

**NHS BLOOD & TRANSPLANT
ORGAN DONATION AND TRANSPLANTATION DIRECTORATE**

PANCREAS ADVISORY GROUP

STANDARD PANCREAS TRANSPLANT DATASET

INTRODUCTION

1. In line with other organs, it is proposed that a standard whole pancreas transplant dataset is agreed by the Pancreas Advisory Group (PAG) for provision in response to data applications that meet a set of criteria. The intention is that it will save statistical time in preparing bespoke datasets and provides a wealth of information for research.
2. The criteria that would need to be met to allow automatic release of the pancreas transplant dataset without specific PAG approval are in line with other organs and are proposed as follows:

The standard pancreas dataset can be automatically released where:

- a) Data requested is included in the standard dataset

AND

- b) The request is from one of the following:
 - i. A current pancreas transplant unit in the UK (with consultant level support)
 - ii. A group with funding through an NIHR grant (or equivalent peer review funding stream)
 - iii. A public health or government body

AND

- c) No statistical support is required from NHSBT

Data applications not meeting these criteria will be reviewed by the Chair of PAG. The Advisory Group will also receive brief details of all studies for which the standard dataset has been issued. This will be provided at PAG meetings.

3. Applications for data will not be revisited once they have been completed, therefore it is important that due consideration is given to the information requested and the timing of the application.
4. The proposed content of the standard pancreas dataset is provided below and includes donor, recipient, transplant and transplant outcome details.

Pancreas Transplant Dataset Describer

VARIABLE	DESCRIPTION	CODE	LEVEL
ARECIP_ID	Anonymous recipient ODT number		
NHS_GRP	NHS group	1	Group 1
		2	Group 2
		9	Unknown
RSEX	Recipient gender	1	Male
		2	Female
		9	Unknown
RAGE	Recipient age		
RAGE_GRP	Recipient paediatric or adult		
RAGE_GRP2	Recipient age in 10 year increments		
RBG	Recipient blood group		
RRHESUS	Recipient blood rhesus allele	1	Positive
		2	Negative
		8	Missing
		9	Unknown
		10	Not tested
RWEIGHT	Weight of recipient (kg)		
RHEIGHT	Height of recipient (cm)		
RBMI	Recipient BMI		
RETHNIC	Recipient ethnicity		
WAIT_TIME	Waiting time for transplant (days)		
PKPD	Best known pancreas/renal disease at registration	see reference pancreas/renal disease below	
FPKPD	Pancreas/renal disease at registration in text		

VARIABLE	DESCRIPTION	CODE	LEVEL		
RCMV	Recipient CMV test result at registration	1	Negative		
		2	Positive		
		6	Result awaited		
		7	Not tested		
		8	Not reported		
		9	Unknown		
		RHCV	Recipient HCV test result at registration	1	Negative
				2	Positive
				6	Result awaited
7	Not tested				
8	Not reported				
9	Unknown				
SURFACE_AGHBSAG	Recipient Hepatitis B - Surface Ag(HBsAG)			1	Negative
				2	Positive
				6	Result awaited
		7	Not tested		
		8	Not reported		
		9	Unknown		
		HBSAB	Recipient if negative Hepatitis B - Surface Ag(HBsAG) then HBsAb	1	Negative
				2	Positive
				6	Result awaited
7	Not tested				
8	Not reported				
9	Unknown				
HIV	Recipient HIV			1	Negative
				2	Positive
				6	Result awaited
		7	Not tested		
		8	Not reported		
		9	Unknown		

VARIABLE	DESCRIPTION	CODE	LEVEL
ABOMATCH	Donor vs Recipient blood group	1	Identical
		2	Compatible
		3	Incompatible
		9	Unknown match
MM_COMPLETE AMM	Mismatch recipient Number of mismatches at A locus	0	Zero mismatches
		1	One mismatch
		2	Two mismatches
		7	Not tested
		9	Unknown
BMM	Number of mismatches at B locus	0	Zero mismatches
		1	One mismatch
		2	Two mismatches
		7	Not tested
		9	Unknown
DRMM	Number of mismatches at dr locus	0	Zero mismatches
		1	One mismatch
		2	Two mismatches
		7	Not tested
		9	Unknown
MGRADE	Matchgrade	000	Zero zero zero mismatches,
		Fave	Favourable mismatch (100,010,110)
		Non-fave	Non-favourable mismatch
HLA_GRP	HLA mismatch groups	see reference Table A: HLA mismatch groups below	
SENSITISATION	% sensitised against general donor population		

VARIABLE	DESCRIPTION	CODE	LEVEL
DIALYSIS	Dialysis status of recipient at transplant	1	Haemodialysis
		2	Peritoneal dialysis
		3	Not on dialysis
		8	Not reported
		9	Unknown
DIALYSIS_START_DATE	Date current dialysis started		
MYOCARDIAL_INFARCTION	Pre-transplant complications- Myocardial infarction	1	No
		2	Yes
		8	Not reported
		9	Unknown
CVA	Pre-transplant complications- CVA	1	No
		2	Yes
		8	Not reported
		9	Unknown
REG_BLIND	Pre-transplant complications- Registered blind	1	No
		2	Yes
		8	Not reported
		9	Unknown
LIMB_AMPUTATION	Pre-transplant complications- Limb amputation	1	No amputation
		2	Major limb amputation
		3	Digital amputation
DIABETES_CAUSE	Cause of diabetes	1	Type 1
		2	Type 2
		3	Other
DIAGNOSIS_YR	Year of diagnosis		
INSULIN_DOSE	Insulin dose prior to transplant (units/24hr)		
SERUM_CREATININE	If not on dialysis, serum creatinine prior to transplant		
PRETX_EGFR	Pre-transplant Estimated GFR		

VARIABLE	DESCRIPTION	CODE	LEVEL
PIPECIGARS	Does the recipient smoke pipe and cigars at transplant	1	No
		2	Yes
		3	Ex-smoker
		8	Not reported
		9	Unknown
CIGARETTES	Does the recipient smoke cigarettes at transplant	1	No
		2	Yes
		3	Ex-smoker
		8	Not reported
		9	Unknown
NODAY	If the recipient smokes cigarettes, how many a day at transplant?		
YRS_SINCE_STOP	If ex smoker how many years since stopped smoking at transplant		
EXPOSURE	Total exposure in pack years at transplant		
ADONOR_ID	Anonymous donor ODT number		
DD_YR	Year of donation		
DTYPE	Donor type	1	DBD
		2	DCD
		5	Living related
		6	Living, unrelated
		7	Domino
		13	Living unrelated - Altruistic
DGRP	Donor type group		
DSEX	Donor gender		
DAGE	Donor age		
DAGE_GRP	Donor paediatric or adult		
DAGE_GRP2	Donor age in 10 year increments		
DBG	Donor blood group		

VARIABLE	DESCRIPTION	CODE	LEVEL
DCOD	Donor cause of death	see reference donor COD below	
FDCOD	Donor cause of death in text		
DHEIGHT	Donor height (cm)		
DWEIGHT	Donor weight (kg)		
DGIRTH	Donor Girth (cm)		
DBMI	Donor BMI		
DETHNIC	Donor ethnicity		
DCMV	Donor CMV test result	1	Negative
		2	Positive
		6	Results awaited
		7	Not tested
		8	Not reported
		9	Unknown
DHG	Donor haemoglobin at retrieval		
DGLUCOSE	Donor glucose at retrieval		
DRET_CREAT	Donor creatinine at retrieval		
DHCV	Donor HCV at retrieval		
DREGION	Region of donor hospital		
DNATION	Nation of donor hospital		
DCOUNTRY	Country of donor hospital		
DHBSAG	Donor HBS AG test result	1	Negative
		2	Positive
		6	Results awaited
		7	Not tested
		8	Not reported
		9	Unknown

VARIABLE	DESCRIPTION	CODE	LEVEL		
DHBCAB	Donor HBCAB test result	1	Negative		
		2	Positive		
		6	Results awaited		
		7	Not tested		
		8	Not reported		
		9	Unknown		
		DHIV	Donor HIV test result	1	Negative
				2	Positive
				6	Results awaited
7	Not tested				
8	Not reported				
9	Unknown				
DEBV	Donor EBV test result			1	Negative
				2	Positive
				6	Results awaited
		7	Not tested		
		8	Not reported		
		9	Unknown		
		DHTLV	Donor HTLV test result	1	Negative
				2	Positive
				6	Results awaited
7	Not tested				
8	Not reported				
9	Unknown				
DTOXO	Donor Toxo test result			1	Negative
				2	Positive
				6	Results awaited
		7	Not tested		
		8	Not reported		
		9	Unknown		

VARIABLE	DESCRIPTION	CODE	LEVEL		
DSYPHILIS	Donor syphilis test result	1	Negative		
		2	Positive		
		6	Results awaited		
		7	Not tested		
		8	Not reported		
		9	Unknown		
		DHBCAG	Donor HBCAG test result	1	Negative
				2	Positive
				6	Results awaited
7	Not tested				
8	Not reported				
9	Unknown				
DURINE_OUTPUT_24HRS	Donor urine output last 24 hours (ml)				
DURINE_OUTPUT_HR	Donor urine output last hour (ml)				
DURINE_PERIOD	Donor urine last for (hrs)				
DURINE_PERIOD_OUTPUT	Donor urine output in relation to durine_period time				
DINSULIN	Insulin administered to the donor	1	No		
		2	Yes		
		8	Not reported		
		9	Unknown		
		DINSULIN_DOSE	If yes what was the dose of insulin given to the donor (mg)		
DCURRENT_GLUCOSE	Donor blood glucose level mmol/l				
DINSULIN_DATE	If yes the date and time insulin was given to the donor				
DINSULIN_RATE	Donor rate of insulin infusion (ml/hr)				

VARIABLE	DESCRIPTION	CODE	LEVEL
DPAST_ALCOHOL_ABUSE	Donor history of alcohol abuse (available pre January 2016)	1	No
		2	Yes
		8	Not reported
		9	Unknown
DALCOHOL_UNITS_AMOUNT	Donor units of alcohol (available post January 2016)	1	Non-Drinker Alcohol
		2	Drinks Rarely/ Occasionally - <1 u/day
		3	Light Drinker – 1-2 u/day
		4	Moderate Drinker – 3-6 u/day
		5	Heavy Drinker – 7-9 u/day
		6	Very Heavy Drinker - >9 u/day
		88	Not reported
		98	Stopped Drinking Alcohol – specify
		99	Alcohol Consumption Unknown
DPAST_CARDIO_DISEASE	Donor cardio disease	1	No
		2	Yes
		8	Not reported
		9	Unknown
DPAST_DIABETES	Donor diabetes	1	No
		2	Yes
		8	Not reported
		9	Unknown
DPAST_FAMILY_DIABETES	Donors family history of diabetes	1	No
		2	Yes
		8	Not reported
		9	Unknown

VARIABLE	DESCRIPTION	CODE	LEVEL
DPAST_FAMILY_DIABETES_TYPE	Donors family history type of diabete	3	Type 1
		4	Type 2
		5	Type 1&2
		8	Not reported
		9	Unknown
DPAST_DRUG_ABUSE	Donor history of drug abuse	1	No
		2	Yes
		8	Not reported
		9	Unknown
		DPAST_HYPERTENSION	Donor hypertension
2	Yes		
8	Not reported		
9	Unknown		
DPAST_LIVER_DISEASE	Donor liver disease		
		2	Yes
		8	Not reported
		9	Unknown
		DPAST_OTHER	Donor past other
2	Yes		
8	Not reported		
9	Unknown		
DPAST_SMOKER	Donor smoker		
		2	Yes
		8	Not reported
		9	Unknown
		DPAST_SMOKER_AMOUNT DPAST_TUMOUR	Donor smoker amount Donor tumour
2	Yes		
8	Not reported		
9	Unknown		

VARIABLE	DESCRIPTION	CODE	LEVEL
DPAST_UTI	Donor UTI	1	No
		2	Yes
		8	Not reported
		9	Unknown
DPAST_ALLERGY	Donor allergy	1	No
		2	Yes
		8	Not reported
		9	Unknown
MACHINE_PRESERVATION_USED	Machine preservation used?	1	No
		2	Yes - warm
		3	Yes - cold
WIT	Warm ischaemia time (minutes)		
CIT	Cold ischaemia time (hh:mm)		
CIT_MINS	Cold ischaemia time (minutes)		
ASYSTOLIC_PERIOD	If donor DCD then duration of asystolic period (mins)		
DUCT_MANAGEMENT	Type of duct management	1	Enteric side to side
		2	Enteric - roux
		3	Bladder drainage
QUALITY	Quality of cold perfusion	1	Good
		2	Fair
		3	Poor
		4	Patchy
		8	Not reported
SENSITISATION_AT_TX	Sensitisation at transplant (%)	9	Unknown
HSP	Flag indicating whether recipient was highly sensitised at transplant	1	No
		2	Yes
		8	Not reported
		9	Unknown

VARIABLE	DESCRIPTION	CODE	LEVEL
ATX_ID	Anonymous transplant ODT number		
TX_YR	Year of transplant		
FYR	Financial year of transplant		
TX_TYPE	Transplant type	50	Pancreas only
		51	Pancreas islets
		115	Pancreas, Liver & kidney,
		130	Pancreas/Kidney,
		131	Pancreas/Islets
		140	Pancreas & Liver
TX_GRP	Type of pancreas transplant	PAK	Pancreas after kidney
		PTA	Pancreas transplant alone,
		SPK	Simultaneous pancreas/kidney
PTX_NO	Number of pancreas transplants		
HBA1C	Pre-transplant HbA1c (%) - as recorded prior to 29/1/13		
IFCC_HBA1C	Pre-transplant IFCC-HbA1c (mmol/mol) - as recorded since 29/1/13		
TMF_INITIAL_GRAFT_FUNCTION	Recipient initial graft function at 3 month fup	1	Immediate function
		2	Partial function (Insulin required)
		3	Primary non-function
TMF_REJECTIONS	Number of treated rejection episodes in the first 3 months post transplant		
TMF_RENAL_DISEASE	Recurrent primary disease in pancreatic graft within the first 3 months	1	No
		2	Yes
		8	Not reported
		9	Unknown

VARIABLE	DESCRIPTION	CODE	LEVEL
TMF_INSULIN_INDEPENDENT	Has the recipient been insulin independent at all since transplant at 3 month fup	1	No
		2	Yes
		8	Not reported
		9	Unknown
TMF_INSULIN_DOSE	What is the insulin dose for recipient at 3 months		
TMF_BLOOD_GLUCOSE	If insulin independent then state blood glucose (mmol/l)		
TMF_HBA1C	If insulin independent then state HbA1c (%) - as recorded prior to 29/1/2013		
TMF_IFCC_HBA1C	If insulin independent then state IFCC-HbA1c (mmol/l) - as recorded since 29/1/2013		
TMF_CREATININE	Serum creatinine measured between 10 and 14 weeks post-transplant		
AF1Y_REJECTIONS	Number of treated rejection episodes in the last 12 months at 1 year fup		
AF1Y_RENAL_DISEASE	Recurrent primary disease in pancreatic graft within the last 12 months at 1 year fup	1	No
		2	Yes
		8	Not reported
		9	Unknown
AF1Y_INSULIN_INDEPENDENT	Has the recipient been insulin independent within the last 9 months at 1 year fup	1	No
		2	Yes
		8	Not reported
		9	Unknown
AF1Y_BLOOD_GLUCOSE	If insulin independent then state blood glucose (mmol/l) at 1 year fup		
AF1Y_HBA1C	If insulin independent then state HbA1c (%) at 1 year fup - as recorded prior to 29/1/13		

VARIABLE	DESCRIPTION	CODE	LEVEL
AF1Y_IFCC_HBA1C	If insulin independent then state IFCC-HbA1c (mmol/mol) at 1 year fup - as recorded since 29/1/13		
AF1Y_CREATININE	Serum creatinine measured between 11 and 13 months post-transplant		
AF2Y_REJECTIONS	Number of treated rejection episodes in the last 12 months at 2 year fup		
AF2Y_RENAL_DISEASE	Recurrent primary disease in pancreatic graft within the last 12 months at 2 year fup	1 2 8 9	No Yes Not reported Unknown
AF2Y_INSULIN_INDEPENDENT	Has the recipient been insulin independent within the last 12 months at 2 year fup	1 2 8 9	No Yes Not reported Unknown
AF2Y_BLOOD_GLUCOSE	If insulin independent then state blood glucose (mmol/l) at 2 year fup		
AF2Y_HBA1C	If insulin independent then state HbA1c (%) at 2 year fup - as recorded prior to 29/1/13		
AF2Y_IFCC_HBA1C	If insulin independent then state IFCC-HbA1c (mmol/mol) at 2 year fup - as recorded since 29/1/13		
AF2Y_CREATININE	Serum creatinine measured at 2 years		
AF5Y_REJECTIONS	Number of treated rejection episodes in the last 12 months at 5 years fup		
AF5Y_RENAL_DISEASE	Recurrent primary disease in pancreatic graft within the last 12 months at 5 years fup	1 2 8 9	No Yes Not reported Unknown

VARIABLE	DESCRIPTION	CODE	LEVEL
AF5Y_INSULIN_INDEPENDENT	Has the recipient been insulin independent within the last 12 months at 5 years fup	1 2 8 9	No Yes Not reported Unknown
AF5Y_BLOOD_GLUCOSE	If insulin independent then state blood glucose (mmol/l) at 5 years fup		
AF5Y_HBA1C	If insulin independent then state HbA1c (%) at 5 years fup - as recorded prior to 29/1/13		
AF5Y_IFCC_HBA1C	If insulin independent then state IFCC-HbA1c (mmol/mol) at 5 years fup - as recorded since 29/1/13		
AF5Y_CREATININE_GRAFT_OUTCOME	Serum creatinine measured at 5 years Last known outcome of graft	1 2 3 4 9	Functioning Failed Died with a functioning graft Died unknown graft function Unknown
COF	Cause of failure		
FCOF	Cause of failure in text		
COF_NOTE	Additional cause of failure information		
RCOD1	Recipient primary cause of death		see reference recipient cause of death
RCOD2	Recipient secondary cause of death		see reference recipient cause of death
FRCOD1	Recipient primary cause of death in text		
FRCOD2	Recipient secondary cause of death in text		
GRAFT_FUNCTION	Pancreas function at last assessment	1 2 3	Insulin independent Partial function No function
RCOD_NOTE	Recipient cause of death notes		

VARIABLE	DESCRIPTION	CODE	LEVEL
TSURV	Transplant survival time (days)		
TCENS	Transplant censoring indicator	0	Censored
		1	Event (Graft failure or death)
GSURV	Graft survival time (days)		
GCENS	Graft censoring indicator	0	Censored
		1	Event (Graft failure)
PSURV	Patient survival time (days) from first graft only		
PCENS	Patient censoring indicator from first graft only	0	Censored
		1	Event (Death of recipient)
KID_DGF	Function of kidney post transplant	1	Immediate
		2	Delayed
		3	Primary non-function
		8	Not reported
		9	Unknown
KID_OUTCOME	Last known outcome of kidney graft	1	Functioning
		2	Failed
		3	Died with a functioning graft
		4	Died unknown graft function
		9	Unknown
KID_LFUP	Kidney lost to fup	1	No
		2	Yes
		8	Not reported
		9	Unknown
KID_GSURV	Kidney graft survival time (days)		
KID_GCENS	Kidney graft censoring indicator	0	Censored
		1	Event (Graft failure)
KID_PSURV	Kidney patient survival time (days)		
KID_PCENS	Kidney patient censoring indicator	0	Censored
		1	Event (Death of recipient)

REFERENCES**DONOR COD**

0	Living donor
10	Intracranial haemorrhage
11	Intracranial thrombosis
12	Brain tumour
13	Hypoxic brain damage - all causes
19	Intracranial - type unclassified (CVA)
20	Trauma RTA - car
21	Trauma RTA - motorbike
22	Trauma RTA - pushbike
23	Trauma RTA - pedestrian
24	Trauma RTA - Other
29	Trauma RTA - unknown type
30	Other trauma - known or suspected suicide
31	Other trauma - accident
39	Other trauma - unknown cause
40	Cardiac arrest
41	Myocardial infarction
42	Aneurysm
42	Aortic Aneurysm
43	Ischaemic heart disease
44	Congestive heart failure
45	Pulmonary embolism
49	Cardiovascular - type unclassified
50	Chronic pulmonary disease
51	Pneumonia
52	Asthma
53	Respiratory failure
54	Carbon monoxide poisoning
59	Respiratory - type unclassified (inc smoke inhalation)
60	Cancer (other than brain tumour)
70	Meningitis
71	Septicaemia
72	Infections - type unclassified
73	Acute blood loss/hypovolaemia
74	Liver failure (not self poisoning)
75	Renal failure
76	Multi-organ failure
77	Sudden Infant Death Syndrome (SIDS)
78	Burns
80	Alcohol poisoning
81	Paracetamol overdose
82	Other drug overdose, please specify
85	Self poisoning - type unclassified
88	Not reported
90	OTHER

REFERENCES

- 98 Other, please specify
99 Unknown

PANCREAS/RENAL DISEASE

- 200 Chronic renal failure, aetiology uncertain
210 Glomerulonephritis, histologically not examined
211 Severe nephrotic syndrome with focal sclerosis
212 IgA nephropathy
213 Dense deposit disease
214 Membranous nephropathy
215 Membrano - proliferative glomerulonephritis
216 Rapidly progressive GN without systemic disease
217 Focal segmental glomerulosclerosis with nephrotic syndrome in adults
219 Glomerulonephritis, histologically examined
220 Pyelonephritis/Interstitial nephritis - cause not specified
221 Pyelonephritis/Interstitial nephritis associated with neurogenic bladder
222 Pyelonephritis/Interstitial nephritis due to congenital obstructive uropathy with/without vesico-ureteric (V-U) reflux
223 Pyelonephritis/Interstitial nephritis due to acquired obstructive uropathy
224 Pyelonephritis/Interstitial nephritis due to V-U reflux without obstruction
225 Pyelonephritis/Interstitial nephritis due to urolithiasis
229 Pyelonephritis/Interstitial nephritis due to other cause
230 Tubulo Interstitial Nephritis (Not Pyelonephritis)
231 Nephropathy due to analgesic drugs
232 Nephropathy due to cis-platinum
233 Nephropathy due to cyclosporin A
239 Nephropathy caused by other specific drug
240 Cystic kidney disease - type unspecified
241 Polycystic kidneys, adult type (dominant type)
242 Polycystic kidneys, infantile (recessive type)
243 Medullary cystic disease, including nephronophthisis
249 Cystic kidney disease - other specified type
250 Hereditary/Familial nephropathy - type unspecified
251 Hereditary nephritis with nerve deafness (Alports syndrome)
252 Cystinosis
253 Primary oxalosis
254 "Fabrys disease"
259 Hereditary nephropathy - other
260 Congenital renal hypoplasia - type unspecified
261 Oligomeganephronic hypoplasia
262 Segmental renal hypoplasia
263 Congenital renal dysplasia with or without urinary tract malformation
266 Syndrome of agenesis of abdominal muscles
270 Renal vascular disease - type unspecified
271 Renal vascular disease - malignant hypertension
272 Renal vascular disease - hypertension

REFERENCES

273	Renal vascular disease - polyarteritis
274	"Wegeners granulomatosis"
275	Ischaemic renal disease/ cholesterol embolism
279	Renal vascular disease - classified
280	Diabetes - insulin dependent (Type I)
281	Diabetes - non-insulin dependent (Type II)
282	Myelomatosis/Light chain deposit disease
283	Amyloid
284	Lupus erythematosus
285	Henoch-Schonlein purpura
286	"Goodpastures Syndrome"
287	Systemic sclerosis (Scleroderma)
288	Haemolytic Uraemic Syndrome (inc Moschowitz Syndrome)
289	Multi-system disease - other
290	Cortical or tubular necrosis
291	Tuberculosis
292	Gout
293	Nephrocalcinosis & hypercalcaemic nephropathy
294	Balkan nephropathy
295	Kidney tumour
296	Traumatic or surgical loss of kidney
298	Other identified renal disorders
299	Unknown
888	Not reported

CAUSE OF FAILURE

0	Graft still functioning
201	Vascular thrombosis
202	Infection
203	Bleeding
204	Anastomotic leak
205	Pancreatitis
206	Primary non-function (no detectable C-peptide between 7 and 28 days)
207	Patient declined medication
208	Hyperacute rejection
209	Acute rejection
210	Chronic rejection
211	Preservation/Procurement problem
212	Instant blood mediated inflammatory reaction (IBMIR)
213	Poor engraftment
214	Functional decline (unknown cause)
215	Recurrent autoimmunity
216	Hepatitis / Steatosis
217	Cholangitis
290	Death with a functioning graft
298	Other

REFERENCES

299 Unknown

RECIPIENT COD

500 Cause of death uncertain/not determined
 511 Myocardial ischaemia and infarction
 512 Hyperkalaemia
 513 Haemorrhagic pericarditis
 514 Other causes of cardiac failure
 515 Sudden unexplained cardiac death
 516 Hypertensive cardiac failure
 517 Hypokalaemia
 518 Fluid overload
 519 Elevated pvr/pulmonary hypertension
 520 Airway dehiscence
 521 Pulmonary embolus
 522 Cerebro-vascular accident
 523 Gastro-intestinal haemorrhage
 524 Haemorrhage from graft site
 525 Haemorrhage from vascular access or dialysis circuit
 526 Haemorrhage from ruptured vascular aneurysm (not code 22 or 23)
 527 Haemorrhage from surgery (not code 23,24 or 26)
 528 Other haemorrhage (not codes 23-27)
 529 Mesenteric infarction
 530 Pulmonary infection (protozoal)
 531 Pulmonary infection (bacterial)
 532 Pulmonary infection (viral)
 533 Pulmonary infection (fungal)
 534 Infections elsewhere (except viral hepatitis)
 535 Septicaemia
 536 Tuberculosis (lung)
 537 Tuberculosis (elsewhere)
 538 Generalized viral infection
 539 Peritonitis (not code 70)
 541 Liver - due to hepatitis b virus
 542 Liver - other viral hepatitis
 543 Liver - drug toxicity
 544 Cirrhosis - not viral
 545 Cystic liver disease
 546 Liver failure - cause unknown
 547 Renal failure
 548 Recurrent primary disease - benign
 549 Recurrent primary disease - malignant
 551 Patient refused further treatment
 552 Suicide
 553 Therapy ceased for any other reason
 554 ESRF treatment withdrawn for medical reasons

REFERENCES

561	Uraemia caused by graft failure
562	Pancreatitis
563	Bone marrow depression
564	Cachexia
566	Lymphoid malignant disease possibly induced by immunosuppressive therapy
567	Lymphoid malignant disease not induced by immunosuppressive therapy
568	Malignant disease: lymphoproliferative disorders (except 66)
569	Dementia
570	Sclerosing (or adhesive) peritoneal disease
571	Perforation of peptic ulcer
572	Perforation of colon
573	Non-lymphoid malignant disease possibly induced by immunosuppressive therapy
574	Non-lymphoid malignant disease not induced by immunosuppressive therapy
575	Early graft dysfunction
576	Cardiac tamponade
577	ARDS
578	Respiratory failure
579	Multi-system failure
581	Accident related to treatment
582	Accident unrelated to treatment
590	Donor organ failure
595	Other identified cause of death
598	Other identified cause of death
599	Unknown
600	Peritonitis (bacterial, with peritoneal dialysis
601	Peritonitis (fungal, with peritoneal dialysis
602	Peritonitis (due to other cause, with peritoneal dialysis
888	COD not requested

Table A HLA mismatch groups

Level	HLA mismatch summary	HLA mismatch combinations included
1	0	0
2	[0 DR and 0/1 B]	100, 010, 110, 200, 210
3	[0 DR and 2 B] or [1 DR and 0/1 B]	020, 120, 220, 001, 101, 201, 011, 111, 211
4	[1 DR and 2 B] or [2 DR]	021, 121, 221, 002, 102, 202, 012, 112, 212, 022, 122, 222