Swiss Transplant Cohort Study report (May 2008 - December 2017)

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Disclaimer

The STCS Annual Report covers all solid organ transplantation (SOT) activities on the Swiss national level since May 2008 (and to a reduced extent also since January 2008). The report is comprehensive and contains all combinations of simultaneous solid organ transplantations, consecutive transplantations, centre-specific activities and key outcomes of all transplantation programs including limited reporting of infectious disease and cancer occurrence. To serve the aim of comprehensive transplant outcome reporting, the report is based on unselected patient populations of the different transplant programs and transplant centres. **However, it is important to note that the report is not designed for and does not serve the purpose of center-specific outcomes comparison.**

The Swiss Transplant Cohort Study (STCS)

List of Abbreviations

STCS	Swiss Transplant Cohort Study
BE	Inselspital Bern
CHUV	Centre Hospitalier Universitaire Vaudois Lausanne
CI	confidence interval
CumInc	cumulative incidence
FUP	follow-up
GF	graft failure
HUG	Hôpitaux Universitaires de Genève
ID	infectious disease
IQR	interquartile range
NHBD	Non heart beating donor (Donation after Cardiac Death, DCD)
DBD	Donation after Brain Death
SG	Kantonsspital St. Gallen
USZ	Universitätsspital Zürich
USB	Universitätsspital Basel
Tpx	transplantation

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1 Comments from the centres

Inselspital Bern: Approves open publication.
Centre Hospitalier Universitaire Vaudois Lausanne: Approves open publication.
Hôpitaux Universitaires de Genève: Approves open publication.
Kantonsspital St. Gallen: Approves open publication.
Universitätsspital Basel: Approves open publication.
Universitätsspital Zürich: Approves open publication.

2 Patients, transplantations and transplanted organs

Definitions applied:

- Enrolment refers to the inclusion of all patients into the Swiss Transplant Cohort Study (STCS) from 1st of May 2008 until 31st of December 2017. From those patients, the follow-up information until the censoring date of the data (10th of January 2018) is included in the report.
- First transplantation:
  - Patients who have a first transplantation (Tpx) in their medical history at the time of STCS enrolment
- Re-transplantation:
  - Patients with a repetition of the same type of transplantation (Re-Tpx)
  - Example: Re-Tpx of a kidney allograft after failure of a previous kidney graft
- Second transplantation:
  - Patients who have a second Tpx type that differs from the preceding Tpx type
  - Example: Tpx of a pancreas following a single kidney Tpx
  - Simultaneous (eg double or triple) Tpx can be categorized as first, re- or second Tpx
- Every Tpx can consist of a single or simultaneous double or triple Tpx. Simultaneous (eg double or triple) Tpx refer to multiple organs that originate from the same donor (e.g. kidney-pancreas).
- Knowledge on previous Tpx from the pre-STCS era (before May 2008) is considered. Patients may thus be enrolled within the STCS as a re- or a second Tpx.
- Sequences of previous islet Tpx have been counted as one prior Tpx.
- Human stem cell transplantations are not considered in this report.

2.1 Overview

The following tables list the number of patients enrolled in the STCS, Tpx performed, and organs transplanted. Table 1 and 2 show patients according to their first STCS Tpx.

Table 1: Number of patients enrolled

	Patients	(%)
Total number	4565	100.0
Single Tpx at enrolment	4349	95.3
Double Tpx at enrolment	212	4.6
Triple Tpx at enrolment	4	0.1
1st Tpx at enrolment	4062	89.0
Re-Tpx at enrolment	408	8.9
2nd Tpx at enrolment	95	2.1

Table 2: Number of patients enrolled by Tpx type

	Total	First Tpx	(%)	Re Tpx	(%)	Second Tpx	(%)
Total	4565	4062	89.0	408	8.9	95	2.1
Kidney	2591	2198	84.8	350	13.5	43	1.7
Liver	953	916	96.1	31	3.3	6	0.6
Lung	425	411	96.7	11	2.6	3	0.7
Heart	333	330	99.1	3	0.9	0	0.0
Islets	35	8	22.9	10	28.6	17	48.6
Pancreas	11	6	54.5	0	0.0	5	45.5
Small bowel	1	0	0.0	1	100.0	0	0.0
Kidney - Pancreas	94	88	93.6	1	1.1	5	5.3
Kidney - Kidney	43	39	90.7	0	0.0	4	9.3
Kidney - Liver	39	32	82.1	0	0.0	7	17.9
Kidney - Islets	17	16	94.1	0	0.0	1	5.9
Kidney - Heart	9	7	77.8	1	11.1	1	11.1
Kidney - Lung	1	0	0.0	0	0.0	1	100.0
Liver - Lung	4	4	100.0	0	0.0	0	0.0
Liver - Pancreas	1	1	100.0	0	0.0	0	0.0
Heart - Lung	1	1	100.0	0	0.0	0	0.0
Islets - Liver	1	1	100.0	0	0.0	0	0.0
Pancreas - Small bowel	2	2	100.0	0	0.0	0	0.0
Kidney - Kidney - Pancreas	2	1	50.0	0	0.0	1	50.0
Kidney - Islets - Liver	1	0	0.0	0	0.0	1	100.0
Islets - Liver - Lung	1	1	100.0	0	0.0	0	0.0

In contrast to Table 1 and 2, Table 3 and 4 list all Tpx performed and the number of implanted organs.

Table 3: Number of Tpx types

	Total	First Tpx	(%)	Re Tpx	(%)	Second Tpx	(%)
Total	4766	4075	85.5	553	11.6	138	2.9
Kidney	2653	2198	82.8	396	14.9	59	2.2
Liver	1027	916	89.2	102	9.9	9	0.9
Lung	442	411	93.0	27	6.1	4	0.9
Heart	336	330	98.2	6	1.8	0	0.0
Islets	51	8	15.7	17	33.3	26	51.0
Pancreas	18	6	33.3	1	5.6	11	61.1
Small bowel	1	0	0.0	1	100.0	0	0.0
Kidney - Pancreas	98	91	92.9	2	2.0	5	5.1
Kidney - Kidney	43	39	90.7	0	0.0	4	9.3
Kidney - Liver	43	34	79.1	0	0.0	9	20.9
Kidney - Islets	24	22	91.7	0	0.0	2	8.3
Kidney - Heart	10	8	80.0	1	10.0	1	10.0
Kidney - Lung	2	0	0.0	0	0.0	2	100.0
Liver - Lung	4	4	100.0	0	0.0	0	0.0
Liver - Pancreas	1	1	100.0	0	0.0	0	0.0
Heart - Lung	1	1	100.0	0	0.0	0	0.0
Islets - Liver	3	1	33.3	0	0.0	2	66.7
Pancreas - Small bowel	2	2	100.0	0	0.0	0	0.0
Kidney - Kidney - Pancreas	2	1	50.0	0	0.0	1	50.0
Kidney - Islets - Liver	2	0	0.0	0	0.0	2	100.0
Liver - Pancreas - Small bowel	1	0	0.0	0	0.0	1	100.0
Islets - Liver - Lung	2	2	100.0	0	0.0	0	0.0

Remark: 'Liver - Pancreas - Small bowel' Tpx type was not perfomed as first STCS Tpx.

Table 4: Number of transplanted organs

	Total	First Tpx	(%)	Re Tpx	(%)	Second Tpx	(%)
Total	4977	4257	85.5	613	12.3	107	2.1
Kidney	2908	2421	83.3	438	15.1	49	1.7
Liver	1077	955	88.7	107	9.9	15	1.4
Lung	450	417	92.7	28	6.2	5	1.1
Heart	346	338	97.7	8	2.3	0	0.0
Pancreas	119	98	82.4	9	7.6	12	10.1
Islets	73	26	35.6	21	28.8	26	35.6
Small bowel	4	2	50.0	2	50.0	0	0.0

Table 5: Patients' characteristics for major Tpx types

	Total	Kidney	Liver	Lung	Heart	Kidney - Pancreas
Total no. patients	4396	2591	953	425	333	94
Age (yrs), median	53.8	54.0	55.6	53.2	51.4	44.4
- IQR*	(41.5,61.9)	(42.4,62.9)	(45.2,61.9)	(34.1,60)	(36.8,59.2)	(36.9,50)
Male gender, n (%)	2772 (63.1%)	1644 (63.5%)	631 (66.2%)	210 (49.4%)	236 (70.9%)	51 (54.3%)
Pediatric, n (%)	226 (5.1%)	103 (4%)	78 (8.2%)	15 (3.5%)	30 (9%)	0 (0%)
Observation time (yrs), median	3.7	3.9	3.4	3.1	3.2	5.1
- IQR	(1.5,6.4)	(1.6,6.6)	(1.2,6.1)	(1.5,5.5)	(1,6)	(2.5,7.4)
No. deaths, n (%)	603 (13.7%)	222 (8.6%)	161 (16.9%)	146 (34.4%)	69 (20.7%)	5 (5.3%)
No. patients with at least one GF**, n (%)	404 (9.2%)	196 (7.6%)	96 (10.1%)	65 (15.3%)	30 (9%)	17 (18.1%)
- with GF, alive	196 (4.5%)	133 (5.1%)	41 (4.3%)	7 (1.6%)	2 (0.6%)	13 (13.8%)
- with GF -> death	122 (2.8%)	60 (2.3%)#	31 (3.3%)	18 (4.2%)	9 (2.7%)	4 (4.3%)
- with GF - related death	86 (2%)	3 (0.1%)	24 (2.5%)	40 (9.4%)	19 (5.7%)	0 (0%)
Death without GF	395 (9%)	159 (6.1%)	106 (11.1%)	88 (20.7%)	41 (12.3%)	1 (1.1%)
No. patients with any ID***	3050 (69.4 %)	1797 (69.4%)	664 (69.7%)	276 (64.9%)	235 (70.6%)	78 (83%)
- any proven/viral ID event	2262 (51.5 %)	1311 (50.6%)	493 (51.7%)	221 (52%)	176 (52.9%)	61 (64.9%)
- any incident cancer other than skin	327 (7.4 %)	164 (6.3%)	111 (11.6%)	34 (8%)	14 (4.2%)	4 (4.3%)
- any incident skin cancer	478 (10.9 %)	335 (12.9%)	52 (5.5%)	50 (11.8%)	35 (10.5%)	6 (6.4%)

* IQR: interquartile range

** GF: graft failure

*** ID: infectious disease event

Out of 60 patients that had a Kidney Tpx and a GF, 12 patients had a re or second Tpx and died later on and 48 patients died after GF without a re or second Tpx. In Chapter "Mortality", patients with GF but without re or second Tpx are censored for mortality at the time point of GF.

Remark: 'Total' refers to the total number of patients with Tpx presented in this table.

2.2 STCS patient enrolment by calendar time

Figure 1 and 2 shows the patient enrolment activity by quarter from May 2008 till December 2017.

Figure 1: Quarterly overall patient enrolment

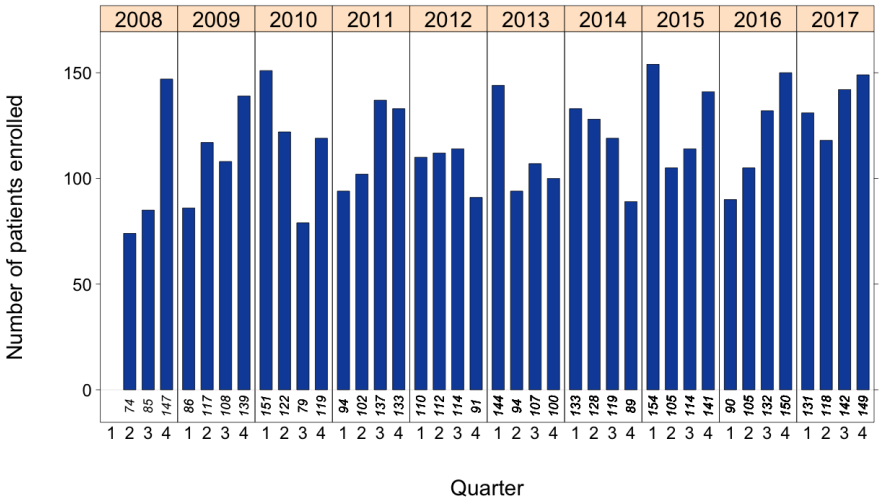


Figure 2: Quarterly patient enrolment by donor type

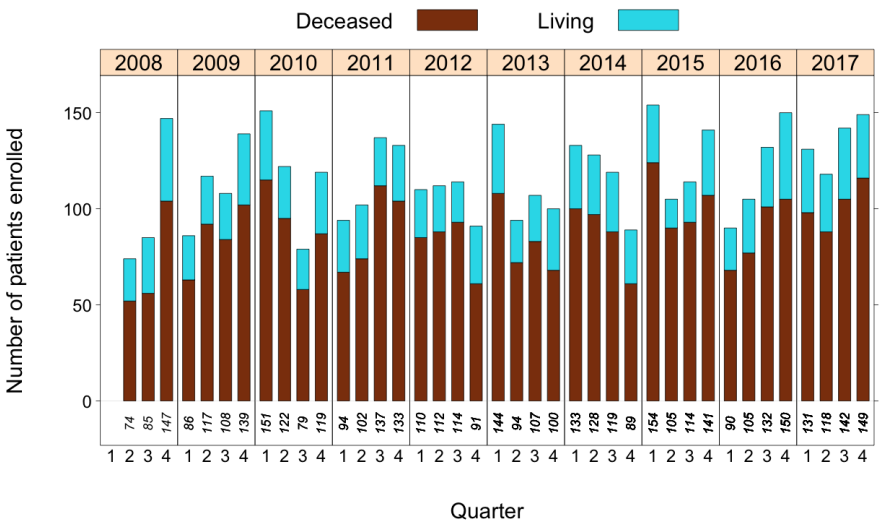


Figure 3: Cumulative overall patient enrolment

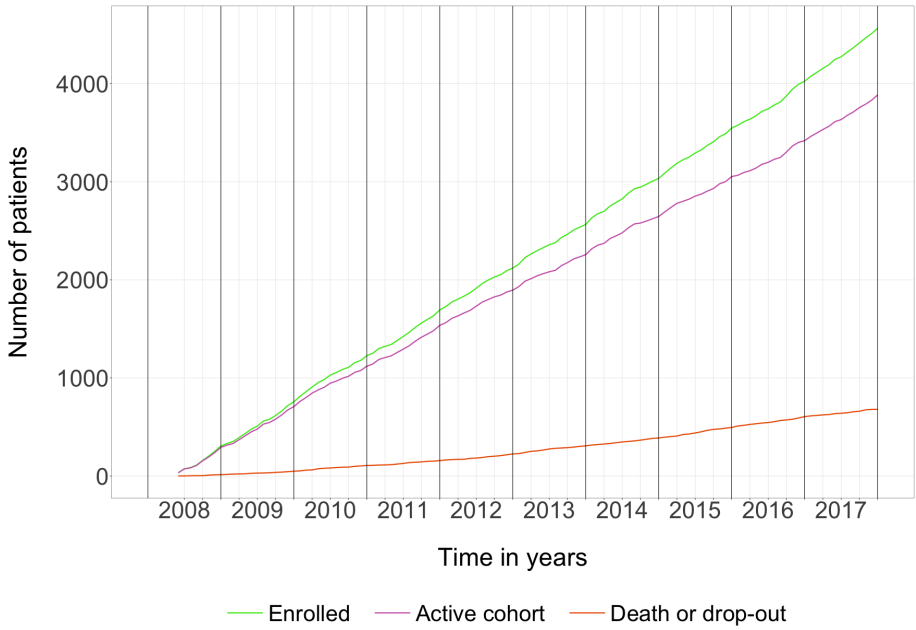
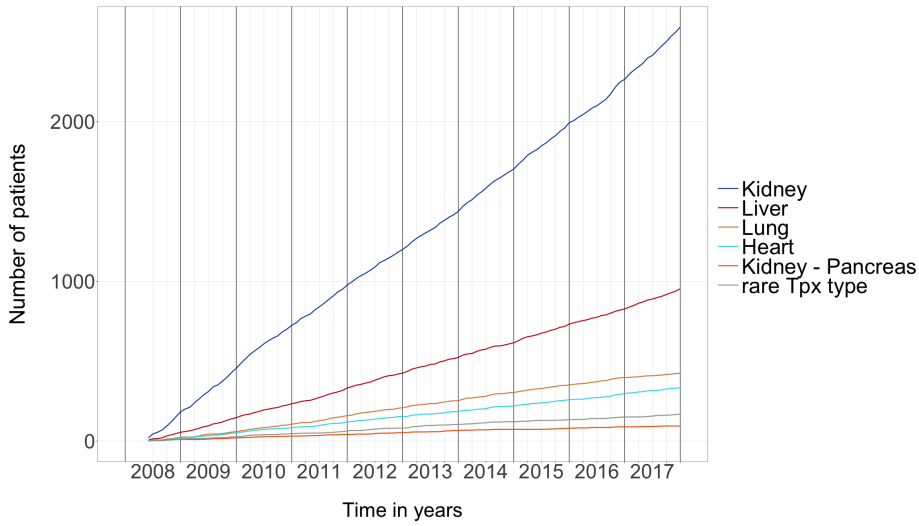
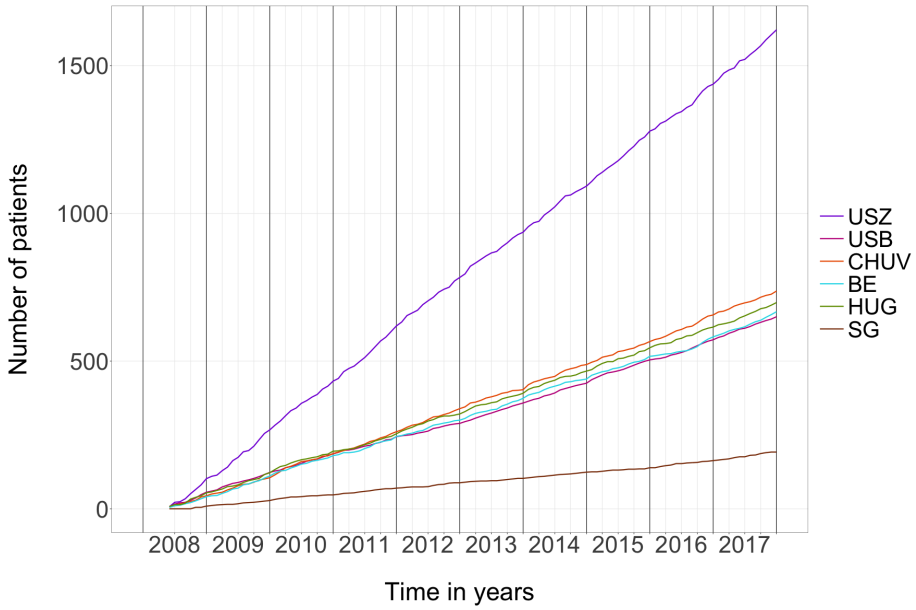


Figure 4: Cumulative overall patient enrolment by Tpx type



Remark: 'rare Tpx type' includes: 'Islets', 'Pancreas', 'Small bowel', 'Kidney - Lung', 'Kidney - Kidney', 'Kidney - Islets', 'Kidney - Heart', 'Kidney - Liver', 'Liver - Lung', 'Liver - Pancreas', 'Heart - Lung', 'Islets - Liver', 'Pancreas - Small bowel', 'Kidney - Kidney - Pancreas', 'Kidney - Islets - Liver' and 'Islets - Liver - Lung'.

Figure 5: Cumulative overall patient enrolment by centre



2.3 Transplantation activities by centre

Figure 6: Number of patients enrolled

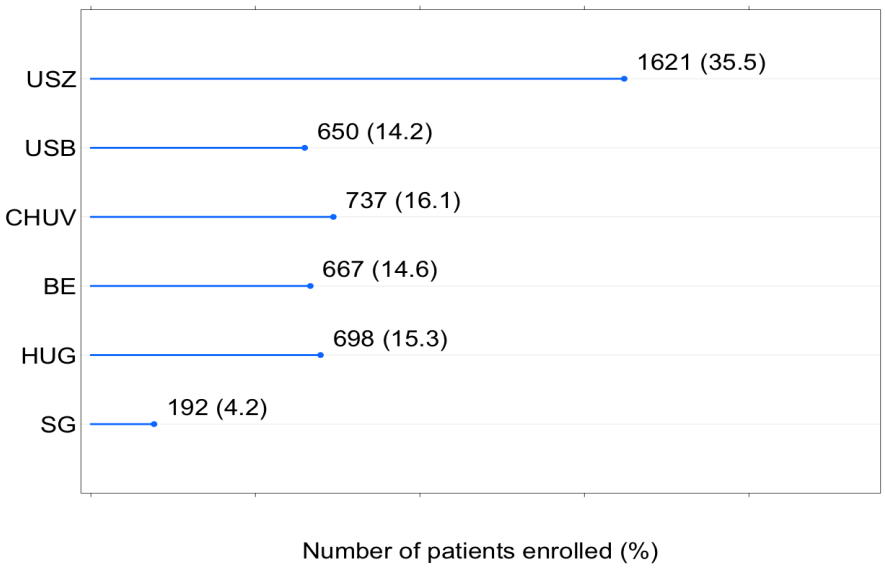


Figure 7: Number of transplanted organs

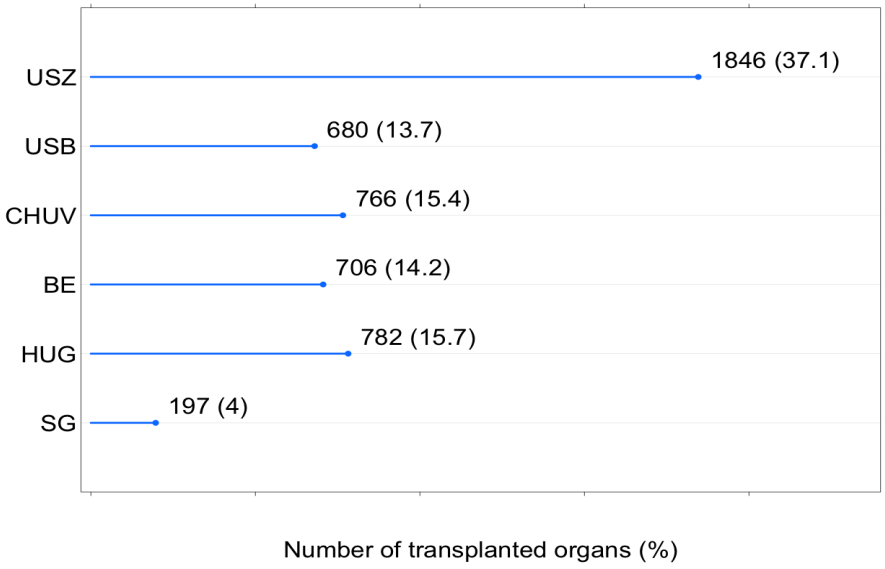
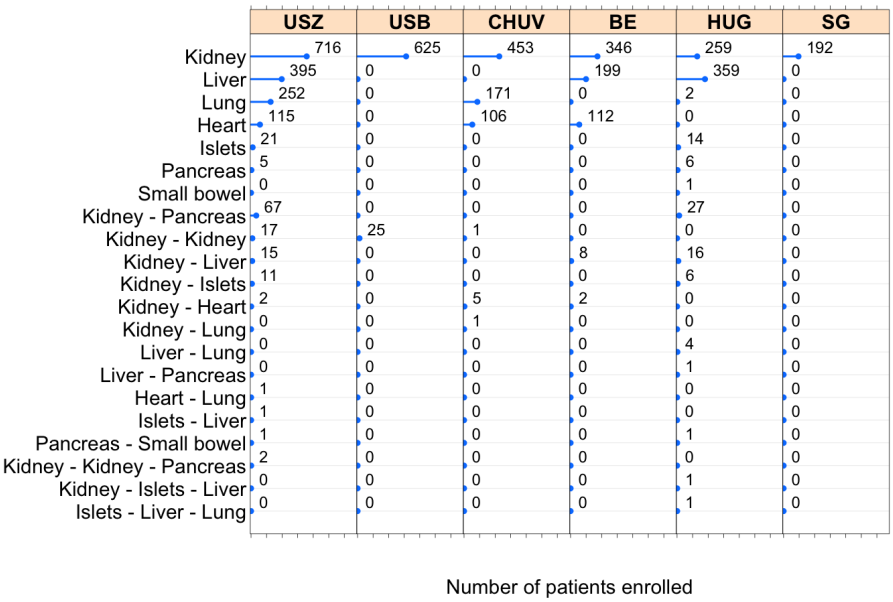


Figure 8: Number of patients enrolled by Tpx type



2.4 Kidney transplantations by centre

Figure 9: Number of patients with first single kidney Tpx

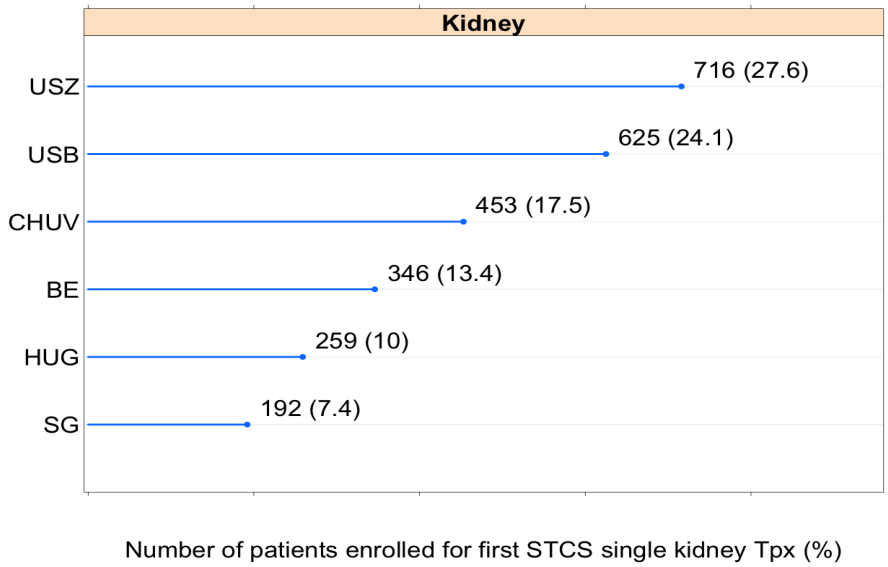
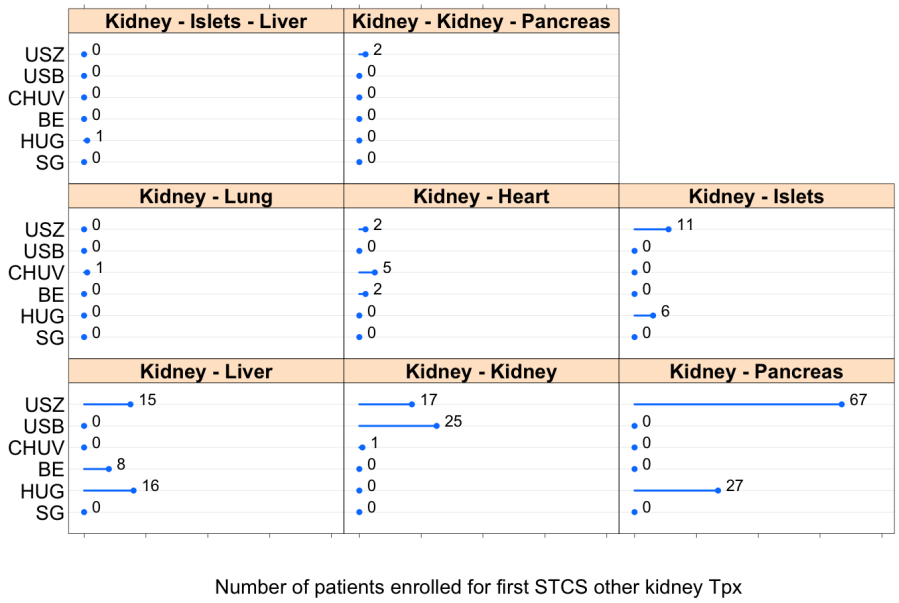


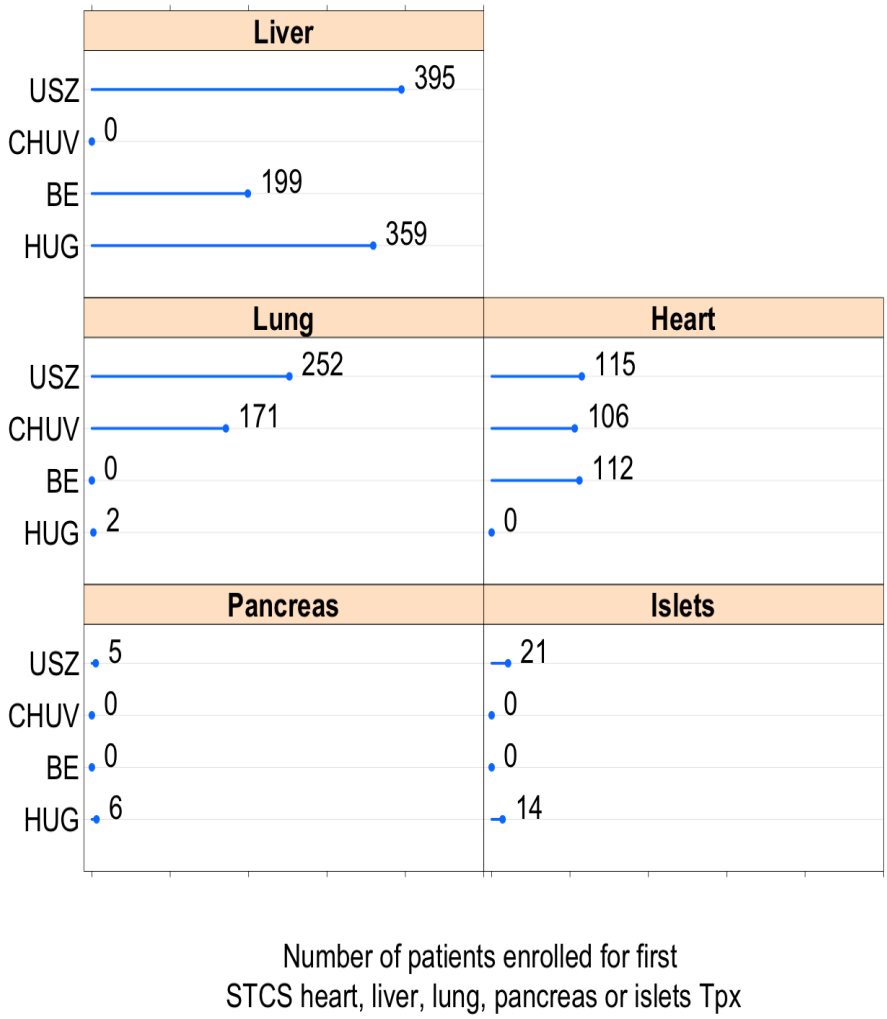
Figure 10: Number of patients with other kidney Tpx



2.5 Transplantations other than kidney by centre

Data from following rare Tpx are not shown: Small bowel (1, HUG), Liver - Lung (4, HUG), Liver - Pancreas (1, HUG), Heart - Lung (1, USZ), Islets - Liver (1, USZ), Pancreas - Small bowel (1 each in USZ and HUG) and Islets - Liver - Lung (1, HUG).

Figure 11: Number of patients with first STCS liver, lung, heart, pancreas or islets Tpx



2.6 Single Kidney and Liver Tpx by donor type

Figures 12 and 13 show all STCS single kidney and liver Tpx by donor type (Donation after Brain Death (DBD), Non heart beating donor (Donation after Cardiac Death, DCD) (NHBD), Living). Figures 14 and 15 present proportions of donor types in all single kidney and liver Tpx within centres.

Figure 12: Number of single kidney Tpx

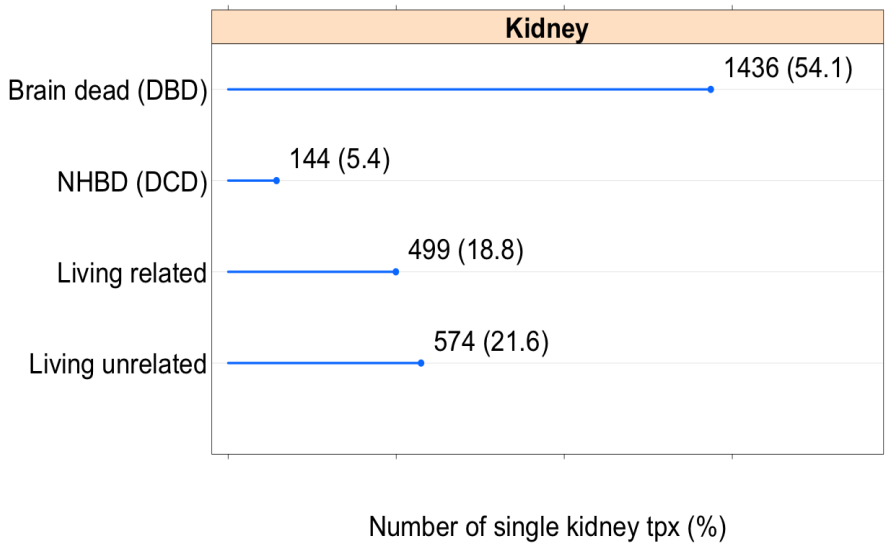


Figure 13: Number of single liver Tpx

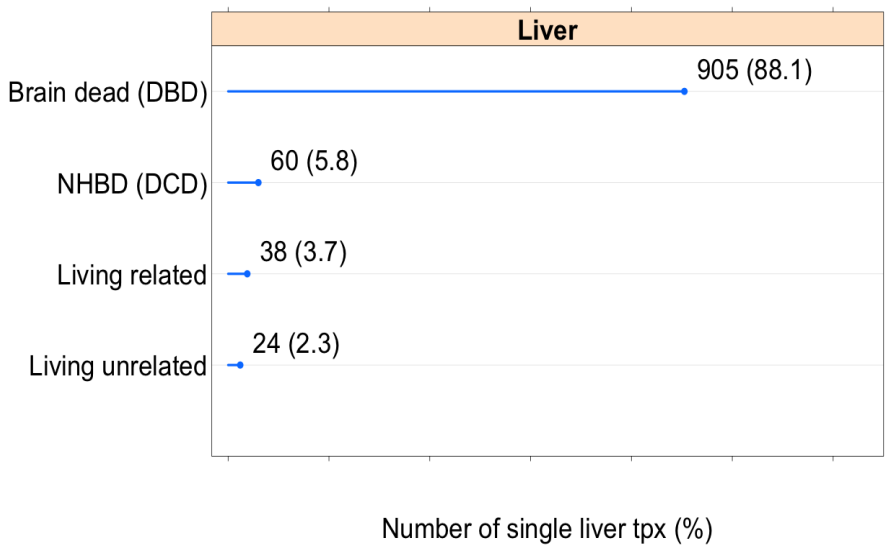


Figure 14: Distribution of donor types in all single kidney Tpx

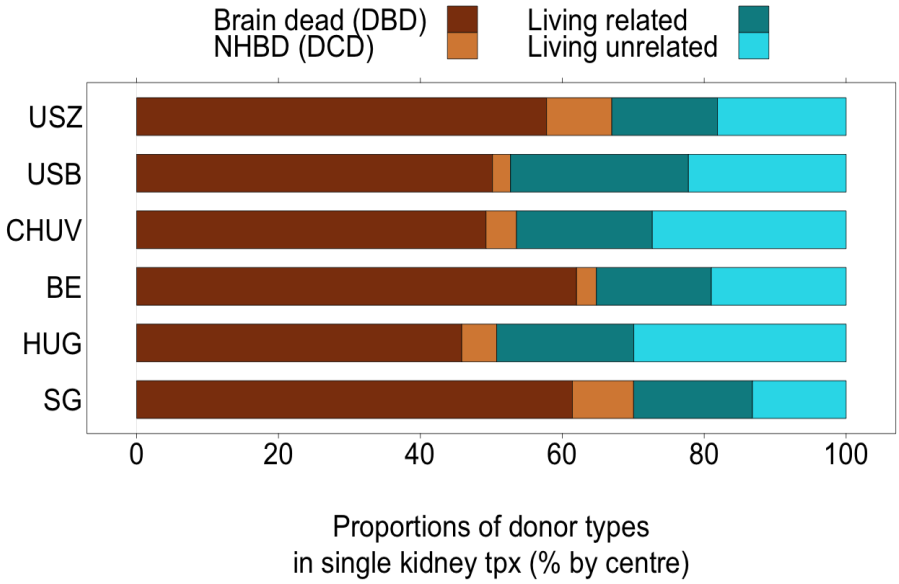
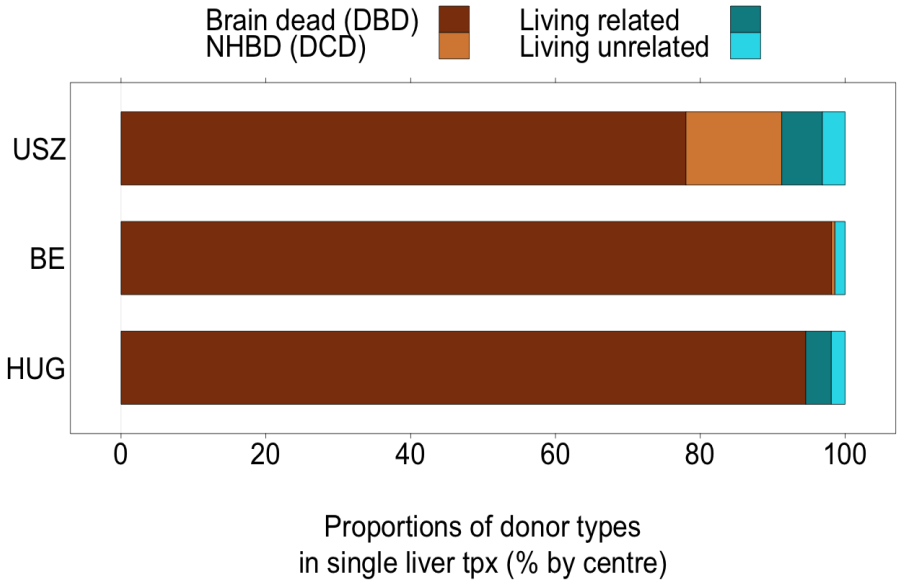


Figure 15: Distribution of donor types in all single liver Tpx



3 Consent status

Table 6 shows patients' consent status change over time from enrolment to the current date.

Figure 16: Patients current consent status

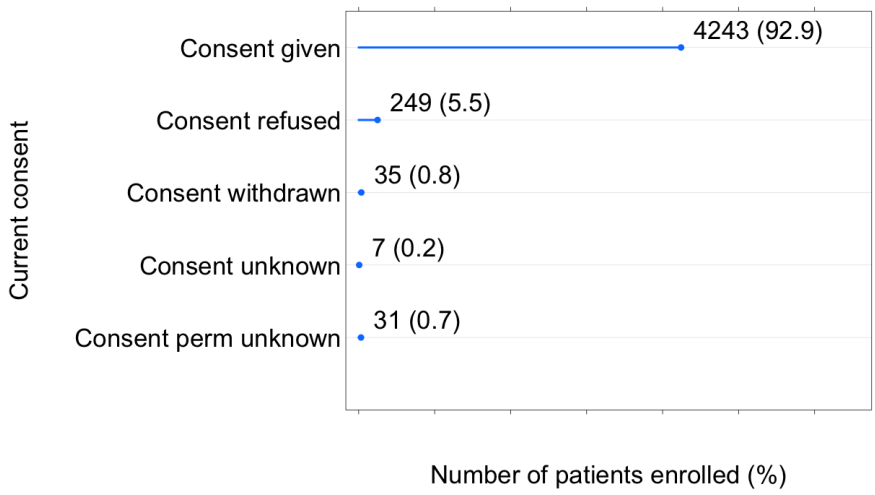


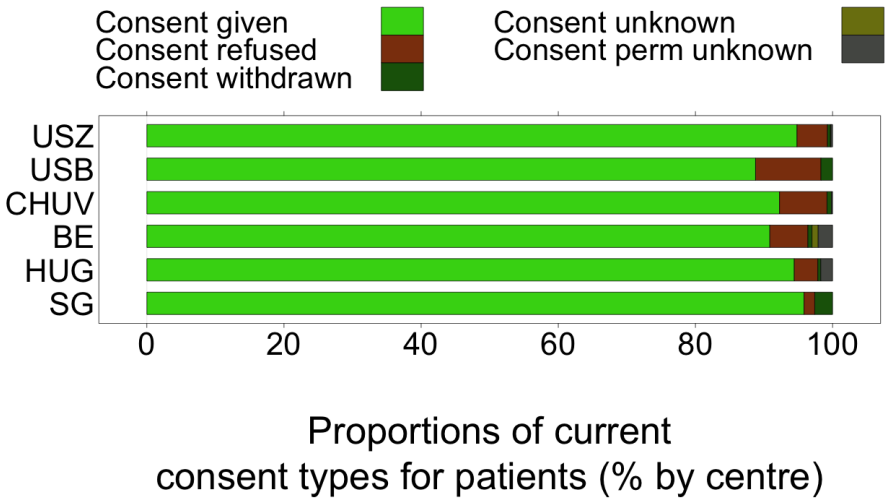
Table 6: Patients' current consent against consent status at enrolment

	Total	C-Given	C-Refused	C-Withdrawn	C-Unknown	C-Perm unknown
Total	4565	4243	249	35	7	31
E-Given	4244	4209	0	35	0	0
E-Refused	248	4	244	0	0	0
E-Withdrawn	0	0	0	0	0	0
E-Unknown	43	30	5	0	6	2
E-Perm unknown	30	0	0	0	1	29

Remark: 'C' stands for 'current consent status' and 'E' denotes the consent status at enrolment.

In Figure 17, current patients' status (i. e. last known consent status) is given proportionally within each centre.

Figure 17: Current patients' consent status by centre



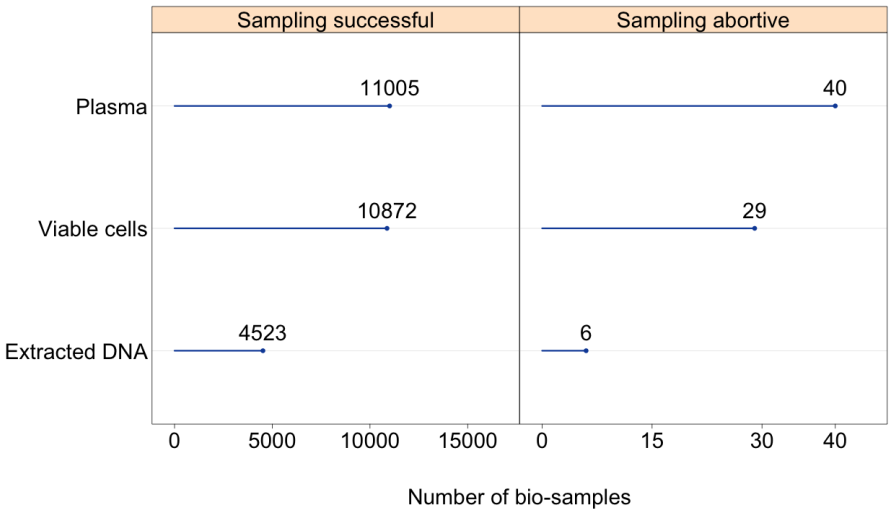
4 Bio-samples

Table 7 presents the number of patients with and without bio-samples. The consent status for patients with at least one bio-sample is at the time point of the first drawn bio-sample. Consent status at enrolment is taken for patients without any bio-samples.

Table 7: Number of patients with bio-samples

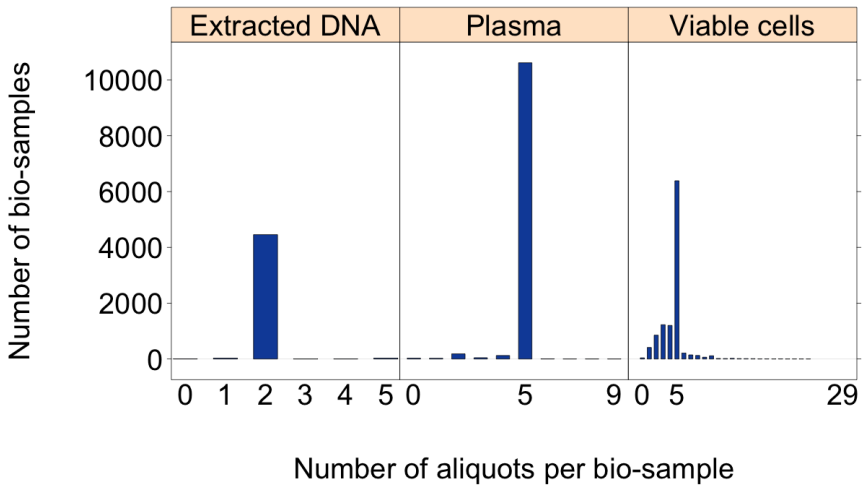
	Total	Sample	(%)	No sample	(%)
Total	4565	4229	92.6	336	7.4
Consent given	4261	4210	98.8	51	1.2
Consent refused	247	0	0.0	247	100.0
Consent unknown	27	12	44.4	15	55.6
Consent perm unknown	30	7	23.3	23	76.7

Figure 18: Number of bio-samples in STCS



Remark: Sampling is defined as abortive if no aliquots were stored.

Figure 19: Distribution of number of aliquots by sample type



5 Infectious disease events

In Tables 8 and 9, descriptive information about patients with infectious disease (ID) events and types of ID events are given. Table 10 and Figure 20 give ID event rates by Tpx and pathogen type.

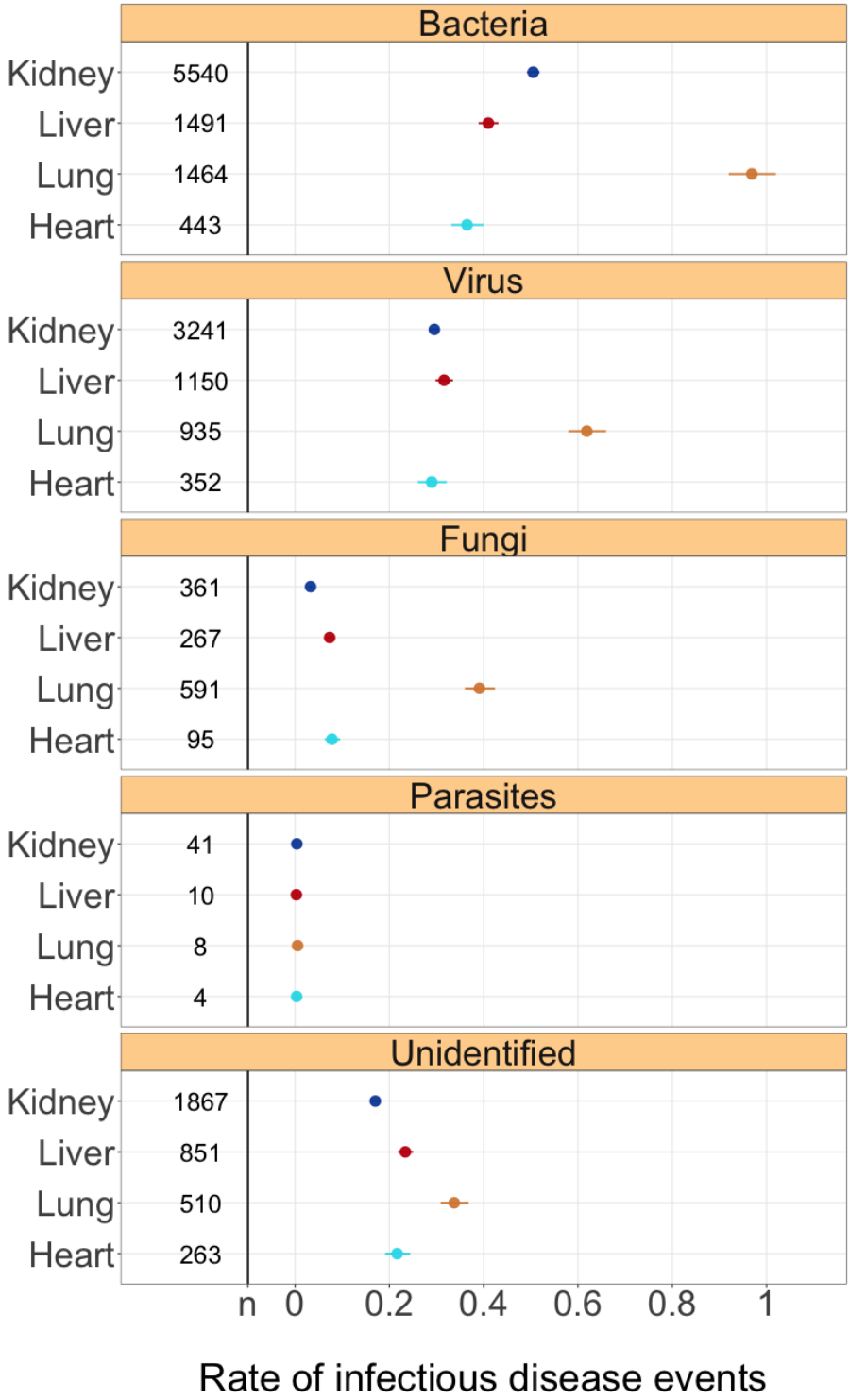
Table 8: Patients with infectious disease events

	N	% (sd)
Total number of patients	4565	
Patients with at least one ID event	3170	69.4%
- Number of ID events, mean (sd)	6.7	(6.5)
Patients with at least one proven/viral ID event	2357	51.6%
- Number of proven/viral ID events, mean (sd)	3.2	(3.2)

Table 9: Summary of infectious disease events

	N	(%)
Total number of ID events	21161	100.0
Proven disease	7471	35.3
Viral syndrome	137	0.6
Primary infection	44	0.2
Probable disease	4747	22.4
Asymptomatic	3242	15.3
Colonization	4832	22.8
Possible disease	64	0.3
Fever neutropenia	20	0.1
Information missing	604	2.9

Figure 20: Rate of infectious disease events by pathogen and Tpx type



Remark: The rate of ID events is defined as the number of ID events per year of observation time. It is calculated as number of ID events divided by the total observation time of patients at risk. Some backlog in the reporting of ID events cannot be excluded.

Table 10: Rate of infectious disease events by pathogen and Tpx type

Tpx	Pathogen	ID events	ID event rate	(95% CI)
Kidney	Bacteria	5540	0.51	(0.49, 0.52)
	Virus	3241	0.3	(0.29, 0.31)
	Fungi	361	0.03	(0.03, 0.04)
	Parasites	41	0	(0, 0.01)
	Unidentified	1867	0.17	(0.16, 0.18)
	Total	11050	1.01	(0.99, 1.03)
Liver	Bacteria	1491	0.41	(0.39, 0.43)
	Virus	1150	0.32	(0.3, 0.33)
	Fungi	267	0.07	(0.06, 0.08)
	Parasites	10	0	(0, 0.01)
	Unidentified	851	0.23	(0.22, 0.25)
	Total	3769	1.04	(1, 1.07)
Lung	Bacteria	1464	0.97	(0.92, 1.02)
	Virus	935	0.62	(0.58, 0.66)
	Fungi	591	0.39	(0.36, 0.42)
	Parasites	8	0.01	(0, 0.01)
	Unidentified	510	0.34	(0.31, 0.37)
	Total	3508	2.32	(2.25, 2.4)
Heart	Bacteria	443	0.36	(0.33, 0.4)
	Virus	352	0.29	(0.26, 0.32)
	Fungi	95	0.08	(0.06, 0.1)
	Parasites	4	0	(0, 0.01)
	Unidentified	263	0.22	(0.19, 0.24)
	Total	1157	0.95	(0.9, 1.01)

6 Follow-up

Percentages in Figures 21 and 22 have to be read as proportions of Tpx for which at least the 6 month or the 12 month FUP visit was performed.

Figure 21: Number of Tpx with 6 month FUP

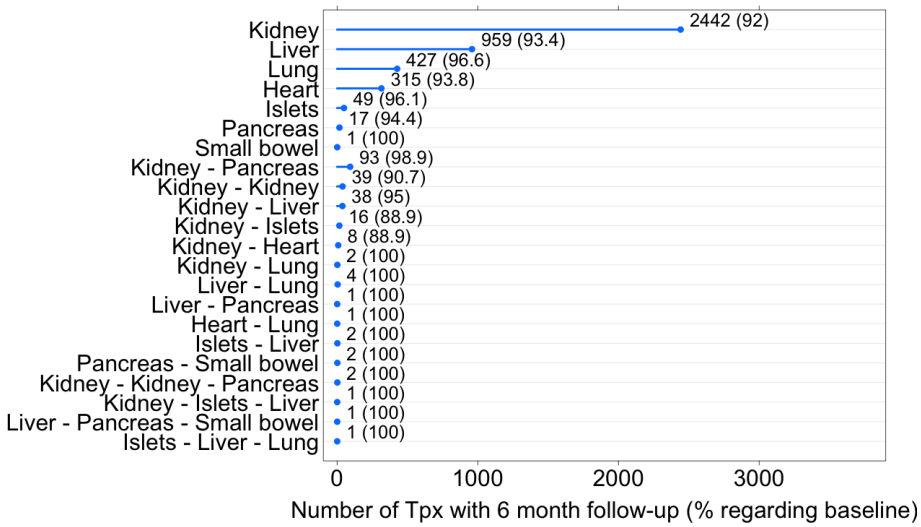
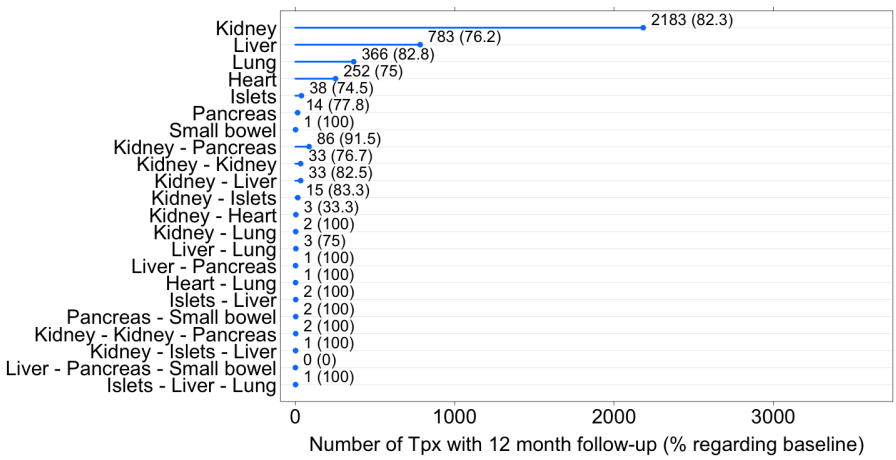


Figure 22: Number of Tpx with 12 month FUP



7 Mortality

In the following, survival rate estimates can only be descriptively interpreted since the precision is low due to the small number of patients at risk at the end of FUP. In Figure 23, the 95%-confidence interval (CI) is given. Furthermore, survival rate estimates are not adjusted for potential risk factors (in Figures and Tables).

7.1 Overall

Table 11: Follow-up information of patients

	Follow-up
Median follow-up duration (years)	3.73
IQR (years)	1.47 - 6.37
Maximum follow-up (years)*	9.69
Number of deaths**	633
Patients with (at least one) graft failure	418
Patients lost to follow-up***	47

* Time period from 2nd of May 2008 to 10th of January 2018
** 48 deaths were observed in Kidney patients with GF and no re or second Tpx following GF. Due to inconsistencies in data collection for death after GF in renal TPX recipients across centres, those death cases are removed for mortality shown in Table 13 and Figures 23.
*** More details in Table 12.

Table 12: Number of patients who dropped out by Tpx type

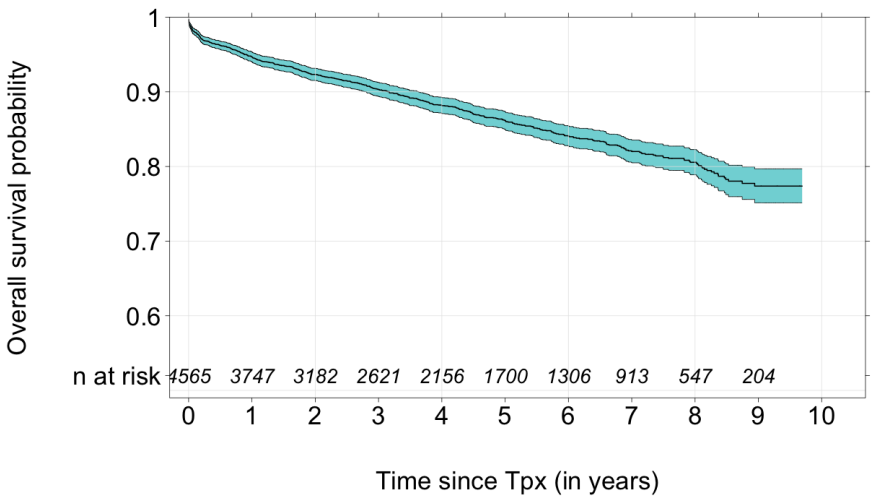
	BE	CHUV	HUG	SG	USB	USZ	Sum
Enrolled, N	667	737	698	192	650	1621	4565
Dropped out, N (%)	5 (0.7%)	6 (0.8%)	11 (1.6%)	0 (0%)	1 (0.2%)	24 (1.5%)	47 (1%)
- Heart	-	-	-	-	-	2	2
- Islets	-	-	-	-	-	2	2
- Kidney	5	4	4	-	1	9	23
- Kidney - Pancreas	-	-	2	-	-	2	4
- Liver	-	-	5	-	-	9	14
- Lung	-	2	-	-	-	-	2

Table 13: Overall mortality

Time	Mortality (%)	95% CI	No at risk	Cum. deaths
Baseline	0.0	-	4565	0
1 month	1.9	(1.5, 2.3)	4416	86
6 months	3.8	(3.2, 4.3)	4064	168
1 year(s)	5.3	(4.7, 6)	3747	232
2 year(s)	7.7	(6.8, 8.5)	3182	318
3 year(s)	9.7	(8.7, 10.6)	2621	382
4 year(s)	11.8	(10.8, 12.9)	2156	440
5 year(s)	13.8	(12.6, 15)	1700	484
6 year(s)	15.9	(14.6, 17.3)	1306	521
7 year(s)	18.0	(16.4, 19.5)	913	547
8 year(s)	19.4	(17.7, 21.1)	547	560
9 year(s)	22.6	(20.3, 24.9)	204	576
Overall	22.6	(20.3, 24.9)	1	576

Remarks: 'Cum.' stands for 'Cumulative'. The 95%-CI is given for 'Mortality'. The time point 'Overall' refers to the maximal follow-up time in the STCS (from 2nd of May in 2008 to 10th of January 2018). Patients that had a Kidney or Kidney-Kidney Tpx and have a GF and no re or second Tpx are censored for mortality at the time point of GF.

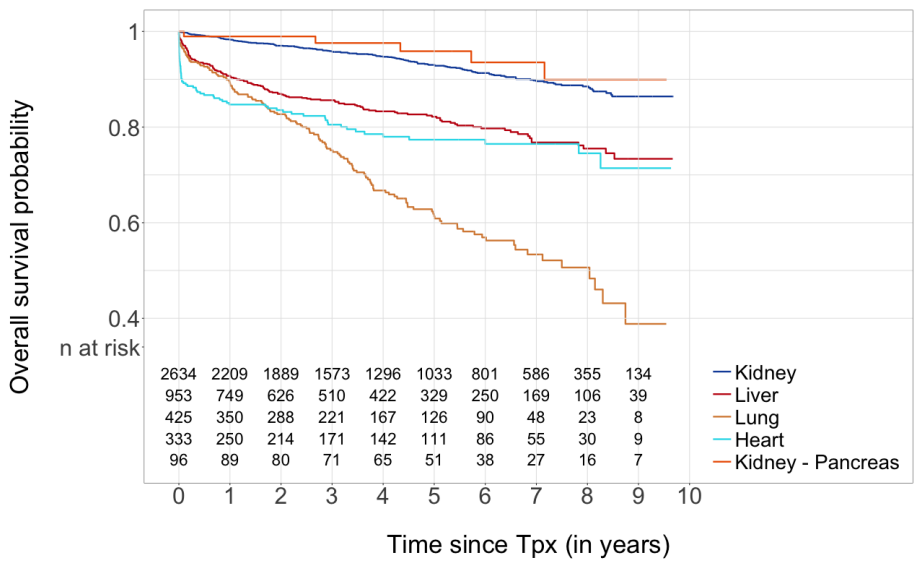
Figure 23: Overall survival



7.2 Mortality by Tpx

For the issue of clarity, Tpx types performed in STCS are separated in frequent and rare Tpx scenarios regarding their frequency of occurrence. Rare Tpx include STCS Tpx types that are performed less than 50 times in the defined period. Figures and Tables are thus potentially given per frequent and rare Tpx (see Appendix C).
Patients that had a Kidney or Kidney-Kidney Tpx and have a GF and no re or second Tpx are censored for mortality at the time point of GF.

Figure 24: Overall survival for frequent Tpx types



Remark: 43 Kidney-Kidney Tpx are included in Kidney Tpx. 2 Kidney-Kidney-Pancreas Tpx are included in Kidney-Pancreas Tpx.

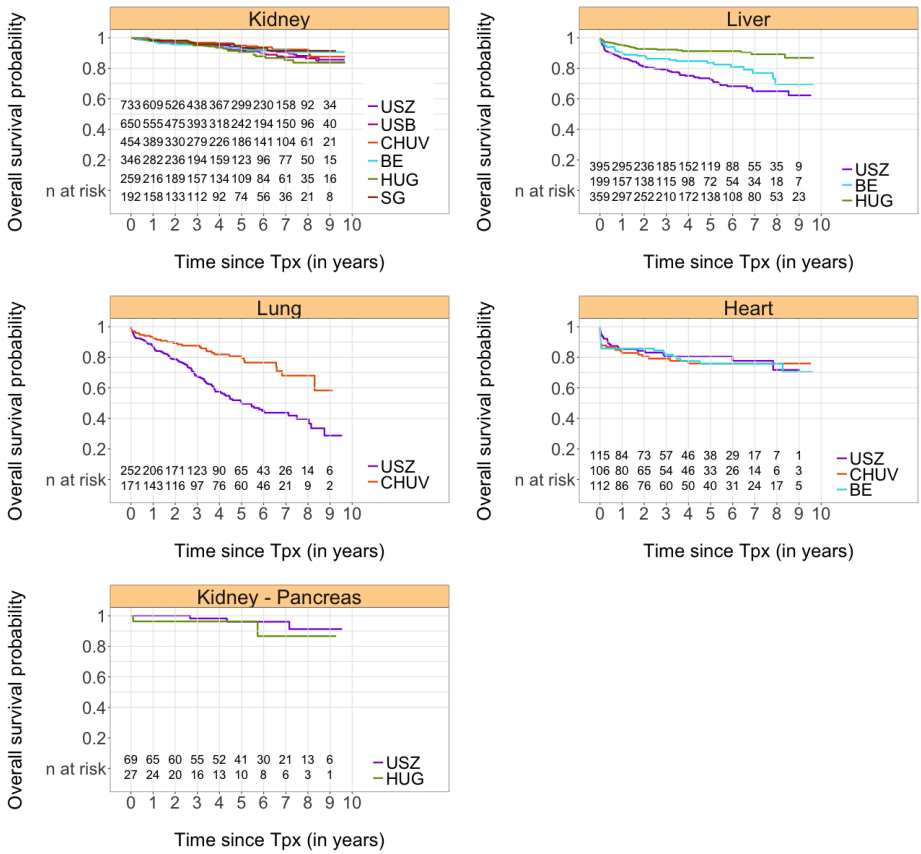
Table 14: Overall mortality by Tpx type

Tpx	Time	Mortality (%)	95% CI	No at risk	Cum. deaths
Kidney	Baseline	0.0	-	2634	0
-	1 month	0.1	(0, 0.3)	2577	4
-	6 months	0.9	(0.5, 1.2)	2387	22
-	1 year(s)	1.7	(1.2, 2.2)	2209	41
-	2 year(s)	3.0	(2.3, 3.7)	1889	68
-	3 year(s)	4.2	(3.4, 5.1)	1573	90
-	4 year(s)	5.3	(4.3, 6.3)	1296	106
-	5 year(s)	7.0	(5.8, 8.2)	1033	127
-	6 year(s)	8.7	(7.2, 10.1)	801	144
-	7 year(s)	10.4	(8.7, 12.1)	586	157
-	8 year(s)	11.5	(9.6, 13.4)	355	163
-	9 year(s)	13.6	(11.2, 16)	134	170
-	Overall	13.6	(11.2, 16)	-	170
Liver	Baseline	0.0	-	953	0
-	1 month	2.8	(1.8, 3.9)	917	27
-	6 months	6.7	(5.1, 8.3)	830	63
-	1 year(s)	9.3	(7.4, 11.1)	749	85
-	2 year(s)	13.1	(10.8, 15.3)	626	114
-	3 year(s)	14.4	(12, 16.7)	510	123
-	4 year(s)	16.7	(14, 19.3)	422	136
-	5 year(s)	17.8	(15, 20.6)	329	141
-	6 year(s)	20.3	(17.1, 23.3)	250	150
-	7 year(s)	23.2	(19.4, 26.8)	169	157
-	8 year(s)	24.5	(20.4, 28.4)	106	159
-	9 year(s)	26.6	(21.6, 31.4)	39	161
-	Overall	26.6	(21.6, 31.4)	-	161
Lung	Baseline	0.0	-	425	0
-	1 month	3.5	(1.8, 5.3)	410	15
-	6 months	7.4	(4.8, 9.8)	378	31
-	1 year(s)	10.9	(7.8, 13.8)	350	45
-	2 year(s)	17.3	(13.5, 21)	288	69
-	3 year(s)	24.9	(20.3, 29.2)	221	93
-	4 year(s)	33.3	(27.9, 38.2)	167	116
-	5 year(s)	38.6	(32.8, 43.9)	126	128
-	6 year(s)	43.1	(36.8, 48.7)	90	136
-	7 year(s)	46.6	(39.7, 52.8)	48	140
-	8 year(s)	49.4	(41.6, 56.1)	23	142
-	9 year(s)	61.2	(47, 71.5)	8	146
-	Overall	61.2	(47, 71.5)	-	146
Heart	Baseline	0.0	-	333	0
-	1 month	10.5	(7.2, 13.7)	297	35
-	6 months	13.3	(9.6, 16.9)	271	44
-	1 year(s)	15.3	(11.3, 19.1)	250	50
-	2 year(s)	16.4	(12.3, 20.4)	214	53
-	3 year(s)	19.5	(14.9, 23.9)	171	60
-	4 year(s)	22.0	(17, 26.7)	142	65
-	5 year(s)	22.6	(17.5, 27.5)	111	66
-	6 year(s)	23.5	(18.1, 28.6)	86	67
-	7 year(s)	23.5	(18.1, 28.6)	55	67
-	8 year(s)	25.5	(18.9, 31.6)	30	68

Tpx	Time	Mortality (%)	95% CI	No at risk	Cum. deaths
-	9 year(s)	28.6	(19.5, 36.6)	9	69
-	Overall	28.6	(19.5, 36.6)	-	69
Kidney - Pancreas	Baseline	0.0	-	96	0
-	1 month	0.0	-	96	0
-	6 months	1.0	(0, 3.1)	91	1
-	1 year(s)	1.0	(0, 3.1)	89	1
-	2 year(s)	1.0	(0, 3.1)	80	1
-	3 year(s)	2.4	(0, 5.7)	71	2
-	4 year(s)	2.4	(0, 5.7)	65	2
-	5 year(s)	4.1	(0, 8.7)	51	3
-	6 year(s)	6.5	(0, 12.7)	38	4
-	7 year(s)	6.5	(0, 12.7)	27	4
-	8 year(s)	10.1	(0.3, 18.9)	16	5
-	9 year(s)	10.1	(0.3, 18.9)	7	5
-	Overall	10.1	(0.3, 18.9)	-	5

7.3 Mortality by Tpx and centre

Figure 25: Overall survival for frequent Tpx



Remarks:
43 Kidney-Kidney Tpx (17 (USZ), 25 (USB) and 1 (CHUV)) are included in Kidney Tpx. 2 Kidney-Kidney-Pancreas Tpx (USZ) are included in Kidney-Pancreas Tpx. 2 Lung tpx in HUG are not included in this graph.
Patients that had a Kidney or Kidney-Kidney Tpx and have a GF and no re or second Tpx are censored for mortality at the time point of GF.

Table 15: Overall mortality by frequent Tpx type and centre

Tpx - centre	Time	Mortality (%)	95% CI	No at risk	Cum. deaths
Kidney - USZ	Baseline	0.0	-	733	0
-	1 month	0.1	(0, 0.4)	713	1
-	6 months	1.0	(0.3, 1.7)	652	7
-	1 year(s)	1.5	(0.6, 2.4)	609	10
-	2 year(s)	2.9	(1.6, 4.2)	526	18
-	3 year(s)	3.9	(2.3, 5.5)	438	23
-	4 year(s)	4.8	(3, 6.7)	367	27
-	5 year(s)	6.5	(4.3, 8.8)	299	33
-	6 year(s)	8.3	(5.6, 10.9)	230	38
-	7 year(s)	9.8	(6.6, 12.9)	158	41
-	8 year(s)	11.9	(7.9, 15.6)	92	44
-	9 year(s)	14.4	(9.1, 19.3)	34	46
-	Overall	14.4	(9.1, 19.3)	-	46
Kidney - USB	Baseline	0.0	-	650	0
-	1 month	0.3	(0, 0.7)	636	2
-	6 months	1.3	(0.4, 2.2)	597	8
-	1 year(s)	2.1	(1, 3.3)	555	13
-	2 year(s)	3.3	(1.8, 4.7)	475	19
-	3 year(s)	4.6	(2.8, 6.3)	393	25
-	4 year(s)	6.2	(4, 8.3)	318	31
-	5 year(s)	8.0	(5.4, 10.6)	242	37
-	6 year(s)	10.2	(7, 13.2)	194	42
-	7 year(s)	12.7	(8.9, 16.4)	150	47
-	8 year(s)	13.6	(9.4, 17.6)	96	48
-	9 year(s)	16.1	(10.7, 21.2)	40	50
-	Overall	16.1	(10.7, 21.2)	-	50
Kidney - CHUV	Baseline	0.0	-	454	0
-	1 month	0.2	(0, 0.7)	447	1
-	6 months	0.5	(0, 1.1)	422	2
-	1 year(s)	1.2	(0.1, 2.2)	389	5
-	2 year(s)	2.5	(1, 4.1)	330	10
-	3 year(s)	3.2	(1.4, 5)	279	12
-	4 year(s)	3.6	(1.6, 5.5)	226	13
-	5 year(s)	5.0	(2.5, 7.5)	186	16
-	6 year(s)	6.2	(3.2, 9.1)	141	18
-	7 year(s)	7.7	(4, 11.1)	104	20
-	8 year(s)	7.7	(4, 11.1)	61	20
-	9 year(s)	12.3	(6, 18.3)	21	23
-	Overall	12.3	(6, 18.3)	-	23
Kidney - BE	Baseline	0.0	-	346	0
-	1 month	0.0	-	341	0
-	6 months	1.2	(0, 2.4)	305	4
-	1 year(s)	2.2	(0.6, 3.8)	282	7
-	2 year(s)	4.5	(2.1, 6.8)	236	13
-	3 year(s)	5.0	(2.4, 7.5)	194	14
-	4 year(s)	6.6	(3.4, 9.7)	159	17
-	5 year(s)	7.3	(3.9, 10.7)	123	18
-	6 year(s)	8.1	(4.3, 11.8)	96	19
-	7 year(s)	8.1	(4.3, 11.8)	77	19
-	8 year(s)	9.4	(4.9, 13.7)	50	20

Tpx - centre	Time	Mortality (%)	95% CI	No at risk	Cum. deaths
-	9 year(s)	9.4	(4.9, 13.7)	15	20
-	Overall	9.4	(4.9, 13.7)	-	20
Kidney - HUG	Baseline	0.0	-	259	0
-	1 month	0.0	-	249	0
-	6 months	0.4	(0, 1.2)	235	1
-	1 year(s)	1.3	(0, 2.7)	216	3
-	2 year(s)	2.3	(0.3, 4.2)	189	5
-	3 year(s)	5.1	(1.9, 8.1)	157	10
-	4 year(s)	6.4	(2.8, 9.9)	134	12
-	5 year(s)	9.4	(4.8, 13.9)	109	16
-	6 year(s)	12.2	(6.7, 17.3)	84	19
-	7 year(s)	14.7	(8.2, 20.7)	61	21
-	8 year(s)	16.3	(9.1, 23)	35	22
-	9 year(s)	16.3	(9.1, 23)	16	22
-	Overall	16.3	(9.1, 23)	-	22
Kidney - SG	Baseline	0.0	-	192	0
-	1 month	0.0	-	191	0
-	6 months	0.0	-	176	0
-	1 year(s)	1.8	(0, 3.8)	158	3
-	2 year(s)	1.8	(0, 3.8)	133	3
-	3 year(s)	4.3	(0.8, 7.6)	112	6
-	4 year(s)	4.3	(0.8, 7.6)	92	6
-	5 year(s)	5.5	(1.3, 9.5)	74	7
-	6 year(s)	6.8	(1.9, 11.4)	56	8
-	7 year(s)	8.5	(2.6, 14.1)	36	9
-	8 year(s)	8.5	(2.6, 14.1)	21	9
-	9 year(s)	8.5	(2.6, 14.1)	8	9
-	Overall	8.5	(2.6, 14.1)	-	9
Liver - USZ	Baseline	0.0	-	395	0
-	1 month	4.1	(2.1, 6)	377	16
-	6 months	10.1	(7, 13)	331	39
-	1 year(s)	13.4	(9.9, 16.8)	295	51
-	2 year(s)	18.9	(14.7, 22.9)	236	68
-	3 year(s)	20.8	(16.3, 25)	185	73
-	4 year(s)	24.9	(19.9, 29.6)	152	82
-	5 year(s)	27.1	(21.8, 32.1)	119	86
-	6 year(s)	31.8	(25.6, 37.4)	88	93
-	7 year(s)	35.0	(28, 41.4)	55	96
-	8 year(s)	35.0	(28, 41.4)	35	96
-	9 year(s)	37.7	(28.9, 45.4)	9	97
-	Overall	37.7	(28.9, 45.4)	-	97
Liver - BE	Baseline	0.0	-	199	0
-	1 month	3.0	(0.6, 5.4)	189	6
-	6 months	6.2	(2.7, 9.5)	176	12
-	1 year(s)	9.4	(5.2, 13.5)	157	18
-	2 year(s)	11.8	(7, 16.3)	138	22
-	3 year(s)	13.7	(8.5, 18.6)	115	25
-	4 year(s)	15.3	(9.7, 20.5)	98	27
-	5 year(s)	16.4	(10.5, 21.9)	72	28
-	6 year(s)	19.0	(12.1, 25.4)	54	30
-	7 year(s)	23.1	(14.3, 31.1)	34	32
-	8 year(s)	30.4	(17, 41.7)	18	34

Tpx - centre	Time	Mortality (%)	95% CI	No at risk	Cum. deaths
-	9 year(s)	30.4	(17, 41.7)	7	34
-	Overall	30.4	(17, 41.7)	-	34
Liver - HUG	Baseline	0.0	-	359	0
-	1 month	1.4	(0.2, 2.6)	351	5
-	6 months	3.4	(1.5, 5.3)	323	12
-	1 year(s)	4.6	(2.4, 6.8)	297	16
-	2 year(s)	7.3	(4.5, 10.2)	252	24
-	3 year(s)	7.8	(4.8, 10.7)	210	25
-	4 year(s)	8.7	(5.5, 11.9)	172	27
-	5 year(s)	8.7	(5.5, 11.9)	138	27
-	6 year(s)	8.7	(5.5, 11.9)	108	27
-	7 year(s)	10.8	(6.5, 15)	80	29
-	8 year(s)	10.8	(6.5, 15)	53	29
-	9 year(s)	13.2	(6.8, 19.1)	23	30
-	Overall	13.2	(6.8, 19.1)	-	30
Lung - USZ	Baseline	0.0	-	252	0
-	1 month	3.6	(1.3, 5.8)	243	9
-	6 months	8.4	(4.9, 11.8)	223	21
-	1 year(s)	13.0	(8.7, 17.1)	206	32
-	2 year(s)	21.3	(15.9, 26.3)	171	51
-	3 year(s)	32.5	(25.9, 38.4)	123	73
-	4 year(s)	42.5	(35.2, 49)	90	90
-	5 year(s)	49.7	(41.8, 56.5)	65	100
-	6 year(s)	55.2	(46.7, 62.4)	43	106
-	7 year(s)	56.3	(47.7, 63.5)	26	107
-	8 year(s)	60.4	(50.3, 68.4)	14	109
-	9 year(s)	71.3	(55.3, 81.6)	6	112
-	Overall	71.3	(55.3, 81.6)	-	112
Lung - CHUV	Baseline	0.0	-	171	0
-	1 month	2.9	(0.4, 5.4)	166	5
-	6 months	5.3	(1.9, 8.7)	154	9
-	1 year(s)	7.2	(3.2, 11.1)	143	12
-	2 year(s)	10.8	(5.8, 15.5)	116	17
-	3 year(s)	12.3	(6.9, 17.5)	97	19
-	4 year(s)	18.1	(11.2, 24.5)	76	25
-	5 year(s)	20.6	(13, 27.6)	60	27
-	6 year(s)	23.5	(15, 31.1)	46	29
-	7 year(s)	32.0	(19.4, 42.6)	21	32
-	8 year(s)	32.0	(19.4, 42.6)	9	32
-	9 year(s)	41.7	(17.5, 58.8)	2	33
-	Overall	41.7	(17.5, 58.8)	-	33
Lung - HUG	Baseline	0.0	-	2	0
-	1 month	50.0	(0, 87.5)	1	1
-	6 months	50.0	(0, 87.5)	1	1
-	1 year(s)	50.0	(0, 87.5)	1	1
-	2 year(s)	50.0	(0, 87.5)	1	1
-	3 year(s)	50.0	(0, 87.5)	1	1
-	4 year(s)	50.0	(0, 87.5)	1	1
-	5 year(s)	50.0	(0, 87.5)	1	1
-	6 year(s)	50.0	(0, 87.5)	1	1
-	7 year(s)	50.0	(0, 87.5)	1	1
-	8 year(s)	50.0	(0, 87.5)	-	1

Tpx - centre	Time	Mortality (%)	95% CI	No at risk	Cum. deaths
-	9 year(s)	50.0	(0, 87.5)	-	1
-	Overall	50.0	(0, 87.5)	-	1
Heart - USZ	Baseline	0.0	-	115	0
-	1 month	5.2	(1.1, 9.2)	108	6
-	6 months	12.6	(6.2, 18.6)	90	14
-	1 year(s)	14.6	(7.7, 21)	84	16
-	2 year(s)	15.8	(8.5, 22.4)	73	17
-	3 year(s)	19.6	(11.4, 27.1)	57	20
-	4 year(s)	19.6	(11.4, 27.1)	46	20
-	5 year(s)	19.6	(11.4, 27.1)	38	20
-	6 year(s)	22.3	(12.5, 31)	29	21
-	7 year(s)	22.3	(12.5, 31)	17	21
-	8 year(s)	28.3	(12.7, 41.1)	7	22
-	9 year(s)	28.3	(12.7, 41.1)	1	22
-	Overall	28.3	(12.7, 41.1)	-	22
Heart - CHUV	Baseline	0.0	-	106	0
-	1 month	12.3	(5.8, 18.3)	93	13
-	6 months	13.2	(6.5, 19.4)	90	14
-	1 year(s)	17.2	(9.6, 24.1)	80	18
-	2 year(s)	19.6	(11.5, 27)	65	20
-	3 year(s)	20.9	(12.4, 28.5)	54	21
-	4 year(s)	24.1	(14.7, 32.4)	46	23
-	5 year(s)	24.1	(14.7, 32.4)	33	23
-	6 year(s)	24.1	(14.7, 32.4)	26	23
-	7 year(s)	24.1	(14.7, 32.4)	14	23
-	8 year(s)	24.1	(14.7, 32.4)	6	23
-	9 year(s)	24.1	(14.7, 32.4)	3	23
-	Overall	24.1	(14.7, 32.4)	-	23
Heart - BE	Baseline	0.0	-	112	0
-	1 month	14.3	(7.6, 20.5)	96	16
-	6 months	14.3	(7.6, 20.5)	91	16
-	1 year(s)	14.3	(7.6, 20.5)	86	16
-	2 year(s)	14.3	(7.6, 20.5)	76	16
-	3 year(s)	18.2	(10.3, 25.4)	60	19
-	4 year(s)	22.5	(13.4, 30.6)	50	22
-	5 year(s)	24.2	(14.6, 32.7)	40	23
-	6 year(s)	24.2	(14.6, 32.7)	31	23
-	7 year(s)	24.2	(14.6, 32.7)	24	23
-	8 year(s)	24.2	(14.6, 32.7)	17	23
-	9 year(s)	29.6	(15.1, 41.7)	5	24
-	Overall	29.6	(15.1, 41.7)	-	24
Kidney - Pancreas - USZ	Baseline	0.0	-	69	0
-	1 month	0.0	-	69	0
-	6 months	0.0	-	67	0
-	1 year(s)	0.0	-	65	0
-	2 year(s)	0.0	-	60	0
-	3 year(s)	1.8	(0, 5.2)	55	1
-	4 year(s)	1.8	(0, 5.2)	52	1
-	5 year(s)	3.9	(0, 9.1)	41	2
-	6 year(s)	3.9	(0, 9.1)	30	2
-	7 year(s)	3.9	(0, 9.1)	21	2
-	8 year(s)	8.7	(0, 18.6)	13	3

Tpx - centre	Time	Mortality (%)	95% CI	No at risk	Cum. deaths
-	9 year(s)	8.7	(0, 18.6)	6	3
-	Overall	8.7	(0, 18.6)	-	3
Kidney - Pancreas - HUG	Baseline	0.0	-	27	0
-	1 month	0.0	-	27	0
-	6 months	3.7	(0, 10.6)	24	1
-	1 year(s)	3.7	(0, 10.6)	24	1
-	2 year(s)	3.7	(0, 10.6)	20	1
-	3 year(s)	3.7	(0, 10.6)	16	1
-	4 year(s)	3.7	(0, 10.6)	13	1
-	5 year(s)	3.7	(0, 10.6)	10	1
-	6 year(s)	13.3	(0, 30.4)	8	2
-	7 year(s)	13.3	(0, 30.4)	6	2
-	8 year(s)	13.3	(0, 30.4)	3	2
-	9 year(s)	13.3	(0, 30.4)	1	2
-	Overall	13.3	(0, 30.4)	-	2

7.4 Mortality in first single kidney Tpx

Overall survival for patients with single kidney Tpx as first STCS Tpx is presented separated by the donor type. In Figure 27, category 'Living' is separated in 'Living, ABO c' and 'Living, not ABO c'. The letter 'c' stands for 'compatible'.
Patients that had a Kidney or Kidney-Kidney Tpx and have a GF and no re or second Tpx are censored for mortality at the time point of GF.

Figure 26: Overall survival for patients with first STCS single kidney Tpx by donor type

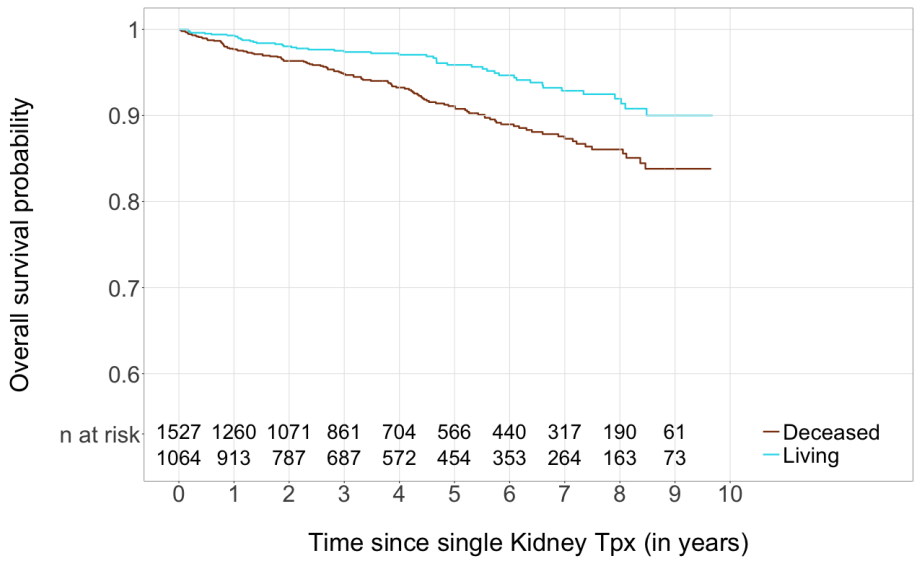


Figure 27: Overall survival for patients with first STCS single kidney Tpx by donor type combined with AB0 compatibility

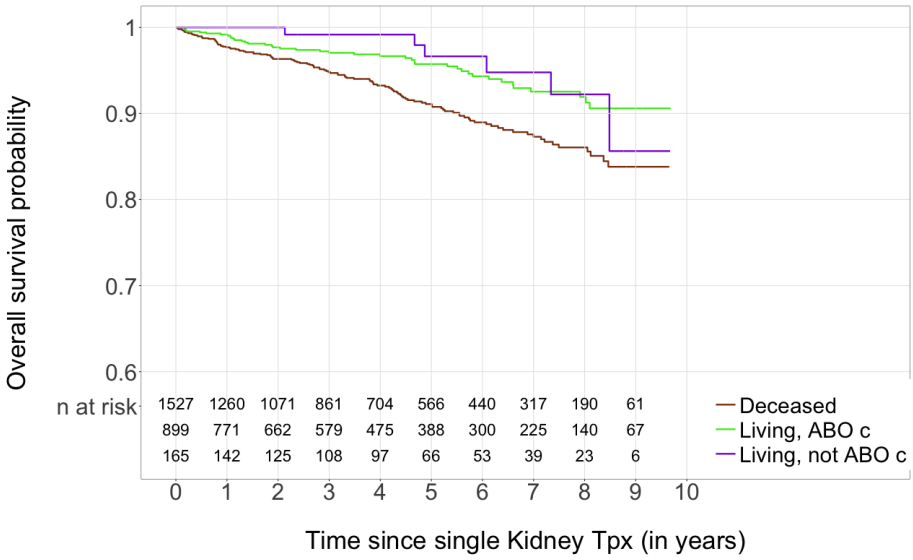


Table 16: Overall mortality in (single) kidney recipients by donor type

Donor type	Time	Mortality (%)	95% CI	No at risk	Cum. deaths
Deceased	Baseline	0.0	-	1527	0
-	1 month	0.2	(0, 0.4)	1487	3
-	6 months	1.0	(0.5, 1.6)	1367	15
-	1 years	2.3	(1.5, 3.1)	1260	32
-	2 years	3.7	(2.6, 4.7)	1071	48
-	3 years	5.2	(3.9, 6.4)	861	63
-	4 years	6.8	(5.2, 8.2)	704	76
-	5 years	8.9	(7.1, 10.7)	566	91
-	6 years	11.0	(8.9, 13.1)	440	103
-	7 years	12.7	(10.2, 15.1)	317	110
-	8 years	13.9	(11.2, 16.6)	190	114
-	9 years	16.2	(12.7, 19.5)	61	118
-	Overall	16.2	(12.7, 19.5)	-	118
Living	Baseline	0.0	-	1064	0
-	1 month	0.0	-	1049	0
-	6 months	0.5	(0.1, 0.9)	984	5
-	1 years	0.7	(0.2, 1.2)	913	7
-	2 years	2.0	(1.1, 2.9)	787	18
-	3 years	2.6	(1.5, 3.7)	687	23
-	4 years	2.9	(1.8, 4.1)	572	25
-	5 years	4.1	(2.6, 5.6)	454	31
-	6 years	5.3	(3.5, 7.1)	353	36
-	7 years	7.1	(4.8, 9.4)	264	42
-	8 years	8.1	(5.4, 10.6)	163	44
-	9 years	10.0	(6.6, 13.3)	73	47
-	Overall	10.0	(6.6, 13.3)	-	47

8 Graft failure and primary non-function

Failure and primary non-function in an allograft are considered as one. No distinction is therefore made in this section.

8.1 Graft failure

Graft failures (incl. grafts with primary non-function) are counted on organ-level (Tables 18 and 19). Table 17 gives a summary of numbers of graft failures on patient- and organ-level. In addition to, numbers of organs with primary non-function are given separately in Table 20.

Table 17: Summary for graft failures

	N	(%)
Graft failure - total	458	100.0
- in single Tpx	421	91.9
- in double Tpx	36	7.9
- in triple Tpx	1	0.2
Patients with at least one graft failure	418	
Patients with graft failure or death	834	100.0
- graft failure and alive at end of follow-up	201	24.1
- graft failure followed by late death	129	15.5
- graft failure related death (at same day)	88	10.6
- death without any graft failure	416	49.9

Table 18: Graft failures in double Tpx

	Total	Kidney	Heart	Liver	Lung	Pancreas
Total	36	10	2	4	1	19
Kidney - Heart	1	0	1	0	0	0
Kidney - Islets	1	1	0	0	0	0
Kidney - Kidney	4	4	0	0	0	0
Kidney - Liver	7	3	0	4	0	0
Kidney - Pancreas	19	2	0	0	0	17
Heart - Lung	2	0	1	0	1	0
Pancreas - Small bowel	2	0	0	0	0	2

Remark: Only double tpx with at least one graft failure are listed.

Table 19: Graft failure and related patients' death

	Total	All GF*	(%)	GF, late death	(%)	GF related death	(%)
Total	4900	458	9.3	147	32.1	100	21.8
Kidney	2908	209	7.2	67	32.1	3	1.4
Liver	1077	121	11.2	45	37.2	30	24.8
Lung	450	73	16.2	20	27.4	46	63
Heart	346	32	9.2	9	28.1	21	65.6
Pancreas	119	23	19.3	6	26.1	0	0

* GF: graft failure (incl. primary non-function)
Remark: Islet and small bowel graft failures are disregarded.

Table 20: Number of organs with primary non-function

	Total	USZ	USB	CHUV	BE	HUG	SG
Total	65	28	4	6	14	12	1
Kidney	24	10	4	2	0	7	1
Liver	29	14	0	0	10	5	0
Lung	2	2	0	0	0	0	0
Heart	9	2	0	3	4	0	0
Pancreas	1	0	0	1	0	0	0

8.2 Graft failure free survival

In the following, estimates of graft failure free survival are not adjusted for potential risk factors. In Figure 28 and 29, both single kidney and double kidney Tpx are included as mentioned previously. Also 2 Kidney-Kidney-Pancreas Tpx (USZ) are included in Kidney-Pancreas Tpx. In contrast, Figure 30 shows graft failure free survival only for patients with first STCS single kidney Tpx.

Figure 28: Graft failure free survival by major Tpx

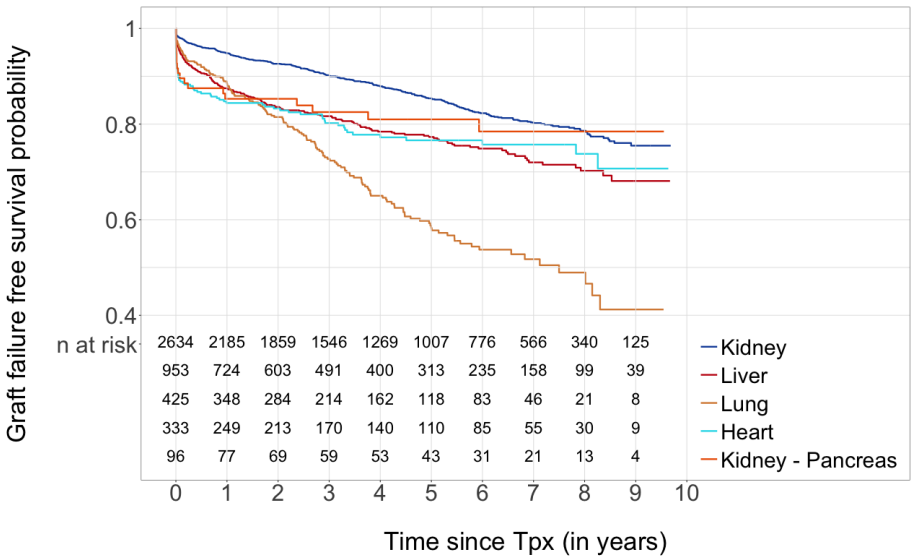


Figure 29: Graft failure free survival by major Tpx and centre

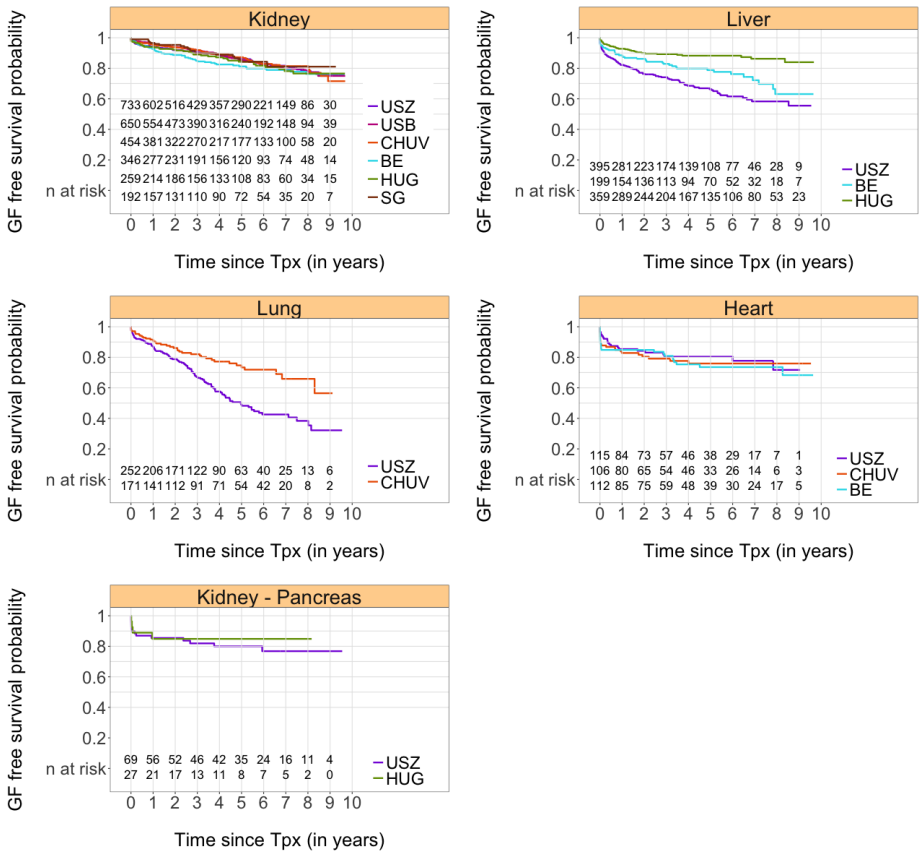
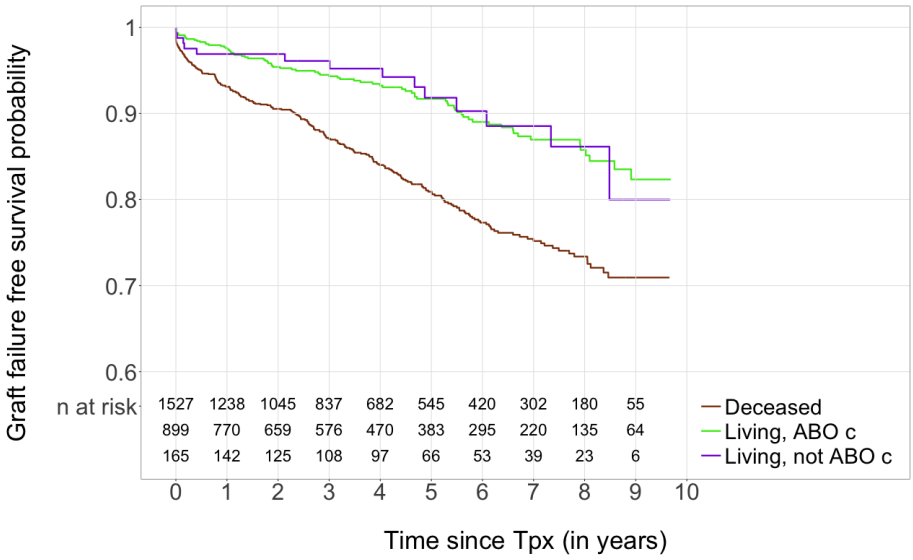


Figure 30: Graft failure free survival in patients with first STCS single kidney Tpx by donor type (combined with AB0 compatibility)



8.3 Cumulative incidence of graft failure

The cumulative incidence (CumInc) of a graft failure is the probability for a graft failure within the reported time period. CumInc functions for graft failure are not adjusted for potential risk factors (illustrated in Figures and Tables).

Figure 31: Cumulative incidence of graft failure for organs with at least one graft failure

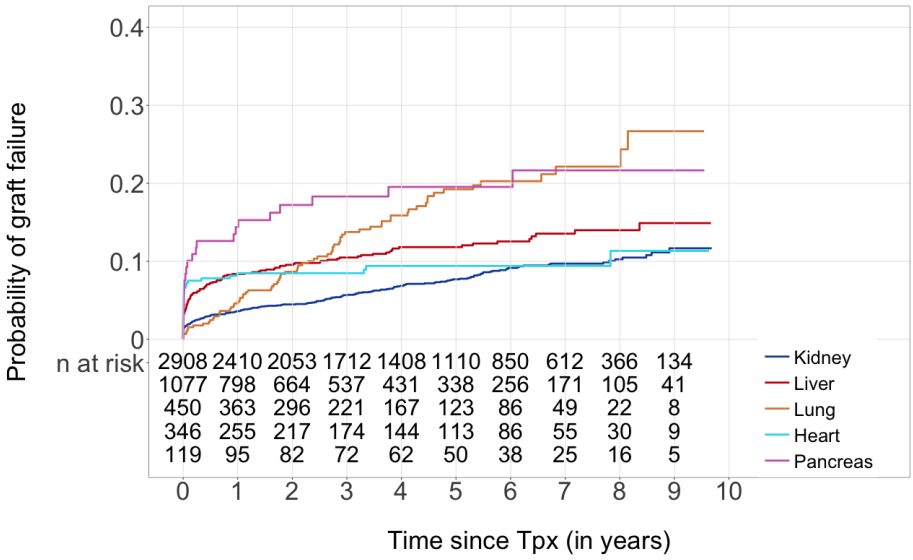


Figure 32: Cumulative incidence of graft failure for kidneys in single Tpx by donor type

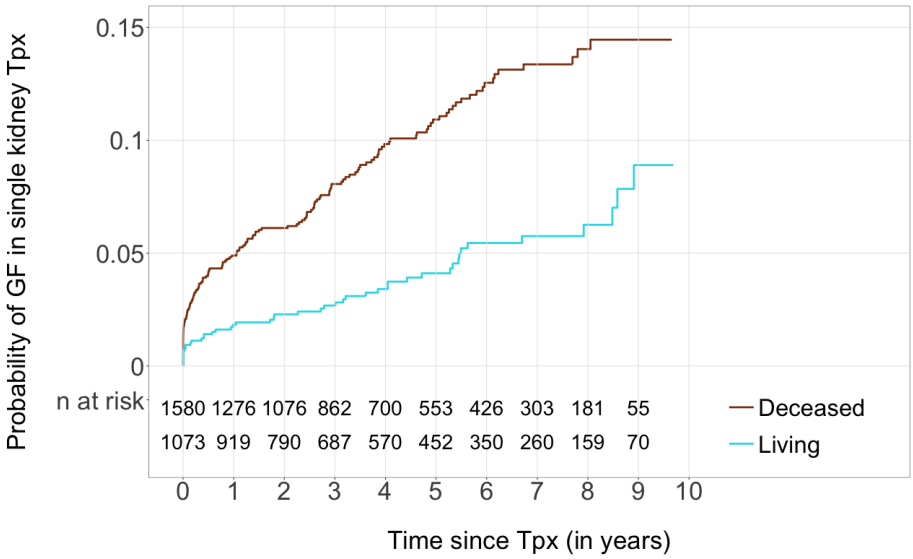


Figure 33: Cumulative incidence of graft failure for kidneys in single Tpx by AB0 compatibility

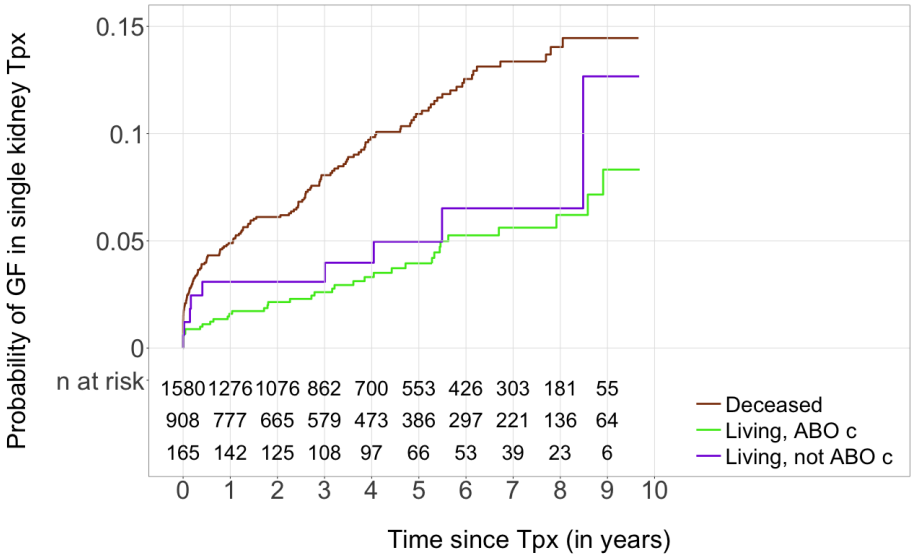


Table 21: Graft failure by organ

Organ	Time	CumInc (%)	95% CI	No at risk	Cum. GF	Cum. deaths
Kidney	Baseline	-	-	2908	0	0
-	1 month	1.9	(1.4,2.4)	2825	55	7
-	6 months	3	(2.4,3.7)	2604	87	29
-	1 year(s)	3.6	(3,4.3)	2410	102	49
-	2 year(s)	4.5	(3.7,5.3)	2053	123	77
-	3 year(s)	5.7	(4.8,6.6)	1712	147	102
-	4 year(s)	6.9	(5.9,7.9)	1408	168	117
-	5 year(s)	7.7	(6.6,8.9)	1110	180	140
-	6 year(s)	9.2	(7.9,10.5)	850	197	159
-	7 year(s)	9.7	(8.4,11.1)	612	202	172
-	8 year(s)	10.3	(8.8,11.8)	366	205	178
-	9 year(s)	11.7	(9.7,13.8)	134	209	184
-	Overall	11.7	(9.7,13.8)	0	209	184
Liver	Baseline	-	-	1077	0	0
-	1 month	4.7	(3.6,6.1)	999	51	17
-	6 months	7.2	(5.8,8.9)	886	77	44
-	1 year(s)	8.4	(6.8,10.2)	798	88	61
-	2 year(s)	9.5	(7.8,11.4)	664	98	84
-	3 year(s)	10.5	(8.7,12.5)	537	105	90
-	4 year(s)	11.8	(9.8,14)	431	113	101
-	5 year(s)	11.8	(9.8,14)	338	113	107
-	6 year(s)	12.6	(10.4,14.9)	256	116	115
-	7 year(s)	13.6	(11.2,16.1)	171	119	121
-	8 year(s)	14	(11.5,16.7)	105	120	123
-	9 year(s)	14.9	(11.9,18.2)	41	121	124
-	Overall	14.9	(11.9,18.2)	0	121	124
Lung	Baseline	-	-	450	0	0
-	1 month	1.3	(0.6,2.8)	431	6	13
-	6 months	2.5	(1.3,4.2)	394	11	28
-	1 year(s)	4.8	(3.1,7.1)	363	21	34
-	2 year(s)	8.7	(6.2,11.6)	296	36	48
-	3 year(s)	13.8	(10.5,17.5)	221	53	60
-	4 year(s)	15.9	(12.3,19.9)	167	59	76
-	5 year(s)	19.2	(15.1,23.7)	123	67	83
-	6 year(s)	20.3	(16,24.9)	86	69	89
-	7 year(s)	22.1	(17.3,27.4)	49	71	89
-	8 year(s)	22.1	(17.3,27.4)	22	71	91
-	9 year(s)	26.7	(19.3,34.7)	8	73	92
-	Overall	26.7	(19.3,34.7)	0	73	92
Heart	Baseline	-	-	346	0	0
-	1 month	7.2	(4.8,10.3)	307	25	13
-	6 months	7.8	(5.3,11)	278	27	21
-	1 year(s)	8.5	(5.8,11.7)	255	29	26
-	2 year(s)	8.5	(5.8,11.7)	217	29	29

Organ	Time	CumInc (%)	95% CI	No at risk	Cum. GF	Cum. deaths
-	3 year(s)	8.5	(5.8,11.7)	174	29	36
-	4 year(s)	9.4	(6.5,12.9)	144	31	40
-	5 year(s)	9.4	(6.5,12.9)	113	31	41
-	6 year(s)	9.4	(6.5,12.9)	86	31	42
-	7 year(s)	9.4	(6.5,12.9)	55	31	42
-	8 year(s)	11.3	(7,16.8)	30	32	42
-	9 year(s)	11.3	(7,16.8)	9	32	43
-	Overall	11.3	(7,16.8)	0	32	43
Pancreas	Baseline	-	-	119	0	0
-	1 month	10.1	(5.5,16.3)	106	12	1
-	6 months	12.6	(7.4,19.3)	100	15	1
-	1 year(s)	14.4	(8.8,21.4)	95	17	1
-	2 year(s)	17.2	(11,24.7)	82	20	1
-	3 year(s)	18.3	(11.8,26)	72	21	2
-	4 year(s)	19.5	(12.7,27.5)	62	22	2
-	5 year(s)	19.5	(12.7,27.5)	50	22	2
-	6 year(s)	19.5	(12.7,27.5)	38	22	2
-	7 year(s)	21.7	(14,30.5)	25	23	2
-	8 year(s)	21.7	(14,30.5)	16	23	2
-	9 year(s)	21.7	(14,30.5)	5	23	3
-	Overall	21.7	(14,30.5)	0	23	3

Table 22: Graft failure by organ and centre

Organ - Centre	Time	CumInc (%)	95% CI	No at risk	Cum. GF	Cum. deaths
Kidney-USZ	Baseline	0.0	-	874	0	0
-	1 month	2.4	(1.5,3.6)	844	21	2
-	6 months	4.1	(2.9,5.5)	771	35	9
-	1 year(s)	4.3	(3.1,5.8)	723	37	12
-	2 year(s)	5.2	(3.8,6.8)	621	43	20
-	3 year(s)	5.7	(4.2,7.4)	521	46	27
-	4 year(s)	6.2	(4.7,8.1)	435	49	32
-	5 year(s)	6.9	(5.2,8.9)	350	52	39
-	6 year(s)	8.6	(6.5,11)	264	58	44
-	7 year(s)	8.9	(6.8,11.5)	176	59	48
-	8 year(s)	9.6	(7.1,12.4)	101	60	51
-	9 year(s)	10.8	(7.6,14.6)	37	61	52
-	Overall	10.8	(7.6,14.6)	0	61	52
Kidney-USB	Baseline	0.0	-	680	0	0
-	1 month	1.0	(0.5,2)	665	7	3
-	6 months	1.5	(0.8,2.6)	623	10	9
-	1 year(s)	1.8	(1,3)	579	12	15
-	2 year(s)	2.9	(1.8,4.4)	495	18	21
-	3 year(s)	3.7	(2.4,5.4)	407	22	28
-	4 year(s)	5.2	(3.5,7.4)	330	28	33
-	5 year(s)	6.7	(4.7,9.3)	249	33	39
-	6 year(s)	8.2	(5.8,11.2)	199	37	44
-	7 year(s)	8.2	(5.8,11.2)	152	37	49
-	8 year(s)	9.0	(6.2,12.3)	96	38	50
-	9 year(s)	9.8	(6.7,13.5)	39	39	52
-	Overall	9.8	(6.7,13.5)	0	39	52
Kidney-CHUV	Baseline	0.0	-	474	0	0
-	1 month	2.1	(1.1,3.7)	459	10	1
-	6 months	2.5	(1.4,4.3)	429	12	4
-	1 year(s)	3.2	(1.9,5.2)	395	15	7
-	2 year(s)	3.2	(1.9,5.2)	336	15	12
-	3 year(s)	4.4	(2.8,6.7)	282	19	14
-	4 year(s)	6.8	(4.5,9.8)	229	26	15
-	5 year(s)	7.3	(4.9,10.3)	186	27	18
-	6 year(s)	10.4	(7.1,14.4)	138	33	20
-	7 year(s)	11.1	(7.6,15.4)	103	34	21
-	8 year(s)	11.1	(7.6,15.4)	61	34	21
-	9 year(s)	16.5	(9.2,25.6)	20	36	24
-	Overall	16.5	(9.2,25.6)	0	36	24
Kidney-BE	Baseline	0.0	-	368	0	0
-	1 month	1.6	(0.7,3.4)	360	6	1
-	6 months	4.2	(2.4,6.6)	318	15	5
-	1 year(s)	5.7	(3.6,8.5)	292	20	8
-	2 year(s)	7.4	(4.9,10.6)	241	25	15

Organ - Centre	Time	CumInc (%)	95% CI	No at risk	Cum. GF	Cum. deaths
-	3 year(s)	10.6	(7.4,14.4)	201	33	16
-	4 year(s)	12.0	(8.5,16)	165	36	18
-	5 year(s)	12.5	(9,16.8)	125	37	19
-	6 year(s)	13.2	(9.5,17.6)	97	38	21
-	7 year(s)	14.1	(10,18.8)	76	39	21
-	8 year(s)	15.5	(10.8,20.9)	49	40	22
-	9 year(s)	15.5	(10.8,20.9)	14	40	22
-	Overall	15.5	(10.8,20.9)	0	40	22
Kidney-HUG	Baseline	0.0	-	315	0	0
-	1 month	2.9	(1.4,5.2)	302	9	0
-	6 months	4.2	(2.3,6.8)	283	13	2
-	1 year(s)	4.5	(2.6,7.3)	261	14	4
-	2 year(s)	5.3	(3.1,8.2)	227	16	6
-	3 year(s)	5.7	(3.5,8.8)	189	17	11
-	4 year(s)	6.2	(3.8,9.4)	158	18	13
-	5 year(s)	6.2	(3.8,9.4)	127	18	18
-	6 year(s)	6.2	(3.8,9.4)	97	18	22
-	7 year(s)	7.3	(4.3,11.3)	70	19	24
-	8 year(s)	7.3	(4.3,11.3)	39	19	25
-	9 year(s)	7.3	(4.3,11.3)	17	19	25
-	Overall	7.3	(4.3,11.3)	0	19	25
Kidney-SG	Baseline	0.0	-	197	0	0
-	1 month	1.0	(0.2,3.3)	195	2	0
-	6 months	1.0	(0.2,3.3)	180	2	0
-	1 year(s)	2.1	(0.7,5.1)	160	4	3
-	2 year(s)	3.4	(1.4,6.8)	133	6	3
-	3 year(s)	6.4	(3.2,11.1)	112	10	6
-	4 year(s)	7.3	(3.8,12.4)	91	11	6
-	5 year(s)	9.6	(5.2,15.5)	73	13	7
-	6 year(s)	9.6	(5.2,15.5)	55	13	8
-	7 year(s)	11.2	(6.1,18)	35	14	9
-	8 year(s)	11.2	(6.1,18)	20	14	9
-	9 year(s)	11.2	(6.1,18)	7	14	9
-	Overall	11.2	(6.1,18)	0	14	9
Liver-USZ	Baseline	0.0	-	463	0	0
-	1 month	6.9	(4.8,9.5)	417	32	12
-	6 months	10.3	(7.7,13.3)	354	47	31
-	1 year(s)	12.2	(9.4,15.4)	315	55	39
-	2 year(s)	13.9	(10.8,17.3)	248	61	53
-	3 year(s)	15.2	(11.9,18.8)	195	65	55
-	4 year(s)	16.9	(13.3,20.8)	153	69	63
-	5 year(s)	16.9	(13.3,20.8)	121	69	67
-	6 year(s)	18.6	(14.7,23)	88	72	72
-	7 year(s)	20.3	(15.8,25.1)	53	74	75
-	8 year(s)	20.3	(15.8,25.1)	31	74	75

Organ - Centre	Time	CumInc (%)	95% CI	No at risk	Cum. GF	Cum. deaths
-	9 year(s)	20.3	(15.8,25.1)	10	74	76
-	Overall	20.3	(15.8,25.1)	0	74	76
Liver-BE	Baseline	0.0	-	221	0	0
-	1 month	5.0	(2.6,8.4)	203	11	2
-	6 months	6.4	(3.7,10.2)	186	14	7
-	1 year(s)	6.4	(3.7,10.2)	166	14	13
-	2 year(s)	6.4	(3.7,10.2)	145	14	18
-	3 year(s)	7.7	(4.5,11.9)	121	16	21
-	4 year(s)	9.1	(5.5,13.7)	101	18	23
-	5 year(s)	9.1	(5.5,13.7)	75	18	24
-	6 year(s)	9.1	(5.5,13.7)	56	18	27
-	7 year(s)	9.1	(5.5,13.7)	34	18	29
-	8 year(s)	11.3	(6.3,17.9)	19	19	31
-	9 year(s)	11.3	(6.3,17.9)	7	19	31
-	Overall	11.3	(6.3,17.9)	0	19	31
Liver-HUG	Baseline	0.0	-	393	0	0
-	1 month	2.0	(1,3.8)	379	8	3
-	6 months	4.1	(2.5,6.5)	346	16	6
-	1 year(s)	5.0	(3.1,7.5)	317	19	9
-	2 year(s)	6.2	(4.1,9)	271	23	13
-	3 year(s)	6.6	(4.3,9.5)	221	24	14
-	4 year(s)	7.5	(5,10.6)	177	26	15
-	5 year(s)	7.5	(5,10.6)	142	26	16
-	6 year(s)	7.5	(5,10.6)	112	26	16
-	7 year(s)	8.4	(5.4,12)	84	27	17
-	8 year(s)	8.4	(5.4,12)	55	27	17
-	9 year(s)	10.5	(6,16.5)	24	28	17
-	Overall	10.5	(6,16.5)	0	28	17
Lung-USZ	Baseline	0.0	-	261	0	0
-	1 month	1.9	(0.7,4.2)	248	5	8
-	6 months	2.3	(1,4.7)	227	6	20
-	1 year(s)	4.7	(2.6,7.8)	209	12	26
-	2 year(s)	8.6	(5.5,12.5)	173	21	37
-	3 year(s)	15.0	(10.7,20.1)	123	34	47
-	4 year(s)	18.5	(13.6,24.1)	90	40	58
-	5 year(s)	22.6	(16.9,28.8)	63	46	64
-	6 year(s)	24.3	(18.3,30.8)	40	48	69
-	7 year(s)	24.3	(18.3,30.8)	25	48	69
-	8 year(s)	24.3	(18.3,30.8)	13	48	71
-	9 year(s)	30.3	(20.8,40.3)	6	50	71
-	Overall	30.3	(20.8,40.3)	0	50	71
Lung-CHUV	Baseline	0.0	-	181	0	0
-	1 month	0.6	(0.1,2.8)	176	1	4
-	6 months	2.3	(0.7,5.3)	162	4	7
-	1 year(s)	4.7	(2.2,8.6)	149	8	7
-	2 year(s)	8.5	(4.9,13.5)	118	14	10

Organ - Centre	Time	CumInc (%)	95% CI	No at risk	Cum. GF	Cum. deaths
-	3 year(s)	11.6	(7.1,17.3)	95	18	12
-	4 year(s)	11.6	(7.1,17.3)	75	18	17
-	5 year(s)	13.9	(8.7,20.4)	58	20	18
-	6 year(s)	13.9	(8.7,20.4)	44	20	19
-	7 year(s)	19.4	(11.1,29.5)	22	22	19
-	8 year(s)	19.4	(11.1,29.5)	9	22	19
-	9 year(s)	19.4	(11.1,29.5)	2	22	20
-	Overall	19.4	(11.1,29.5)	0	22	20
Lung-HUG	Baseline	0.0	-	8	0	0
-	1 month	0.0	-	7	0	1
-	6 months	14.6	(0.5,50.2)	5	1	1
-	1 year(s)	14.6	(0.5,50.2)	5	1	1
-	2 year(s)	14.6	(0.5,50.2)	5	1	1
-	3 year(s)	14.6	(0.5,50.2)	3	1	1
-	4 year(s)	14.6	(0.5,50.2)	2	1	1
-	5 year(s)	14.6	(0.5,50.2)	2	1	1
-	6 year(s)	14.6	(0.5,50.2)	2	1	1
-	7 year(s)	14.6	(0.5,50.2)	2	1	1
-	8 year(s)		-	0	1	1
-	9 year(s)		-	0	1	1
-	Overall	14.6	(0.5,50.2)	0	1	1
Heart-USZ	Baseline	0.0	-	118	0	0
-	1 month	3.4	(1.1,7.9)	110	4	3
-	6 months	5.2	(2.1,10.3)	92	6	9
-	1 year(s)	6.1	(2.7,11.6)	84	7	11
-	2 year(s)	6.1	(2.7,11.6)	73	7	12
-	3 year(s)	6.1	(2.7,11.6)	57	7	15
-	4 year(s)	6.1	(2.7,11.6)	46	7	15
-	5 year(s)	6.1	(2.7,11.6)	38	7	15
-	6 year(s)	6.1	(2.7,11.6)	29	7	16
-	7 year(s)	6.1	(2.7,11.6)	17	7	16
-	8 year(s)	12.0	(3.2,27)	7	8	16
-	9 year(s)	12.0	(3.2,27)	1	8	16
-	Overall	12.0	(3.2,27)	0	8	16
Heart-CHUV	Baseline	0.0	-	111	0	0
-	1 month	9.0	(4.6,15.3)	98	10	3
-	6 months	9.0	(4.6,15.3)	93	10	4
-	1 year(s)	10.0	(5.3,16.5)	83	11	7
-	2 year(s)	10.0	(5.3,16.5)	68	11	9
-	3 year(s)	10.0	(5.3,16.5)	57	11	10
-	4 year(s)	10.0	(5.3,16.5)	49	11	12
-	5 year(s)	10.0	(5.3,16.5)	35	11	12
-	6 year(s)	10.0	(5.3,16.5)	26	11	12
-	7 year(s)	10.0	(5.3,16.5)	14	11	12
-	8 year(s)	10.0	(5.3,16.5)	6	11	12

Organ - Centre	Time	CumInc (%)	95% CI	No at risk	Cum. GF	Cum. deaths
-	9 year(s)	10.0	(5.3,16.5)	3	11	12
-	Overall	10.0	(5.3,16.5)	0	11	12
Heart-BE	Baseline	0.0	-	117	0	0
-	1 month	9.4	(5,15.5)	99	11	7
-	6 months	9.4	(5,15.5)	93	11	8
-	1 year(s)	9.4	(5,15.5)	88	11	8
-	2 year(s)	9.4	(5,15.5)	76	11	8
-	3 year(s)	9.4	(5,15.5)	60	11	11
-	4 year(s)	12.1	(6.7,19.2)	49	13	13
-	5 year(s)	12.1	(6.7,19.2)	40	13	14
-	6 year(s)	12.1	(6.7,19.2)	31	13	14
-	7 year(s)	12.1	(6.7,19.2)	24	13	14
-	8 year(s)	12.1	(6.7,19.2)	17	13	14
-	9 year(s)	12.1	(6.7,19.2)	5	13	15
-	Overall	12.1	(6.7,19.2)	0	13	15
Pancreas-USZ	Baseline	0.0	-	80	0	0
-	1 month	8.8	(3.8,16.2)	72	7	1
-	6 months	12.5	(6.4,20.8)	68	10	1
-	1 year(s)	13.8	(7.3,22.4)	64	11	1
-	2 year(s)	16.6	(9.3,25.7)	58	13	1
-	3 year(s)	18.1	(10.4,27.5)	52	14	2
-	4 year(s)	19.8	(11.6,29.6)	45	15	2
-	5 year(s)	19.8	(11.6,29.6)	36	15	2
-	6 year(s)	19.8	(11.6,29.6)	26	15	2
-	7 year(s)	22.9	(13.2,34.1)	16	16	2
-	8 year(s)	22.9	(13.2,34.1)	11	16	2
-	9 year(s)	22.9	(13.2,34.1)	4	16	2
-	Overall	22.9	(13.2,34.1)	0	16	2
Pancreas-HUG	Baseline	0.0	-	39	0	0
-	1 month	12.8	(4.6,25.4)	34	5	0
-	6 months	12.8	(4.6,25.4)	32	5	0
-	1 year(s)	15.5	(6.2,28.8)	31	6	0
-	2 year(s)	18.3	(7.9,32)	24	7	0
-	3 year(s)	18.3	(7.9,32)	20	7	0
-	4 year(s)	18.3	(7.9,32)	17	7	0
-	5 year(s)	18.3	(7.9,32)	14	7	0
-	6 year(s)	18.3	(7.9,32)	12	7	0
-	7 year(s)	18.3	(7.9,32)	9	7	0
-	8 year(s)	18.3	(7.9,32)	5	7	0
-	9 year(s)	18.3	(7.9,32)	1	7	1
-	Overall	18.3	(7.9,32)	0	7	1

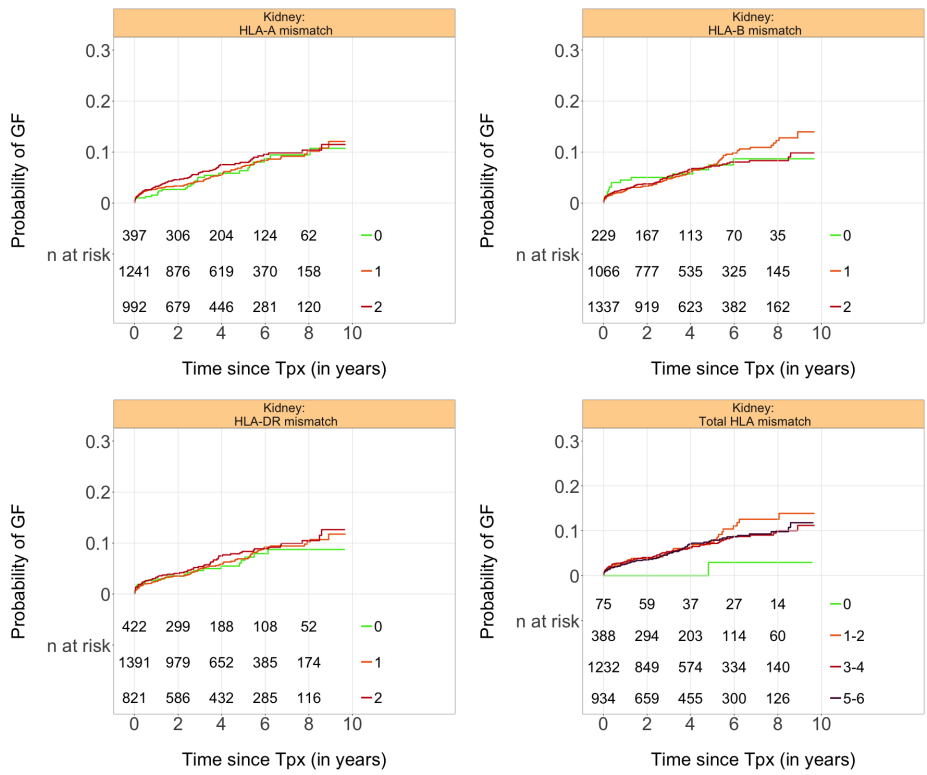
Table 23: Graft failure of kidneys (in first STCS single Tpx) by donor type

Donor type	Time	CumInc (%)	95% CI	No at risk	Cum. GF	Cum. deaths
Deceased	Baseline	-	-	1580	0	0
-	1 month	2.4	(1.7,3.3)	1525	38	2
-	6 months	4.1	(3.2,5.2)	1392	64	16
-	1 year(s)	4.9	(3.9,6.1)	1276	75	34
-	2 year(s)	6.1	(5,7.4)	1076	91	50
-	3 year(s)	8.1	(6.7,9.6)	862	112	65
-	4 year(s)	9.8	(8.2,11.6)	700	128	76
-	5 year(s)	10.9	(9.2,12.8)	553	136	91
-	6 year(s)	12.5	(10.6,14.7)	426	146	103
-	7 year(s)	13.4	(11.3,15.6)	303	150	109
-	8 year(s)	14	(11.8,16.5)	181	152	113
-	9 year(s)	14.5	(12.1,17)	55	153	117
-	Overall	14.5	(12.1,17)	0	153	117
Living	Baseline	-	-	1073	0	0
-	1 month	0.9	(0.5,1.7)	1057	10	0
-	6 months	1.4	(0.8,2.3)	992	15	5
-	1 year(s)	1.8	(1.1,2.8)	919	19	7
-	2 year(s)	2.3	(1.5,3.4)	790	23	18
-	3 year(s)	2.7	(1.8,3.8)	687	26	23
-	4 year(s)	3.4	(2.3,4.8)	570	31	25
-	5 year(s)	4.1	(2.9,5.6)	452	35	31
-	6 year(s)	5.4	(3.9,7.4)	350	41	36
-	7 year(s)	5.8	(4.1,7.8)	260	42	42
-	8 year(s)	6.3	(4.4,8.5)	159	43	44
-	9 year(s)	8.9	(5.7,12.9)	70	46	46
-	Overall	8.9	(5.7,12.9)	0	46	46

8.4 Graft failure and number of HLA mismatches

Figures 34-37 show cumulative incidence functions for graft failures separated by (major) tpx and the number of HLA mismatches[1] between donor and recipient at baseline (i. e. at timepoint of first STCS tpx). It is distinguished between mismatches for HLA-A, HLA-B and HLA-DR and the total number of mismatches of these HLA classes.

Figure 34: Cumulative incidence of graft failure for kidney or kidney-kidney tpx by HLA mismatches



[1]The number of mismatches are the number of HLA surface receptor classes of the donor not present in the recipient. If the surface receptors of the donor are homozygous, they are counted only once. Groups with less than 10 patients at time of tpx are not shown. The number of patients at risk for some tpx is lower compared to the number of tpx due to missing HLA information.

Figure 35: Cumulative incidence of graft failure for liver tpx by HLA mismatches

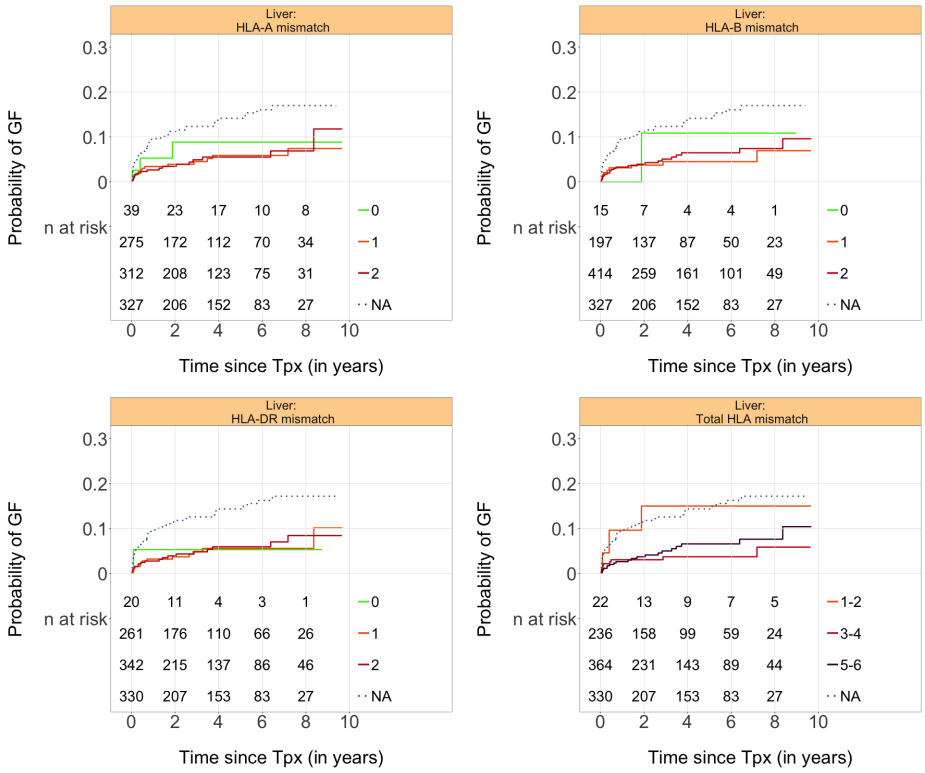


Figure 36: Cumulative incidence of graft failure for lung tpx by HLA mismatches

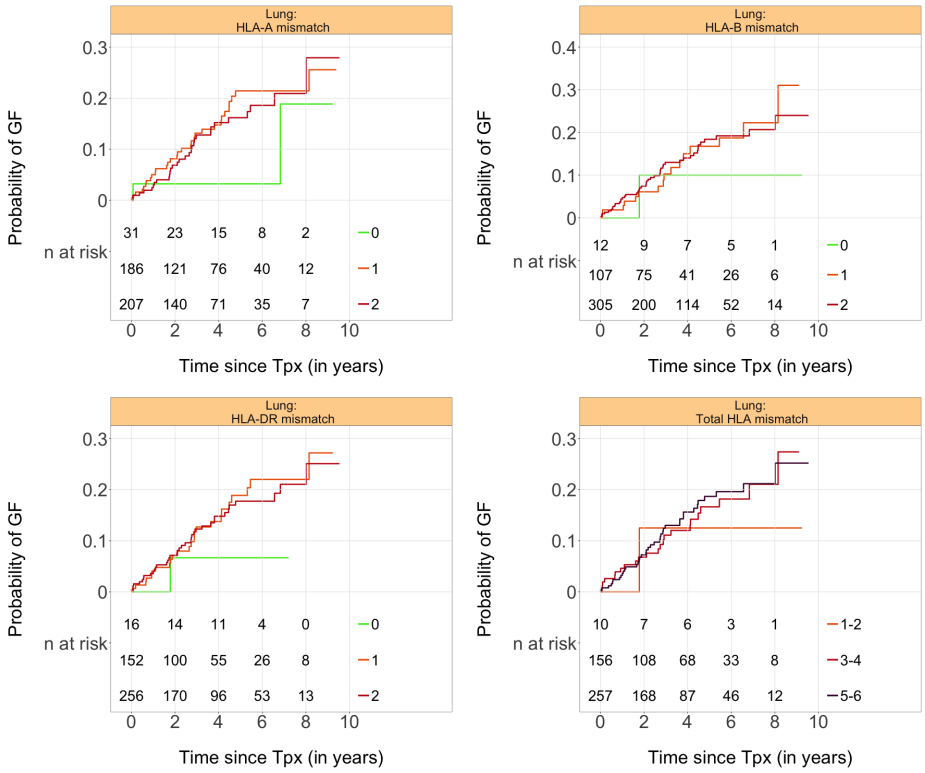
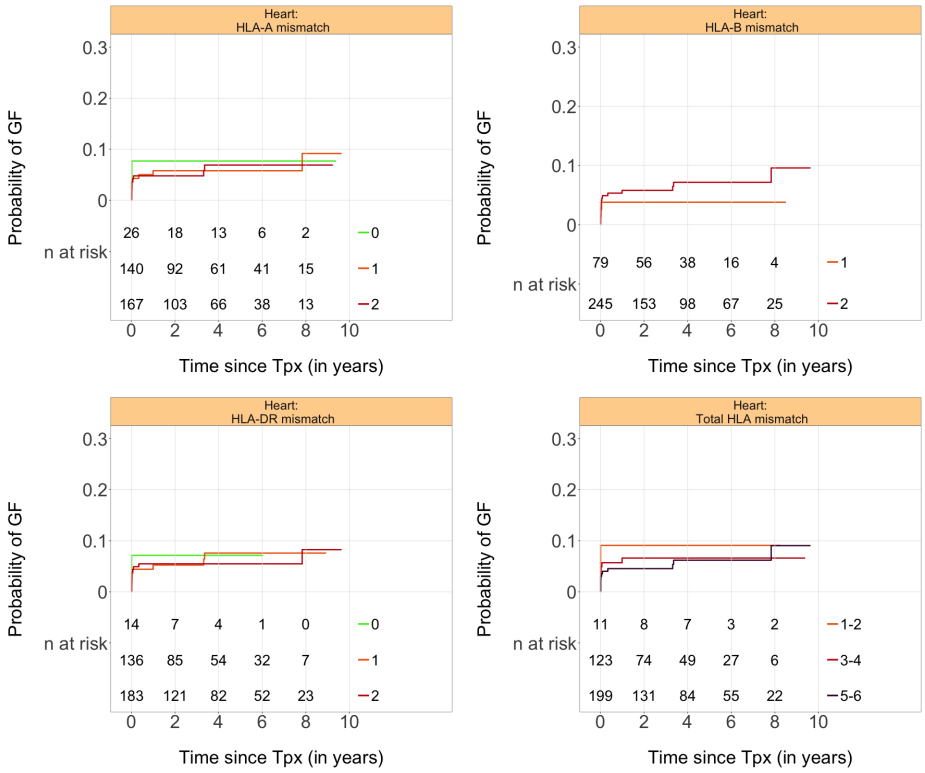


Figure 37: Cumulative incidence of graft failure for heart tpx by HLA mismatches



9 Cancer

Results regarding the incidence of cancer and skin cancer have to be considered with caution as data may be incomplete at the moment.

9.1 Cancer other than skin

Table 24: Overview of patients with incident cancer

	N	%
Total number of patients	4565	
Patients with incident cancer (other than skin)	338	7.4
- single record (% of line 2)	230	68
- multiple records (% of line 2)	108	32

Table 25: Patients with incident cancer

	Patients	Episodes	Median time (in yrs)*
Total	338	533	2.70
Kidney	175	250	2.75
Liver	111	199	2.59
Lung	34	55	2.70
Heart	14	24	2.74
Pancreas	1	2	0.24
Islets	3	3	3.02

* Median time (in years) from first STCS Tpx to diagnosis of cancer
Remark: Patients are listed regarding the organ implanted in the first STCS Tpx.

Table 26: Overview of incident cancer occurrence

	N	%
Total	533	100
Brain	10	2
Breast	21	4
Cervix_Uterus_Adnex	6	1
Colon	21	4
CUP	2	0
Kaposi	5	1
Kidney	18	3
Leukemia	6	1
Liver	63	12
Lung	49	9
MDS	5	1
MM	2	0
Neuroendocrine	8	2
Prostate	45	8
PTLD	55	10
Sarkoma	8	2
Testicular cancer	3	1
Thyroid	8	2
Uro_bladder	30	6
Other	168	32

9.2 Skin cancer

Table 27: Overview of patients with incident skin cancer

	N	%
Total number of patients	4565	
Patients with incident skin cancer	505	11.1
- single record (% of line 2)	255	50.5
- multiple records (% of line 2)	250	49.5

Table 28: Patients with incident skin cancer

	Patients	Episodes	Median time (in yrs)*
Total	505	1316	3.04
Kidney	354	970	3.06
Liver	53	112	2.90
Lung	50	138	2.83
Heart	36	65	3.33
Pancreas	4	20	3.60
Islets	8	11	2.33

* Median time (in years) from first STCS Tpx to diagnosis of skin cancer
Remark: Patients are listed regarding the organ implanted in the first STCS Tpx.

Table 29: Overview of incident skin cancer occurrence

	N	%
Total	1316	100
Basalioma	404	31
Melanoma	46	4
Spinalioma	573	44
Other	293	22

A Cohort of all solid organ recipients transplanted since January 2008

The STCS officially started to enrol patients on May 1st, 2008. By request from the Swiss Federal Office of Public Health, patients transplanted in the reporting period from January 1st, 2008 until April 30th, 2008 were retrospectively added to the STCS. The STCS authorities decided to capture and report only "mini-minimal" data for these patients. Therefore for the full reporting period (January 2008 to present) only data on the transplanted organ, overall mortality and failure-free survival can be presented.

A.1 Overview

The following table lists the number of patients and Tpx performed, it shows patients according to their first STCS Tpx in the period: January 2008 - April 2008.

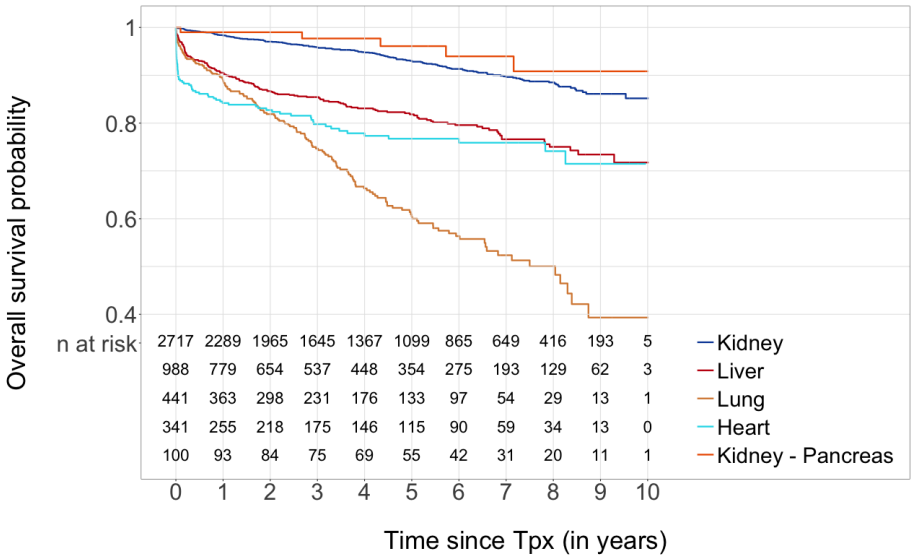
Table 30: Number of patients enrolled by Tpx type (January 2008 - April 2008)

	Total	First Tpx	(%)	Re Tpx	(%)	Second Tpx	(%)
Total	151	151	100.0	0	0.0	0	0.0
Kidney	83	83	100.0	0	0.0	0	0.0
Liver	35	35	100.0	0	0.0	0	0.0
Lung	16	16	100.0	0	0.0	0	0.0
Heart	8	8	100.0	0	0.0	0	0.0
Islets	2	2	100.0	0	0.0	0	0.0
Small bowel	1	1	100.0	0	0.0	0	0.0
Kidney - Pancreas	4	4	100.0	0	0.0	0	0.0
Kidney - Liver	1	1	100.0	0	0.0	0	0.0
Kidney - Heart	1	1	100.0	0	0.0	0	0.0

A.2 Mortality by Tpx

The following figure includes all the patients transplanted in the period: January 2008 - December 2017 and is analogous to Figure 24.

Figure 38: Overall survival since January 2008 for frequent Tpx types

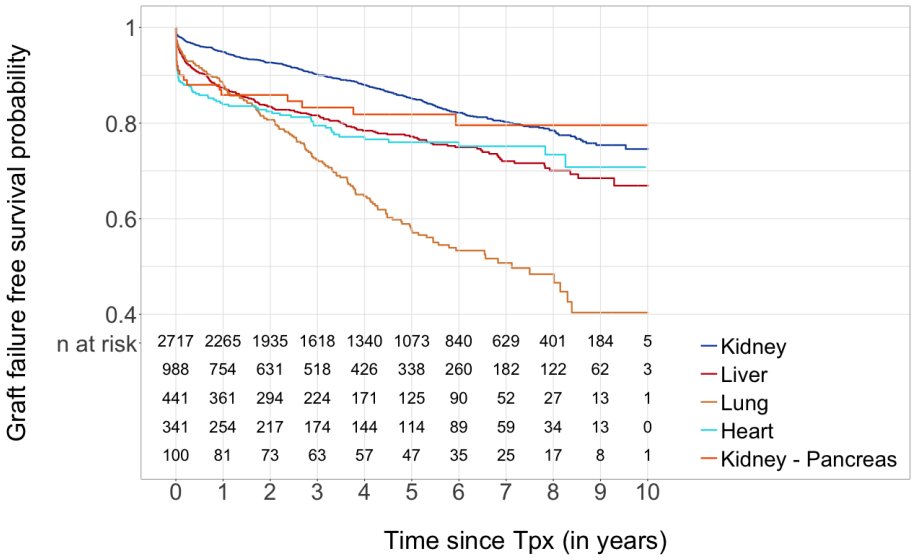


Remark: 43 Kidney-Kidney Tpx are included in Kidney Tpx. 2 Kidney-Kidney-Pancreas are included in Kidney-Pancreas. Patients that had a Kidney or Kidney-Kidney Tpx and have a GF and no re or second Tpx are censored for mortality at the time point of GF.

A.3 Graft failure free survival

The following figure includes all the patients transplanted in the period: January 2008 - December 2017 and is analogous to Figure 28. The rate estimates for graft failure free survival are not adjusted for potential risk factors.

Figure 39: Graft failure free survival since January 2008 by major Tpx



Remark: 43 Kidney-Kidney Tpx are included in Kidney Tpx. 2 Kidney-Kidney-Pancreas are included in Kidney-Pancreas.

B Pediatric patients

Table 31: Number of pediatric patients (under 18) by first Tpx type

	Total	USZ	%	USB	%	CHUV	%	BE	%	HUG	%	SG	%
Total	232	88	37.9	4	1.7	23	9.9	31	13.4	83	35.8	3	1.3
Kidney	103	56	54.4	4	3.9	14	13.6	22	21.4	4	3.9	3	2.9
Liver	78	3	3.8	0	0.0	0	0.0	1	1.3	74	94.9	0	0.0
Lung	15	13	86.7	0	0.0	1	6.7	0	0.0	1	6.7	0	0.0
Heart	30	14	46.7	0	0.0	8	26.7	8	26.7	0	0.0	0	0.0
Kidney - Kidney	2	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Kidney - Liver	3	0	0.0	0	0.0	0	0.0	0	0.0	3	100.0	0	0.0
Islets - Liver - Lung	1	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0

Table 32: Number of Tpx in pediatric patients by organ and centre

	Total	USZ	%	USB	%	CHUV	%	BE	%	HUG	%	SG	%
Total	244	92	37.7	4	1.6	26	10.7	32	13.1	87	35.7	3	1.2
Kidney	106	57	53.8	4	3.8	16	15.1	22	20.8	4	3.8	3	2.8
Liver	82	4	4.9	0	0.0	0	0.0	1	1.2	77	93.9	0	0.0
Lung	18	15	83.3	0	0.0	2	11.1	0	0.0	1	5.6	0	0.0
Heart	31	14	45.2	0	0.0	8	25.8	9	29.0	0	0.0	0	0.0
Kidney - Kidney	2	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Kidney - Liver	4	0	0.0	0	0.0	0	0.0	0	0.0	4	100.0	0	0.0
Islets - Liver - Lung	1	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0

Remark: Patients that are under 18 at baseline might be over 18 at the time of re or second Tpx.

C Mortality in patients with rare Tpx scenarios

Kidney - Kidney Tpx and Kidney - Kidney - Pancreas Tpx are excluded from the following tables.

Table 33: Overall mortality by rare Tpx scenarios

Tpx	Time	Mortality (%)	95% CI	No at risk	Cum. deaths
Islets	Baseline	0.00	-	35	0
-	1 month	0.00	-	35	0
-	6 months	5.89	(0, 13.5)	31	2
-	1 year(s)	9.03	(0, 18.3)	29	3
-	2 year(s)	9.03	(0, 18.3)	27	3
-	3 year(s)	9.03	(0, 18.3)	25	3
-	4 year(s)	12.67	(0.2, 23.6)	23	4
-	5 year(s)	24.86	(6.6, 39.5)	16	7
-	6 year(s)	24.86	(6.6, 39.5)	15	7
-	7 year(s)	31.69	(9, 48.7)	10	8
-	8 year(s)	38.52	(12.5, 56.8)	8	9
-	9 year(s)	47.31	(16.1, 66.9)	4	10
-	Overall	47.31	(16.1, 66.9)	1	10
Pancreas	Baseline	0.00	-	11	0
-	1 month	0.00	-	11	0
-	6 months	0.00	-	11	0
-	1 year(s)	0.00	-	11	0
-	2 year(s)	0.00	-	10	0
-	3 year(s)	0.00	-	10	0
-	4 year(s)	0.00	-	9	0
-	5 year(s)	0.00	-	8	0
-	6 year(s)	0.00	-	6	0
-	7 year(s)	0.00	-	4	0
-	8 year(s)	0.00	-	3	0
-	9 year(s)	50.00	(0, 87.5)	1	1
-	Overall	50.00	(0, 87.5)	-	1
Small bowel	Baseline	0.00	-	1	0
-	1 month	0.00	-	1	0
-	6 months	0.00	-	1	0
-	1 year(s)	0.00	-	1	0
-	2 year(s)	0.00	-	1	0
-	3 year(s)	100.00	-	-	1
-	4 year(s)	100.00	-	-	1
-	5 year(s)	100.00	-	-	1
-	6 year(s)	100.00	-	-	1
-	7 year(s)	100.00	-	-	1
-	8 year(s)	100.00	-	-	1
-	9 year(s)	100.00	-	-	1
-	Overall	100.00	-	-	1
Kidney - Liver	Baseline	0.00	-	39	0
-	1 month	7.69	(0, 15.7)	36	3
-	6 months	7.69	(0, 15.7)	33	3

Tpx	Time	Mortality (%)	95% CI	No at risk	Cum. deaths
-	1 year(s)	10.49	(0.2, 19.7)	31	4
-	2 year(s)	13.47	(1.7, 23.8)	26	5
-	3 year(s)	13.47	(1.7, 23.8)	23	5
-	4 year(s)	13.47	(1.7, 23.8)	17	5
-	5 year(s)	18.88	(2.9, 32.2)	13	6
-	6 year(s)	25.12	(5, 41)	12	7
-	7 year(s)	25.12	(5, 41)	9	7
-	8 year(s)	25.12	(5, 41)	5	7
-	9 year(s)	25.12	(5, 41)	2	7
-	Overall	25.12	(5, 41)	-	7
Kidney - Islets	Baseline	0.00	-	17	0
-	1 month	0.00	-	17	0
-	6 months	0.00	-	15	0
-	1 year(s)	0.00	-	14	0
-	2 year(s)	0.00	-	12	0
-	3 year(s)	0.00	-	10	0
-	4 year(s)	0.00	-	9	0
-	5 year(s)	0.00	-	8	0
-	6 year(s)	0.00	-	6	0
-	7 year(s)	20.00	(0, 48.4)	3	1
-	8 year(s)	20.00	(0, 48.4)	-	1
-	9 year(s)	20.00	(0, 48.4)	-	1
-	Overall	20.00	(0, 48.4)	-	1
Kidney - Heart	Baseline	0.00	-	9	0
-	1 month	22.22	(0, 45.1)	7	2
-	6 months	22.22	(0, 45.1)	5	2
-	1 year(s)	22.22	(0, 45.1)	4	2
-	2 year(s)	22.22	(0, 45.1)	3	2
-	3 year(s)	22.22	(0, 45.1)	3	2
-	4 year(s)	22.22	(0, 45.1)	3	2
-	5 year(s)	22.22	(0, 45.1)	2	2
-	6 year(s)	22.22	(0, 45.1)	-	2
-	7 year(s)	22.22	(0, 45.1)	-	2
-	8 year(s)	22.22	(0, 45.1)	-	2
-	9 year(s)	22.22	(0, 45.1)	-	2
-	Overall	22.22	(0, 45.1)	-	2
Kidney - Lung	Baseline	0.00	-	1	0
-	1 month	0.00	-	1	0
-	6 months	0.00	-	1	0
-	1 year(s)	0.00	-	1	0
-	2 year(s)	0.00	-	1	0
-	3 year(s)	0.00	-	1	0
-	4 year(s)	0.00	-	1	0
-	5 year(s)	0.00	-	1	0
-	6 year(s)	0.00	-	1	0
-	7 year(s)	0.00	-	1	0
-	8 year(s)	0.00	-	1	0
-	9 year(s)	0.00	-	-	0
-	Overall	0.00	-	-	0
Liver - Lung	Baseline	0.00	-	4	0
-	1 month	0.00	-	4	0

Tpx	Time	Mortality (%)	95% CI	No at risk	Cum. deaths
-	6 months	0.00	-	3	0
-	1 year(s)	0.00	-	3	0
-	2 year(s)	0.00	-	3	0
-	3 year(s)	0.00	-	1	0
-	4 year(s)	0.00	-	1	0
-	5 year(s)	0.00	-	1	0
-	6 year(s)	0.00	-	1	0
-	7 year(s)	0.00	-	1	0
-	8 year(s)	0.00	-	-	0
-	9 year(s)	0.00	-	-	0
-	Overall	0.00	-	-	0
Liver - Pancreas	Baseline	0.00	-	1	0
-	1 month	0.00	-	1	0
-	6 months	0.00	-	1	0
-	1 year(s)	0.00	-	1	0
-	2 year(s)	0.00	-	-	0
-	3 year(s)	0.00	-	-	0
-	4 year(s)	0.00	-	-	0
-	5 year(s)	0.00	-	-	0
-	6 year(s)	0.00	-	-	0
-	7 year(s)	0.00	-	-	0
-	8 year(s)	0.00	-	-	0
-	9 year(s)	0.00	-	-	0
-	Overall	0.00	-	-	0
Heart - Lung	Baseline	0.00	-	1	0
-	1 month	0.00	-	1	0
-	6 months	0.00	-	1	0
-	1 year(s)	100.00	-	-	1
-	2 year(s)	100.00	-	-	1
-	3 year(s)	100.00	-	-	1
-	4 year(s)	100.00	-	-	1
-	5 year(s)	100.00	-	-	1
-	6 year(s)	100.00	-	-	1
-	7 year(s)	100.00	-	-	1
-	8 year(s)	100.00	-	-	1
-	9 year(s)	100.00	-	-	1
-	Overall	100.00	-	-	1
Islets - Liver	Baseline	0.00	-	1	0
-	1 month	0.00	-	1	0
-	6 months	0.00	-	1	0
-	1 year(s)	0.00	-	1	0
-	2 year(s)	0.00	-	-	0
-	3 year(s)	0.00	-	-	0
-	4 year(s)	0.00	-	-	0
-	5 year(s)	0.00	-	-	0
-	6 year(s)	0.00	-	-	0
-	7 year(s)	0.00	-	-	0
-	8 year(s)	0.00	-	-	0
-	9 year(s)	0.00	-	-	0
-	Overall	0.00	-	-	0
Pancreas - Small bowel	Baseline	0.00	-	2	0
-	1 month	0.00	-	2	0

Tpx	Time	Mortality (%)	95% CI	No at risk	Cum. deaths
-	6 months	0.00	-	2	0
-	1 year(s)	0.00	-	2	0
-	2 year(s)	100.00	-	-	2
-	3 year(s)	100.00	-	-	2
-	4 year(s)	100.00	-	-	2
-	5 year(s)	100.00	-	-	2
-	6 year(s)	100.00	-	-	2
-	7 year(s)	100.00	-	-	2
-	8 year(s)	100.00	-	-	2
-	9 year(s)	100.00	-	-	2
-	Overall	100.00	-	-	2
Kidney - Islets - Liver	Baseline	0.00	-	1	0
-	1 month	0.00	-	1	0
-	6 months	0.00	-	1	0
-	1 year(s)	0.00	-	1	0
-	2 year(s)	0.00	-	1	0
-	3 year(s)	0.00	-	1	0
-	4 year(s)	0.00	-	1	0
-	5 year(s)	0.00	-	1	0
-	6 year(s)	0.00	-	-	0
-	7 year(s)	0.00	-	-	0
-	8 year(s)	0.00	-	-	0
-	9 year(s)	0.00	-	-	0
-	Overall	0.00	-	-	0
Islets - Liver - Lung	Baseline	0.00	-	1	0
-	1 month	0.00	-	1	0
-	6 months	0.00	-	1	0
-	1 year(s)	0.00	-	1	0
-	2 year(s)	0.00	-	1	0
-	3 year(s)	0.00	-	1	0
-	4 year(s)	0.00	-	-	0
-	5 year(s)	0.00	-	-	0
-	6 year(s)	0.00	-	-	0
-	7 year(s)	0.00	-	-	0
-	8 year(s)	0.00	-	-	0
-	9 year(s)	0.00	-	-	0
-	Overall	0.00	-	-	0

Table 34: Overall mortality by rare Tpx scenarios and centre

Tpx - centre	Time	Mortality (%)	95% CI	No at risk	Cum. deaths
Islets - USZ	Baseline	0.0	-	21	0
-	1 month	0.0	-	21	0
-	6 months	9.8	(0, 21.8)	18	2
-	1 year(s)	14.8	(0, 28.9)	17	3
-	2 year(s)	14.8	(0, 28.9)	15	3
-	3 year(s)	14.8	(0, 28.9)	15	3
-	4 year(s)	20.5	(0.3, 36.6)	14	4
-	5 year(s)	38.6	(10.8, 57.8)	9	7
-	6 year(s)	38.6	(10.8, 57.8)	8	7
-	7 year(s)	47.4	(15, 67.5)	6	8
-	8 year(s)	56.2	(20.2, 75.9)	5	9
-	9 year(s)	67.1	(25.1, 85.6)	2	10
-	Overall	67.1	(25.1, 85.6)	-	10
Islets - HUG	Baseline	0.0	-	14	0
-	1 month	0.0	-	14	0
-	6 months	0.0	-	13	0
-	1 year(s)	0.0	-	12	0
-	2 year(s)	0.0	-	12	0
-	3 year(s)	0.0	-	10	0
-	4 year(s)	0.0	-	9	0
-	5 year(s)	0.0	-	7	0
-	6 year(s)	0.0	-	7	0
-	7 year(s)	0.0	-	4	0
-	8 year(s)	0.0	-	3	0
-	9 year(s)	0.0	-	2	0
-	Overall	0.0	-	1	0
Pancreas - USZ	Baseline	0.0	-	5	0
-	1 month	0.0	-	5	0
-	6 months	0.0	-	5	0
-	1 year(s)	0.0	-	5	0
-	2 year(s)	0.0	-	5	0
-	3 year(s)	0.0	-	5	0
-	4 year(s)	0.0	-	4	0
-	5 year(s)	0.0	-	3	0
-	6 year(s)	0.0	-	1	0
-	7 year(s)	0.0	-	-	0
-	8 year(s)	0.0	-	-	0
-	9 year(s)	0.0	-	-	0
-	Overall	0.0	-	-	0
Pancreas - HUG	Baseline	0.0	-	6	0
-	1 month	0.0	-	6	0
-	6 months	0.0	-	6	0
-	1 year(s)	0.0	-	6	0
-	2 year(s)	0.0	-	5	0
-	3 year(s)	0.0	-	5	0
-	4 year(s)	0.0	-	5	0
-	5 year(s)	0.0	-	5	0
-	6 year(s)	0.0	-	5	0
-	7 year(s)	0.0	-	4	0
-	8 year(s)	0.0	-	3	0

Tpx - centre	Time	Mortality (%)	95% CI	No at risk	Cum. deaths
-	9 year(s)	50.0	(0, 87.5)	1	1
-	Overall	50.0	(0, 87.5)	-	1
Small bowel - HUG	Baseline	0.0	-	1	0
-	1 month	0.0	-	1	0
-	6 months	0.0	-	1	0
-	1 year(s)	0.0	-	1	0
-	2 year(s)	0.0	-	1	0
-	3 year(s)	100.0	-	-	1
-	4 year(s)	100.0	-	-	1
-	5 year(s)	100.0	-	-	1
-	6 year(s)	100.0	-	-	1
-	7 year(s)	100.0	-	-	1
-	8 year(s)	100.0	-	-	1
-	9 year(s)	100.0	-	-	1
-	Overall	100.0	-	-	1
Kidney - Liver - USZ	Baseline	0.0	-	15	0
-	1 month	6.7	(0, 18.5)	14	1
-	6 months	6.7	(0, 18.5)	13	1
-	1 year(s)	13.8	(0, 30)	12	2
-	2 year(s)	13.8	(0, 30)	8	2
-	3 year(s)	13.8	(0, 30)	7	2
-	4 year(s)	13.8	(0, 30)	6	2
-	5 year(s)	13.8	(0, 30)	5	2
-	6 year(s)	13.8	(0, 30)	5	2
-	7 year(s)	13.8	(0, 30)	4	2
-	8 year(s)	13.8	(0, 30)	2	2
-	9 year(s)	13.8	(0, 30)	1	2
-	Overall	13.8	(0, 30)	-	2
Kidney - Liver - BE	Baseline	0.0	-	8	0
-	1 month	0.0	-	8	0
-	6 months	0.0	-	7	0
-	1 year(s)	0.0	-	7	0
-	2 year(s)	14.3	(0, 36.7)	6	1
-	3 year(s)	14.3	(0, 36.7)	6	1
-	4 year(s)	14.3	(0, 36.7)	5	1
-	5 year(s)	14.3	(0, 36.7)	4	1
-	6 year(s)	35.7	(0, 66.2)	3	2
-	7 year(s)	35.7	(0, 66.2)	2	2
-	8 year(s)	35.7	(0, 66.2)	1	2
-	9 year(s)	35.7	(0, 66.2)	-	2
-	Overall	35.7	(0, 66.2)	-	2
Kidney - Liver - HUG	Baseline	0.0	-	16	0
-	1 month	12.5	(0, 27.3)	14	2
-	6 months	12.5	(0, 27.3)	13	2
-	1 year(s)	12.5	(0, 27.3)	12	2
-	2 year(s)	12.5	(0, 27.3)	12	2
-	3 year(s)	12.5	(0, 27.3)	10	2
-	4 year(s)	12.5	(0, 27.3)	6	2
-	5 year(s)	30.0	(0, 56.5)	4	3
-	6 year(s)	30.0	(0, 56.5)	4	3
-	7 year(s)	30.0	(0, 56.5)	3	3
-	8 year(s)	30.0	(0, 56.5)	2	3

Tpx - centre	Time	Mortality (%)	95% CI	No at risk	Cum. deaths
-	9 year(s)	30.0	(0, 56.5)	1	3
-	Overall	30.0	(0, 56.5)	-	3
Kidney - Islets - USZ	Baseline	0.0	-	11	0
-	1 month	0.0	-	11	0
-	6 months	0.0	-	9	0
-	1 year(s)	0.0	-	8	0
-	2 year(s)	0.0	-	7	0
-	3 year(s)	0.0	-	6	0
-	4 year(s)	0.0	-	5	0
-	5 year(s)	0.0	-	4	0
-	6 year(s)	0.0	-	4	0
-	7 year(s)	33.3	(0, 70)	2	1
-	8 year(s)	33.3	(0, 70)	-	1
-	9 year(s)	33.3	(0, 70)	-	1
-	Overall	33.3	(0, 70)	-	1
Kidney - Islets - HUG	Baseline	0.0	-	6	0
-	1 month	0.0	-	6	0
-	6 months	0.0	-	6	0
-	1 year(s)	0.0	-	6	0
-	2 year(s)	0.0	-	5	0
-	3 year(s)	0.0	-	4	0
-	4 year(s)	0.0	-	4	0
-	5 year(s)	0.0	-	4	0
-	6 year(s)	0.0	-	2	0
-	7 year(s)	0.0	-	1	0
-	8 year(s)	0.0	-	-	0
-	9 year(s)	0.0	-	-	0
-	Overall	0.0	-	-	0
Kidney - Heart - USZ	Baseline	0.0	-	2	0
-	1 month	50.0	(0, 87.5)	1	1
-	6 months	50.0	(0, 87.5)	1	1
-	1 year(s)	50.0	(0, 87.5)	-	1
-	2 year(s)	50.0	(0, 87.5)	-	1
-	3 year(s)	50.0	(0, 87.5)	-	1
-	4 year(s)	50.0	(0, 87.5)	-	1
-	5 year(s)	50.0	(0, 87.5)	-	1
-	6 year(s)	50.0	(0, 87.5)	-	1
-	7 year(s)	50.0	(0, 87.5)	-	1
-	8 year(s)	50.0	(0, 87.5)	-	1
-	9 year(s)	50.0	(0, 87.5)	-	1
-	Overall	50.0	(0, 87.5)	-	1
Kidney - Heart - CHUV	Baseline	0.0	-	5	0
-	1 month	0.0	-	5	0
-	6 months	0.0	-	3	0
-	1 year(s)	0.0	-	3	0
-	2 year(s)	0.0	-	3	0
-	3 year(s)	0.0	-	3	0
-	4 year(s)	0.0	-	3	0
-	5 year(s)	0.0	-	2	0
-	6 year(s)	0.0	-	-	0
-	7 year(s)	0.0	-	-	0
-	8 year(s)	0.0	-	-	0

Tpx - centre	Time	Mortality (%)	95% CI	No at risk	Cum. deaths
-	9 year(s)	0.0	-	-	0
-	Overall	0.0	-	-	0
Kidney - Heart - BE	Baseline	0.0	-	2	0
-	1 month	50.0	(0, 87.5)	1	1
-	6 months	50.0	(0, 87.5)	1	1
-	1 year(s)	50.0	(0, 87.5)	1	1
-	2 year(s)	50.0	(0, 87.5)	-	1
-	3 year(s)	50.0	(0, 87.5)	-	1
-	4 year(s)	50.0	(0, 87.5)	-	1
-	5 year(s)	50.0	(0, 87.5)	-	1
-	6 year(s)	50.0	(0, 87.5)	-	1
-	7 year(s)	50.0	(0, 87.5)	-	1
-	8 year(s)	50.0	(0, 87.5)	-	1
-	9 year(s)	50.0	(0, 87.5)	-	1
-	Overall	50.0	(0, 87.5)	-	1
Kidney - Lung - CHUV	Baseline	0.0	-	1	0
-	1 month	0.0	-	1	0
-	6 months	0.0	-	1	0
-	1 year(s)	0.0	-	1	0
-	2 year(s)	0.0	-	1	0
-	3 year(s)	0.0	-	1	0
-	4 year(s)	0.0	-	1	0
-	5 year(s)	0.0	-	1	0
-	6 year(s)	0.0	-	1	0
-	7 year(s)	0.0	-	1	0
-	8 year(s)	0.0	-	1	0
-	9 year(s)	0.0	-	-	0
-	Overall	0.0	-	-	0
Liver - Lung - HUG	Baseline	0.0	-	4	0
-	1 month	0.0	-	4	0
-	6 months	0.0	-	3	0
-	1 year(s)	0.0	-	3	0
-	2 year(s)	0.0	-	3	0
-	3 year(s)	0.0	-	1	0
-	4 year(s)	0.0	-	1	0
-	5 year(s)	0.0	-	1	0
-	6 year(s)	0.0	-	1	0
-	7 year(s)	0.0	-	1	0
-	8 year(s)	0.0	-	-	0
-	9 year(s)	0.0	-	-	0
-	Overall	0.0	-	-	0
Liver - Pancreas - HUG	Baseline	0.0	-	1	0
-	1 month	0.0	-	1	0
-	6 months	0.0	-	1	0
-	1 year(s)	0.0	-	1	0
-	2 year(s)	0.0	-	-	0
-	3 year(s)	0.0	-	-	0
-	4 year(s)	0.0	-	-	0
-	5 year(s)	0.0	-	-	0
-	6 year(s)	0.0	-	-	0
-	7 year(s)	0.0	-	-	0
-	8 year(s)	0.0	-	-	0

Tpx - centre	Time	Mortality (%)	95% CI	No at risk	Cum. deaths
-	9 year(s)	0.0	-	-	0
-	Overall	0.0	-	-	0
Heart - Lung - USZ	Baseline	0.0	-	1	0
-	1 month	0.0	-	1	0
-	6 months	0.0	-	1	0
-	1 year(s)	100.0	-	-	1
-	2 year(s)	100.0	-	-	1
-	3 year(s)	100.0	-	-	1
-	4 year(s)	100.0	-	-	1
-	5 year(s)	100.0	-	-	1
-	6 year(s)	100.0	-	-	1
-	7 year(s)	100.0	-	-	1
-	8 year(s)	100.0	-	-	1
-	9 year(s)	100.0	-	-	1
-	Overall	100.0	-	-	1
Islets - Liver - USZ	Baseline	0.0	-	1	0
-	1 month	0.0	-	1	0
-	6 months	0.0	-	1	0
-	1 year(s)	0.0	-	1	0
-	2 year(s)	0.0	-	-	0
-	3 year(s)	0.0	-	-	0
-	4 year(s)	0.0	-	-	0
-	5 year(s)	0.0	-	-	0
-	6 year(s)	0.0	-	-	0
-	7 year(s)	0.0	-	-	0
-	8 year(s)	0.0	-	-	0
-	9 year(s)	0.0	-	-	0
-	Overall	0.0	-	-	0
Pancreas - Small bowel - USZ	Baseline	0.0	-	1	0
-	1 month	0.0	-	1	0
-	6 months	0.0	-	1	0
-	1 year(s)	0.0	-	1	0
-	2 year(s)	100.0	-	-	1
-	3 year(s)	100.0	-	-	1
-	4 year(s)	100.0	-	-	1
-	5 year(s)	100.0	-	-	1
-	6 year(s)	100.0	-	-	1
-	7 year(s)	100.0	-	-	1
-	8 year(s)	100.0	-	-	1
-	9 year(s)	100.0	-	-	1
-	Overall	100.0	-	-	1
Pancreas - Small bowel - HUG	Baseline	0.0	-	1	0
-	1 month	0.0	-	1	0
-	6 months	0.0	-	1	0
-	1 year(s)	0.0	-	1	0
-	2 year(s)	100.0	-	-	1
-	3 year(s)	100.0	-	-	1
-	4 year(s)	100.0	-	-	1
-	5 year(s)	100.0	-	-	1
-	6 year(s)	100.0	-	-	1
-	7 year(s)	100.0	-	-	1
-	8 year(s)	100.0	-	-	1

Tpx - centre	Time	Mortality (%)	95% CI	No at risk	Cum. deaths
-	9 year(s)	100.0	-	-	1
-	Overall	100.0	-	-	1
Kidney - Islets - Liver - HUG	Baseline	0.0	-	1	0
-	1 month	0.0	-	1	0
-	6 months	0.0	-	1	0
-	1 year(s)	0.0	-	1	0
-	2 year(s)	0.0	-	1	0
-	3 year(s)	0.0	-	1	0
-	4 year(s)	0.0	-	1	0
-	5 year(s)	0.0	-	1	0
-	6 year(s)	0.0	-	-	0
-	7 year(s)	0.0	-	-	0
-	8 year(s)	0.0	-	-	0
-	9 year(s)	0.0	-	-	0
-	Overall	0.0	-	-	0
Islets - Liver - Lung - HUG	Baseline	0.0	-	1	0
-	1 month	0.0	-	1	0
-	6 months	0.0	-	1	0
-	1 year(s)	0.0	-	1	0
-	2 year(s)	0.0	-	1	0
-	3 year(s)	0.0	-	1	0
-	4 year(s)	0.0	-	-	0
-	5 year(s)	0.0	-	-	0
-	6 year(s)	0.0	-	-	0
-	7 year(s)	0.0	-	-	0
-	8 year(s)	0.0	-	-	0
-	9 year(s)	0.0	-	-	0
-	Overall	0.0	-	-	0

D Technical summary

All analyses were performed using the statistical software R Core Team (2017). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL https://www.R-project.org/.