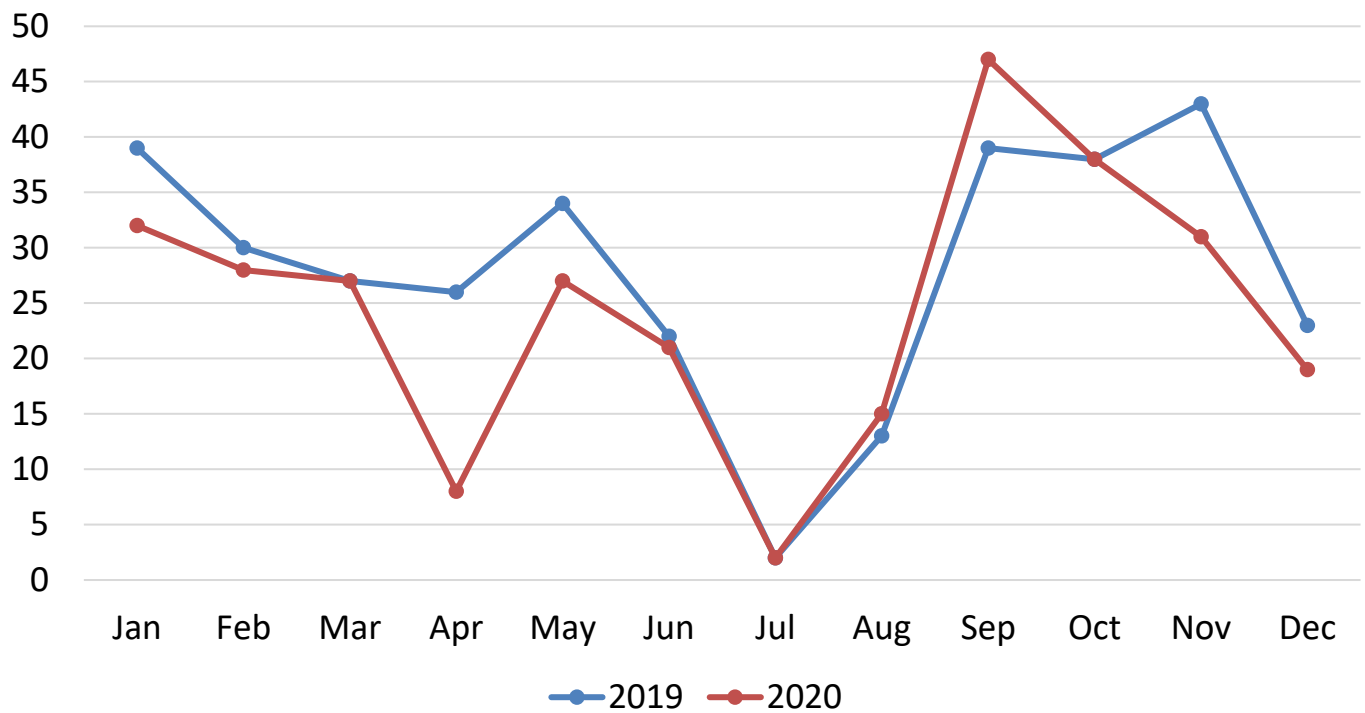
The total number of deceased donors in Scandiatransplant was about the same as the preceding 3 years, but with variations from country to country as seen in the figure above.

The number of organs transplanted was 7.8% less in 2020 compared to 2019. The relative decrease varied between the different organs, the livers with almost no decrease and a substantial decrease in heart, pancreas and islets. However, the decrease in the number of pancreas and islet transplantation started before the Covid-19 pandemic.

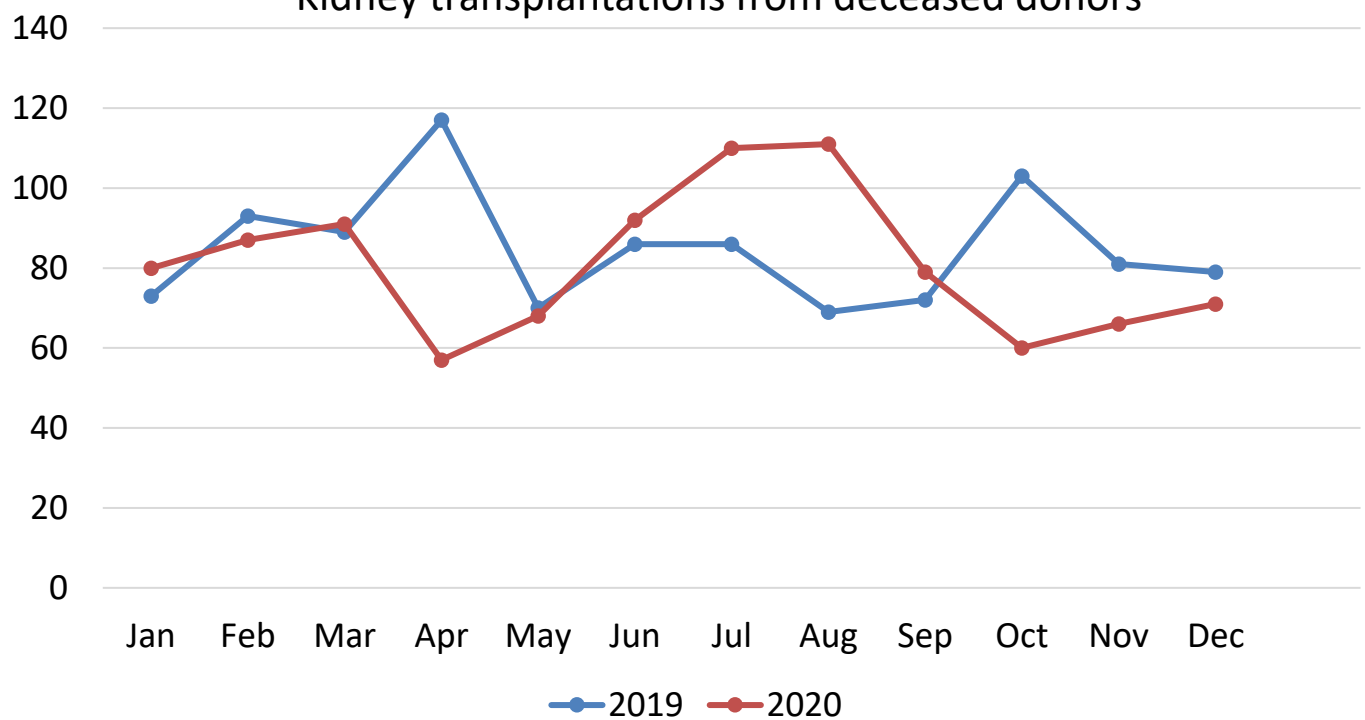


The decrease in number of kidney transplantations (6.4%) was most significant for transplantation with living donors (12,2%) and much less for patients transplanted with kidneys from deceased donors (4,5%). Some living donor kidney transplantation programs were closed down in April during the first wave of the pandemic. The figure also shows that many centers close down the living donor program in July.

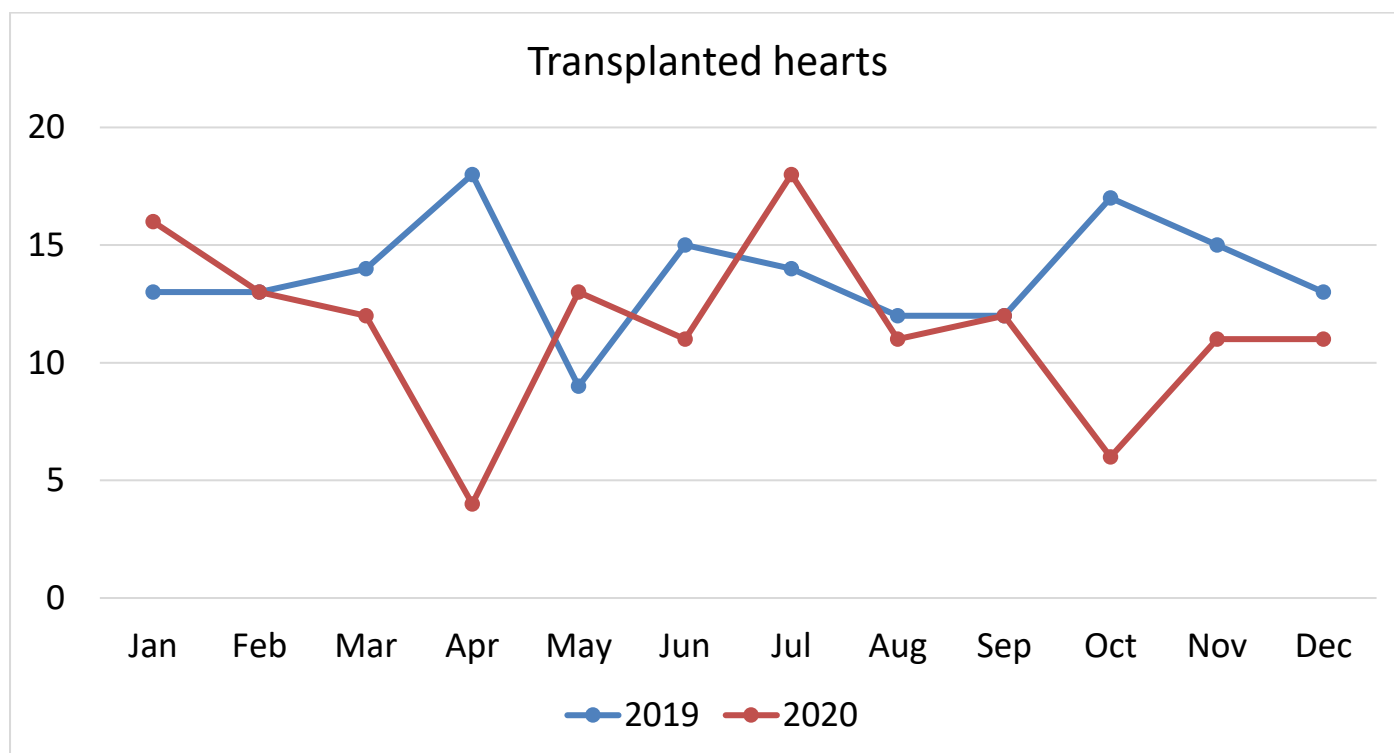
Kidney transplantations from living donors



Kidney transplantations from deceased donors



Heart transplantations also seemed to have scaled down during the first wave of the pandemic, probably due to the fear of lack of capacity in the intensive care units.



The Covid-19 pandemic has certainly had an impact on organ donation and transplantation in the Scandi transplant countries, but the negative impact has been relatively small compared to many other countries in the world.

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 2011 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 Scandi transplant 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.

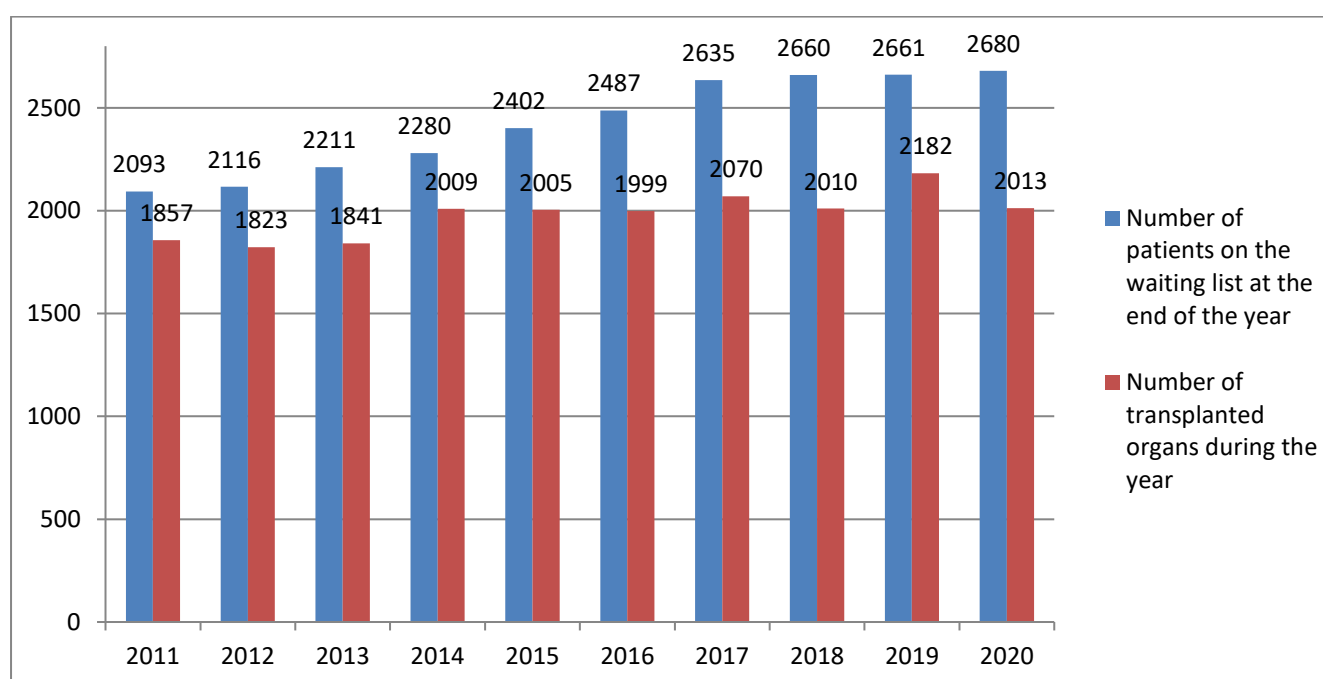
Further presentation of Scandi transplant data is available in the annual slideshow:

[Scandi transplant annual slideshow 2020](#)

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
2011	2093	1857
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

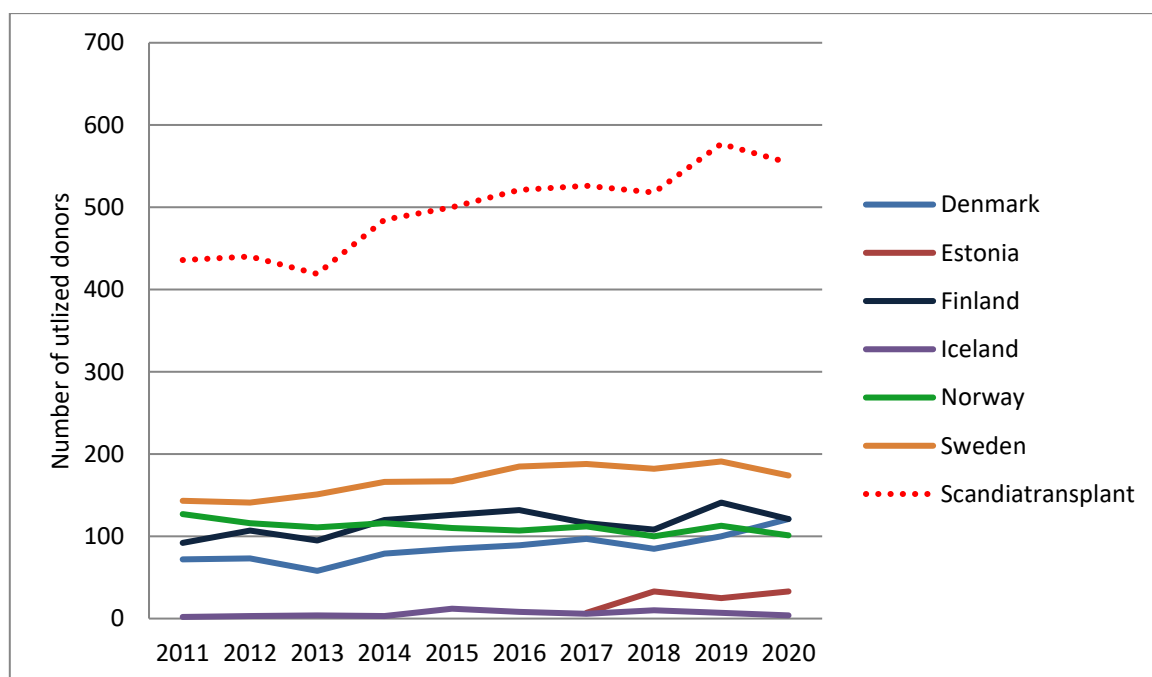


¹ Including patients (active/temp. on hold) waiting for kidney, liver, liver-kidney, heart, heart-lung, single lung, double lung, kidney-pancreas, pancreas and pancreatic islets

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

Utilized deceased donors³ in numbers in Scandiatransplant

Year	Denmark	Estonia ⁴	Finland	Iceland	Norway	Sweden	Scandiatransplant
2011	72		92	2	127	143	436
2012	73		107	3	116	141	440
2013	58		95	4	111	151	419
2014	79		120	3	116	166	485
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

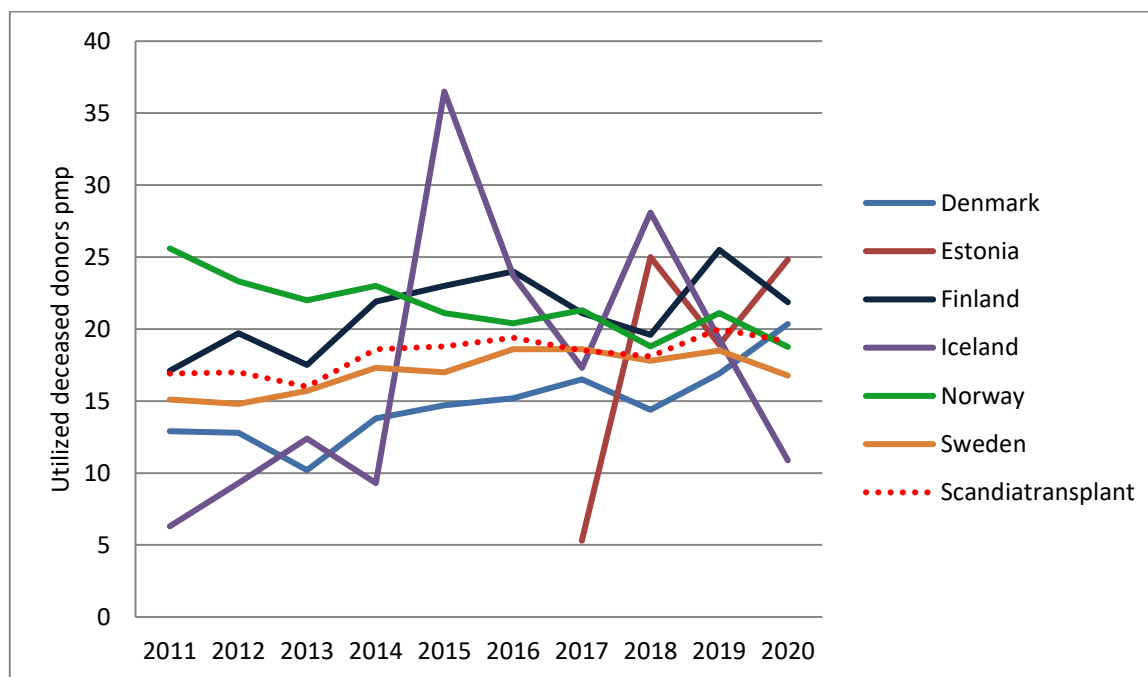


³Definition of utilized donor: An actual donor from whom at least one solid organ was transplanted.
http://www.scandiatransplant.org/data/Deceaseddonordefv_3.pdf

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
2011	12,9		17,1	6,3	25,6	15,1	16,9
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

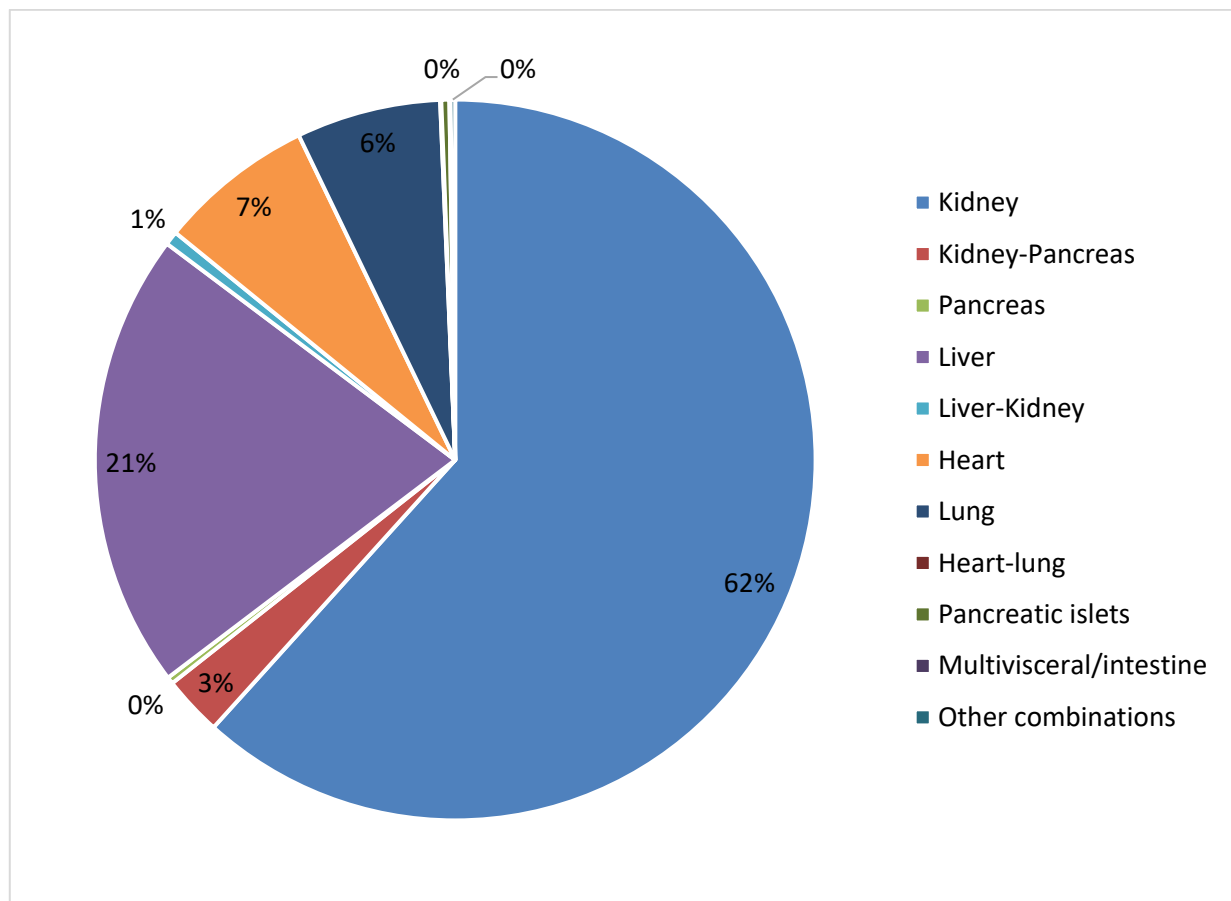


⁵ pmp: per million population

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

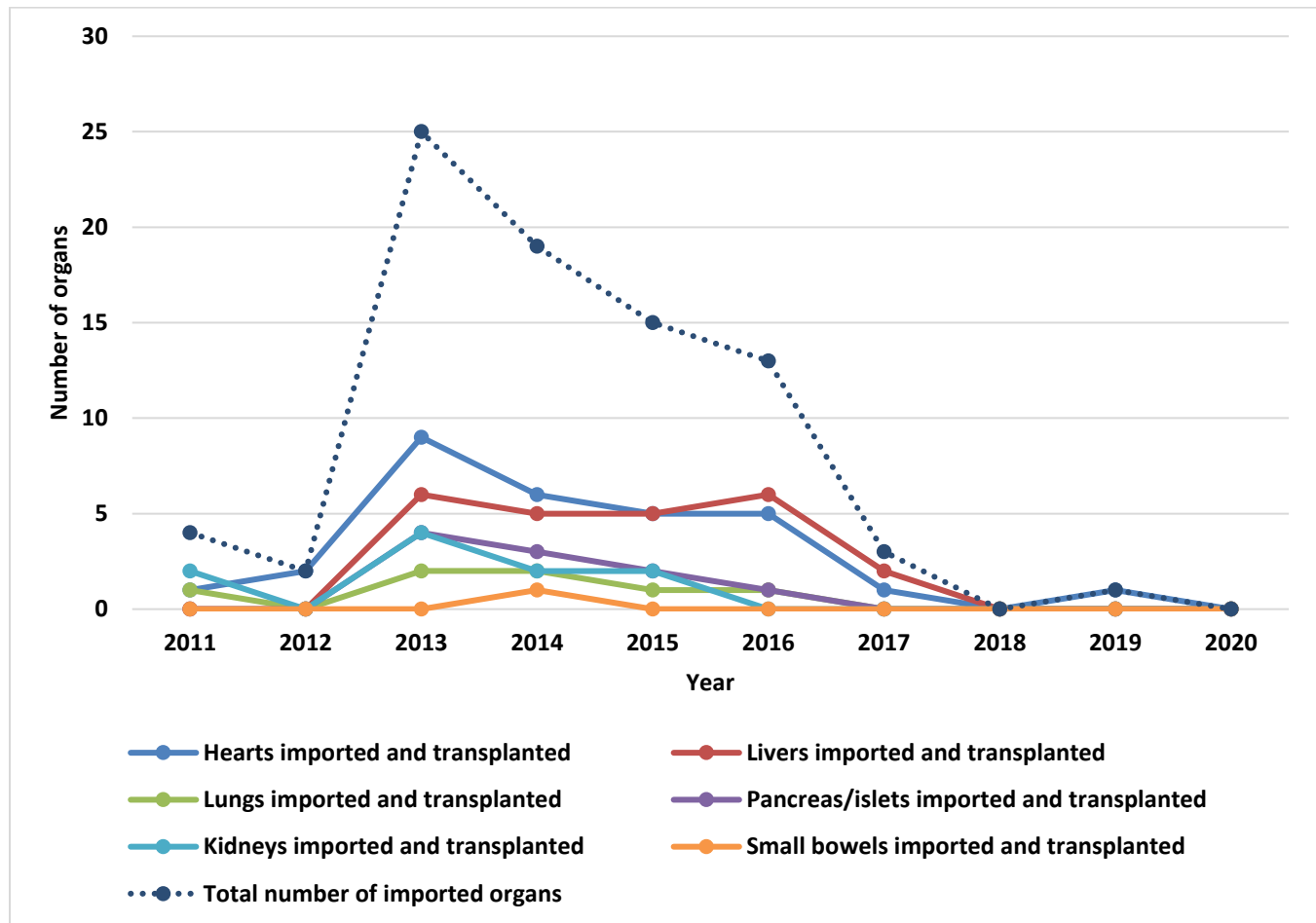
Transplanted patients in Scandiatransplant 2020

Organ(s) transplanted	Number of transplantations
Kidney	1200
Kidney-Pancreas	52
Pancreas	6
Liver	400
Liver-Kidney	12
Heart	136
Lung	126
Heart-lung	1
Pancreatic islets	7
Multivisceral/intestine	1
Other combinations	4
Total transplanted patients	1945



Organs imported and exported between EOEO's⁷ and Scandiatriplant⁸

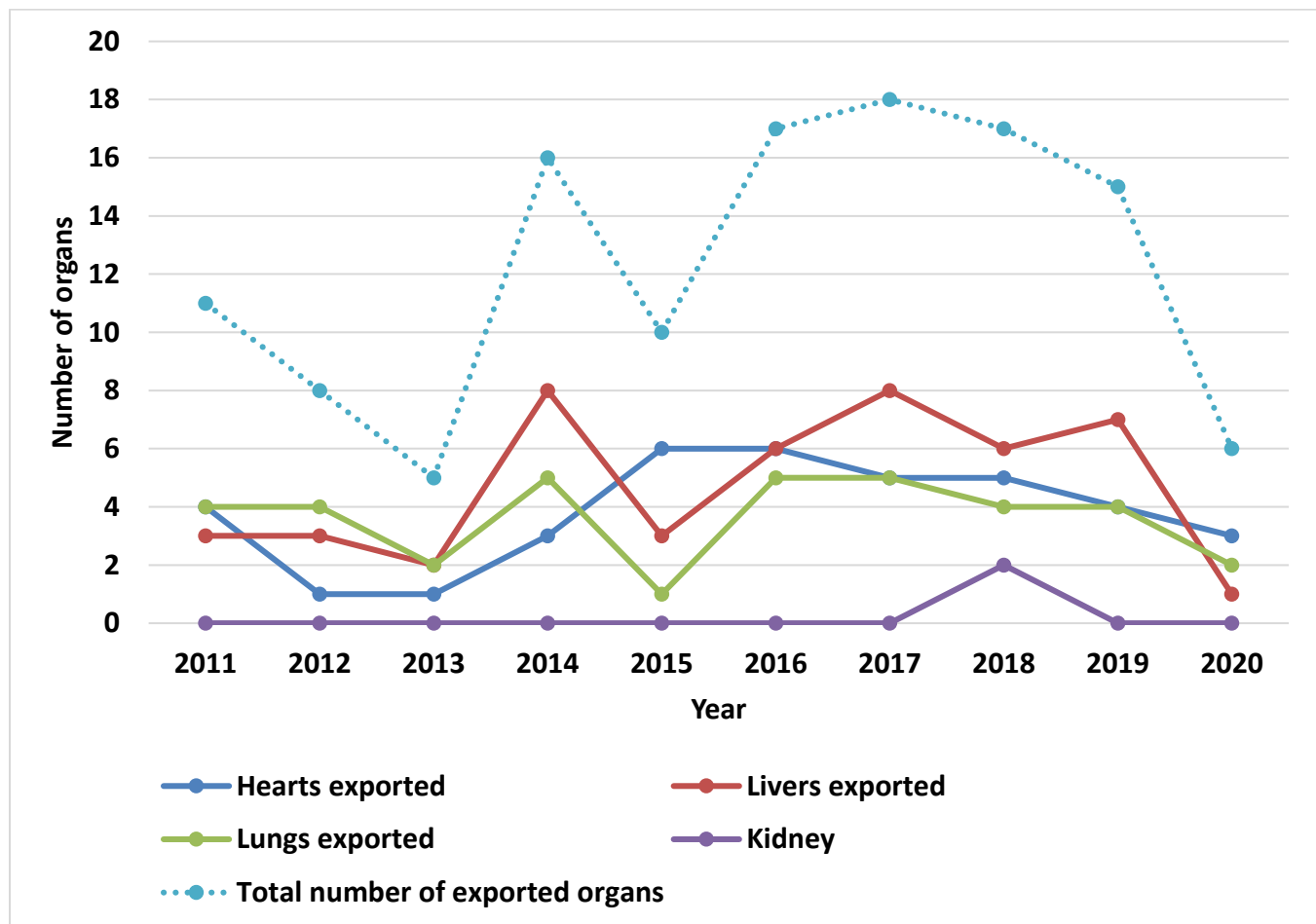
Organs imported from other EOEO's to Scandiatriplant



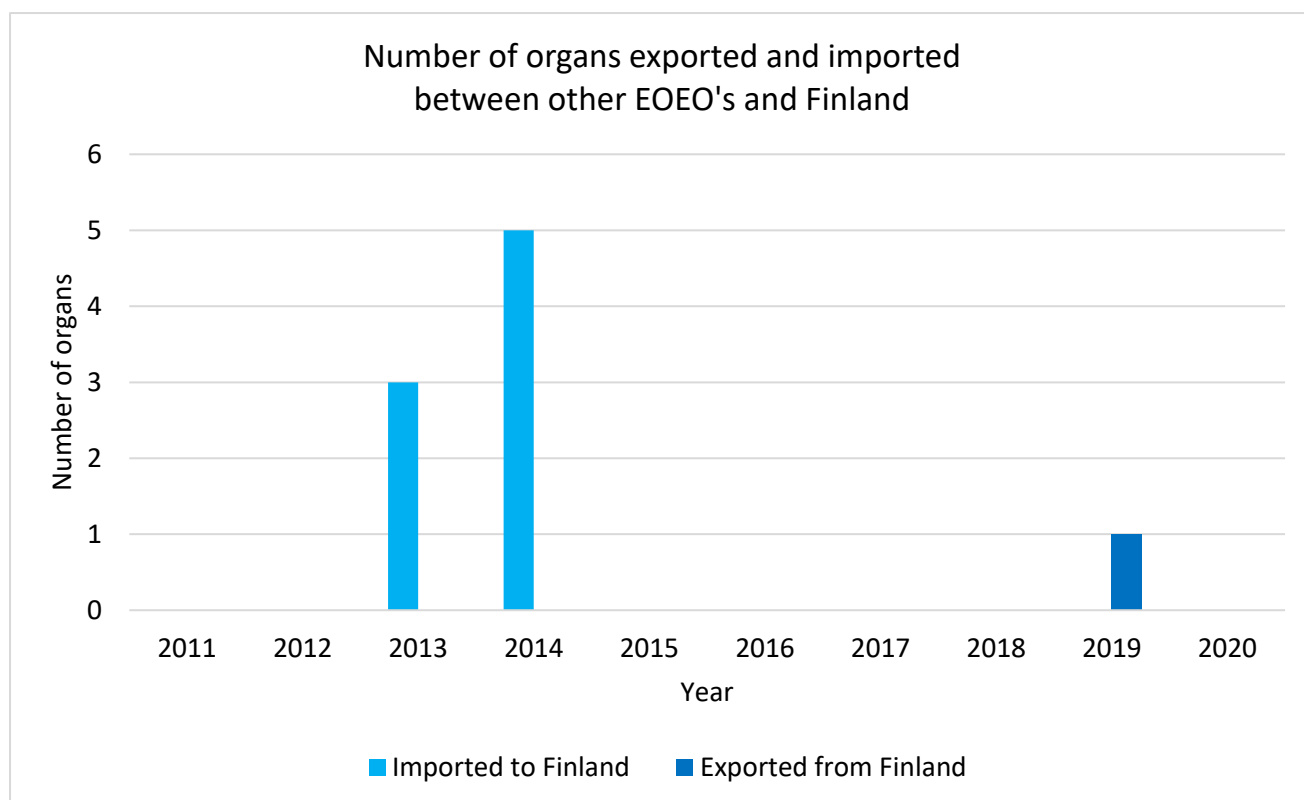
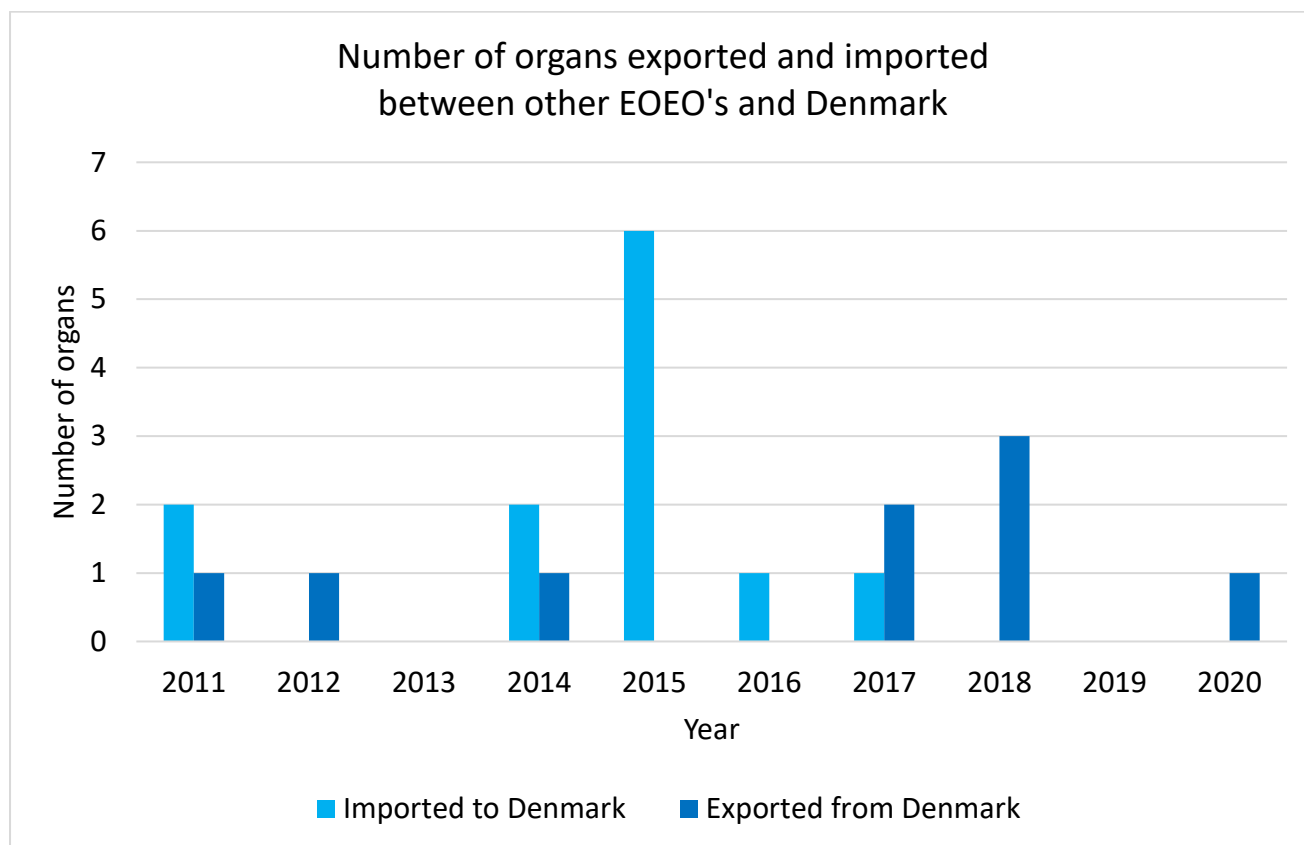
⁷ EOEO: European Organ Exchange Organisations (In 2019 a double lung was imported from Switzerland to Denmark, however optimization was not successful)

⁸ From October 1st 2017 Estonia is regarded as part of Scandiatriplant

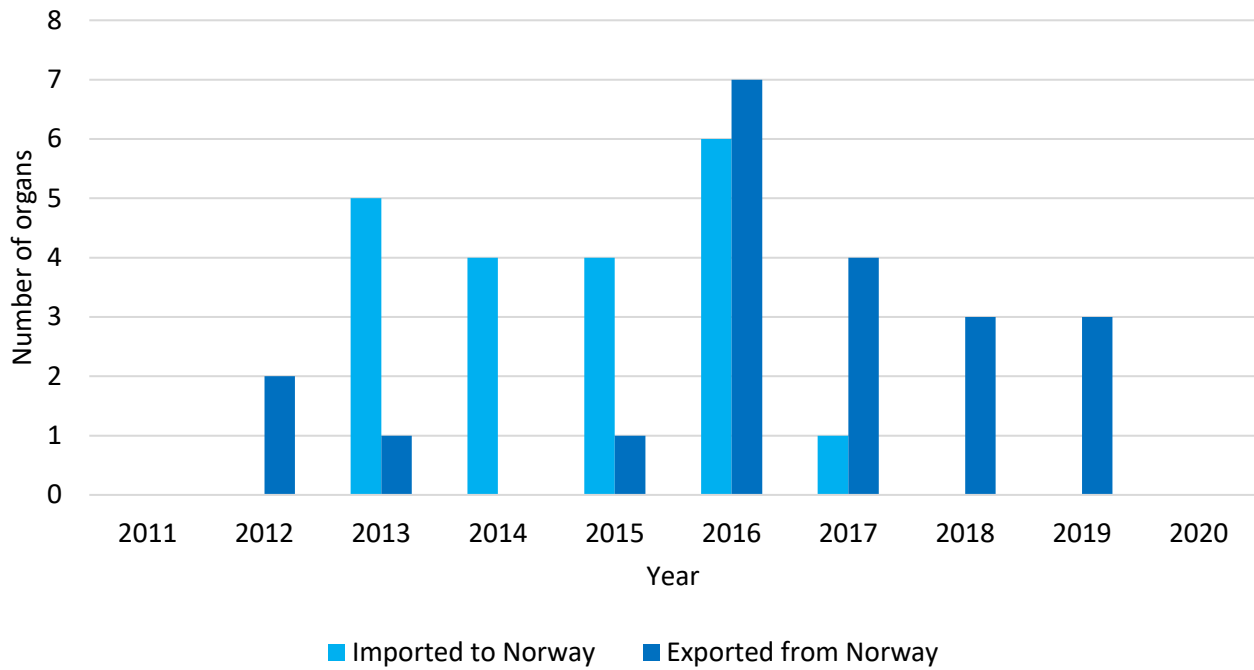
Organs exported to other EOEO's from Scandiatriplant



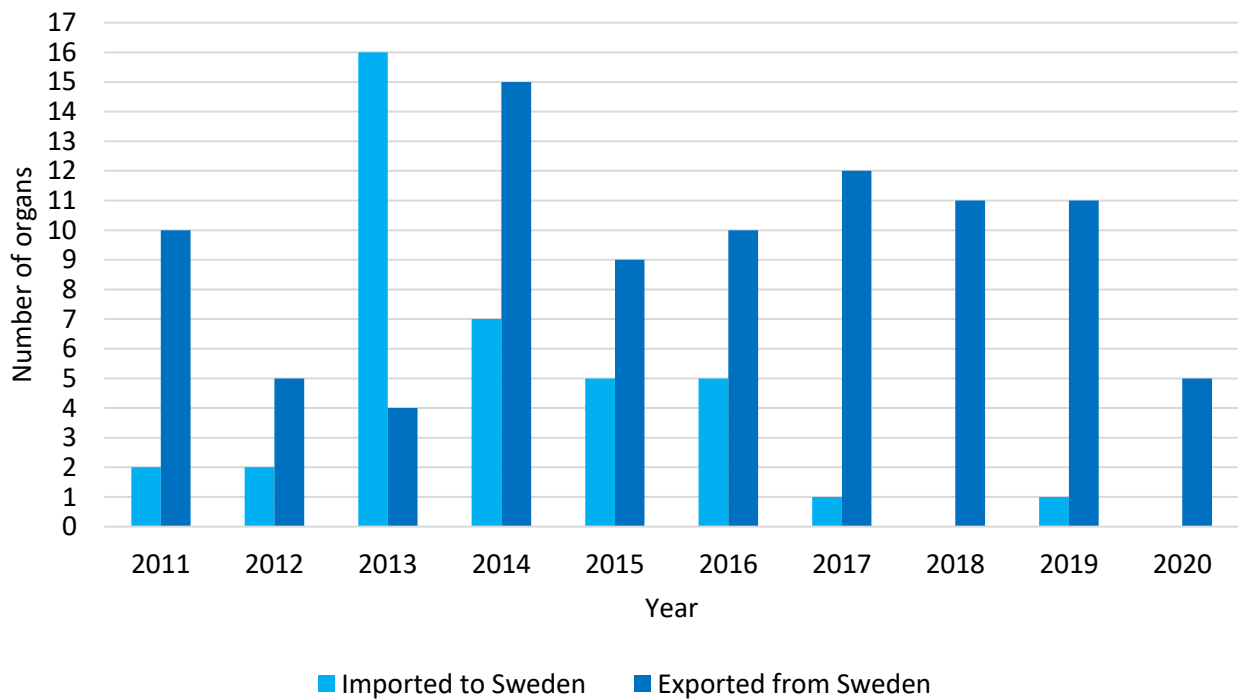
Organs exported and imported between Scandiatriplant countries and other EOEO's



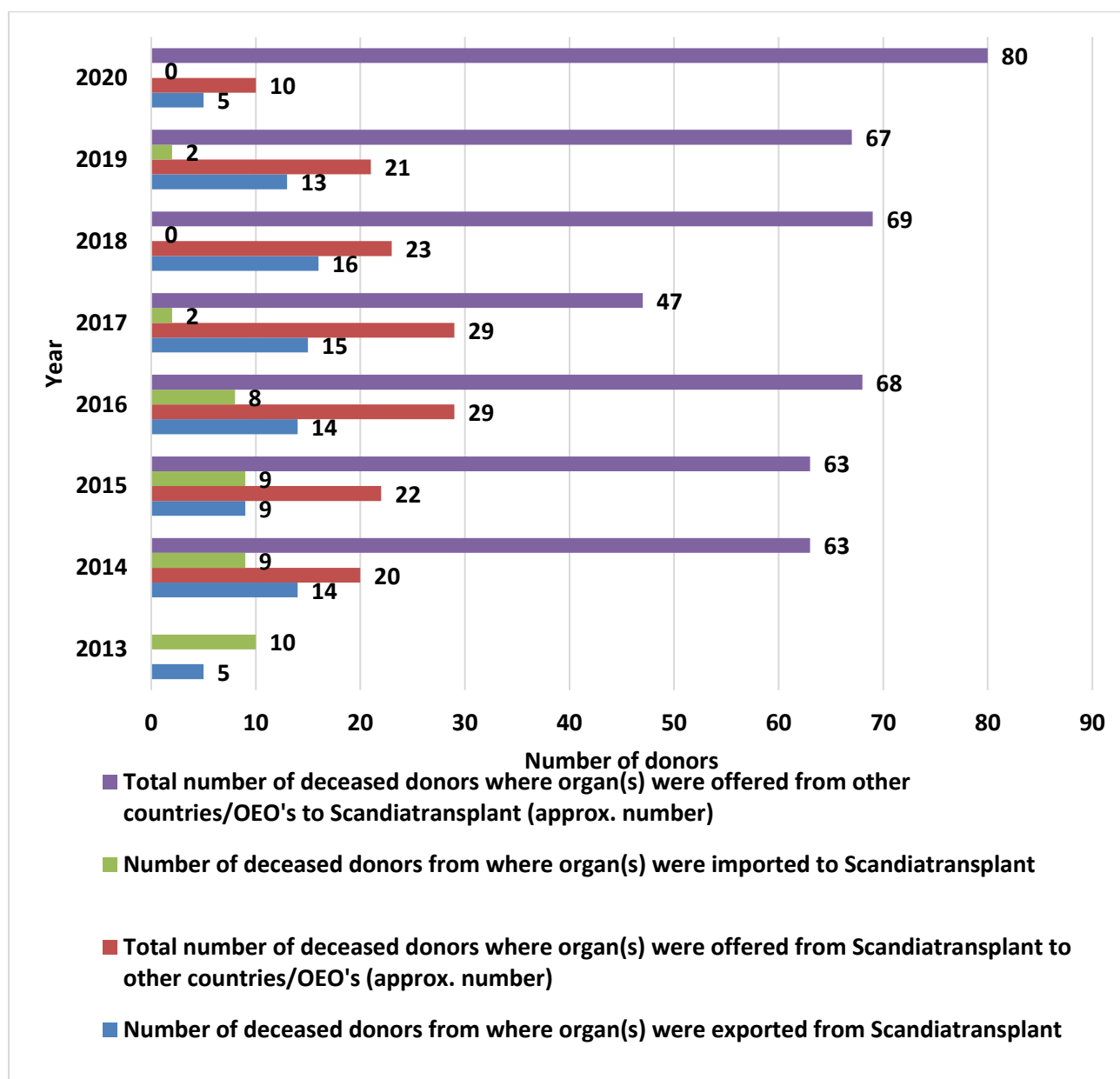
Number of organs exported and imported
between other EOEO's and Norway



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



Number of deceased donors where organ(s) were offered^{9,10}

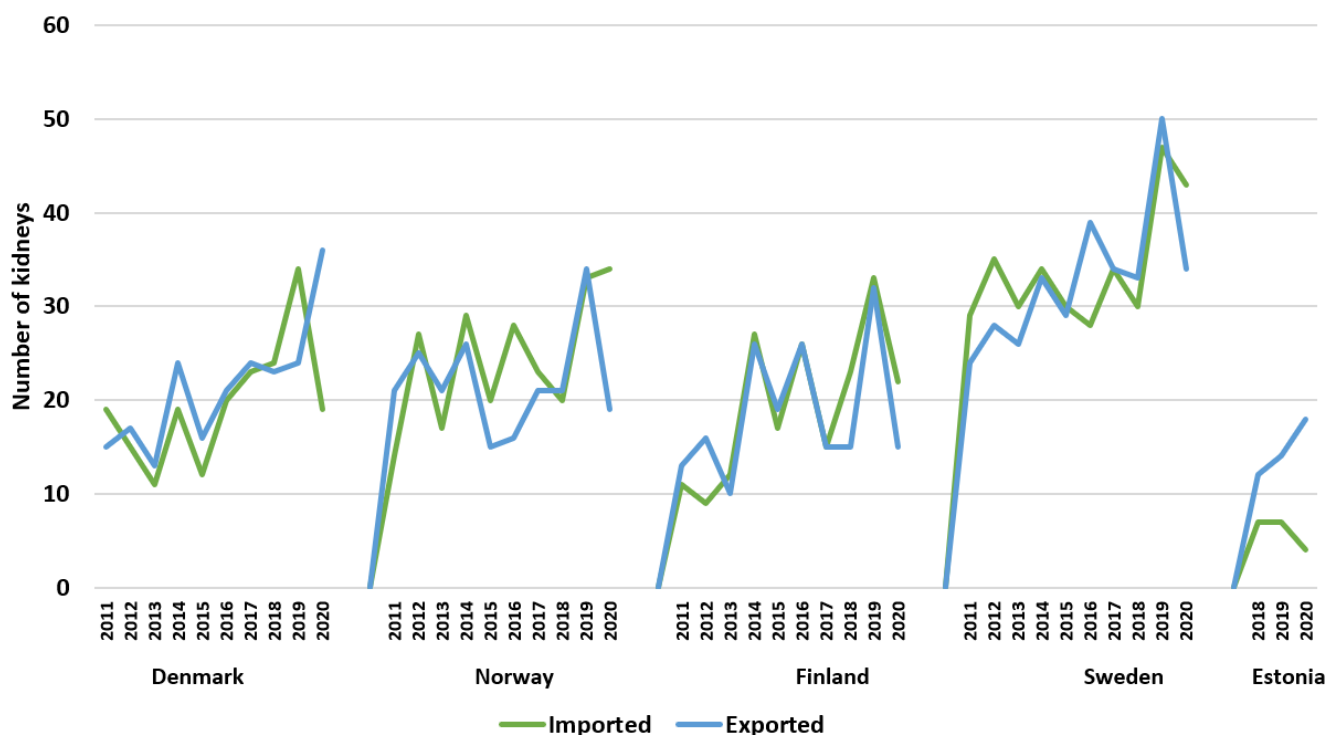


⁹ The web-based organ offer form and related communication systems for organ offers were introduced in year 2013

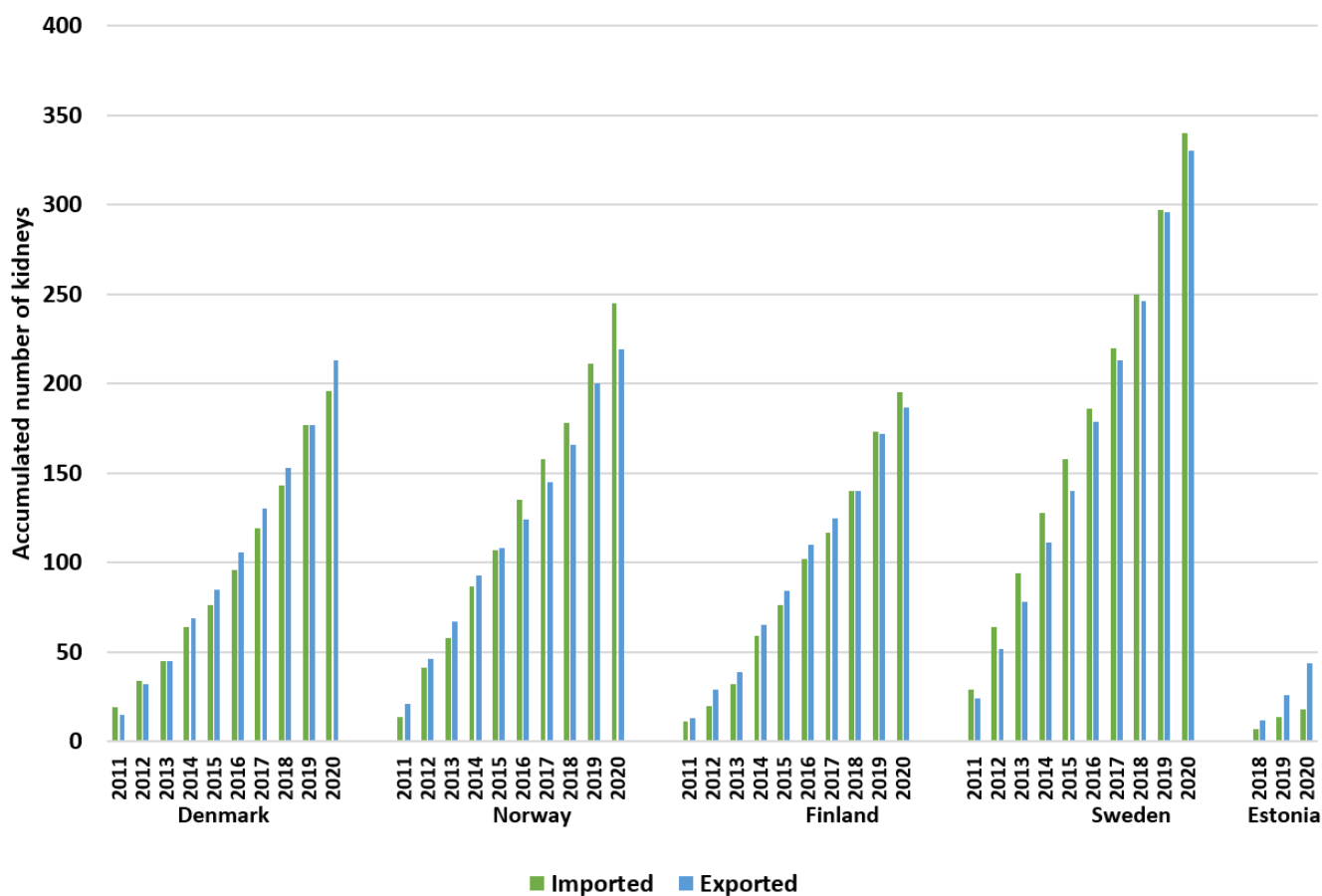
¹⁰ From October 1st 2017 Estonia is regarded as part of Scandiatransplant

Kidneys exported and imported between the Scandiatriplant countries¹¹

Import and export of kidneys



Import and export of kidneys - accumulated figures



¹¹ Only kidneys from deceased donors and kidneys used for transplantation are included

Kidneys exported and imported¹² between the Scandiatransplant countries in numbers¹³ (including import and export to other EOEO's)

Denmark

	Kidneys transplanted	Import	Export	Import EOEO	Export EOEO
2011	135	19	15	1	0
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

Norway

	Kidneys transplanted	Import	Export	Import EOEO	Export EOEO
2011	229	14	21	0	0
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

¹² Only kidneys from deceased donors and kidneys used for transplantation are included

¹³ Kidney double transplantations are counted as 1

Finland

	Kidneys transplanted	Import	Export	Import EOEO	Export EOEO
2011	164	11	13	0	0
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

Sweden

	Kidneys transplanted	Import	Export	Import EOEO	Export EOEO
2011	251	29	24	1	0
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

Estonia¹⁴

	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

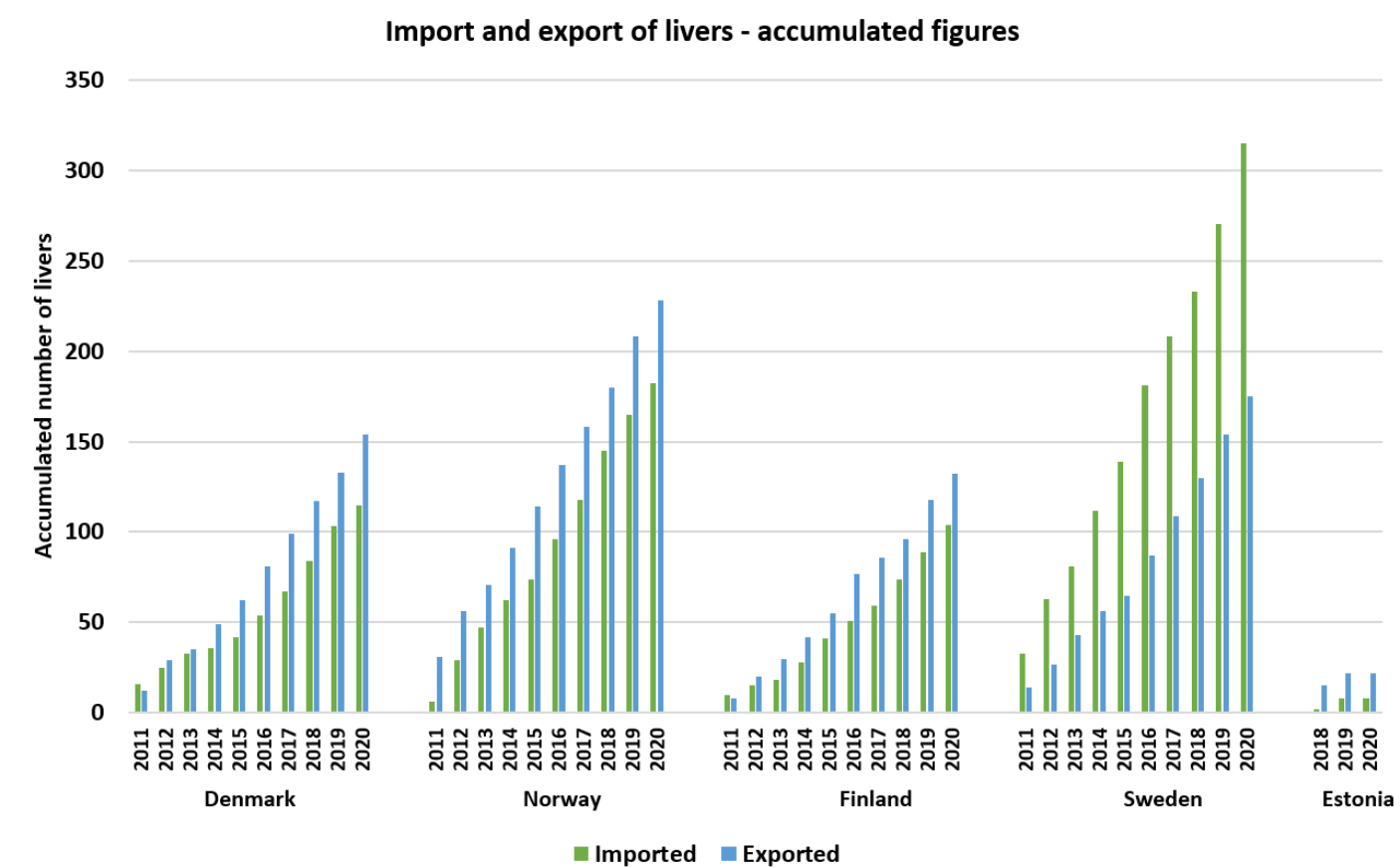
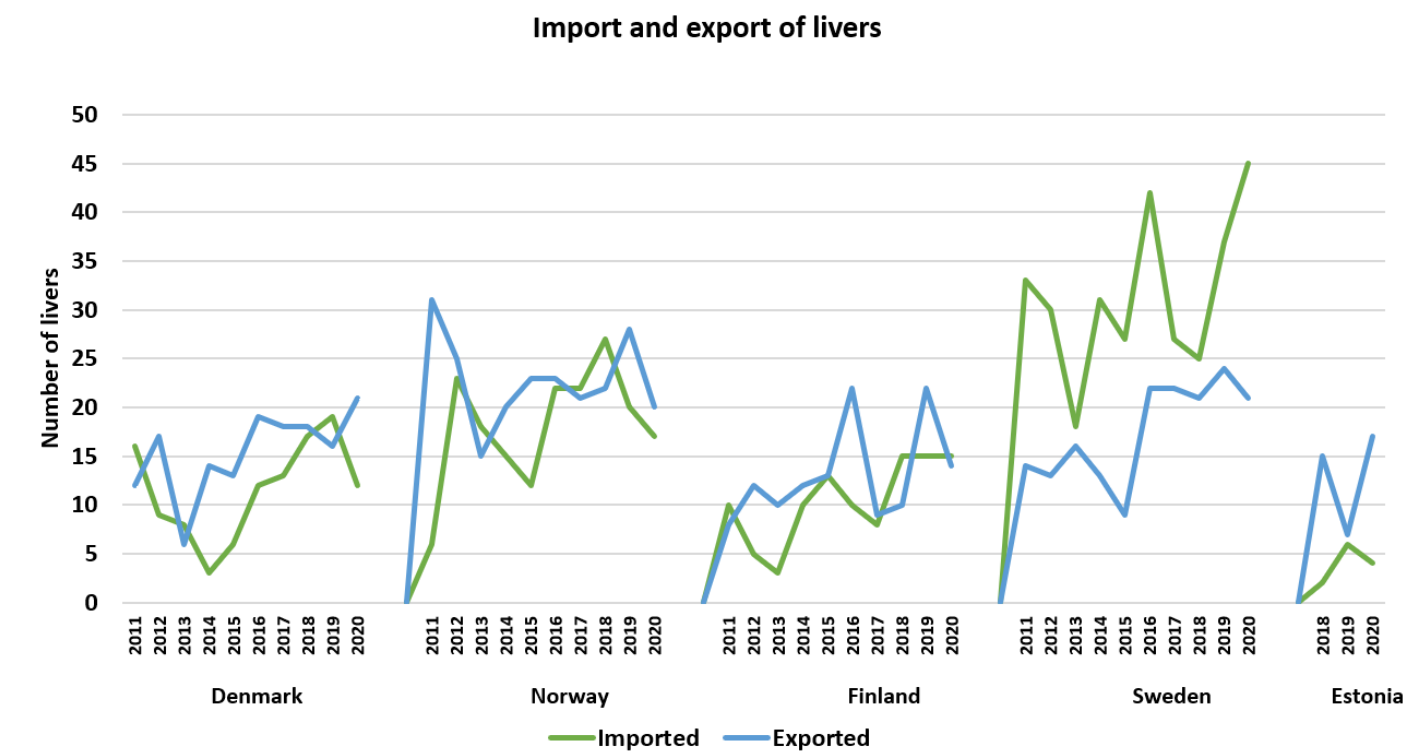
Iceland¹⁵

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

¹⁴ From October 1st 2017 Estonia is regarded as part of ScandiTransplant

¹⁵ From 2019 some of the deceased donor kidney transplantations on Icelandic patients will be made in Iceland

Livers exported and imported between the Scandiatriplant countries¹⁶



¹⁶ Only livers used for transplantation are included

**Livers exported and imported¹⁷ between the Scandiatransplant countries in numbers¹⁸
(including import and export to other EOEO's)**

Denmark

	Livers transplanted	Import	Export	Import EOEO	Export EOEO
2011	51	16	12	0	0
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

Norway

	Livers transplanted	Import	Export	Import EOEO	Export EOEO
2011	89	6	31	0	0
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

¹⁷ Only livers used for transplantation are included

¹⁸ If the liver is transplanted as split liver, each split is counted as 1

Finland

	Livers transplanted	Import	Export	Import EOEO	Export EOEO
2011	56	10	8	0	0
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

Sweden

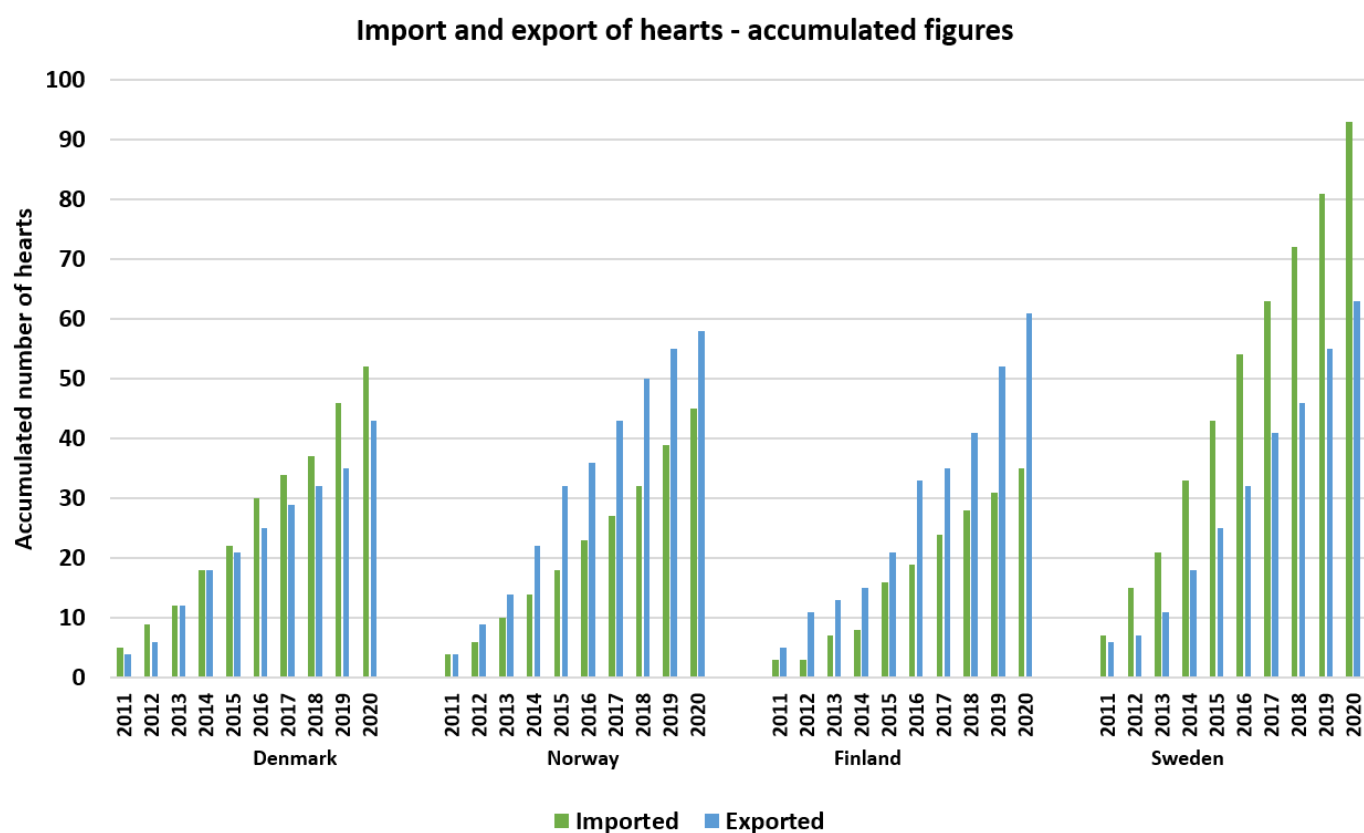
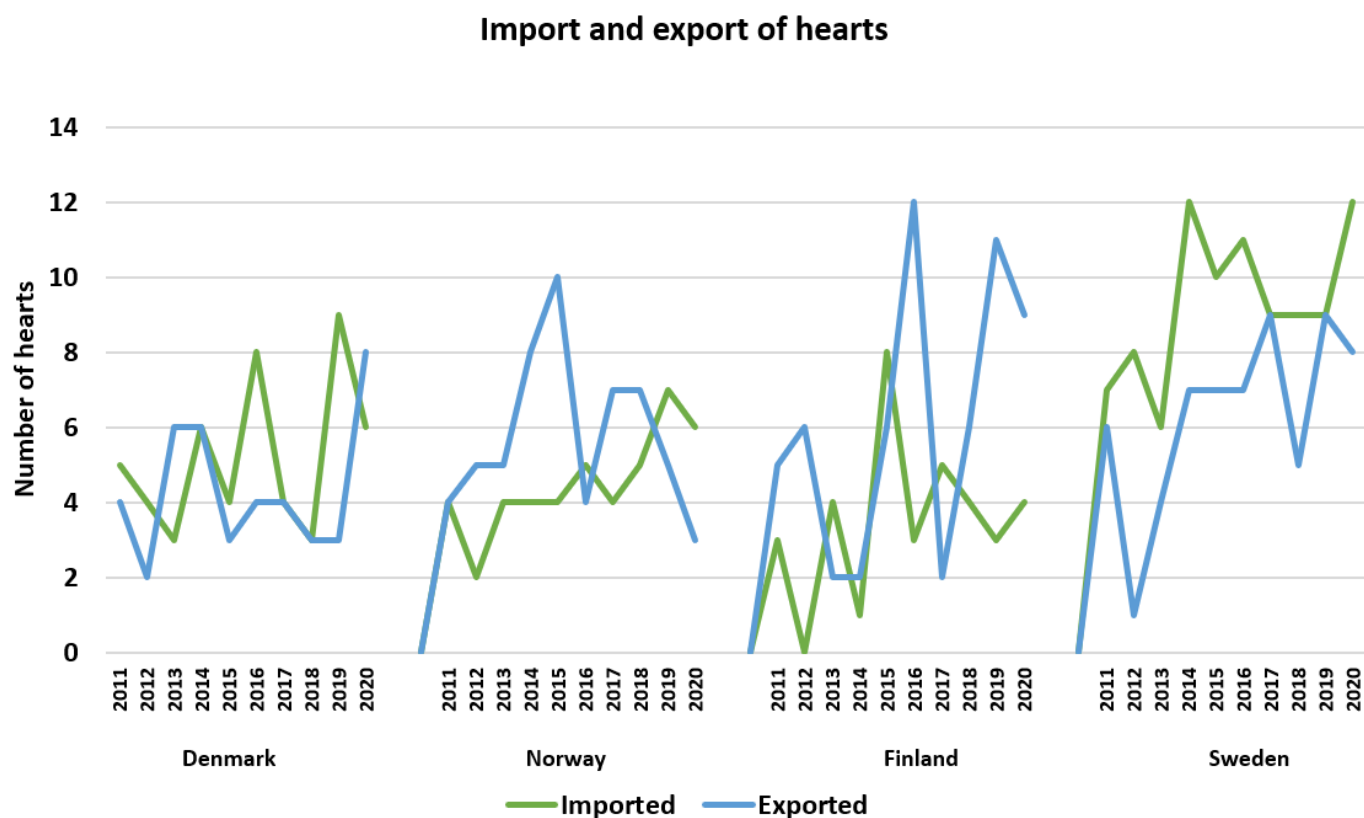
	Livers transplanted	Import	Export	Import EOEO	Export EOEO
2011	149	33	14	0	3
2012	142	30	13	0	1
2013	150	18	16	4	1
2014	171	31	13	3	3
2015	176	27	9	2	5
2016	197	42	22	2	2
2017	176	27	22	0	4
2018	162	25	21	0	3
2019	183	37	24	0	5
2020	171	45	21	0	1

Estonia¹⁹

	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

¹⁹ From October 1st 2017 Estonia is regarded as part of Scandiatransplant

Hearts exported and imported between the Scandi transplant countries²⁰



²⁰ Only hearts used for transplantation are included

Hearts exported and imported²¹ between the Scandiatransplant countries in numbers (including import and export to other EOEO's)

Denmark

	Hearts transplanted	Import	Export	Import EOEO	Export EOEO
2011	29	5	4	0	0
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

Norway

	Hearts transplanted	Import	Export	Import EOEO	Export EOEO
2011	29	4	4	0	0
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

²¹ Only hearts used for transplantation are included

Finland²²

	Hearts transplanted	Import	Export	Import EOEO	Export EOEO
2011	18	3	5	0	0
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

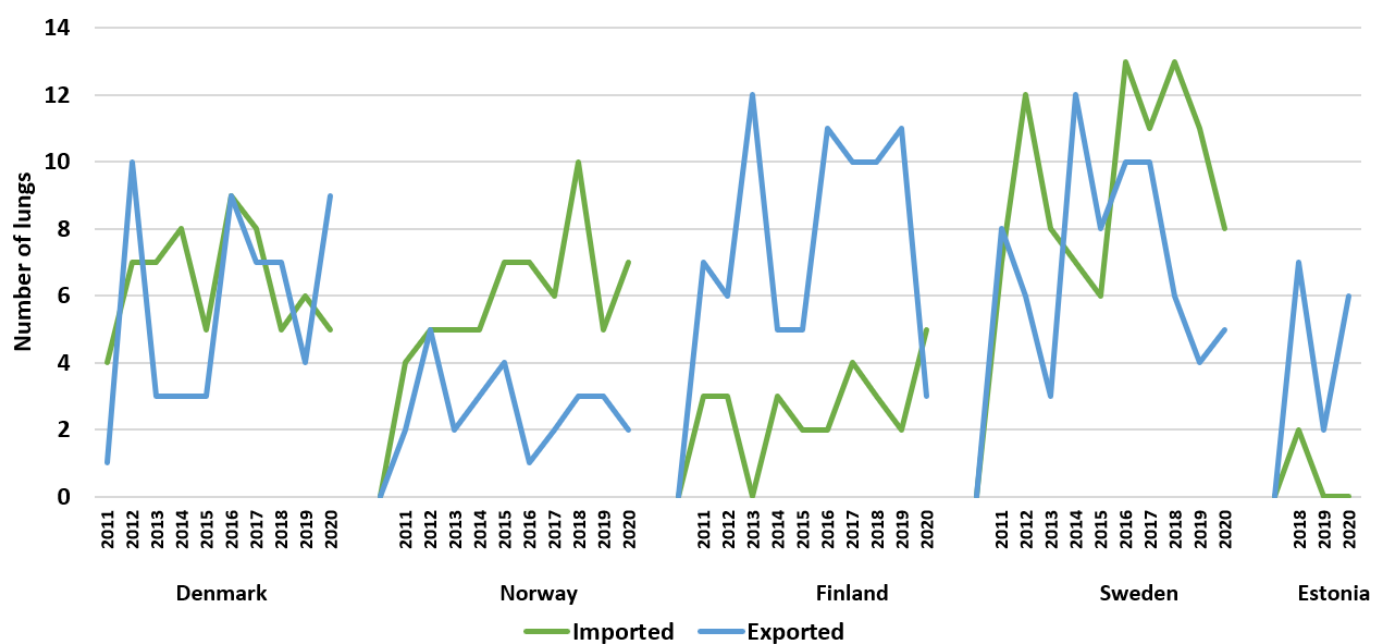
Sweden

	Hearts transplanted	Import	Export	Import EOEO	Export EOEO
2011	51	7	6	1	4
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

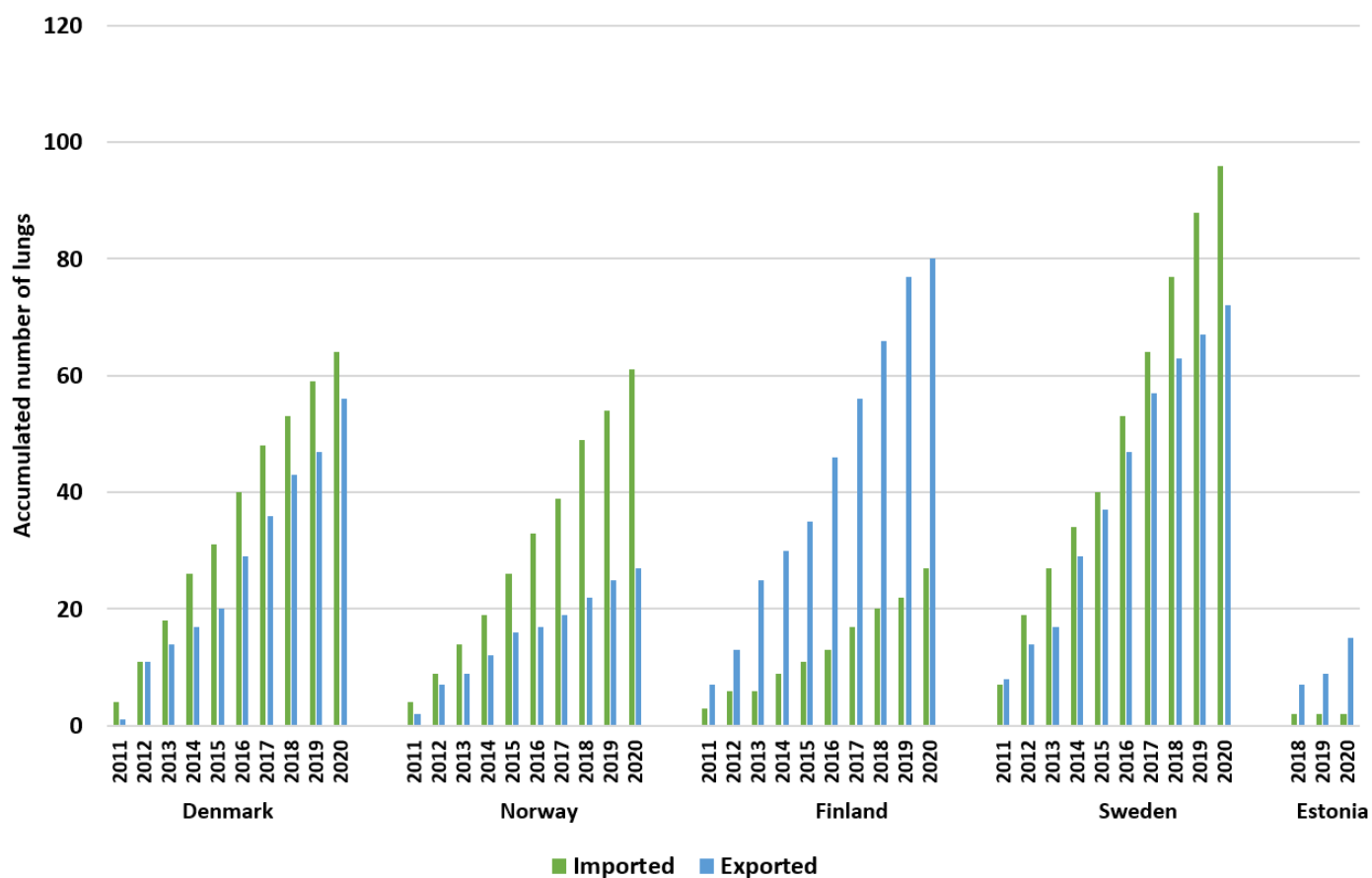
²² Estonian heart transplantations are performed in Finland and included in the number of heart transplantation. Furthermore, Estonian heart donors are not calculated as import/export when used for transplantation in Finland.

Lungs exported and imported between the Scandiatriplant countries²³

Import and export of lungs



Import and export of lungs - accumulated figures



²³ Only lungs used for transplantation are included

**Lungs exported and imported²⁴ between the Scandiatransplant countries in numbers²⁵
(including import and export to other EOEO's)**

Denmark

	Lungs transplanted	Import	Export	Import EOEO	Export EOEO
2011	30	4	1	1	1
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

Norway

	Lungs transplanted	Import	Export	Import EOEO	Export EOEO
2011	28	4	2	0	0
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

²⁴ Only lungs used for transplantation are included

²⁵ Single lung, double lung and heart-lung transplantations are all counted as 1

Finland

	Lungs transplanted	Import	Export	Import EOEO	Export EOEO
2011	23	3	7	0	0
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

Sweden

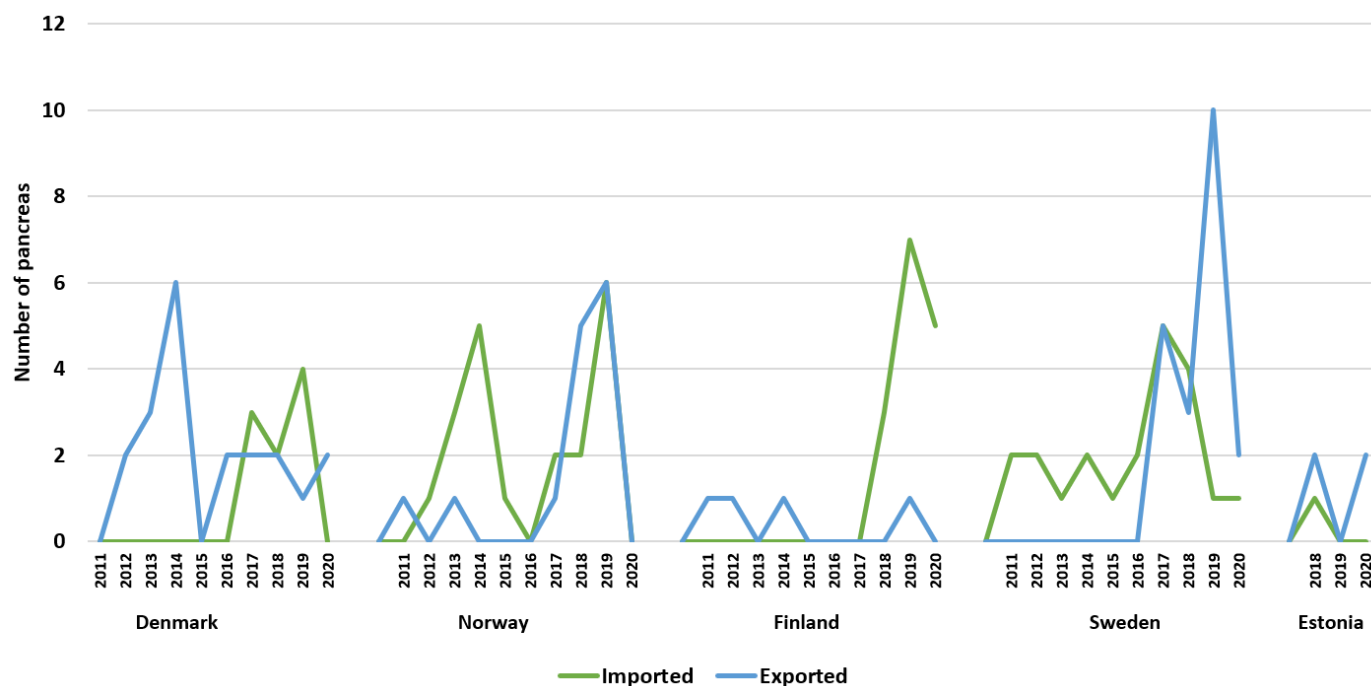
	Lungs transplanted	Import	Export	Import EOEO	Export EOEO
2011	60	7	8	0	3
2012	60	12	6	0	3
2013	58	8	3	1	2
2014	65	7	12	1	8
2015	48	6	8	0	3
2016	62	13	10	0	4
2017	65	11	10	0	5
2018	74	13	6	0	4
2019	56	11	4	0	4
2020	51	8	5	0	2

Estonia

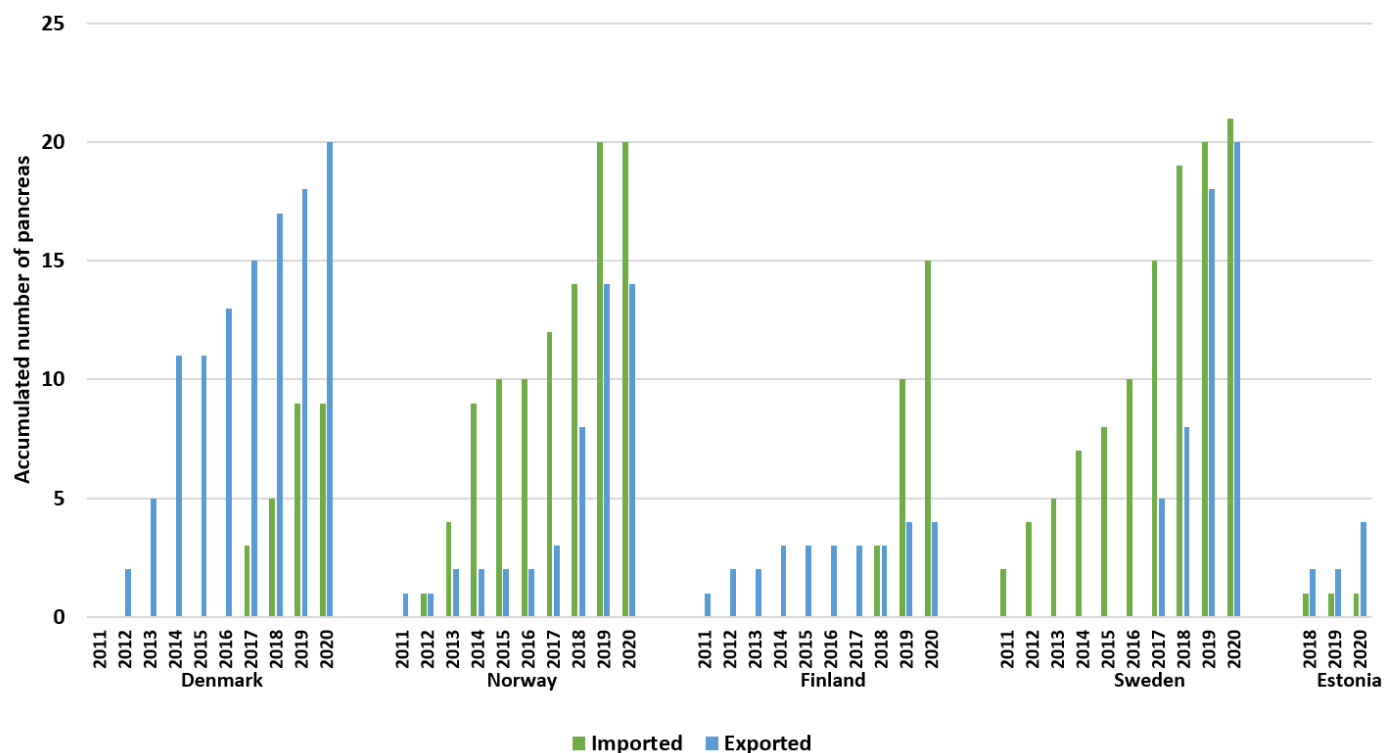
	Lungs transplanted	Import	Export	Import EOEO	Export EOEO
2017	2	0	0	0	0
2018	4	2	7	0	0
2019	3	0	2	0	0
2020	0	0	6	0	0

Pancreas exported and imported between the Scandiatriplant countries^{26,27}

Import and export of pancreas



Import and export of pancreas - accumulated figures



²⁶ Only pancreas used for whole pancreas transplantation are included

²⁷ 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 imported²⁸ between the Scandiatransplant countries in numbers (including import and export to other EOEO's)

Denmark

	Pancreas transplanted	Import	Export	Import EOEO	Export EOEO
2011	0	0	0	0	0
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

Norway

	Pancreas transplanted	Import	Export	Import EOEO	Export EOEO
2011	20	0	1	0	0
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 ²⁹	0	0
2018	15	2	5	0	0
2019	15	6	6	0	0
2020	6	0	0	0	0

²⁸ Only pancreas used for whole pancreas transplantation are included

²⁹ +1 for a Norwegian recipient transplanted in Sweden

Finland

	Pancreas transplanted	Import	Export	Import EOEO	Export EOEO
2011	1	0	1	0	0
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

Sweden

	Pancreas transplanted	Import	Export	Import EOEO	Export EOEO
2011	35	2	0	0	0
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

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

Intestine exported and imported³⁰ between the Scandiatransplant countries and other EOEO's

	Import/export	Import/export EOEO
2011	0	0
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

³⁰ Only intestine used for transplantation is included

SAEs and SARs reported through the Scandiatransplant system in 2020

Between January 1st and December 31st, 2020 there has been 5 SAEs reported through the Scandiatransplant IT-system. In 2018 there were 15 reports and in 2019 there were 12 reports. Four reports were from Sweden and one was from Denmark. In 3 reports the event involved donor or patients from another country. The decline in the number of reports suggests underreporting. Scandiatransplant is discussing initiatives to increase alertness of reporting SAEs and SARs.

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

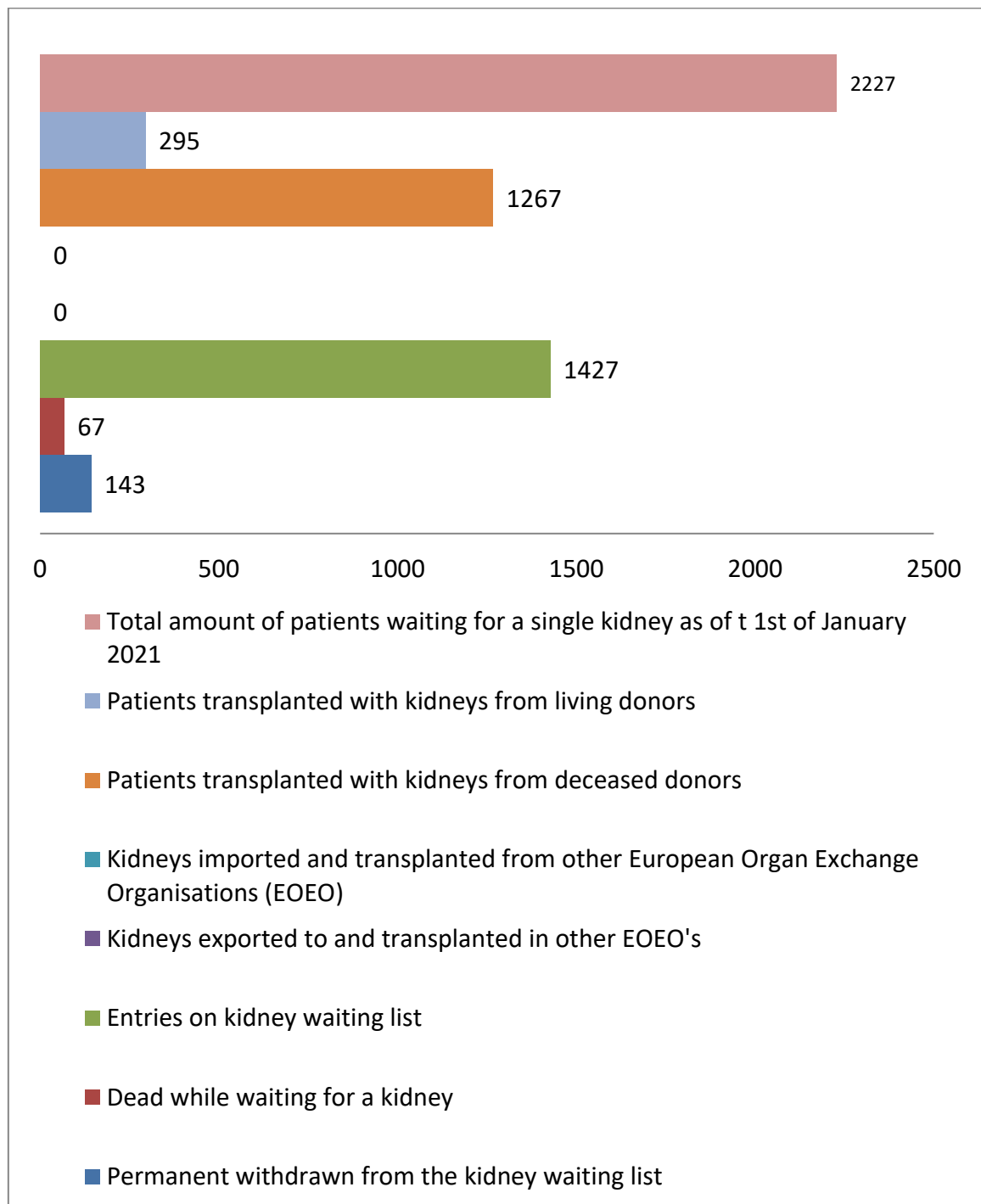
Reports from transplantation centers in Sweden

ID	Center	OIC	Short description of SAE/SAR
625	Skåne	N, DK SF ES	Papillary carcinoma in donor discovered late. Heart was used for transplantation
648	Uppsala		Vascular mycotic infection transmitted to liver-, kidney- and pancreas recipient
668	Skåne*		Big kidney not stored according to routine
728	Skåne*		Delayed transport (Covid-19) and complicated renal vasculature

Reports from transplantation centers in Denmark

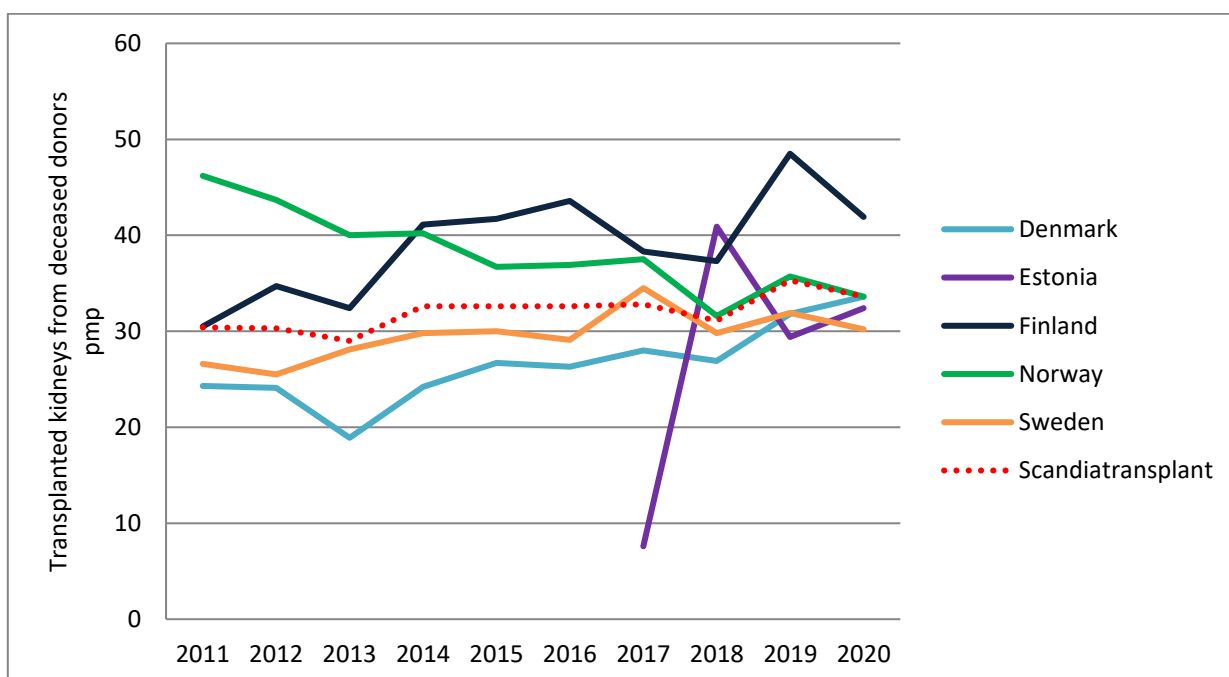
ID	Center	OIC	Short description of SAE/SAR
688	Aarhus		Low malignant renal cell carcinoma in one kidney from donor. Both kidneys transplanted with both recipient's consent.

Kidneys 2020



Transplanted kidneys pmp³¹ from deceased donors per year

Year	Denmark	Estonia	Finland	Norway	Sweden	Scandiatransplant
2011	24,3		30,5	46,2	26,6	30,4
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 ³²	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

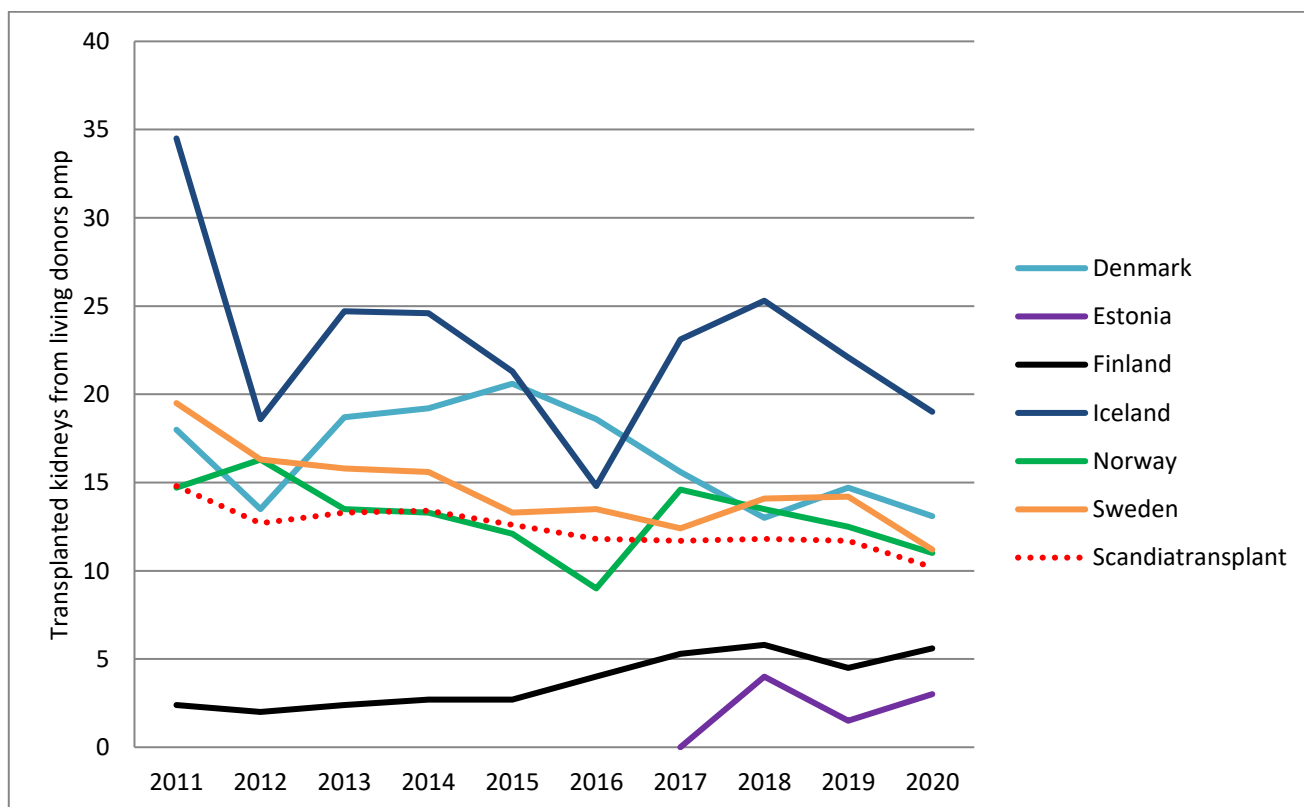


³¹ pmp: per million population

³² Figures included from Estonia year 2017 starts from October 1st 2017, which has negative impact on PMP for Estonia and Scandiatransplant this year

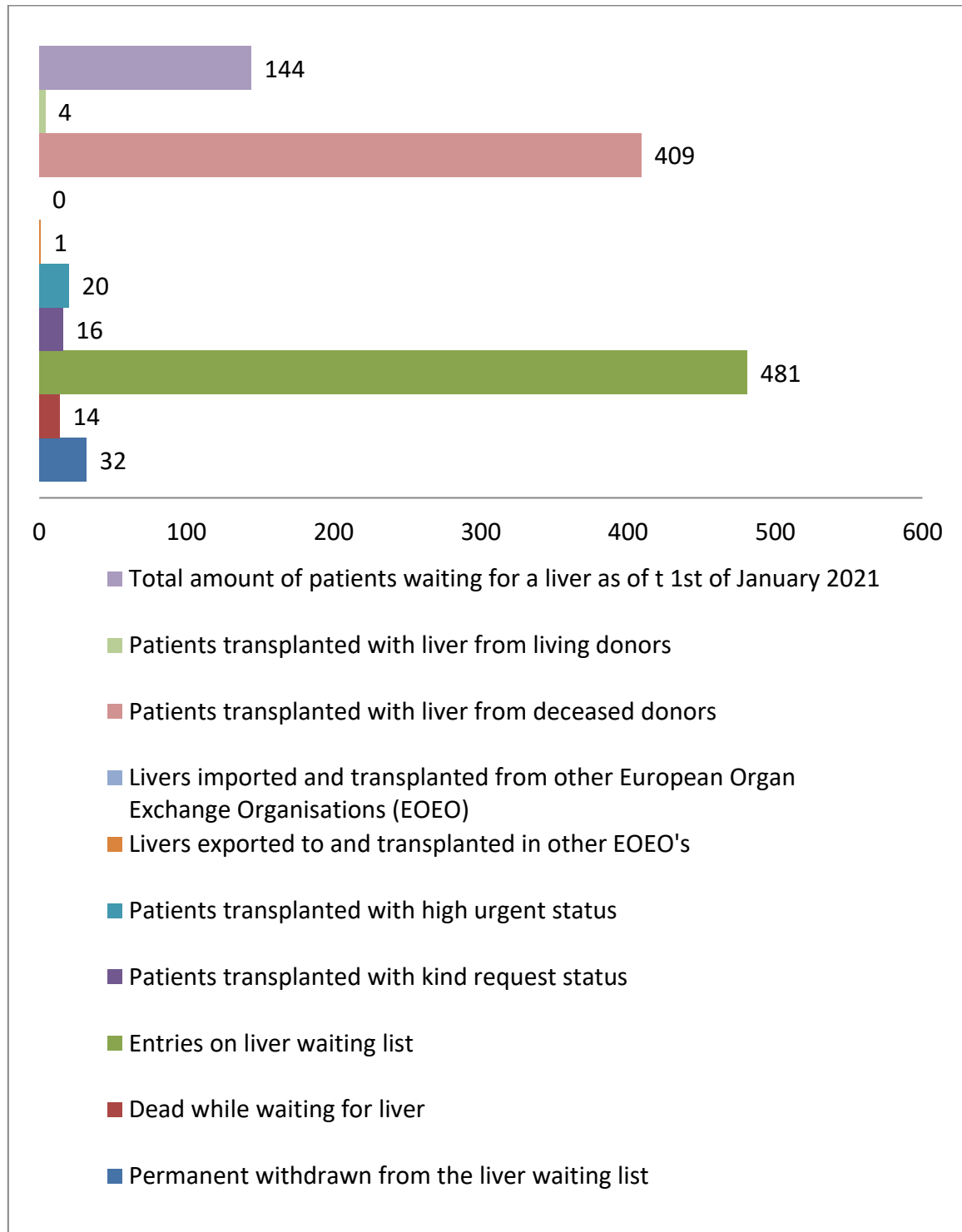
Transplanted kidneys pmp³³ from living donors per year

Year	Denmark	Estonia	Finland	Iceland	Norway	Sweden	Scandiatransplant
2011	18,0		2,4	34,5	14,7	19,5	14,8
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



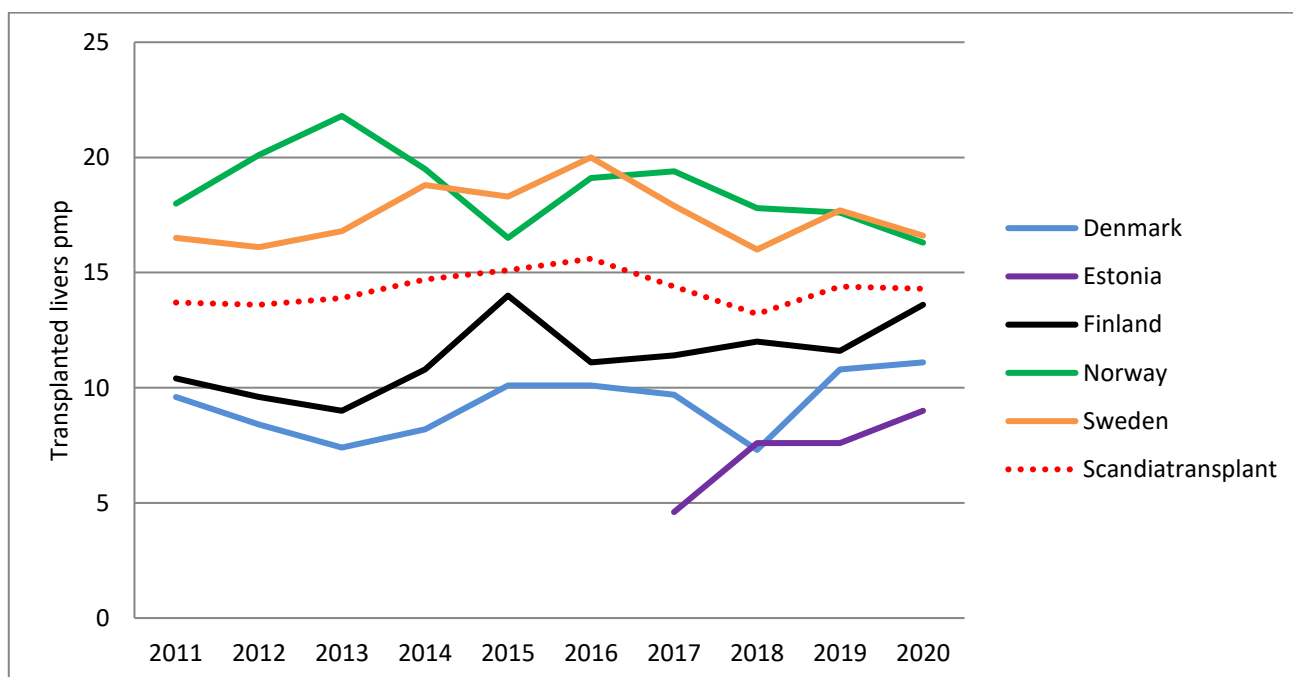
³³ pmp: per million population

Livers 2020



Transplanted livers (Deceased and living donors) pmp³⁴ per year

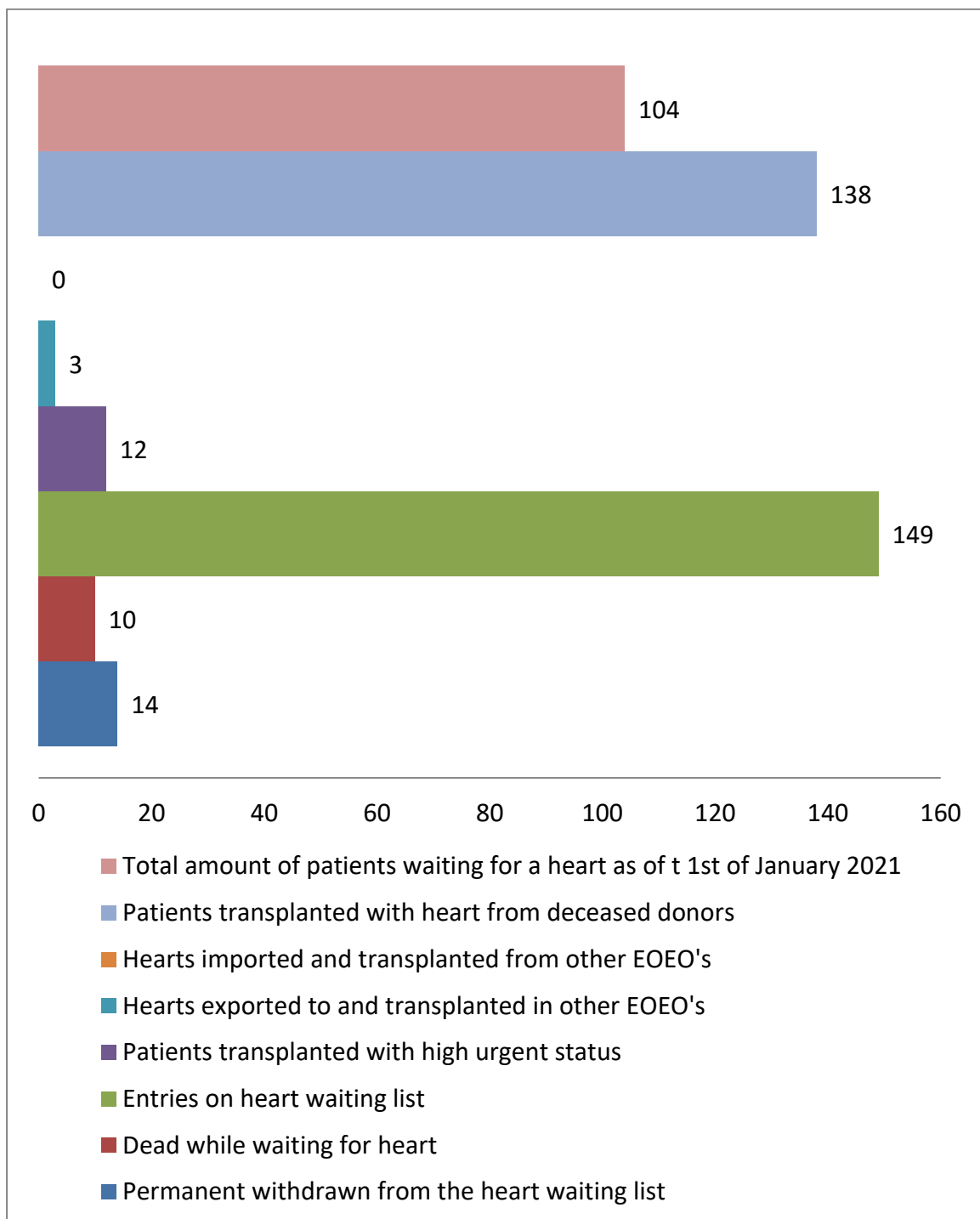
Year	Denmark	Estonia	Finland	Norway	Sweden	Scandiatransplant
2011	9,6		10,4	18,0	16,5	13,7
2012	8,4		9,6	20,1	16,1	13,6
2013	7,4		9,0	21,8	16,8	13,9
2014	8,2		10,8	19,5	18,8	14,7
2015	10,1		14,0	16,5	18,3	15,1
2016	10,1		11,1	19,1	20,0	15,6
2017	9,7	4,6 ³⁵	11,4	19,4	17,9	14,4
2018	7,3	7,6	12,0	17,8	16,0	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



³⁴ pmp: per million population

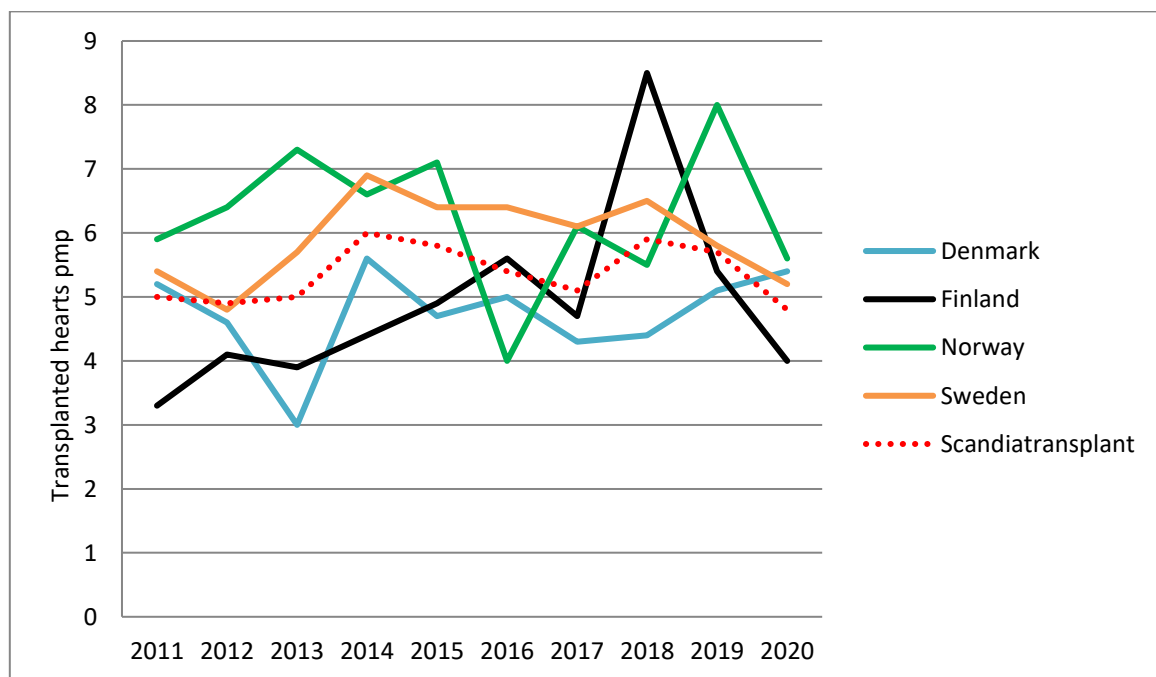
³⁵ Figures included from Estonia year 2017 starts from October 1st 2017, which has negative impact on PMP for Estonia and Scandiatransplant

Hearts 2020



Transplanted hearts pmp³⁶ per year³⁷

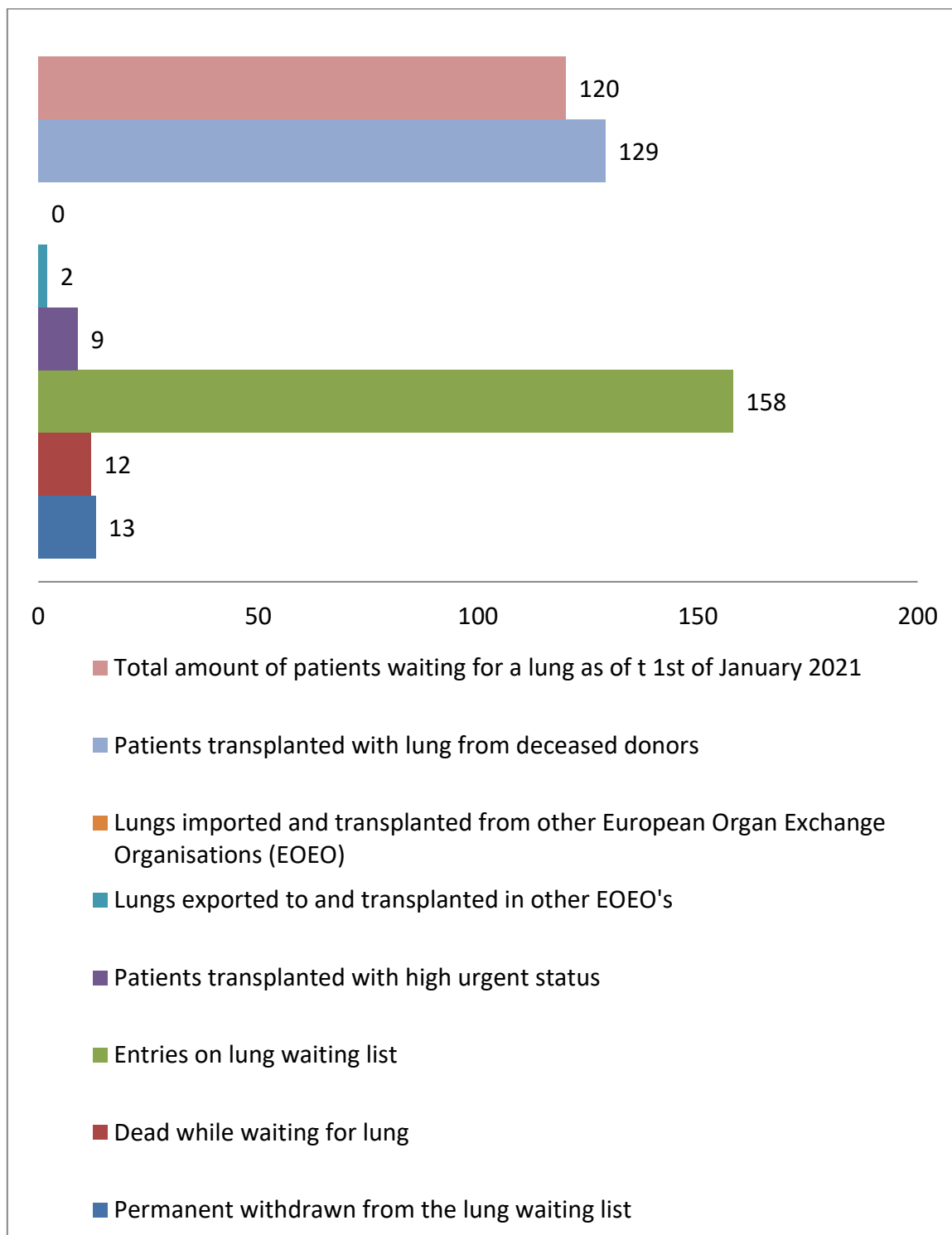
Year	Denmark	Finland	Norway	Sweden	Scandiatransplant
2011	5,2	3,3	5,9	5,4	5,0
2012	4,6	4,1	6,4	4,8	4,9
2013	3,0	3,9	7,3	5,7	5,0
2014	5,6	4,4	6,6	6,9	6,0
2015	4,7	4,9	7,1	6,4	5,8
2016	5,0	5,6	4,0	6,4	5,4
2017	4,3	4,7	6,1	6,1	5,1
2018	4,4	8,5	5,5	6,5	5,9
2019	5,1	5,4	8,0	5,8	5,7
2020	5,4	4,0	5,6	5,2	4,8



³⁶ pmp: per million population

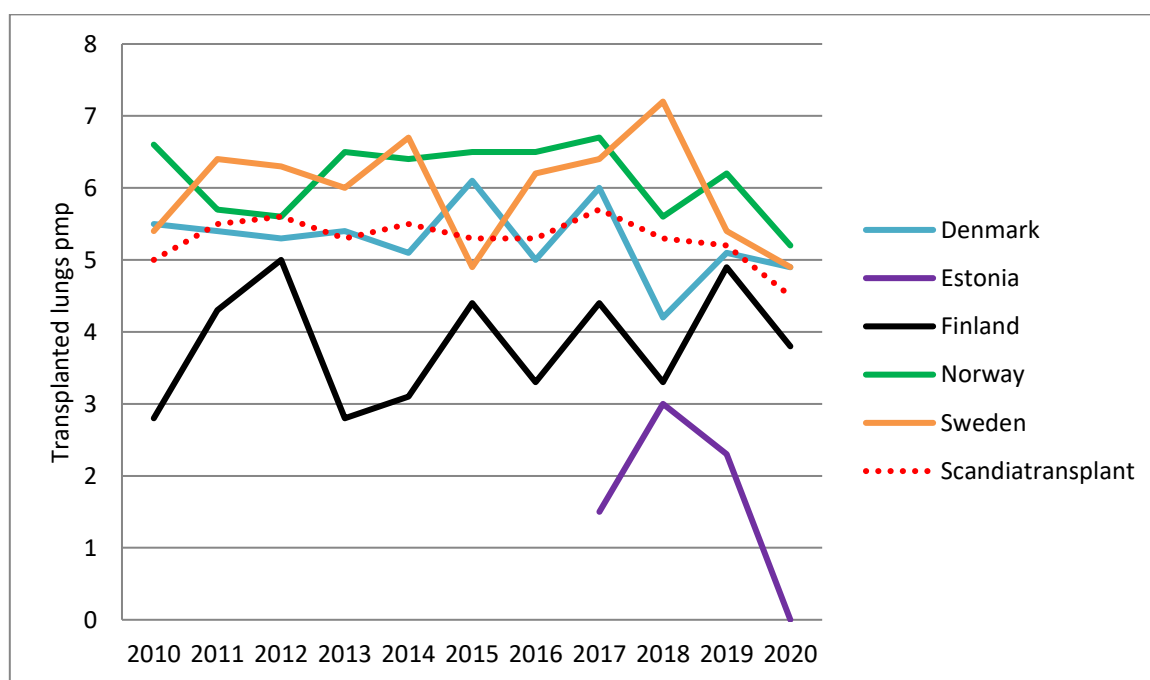
³⁷ Estonian deceased donor heart transplantations are performed in Helsinki.

Lungs 2020



Transplanted lungs (Double, single and heart-lung) pmp³⁸ per year

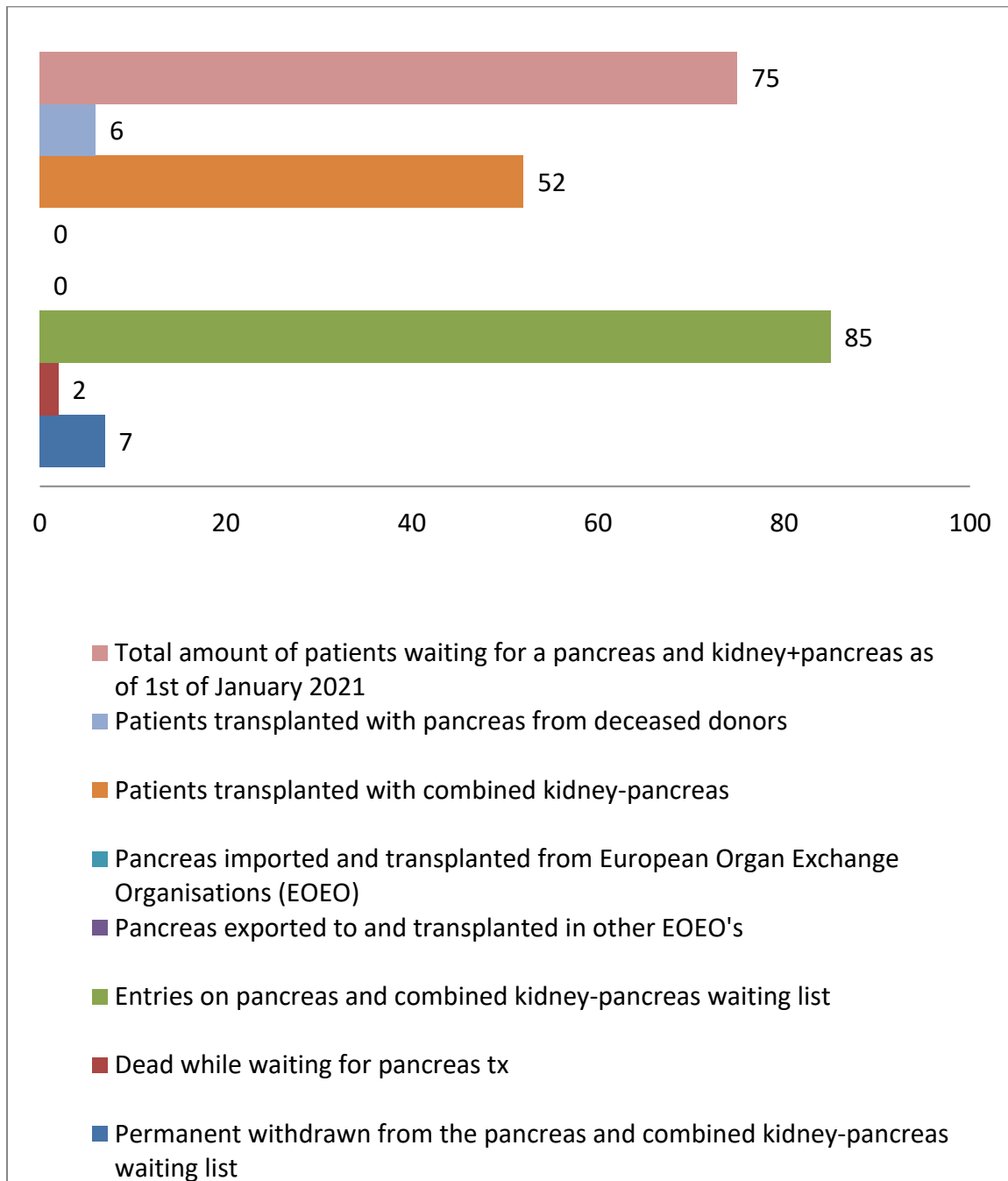
Year	Denmark	Estonia	Finland	Norway	Sweden	Scandiatransplant
2011	5,4		4,3	5,7	6,4	5,5
2012	5,3		5,0	5,6	6,3	5,6
2013	5,4		2,8	6,5	6,0	5,3
2014	5,1		3,1	6,4	6,7	5,5
2015	6,1		4,4	6,5	4,9	5,3
2016	5,0		3,3	6,5	6,2	5,3
2017	6,0	1,5 ³⁹	4,4	6,7	6,4	5,7
2018	4,2	3,0	3,3	5,6	7,2	5,3
2019	5,1	2,3	4,9	6,2	5,4	5,2
2020	4,9	0	3,8	5,2	4,9	4,7



³⁸ pmp: per million population

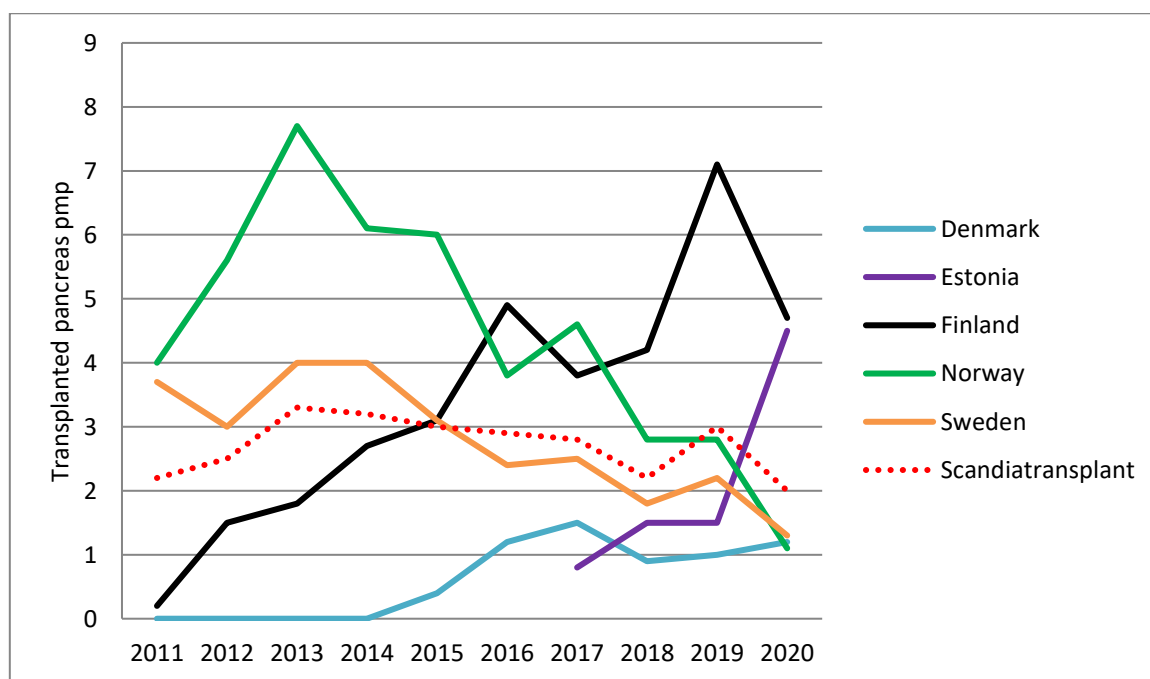
³⁹ Figures included from Estonia year 2017 starts from October 1st 2017, which has negative impact on PMP for Estonia and Scandiatransplant

Pancreas 2020



Transplanted pancreas (incl. combined kidney-pancreas) pmp⁴⁰ per year

Year	Denmark	Estonia	Finland	Norway	Sweden	Scandiatransplant
2011	0		0,2	4,0	3,7	2,2
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 ⁴¹	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

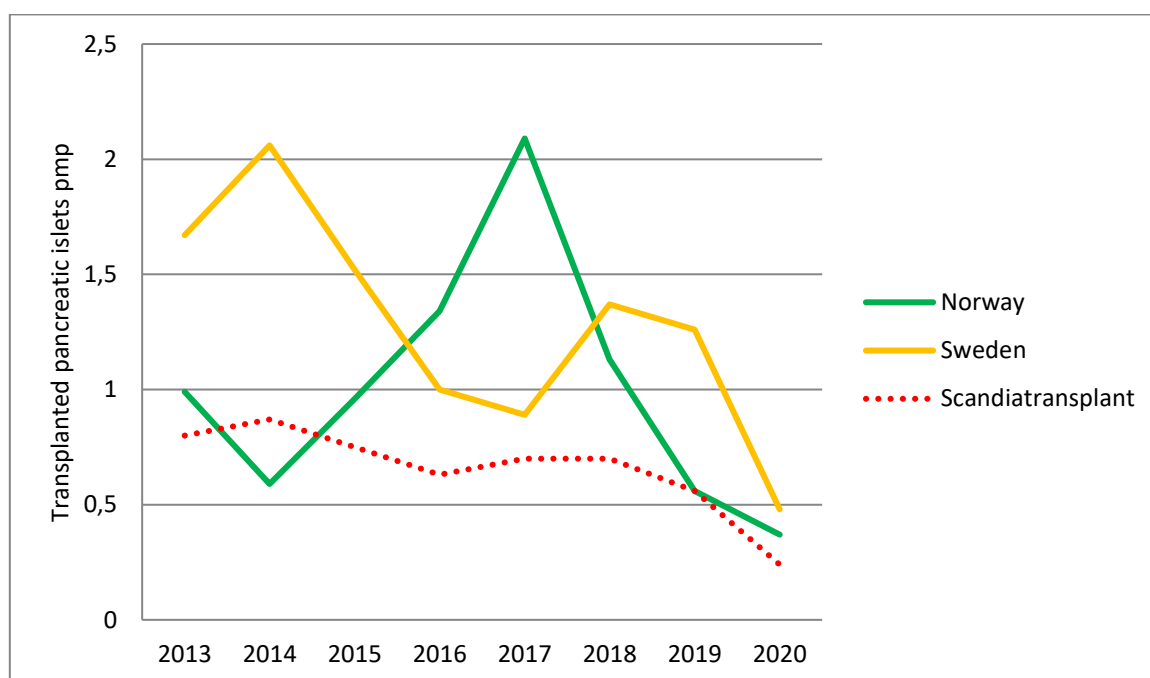


⁴⁰ pmp: per million population

⁴¹ Figures included from Estonia year 2017 starts from October 1st 2017, which has negative impact on PMP for Estonia and Scandiatransplant

Transplanted pancreatic islets⁴² pmp⁴³ 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



On behalf of Scandiatransplant

Bo-Göran Ericzon
(Chairman)

Kaj Anker Jørgensen
(Medical Director)

Ilse D. Weinreich
(Clinical Data Manager)

⁴² Each portion is counted as one transplantation

⁴³ pmp: per million population