

Annual report 2019



ScandiTransplant office

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Table of contents

Introduction	3
Organisation.....	3
Activities in the organisation in 2019	4
Transplantation and organ procurement activity.....	5
Total number of organs transplanted and patients waiting for organs within Scandiatransplant	6
Utilized deceased donors in numbers in Scandiatransplant.....	7
Utilized deceased donors pmp in Scandiatransplant.....	8
Transplanted patients in Scandiatransplant 2019	9
Organs imported and exported between EOEO's and Scandiatransplant.....	10
Number of deceased donors where organ(s) were offered'	14
Kidneys exported and imported between the Scandiatransplant countries.....	15
Kidneys exported and imported between the Scandiatransplant countries in numbers (including import and export to other EOEO's)	16
Livers exported and imported between the Scandiatransplant countries.....	18
Livers exported and imported between the Scandiatransplant countries in numbers (including import and export to other EOEO's)	19
Hearts exported and imported between the Scandiatransplant countries.....	21
Hearts exported and imported between the Scandiatransplant countries in numbers (including import and export to other EOEO's)	22
Lungs exported and imported between the Scandiatransplant countries	24
Lungs exported and imported between the Scandiatransplant countries in numbers (including import and export to other EOEO's)	25
Pancreas exported and imported between the Scandiatransplant countries,.....	27
Pancreas exported and imported between the Scandiatransplant countries in numbers (including import and export to other EOEO's)	28
Intestine exported and imported between the Scandiatransplant countries and other EOEO's.....	30
SAEs and SARs reported through the Scandiatransplant system in 2019	31
Kidneys 2019	32
Livers 2019	35
Hearts 2019	37
Lungs 2019	39
Pancreas 2019	41

Introduction

The 50 year jubilee of Scandiatransplant was celebrated with a ceremony in the City Hall of Aarhus in 2019. This was also the year where Scandiatransplant finally obtained Data Processor Agreements with all 11 member hospitals. It was also in 2019 that the first paired donor kidneys were exchanged over country borders in the STEP program (ScandiaTransplant kidney paired donation Exchange Program). Both the number of utilized donors and patients transplanted increased to the highest yet. Especially Finland had a very good year with a substantial increase in the number of utilized donors. The number of patients on the waiting list at the end of the year seems to have stabilized.

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 2019 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.

Finn Gustafsson (Denmark) and Runolfur Pálsson (Iceland) left the Board and Amir Sedigh from Sweden announced, that he could not be on the Board due to workload. Johan Nilsson (Sweden), Jóhann Jónsson (Iceland), and Allan Rasmussen (Denmark) all joined the Board in 2019. The other members of the Board were Moten Hagness (Norway) and Arno Nordin (Finland). Bo-Göran Ericzon from Sweden continues as chairman.

Suggestions for the activity and allocation rules are brought forward by a number of specialised expert groups and committees, which have been very active through the year.

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 2019 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 (6.4 mill. DKK ~ 857.000 EUR) were kept within the budget. 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 2019

The association celebrated its 50 years jubilee on May 9th. The ceremony was held in the beautiful City Hall of Aarhus. Administrators, competent authorities, collaborators, patient's representatives, and important people from the past and present in the organization were presented for talks, videos and opera singing as a review of the achievements within Scandiatransplant. The videos shown can be downloaded on YouTube with these links:

<https://www.youtube.com/watch?v=gmy1ZO0RGPw>

<https://www.youtube.com/watch?v=CJoH1tigKhg>

<https://www.youtube.com/watch?v=nnLiP-ZJENM>

The majority 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 put resources into education and guidance in relation with usage of the IT-system. Developing the IT-system for the requirements to run the STEP (ScandiaTransplant kidney living donor Exchange Program) has had high priority.

The work on implementing the new model for the responsibility of data continued in 2019 and now all 11 member hospitals have a signed Data Processor Agreement.

The annual meeting with the 6 countries' health authorities in October was held in Oslo. Among other matters, the reporting of SAE/SAR in relation to transplantation to the health authorities was discussed. This solution is logic and practical, since many of the data needed for the report would already be in the Scandiatransplant IT-system. It is working to everybody's satisfaction.

Scandiatransplant has participated in the meetings of the competent authorities and the EU-commission on matters of organ transplantation. The main reason has been to balance the participation of Scandiatransplant in the EU projects and to support the competent authorities of the 6 countries. The Office has adopted a policy of trying to have at least one person from the Office present at every meeting in the groups in Scandiatransplant to ensure continuity and updated information on decisions and wishes from the users.

Transplantation and organ procurement activity

In this report we have chosen to present some key figures and compare some of them with data from 2010 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.

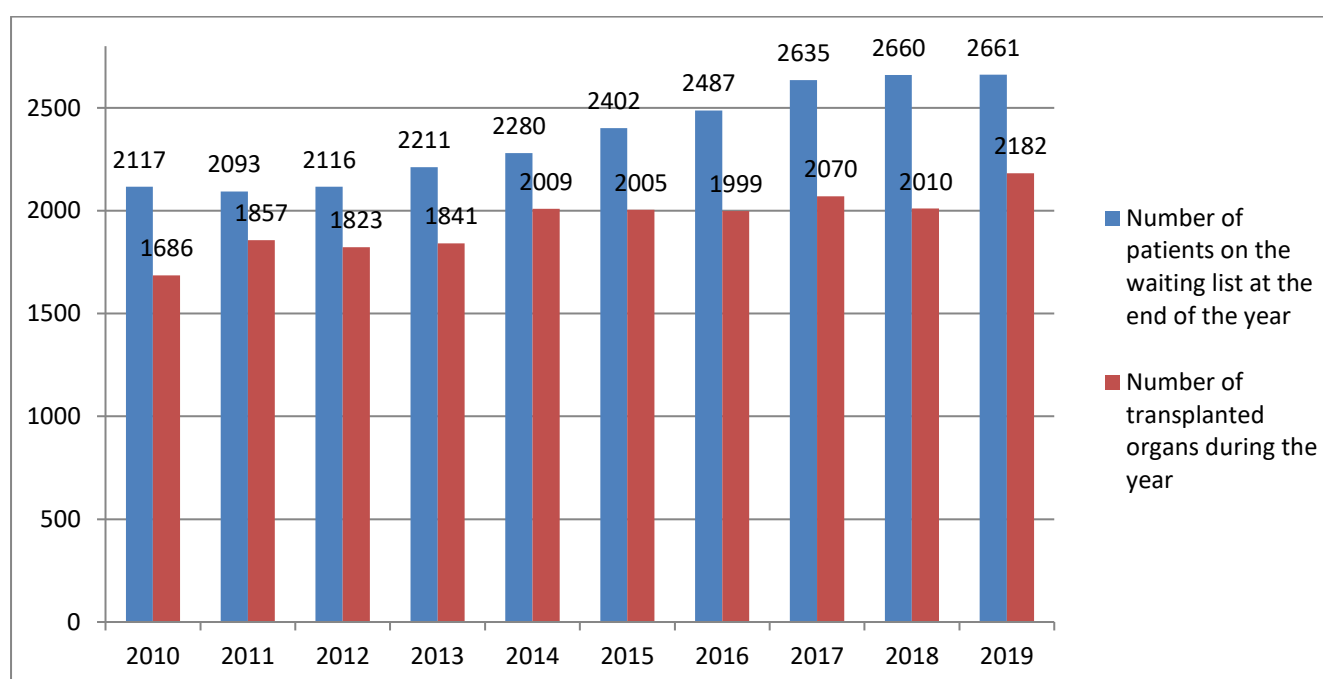
Further presentation of Scandiatransplant data is available in the annual slideshow:

[Scandiatransplant annual PowerPoint 2019](#)

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 Scandiатransplant

Year	Number of waiting patients ¹	Number of transplanted organs ²
2010	2117	1686
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

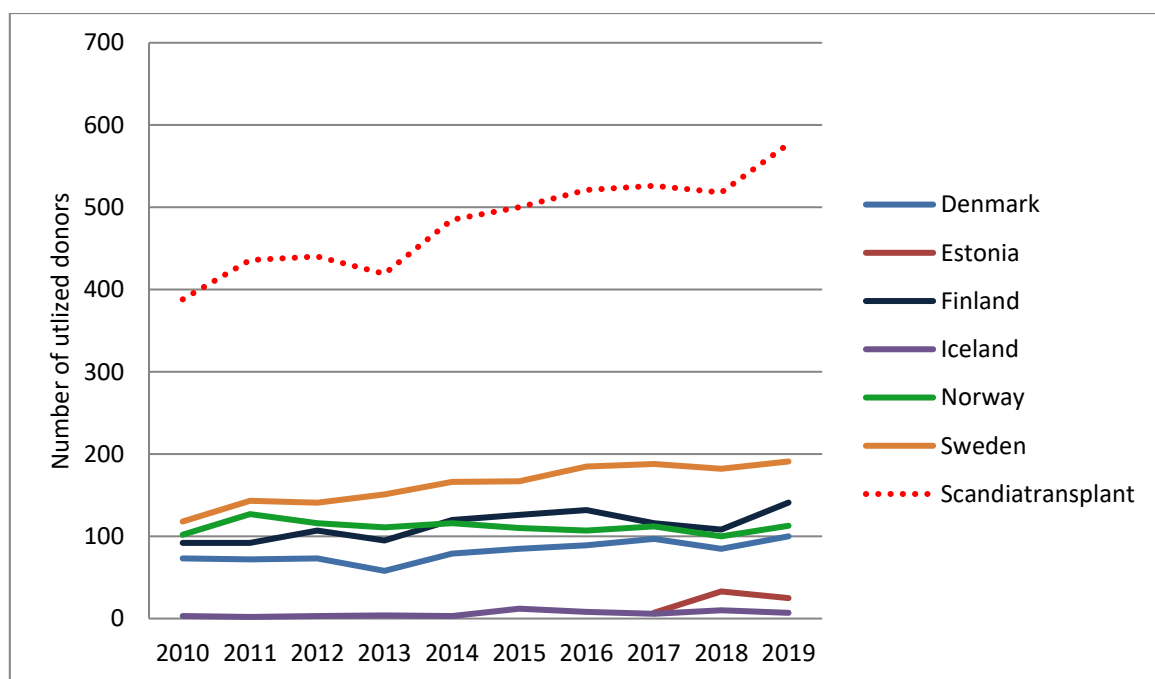


¹ Including patients (active/temp. on hold) waiting for kidney, liver, liver-kidney, heart, heart-lung, single lung, double lung, kidney-pancreas, pancreas and pancreatic islets

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
2010	73		92	3	102	118	388
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

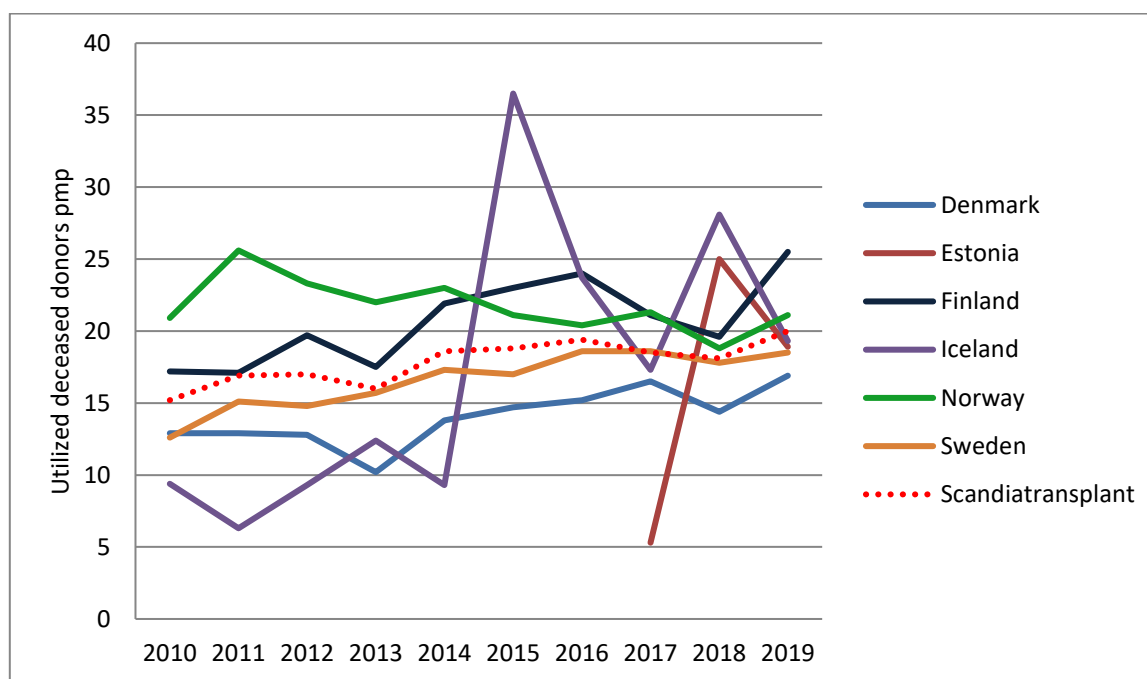


³Definition of utilized donor: An actual donor from whom at least one solid organ was transplanted.
http://www.scandiatransplant.org/data/Deceaseddonordefv_3.pdf

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
2010	12,9		17,2	9,4	20,9	12,6	15,2
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

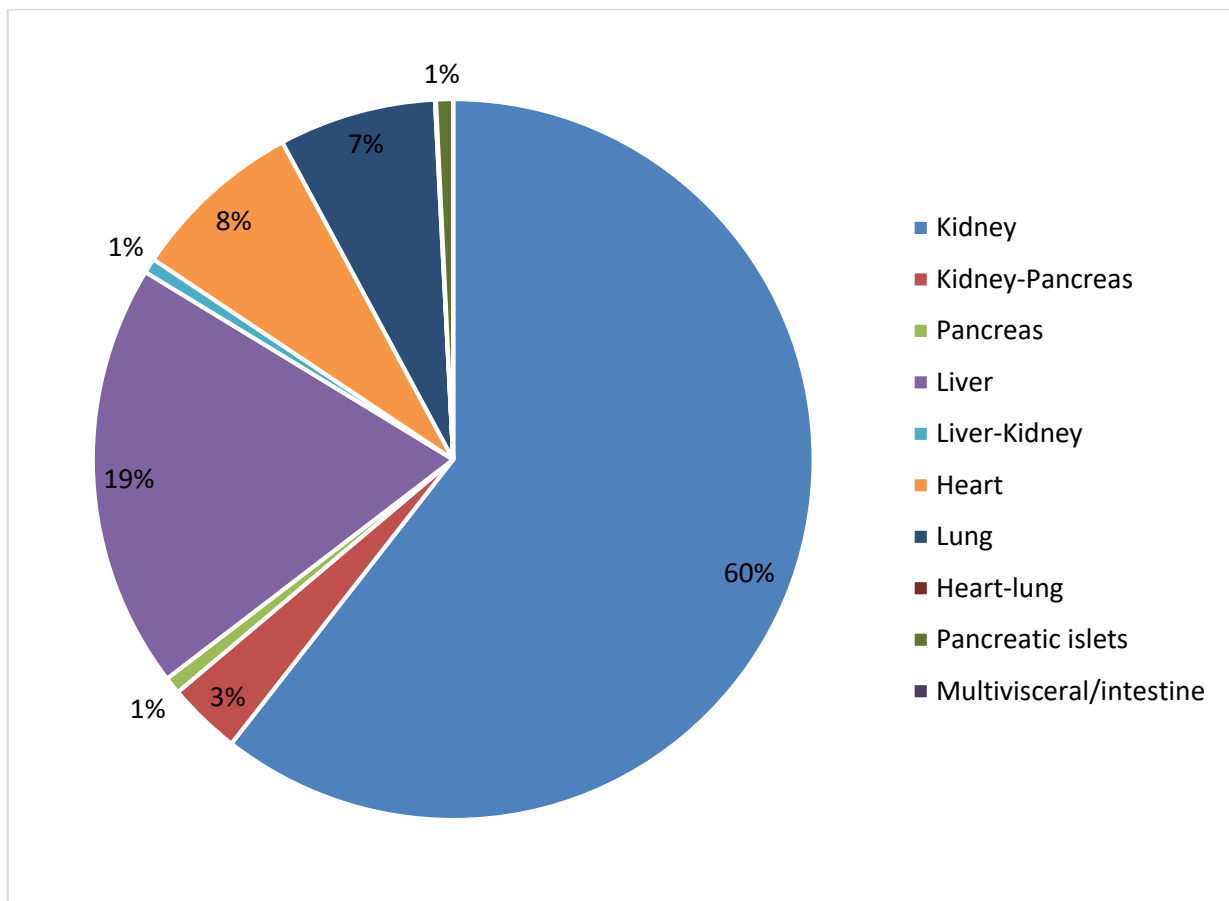


⁵ pmp: per million population

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

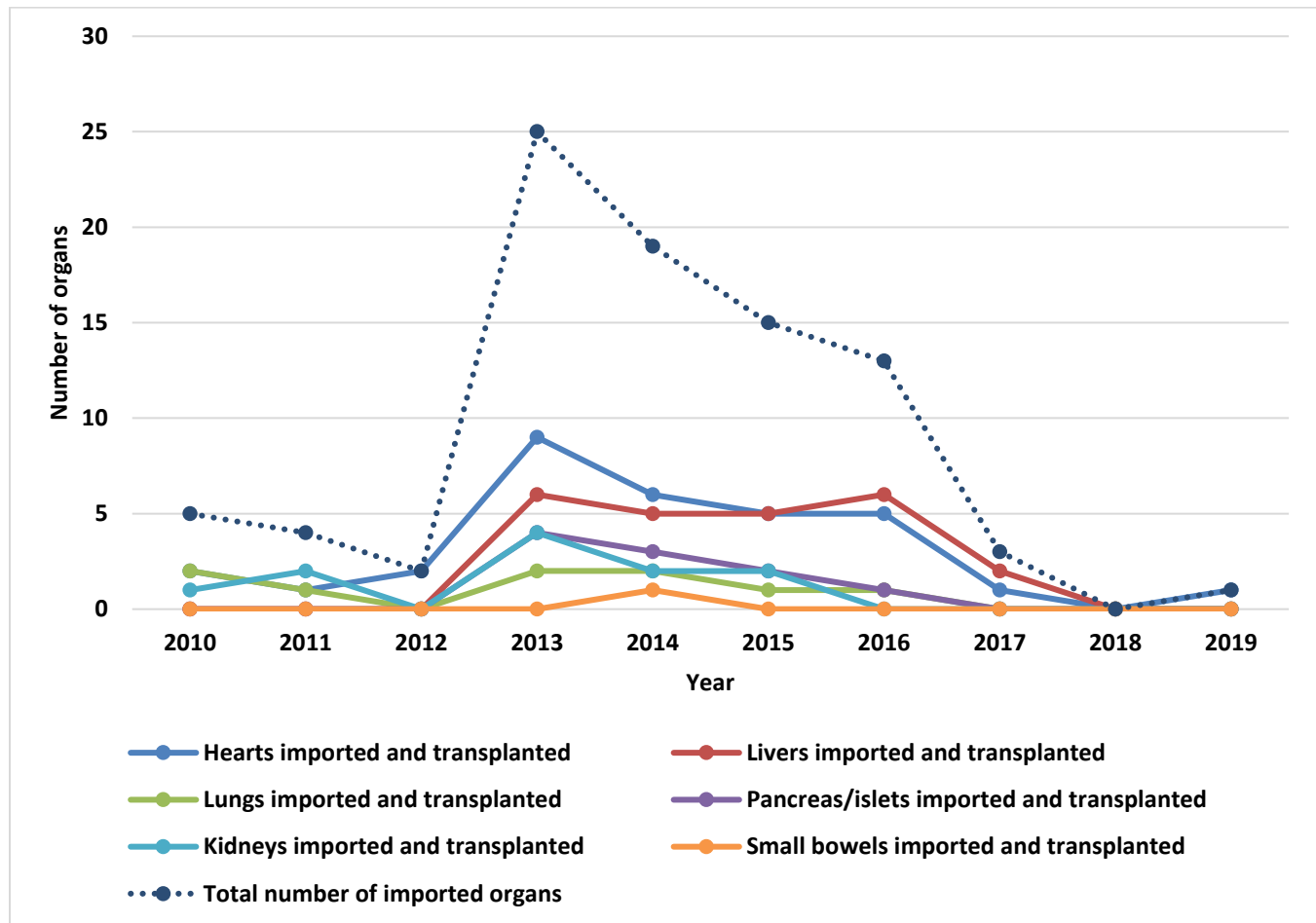
Transplanted patients in Scandiatransplant 2019

Organ(s) transplanted	Number of transplantations
Kidney	1271
Kidney-Pancreas	69
Pancreas	16
Liver	401
Liver-Kidney	14
Heart	163
Lung	148
Heart-lung	1
Pancreatic islets	16
Multivisceral/intestine	0
Total transplanted patients	2099



Organs imported and exported between EOEO's⁷ and Scandiatriplant⁸

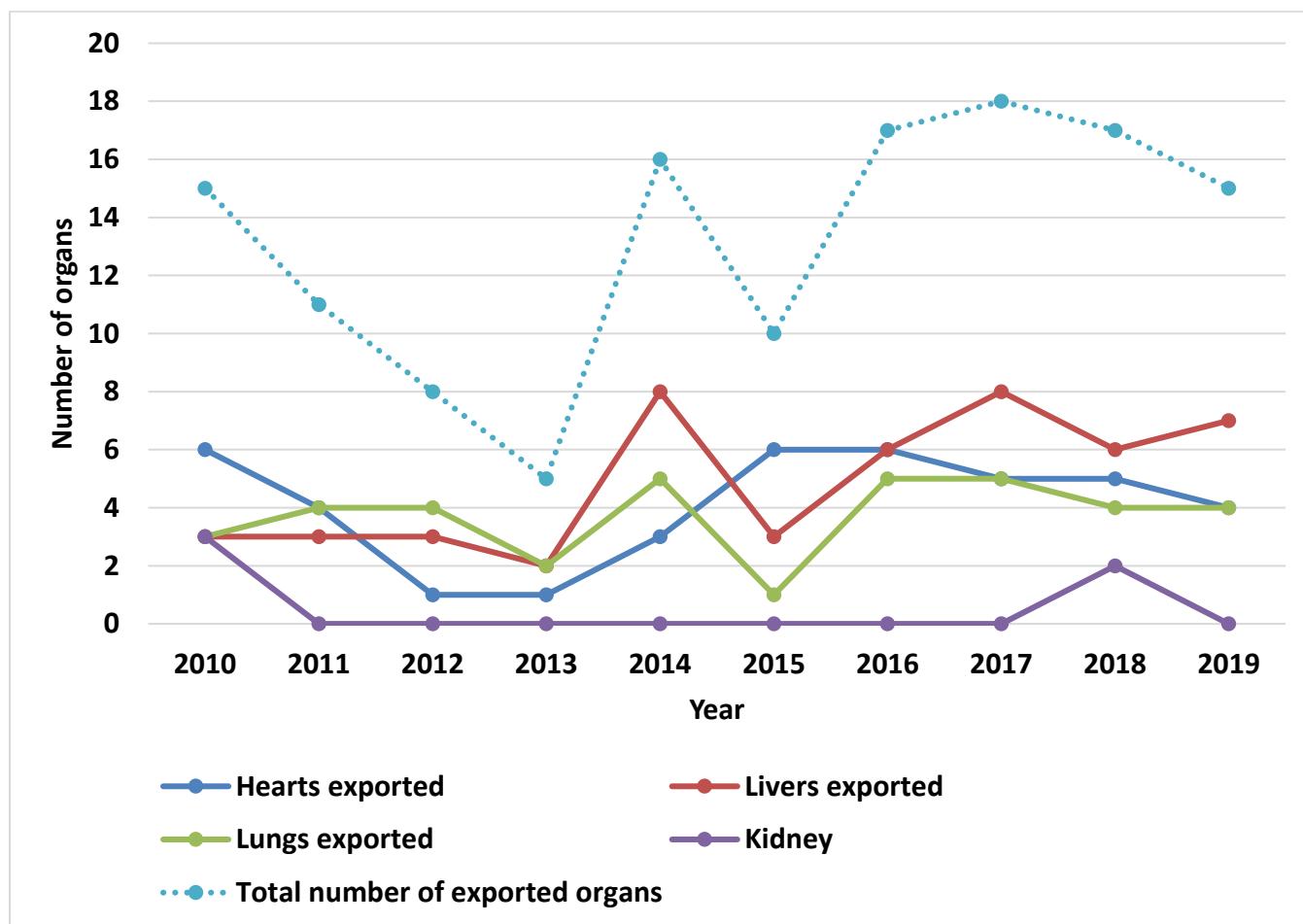
Organs imported from other EOEO's to Scandiatriplant



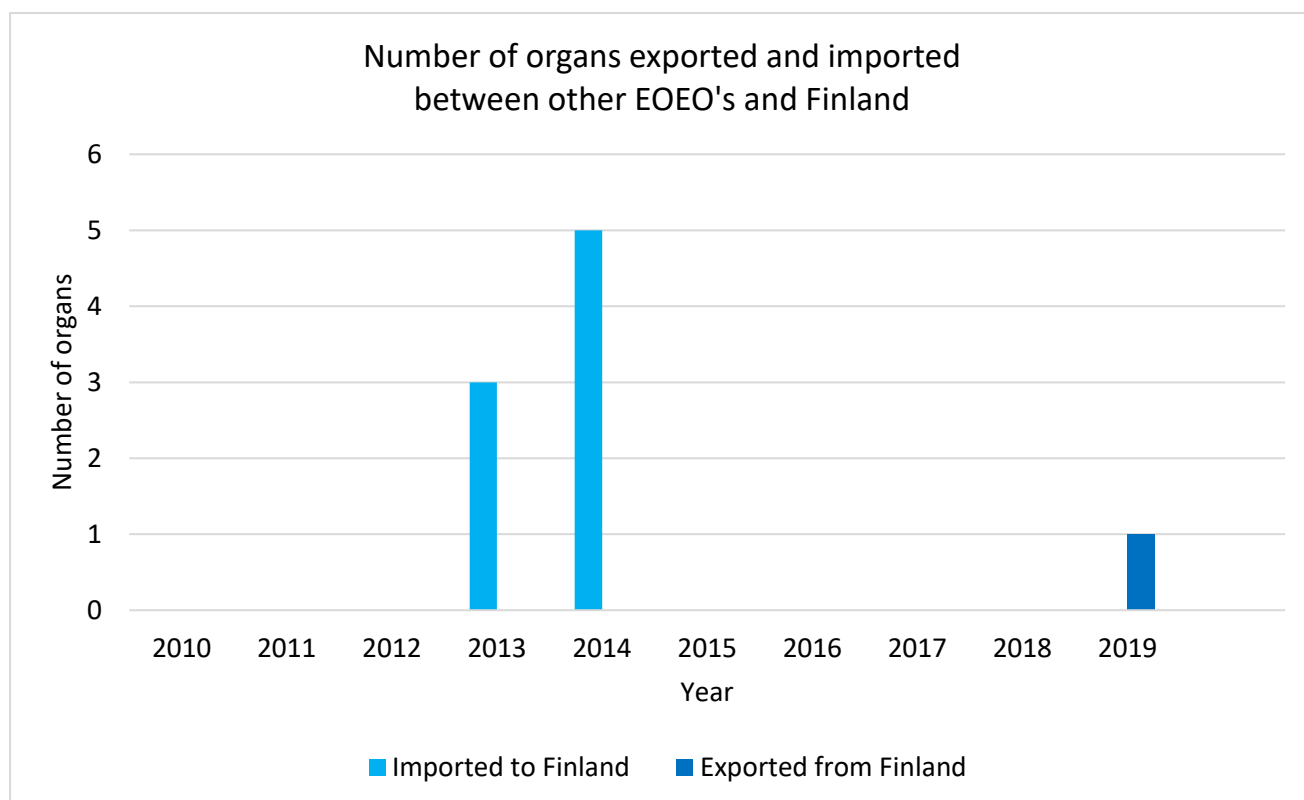
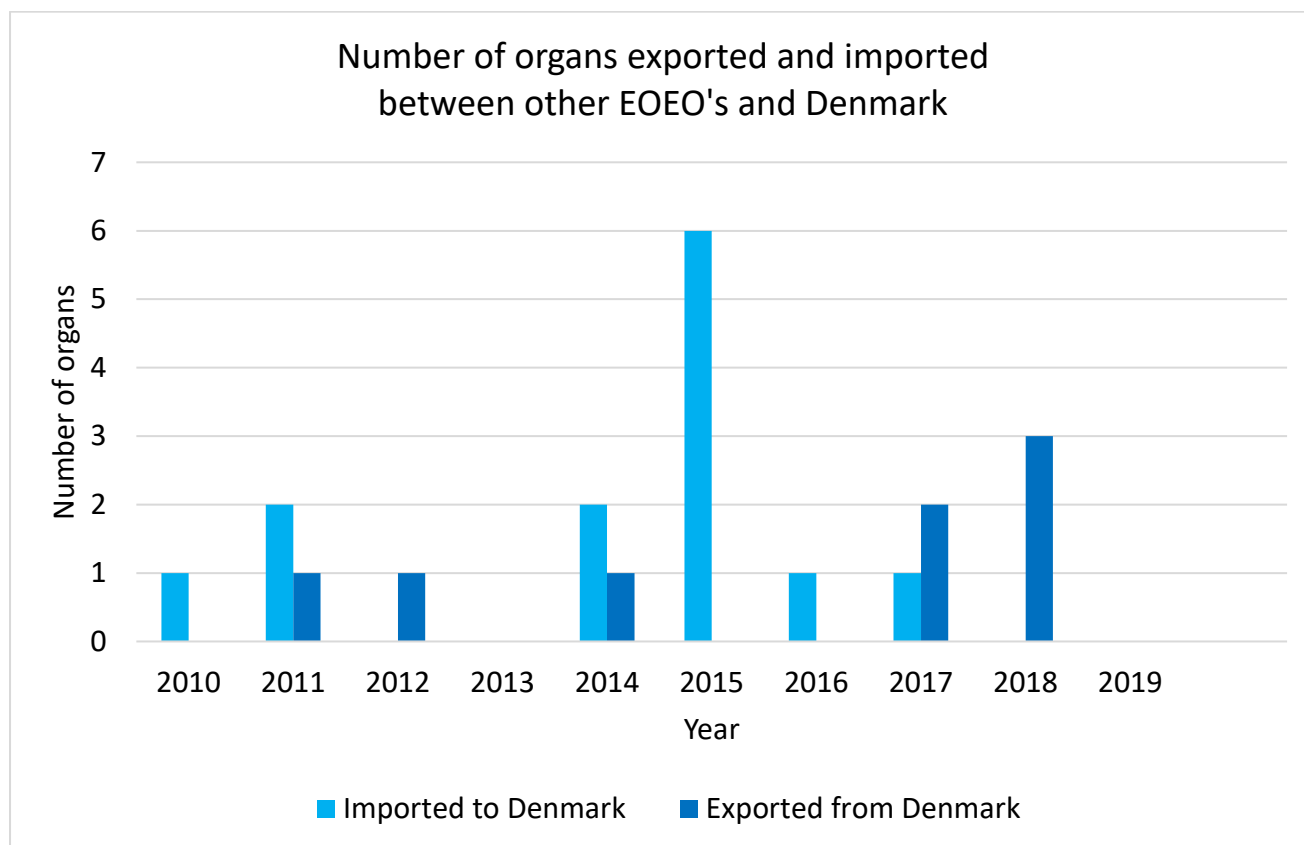
⁷ EOEO: European Organ Exchange Organisations (In 2019 a double lung was imported from Switzerland to Denmark, however optimization was not successful)

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

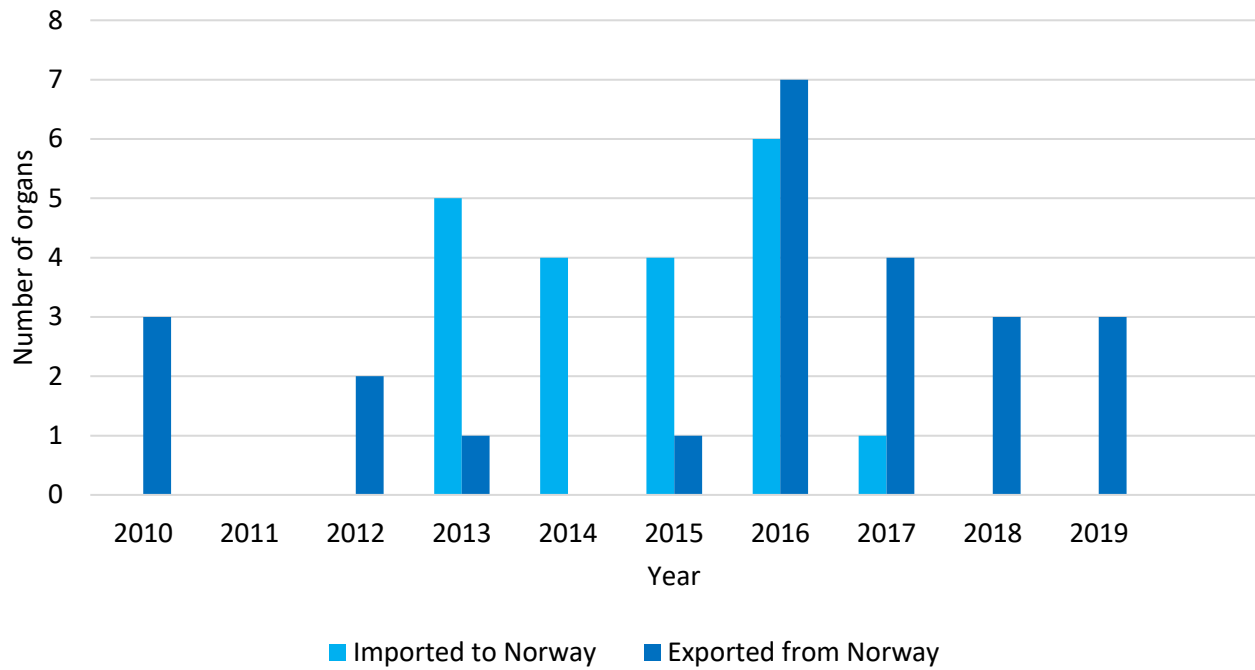
Organs exported to other EOEO's from Scandiatriplant



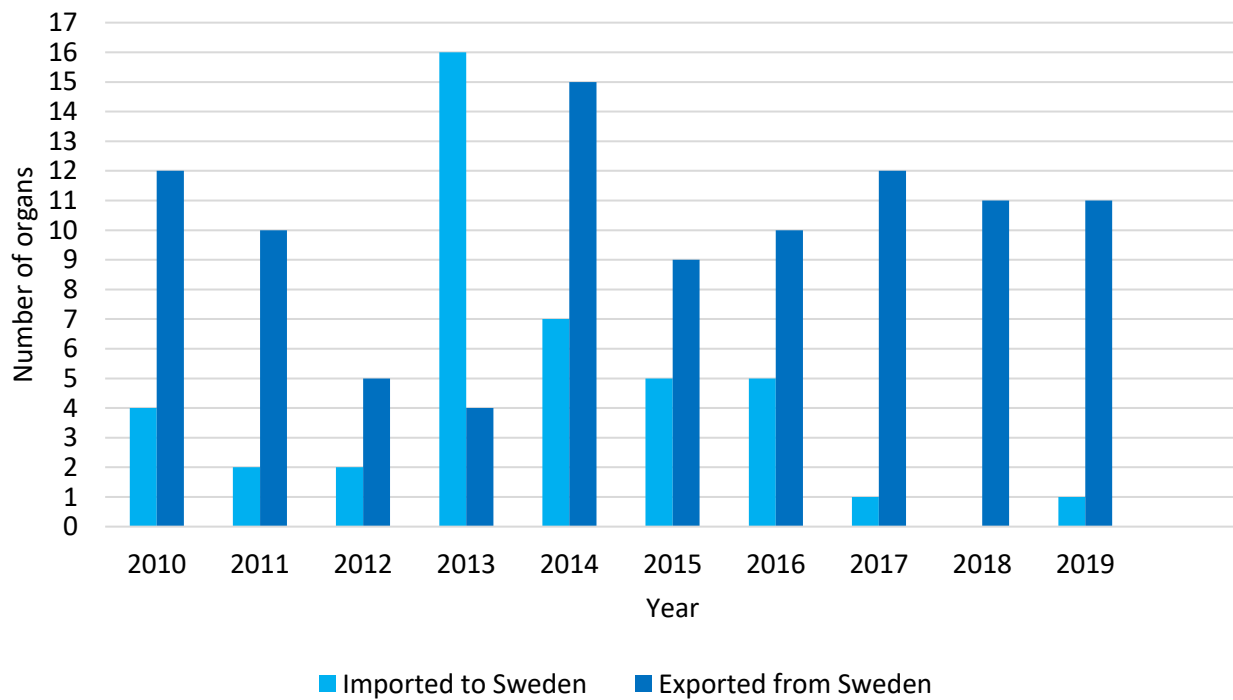
Organs exported and imported between Scandiatransplant countries and other EOEO's



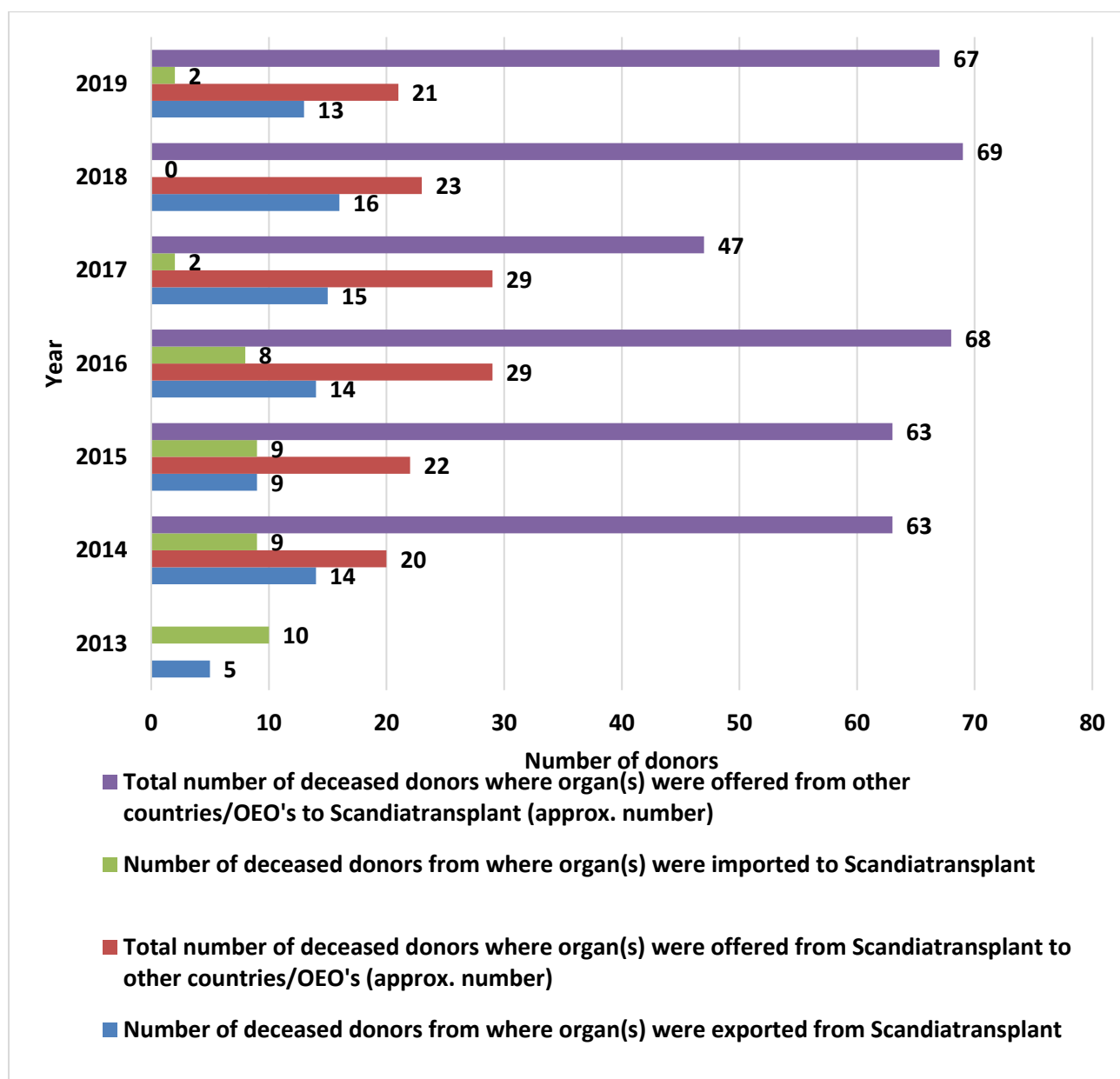
Number of organs exported and imported
between other EOEO's and Norway



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



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

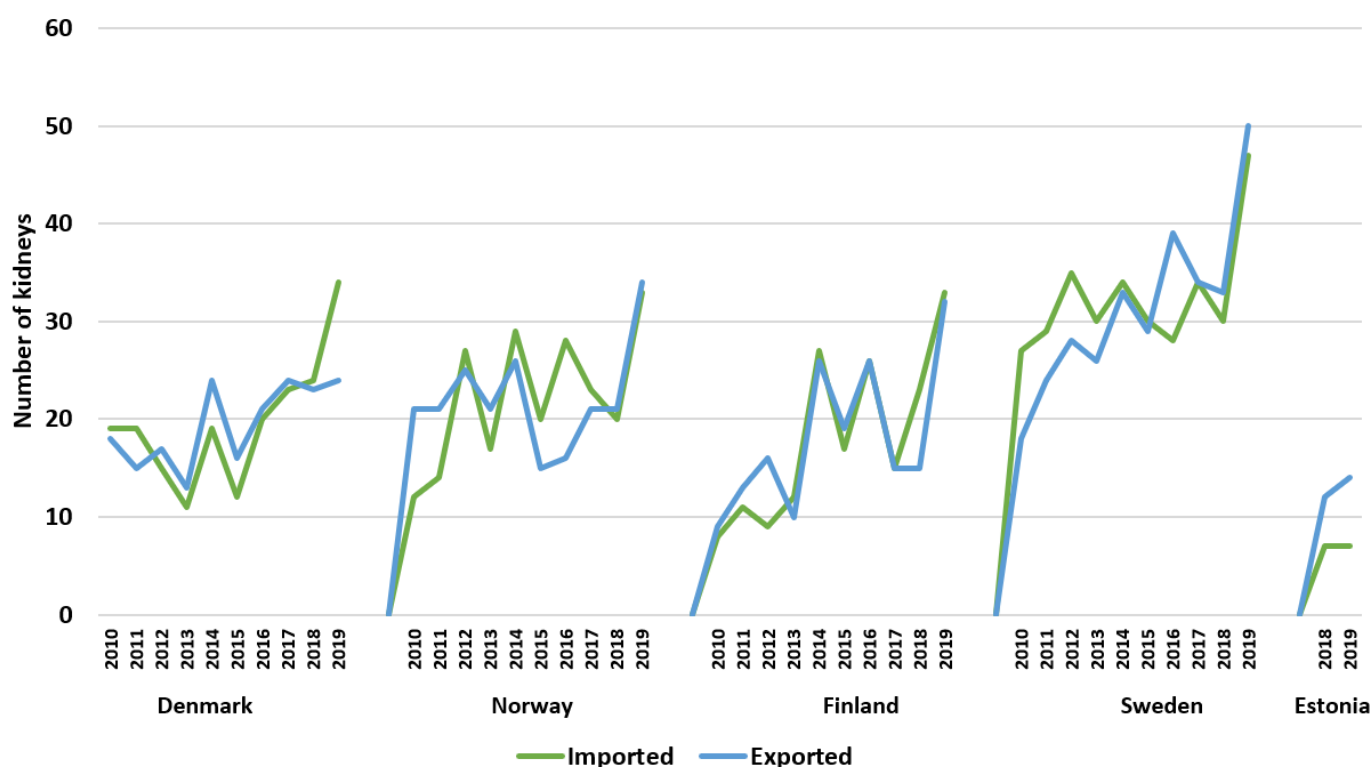


⁹ The web-based organ offer form and related communication systems for organ offers were introduced in year 2013

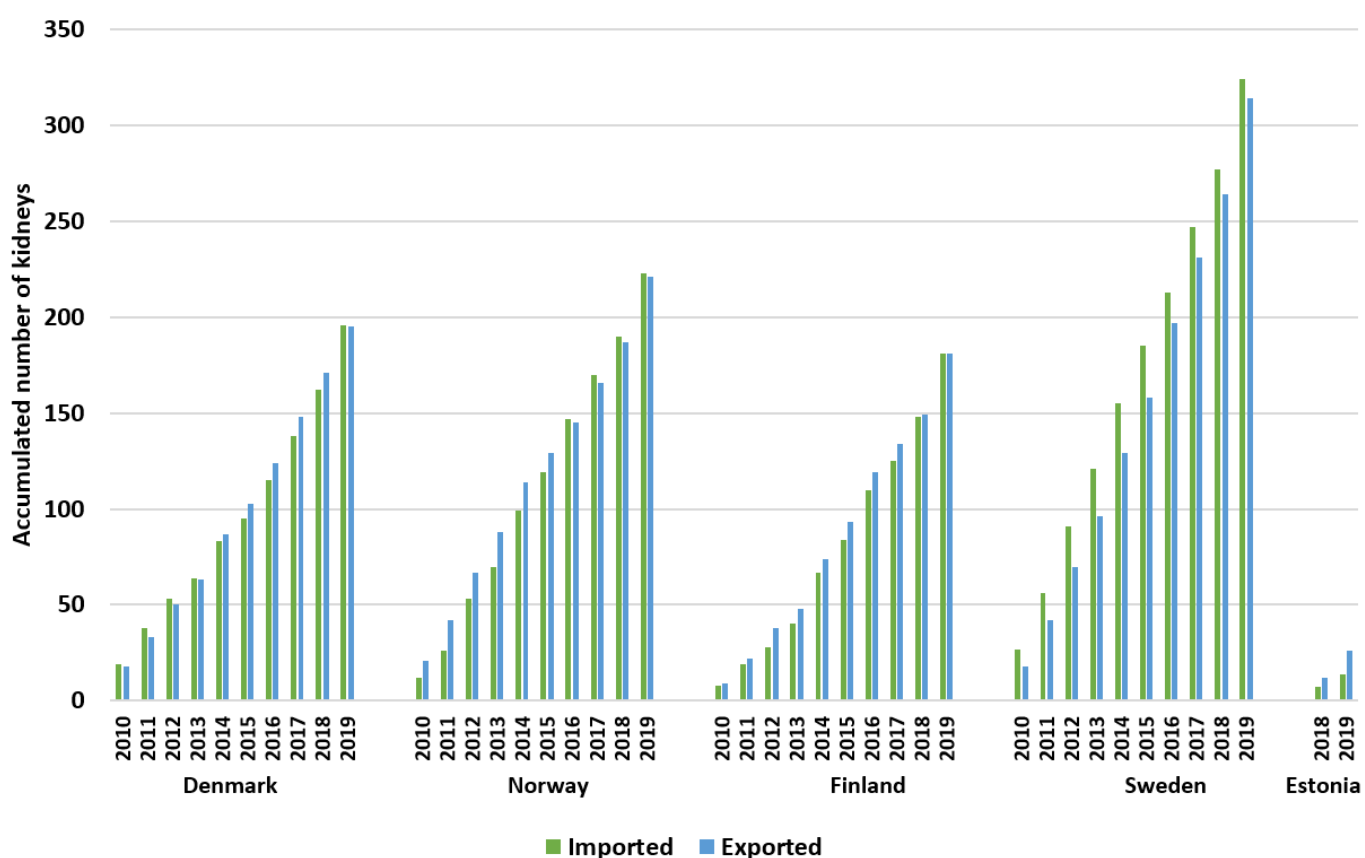
¹⁰ From October 1st 2017 Estonia is regarded as part of Scandiatransplant

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
2010	130	19	18	1	0
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

Norway

	Kidneys transplanted	Import	Export	Import EOEO	Export EOEO
2010	180	12	21	0	0
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

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
2010	164	8	9	0	0
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

Sweden

	Kidneys transplanted	Import	Export	Import EOEO	Export EOEO
2010	202	27	18	0	3
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

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

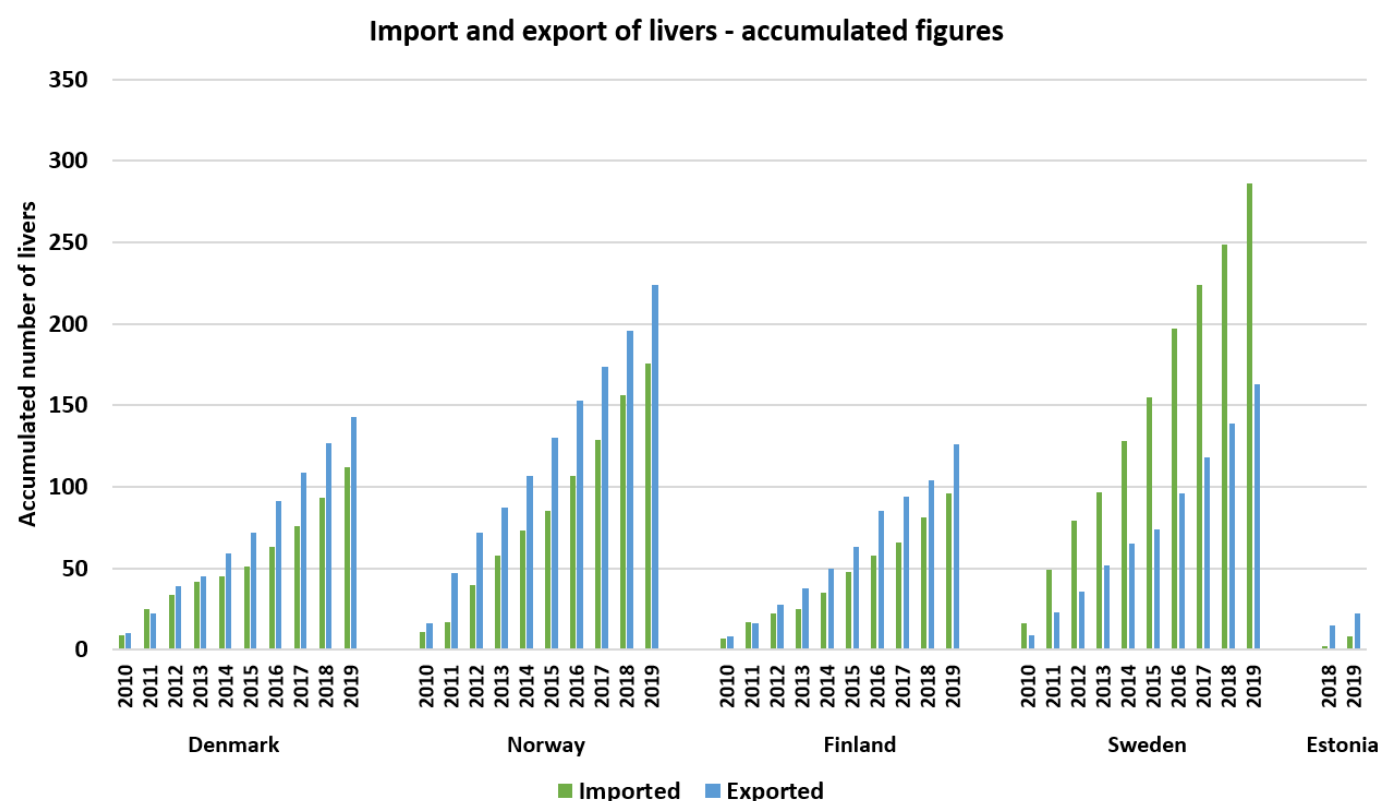
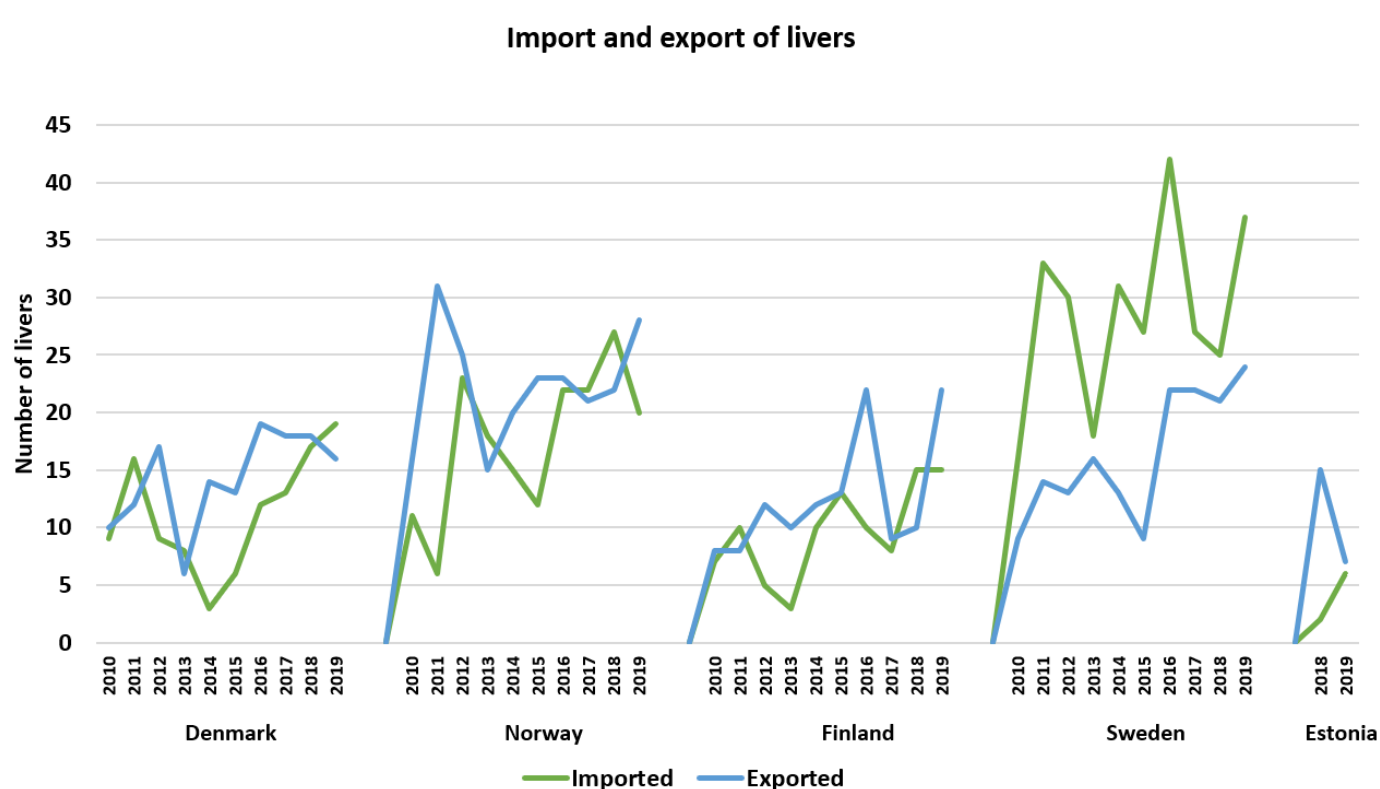
Iceland¹⁵

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

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

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
2010	47	9	10	0	0
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

Norway

	Livers transplanted	Import	Export	Import EOEO	Export EOEO
2010	89	11	16	0	1
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

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
2010	50	7	8	0	0
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

Sweden

	Livers transplanted	Import	Export	Import EOEO	Export EOEO
2010	122	16	9	0	2
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

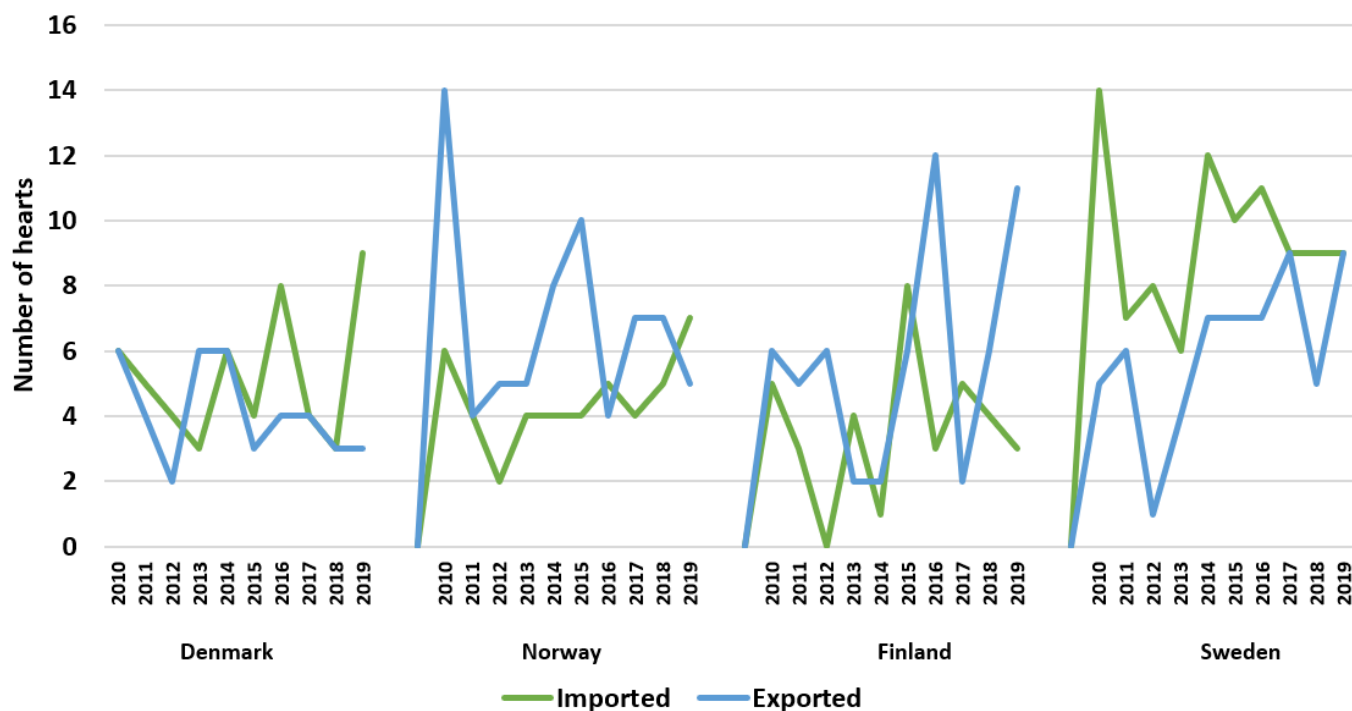
Estonia¹⁹

	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

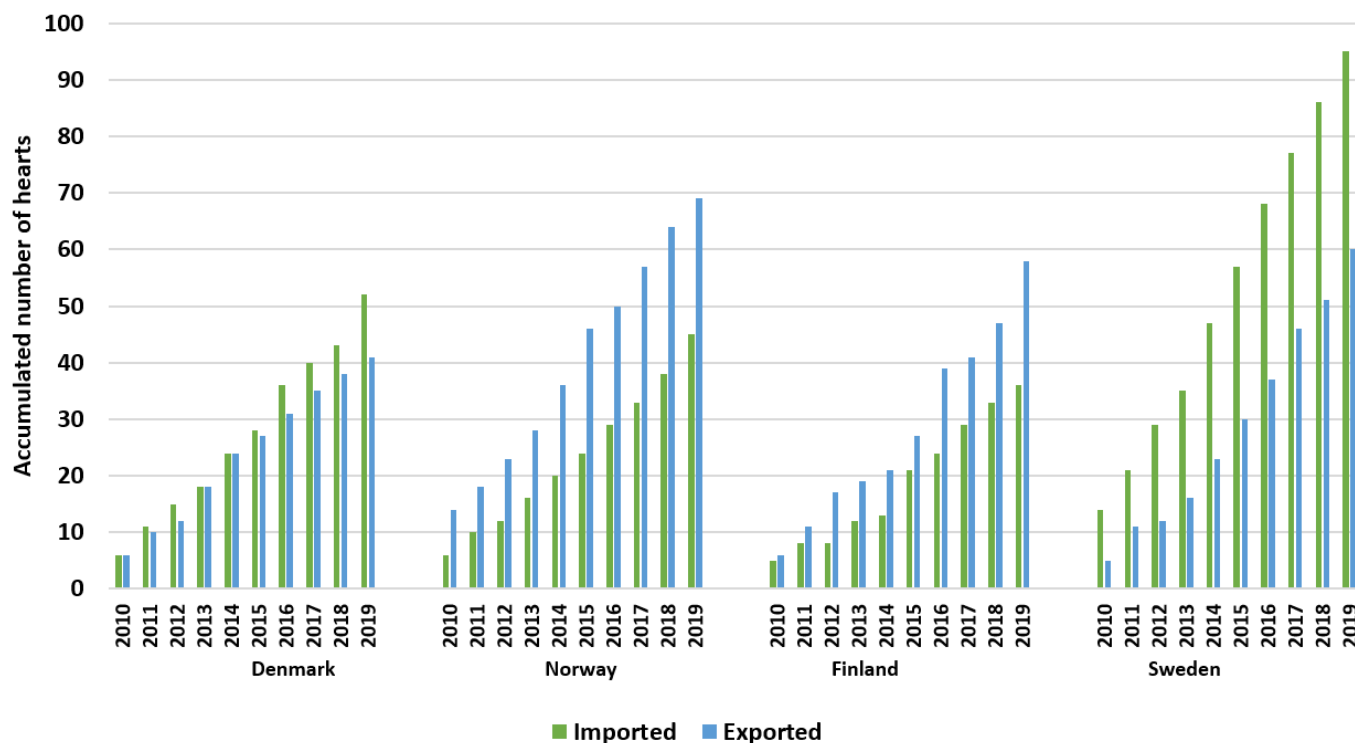
¹⁹ From October 1st 2017 Estonia is regarded as part of Scandiatransplant

Hearts exported and imported between the Scandiatriplant countries²⁰

Import and export of hearts



Import and export of hearts - accumulated figures



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
2010	22	6	6	0	0
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

Norway

	Hearts transplanted	Import	Export	Import EOEO	Export EOEO
2010	30	6	14	0	2
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

²¹ Only hearts used for transplantation are included

Finland²²

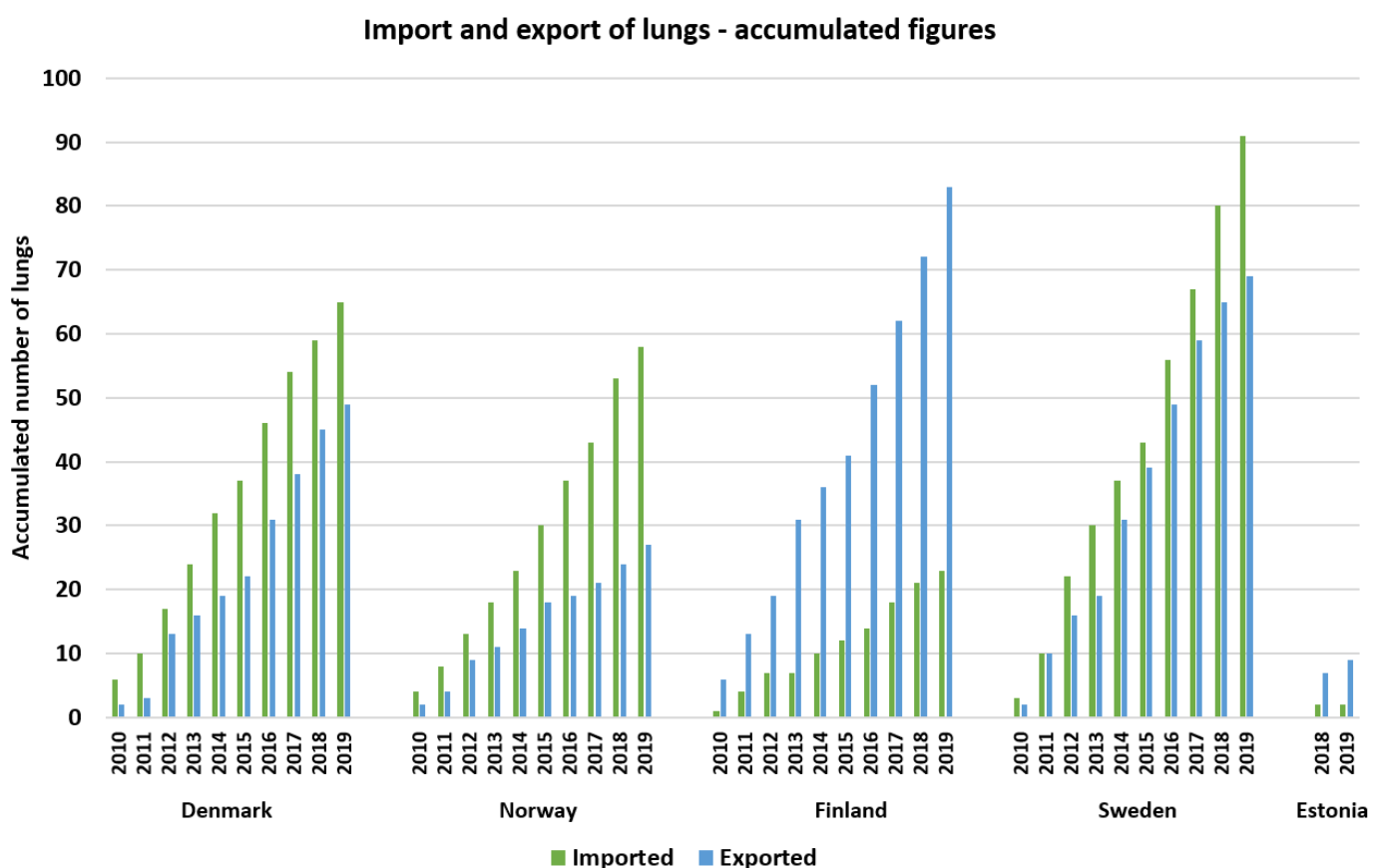
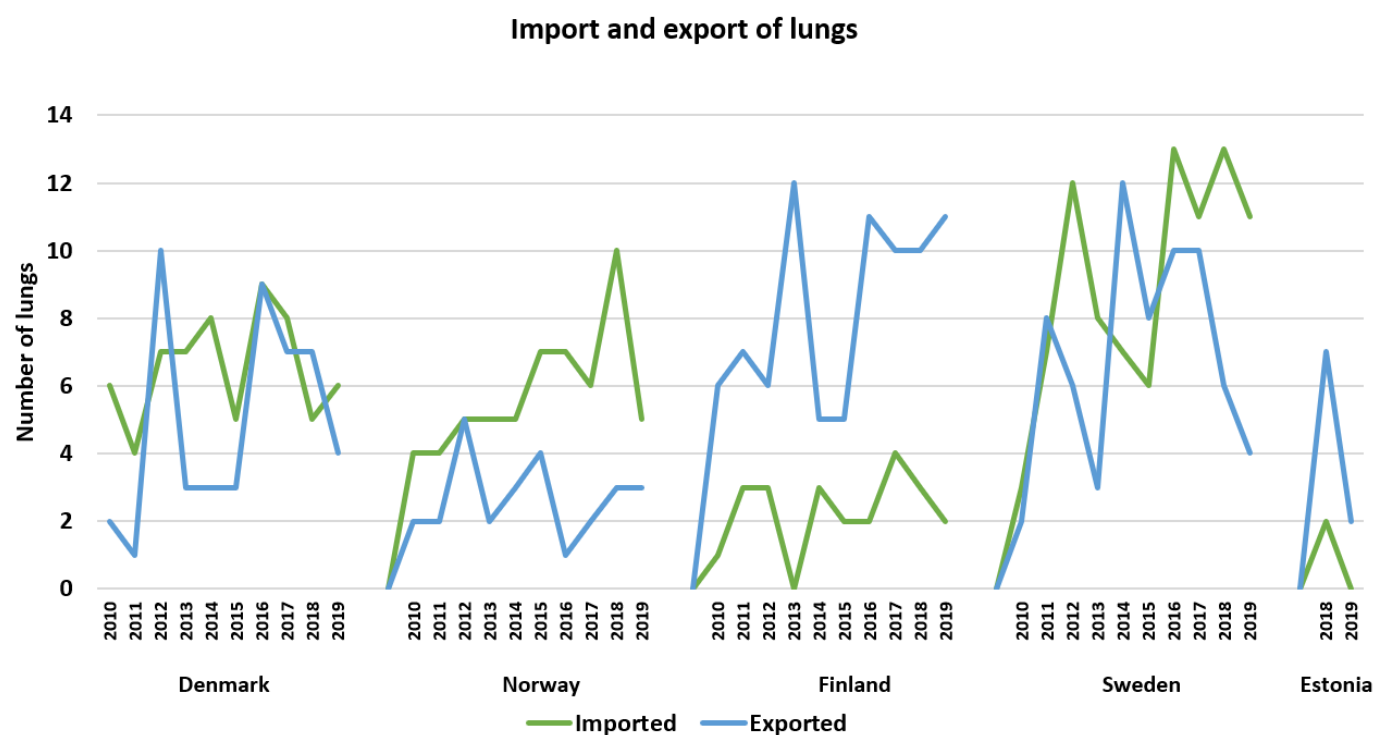
	Hearts transplanted	Import	Export	Import EOEO	Export EOEO
2010	22	5	6	0	0
2011	18	3	5	0	0
2012	22	0	6	0	0
2013	21	4	2	3	0
2014	24	1	2	4	0
2015	27	8	6	0	0
2016	31	3	12	0	0
2017	26	5	2	0	0
2018	47	4	6	0	0
2019	30	3	11	0	1

Sweden

	Hearts transplanted	Import	Export	Import EOEO	Export EOEO
2010	56	14	5	2	4
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

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



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
2010	31	6	2	0	0
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

Norway

	Lungs transplanted	Import	Export	Import EOEO	Export EOEO
2010	32	4	2	0	0
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

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
2010	15	1	6	0	0
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

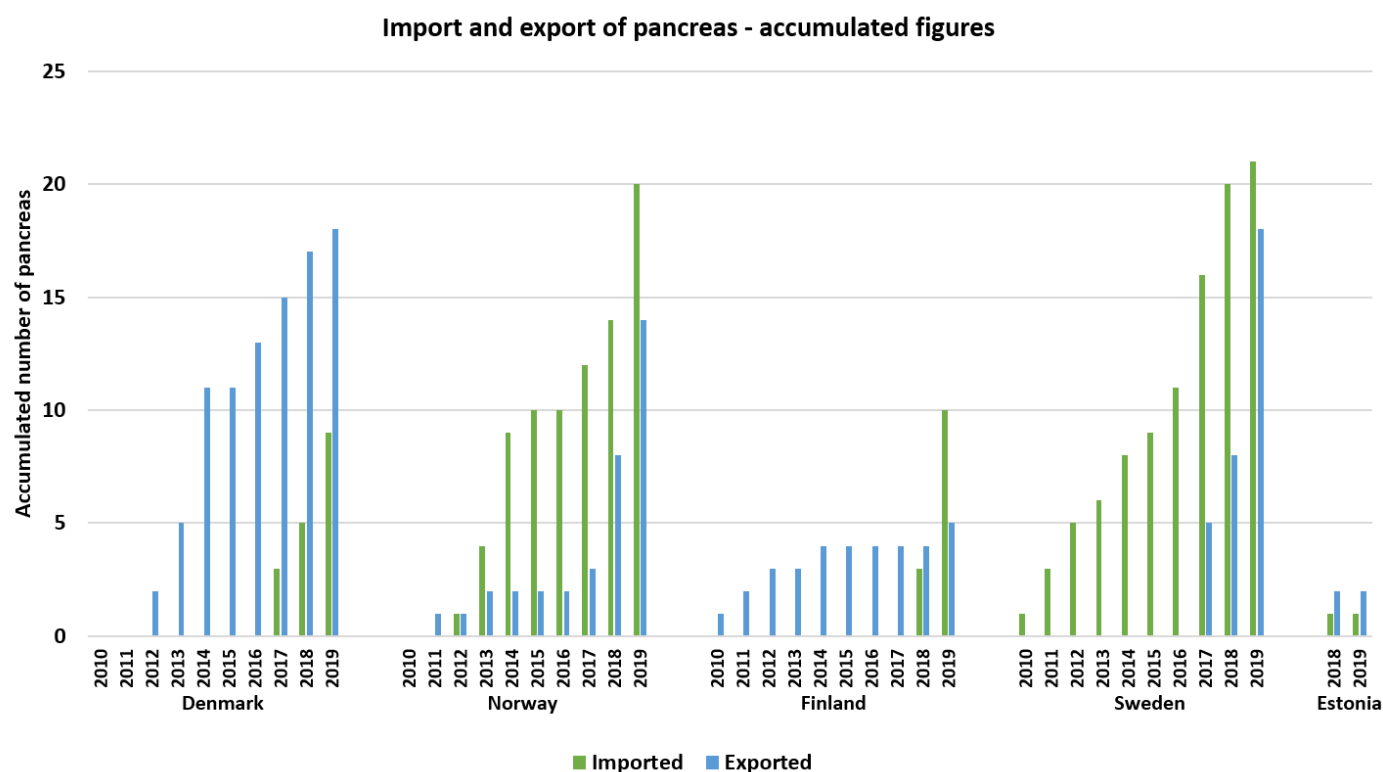
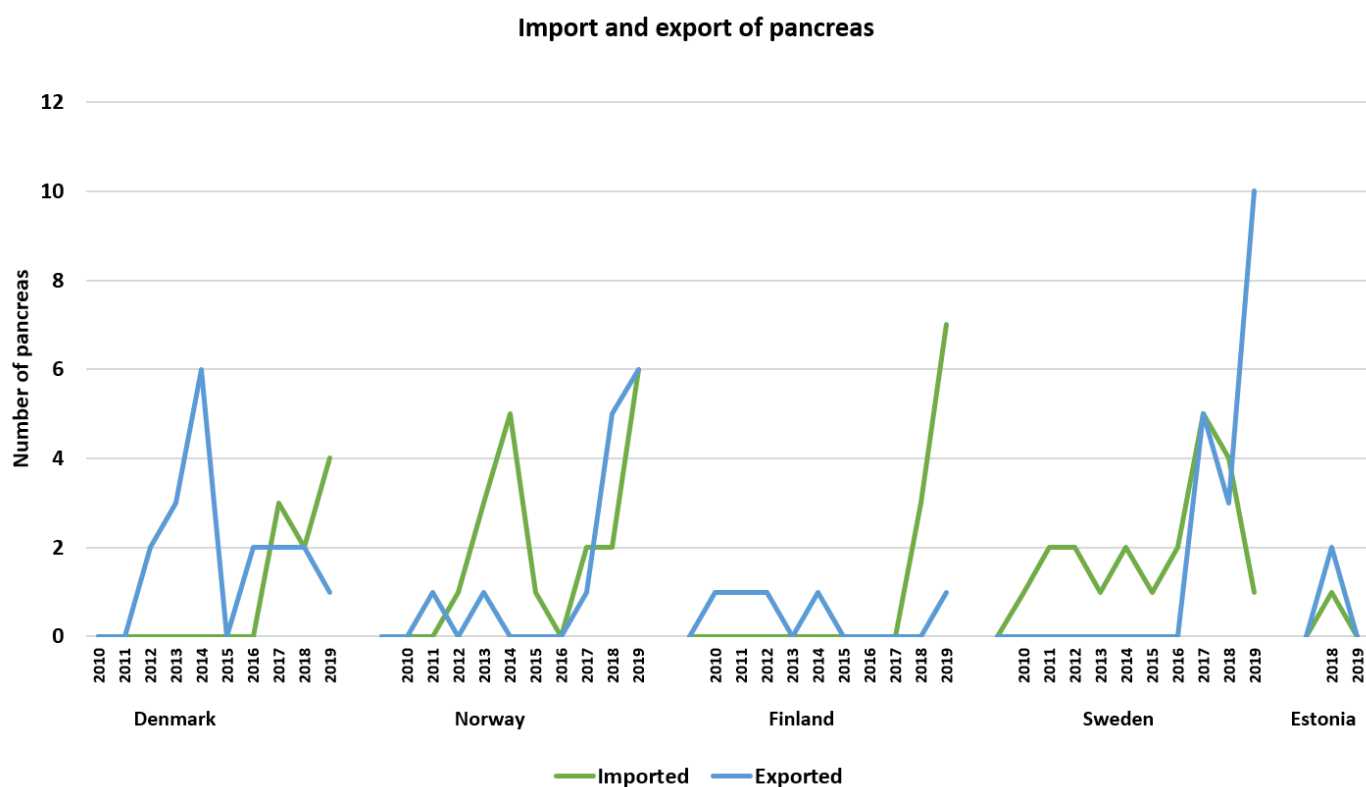
Sweden

	Lungs transplanted	Import	Export	Import EOEO	Export EOEO
2010	51	3	2	2	3
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

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

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



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
2010	0	0	0	0	0
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

Norway

	Pancreas transplanted	Import	Export	Import EOEO	Export EOEO
2010	15	0	0	0	0
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

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
2010	2	0	1	0	0
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

Sweden

	Pancreas transplanted	Import	Export	Import EOEO	Export EOEO
2010	26	1	0	0	0
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

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

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

	Import/export	Import/export EOEO
2010	0	0
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

³⁰ Only intestine used for transplantation is included

SAEs and SARs reported through the Scandiatransplant system in 2019

Between January 1st and December 31st, 2019 there has been 12 SAEs reported through the Scandiatransplant IT-system. They are all reported as SAEs although half of them should have been reported as SARs, so there is a need to explain the difference between SAE and SAR to the people who report. In 2018 there were 15 reports, so the number has decreased a little.

In 2019 there were 4 SAEs reported from Sweden, 3 from Norway and Denmark, and 2 from Finland. In 3 reports the event involved donor or patients 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
388	Skåne	SF, N DK	Kidney exchange priority 1 not followed due to bad communication with local system
450	Stockholm		Small renal cell carcinoma in transplanted kidney
528	Gothenburg		False CMV negative test on donor
588	Skåne		First accept of kidney pay-back, then refusal later.

Reports from transplantation center in Norway

ID	Center	OIC	Short description of SAE/SAR
373	Oslo	S	Aberant right artery hepatic artery cut during harvesting.
432*	Oslo		Short artery to liver after pancreas removal from donor
548	Oslo		Acute cardiopulmonal failure in donor, liver and kidney used for transplantation.

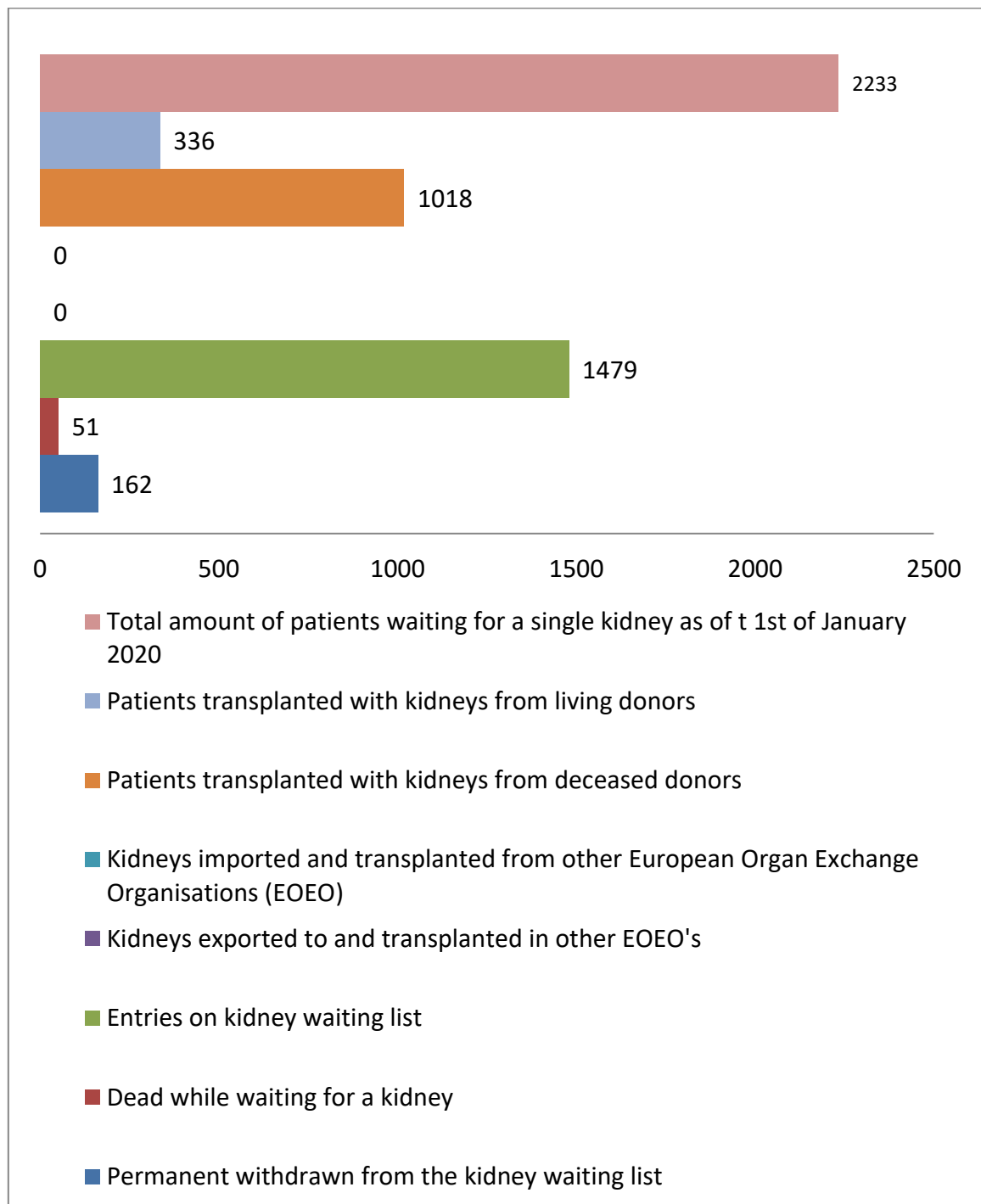
Reports from transplantation centers in Denmark

ID	Center	OIC	Short description of SAE/SAR
308	Copenhagen		Recipient sternotomy, but lungs to bad. Postop need for ICU for intended recipient
416	Aarhus		Donor has AL-Amyloidosis previously treated with Rituximab unknown to harvesting team
488	Copenhagen		Aspergillus infection transmitted to lung recipient

Reports from transplantation center in Finland

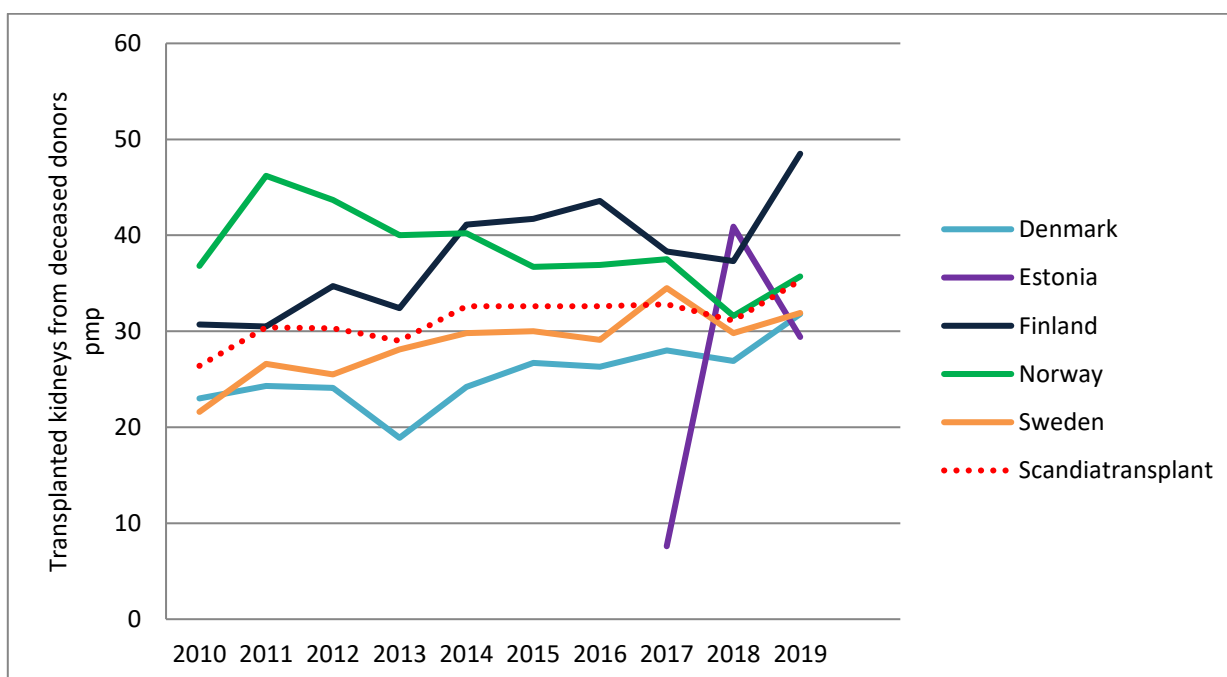
ID	Center	OIC	Short description of SAE/SAR
348	Helsinki		Low-grade mucinous neoplasma in appendix of recipient
508	Helsinki		Wrong kidney handed to surgeon, mistake recognized and transplanted correct

Kidneys 2019



Transplanted kidneys pmp³¹ from deceased donors per year

Year	Denmark	Estonia	Finland	Norway	Sweden	Scandiatransplant
2010	23,0		30,7	36,8	21,6	26,4
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

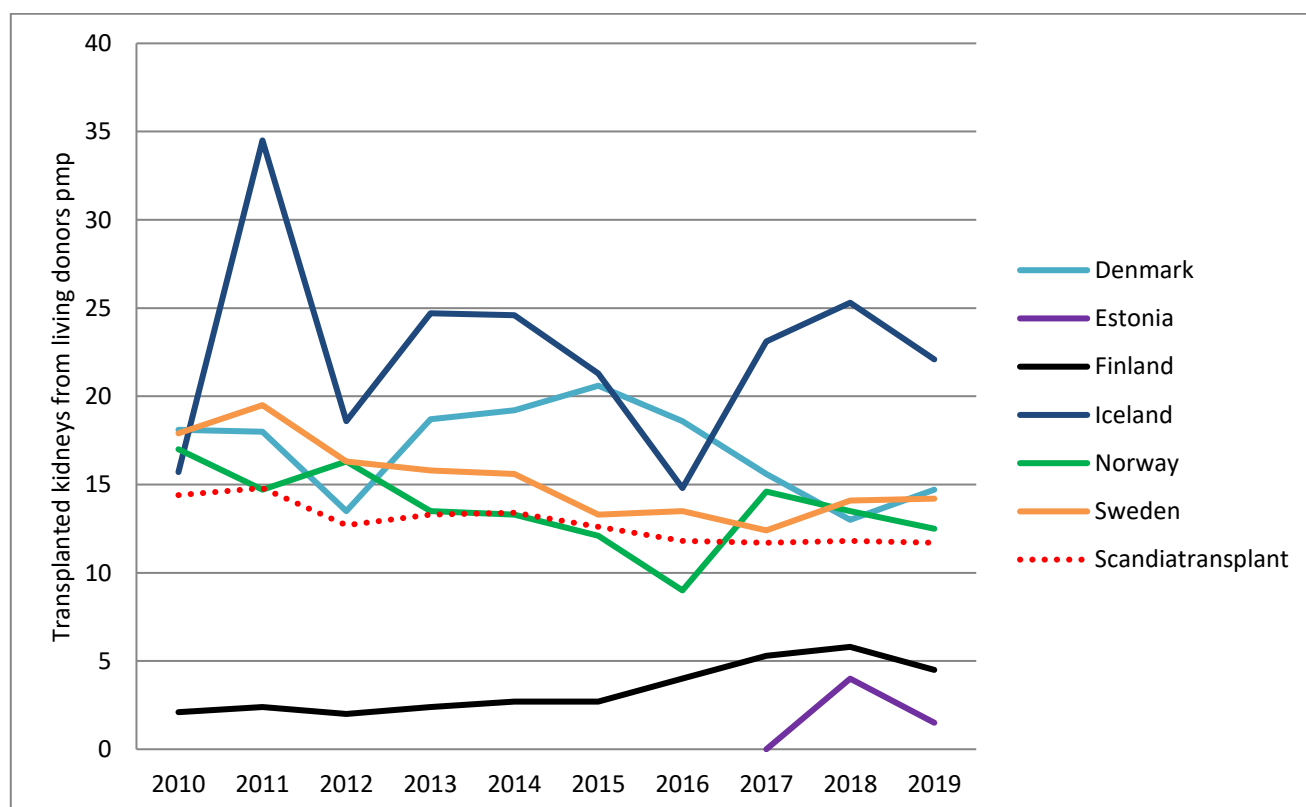


³¹ pmp: per million population

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

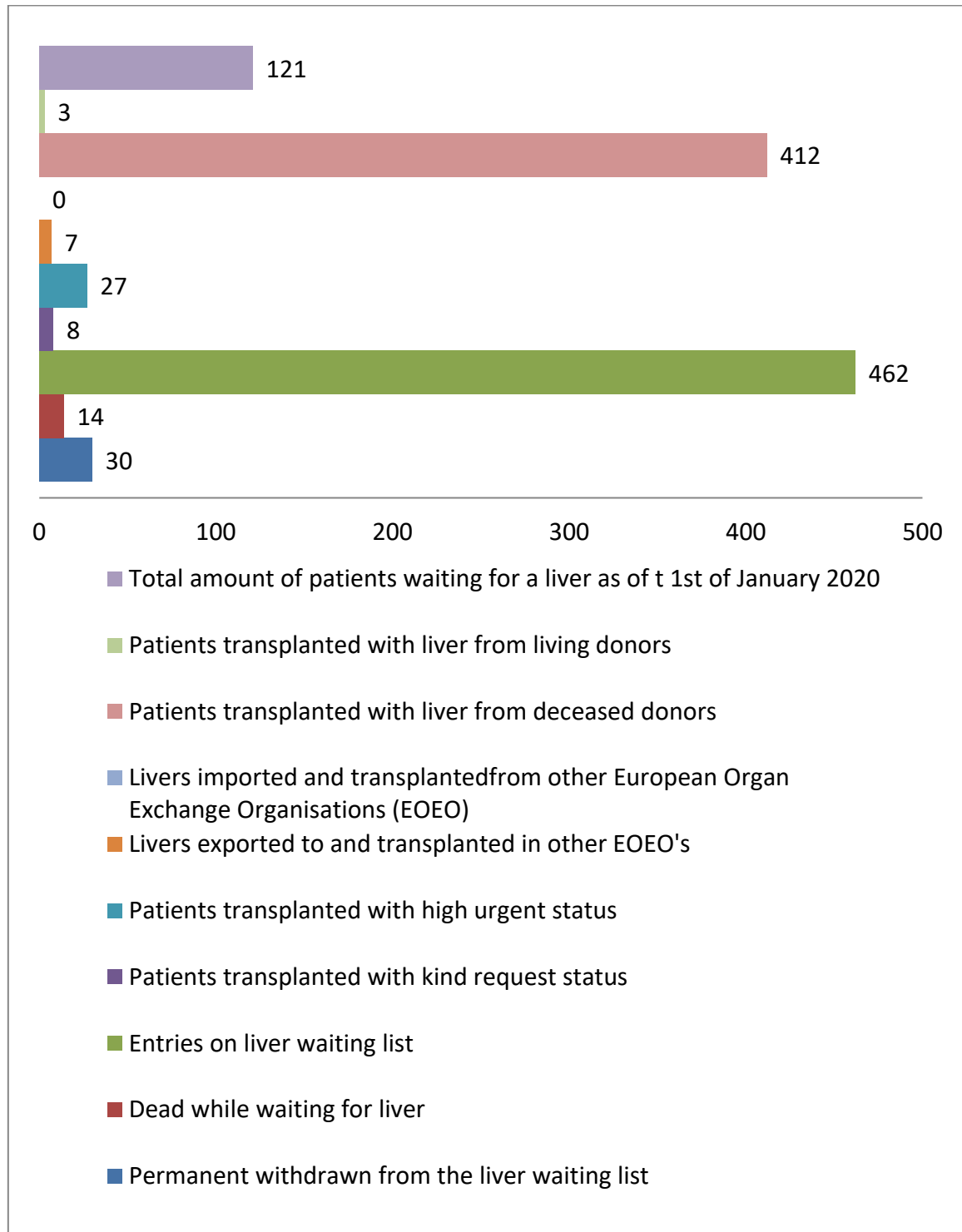
Transplanted kidneys pmp³³ from living donors per year

Year	Denmark	Estonia	Finland	Iceland	Norway	Sweden	Scandiatransplant
2010	18,1		2,1	15,7	17,0	17,9	14,4
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



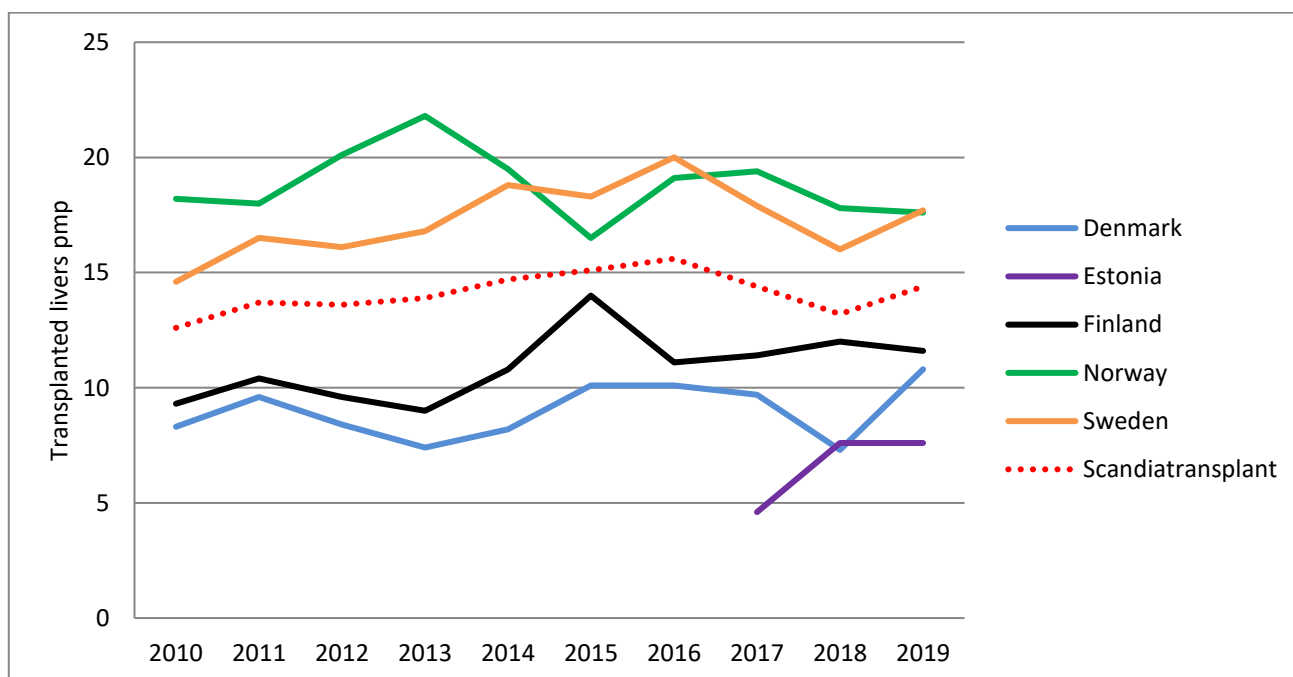
³³ pmp: per million population

Livers 2019



Transplanted livers (Deceased and living donors) pmp³⁴ per year

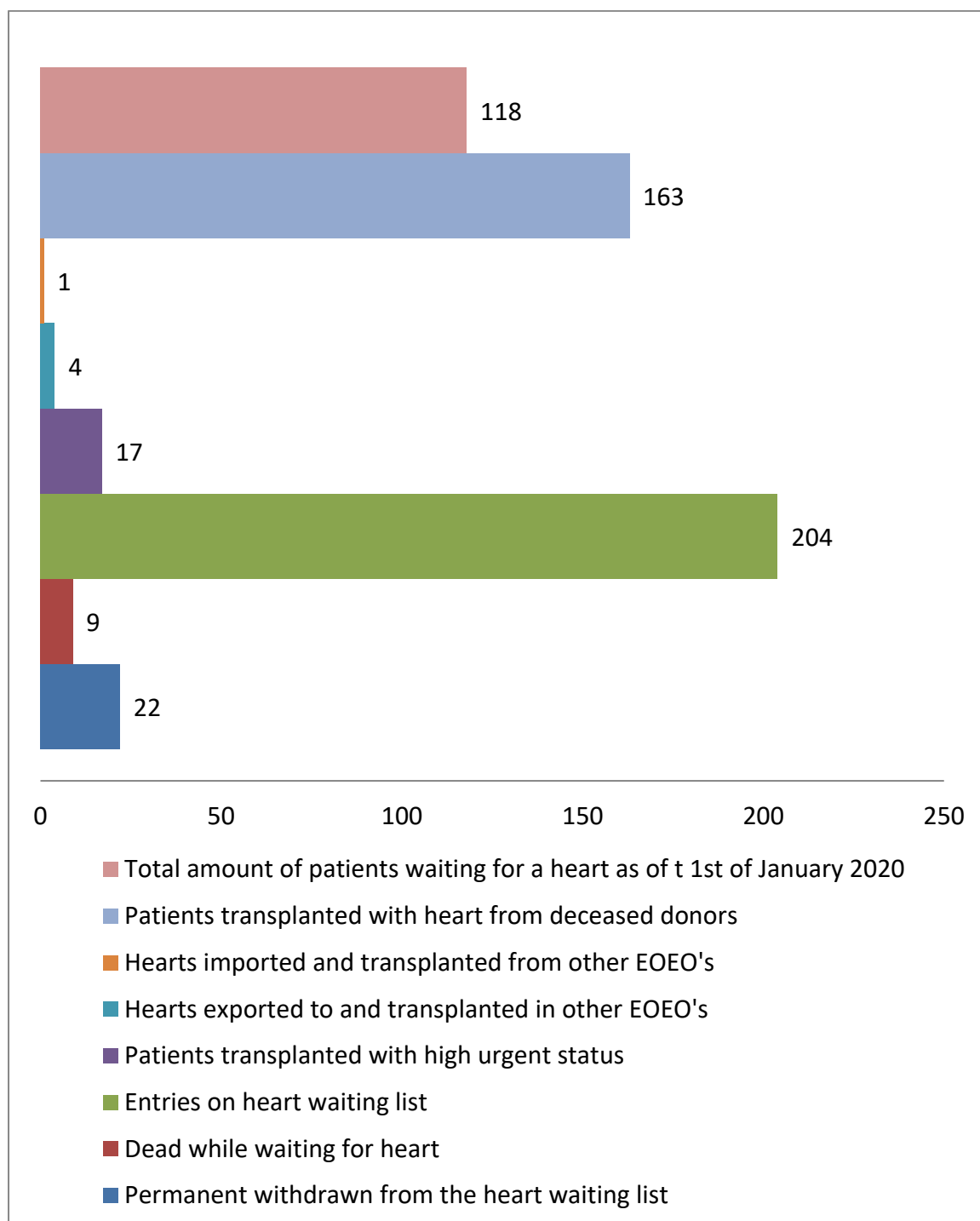
Year	Denmark	Estonia	Finland	Norway	Sweden	Scandiatransplant
2010	8,3		9,3	18,2	14,6	12,6
2011	9,6		10,4	18,0	16,5	13,7
2012	8,4		9,6	20,1	16,1	13,6
2013	7,4		9,0	21,8	16,8	13,9
2014	8,2		10,8	19,5	18,8	14,7
2015	10,1		14,0	16,5	18,3	15,1
2016	10,1		11,1	19,1	20,0	15,6
2017	9,7	4,6 ³⁵	11,4	19,4	17,9	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



³⁴ pmp: per million population

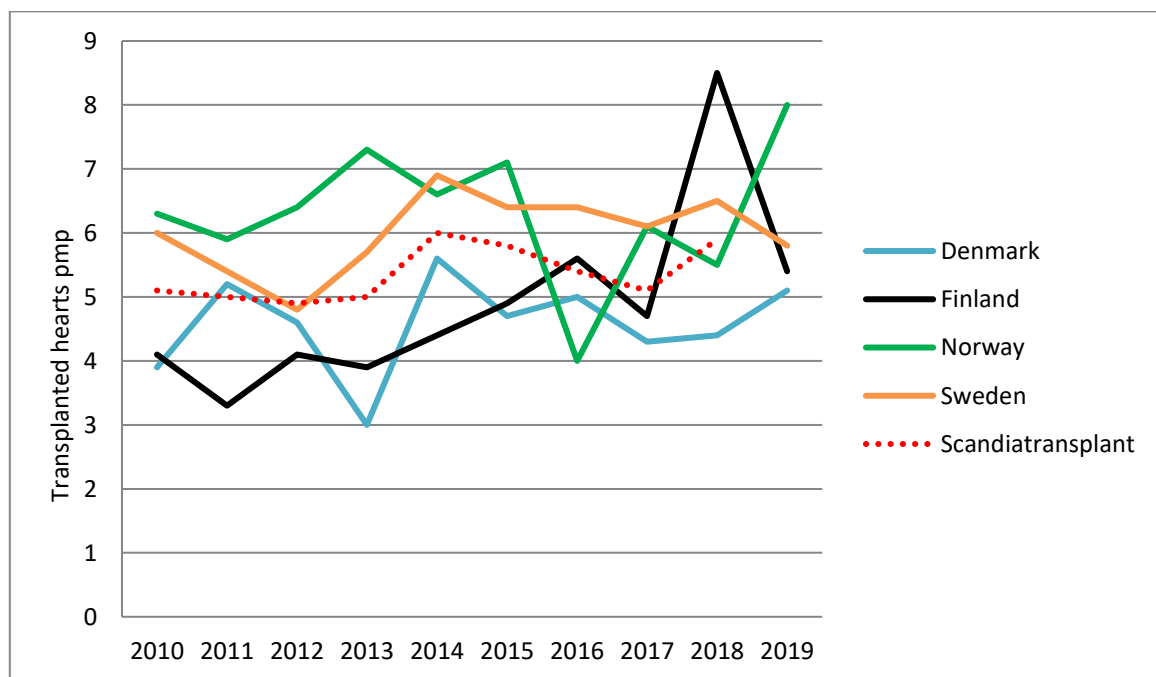
³⁵ Figures included from Estonia year 2017 starts from October 1st 2017, which has negative impact on PMP for Estonia and Scandiatransplant

Hearts 2019



Transplanted hearts pmp³⁶ per year³⁷

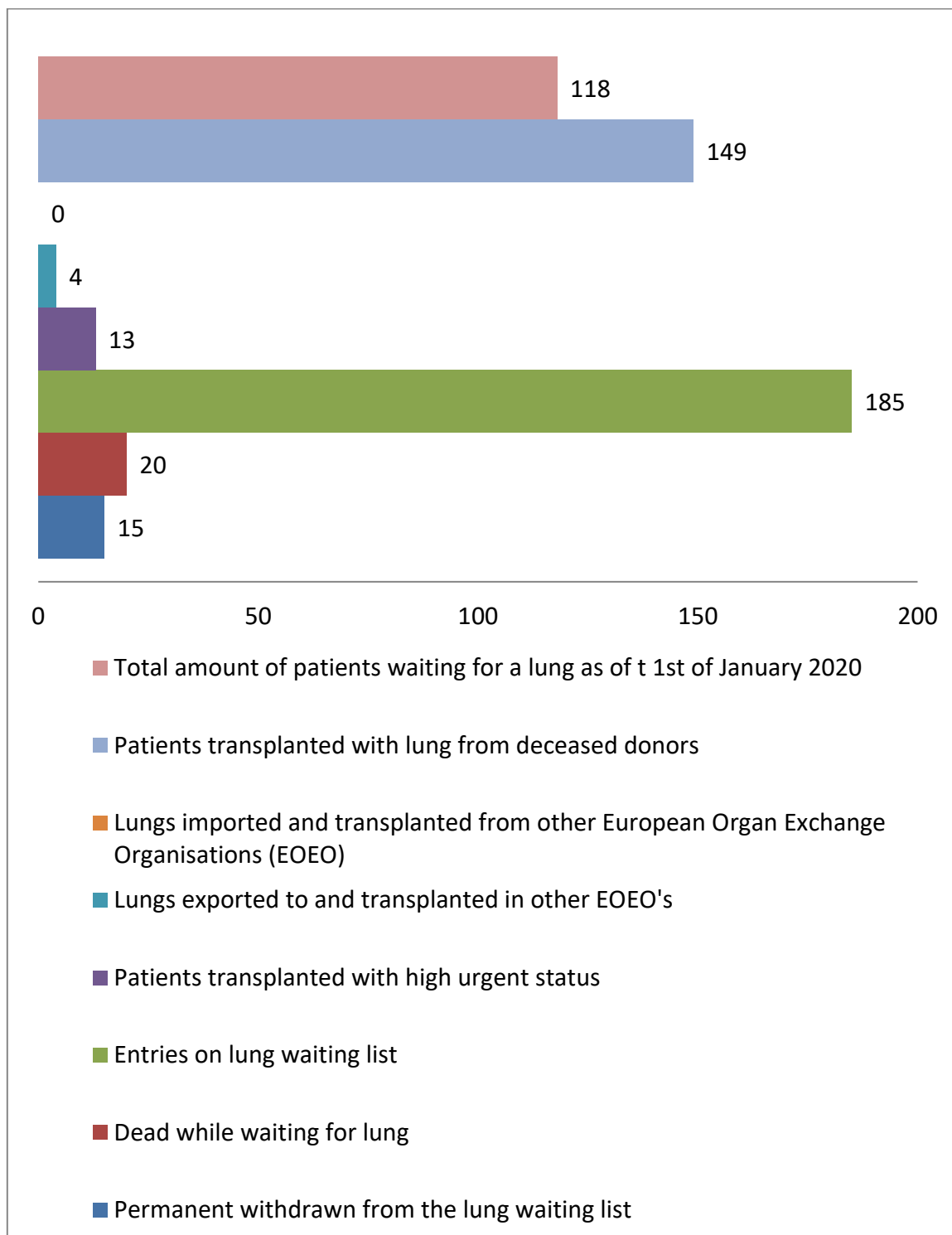
Year	Denmark	Finland	Norway	Sweden	Scandiatransplant
2010	3,9	4,1	6,3	6,0	5,1
2011	5,2	3,3	5,9	5,4	5,0
2012	4,6	4,1	6,4	4,8	4,9
2013	3,0	3,9	7,3	5,7	5,0
2014	5,6	4,4	6,6	6,9	6,0
2015	4,7	4,9	7,1	6,4	5,8
2016	5,0	5,6	4,0	6,4	5,4
2017	4,3	4,7	6,1	6,1	5,1
2018	4,4	8,5	5,5	6,5	5,9
2019	5,1	5,4	8,0	5,8	5,7



³⁶ pmp: per million population

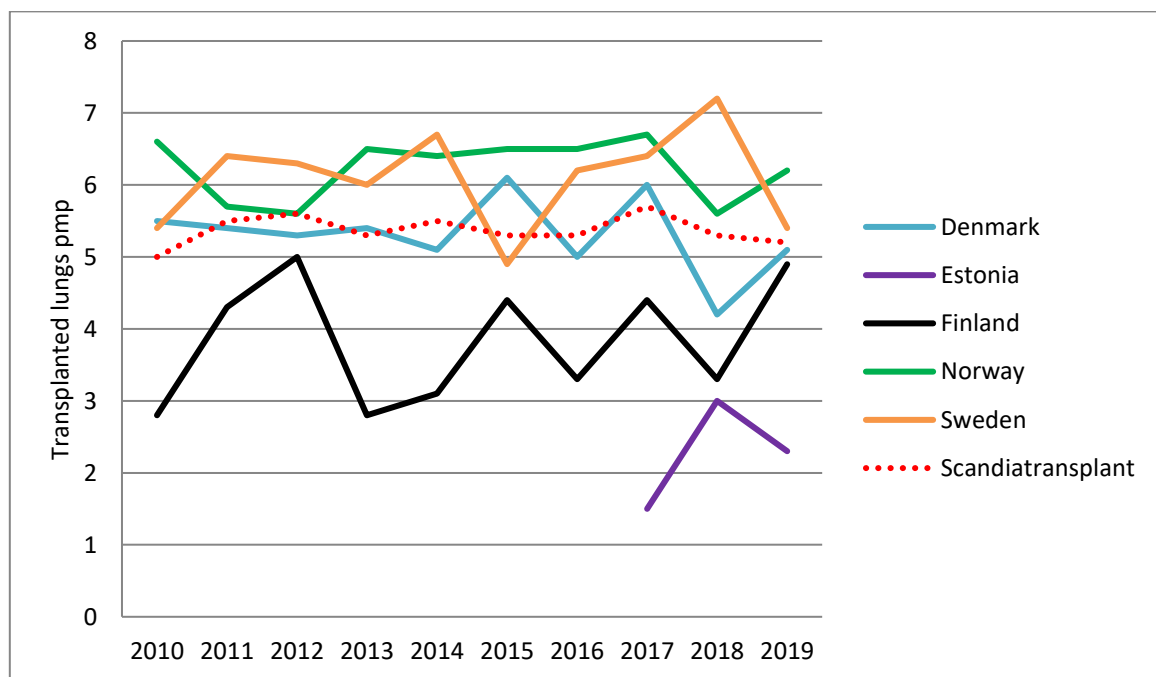
³⁷ Estonian deceased donor heart transplantations are performed in Helsinki.

Lungs 2019



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

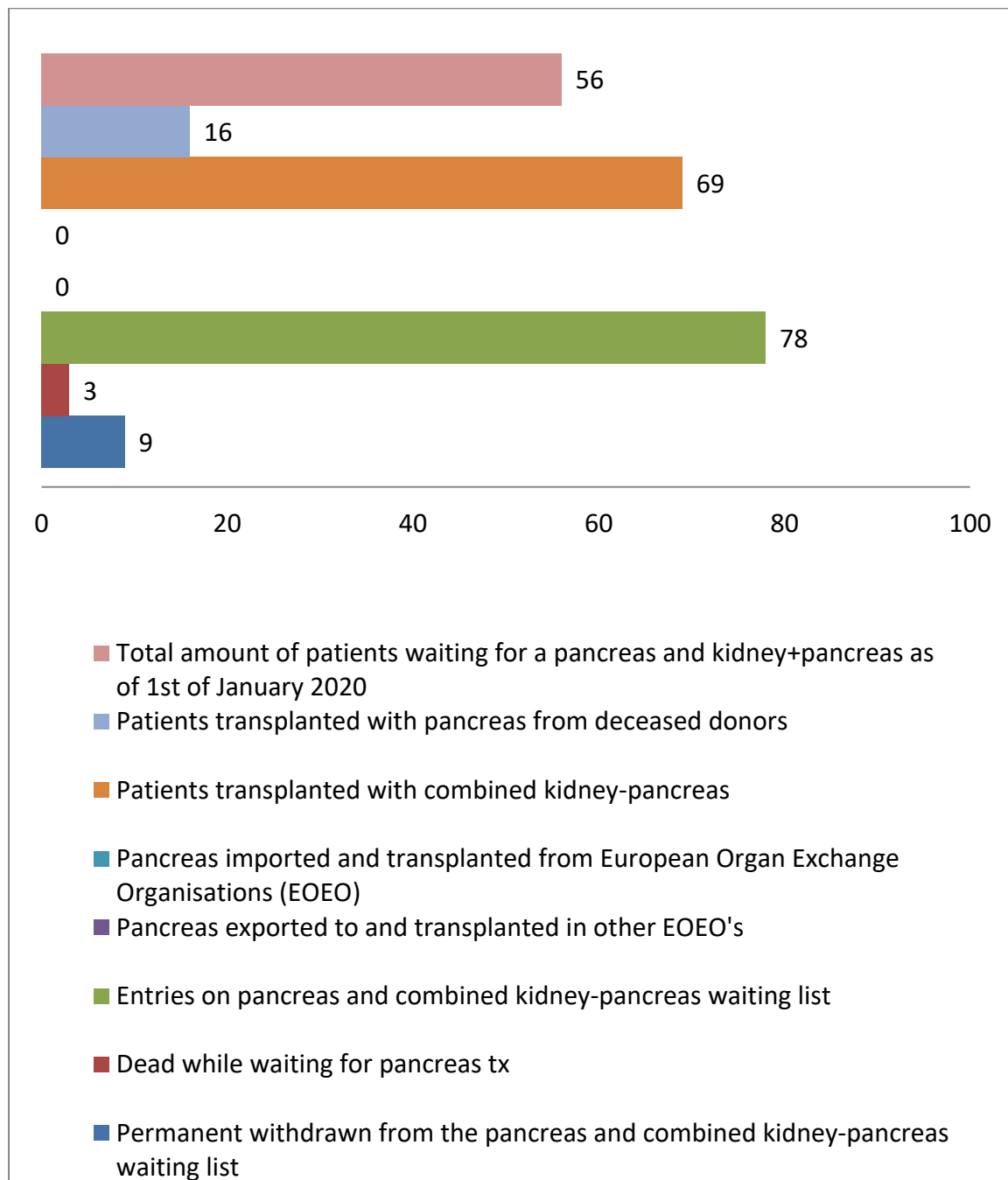
Year	Denmark	Estonia	Finland	Norway	Sweden	Scandiatransplant
2010	5,5		2,8	6,6	5,4	5,0
2011	5,4		4,3	5,7	6,4	5,5
2012	5,3		5,0	5,6	6,3	5,6
2013	5,4		2,8	6,5	6,0	5,3
2014	5,1		3,1	6,4	6,7	5,5
2015	6,1		4,4	6,5	4,9	5,3
2016	5,0		3,3	6,5	6,2	5,3
2017	6,0	1,5 ³⁹	4,4	6,7	6,4	5,7
2018	4,2	3,0	3,3	5,6	7,2	5,3
2019	5,1	2,3	4,9	6,2	5,4	5,2



³⁸ pmp: per million population

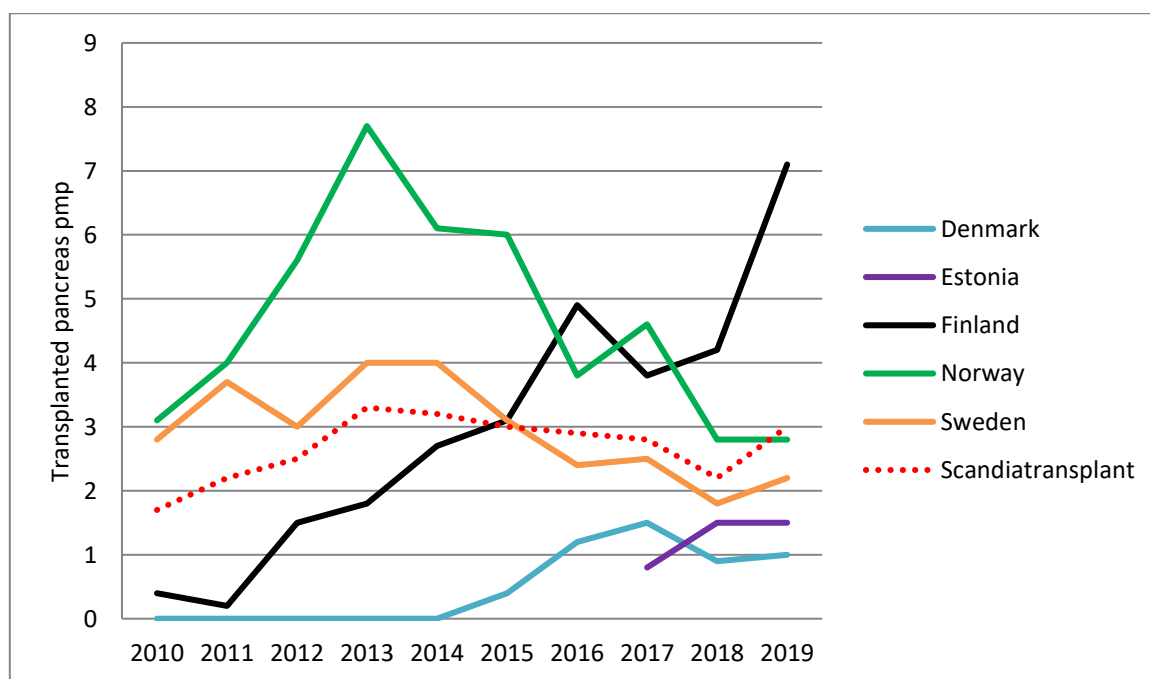
³⁹ Figures included from Estonia year 2017 starts from October 1st 2017, which has negative impact on PMP for Estonia and Scandiatransplant

Pancreas 2019



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

Year	Denmark	Estonia	Finland	Norway	Sweden	Scandiatransplant
2010	0		0,4	3,1	2,8	1,7
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

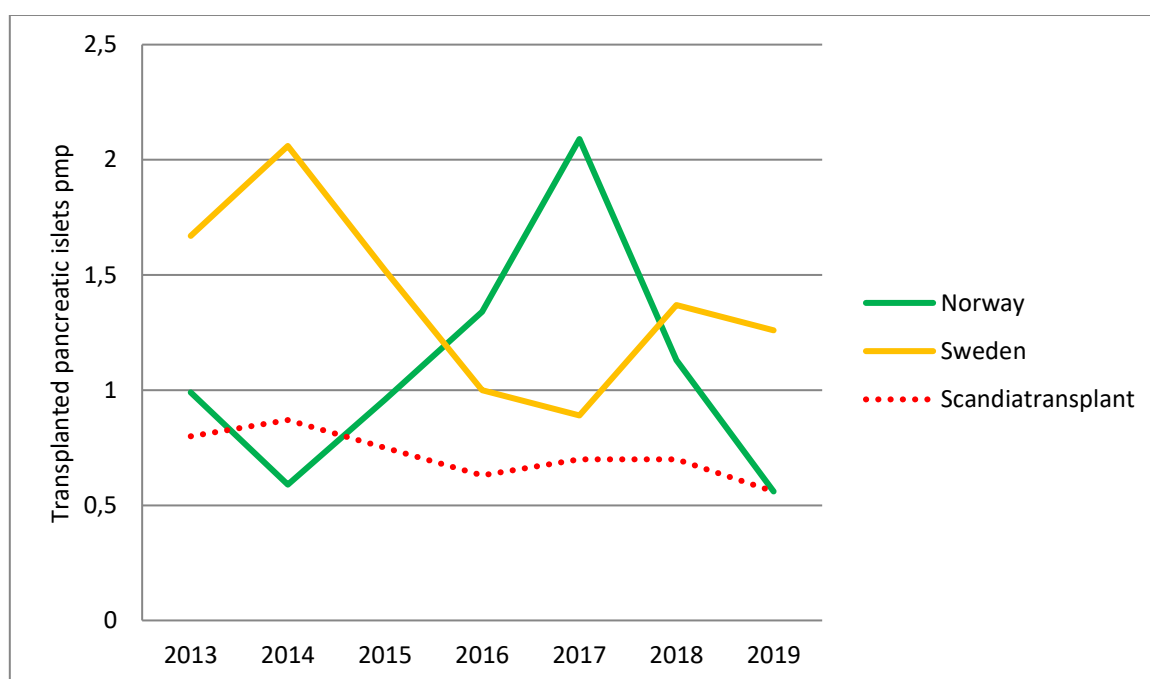


⁴⁰ pmp: per million population

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



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