#### EUROTRANSPLANT INTERNATIONAL FOUNDATION

# Annual Report 2010

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## **Board of Eurotransplant International Foundation**

#### as per December 31, 2010

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secretary / treasurer (D)

on behalf of the kidney section (A)

on behalf of the kidney section (A)

on behalf of the kidney section (A)

on behalf of the liver section (A)

on behalf of the liver section (A)

on behalf of the pancreas section (A)

on behalf of the thoracic section (A)

on behalf of the thoracic section (A)

on behalf of the tissue typing section (A)

on behalf of the Austrian Transplant Society (B)

on behalf of the Belgian Transplant Society (B)

on behalf of the Republic of Croatia (B)

on behalf of the German Transplant Society (B)

on behalf of the Dutch Transplant Society (B)

on behalf of the Slovenian Transplant Society (B)

on behalf of the Eurotransplant Reference Laboratory (C)

ethics advisor (D)

The Board of Stichting Eurotransplant International Foundation consists of:

10 members A: members representing organ / tissue typing sections

6 members B: members representing national transplant societies

1 member C: head of the Eurotransplant Reference Laboratory

2 members D: one member being financial expert, one member representing society (ethicist)

#### TRANSPLANT PROGRAMS AND THEIR DELEGATES IN 2010

Definitions of transplant programs are described in the Articles of Association of Stichting Eurotransplant International Foundation, version March 4, 2010.

#### **Program:**

Any of the following transplantation areas:

kidney, heart, lungs, liver, intestine, pancreas or any part of a specific organ and/or Tissue Typing, which have the approval of the competent and relevant authorities.

(Article 2)

#### **Delegate:**

Each center shall have the right to delegate one natural person in the Assembly for each program in which it performed transplantations during a year. On each reference date, the number of persons delegated (the "delegates") by a center in the Assembly shall be reviewed. (Article 5.1)

(If no name is indicated, then no delegate was appointed by transplant/tissue typing program or it concerns a new program in 2010).

RENAL PROGRAMS DELEGATE
-------------------------

KENA	L PROGRAMS	DELEGATE
Austria		
GA	Medizinische Universitätsklinik, Graz	S. Horn
IB	Chirurgische Universitätsklinik, Innsbruck	C. Bösmüller
OE	Krankenhaus der Elisabethinen, Linz	R. Oberbauer
OL	Allgemeines Krankenhaus, Linz	E. Pohanka
WG	Universitätsklinik für Chirurgie, Wien	F. Mühlbacher
Belgium		
AN	Universitair Ziekenhuis Antwerpen, Edegem	D. Ysebaert
BJ	Universitair Ziekenhuis Brussel, Campus Jette	
BR	ULB, Hôpital Erasme, Bruxelles	D. Abramowicz
GE	Universitair Ziekenhuis, Gent	P. Peeters
LA	Cliniques Universitaires St. Luc, Bruxelles	M. Mourad
LE	Kinderdialyse Universitair Ziekenhuis Gasthuisberg, Leuven	R. Van Damme-Lombaerts
LG	Centre Hospitalier Universitaire, Liège	J-P. Squifflet
LM	Universitair Ziekenhuis Gasthuisberg, Leuven	Y. Vanrenterghem
Croatia		
OS	University Hospital, Osijek	J. Galić
RI	University Clinical Hospital, Rijeka	
ZA	University Clinical Cospital, Zagreb	
ZM	Clinical Hospital Zagreb Merkur, Zagreb	I. Kovacevic Vojtusek

#### Germany

German	y	
AK	Universitätsklinikum der Rheinisch-Westfälischen TH, Aachen	A. Homburg
AU	Zentralklinikum, Augsburg	H. Weihprecht
BB	Ruhr Universität, Bochum	P. Schenker
BC	Charité-Campus Virchow Klinikum der Humboldt Universität, Berlin	A. Pascher
BE	Universitätsklinikum Benjamin Franklin, Berlin	M. van der Giet
BM	Kliniken der Freien Hansestadt, Bremen	U. Kuhlmann
BO	Klinikum der Urologischen und Medizinischen Universität, Bonn	R. Woitas
DR	Technischen Universität, Dresden	J. Passauer
DU	Med. Einrichtungen der Heinrich-Heine-Universität, Düsseldorf	K. Ivens
ER/NB	Med. Einrichtungen der Universität Erlangen-Nürnberg, Erlangen	K. Pressmar
ES	Universitätsklinikum, Essen	O. Witzke
FD	Klinikum Fulda, Fulda	T. Kälble
FM	Klinikum der Johann-Wolfgang-Goethe-Universität, Frankfurt	I. Hauser
FR	Klinikum der Albert-Ludwigs-Universität, Freiburg	P. Pisarski
GI	Klinikum der Justus-Liebig-Universität, Gießen	F. Renner
GO	Klinikum der Georg-August-Universität, Göttingen	A. Obed

HA	Klinikum der Martin-Luther-Universität, Halle	K. Weigand
HB	Klinikum der Ruprecht-Karls-Universität, Heidelberg	C. Morath
HG	Universitäts-Krankenhaus Eppendorf, Hamburg	F. Thaiss
HM	Nephrologisches Zentrum Niedersachsen, Hann. Münden	V. Kliem
НО	Klinikum der Medizinischen Hochschule, Hannover	F. Lehner
HS	Klinikum der Universität des Saarlandes, Homburg/Saar	U. Sester
JE	Klinikum der Friedrich-Schiller-Universität, Jena	U. Ott
KI	Klinikum Christian-Albrechts-Universität, Kiel	F. Braun
KL	Klinik der Universität Köln-Lindenthal, Köln	W. Arns
KM	Kliniken der Stadt Köln gGmbH, Krankenhaus Merheim, Köln-Merheim, Köln	W. Arns
KK	Klinik und Poliklinik für Kinderheilkunde der Universität Köln-Lindenthal, Köln	W. Arns
KS	Westpfalz-Klinikum, Kaiserslautern	Th. Rath
LP	Klinikum der Universität, Leipzig	M. Bartels
LU	Klinikum der Medizinischen Universität, Lübeck	M. Nitschke
MA	Klinikum der Stadt, Mannheim	P. Schnülle
MH	Klinikum Rechts der Isar der Technischen Universität, München	U. Heemann
ML	Klinikum Großhadern der Ludwig-Maximilians-Universität, München	K-W Jauch
MN	Klinikum der Westfälischen Wilhelms-Universität, Münster	H. Wolters
MR	Klinikum Lahnberge der Philipps-Universität, Marburg	J. Hoyer
		•
MZ	Klinikum der Johannes-Gutenberg-Universität, Mainz	O. Schreiner
RB	Klinikum der Universität, Regensburg	B. Banas
RO	Klinikum der Universität, Rostock	O. Hakenberg
ST	Katharinenhospital, Stuttgart	J. Wilhelm
TU	Klinikum der Eberhard-Karls-Universität, Tübingen	S. Nadalin
UL	Klinikum der Universität, Ulm	M. Wittau
WZ	Klinikum der Julius-Maximilians-Universität, Würzburg	K. Lopau
		-
Luxemb	ourg	
LX	Centre Hospitalier de Luxembourg	P. Duhoux
LII	Centre Hospitaner de Editemoodig	1. Dunoux
The Net	herlands	
I He Net	nerianus	
A 3. 7	VIII Medical Continue Americadore	C. M.,
AV	VU Medisch Centrum, Amsterdam	S. Nurmohamed
AW	Academisch Medisch Centrum, Amsterdam	F. Bemelman
AW GR	Academisch Medisch Centrum, Amsterdam Academisch Ziekenhuis, Groningen	F. Bemelman J. Homan van der Heide
AW	Academisch Medisch Centrum, Amsterdam	F. Bemelman
AW GR	Academisch Medisch Centrum, Amsterdam Academisch Ziekenhuis, Groningen	F. Bemelman J. Homan van der Heide
AW GR LB	Academisch Medisch Centrum, Amsterdam Academisch Ziekenhuis, Groningen Leids Universitair Medisch Centrum, Leiden Academisch Ziekenhuis, Maastricht	F. Bemelman J. Homan van der Heide J. de Fijter
AW GR LB MS NY	Academisch Medisch Centrum, Amsterdam Academisch Ziekenhuis, Groningen Leids Universitair Medisch Centrum, Leiden Academisch Ziekenhuis, Maastricht Universitair Medisch Centrum St. Radboud, Nijmegen	F. Bemelman J. Homan van der Heide J. de Fijter M. Christiaans A. Hoitsma
AW GR LB MS NY RD	Academisch Medisch Centrum, Amsterdam Academisch Ziekenhuis, Groningen Leids Universitair Medisch Centrum, Leiden Academisch Ziekenhuis, Maastricht Universitair Medisch Centrum St. Radboud, Nijmegen Erasmus Medisch Centrum, Rotterdam	F. Bemelman J. Homan van der Heide J. de Fijter M. Christiaans A. Hoitsma W. Weimar
AW GR LB MS NY RD RS	Academisch Medisch Centrum, Amsterdam Academisch Ziekenhuis, Groningen Leids Universitair Medisch Centrum, Leiden Academisch Ziekenhuis, Maastricht Universitair Medisch Centrum St. Radboud, Nijmegen Erasmus Medisch Centrum, Rotterdam Sophia Kinderziekenhuis, Rotterdam	F. Bemelman J. Homan van der Heide J. de Fijter M. Christiaans A. Hoitsma W. Weimar K. Cransberg
AW GR LB MS NY RD RS UT	Academisch Medisch Centrum, Amsterdam Academisch Ziekenhuis, Groningen Leids Universitair Medisch Centrum, Leiden Academisch Ziekenhuis, Maastricht Universitair Medisch Centrum St. Radboud, Nijmegen Erasmus Medisch Centrum, Rotterdam Sophia Kinderziekenhuis, Rotterdam Universitair Medisch Centrum, Utrecht	F. Bemelman J. Homan van der Heide J. de Fijter M. Christiaans A. Hoitsma W. Weimar K. Cransberg A. van Zuilen
AW GR LB MS NY RD RS	Academisch Medisch Centrum, Amsterdam Academisch Ziekenhuis, Groningen Leids Universitair Medisch Centrum, Leiden Academisch Ziekenhuis, Maastricht Universitair Medisch Centrum St. Radboud, Nijmegen Erasmus Medisch Centrum, Rotterdam Sophia Kinderziekenhuis, Rotterdam	F. Bemelman J. Homan van der Heide J. de Fijter M. Christiaans A. Hoitsma W. Weimar K. Cransberg
AW GR LB MS NY RD RS UT UW	Academisch Medisch Centrum, Amsterdam Academisch Ziekenhuis, Groningen Leids Universitair Medisch Centrum, Leiden Academisch Ziekenhuis, Maastricht Universitair Medisch Centrum St. Radboud, Nijmegen Erasmus Medisch Centrum, Rotterdam Sophia Kinderziekenhuis, Rotterdam Universitair Medisch Centrum, Utrecht Wilhelmina Kinderziekenhuis, Utrecht	F. Bemelman J. Homan van der Heide J. de Fijter M. Christiaans A. Hoitsma W. Weimar K. Cransberg A. van Zuilen
AW GR LB MS NY RD RS UT UW Slovenia	Academisch Medisch Centrum, Amsterdam Academisch Ziekenhuis, Groningen Leids Universitair Medisch Centrum, Leiden Academisch Ziekenhuis, Maastricht Universitair Medisch Centrum St. Radboud, Nijmegen Erasmus Medisch Centrum, Rotterdam Sophia Kinderziekenhuis, Rotterdam Universitair Medisch Centrum, Utrecht Wilhelmina Kinderziekenhuis, Utrecht	F. Bemelman J. Homan van der Heide J. de Fijter M. Christiaans A. Hoitsma W. Weimar K. Cransberg A. van Zuilen M. Lilien
AW GR LB MS NY RD RS UT UW	Academisch Medisch Centrum, Amsterdam Academisch Ziekenhuis, Groningen Leids Universitair Medisch Centrum, Leiden Academisch Ziekenhuis, Maastricht Universitair Medisch Centrum St. Radboud, Nijmegen Erasmus Medisch Centrum, Rotterdam Sophia Kinderziekenhuis, Rotterdam Universitair Medisch Centrum, Utrecht Wilhelmina Kinderziekenhuis, Utrecht	F. Bemelman J. Homan van der Heide J. de Fijter M. Christiaans A. Hoitsma W. Weimar K. Cransberg A. van Zuilen
AW GR LB MS NY RD RS UT UW Slovenia	Academisch Medisch Centrum, Amsterdam Academisch Ziekenhuis, Groningen Leids Universitair Medisch Centrum, Leiden Academisch Ziekenhuis, Maastricht Universitair Medisch Centrum St. Radboud, Nijmegen Erasmus Medisch Centrum, Rotterdam Sophia Kinderziekenhuis, Rotterdam Universitair Medisch Centrum, Utrecht Wilhelmina Kinderziekenhuis, Utrecht	F. Bemelman J. Homan van der Heide J. de Fijter M. Christiaans A. Hoitsma W. Weimar K. Cransberg A. van Zuilen M. Lilien
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BD	Deutsches Herzzentrum, Berlin	M. Hübler
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UT	Universitair Medisch Centrum, Utrecht	N. de Jonge
	,	
Slovenia		
LO	University Medical Center, Ljubljana	I. Knezević
Croatia		
ZA	University clinical hospital, Zagreb	
ZD		
	Clinical Hospital Dubraya Zagreb	
LD	Clinical Hospital Dubrava, Zagreb	
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Belgium		
AN	Universitair Ziekenhuis Antwerpen, Edegem	D. Ysebaert
BR	ULB, Hôpital Erasme, Bruxelles	V. Donckier
GE	Universitair Ziekenhuis, Gent	X. Rogiers
LA	Cliniques Universitaires St. Luc, Bruxelles	J. Lerut
LG	Centre Hospitalier Universitaire, Liège	O. Detry
LM	Universitair Ziekenhuis Gasthuisberg, Leuven	J. Pirenne
German	v	
BC	Charité-Campus Virchow Klinikum der Humboldt Universität, Berlin	A. Pascher
ВО	Chirurgische Universitätsklinik, Bonn	J. Kalff
ER/NB	Chirurgische Klinik der Universität Erlangen-Nürnberg, Erlangen	V. Müller
ES	Universitätsklinikum, Essen	A. Paul
FM	Klinikum der Johann-Wolfgang-Goethe-Universität, Frankfurt	C. Mönch
GO	Klinikum der Georg-August-Universität, Göttingen	A. Obed
HB	Klinikum der Ruprecht-Karls-Universität, Heidelberg	J. Schmidt
HG	Universitäts-Krankenhaus Eppendorf, Hamburg	L. Fischer
НО	Klinikum der Medizinischen Hochschule, Hannover	F. Lehner
HS JE	Klinikum Universität des Saarlandes, Homburg/Saar Friedrich Schiller Universität, Jena	O. Kollmar M. Heise
KI	Klinikum der Christian-Albrechts-Universität, Kiel	F. Braun
KL	Klinik der Universität Köln-Lindenthal	D. Stippel
LP	Klinikum der Universität, Leipzig	S. Jonas
MB	Klinikum Otto-von-Guericke Universität, Magdeburg	H. Lippert
MH	Klinikum Rechts der Isar der Technischen Universität, München	P. Büchler
ML	Klinikum Großhadern der Ludwig-Maximilians-Universität, München	M. Guba
MN	Klinikum der Westfälischen Wilhelms-Universität, Münster	H. Wolters
MZ	Klinikum der Johannes-Gutenberg-Universität, Mainz	M. Heise
RB TU	Klinikum der Universität, Regensburg Klinikum der Eberhard-Karls Universität, Tübingen	M. Scherer S. Nadalin
10	Trimitain der Boernata Italia Oliverstaa, Tuolingen	S. I (dddiii
The Net		
GR	Academisch Ziekenhuis, Groningen	R. Porte
LB RD	Leids Universitair Medisch Centrum, Leiden	J. Ringers G. Kazemier
KD	Erasmus Medisch Centrum, Rotterdam	G. Kazemier
Slovenia		
LO	University Medical Centre, Ljubljana	S. Markovič
Cractic		
Croatia ZA	University Clinical Hospital, Zagreb	
ZM	Clinical Hospital Merkur, Zagreb	B. Kocman
ZP	University Clinical Hospital Pediatric, Zagreb	D. Roeman
	Cilitar 1100pini 1 valuato, 2mg1vo	

PANCE	REAS (ISLET) PROGRAMS	DELEGATE
Austria		
GA	Chirurgische Universitätsklinik, Graz	F. Iberer
IB	Chirurgische Universitätsklinik, Innsbruck	W. Mark
WG	Universitätsklinik für Chirurgie, Wien	F. Mühlbacher
Belgium		
AN	Universitair Ziekenhuis Antwerpen, Edegem	D. Ysebaert
BR	ULB, Hôpital Erasme, Bruxelles	A. Hoang
BP GE	Academisch Ziekenhuis der Vrije Universiteit, Brussel Universitair Ziekenhuis, Gent	D. Pipeleers C. Randon
LA	Cliniques Universitaires St. Luc, Bruxelles	L. De Pauw
LG	Centre Hospitalier Universitaire, Liège	J-P. Squifflet
LM	Universitair Ziekenhuis Gasthuisberg, Leuven	J. Pirenne
23111	Onversion Ziekeman Gastratsoorg, Deaven	o. I ficinite
Germany	y	
BB .	Knappschaftskrankenhaus, Bochum	P. Schenker
BC	Charité-Campus Virchow Klinikum der Humboldt Universität, Berlin	A. Kahl
DR	Universitätsklinikum Carl Gustav Carus, Dresden	S. Kersting
ER/NB	Chirurgische Klinik der Universität Erlangen-Nürnberg, Erlangen	V. Müller
ES	Universitätsklinikum, Essen	A. Paul
FM	Klinikum der Johann-Wolfgang-Goethe-Universität, Frankfurt	C. Mönch
FR	Klinikum der Albert-Ludwigs-Universität, Freiburg	P. Pisarski
HB	Klinikum der Ruprecht-Karls-Universität, Heidelberg	J. Schmidt
HG	Universitäts-Krankenhaus Eppendorf, Hamburg	T. Tsui
HO	Klinikum der Medizinischen Hochschule, Hannover	F. Lehner
JE KI	Friedrich Schiller Universität, Jena	C. Malessa
KI KL	Klinikum der Christian-Albrechts-Universität, Kiel	F. Braun
KL KM	Klinik der Universität Köln-Lindenthal Kliniken der Stadt Köln gGmbH, Krankenhaus Merheim, Köln-Merheim, Köln	D. Stippel D. Stippel
LP	Klinikum der Universität, Leipzig	D. Supper D. Uhlmann
LU	Klinikum der Medizinischen Universität, Lübeck	M. Nitschke
MH	Klinikum Rechts der Isar der Technischen Universität, München	S. Thorban
ML	Klinikum Großhadern der Ludwig-Maximilians-Universität, München	H. Arbogast
MR	Klinikum Lahnberge der Philipps-Universität, Marburg	J. Hoyer
RB	Klinikum der Universität, Regensburg	S. Farkas
RO	Klinikum der Universität, Rostock	W. Schareck
TU	Klinikum der Eberhard-Karls-Universität, Tübingen	S. Nadalin
The Neth	nerlands	
GR	Academisch Ziekenhuis, Groningen	R. Ploeg
LB	Leids Universitair Medisch Centrum, Leiden	J. Ringers
Croatia		0.1.1
ZM	Clinical Hospital Merkur, Zagreb	S. Jadrijević
Clarrania		
<b>Slovenia</b> LO	University Medical Centre Liubliane	A. Tomazic
LO	University Medical Centre, Ljubljana	A. Iomazic
TICCLU	E TYDING I ABODATODIES	DELECATE
11330	E TYPING LABORATORIES	DELEGATE
Austria		
GA	Universitätsklinik, Abteilung für Transfusionsmedizin und Immunohämatologie, Graz	A. Helmberg
IB	Universitätsklinik, HLA Labor, Innsbruck	A. Mühlbacher
OL	Allgemeines Krankenhaus, Blutzentrale, Linz	C. Gabriel
OW	Allgemeines Krankenhaus, HLA Labor, Wels	R. Loizenbauer
WG	Institut für Blutgruppenserologie, Wien	W. Mayr

Rolaium		
Belgium	Heli contests 77 de est la Decembra Diseason Certa contesta de Lette	G. Damanat
BJ	Universitair Ziekenhuis Brussel, Bloedtransfusiecentrum Jette	C. Demanet
BR	Hôpital Erasme, Tissue typing laboratory, Bruxelles	M. Andrien
LA	Université de Louvain, Tissue typing laboratory, Bruxelles	D. Latinne
LG	Laboratoire des Groupes Sanguins, Liège	G. Maggipinto
ME	Rode Kruis Vlaanderen, Laboratory for Histocompatibility	M-P. Emonds
	& Immunogenetics (HILA), Mechelen	
Germany	y	
BC	Charité-Campus Virchow Klinikum der Humboldt Universität, Berlin	C. Schönemann
DU	Institut für Transplantationsdiagnostik und Zelltherapeutika, Düsseldorf	J. Rox
ER/NB	Institut für Klinische Immunologie, Erlangen	B. Spriewald
ES	Universitätsklinikum, Institut für Immunologie, Essen	F. Heinemann
FM	Immunohaematologie, Blutspendedienst Hessen, Frankfurt	C. Seidl
FR	Blutspendedienst, Labor für Gewebetypisierung, Freiburg	F. Emmerich
GI	Institut für Klinische Immunologie und Transfusionsmedizin, Gießen	S. Wienzek-Lischka
GO	Klinikum der Universität, HLA Labor, Göttingen	H. Neumeyer
HA	Institut für Phathologische Biochemie, Interdisziplinäres Typisierungslabor, Halle	W. Altermann
HB	Institut für Immunologie und Serologie, Heidelberg	C. Süsal
HG	Universitäts-Krankenhaus Eppendorf, HLA Labor, Hamburg	T. Binder
НО	Klinikum der Medizinischen Hochschule, Immunohaematologie/Blutbank, Hannover	M. Hallensleben
KI	Klinikum der Christian-Albrechts-Universität, HLA Labor, Kiel	M. Marget
KM		U. Bauerfeind
	Institut für Transfusionsmedizin, Köln-Merheim	
KS	Institut für Rechtsmedizin, Transplantationsimmunologie, Kaiserslautern	B. Thiele
LU	Institut für Immunologie und Transfusionsmedizin, Lübeck	M. Ziemann
ML	Kinderklinik der Ludwig-Maximilians-Universität, HLA Labor, München	T. Kauke
GMN	Institut für Transfusionsmedizin, Münster	R. Kelsch
MZ	Klinikum der Johannes-Gutenberg Universität, HLA Labor, Mainz	W. Hitzler
RO	Klinikum der Universität, Abteilung für Transfusionsmedizin, HLA Labor, Rostock	
ST	Klinikum Stuttgart, Zentralinstitut für Transfusionsmedizin und Blutspendedienst	A. Ender
TU	Klinikum der Eberhard-Karls-Universität, Abt. für Transfusionswesen	B. Schmid-Horch
	und Blutbank, Tübingen	
UL	DRK Blutspendezentrale, Transplantationsimmunologie, Ulm	J. Mytilineos
Luxemb		
LX	Centre Hospitalier, HLA Lab, Luxembourg	F. Hentges
The Neth	nerlands	
AW	Centraal Laboratorium Bloedtransfusiedienst, Nederlandse Rode Kruis, Amsterdam	N. Lardy
GR	Laboratorium voor transplantatie-immunologie, Groningen	S. Lems
LB	Leiden University Medical Centre, Immunohaematologie, Leiden	F. Claas
MS	Academisch Ziekenhuis, Laboratorium voor weefseltypering, Maastricht	M. Tilanus
NY	Academisch Ziekenhuis St. Radboud, Bloedtransfusiedienst, Nijmegen	W. Allebes
UT	Academisch Ziekenhuis, Bloedbank, Utrecht	H. Otten
Slovenia		
LO	Tissue Typing Centre, Blood Transfusion Centre, Ljubljana	B. Vidan-Jeras
Croatia		
RI	Clinical Hospital Center, Tissue Typing Laboratory, Rijeka	M. Fucak
ZA	University Clinical Hospital, Zagreb	V. Balog
ETRL	Eurotransplant Reference Laboratory, Leids Universitair Medisch Centrum,	F. Claas, I. Doxiadis
	Leiden, The Netherlands	

### **Foreword**

We hereby present to you the Annual Report of 2010 of the Eurotransplant (ET) International Foundation. The objective of this report is to be accountable for the activities and initiatives that were undertaken in 2010 in Austria, Belgium, Croatia, Germany, Luxembourg, the Netherlands and Slovenia towards the internal and external parties with a vested interest in the Foundation such as:

- our community of transplant professionals;
- the national transplant authorities;
- the national representatives of the transplant societies;
- the financing authorities;
- the donor hospitals;
- the transplant centers;
- the tissue typing laboratories;
- the employees of the ET office;.
- the European Union.

As always many people have worked systematically to achieve our mission to encourage organ transplantation and to reach the goals associated with its mission. Obviously the good work was done by doctors and nurses of the donor hospitals and the transplant centers, the tissue typers, the transplant coordinators and many others such as people working at the ET office. Our Advisory Committee members put a lot of time and effort in setting organ allocation standards.

ET conducted many activities in line with the steps as described in the ET Policy Plan 2009 - 2013. Our objectives were to address the organizational issues and risks that were identified in this plan in order to prepare our organization adequately for the future.

Finally, we hope – with support from all of you – to realize as many as possible challenging achievements in the year 2011!

Prof.Dr. Bruno Meiser President Dr. Axel Rahmel Medical Director Arie Oosterlee, MD MBA General Director

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# 1. Report of the Board and the central office of Stichting Eurotransplant International Foundation

E. Houwaart, W. van Bommel and A. Oosterlee, Eurotransplant International Foundation, the Netherlands

The Board of Stichting Eurotransplant International Foundation met on January 27, May 31 and September 22, 2010. Two Board members A were re-elected by the Assembly, Prof.Dr. Xavier Rogiers in the liver section and Prof.Dr. Wolfgang Schareck in the pancreas section. The Board took leave of Prof. Dr. Paul Schotsmans as Board member D in the field of ethics and welcomed Mr. Mike Bos, MSoc, as his successor.

In succession of Prof.Dr. Uwe Heemann, Prof.Dr. Bernhard Banas had been appointed as ad interim Board member B representing Germany. As of October 2010, Prof.Dr. Wolf Bechstein assumed the position of Board member B representing Germany.

#### 1.1 Report of the Eurotransplant Board

Adjustment of the allocation sequence

During its first meeting, the Board approved recommendation RET01.09. In 2009, there had been discussion on the position of the intestine in relation to the other organs in the allocation sequence. At this it had been decided to give priority to intestine over pancreas allocation and transplantation in pediatric organ donors only. During a joint meeting of the Board and the Advisory Committees it was concluded that procurement of intestine should have priority over pancreas for all donors. Whenever possible both organs should be transplanted, in adult donors it is expected that this will almost always be the case. To see whether this expectation will be met in the daily practice, it was decided to closely monitor the consequences of this change in the allocation sequence. As a consequence every case of a pancreas not transplanted in an intestine donor has to be reviewed in detail. The change of the allocation sequence was realized in 2010.

Adaptation of the Articles of Association

In the course of 2010, several decisions were taken by the Board which resulted in adjustment of the Articles of Association.

First of all, it was decided to adjust the selection procedure for candidate Board members A and B in such a way that:

- Candidates proposed for the position of a Board member B have to be approved by the majority of the current Board members for their position.
- Candidates for Board member A positions have to be approved by the majority of votes of the current Board members prior to the elections in the Assembly.

Next, the Board discussed and approved the proposal by the ET Liver Intestine Advisory Committee (ELIAC) to institute substitute members, who are to be appointed by the national transplant societies. They can step in at meetings in case the full member is not able to attend the meeting. Close cooperation between all members of Advisory Committees will be important. The experiences of the ELIAC with this new composition will be evaluated. In case of a positive evaluation, the institution of substitute members might be implemented in the other ET Advisory Committees.

Inspired by this ELIAC proposal, the Board decided to institute substitute Board members B, who will have to be appointed by the national transplant societies as well. The institution of substitute members would prevent the situation that decisions are made without the representation of an ET country.

Furthermore, it was decided to change the composition of the ET Ethics Committee (ETEC) in such a way that it is in line with the other ET Advisory Committees. This means that in the future the nationality of the chairman of the ETEC does not affect the composition.

During the last meeting in 2010, the Board expressed the wish to give the President to the Board a more independent position unrelated to a specific organ. In this regard, the Board approved the amendment of article 6.6:

The Board shall elect a President from the current or former members A for a period of three (3) years. If and when the Board appoints a member A as President, he renounces his capacity as member A and - with due observance of the provisions in article 6, paragraph 3 - a new member A will be elected by the Assembly.

Finally, the Board approved minor textual changes in the Articles of Association and the ET Basic Mandate in order to harmonize the wordings of the two documents. The up to date text of the Articles of Association is available on the ET website (www.eurotransplant.org).

Directive of the European Parliament and of the Council on standards of quality and safety of human organs intended for transplantation

On July 24, 2010 a round table meeting on the subject of the *EU Directive on standards of quality and safety of human organs intended for transplantation* took place in presence of the EU Commissioner for Health and Consumer Policy, Mr. John Dalli. The meeting was also attended by Mrs. Dr. Beate Merk, Bavarian State Minister for Justice, Prof. Robert Langer, Director of the Department of Transplantation and Surgery at the Semmelweis University in Budapest, Hungary, Dr. Hans Neft, Official of the Bavarian State Ministry of the Environment and Public Health and the Board members B. A report of this meeting was published in Newsletter 218.

#### Expansion of the ET region

The Board approved an accession procedure for new ET member countries. The earlier determined prerequisites for new ET member countries are included in this accession procedure, which can be found on the ET website.

Several consultations took place with three possible new ET member states: Estonia, Hungary and Serbia.

At the beginning of 2010, the progress of establishing cooperation with Estonia looked promising. Some issues still needed to be addressed in view of setting up cooperation, such as adaptation of the kidney allocation rules, logistics in regard to the shipment of organs and compliance to the prerequisites as set by ET for HLA laboratories and HLA typing. But the intention was to organize the spring Board meeting in Estonia and to sign a preliminary cooperation agreement.

Unfortunately, the establishment of cooperation with Estonia came to a halt due to political, procedural and logistical hindrances. The Board expressed the hope that the consultations will be resumed in the future.

With regard to Serbia, the Board was informed that the transplantation and donation situation in Serbia improved rapidly. The donation rates continuously increased. ET and Serbia exchanged 'Letters of Intent' to confirm the intentions of both parties to establish cooperation.

Negotiations with Hungary regarding a possible membership in ET are quite advanced. After some exploratory talks and visits back and forth, it is hoped that a preliminary cooperation agreement can be signed in the near future.

ET will continue setting up and maintaining relationships with other European countries and assess the possibility for collaboration.

#### Twinning agreement

A liver twinning agreement (model B) between Vienna, Austria and Budapest, Hungary became operational. In this regard, it was pointed out that the situation could occur that a liver, which is allocated to Vienna, will be transported to Budapest. This is due to the fact that selected patients defined in the twining agreement can be registered in the framework of this twinning agreement on the Vienna waiting list. If a transport of the patient to Vienna is not feasible the transplant will take place in Budapest and the donor organ will be transported to the Budapest transplant center for this purpose.

#### Belgian-Dutch patient migration issue

On several occasions, the Board discussed the issue of migration of Dutch patients to Belgium in order to get transplanted there. The Board was informed that ET is working on a solution together with the Belgian Ministry of Health and the involved transplant centers.

European FRamework for the EvaluaTion of Organ transplantS (EFRETOS) project

During all meetings, the Board was informed on the progress of the EFRETOS project of which ET is the project leader.

The project is progressing well and in the course of 2010 several Deliverables were completed. Two of the most challenging tasks had been setting definitions for the data sets of the future umbrella registry and to determine ways of data collection.

The project will come to an end in the course of 2011.

#### Registry activities

The Board discussed and adopted a registry policy, which was developed to give more structure to the registry activities by ET. The policy describes three kinds of data sets and ways to collect data. The aim of the three data sets and a corresponding flexible system for collecting and storing data is to reach a high data completeness.

Furthermore, the Board was informed on the progress of the development of a liver follow-up registry. A trial has been set up during the summer of 2010. The Board was informed that it is expected that an ET-wide new liver follow-up data base could be made available in 2011.

#### Planning & Control

Improvement and professionalization of the planning & control system, which was started in 2009, continued in 2010. The Directors presented a concept which contained clear procedures and information on prioritization of projects. The Board appreciated and accepted the concept.

In short the concept implies that the portfolio of projects is actively maintained on a daily basis by the program management and changes are quarterly decided on by the Directors. This is essential in order to manage expectations regarding the throughput time of new projects. Urgent requests or obligations from the Board or national authorities require reprioritization of existing plans.

#### **Finance**

Concerning the finances of ET, the Board was informed that the financial situation of ET improved significantly.

In the course of 2010, the Board approved the Annual Accounts 2009 as well as the budget proposal for 2011.

Housing issue & disentanglement of shared services

In view of the termination of the leasing agreement for the premises of ET, the Board discussed the housing issue. Furthermore, possible disentanglement of the services which ET shared with the Dutch Transplantation Foundation (NTS) and Bio Implant Services (BIS) was discussed.

One matter played a significant role in these discussions: since Bio Implant Services (BIS) merged with the Netherlands Bone bank Foundation, it became a tissue bank potentially with commercial interest (NBF-BIS, later on renamed BISLIFE).

In this regard, it was concluded that the cooperation with NBF-BIS could not be continued. In 2011, NBF-BIS will search for new premises and move out of the building in which the foundations have shared one floor in the past years.

At the same time, it was decided to start to disentangle the shared services between ET, NTS and NBF-BIS in order to underline the independency of the different foundations. The disentanglement was started in 2010 and will be completed in 2011.

#### *Friends of ET Foundation*

The Board of the Foundation had been reinforced with a new member, Prof. Dr. Yves Vanrenterghem.

During one of its meetings, the following goals for the Friends of ET Foundation were formulated:

- to support ET in strengthening its scientific image by supporting research in this area;
- to support ET by promoting and stimulating communication of the benefits of ET towards different stakeholders.

In addition, a list of research projects appropriate for fund raising was developed.

Henk Schippers Young Investigator (HSYI) Award 2010

Six applications from four different countries were received. The members of the HSYI Award committee unanimously declared Dr. Robin Vos, Leuven, Belgium, as the winner of the 2010 HSYI Award with his manuscript entitled: 'Bronchiolitis Obliterans Syndrome: new risk factors and role of azithromycin for treatment and prevention'.

#### 1.2 Report of the Eurotransplant office

In this section, ET accounts for its activities as well as the execution of its plans in 2010. Secondly, external developments relevant to ET are described. Finally, based on its midterm policy a framework is given for ET's 2011 plans.

Concerning the activities taken place in 2010 the following can be said about ET's basic services (see chapter 2.2 Basic Mandate).

Allocation services

24 hours a day, 7 days a week, 365 days a year allocation services are performed by our duty desk. The core services can be summarized as management of the waiting list of transplant patients and the allocation of donor organs to these patients.

The activities of the duty desk contributed to the results as shown in chapter 3 of this annual report. In 2010 a start was made with the reinforcement of the duty desk staff, aiming especially at increasing presence during the weekend shifts.

A major step forward was made in the documentation of allocation activities of the duty desk officers allowing online documentation of all allocation events and decisions. In addition software was developed and implemented that provides process support to the duty desk officer for complex steps in liver allocation. Another application developed and implemented in 2010 enables electronic data exchange between transplant centers and auditors related to high urgency requests for patients waiting for a heart transplant. This development helps to reduce the manual administrative workload for all partners involved.

#### Allocation development

ET's Advisory Committees developed various recommendations to the Board that were – after approval by the Board – subsequently forwarded to the different national authorities of the ET member countries for authorization (see chapter 1.5 'Recommendations'). In the following section some of the recommendations implemented in 2010 are highlighted due to their relevance to the ET community.

ETKAC: a recommendation that is expected to affect other organ allocation systems in the future is the extension of the definition of the 'pediatric' status. Since 2010 adolescents 'proven to be in maturation' still can be assigned with the pediatric status. Other changes addressing the special needs of pediatric patients are the uniform bonus of a 100 points for all 'pediatric' patients and the introduction of preferred allocation to pediatric patients in case of pediatric donors.

In 2010 a committee was formed consisting of representatives from the ETKAC and the TTAC with the task to evaluate and further develop where necessary the current ETKAS point system for kidney allocation.

TTAC: the recommendation to adopt the new HLA nomenclature according to WHO standards within ET was implemented in 2010.

OPC: position statements and recommendations were made on the following topics:

- traceability of discarded organs;
- improvement of reporting and tracing of organs in which transmissible risks were detected during or after procurement;
- electronic process support for transplant centers in accepting donor organ offers.

EThAC: both the heart and the lung allocation algorithms were modified. While the change in heart allocation is limited to a modification of the current allocations system, the lung allocation will be modified substantially introducing the 'lung allocation score' (LAS) for ranking the patients. This new allocation system considering both urgency and expected outcome of the lung transplantation will be introduced in Germany only. As this constitutes a major change, implementation is planned for the end of 2011.

ETEC: a discussion was started within the ETEC aiming at the development of an ethics charter for the ET community, in which ET's guiding ethical principles are laid down.

*ELIAC*: a recommendation developed by the ELIAC together with the ETKAC to tailor allocation of livers and kidneys to patients in need for both organs was implemented. This allows now either simultaneous liver and kidney or sequential kidney after liver transplantation depending on the best clinical option for the recipient. In addition a recommendation was developed making re-evaluation of HU liver requests every 14 days necessary. Details of the upcoming ET's liver follow-up registry were discussed in parallel to the first steps of development and implementation.

*EPAC*: adaptation of the pancreas islet allocation was introduced, as in Germany pancreas islets are no longer considered as organs but as tissue. In addition the international Special Urgency status for patients waiting for pancreatic islets was eliminated.

#### External networking

#### • Service Level Agreement

The Dutch National Transplant authority (NTS) and ET gained experience in managing their cooperation through a detailed service level agreement, in which services provided by ET to NTS were evaluated every three months by discussing predefined allocation statistics and other management information related i.e. to the quality of performed allocation services and also relevant national developments.

#### • Eurotransplant Council

ET's national authorities periodically meet a delegation of ET's Board as well as its Directors. In 2010, discussions took place regarding ET's basic mandate and services. National authorities expressed their interest in ET's expansion policy. This discussion resulted in the development and implementation of an accession procedure for new member states in the process of which several risk assessments have to be performed.

#### • Expert to European Commission

ET fulfilled its function towards the EC as expert in the field of international organ exchange during the development and authorization process of Directive 2010/53/EC, on quality and safety of organ donation and transplantation. The authorized EU Directive will have to be implemented in the member states of ET by mid 2012.

#### Supporting processes

#### Financial management

ET ended the financial year with a modest surplus of approximately  $\in$  60.000. All new positions related to ET's policy plan, milestone 1-3 have now been filled, marking the last steps of the implementation of this plan.

#### Shared services:

As of December 31, 2010, the shared service human resource management (HRM) ceased to exist. ET, NTS and BISLIFE created HRM functions for their own organizations as of January 1, 2011. In 2010 BISLIFE was willing to oblige ET's and NTS' request of leaving the Eurocenter building as of October 1, 2011 thus enabling the two remaining organizations to occupy a moderately larger office space in the future.

#### IT functionality

The ENIS system and other applications were modified or newly developed in order to implement all the IT functionality needed for the centers, the HLA laboratories and the ET office related to the above described recommendations. Many of the improvements in the allocation and documentation process within ET described above are closely linked to the respective IT applications that were adapted accordingly.

In addition a web based follow-up data entry application for liver transplants was implemented as a pilot for the future ET follow-up registry.

#### 1.3 Future policy

The ET Directors regard the following external developments relevant for policies and activities that are planned for 2011:

- Increasing independence of ET towards BISLIFE and NTS concerning shared services;
- Candidate countries expressing their wish to become member of ET;
- Increasing diversity and complexity;
  - of national allocation rules and country specific services;
  - due to increasing role of national authorities;
- Implementation of EU Directive within ET member states;
- Finalization of EFRETOS-project.

#### Framework for activities in 2011

Based on the ET policy plan 2009 - 2013 as well as on current external developments, the activities and plans of ET for 2011 will be positioned within the following framework:

- Increasing independence from the BISLIFE foundation as well as from the Dutch National Transplant authority (NTS):
  - 1. separation of shared services finance and accounting;
  - 2. separation of IT systems of ET, NTS and BISLIFE;
  - 3. upgrading housing facilities.
- Assessing of candidate countries applying for membership of ET :
  - possible start of accession procedure with a new candidate member state
- Responding to increasing diversity and complexity:
  - 1. strengthening of planning and control systems;
  - 2. strengthening the cooperation and communication within our community:
  - enhancing a harmonized implementation of the EU Directive on quality and safety of organ donation and transplantation within the ET member states:
  - formalization of existing relationship between ET and several of its member states [contracts and service level agreements];
  - commencement of dialogue with member states on consequences of diversification of allocation rules; providing insight on costs and benefits;
  - enhancing quality of transplant follow-up registry;
  - assessment and ways of enhancing communication within ET community through use social media tools; initiation of pilot project with specific user group within ET community.
- Developing and enhancing ET's IT systems:
  - · develop future vision on IT systems and IT architecture;
- Finalization of the EFRETOS project.

#### 1.4 Quality Assurance & Safety

#### General

In September 2010 a re-certification of the organization took place according to the ISO 9001:2008 standards. ET was granted the Quality Certificate. Provided that the same quality of work will be maintained, the Quality Certificate will expire by December 2013.

After the re-certification ET continued to search for possibilities for further improvement of its internal working processes.

A next step in developing the quality management system has been taken by describing processes and creating insight and control on a more aggregated level. This step is expected to be realized in the course of 2011, but will be a maintaining point of interest and subject to internal auditing.

ET's quality manual was revised and restructured, making it more accessible for its users. This development was also related to the further enhancement of ET's web based content management system.

In 2010 a start has been made with preparing the implementation of a new tool to report and assess incidents. This will help and allow us to make in-depth analysis about the root-course of incidents and make sure we will take the right corrective actions and whenever possible take preventive measures in the future.

Diversification in and the increase of country specific regulations are considered factors that increase the risk of incidents occurring. Further automation of the matching process is expected to reduce the risk of human errors. Furthermore actions have been taken to improve the process control regarding the matching process in order to reduce risks and to create a better awareness on potential risks. Ongoing implementation and focus on continuous improvement on this subject will be a theme for quality assurance in 2011.

#### Incidents

In 2010 a decline in the number of incidents was seen. The table below shows that this decline is seen in all categories of incidents. The majority of the incidents are related to administrative follow-up issues. One other general theme on (near) incidents is communication. These two theme's cover over 75% of all the incidents.

Reported near-incidents and incidents							
With an         2010         2009         200							
Internal cause	285	347	289				
External cause	180	244	236				
Internal & External cause	13	20	17				
Total	478	611	542				

In 2011 an electronic reporting of incidents will be made possible. This system is expected to enable more systematic analysis and to facilitate the generation of standard reports. The (near) incident reporting system will not only be used by the allocation department but will be deployed within the whole organization of ET.

#### **Complaints**

In 2010 twenty-one complaints were registered which all concerned third parties complaining about each other to ET. These complaints were passed on to national authorities, hospitals, etc. involved.

#### Audits by third parties

As part of several agreements with the member states of Eurotransplant audits by third parties were done to assess the service level. Both the audit of the Dutch Transplantation Foundation (NTS) and the investigation by the Prüfungskommission of the German Bundesärztekammer were considered appropriate.

#### Internal audits

In 2010 internal auditors were trained to improve their knowledge of quality assurance, the ISO 9001:2008 standard, and to train skills in internal auditing. A change has been made regarding the internal audit process to empower the organizational learning and provide more fact based audit reports as input for improvement. Outcomes of internal audits in 2010 were satisfactory and provided input for improvement and learning as requested.

#### 1.5 Advisory Committees

The Board discussions, among other issues, concentrated on the proposed recommendations by the various Advisory Committees. Obviously, the work done in these committees contributes to improve the core of the business, namely: state of the art allocation. The Board is grateful for all the time and efforts the Committee members have provided to this important part of the work of ET.

ET positions itself as an independent scientifically oriented organization. Various organ Advisory Committees, of which the chairmen hold a position in the Board of ET, meet several times a year and discuss the impact of new scientific developments in the field of organ allocation, organ procurement as well as transplant ethics. Their conclusions are proposed as recommendations to the Board of ET. In the respective member states national transplant authorities authorize recommendations approved by the ET Board, sometimes with slight adaptations to the national circumstances. A complete list of all recommendations approved in 2010 is published under section 1.6 of this chapter.

Through this practice transplant regulations throughout ET have a great degree of uniformity.

In 2010, the various Advisory Committees met 19 times and submitted 33 recommendations; all of them were approved by the Board.

The composition of the various Advisory Committees as per December 31, 2010 was as follows:

#### KIDNEY ADVISORY COMMITTEE (ETKAC)

Name	As of	Remarks
Prof.Dr. U. Heemann, Munich	05.2009	chairman, representative Board
Prof.Dr. F. Mühlbacher, Vienna	09.1994	representative Austria
Prof.Dr. A. Rosenkranz, Graz	01.2008	representative Austria
Prof.Dr. J. Pasini, Zagreb	04.2008	representative Croatia
Dr. K. Wissing, Brussels (BJ)	01.2004	representative Belgium
Dr. P. Peeters, Ghent	02.2006	representative Belgium
Prof.Dr. U. Kunzendorf, Kiel	01.2002	representative Germany
Prof.Dr. B. Krämer, Mannheim	01.2006	representative Germany
Prof.Dr. O. Witzke, Essen	01.2010	representative Germany
Dr. P. Pisarski, Freiburg	01.2010	representative Germany
Dr. P. Duhoux, Luxembourg	09.1994	representative Luxembourg
Dr. J. Homan van der Heide, Groningen	04.2005	representative the Netherlands
Dr. L. Hilbrands, Nijmegen	01.2006	representative the Netherlands
Dr. M. Arnol, Ljubljana	01.2006	representative Slovenia
Prof.Dr. F.H.J. Claas, Leiden (ETRL)	09.1994	representative TT Assembly
Dr. J. de Boer, Eurotransplant	12.2005	secretary

#### LIVER INTESTINE ADVISORY COMMITTEE (ELIAC)

Name	As of	Remarks
Prof.Dr. R. Rogiers, Ghent	09.2007	chairman, representative Board
Prof.Dr. R. Steininger, Vienna	11.2004	representative Austria
Dr. O. Detry, Liège	01.2000	representative Belgium
Prof.Dr. P. Michielsen, Antwerp	01.2008	representative Belgium
Dr. B. Kocman, Zagreb	04.2008	representative Croatia
Prof.Dr. P. Neuhaus, Berlin	09.1994	representative Germany
Prof.Dr. Ch. Strassburg, Hanover	01.2010	representative Germany
Prof.Dr. H. Schlitt, Regensburg	01.2010	representative Germany
Prof.Dr. R. Porte, Groningen	01.2006	representative the Netherlands
Prof.Dr. S. Marković, Ljubljana	06.2010	representative Slovenia
Dr. A. Rahmel, Eurotransplant	02.2007	secretary a.i.

#### PANCREAS ADVISORY COMMITTEE (EPAC)

Name	As of	Remarks
Prof.Dr. W. Schareck, Rostock	12.2005	chairman, representative Board
Prof.Dr. P. Hengster, Innsbruck	11.2004	representative Austria
Prof.Dr. P. Gillard, Leuven	03.2010	representative Belgium
Dr. S. Jadrijević, Zagreb	04.2008	representative Croatia
Dr. A. Kahl, Berlin	01.2006	representative Germany
Dr. H. Arbogast, Munich	03.2009	representative Germany
Dr. S. Farkas, Regensburg	01.2010	representative Germany
Dr. J. Ringers, Leiden	04.1998	representative the Netherlands
Dr. A. Tomazič	01.2007	representative Slovenia
Prof.Dr. F.H.J. Claas, Leiden (ETRL)	08.1994	representative TT Assembly
Dr. K. Kovac Eurotransplant	10.2009	secretary

#### THORACIC ADVISORY COMMITTEE (EThAC)

Name	As of	Remarks
Prof.Dr. G. Laufer, Vienna	10.2001	chairman, representative Board
Prof.Dr. A. Wasler, Graz	11.2001	representative Austria
Prof.Dr. A. Zuckermann, Vienna	01.2008	representative Austria
Prof.Dr. P. Evrard, Brussels (LA)	01.2004	representative Belgium
Prof.Dr. M. Depauw, Ghent	01.2006	representative Belgium
Prof.Dr. Z. Sutlić, Zagreb	04.2008	representative Croatia
Dr. P. Überfuhr, Munich	02.2006	representative Germany
Dr. U. Schulz, Bad Oeynhausen	05.2006	representative Germany
Prof.Dr. H. Reichenspurner, Hamburg	02.2008	representative Germany
Prof.Dr. H. Bittner, Leipzig	02.2008	representative Germany
Dr. W. van der Bij, Groningen	06.2001	representative the Netherlands
Dr. N. de Jonge, Utrecht	01.2004	representative the Netherlands
Prof.Dr. I. Kneževič, Ljubljana	07.2007	representative Slovenia
Dr. J. Smits, Eurotransplant	07.2002	secretary

#### **ORGAN PROCUREMENT COMMITTEE (OPC)**

Name	As of	Remarks
Prof.Dr. D. Ysebaert, Antwerp	10.2005	chairman, representative Board
Prof.Dr. G. Berlakovich, Vienna	11.2009	representative Austria
Ms. G. Van Beeumen, Antwerp	02.2006	representative Belgium
Dr. Z. Zupan, Rijeka	04.2008	representative Croatia
Dr. N. Frühauf, Hanover	01.2008	representative DSO Germany
Prof.Dr. E. Klar, Rostock	01.2008	representative Germany
Ms. J. Hagenaars, Rotterdam	04.2008	representative the Netherlands
Dr. B. Trotovšek, Ljubljana	01.2008	representative Slovenia
Prof.Dr. F. Mühlbacher, Vienna	11.2009	representative ETKAC
Dr. O. Detry, Liège	01.2000	representative ELIAC
Dr. J. Ringers, Leiden	04.2002	representative EPAC
Prof.Dr. A. Zuckermann, Vienna	04.2008	representative EThAC
Prof.Dr. I. Doxiadis, Leiden (ETRL)	02.1998	representative TTAC
Dr. I. Tieken, Eurotransplant	09.2007	secretary

#### **INFORMATION SERVICES WORKING GROUP (ISWG)**

Name	As of	Remarks
Prof.Dr. F. Mühlbacher, Vienna	09.1995	chairman, representative Board + ETKAC
Dr. R. Kramar, Wels	09.1995	representative Austria
Mr.W. Van Donink, Antwerp	10.2009	representative Belgium
Dr. M. Schenk, Tübingen	01.2008	representative Germany
Dr. A. Hoitsma, Nijmegen	09.1995	representative the Netherlands
Dr. G. Čebulc, Ljubljana	05.2010	representative Slovenia
Vacancy		representative ELIAC
Dr. W. van der Bij, Groningen	05.2002	representative EThAC
Dr. S. Lems, Groningen	06.1996	representative TTAC
Drs. T. Valkering, Eurotransplant	05.2008	secretary

#### **TISSUE TYPING ADVISORY COMMITTEE (TTAC)**

Name	As of	Remarks
Prof.Dr. F.H.J. Claas, Leiden (ETRL)	09.1995	chairman, representative Board
Prof.Dr. W. Mayr, Vienna	01.2008	representative Austria
Prof.Dr. M-P. Emonds, Leuven	02.2006	representative Belgium
Prof.Dr. R. Zunec, Zagreb	04.2008	representative Croatia
Dr. C. Schönemann, Berlin	11.2002	representative Germany
Dr. J. Mytilineos, Ulm	01.2006	representative Germany
Dr. F. Hentges, Luxembourg	09.1995	representative Luxembourg
Dr. S. Lems, Groningen	09.1995	representative the Netherlands
Dr. B. Vidan Jeras, Ljubljana	12.1999	representative Slovenia
Prof.Dr. I.I.N. Doxiadis, Leiden (ETRL)	09.1995	secretary

#### **ETHICS COMMITTEE (EC)**

Name	As of	Remarks
Drs. M. Bos, The Hague	06.2010	chairman, representative Board
Prof.Dr. W. Schaupp, Vienna	04.1998	representative Austria
Prof.Dr. I. Kerremans, Ghent	03.2004	representative Belgium
Dr. J. Stoić Brezak, Zagreb	04.2008	representative Croatia
Prof.Dr. R. Viebahn, Bochum	11.2006	representative Germany
Vacancy		representative the Netherlands
Dr. D. Rigler Pleterski, Ljubljana	01.2000	representative Slovenia
Dr. A. Rahmel, Eurotransplant	12.2006	secretary a.i.

#### **FINANCIAL COMMITTEE (FC)**

Name	As of	Remarks
Prof.Dr. A.P.W.P. van Montfort, Utrecht	05,2003	chairman, representative Board

#### 1.6 Recommendations approved

In 2010, the following recommendations were submitted by the Advisory Committees and approved by the Board of Eurotransplant International Foundation.

#### **Kidney Advisory Committee (ETKAC)**

#### **RKAC01.10**

In addition to the option of performing a combined liver-kidney transplant the option of a kidney-after-liver transplant should be made possible in selected cases.

If a recipient is listed for a liver and kidney transplant, the center can decide to perform a simultaneous liver-kidney-transplant or a kidney-after-liver transplant. In the latter case the recipient gets 500 extra points in the kidney allocation system (ETKAS) during the period of 90 to 360 days after the liver-only transplant, under the condition that the creatinine clearance is <15 ml/min within this period.

#### **RKAC02.10**

As the basic idea of RKAC05.06, giving priority to recipients still in maturation after an early failed transplant, is included in RKAC02.09, the ETKAC recommends the Board to abandon RKAC05.06.

#### **RKAC05.06**

Children either on dialysis or registered on the Eurotransplant waiting list before the age of 16, should keep their pediatric status until their first successful graft, irrespective of their age at the time of an offer. In case of a pre-emptive registration on the kidney waiting list, the pediatric status will end on the 17<sup>th</sup> birthday, if dialysis is not initiated before this date.

#### **RKAC02.09**

Children either on dialysis or registered on the Eurotransplant waiting list before the age of 16, should be granted a pediatric status until their first successful graft, irrespective of their age at the time of an offer. In case of a pre-emptive registration on the kidney waiting list, the pediatric status will end on the 17<sup>th</sup> birthday, if dialysis is not initiated before this date.

Recipients on dialysis or registered on the waiting list after their 16<sup>th</sup> birthday will be granted the pediatric status provided that they are proven to be in maturation. This proof has to be delivered by the transplant center by a report of a competent radiologist or pediatric endocrinologist on an X-ray of the left hand that has to be sent to and judged on by two independent auditors appointed by Eurotransplant. In case of a split decision a third auditor has to be consulted for a final decision.

The pediatric status will be withdrawn when dialysis does not start within one year after registration, but will be restored when the recipient fulfils above criteria for maturation at time of institution of dialysis.

The effect of these changes should be evaluated after 2 years.

#### **RKAC03.10**

If one or more consecutive living donor kidney transplants fail, requiring maintenance dialysis and the recipient is re-entered on the waiting list, waiting time acquired before the first failed living donor transplant will be returned.

#### **Liver Intestine Advisory Committee (ELIAC)**

#### **RLAC05.09\***

HU status for liver transplant recipients has to be re-evaluated every 14 days. At the time of re-evaluation the number, and if requested, also the details of a turned down liver organ offer in the preceding 14 days have to be reported to the auditors. Patients in HU status who become (temporarily) not transplantable have to be reported as NT and will at that moment loose the HU status and the so far accumulated HU days.

#### **RLAC01.10**

With reference to the ET non-resident policy, as published on the ET website, the 5% rule is not applicable for intestine patients with understanding that these patients are not allowed to be registered on the ET waiting list.

#### **RLAC02.10**

In case a liver is allocated to a recipient outside the donor country within ET for a HU patient and later it turns out that this patient is not-transplantable with this liver but the liver is transplanted into an elective patient in the recipient country, this shall nevertheless open up an obligation to send back a liver from the recipient country to the donor country.

#### **RLAC03.10**

At time of listing and with every MELD update the following two additional lab values have to be reported to Eurotransplant:

- 1. Serum Ferritin
- 2. Serum Cholinesterase.

(Rationale: Recent data indicate that these lab values could increase the predictive value of MELD especially with regard to outcome after liver transplantation. These lab values might therefore be helpful in further improving liver allocation via a modified MELD-score.)

#### **RLAC04.10**

Eurotransplant shall report twice a year on the completeness of liver follow-up data delivery to Eurotransplant in the ET Newsletter (mentioning the centers that did not comply de nomine).

(Rationale: This way it is expected that follow-up data delivery will become more complete with relatively small effort.)

#### **Pancreas Advisory Committee (EPAC)**

#### **RPAC01.10**

In Germany pancreata that cannot be allocated via standard allocation and all pancreata from donors >50 years of age and with a BMI >30 are allocated via rescue allocation. If a pancreas allocated via rescue allocation turns out to be not suitable for vascularized organ transplantation, it can be used for islet transplantation. If the pancreas is already in a center that also performs islet transplantation, it can be directly forwarded to this islet program. If this center has no islet program, the pancreas should be forwarded to the nearest islet program. The islet program selects from its waiting list the patient best suited for transplantation after islet isolation.

ET maintains a service of documenting the waiting list for islet transplant recipients. The islet transplant programs will be provided with their waiting list to facilitate the selection of the best suited islet recipient. For sake of proper documentation, the islet transplant programs are obliged to register every islet transplantation in the ET computer program ENIS.

RPAC01.10 will be re-evaluated one year after implementation.

#### **RPAC02.10**

The SU status for pancreas islet transplantation limited to a national level can be re-instituted upon request of an ET member country. The pancreas islet SU criteria have to be defined by the respective national organ specific Advisory Committee.

#### **Thoracic Advisory Committee (EThAC)**

#### RThAC01.10

A pediatric recipient is a heart or heart+lung transplant candidate, who at time of listing is under the age of 16 years or proven to be in maturation. This proof has to be delivered by the transplant center by a report from a competent radiologist or pediatric endocrinologist on an X-ray of the left hand, not older than 3 months and judged upon by two independent auditors appointed by Eurotransplant. In case of a split decision, a third auditor has to be consulted for a final decision. In order to keep the pediatric status, the proof of immaturity has to be updated yearly as long as the recipient is still on the waiting list.

#### **RThAC02.10**

All pediatric heart or heart+lung transplant candidates are granted the HU status, as soon as they are registered on the waiting list in an active urgency.

#### **RThAC03.10**

Within each tier of HU patients the hospitalized pediatric patients will have priority over all other HU patients.

#### **RThAC04.10**

AB0 incompatible heart or heart+lung transplantation is possible for patients under the age of 2 years, provided that:

- a protocol approved by the local ethics committee has been submitted by the transplant center.
- within Eurotransplant there is no suitable AB0 blood group compatible recipient available at the time of the organ allocation.

#### **RThAC05.10**

The duration of HU status for international HU heart or heart+lung patients will be extended from 7 days to 8 weeks. If patients on HU-status are temporarily downgraded to status T and/or NT for no longer than 28 days, and are then reassigned a HU status their previous HU time will be returned.

#### RThAC06.10

All donor hearts or heart+lung blocks reported by Germany will be allocated via the scheme described in RThAC 02.05 where the following adaptations will be introduced:

- Introduction of a new main rank tier, i.e. hospitalized children are ranked above other High Urgency (HU) patients;
- All children have the HU status;
- Abolishment of the Urgency (U) status;
- Introduction of a new AB0 blood group tier;
- AB0 blood group incompatibility will be allowed for patients under 2-years of age;
- Introduction of a new sub rank tier, i.e. highly immunized patients;
- A new order of the sub rank tiers;
- Change of the rule for the sequence HU- (T or NT)- HU;
- Extension duration HU national from 7 days to 8 weeks;
- Introduction of a new definition of a child recipient.

#### RThAC07.10

An objection to an auditor's decision concerning an HU or U request and/or reevaluation will be considered if the objection is accompanied with new information on the patient or in case auditors did not take all information into account during their decision making.

#### **RThAC08.10**

Patients with a high LAS from countries with a negative total balance (with the donor country) will come on top of the donor country's waiting list ranked by LAS. Then patients with a low LAS from countries with a negative total balance (with the donor country) are sorted by LAS together with the national patients.

#### **RThAC09.10**

Patients with a high LAS will be reevaluated every 14 days based on current original lab and blood gas data.

#### RThAC10.10

Within each main rank tier, all international patients will be ranked according to the lung allocation score.

#### RThAC11.10

Lungs will be allocated first according to the modified AB0 compatible rule\* and then according to the AB0 compatible rule.

\* Modified AB0 compatible rule: AB0-0 to AB0-0 and –B; AB0-A to AB0-A and –AB; AB0-B to AB0-B; AB0-AB to AB0-AB.

#### **RThAC12.10**

All children <12 years actively listed on the lung transplant waiting list will be assigned a LAS = 100.

#### RThAC13.10

The pediatric donor:recipient age matching for international patients will be done according to the LAS scheme.

#### **Organ Procurement Committee (OPC)**

#### ROPC04.08 rephrased\*

- a. If a procured organ cannot be transplanted, it is mandatory to contact ET directly and only with approval of ET this organ can be discarded;
- b. Discarding an organ is only possible in four ways:
- 1. Allocation is changed towards donation of cells or tissues in case of consent.
- 2. Use for research upon consent and in the donor country only; otherwise the organ will have to be cremated or returned to the donor country. A confirmation report is needed.
- 3. Send the organ for cremation; a confirmation report is needed;
- 4. Leave the organ with the donor.
- c. The confirmation report of cremation or research should be forwarded to Eurotransplant. Eurotransplant is responsible for the documentation of these reports of discarded organs.

#### **ROPC01.10**

According to the guidelines UN3373, Biological Substance, category B the packaging of organs and blood/tissue samples is recommended to consist of the following three components:

- 1. a leak-proof primary receptacle(s);
- 2. a leak-proof secondary packaging; and
- 3. an outer packaging of adequate strength for its capacity, mass and intended use, and with at least one surface having minimum dimensions of  $100 \text{ mm} \times 100 \text{ mm}$ .

#### **ROPC02.10**

- A. It is the responsibility of the procurement and the transplant centers to immediately report to Eurotransplant all known transmittable diseases (e.g. infection, malignancy etc.) that might originate from the donor or the donation procedure.
- B. Eurotransplant must inform all involved recipient and donor parties (e.g. transplant centers, coordinators, tissue typing centers etc.) as soon as the information from the donor center is available.
- C. In a later phase Eurotransplant will inform the competent authorities about the events.

#### **ROPC03.10**

- A. As of July 1, 2011 exchange of donor information via the web-based application 'donordata.eu' (or similar web-based applications in use within the ET member countries) is mandatory.
- B. In exceptional cases, donor information is allowed to be provided in other ways (e.g. by fax). Exceptional cases will only be considered as such if they are included in the 'donordata.eu exceptional case description'.

A description of exceptional cases will be established prior to implementation of ROPC03.10 (e.g. technical calamities).

#### **Information Services Working Group (ISWG)**

#### **RCSWG01.10**

The Computer Services Working Group (CSWG) recommends to change its name into Information Services Working Group (ISWG). Each organ specific Advisory Committee will be represented in the ISWG by a member who is familiar with information, especially registry issues. In addition it should be aimed at having one representative from each ET member country.

#### **Tissue Typing Advisory Committee (TTAC)**

#### **RTTAC01.10**

In order to have a uniform and reliable parameter for sensitization in ET, the v-PRA value (based on the phenotype frequency of the unacceptable mismatches) will replace the %-PRA value.

#### **RTTAC02.10**

Centers receiving organs via the AM program must report additional follow-up data of their AM transplants for evaluation and/or improvement of the program. The follow-up must include number and kind of rejection episodes in the first 180 days, and one year patient and graft survival. The data will be presented to the community on an annual basis.

#### **Financial Committee (FC)**

#### **RFC01.10**

The Financial Committee recommends the Board to approve the annual accounts 2009.

#### RFC02.10

The Financial Committee recommends the Board to approve the budget proposal 2011.

# 2. Basic principles of the Eurotransplant community

This chapter gives some general information on the ET mission, on the services we provide and on the relationship with our member states. The Eurotransplant International Foundation is responsible for the mediation and allocation of organ donation procedures in Austria, Belgium, Croatia, Germany, Luxembourg, the Netherlands and Slovenia. In this international collaborative framework, the participants include all transplant hospitals, tissue typing laboratories and hospitals where organ donations take place. The ET region numbers well over 124,5 million.

In the following paragraphs the following topics are covered:

- 1. ET's mission, aims and goals;
- 2. The basic services that ET provides to its member states as laid down in ET's Basic Mandate.
- 3. Formal support to ET by the ministries of Health of ET's member states: the so-called 'Joint Declaration'.

#### 2.1 Eurotransplant mission statement

Eurotransplant is a non-profit service organization for donation and transplantation through the collaborating transplant programs within the organization. Eurotransplant provides services to transplant centers and their associated tissue typing laboratories and donor hospitals in its member states.

- To achieve its mission Eurotransplant has set the following goals:
- To achieve an optimal use of available donor organs and tissues;
- To secure a transparent, objective and fair allocation system, based upon medical and ethical criteria;
- To assess the importance of factors which have the greatest influence on waiting list mortality and transplant results;
- To support donor procurement to increase the supply of donor organs and tissues;
- To further improve the results of transplantation through scientific research and to publish and present these results;
- Promotion, support and coordination of organ donation and transplantation in the broadest sense of terms.

The following document was agreed upon by all National Authorities of Eurotransplant. It describes that basic services that every member state expects Eurotransplant to provide. The budget for Eurotransplant's basic services is guaranteed by all National Authorities. Specific wishes from member states are often laid down in country specific Service Level Agreements.

#### 2.2 Basic Mandate of Eurotransplant

The Basic Mandate of Eurotransplant includes the following elements:

- 1. Assignment
- 2. Services
- 3. Support

#### 1. Assignment

#### The process

ET's primary assignment is to coordinate the international exchange and allocation of donor organs. To carry out this assignment ET performs activities related to the whole process of organ donation and transplantation. The process includes the following responsibilities:

- Coordination of donor procedures and support of donor procurement;
- Maintaining a waiting list;
- Receiving donor offers;
- Providing central support and advice for the transplant centers, tissue typing laboratories and donor hospitals;
- International coordination of transportation;
- Allocating the organs;
- Following-up of the transplantation;
- Evaluating the transplantation results;
- Improving the results of transplantation through scientific research.

#### Note

#### The environment

ET interacts with various stakeholders such as patients, national regulating transplant authorities, national representatives of the transplant societies, financing authorities, donor hospitals, transplant centers, tissue typing laboratories, other allocation organizations, scientific societies and the employees of the Leiden office.

ET allocates organs based on rules set by national and international legislation. ET is in continuous interaction with the outside world to analyze and further develop the allocation policy.

ET delivers its services in a social and political framework which demands transparency. Therefore comprehensive quality and patient safety management systems will be in place and maintained.

#### Competences of the organization

To perform its mandate, the organization of ET has to be in a position to:

- 1. Perform allocation in a 24-hour service framework
- 2. Continuously update and improve the process of allocation
- 3. Establish and maintain an external network
- 4. Report on and account for the outcome of its services

#### This means the organization shall:

- Operate and sustain its services continuously;
- Manage an influx of complex information from different sources. This incoming information varies in its format, structure and content:
- Perform the activities to realize it's international and external orientation;
- Maintain close communication with regulatory and legislative authorities nationally as well as at European Union and international level;
- Implement, comply with and support the development of (inter)national rules and regulations;
- Disseminate the knowledge of ET concerning allocation;
- Participate in international cooperation and the European framework on topics as standards/best practices, issuing of rules, shortage of organs and international harmonization;
- Coordinate international cooperation;
- Gather data in order to perform the allocation process, to report on outcome of the process, to account for the outcome and in order to further develop the process. The analyses have to be within the framework of EU and national legislation.

#### 2. Services

To be able to perform its mandate ET sustains an efficient, effective and proportionate organization. ET follows the relevant ISO standards (ref. ISO 9001:2000). Its activities are aimed at realizing effective services with adequate quality regarding issues such as patient-safety, accuracy, speed and efficiency.

Important aspects of ET's quality system involve the ET Reference Laboratory (ETRL) and the audit system for evaluating the High Urgent status of the patients on the waiting list.

The main mandated tasks performed by ET are described below.

#### Allocation services

To be able to perform the services 24 hours a day, seven days a week ET maintains a staff of medical doctors, an allocation service desk and a medical administration function.

To support this primary process supportive services are required in the area of housing, facilities, information and communication.

In realizing continuity of its services ET complies with all relevant rules and regulations concerning labor conditions in the Netherlands.

The ET Reference Laboratory provides 24 hours a day, 7 days a week immunological support to the allocation office and to the transplant centers. The ETRL is responsible for the proficiency testing of all histocompatibility laboratories associated to ET and the evaluation of highly immunized patients to be included in the acceptable mismatch program.

The development of ET's allocation processes is driven by the evaluation of post transplant results. For this purpose ET sustains a transplant follow-up registry.

#### Development of allocation process

To continuously update and improve the allocation process ET develops and maintains a network of experts. Because the allocation process differs per organ on allocation rules and specific details, the network represents these different scientific areas. The fields of experience relate to the different organs and ET Advisory Committees are formed along these lines: kidney, thoracic, liver

and intestine, pancreas. Also on more general topics committees are organized: on organ procurement, tissue typing and ethical issues. To advise on supporting functions there are also Advisory Committees on finance and information services.

All of these committees meet regularly. The ET staff prepares and conducts the meetings and guides recommendations through the organization and the governance structure.

ET takes care of checking the recommendations on their compliance with the different national and international legislative and regulatory frameworks that are concerned.

ET actively joins in European projects related to organ transplantation. It is also actively involved in national and international regulatory projects. In this way ET works at the improvement of its services, at standardization of processes and methods and at setting as well as learning from, best practices of organizations outside the ET network.

#### External networking

ET performs activities to establish and maintain international relations that can help ET to improve the allocation process, but also get understanding of, and support for its activities.

Therefore ET organizes twice a year congresses focusing on the professional, scientific, and political communities in the field of organ transplantation within its member states. These congresses are held in autumn and winter in a way that enhances networking between the participants and the staff of ET, thus contributing to mutual trust and understanding within the organization. ET furthermore issues a Newsletter to inform its stakeholders on the recommendations made by the ET Board. ET has also developed a website to inform its stakeholders.

On behalf of its members ET actively makes itself known to, and establishes connections with, the European Community and its representatives who are acting in the field of organ transplantation and issuing rules.

In order to enable benchmarking as well as identification and dissemination of best practices, ET sustains an external network with international organ exchange organizations in the area of donation and transplantation.

#### Reporting and accounting

ET accounts for the results of its services in various ways and with various reports. They make standard reports on all kind of topics concerning the transplantation process. These reports are made available to the members and the outside world via the ET public website or the member site (extranet) or via alternate routes agreed upon with those concerned.

ET also disseminates the services and their results through (co)publishing and giving lectures on congresses and meetings.

Every year ET reports on the preceding year in an annual report in which account is given, both on the allocation process as well as the financial developments. In the annual report account is also given for the realization of the general policy in the field of allocation and its supportive processes.

Every year ET sees to it that the financial accounts of the preceding year are approved by an external auditor.

To coordinate all external contacts ET develops and maintains a communication policy and actively pursues this policy.

#### 3. Support

To facilitate the process of allocation and the related processes and thereby the organization and people working in it, ET organizes several supportive processes. These processes are detailed below in the sub-sections *Clearing house, Information and quality* and *Other*.

#### Clearing house

To facilitate the international exchange of organs, ET supports the centers with international transport logistics. ET fulfills and sustains a clearing house function concerning the settlements of costs between the donating and receiving centers in the event of international organ exchange within the organization.

#### *Information and quality*

Allocation of organs is an information intensive process which needs substantial support of automated systems. Therefore ET develops and maintains the information systems that are required. They support the analysis of processes, of allocation rules and of other information and transform this into effective information systems. To operate the information systems an adequate infrastructure for information and communication is realized and maintained.

ET will adequately test all procedures and systems and maintains a quality system to assure this.

#### Other

To enable ET to operate as a service organization its supportive functions have to be sustained. Therefore ET maintains and sustains a supporting organization in fields of management (planning & control), housing, human resource management, finance, ICT and facilities.

#### 4. Governance

ET has a governance structure with an international external board representing the member states, the so-called Board of ET. The Board of ET is responsible for the management of the Foundation and supervises the Board of Directors. The Board of Directors is responsible for the day-to-day management of the organization and is composed of two directors, a general and a medical director. The Board of ET meets on a regular basis with the two directors. These meetings are prepared by the directors and staff of ET.

#### 5. Finances

ET's activities are entirely financed by the health insurance companies in the participating countries. The organization's budget and the resulting registration fees are negotiated annually with the financers and/or the national authorities.

The following document was signed during the conference Eurotransplant organized on the occasion of its 40<sup>th</sup> anniversary in Sint Gerlach for the ministers of Health Care of the Eurotransplant member states. The ministers affirmed the cooperation with the other member states and the perceived importance of Eurotransplant for each of them.

## 2.3 Joint Declaration on cooperation within the framework of Eurotransplant International Foundation

The Minister of Social Affairs and Public Health of the Kingdom of Belgium,

The Minister of Health and Social Welfare of the Republic of Croatia,

The Federal Minister of Health of the Federal Republic of Germany,

The Minister of Health and Social Security of the Grand Duchy Luxembourg,

The Minister of Health, Welfare and Sport of the Kingdom of the Netherlands,

The Federal Minister of Health, Family and Youth of the Republic of Austria

The Minister of Health of the Republic of Slovenija,

issue the following Joint Declaration on cooperation within the framework of Eurotransplant International Foundation:

We, Ministers of Health, wish to express our recognition of the activities performed by the Eurotransplant International Foundation (ETI) in Leiden, the Netherlands.

We are of the opinion that the subjects addressed in the Joint Declaration of November 2000 are today undiminished valid.

#### We emphasize:

- that the importance of international cooperation on organ transplantation within the Eurotransplant International Foundation framework has been demonstrated and should be continued;
- the necessity and added value of a fruitful cooperation between the professionals and the national authorities within the framework of Eurotransplant as opposed to separate agreements;
- that it is of crucial importance for the acceptance of transplantation medicine in the participating countries and in the interest of the patients that distribution of the allocated donor organs is performed as fairly as possible within a transparent and objective allocation system according to medical criteria;

#### Note

2. This governance structure is described in ET's Articles of Assocation

- the necessity of having systems operational for quality and safety in the area of organ donation. The state of a donor organ eligible to be allocated by Eurotransplant International Foundation must comply with those safety and quality requirements that are or might be imposed in accordance with the most recent advancements in medical science.
- our involvement as Ministers of Health with Eurotransplant International Foundation, its transparent and unambiguous allocation system and the responsibility of Eurotransplant International Foundation towards the participating member states.

Given the above considerations and the need to take into account national regulatory frameworks as well as efforts directed at the implementation of appropriate measures to improve the existing opportunities for post-mortem organ donation, we, Ministers of Health

- agree that the mutual exchange of practices in the area of post-mortem organ donation between the Eurotransplant International Foundation member states is valuable and supported by us;
- agree that Eurotransplant International Foundation fulfils an important role as a platform for the exchange of knowledge and practices;
- encourage the realization of a collection system for transplant results within Eurotransplant International Foundation.

This declaration was signed on September 24, 2007 in Valkenburg aan de Geul, the Netherlands:

Dr. Dirk Cuypers

on behalf of the Minister of Social Affairs and Public Health of the Kingdom of Belgium, President of the Board of Directors of the Federal Public Service Health, Food Chain, Safety and Environment

Cleary the locus

Prof. Dr. Neven Ljubičić

The Minister of Health and Social Welfare of the Republic of Croatia,

Mrs. Ulla Schmidt

The Federal Minister of Health of the Federal Republic of Germany

Mr. Mars di Bartolomeo

The Minister of Health and Social Security of the Grand Duchy of Luxembourg

hllo Clenida

Dr. Ab Klink

The Minister of Health, Welfare and Sport of the Kingdom of the Netherlands

Dr. Andrea Kdolsky Dr. Andrea Kdolsky

The Federal Minister of Health, Family and Youth of the Republic of Austria

Mrs. Zofija Mazej Kukovič

The Minister of Health of the Republic of Slovenija

# 3. Eurotransplant: donation, waiting lists and transplants

#### Introduction

The changes introduced to the table and chart section of last year's Annual Report were well received. Based on this feedback, discussions in the Eurotransplant Advisory Committees and the data requests coming in from you as users we tried to further improve the accessibility and the level of detail of the information in this section.

The development with regard to donor age turned out to be of major interest for many of you. Therefore in addition to figure 3.2 showing the development of median donor age per organ over the last 20 years we extended table 3.3: you can now find data on donor age per organ and country in table 3.3b. In parallel information on the recipient age distribution is added to the waiting list and transplant tables for all organs. Interesting differences between the different countries regarding recipient age distribution can be identified.

Table 3.7 now allows at a glance to compare the number of organs donated and transplanted per country. The figures show that the numbers are reasonably balanced. Due to the fact that the Vienna lung transplant center has several twinning agreements with centers outside ET and in addition established cooperation agreements with Croatia and Slovenia with regard to lung transplantation, the substantial inflow of donor lungs to Austria can be explained (details regarding the different twinning agreements within Eurotransplant are depicted in chapter 8).

You will notice that the most pronounced adaptations took place in the kidney transplant and waiting list part of this report. Next to the general Eurotransplant Kidney Allocation point score System (ETKAS), the Eurotransplant Senior Program (ESP) and the Acceptable Mismatch (AM) program are well established and of special importance for the elderly and highly immunized recipients. The idea of the AM program has been taken over by several organ exchange organizations outside ET and the ESP is considered a successful model to optimize the use of donor organs in times of increasing donor and recipient age. Therefore the tables 4.4 now contain detailed information on kidneys allocated via the different kidney allocation programs within Eurotransplant. End of 2010 the allocation of kidneys from donors >65 years of age were changed according to the ESDP protocol. Analysis of the data comparing recipients that received a kidney with no vs. one or two HLA-DR-mismatches will show, whether the ESP allocation can be improved even further in the interest of the patients in need of a kidney transplant. Broad participation in the study and accurate and timely data delivery will help to come to conclusions soon.

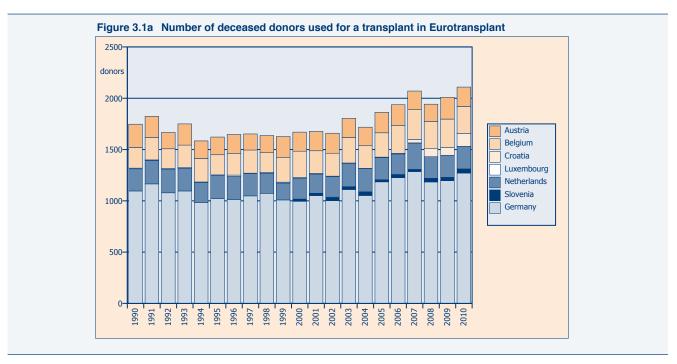
Use of the MELD score for allocation (currently in use in Belgium, Germany and the Netherlands) is of special interest not only within ET. In the liver transplant chapter information on the MELD score of patients on the waiting list on the one hand side and transplant recipients on the other hand side can be found (tables 6.3 and 6.4). Together with the liver transplant community the ELIAC is closely monitoring the effects of MELD allocation both on patients on the waiting list and on transplant results.

Newly introduced to this section of the Eurotransplant Annual Report is an overview of the currently existing cooperation agreements ('twinning agreements') between transplant centers within ET countries and transplant centers outside the ET area. Eurotransplant currently distinguishes three different types of twinning agreements, each of these models were introduced with a different focus: Model A - Start-up and training program, Model B - Transplantation support program, Model C - Delegated responsibilities for transplant programs.

Like last year we would like to encourage you to give us feedback on the usability of this Annual Report and especially the changes introduced. Your suggestions will help us to further improve and adapt it according to your wishes.

Table 3.1 Number of deceased organ donors used for a transplant, by donor country, from 2006 to 2010

Donor o	country	Population (millions)	2006	2007	2008	2009	2010	pmp 2	2009/2010
A	Austria	8,4	201	181	168	212	189	22,6	-10,8 %
B	Belgium	10,8	273	291	265	276	263	24,3	-4,7 %
HR	Croatia	4,4	0	33	79	77	127	28,7	64,9 %
(D)	Germany	81,8	1227	1285	1184	1196	1271	15,5	6,3 %
Ū	Luxembourg	0,5	6	1	9	0	3	6,0	
NL	Netherlands	16,6	200	257	201	215	216	13,0	0,5 %
(SLO)	Slovenia	2,0	30	22	36	33	40	19,5	21,2 %
ET		124,6	1937	2070	1942	2009	2109	16,9	5,0 %
Non-ET	•		84	69	61	65	78		20,0 %
Total			2021	2139	2003	2074	2187		5,4 %



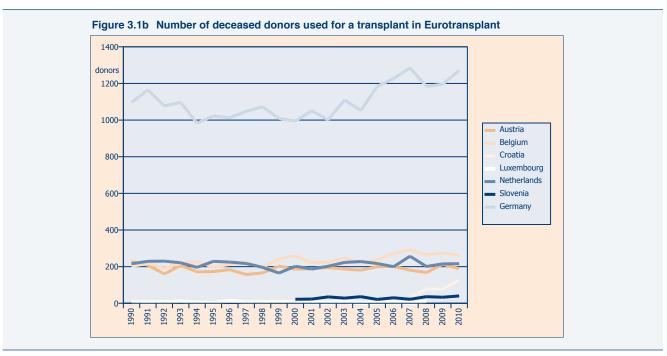


Table 3.2(i) Number of deceased organ donors used for a transplant, by organ, from 2006 to 2010

Year of registration	2006	2007	2008	2009	2010	2009/2010
Organ donors, total	2021	2139	2003	2074	2187	5,4 %
Kidney	1833	1930	1833	1859	1950	4,9 %
Heart	587	598	583	580	631	8,8 %
Lung	454	503	508	513	572	11,5 %
Liver	1395	1569	1550	1631	1734	6,3 %
Pancreas	245	255	257	226	273	20,8 %

Table 3.2(ii) Number of deceased organ donors used for a transplant, by organ and donor country, in 2010

Donor country	A	В	HR	D	L	NL	(SLO)	Non-ET	Total
Organ donors, total	189	263	127	1271	3	216	40	78	2187
Kidney	182	215	120	1182	3	205	38	5	1950
Heart	68	67	33	385	0	48	20	10	631
Lung	51	103	16	280	2	60	12	48	572
Liver	132	220	111	1077	3	138	34	19	1734
Pancreas	32	40	8	162	0	24	7	0	273

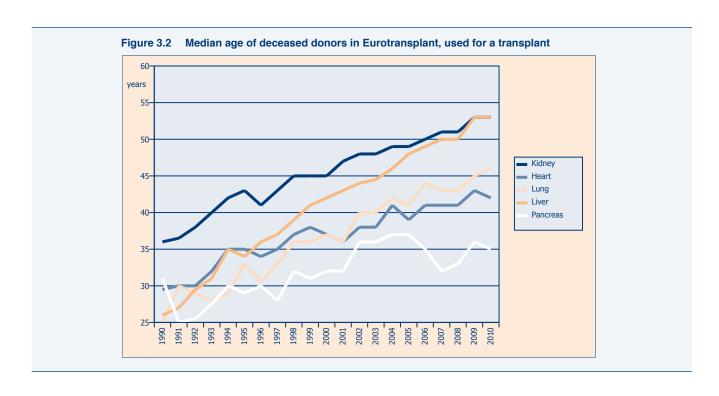


Table 3.3a(i) Demographic data on deceased organ donors, used for a transplant, from 2006 to 2010

Age (years)	2006	2007	2008	2009	2010	2009/2010
0-15	67	77	73	70	81	15,7%
16-55	1202	1239	1145	1089	1139	4,6%
56-64	337	396	371	399	427	7,0%
≥65	415	427	414	516	540	4,7%
Total	2021	2139	2003	2074	2187	5,4%
Gender	2006	2007	2008	2009	2010	2009/2010
Female	930	969	903	976	1015	4,0%
Male	1091	1170	1100	1098	1172	6,7%
Total	2021	2139	2003	2074	2187	5,4%

Table 3.3a(i) (Continued)

Blood group	2006	2007	2008	2009	2010	2009/2010
A	906	933	835	855	928	8,5%
AB	103	125	98	110	103	-6,4%
В	216	230	248	241	258	7,1%
0	796	851	822	868	898	3,5%
Total	2021	2139	2003	2074	2187	5,4%
Cause of death	2006	2007	2008	2009	2010	2009/2010
Accident	423	471	459	385	417	8,3%
Natural	1536	1612	1480	1621	1704	5,1%
Suicide	42	29	47	43	46	7,0%
Other	20	27	17	25	20	-20,0%
Total	2021	2139	2003	2074	2187	5,4%

Table 3.3a(ii) Demographic data on deceased organ donors, used for a transplant, in 2010

Age	A	В	HR	D	L	NL	(SLO)	Non-ET	Total	%
0-15	5	8	5	44	0	7	1	11	81	3,7%
16-55	109	155	53	625	3	114	23	57	1139	52,1%
56-64	33	50	31	225	0	67	12	9	427	19,5%
≥65	42	50	38	377	0	28	4	1	540	24,7%
Total	189	263	127	1271	3	216	40	78	2187	100,0%
Gender	A	В	HR	D	L	NL	SLO	Non-ET	Total	%
Female	93	123	55	589	2	101	20	32	1015	46,4%
Male	96	140	72	682	1	115	20	46	1172	53,6%
Total	189	263	127	1271	3	216	40	78	2187	100,0%
Blood group	A	В	HR	D	L	NL	SLO	Non-ET	Total	%
A	86	92	56	564	2	77	17	34	928	42,4%
AB	9	7	9	66	0	5	0	7	103	4,7%
В	19	21	16	159	0	21	8	14	258	11,8%
0	75	143	46	482	1	113	15	23	898	41,1%
Total	189	263	127	1271	3	216	40	78	2187	100,0%
Cause of death	A	В	HR	D	L	NL	SLO	Non-ET	Total	%
Accident	43	65	19	224	0	33	12	21	417	19,1%
Natural	136	172	100	1047	3	166	25	55	1704	77,9%
Suicide	6	23	6	0	0	8	3	0	46	2,1%
Other	4	3	2	0	0	9	0	2	20	0,9%
Total	189	263	127	1271	3	216	40	78	2187	100,0%

Table 3.3b(i) Age of deceased organ donors used for a transplant, from 2006 to 2010

All donors	2006	2007	2008	2009	2010	2009/2010
0-15	67	77	73	70	81	15,7%
16-55	1202	1239	1145	1089	1139	4,6%
56-64	337	396	371	399	427	7,0%
>=65	415	427	414	516	540	4,7%
Total	2021	2139	2003	2074	2187	5,4%

Table 3.3b(i) (Continued)

Heart donors	2006	2007	2008	2009	2010	2009/2010
0-15	36	37	35	40	55	37,5%
16-55	506	503	504	486	502	3,3%
56-64	38	53	42	52	67	28,8%
>=65	7	5	2	2	7	250,0%
Total	587	598	583	580	631	8,8%
Kidney donors	2006	2007	2008	2009	2010	2009/2010
0-15	51	60	61	55	67	21,8%
16-55	1099	1133	1057	992	1029	3,7%
56-64	317	365	350	367	389	6,0%
>=65	366	372	365	445	465	4,5%
Total	1833	1930	1833	1859	1950	4,9%
Liver donors	2006	2007	2008	2009	2010	2009/2010
0-15	54	65	60	53	66	24,5%
16-55	845	960	918	883	915	3,6%
56-64	239	260	261	298	316	6,0%
>=65	257	284	311	397	437	10,1%
Total	1395	1569	1550	1631	1734	6,3%
Lung donors	2006	2007	2008	2009	2010	2009/2010
0-15	18	18	20	22	29	31,8%
16-55	381	422	420	405	439	8,4%
56-64	48	55	57	74	89	20,3%
>=65	7	8	11	12	15	25,0%
Total	454	503	508	513	572	11,5%
Pancreas donors	2006	2007	2008	2009	2010	2009/2010
0-15	15	26	21	18	20	11,1%
16-55	225	219	230	197	246	24,9%
56-64	5	10	4	6	5	-16,7%
>=65	0	0	2	5	2	-60,0%
Total	245	255	257	226	273	20,8%

Table 3.3b(ii) Age of deceased organ donors used for a transplant, by organ and donor country, in 2010

All donors	A	B	HR	(D)	L	NL	(SLO)	Non-ET	Total	%
0-15	5	8	5	44	0	7	1	11	81	3,7%
16-55	109	155	53	625	3	114	23	57	1139	52,1%
56-64	33	50	31	225	0	67	12	9	427	19,5%
>=65	42	50	38	377	0	28	4	1	540	24,7%
Total	189	263	127	1271	3	216	40	78	2187	100,0%
Heart donors	A	В	HR	D	L	NL	(SLO)	Non-ET	Total	%
0-15	3	6	4	34	0	3	0	5	55	8,7%
16-55	60	54	28	307	0	30	18	5	502	79,6%
56-64	4	7	1	38	0	15	2	0	67	10,6%
>=65	1	0	0	6	0	0	0	0	7	1,1%
Total	68	67	33	385	0	48	20	10	631	100,0%

Table 3.3b(ii) (Continued)

Kidney donors	A	В	HR	D	L	NL	(SLO)	Non-ET	Total	%
0-15	5	8	5	41	0	5	1	2	67	3,4%
16-55	105	144	52	591	3	109	23	2	1029	52,8%
56-64	32	40	30	211	0	63	12	1	389	19,9%
>=65	40	23	33	339	0	28	2	0	465	23,8%
Total	182	215	120	1182	3	205	38	5	1950	100,0%
Liver donors	A	В	HR	D	L	(NL)	(SLO)	Non-ET	Total	%
0-15	5	8	5	39	0	4	0	5	66	3,8%
16-55	82	126	45	546	3	80	23	10	915	52,8%
56-64	21	39	28	182	0	35	8	3	316	18,2%
>=65	24	47	33	310	0	19	3	1	437	25,2%
Total	132	220	111	1077	3	138	34	19	1734	100,0%
Lung donors	A	В	HR	D	L	NL	(SLO)	Non-ET	Total	%
0-15	4	3	2	15	0	3	0	2	29	5,1%
16-55	40	76	13	216	2	40	11	41	439	76,7%
56-64	6	20	1	41	0	15	1	5	89	15,6%
>=65	1	4	0	8	0	2	0	0	15	2,6%
Total	51	103	16	280	2	60	12	48	572	100,0%
Pancreas donors	A	В	HR	D	L	NL	(SLO)	Non-ET	Total	%
0-15	4	3	2	11	0	0	0	0	20	7,3%
16-55	28	32	6	150	0	23	7	0	246	90,1%
		3	0	1	0	1	0	0	5	1,8%
56-64	0	J	0							
56-64 >=65	0	2	0	0	0	0	0	0	2	0,7%

Table 3.4a(i) Number of donors, used for a transplant, by type of donor, from 2006 to 2010

	2006	2007	2008	2009	2010	2009/2010
Deceased	2021	2139	2003	2074	2187	5,4%
Domino	10	10	7	3	6	100,0%
Living	1007	1123	1163	1246	1394	11,9%
Total	3038	3272	3173	3323	3587	7,9%

Table 3.4a(ii) Number of donors, used for a transplant, by type and donor country, in 2010

	Deceased	%	Domino	%	Living	%	Total
Austria	189	75,3%	0		61	24,4%	250
Belgium	263	76,2%	0		82	23,8%	345
Croatia	127	86,4%	0		18	12,4%	145
Germany	1271	62,6%	5	0.2%	756	37,2%	2032
Luxembourg	3	100,0%	0	,	0	•	3
Netherlands	216	32,1%	1	0,1%	477	68,7%	694
Slovenia	40	97,6%	0	,	0	,	40
Non-ET	78	100,0%	0		0		78
Total	2187	61,3%	6	0,2%	1394	38,9%	3587

Table 3.4b(i) Number of deceased donors, used for a transplant, by type of donor, from 2006 to 2010

	2006	2007	2008	2009	2010	2009/2010
SOD	617	597	461	487	491	0,8%
MOD	1404	1542	1542	1587	1696	6,9%
Total	2021	2139	2003	2074	2187	5,4%

Table 3.4b(ii) Number of deceased donors, used for a transplant, by type and donor country, in 2010

	SOD	%	MOD	%	Total	% of total
Austria	43	22,8%	146	77,2%	189	8,6%
Belgium	66	25,1%	197	74,9%	263	12,0%
Croatia	18	14,2%	109	85,8%	127	5,8%
Germany	214	16,8%	1057	83,2%	1271	58,1%
Luxembourg	0	0,0 %	3	100,0%	3	0,1%
Netherlands	68	31,5%	148	68,5%	216	9,9%
Slovenia	8	20,0%	32	80,0%	40	1,8%
Non-ET	74	94,9%	4	5,1%	78	3,6%
Total	491	22,5%	1696	77,5%	2187	100,0%

MOD - multiple organ donor - a donor from which more than one organ type has been used in a transplant

SOD - single organ donor

Table 3.4c(i) Non-heart beating (NHB) donors, used for a transplant, from 2006 to 2010

NHB Category	2006	2007	2008	2009	2010	2009/2010
I - Dead on arrival	1	1	0	0	3	-
II - Unsuccesful resuscitation	8	8	8	4	8	100,0%
III - Awaiting heart arrest	113	131	115	140	106	-24,3%
IV - Heart arrest in brain dead donor	1	0	0	0	1	
Total	123	140	123	144	118	-18,1%

Table 3.4c(ii) Non-heart beating donors, used for a transplant, by donor country, in 2010

NHB Category	В	NL	Total	%
I - Dead on arrival	0	3	3	2,5%
II - Unsuccesful resuscitation	3	5	8	6,8%
III - Awaiting heart arrest	41	65	106	89,8%
IV - Heart arrest in brain death donor	1	0	1	0,8%
Total	45	73	118	100,0%

Table 3.4d(i) Transplants from NHB donors from 2006 to 2010

		2006	2007	2008	2009	2010	2009/2010
Kidney	Kidney	222	244	200	243	191	-21,4%
	Kidney en bloc	1	3	1	3	1	-66,7%
Total		223	247	201	246	192	-22,0%
Liver	Whole liver	33	36	46	69	39	-43,5%
Total		33	36	46	69	39	-43,5%
Liver + kidney	Liver + kidney	0	0	1	0	3	
Total		0	0	1	0	3	

Table 3.4d(i) (Continued)

Lung	Single lung	0	1	4	4	1	-75,0%
	Double lung	4	9	12	29	25	-13,8%
Total		4	10	16	33	26	-21,2%
Pancreas	Pancreas	0	2	7	2	0	-100,0%
Total		0	2	7	2	0	-100,0%
	Total	260	295	271	350	260	-25,7%

Table 3.4d(ii) Transplants from NHB donors, by donor country, in 2010

Recipient country	Type of transplant	В	NL	Total	%
Austria	Kidney	2	3	5	2,6%
Belgium		55	3	58	30,2%
Netherlands		7	122	129	67,2%
Total	Kidney	64	128	192	100,0%
Austria	Liver	1	0	1	2,6%
Belgium		22	0	22	56,4%
Netherlands		0	16	16	41,0%
Total	Liver	23	16	39	100,0%
Belgium	Liver + Kidney	3	0	3	100,0%
Total	Liver + Kidney	3	0	3	100,0%
Belgium	Lung	13	0	13	50,0%
Netherlands		0	13	13	50,0%
Total	Lung	13	13	26	100,0%

Table 3.5(i) Active Eurotransplant waiting list, by organ, as per December 31, from 2006 to 2010

Waiting list type	Composition	2006	2007	2008	2009	2010	2009/2010
Kidney	kidney	11069	10910	10687	10533	10307	-2,1%
-	kidney + heart	15	24	16	27	31	14,8%
	kidney + heart + lung	0	0	0	1	0	-100,0%
	kidney + heart + liver	0	0	0	0	1	
	kidney + lung	2	3	5	2	2	0,0%
	kidney + liver	62	67	72	97	90	-7,2%
	kidney + liver + pancreas	1	0	2	1	2	100,0%
	kidney + pancreas	242	304	300	349	335	-4,0%
Kidney	Total	11391	11308	11082	11010	10768	-2,2%
Heart	heart	904	933	989	1121	1158	3,3%
	heart + lung	59	55	57	38	33	-13,2%
	heart + lung + kidney	0	0	0	1	0	-100,0%
	heart + kidney	15	24	16	27	31	14,8%
	heart + liver	1	2	2	4	2	-50,0%
	heart + liver + pancreas	0	0	0	0	1	
	heart + liver + kidney	0	0	0	0	1	
Heart	Total	979	1014	1064	1191	1226	2,9%
Lung	lung	758	849	846	964	964	0,0%
	lung + heart	59	55	57	38	33	-13,2%
	lung + heart + kidney	0	0	0	1	0	-100,0%
	lung + kidney	2	3	5	2	2	0,0%
	lung + liver	5	4	8	6	5	-16,7%
Lung	Total	824	911	916	1011	1004	-0,7%

Table 3.5(i) (Continued)

	liver + lung liver + pancreas	5 1	4 5	8 4	6 8	5 6	-16,7% -25,0%
	liver + pancreas + kidney	1	0	2	1	2	100,0%
Liver	Total	2319	2429	2442	2641	2695	2,0%
Pancreas	pancreas	48	43	55	68	66	-2,9%
	pancreas + kidney	242	304	300	349	335	-4,0%
	pancreas + liver + kidney	1	0	2	1	2	100,0%
	pancreas + liver	1	5	4	8	6	-25,0%
	pancreas + heart + liver	0	0	0	0	1	
			352	361	426	410	-3,8%

Table 3.5(ii) Active Eurotransplant waiting list, by organ, as per December 31, 2010

Waiting list type	Composition	A	В	HR	D	L	NL	(SLO)	Total	%
Kidney	kidney	783	867	225	7515	0	864	53	10307	95,7%
	kidney + heart	4	7	0	20	0	0	0	31	0,3%
	kidney + heart + lung	0	0	0	0	0	0	0		
	kidney + heart + liver	1	0	0	0	0	0	0	1	0,0%
	kidney + lung	0	1	0	1	0	0	0	2	0,0%
	kidney + liver	3	19	0	63	0	5	0	90	0,8%
	kidney + liver + pancreas	0	1	0	1	0	0	0	2	0,0%
	kidney + pancreas	19	19	5	269	0	23	0	335	3,1%
Kidney	Total	810	914	230	7869	0	892	53	10768	100,0%
Heart	heart	67	59	11	929	0	66	26	1158	94,5%
	heart + lung	2	1	0	29	0	1	0	33	2,7%
	heart + lung + kidney	0	0	0	0	0	0	0		
	heart + kidney	4	7	0	20	0	0	0	31	2,5%
	heart + liver	0	0	0	2	0	0	0	2	0,2%
	heart + liver + pancreas	0	0	0	1	0	0	0	1	0,1%
	heart + liver + kidney	1	0	0	0	0	0	0	1	0,1%
Heart	Total	74	67	11	981	0	67	26	1226	100,0%
Lung	lung	55	88	0	609	0	212	0	964	96,0%
	lung + heart	2	1	0	29	0	1	0	33	3,3%
	lung + heart + kidney	0	0	0	0	0	0	0		•
	lung + kidney	0	1	0	1	0	0	0	2	0,2%
	lung + liver	1	0	0	3	0	1	0	5	0,5%
Lung	Total	58	90	0	642	0	214	0	1004	100,0%
Liver	liver	132	171	75	2087	0	115	8	2588	96,0%
	liver + kidney	3	19	0	63	0	5	0	90	3,3%
	liver + heart	0	0	0	2	0	0	0	2	0,1%
	liver + heart + kidney	1	0	0	0	0	0	0	1	0,0%
	liver + heart + pancreas	0	0	0	1	0	0	0	1	0,0%
	liver + lung	1	0	0	3	0	1	0	5	0,2%
	liver + pancreas	0	2	0	4	0	0	0	6	0,2%
	liver + pancreas + kidney	0	1	0	1	0	0	0	2	0,1%
Liver	Total	137	193	75	2161	0	121	8	2695	100,0%
Pancreas	pancreas	7	17	1	29	0	12	0	66	16,1%
	pancreas + kidney	19	19	5	269	0	23	0	335	81,7%
	pancreas + liver + kidney	0	1	0	1	0	0	0	2	0,5%
	pancreas + liver	0	2	0	4	0	0	0	6	1,5%
	pancreas + heart + liver	0	0	0	1	0	0	0	1	0,2%
Pancreas	Total	26	39	6	304	0	35	0	410	100,0%

Table 3.6(i) Registration events on the Eurotransplant waiting list, by organ, from 2006 to 2010

All registration events	2006	2007	2008	2009	2010	2009/2010
Kidney	5335	6212	5808	5849	6157	5,3%
Heart	1009	1015	1052	1121	1089	-2,9%
Lung	739	805	846	843	818	-3,0%
Liver	2515	2631	2675	2923	3048	4,3%
Pancreas	317	365	341	334	328	-1,8%
Total	9915	11028	10722	11070	11440	3,3%
New registration events	2006	2007	2008	2009	2010	2009/2010
Kidney	4553	5398	4967	4941	5215	5,5%
Heart	975	992	1030	1094	1053	-3,7%
Lung	696	748	799	787	765	-2,8%
Liver	2203	2338	2372	2592	2697	4,1%
Pancreas	273	304	281	291	282	-3,1%
total	8700	9780	9449	9705	10012	3,2%
Re-registration events	2006	2007	2008	2009	2010	2009/2010
Kidney	782	814	841	908	942	3,7%
Heart	34	23	22	27	36	33,3%
Lung	43	57	47	56	53	-5,4%
Liver	312	293	303	331	351	6,0%
Pancreas	44	61	60	43	46	7,0%
Total	1215	1248	1273	1365	1428	4,6%

Table 3.6(ii) Registration events on the Eurotransplant waiting list, by organ and country, in 2010

All registration events	A	В	HR	D	L	NL	SLO	Total	%
Kidney	455	566	183	3710	0	1183	60	6157	53,8%
Heart	90	106	45	739	0	67	42	1089	9,5%
Lung	124	122	0	448	0	124	0	818	7,2%
Liver	242	339	155	2098	0	191	23	3048	26,6%
Pancreas	33	37	13	212	0	32	1	328	2,9%
Total	944	1170	396	7207	0	1597	126	11440	100,0%
New registration events	A	В	HR	D	L	(NL)	(SLO)	Total	%
Kidney	360	488	173	3137	0	1000	57	5215	52,1%
Heart	87	101	45	716	0	64	40	1053	10,5%
Lung	114	115	0	416	0	120	0	765	7,6%
Liver	221	295	153	1846	0	164	18	2697	26,9%
Pancreas	27	26	13	187	0	28	1	282	2,8%
Total	809	1025	384	6302	0	1376	116	10012	100,0%
Re-registration events	A	В	HR	D	L	(NL)	(SLO)	Total	%
Kidney	95	78	10	573	0	183	3	942	66,0%
Heart	3	5	0	23	0	3	2	36	2,5%
Lung	10	7	0	32	0	4	0	53	3,7%
Liver	21	44	2	252	0	27	5	351	24,6%
Pancreas	6	11	0	25	0	4	0	46	3,2%
Total	135	145	12	905	0	221	10	1428	100,0%

(Re) Registrations for multiple organs are counted under each waiting list respectively

Table 3.7(i) Number of transplanted organs  $^{\star\star}$  , by organ, by donor type, from  $^{\star}$  2006 to 2010

Deceased	2006	2007	2008	2009	2010	2009/2010
Kidney	3539	3728	3522	3590	3739	4,2%
Heart	587	598	581	581	632	8,8%
Lung	870	959	972	999	1111	11,2%
Liver	1436	1625	1606	1692	1793	6,0%
Pancreas	247	255	256	227	273	20,3%
Total	6679	7165	6937	7089	7548	6,5%

Table 3.7(i) (Continued)

Living	2006	2007	2008	2009	2010	2009/2010
Kidney	901	1032	1091	1150	1262	9,7%
Liver (partial and domino)	116	101	82	99	138	39,4%
Lung	0	0	0	1	0	-100,0%
Total	1017	1133	1173	1250	1400	12,0%

Table 3.7(ii) Number of transplanted organs\*\*, by organ, by donor type, by country, in\* 2010

### Deceased donor transplants by transplant country

Transplant country	A	B	HR	D	L	NL	(SLO)	Non-ET	Total	%
Kidney	350	408	227	2294	0	397	61	2	3739	49,5%
Heart	69	68	36	393	0	46	19	1	632	8,4%
Lung	223	207	0	552	0	129	0	0	1111	14,7%
Liver	139	210	103	1187	0	130	23	1	1793	23,8%
Pancreas	31	43	6	166	0	26	1	0	273	3,6%
Total	812	936	372	4592	0	728	104	4	7548	100,0%

### Deceased donor transplants by donor country

Donor country	A	B	HR	D	L	NL	(SLO)	Non-ET	Total	%
Kidney	350	408	232	2276	6	388	73	6	3739	49,5%
Heart	69	67	33	385	0	48	20	10	632	8,4%
Lung	99	197	30	543	4	118	24	96	1111	14,7%
Liver	137	228	114	1114	3	144	34	19	1793	23,8%
Pancreas	32	40	8	162	0	24	7	0	273	3,6%
Total	687	940	417	4480	13	722	158	131	7548	100,0%

### Living donor transplants by country

Transplant country	A	B	HR	D	L	NL	(SLO)	Non-ET	Total	%
Kidney Liver (partial and domino)	59 2	49 33	16 2	665 96	0 0	473 5	0	0 0	1262 138	90,1% 9,9%
Total	61	82	18	761	0	478	0	0	1400	100,0%

<sup>\*</sup> based on transplant registration date

Table 3.8(i) Transplants from 2006 to 2010

Deceased donors	2006	2007	2008	2009	2010	2009/2010
Kidney	3220	3415	3179	3302	3388	2,6%
Kidney en bloc	20	24	28	29	34	17,2%
Heart	539	562	544	553	602	8,9%
Single lung	121	90	82	79	75	-5,1%
Double lung	337	409	419	435	496	14,0%
Liver	1273	1439	1405	1516	1606	5,9%
Split liver	90	105	113	121	118	-2,5%
Pancreas	31	29	20	13	24	71,4%
Pancreas islets	5	15	17	18	14	-17,6%
Heart + double lung	30	21	23	20	16	-20,0%
Heart + double lung + liver	2	0	0	0	1	
Heart + double lung + kidney	0	0	1	0	0	0,0%
Heart + liver	1	2	3	0	1	
Heart + pancreas + kidney	0	0	0	0	1	
Heart + single kidney	15	13	10	8	11	37,5%
Single lung + liver	1	0	0	0	0	0,0 %
Double lung + liver	2	4	1	3	3	0,0%
Single lung + kidney	0	1	0	0	0	0,0%
Double lung + kidney	3	0	1	2	2	0,0%
Liver + pancreas	2	5	5	4	6	50,0%
Liver + pancreas + kidney	1	1	0	2	1	-50,0%
Liver + kidney	61	64	73	45	52	15,6%
Liver + kidney en bloc	1	1	2	0	0	0,0%
Split liver + kidney	2	4	4	1	5	400,0%
Pancreas + kidney	195	180	194	172	211	22,7%
Total (deceased donor) transplants	5952	6384	6124	6323	6667	5,4%

<sup>\*\*</sup> each liver split counted as one

<sup>\*\*</sup> each kidney en bloc counted as two

<sup>\*\*</sup> each double lung counted as two

Table 3.8(i) (Continued)

Living donors	2006	2007	2008	2009	2010	2009/2010
Kidney	901	1032	1090	1150	1262	9,7%
Kidney + liver	0	0	1	0	0	0,0 %
Liver (partial and domino)	116	101	81	99	138	39,4%
Lung	0	0	0	1	0	-100,0%
Total (living donor) transplants	1017	1133	1172	1250	1400	12,0%
All donors	2006	2007	2008	2009	2010	2009/2010
Total transplants	6969	7517	7296	7573	8067	7,0%

Table 3.8(ii) Transplants in 2010, by transplant country

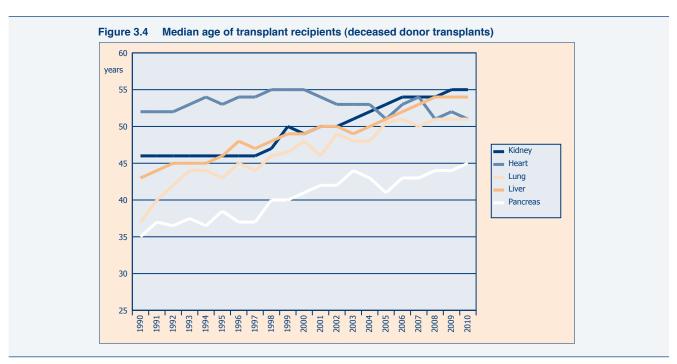
Deceased donor transplants	A	В	HR	D	L	NL	(SLO)	Non-ET	Total	% of deceased donor transplants
Kidney	314	357	214	2070	0	372	59	2	3388	50,8%
Kidney en bloc	2	4	3	22	0	3	0	0	34	0,5%
Heart	69	64	36	369	0	45	18	1	602	9,0%
Single lung	5	21	0	44	0	5	0	0	75	1,1%
Double lung	107	91	0	237	0	61	0	0	496	7,4%
Liver	131	188	99	1048	0	116	23	1	1606	24,1%
Split liver	3	3	2	102	0	8	0	0	118	1,8%
Pancreas	4	0	1	14	0	5	0	0	24	0,4%
Pancreas islets	0	7	0	3	0	4	0	0	14	0,2%
Heart + double lung	0	0	0	15	0	1	0	0	16	0,2%
Heart + double lung + liver	0	0	0	1	0	0	0	0	1	0,0%
Heart + double lung + kidney	0	0	0	0	0	0	0	0	0	0,0%
Heart + liver	0	0	0	1	0	0	0	0	1	0,0%
Heart + pancreas + kidney	0	0	0	1	0	0	0	0	1	0,0%
Heart + single kidney	0	4	0	6	0	0	1	0	11	0,2%
Single lung + liver	0	0	0	0	0	0	0	0	0	0,0%
Double lung + liver	1	2	0	0	0	0	0	0	3	0,0%
Single lung + kidney	0	0	0	0	0	0	0	0	0	0,0%
Double lung + kidney	1	0	0	1	0	0	0	0	2	0,0%
Liver + pancreas	0	0	0	5	0	1	0	0	6	0,1%
Liver + pancreas + kidney	0	0	0	1	0	0	0	0	1	0,0%
Liver + kidney	4	17	2	24	0	5	0	0	52	0,8%
Liver + kidney en bloc	0	0	0	0	0	0	0	0	0	0,0%
Split liver + kidney	0	0	0	5	0	0	0	0	5	0,1%
Pancreas + kidney	27	22	5	142	0	14	1	0	211	3,2%
Total (deceased donors) transplants	668	780	362	4111	0	640	102	4	6667	100,0%
Living donor transplants	A	В	HR	D	L	(NL)	(SLO)	Non-ET	Total	% of living donor transplants
Kidney	59	49	16	665	0	473	0	0	1262	90,1%
Liver (partial and domino)	2	33	2	96	0	5	0	0	138	9,9%
Total (living donors) transplants	61	82	18	761	0	478	0	0	1400	100,0%
All donors	A	В	HR	D	L	NL	(SLO)	Non-ET	Total	
Total transplants	729	862	380	4872	0	1118	102	4	8067	

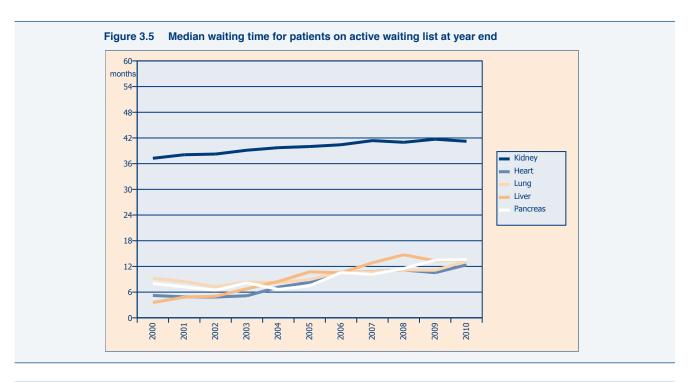
 $Table \ 3.9 (i) \quad Mortality \ on \ the \ Eurotransplant \ waiting \ list, \ by \ year \ of \ death, \ from \ 2006 \ to \ 2010$ 

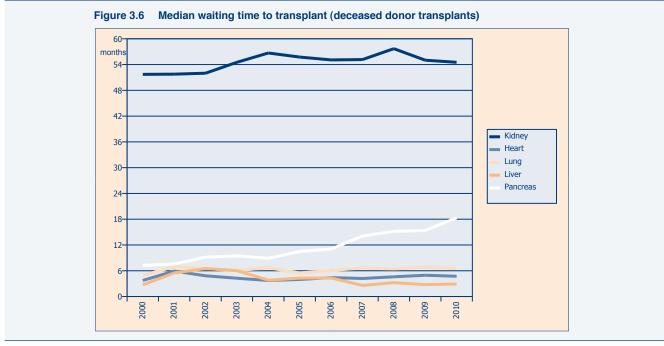
Waiting list	2006	2007	2008	2009	2010	2009/2010
Kidney	563	526	539	506	551	8,9%
Heart	252	224	215	234	246	5,1%
Lung	123	120	178	148	137	-7,4%
Liver	470	436	497	534	600	12,4%
Pancreas	22	19	27	29	29	0,0%
Total	1430	1325	1456	1451	1563	7,7%
Total patients	1361	1263	1393	1379	1483	2,1%

Table 3.9(ii) Mortality on the Eurotransplant waiting list in 2010, by country

Waiting list	A	В	HR	D	L	NL	(SLO)	Total
Kidney	39	34	11	374	0	92	1	551
Heart	7	18	7	199	0	11	4	246
Lung	9	6	0	104	0	18	0	137
Liver	40	47	28	463	0	17	5	600
Pancreas	1	0	0	25	0	3	0	29
Total	96	105	46	1165	0	141	10	1563
Total patients	89	101	44	1104	0	135	10	1483





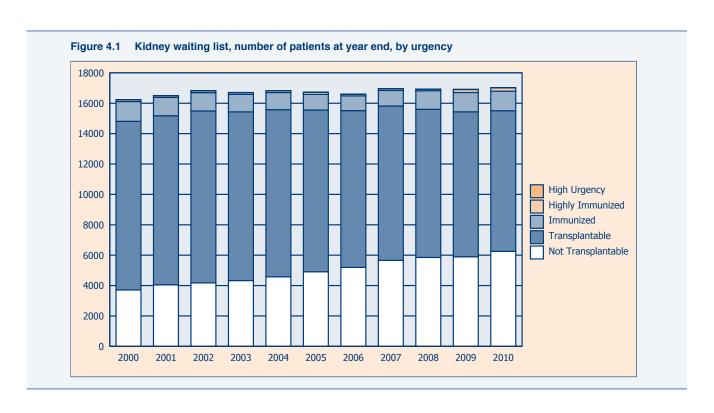


# **Kidney: donation, waiting lists** and transplants

Table 4.1(i) Deceased donors / kidneys in Eurotransplant, from 2006 to 2010

D						
Donors						
Year of registration	2006	2007	2008	2009	2010	2009/2010
All donors	2299	2411	2233	2305	2415	4,8%
Non-kidney donors	242	216	217	243	264	8,6%
Kidney donors	2057	2195	2016	2062	2151	4,3%
Kidney donors not used	224	265	183	203	201	-1,0%
One kidney used	121	145	138	131	163	24,4%
Two kidneys used	1712	1785	1695	1728	1787	3,4%
Total kidney donors used	1833	1930	1833	1859	1950	4,9%
Kidneys						
Year of registration	2006	2007	2008	2009	2010	2009/2010
Reported	4081	4365	3999	4103	4261	3,9%
Offered	3946	4208	3912	4026	4182	3,9%
Accepted	3713	3952	3711	3800	3925	3,3%
Transplanted	3545	3715	3528	3587	3737	3,3%

Table 4.1(ii) Deceased done	UIS/ KIUII	eys III Eu	Totransp	nant III 20	10						
Donor country	A	В	HR	D	L	NL	(SLO)	Total ET	Non-ET	Total	% al
All donors	203	289	135	1315	3	259	44	2248	167	2415	100,0%
Non-kidney donors	4	41	1	60	0	11	1	118	146	264	10,9%
Kidney donors	199	248	134	1255	3	248	43	2130	21	2151	89,1%
Kidney donors not used	17	33	14	73	0	43	5	185	16	201	8,3%
One kidney used	16	22	8	88	0	22	3	159	4	163	6,7%
Two kidneys used	166	193	112	1094	3	183	35	1786	1	1787	74,0%
Total kidney donors used	182	215	120	1182	3	205	38	1945	5	1950	80,7%
Kidneys											
Donor country	A	В	HR	D	L	NL	SLO	Total ET	Non-ET	Total	% reported
Reported	392	494	268	2491	6	491	86	4228	33	4261	100,0%
Offered	392	486	263	2486	6	436	84	4153	29	4182	98,1%
Accepted	378	445	246	2359	6	405	76	3915	10	3925	92,1%
Transplanted	348	408	232	2276	6	388	73	3731	6	3737	87,7%



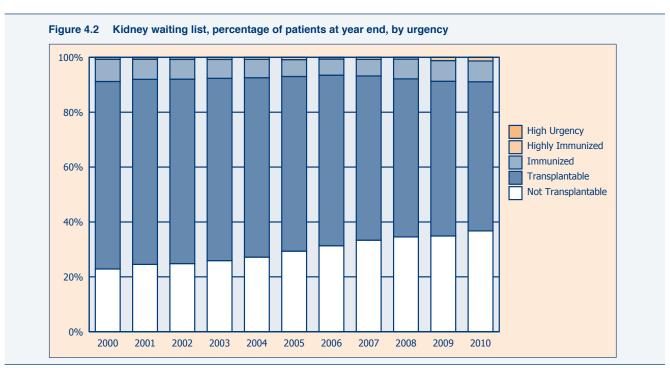


Table 4.2(i) Active kidney transplant waiting list, as per December 31, from 2006 to 2010 - characteristics

Type of transplant	2005	2006	2007	2008	2009	2010	2009/2010
Kidney	11515	11069	10910	10687	10533	10307	-2,1%
Kidney + heart	18	15	24	16	27	31	14,8%
Kidney + heart + liver	0	0	0	0	0	1	
Kidney + heart + lung	0	0	0	0	1	0	-100,0%
Kidney + liver	60	62	67	72	97	90	-7,2%
Kidney + liver + pancreas	1	1	0	2	1	2	100,0%
Kidney + lung	3	2	3	5	2	2	0,0%
Kidney + pancreas	217	242	304	300	349	335	-4,0%
Total	11814	11391	11308	11082	11010	10768	-2,2%

Table 4.2(ii) Active kidney transplant waiting list, as per December 31 , 2010 - characteristics

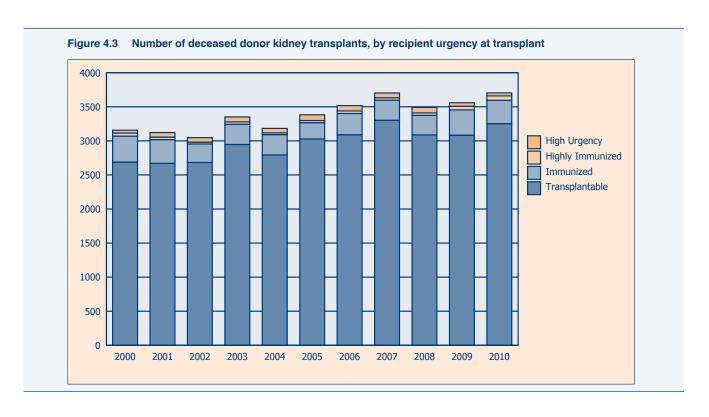
Type of transplant	A	B	HR	D	NL	(SLO)	Total	%
Kidney	783	867	225	7515	864	53	10307	95,7%
Kidney + heart	4	7	0	20	0	0	31	0,3%
Kidney + heart + liver	1	0	0	0	0	0	1	0,0%
Kidney + liver	3	19	0	63	5	0	90	0,8%
Kidney + liver + pancreas	0	1	0	1	0	0	2	0,0%
Kidney + lung	0	1	0	1	0	0	2	0,0%
Kidney + pancreas	19	19	5	269	23	0	335	3,1%
Total	810	914	230	7869	892	53	10768	100,0%

Table 4.3(i) Active kidney-only transplant waiting list, as per December 31, from 2006 to 2010 - characteristics

Blood group	2006	2007	2008	2009	2010	2009/2010
A	4082	3924	3770	3706	3556	-4,0%
AB	213	144	175	189	179	-5,3%
В	1287	1307	1265	1258	1251	-0,6%
0	5487	5535	5477	5380	5321	-1,1%
Total	11069	10910	10687	10533	10307	-2,1%
% PRA current	2006	2007	2008	2009	2010	2009/2010
0-5 %	9964	9741	9347	9063	8806	-2,8%
6-84 %	959	997	1182	1243	1255	1,0%
85-100 %	95	113	100	188	212	12,8%
Not reported	51	59	58	39	34	-12,8%
Total	11069	10910	10687	10533	10307	-2,1%
Sequence	2006	2007	2008	2009	2010	2009/2010
First	9262	9159	8943	8751	8478	-3,1%
Repeat	1807	1751	1744	1782	1829	2,6%
Total	11069	10910	10687	10533	10307	-2,1%
Waiting time (years) based on o	late start of dialysis					
Training time (years) based on e	2006	2007	2008	2009	2010	2009/2010
Pre-emptive	239	275	326	329	373	13,4%
0-1	2516	2401	2363	2319	2242	-3,3%
2-4	5319	5269	5054	4799	4740	-1,2%
5+	2995	2965	2944	3086	2952	-4,3%
Total	11069	10910	10687	10533	10307	-2,1%
Waiting time (years) based on c		2007	2008	2009	2010	2009/2010
0.1	2006					
0-1 2-4	4825 4494	5047 4197	5069 3950	4861 3917	4798 3814	-1,3% -2,6%
<del>2-4</del> 5+	1750	1666	1668	1755	1695	-2,6% -3,4%
Total	11069	10910	10687	10533	10307	-2,1%
Age						
nyv	2006	2007	2008	2009	2010	2009/2010
0-15	125	124	104	114	99	-13,2%
16-55	7127	7026	6737	6614	6412	-3,1%
56-64	2841	2789	2780	2762	2773	0,4%
65+	976	971	1066	1043	1023	-1,9%
Total	11069	10910	10687	10533	10307	-2,1%

Table 4.3(ii) Active kidney-only transplant waiting list, as per December 31, 2010 - characteristics

Blood group	A	B	HR	D	NL	(SLO)	Total	%
A	276	273	62	2674	251	20	3556	34,5%
AB	14	17	3	119	25	1	179	1,7%
В	114	82	48	871	126	10	1251	12,1%
0	379	495	112	3851	462	22	5321	51,6%
Total	783	867	225	7515	864	53	10307	100,0%
% PRA current	A	В	HR	D	NL	(SLO)	Total	%
0-5 %	663	684	150	6520	742	47	8806	85,4%
6-84 %	105	107	64	875	99	5	1255	12,2%
85-100 %	15	74	2	100	20	1	212	2,1%
Not reported	0	2	9	20	3	0	34	0,3%
Total	783	867	225	7515	864	53	10307	100,0%
Sequence	A	В	HR	D	NL	SLO	Total	%
First	583	681	214	6268	680	52	8478	82,3%
Repeat	200	186	11	1247	184	1	1829	17,7%
Total	783	867	225	7515	864	53	10307	100,0%
Waiting time (years) based on								
date start of dialysis	A	В	HR	D	NL	SLO	Total	%
0-1	274	329	71	1297	260	11	2242	21,8%
2-4	398	327	122	3438	427	28	4740	46,0%
5+	81	88	31	2642	101	9	2952	28,6%
Pre-emptive	30	123	1	138	76	5	373	3,6%
Total	783	867	225	7515	864	53	10307	100,0%
Waiting time (years) based on date put on WL	A	В	HR	(D)	NL	(SLO)	Total	%
0-1	464	568	140	3146	444	36	4798	46,6%
2-4	270	234	84	2877	337	12	3814	37,0%
5+	49	65	1	1492	83	5	1695	16,4%
Total	783	867	225	7515	864	53	10307	100,0%
Age	A	В	HR	(D)	NL	(SLD)	Total	%
0-15	8	9	1	70	11	0	99	1,0%
V 10	476	542	155	4741	464	34	6412	62,2%
16-55		U-T-L					2773	26,9%
		208	69	2030	2,38		2113	
16-55 56-64 65+	209 90	208 108	69 0	2030 674	238 151	19 0	1023	9,9%



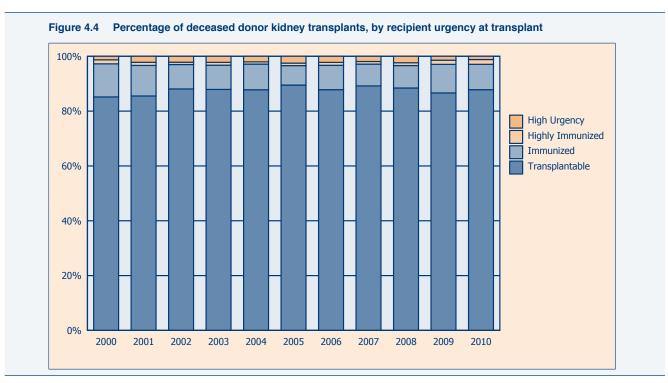


Table 4.4a(i) Kidney transplant characteristics from 2006 to 2010

Deceased donor kidney transplants		Deceased donor kidney transplants											
Type of transplant	2006	2007	2008	2009	2010	2009/2010							
Kidney only	3220	3415	3179	3302	3388	2,6%							
Kidney en bloc	20	24	28	29	34	17,2%							
Kidney + pancreas	195	180	194	172	211	22,7%							
Kidney + heart	15	13	10	8	11	37,5%							
Kidney + split liver	2	4	4	1	5	400,0%							
Kidney + whole liver	61	64	73	45	52	15,6%							
Kidney en bloc + whole liver	1	1	2	0	0	0,0%							
Kidney + pancreas + whole liver	1	1	0	2	1	-50,0%							
Kidney + single lung	0	1	0	0	0	0,0%							
Kidney + double lungs	3	0	1	2	2	0,0%							
Kidney + heart + pancreas	0	0	0	0	1								
Kidney + heart + double lungs	0	0	1	0	0	0,0%							
Total	3518	3703	3492	3561	3705	4,0%							

Table 4.4a(ii) Kidney transplant characteristics - 2010

Deceased donor kidney trans	plants						,			
Type of transplant	A	В	HR	D	NL	(SLO)	Total ET	Non-ET	Total	%
Kidney only	314	357	214	2070	372	59	3386	2	3388	91,4%
Kidney en bloc	2	4	3	22	3	0	34	0	34	0,9%
Kidney + pancreas	27	22	5	142	14	1	211	0	211	5,7%
Kidney + heart	0	4	0	6	0	1	11	0	11	0,3%
Kidney + split liver	0	0	0	5	0	0	5	0	5	0,1%
Kidney + whole liver	4	17	2	24	5	0	52	0	52	1,4%
Kidney + pancreas + whole liver	0	0	0	1	0	0	1	0	1	0,0%
Kidney + both lungs	1	0	0	1	0	0	2	0	2	0,1%
Kidney + heart + pancreas	0	0	0	1	0	0	1	0	1	0,0%
Total	348	404	224	2272	394	61	3703	2	3705	100,0%

Table 4.4b(i) Kidney-only transplants (including kidney en bloc) - all allocation programs

HLA - A, B, DR mismatches	2006	2007	2008	2009	2010	2009/2010
0	521	460	451	440	431	-2,0%
1	235	259	251	229	232	1,3%
2	761	747	753	732	836	14,2%
3	915	1012	889	1011	970	-4,1%
4	466	534	488	502	575	14,5%
5	220	301	264	307	260	-15,3%
6	98	105	100	100	108	8,0%
not calculated	24	21	11	10	10	0,0%
Total	3240	3439	3207	3331	3422	2,7%
Blood group	2006	2007	2008	2009	2010	2009/2010
A	1435	1530	1404	1445	1517	5,0%
AB	202	243	185	204	213	4,4%
В	395	413	431	424	441	4,0%
0	1208	1253	1187	1258	1251	-0,6%
Total	3240	3439	3207	3331	3422	2,7%
PRA	2006	2007	2008	2009	2010	2009/2010
0-5%	2887	3097	2883	2909	3013	3,6%
6-84%	312	294	286	366	341	-6,8%
85-100%	34	39	35	55	64	16,4%
Not reported	7	9	3	1	4	300,0%
Total	3240	3439	3207	3331	3422	2,7%

Table 4.4b(i) (Continued)

Waiting time (months) based on date put on WL	2006	2007	2008	2009	2010	2009/2010
Pre-emptive	42	38	43	38	44	15,8%
0-5	45	47	45	46	44	-4,3%
6-11	107	131	108	88	101	14,8%
12-23	369	407	350	422	401	-5,0%
24-59	1244	1262	1149	1282	1358	5,9%
60 +	1433	1554	1512	1455	1474	1,3%
Total	3240	3439	3207	3331	3422	2,7%
Sequence	2006	2007	2008	2009	2010	2009/2010
First	2717	2903	2731	2841	2956	4,0%
Repeat	523	536	476	490	466	-4,9%
Total	3240	3439	3207	3331	3422	2,7%
Recipient age	2006	2007	2008	2009	2010	2009/2010
0-15	88	85	102	71	95	33,8%
16-55	1667	1735	1655	1597	1668	4,4%
56-64	715	812	722	765	753	-1,6%
65+	770	807	728	898	906	0,9%
Total	3240	3439	3207	3331	3422	2,7%
Allocation program (all donors)	2006	2007	2008	2009	2010	2009/2010
ETKAS	2467	2574	2442	2399	2424	1,0%
ESP	521	588	543	680	699	2,8%
AM	38	60	59	95	122	28,4%
Rescue	214	217	163	157	177	12,7%
Total	3240	3439	3207	3331	3422	2,7%
Allocation program (donors 65+)	2006	2007	2008	2009	2010	2009/2010
ETKAS	94	66	75	92	84	-8,7%
ESP	516	587	541	680	699	2,8%
AM	1	1	0	1	2	100,0%
Rescue	71	42	53	52	53	1,9%
Total	682	696	669	825	838	1,6%

Table 4.4b(ii) Kidney-only transplants (including kidney en bloc) - 2010 - all allocation programs

HLA - A, B, DR mismatches	A	B	HR	D	NL	(SLO)	Total ET	Non-ET	Total	%
0	30	34	11	323	31	2	431	0	431	12,6%
1	22	25	14	135	31	5	232	0	232	6,8%
2	64	111	68	466	107	19	835	1	836	24,4%
3	92	142	59	525	125	27	970	0	970	28,3%
4	74	45	48	352	52	4	575	0	575	16,8%
5	22	3	15	200	17	2	259	1	260	7,6%
6	5	1	2	88	12	0	108	0	108	3,2%
Not calculated	7	0	0	3	0	0	10	0	10	0,3%
Total	316	361	217	2092	375	59	3420	2	3422	100,0%
Blood group	A	В	HR	D	NL	(SLO)	Total ET	Non-ET	Total	%
A	152	139	95	969	135	27	1517	0	1517	44,3%
AB	18	20	16	141	16	0	211	2	213	6,2%
В	34	33	30	273	63	8	441	0	441	12,9%
0	112	169	76	709	161	24	1251	0	1251	36,6%
Total	316	361	217	2092	375	59	3420	2	3422	100,0%

Table 4.4b(ii) (Continued)

PRA	A	В	HR	D	NL	(SLO)	Total ET	Non-ET	Total	%
0-5%	280	305	193	1846	340	49	3013	0	3013	88,0%
6-84%	31	40	24	206	30	10	341	0	341	10,0%
85-100%	5	16	0	38	5	0	64	0	64	1,9%
Not reported	0	0	0	2	0	0	2	2	4	0,1%
Not reported										0,176
Total	316	361	217	2092	375	59	3420	2	3422	100,0%
Waiting time (months) based on date put on WL	A	В	HR	D	NL	(SLO)	Total ET	Non-ET	Total	%
Pre-emptive	6	9	0	19	9	1	44	0	44	1,3%
0-5	8	10	2	18	6	0	44	0	44	1,3%
6-11	17	24	2	43	14	1	101	0	101	3,0%
12-23	44	85	21	200	46	5	401	0	401	11,7%
24-59	163	176	107	668	206	37	1357	1	1358	39,7%
60 +	78	57	85	1144	94	15	1473	i	1474	43,1%
	70			1144		13	1475	'	1474	43,176
Total	316	361	217	2092	375	59	3420	2	3422	100,0%
Sequence	A	В	HR	D	NL	(SLO)	Total ET	Non-ET	Total	%
First	257	312	212	1795	321	57	2954	2	2956	86,4%
Repeat	59	49	5	297	54	2	466	0	466	13,6%
Total	316	361	217	2092	375	59	3420	2	3422	100,0%
Recipient age	A	В	HR	D	NL	(SLO)	Total ET	Non-ET	Total	%
Recipient age 0-15	A 11	B 3	HR 6	© 62	NL 13	(SLD)	Total ET	Non-ET	Total 95	
0-15	11	3	6	62	13	0	95	0	95	2,8%
0-15 16-55	11 150	3 189	6 133	62 979	13 174	0 42	95 1667	0	95 1668	2,8% 48,7%
0-15	11	3	6	62	13	0	95	0	95	2,8%
0-15 16-55 56-64	11 150 66	3 189 94	6 133 58	62 979 420	13 174 102	0 42 13	95 1667 753	0 1 0	95 1668 753	2,8% 48,7% 22,0%
0-15 16-55 56-64 65+	11 150 66 89 <b>316</b>	3 189 94 75 <b>361</b>	6 133 58 20 <b>217</b>	62 979 420 631 <b>2092</b>	13 174 102 86 <b>375</b>	0 42 13 4 <b>59</b>	95 1667 753 905	0 1 0 1	95 1668 753 906	2,8% 48,7% 22,0% 26,5%
0-15 16-55 56-64 65+  Total  Allocation program (all done	11 150 66 89 <b>316</b> ors) (A)	3 189 94 75 <b>361</b>	6 133 58 20 <b>217</b>	62 979 420 631 <b>2092</b>	13 174 102 86 <b>375</b>	0 42 13 4 <b>59</b>	95 1667 753 905 3420	0 1 0 1 2 Non-ET	95 1668 753 906 3422	2,8% 48,7% 22,0% 26,5% 100,0%
0-15 16-55 56-64 65+  Total  Allocation program (all done ETKAS	11 150 66 89 <b>316</b> ors) (A)	3 189 94 75 <b>361</b> 8	6 133 58 20 <b>217</b> (HR)	62 979 420 631 <b>2092</b>	13 174 102 86 <b>375</b>	0 42 13 4 <b>59</b> \$10	95 1667 753 905 3420 Total ET	0 1 0 1 2 Non-ET	95 1668 753 906 3422 Total 2424	2,8% 48,7% 22,0% 26,5% 100,0%
0-15 16-55 56-64 65+  Total  Allocation program (all done	11 150 66 89 <b>316</b> ors) (A)	3 189 94 75 <b>361</b>	6 133 58 20 <b>217</b>	62 979 420 631 <b>2092</b>	13 174 102 86 <b>375</b>	0 42 13 4 <b>59</b>	95 1667 753 905 3420 Total ET 2424 699	0 1 0 1 2 Non-ET	95 1668 753 906 3422 Total 2424 699	2,8% 48,7% 22,0% 26,5% 100,0% % 70,8% 20,4%
0-15 16-55 56-64 65+  Total  Allocation program (all done ETKAS ESP AM	11 150 66 89 <b>316</b> ors) (A)	3 189 94 75 <b>361</b> 8 329 17 8	6 133 58 20 <b>217</b> (HP) 187 14 0	62 979 420 631 <b>2092</b> 1336 554 77	13 174 102 86 <b>375</b> NL 274 50 34	0 42 13 4 <b>59</b> \$10	95 1667 753 905 3420 Total ET 2424 699 122	0 1 0 1 2 Non-ET	95 1668 753 906 3422 Total 2424 699 122	2,8% 48,7% 22,0% 26,5%  100,0%  70,8% 20,4% 3,6%
0-15 16-55 56-64 65+  Total  Allocation program (all done ETKAS ESP	11 150 66 89 <b>316</b> ors) (A)	3 189 94 75 <b>361</b> 8 329 17	6 133 58 20 <b>217</b> (HR) 187 14	62 979 420 631 <b>2092</b> D	13 174 102 86 <b>375</b>	0 42 13 4 <b>59</b> \$10	95 1667 753 905 3420 Total ET 2424 699	0 1 0 1 2 Non-ET	95 1668 753 906 3422 Total 2424 699	2,8% 48,7% 22,0% 26,5% 100,0% % 70,8% 20,4%
0-15 16-55 56-64 65+  Total  Allocation program (all done ETKAS ESP AM	11 150 66 89 <b>316</b> ors) (A) 242 62 3	3 189 94 75 <b>361</b> 8 329 17 8	6 133 58 20 <b>217</b> (HP) 187 14 0	62 979 420 631 <b>2092</b> 1336 554 77	13 174 102 86 <b>375</b> NL 274 50 34	0 42 13 4 <b>59</b> 56 2 0	95 1667 753 905 3420 Total ET 2424 699 122	0 1 0 1 2 Non-ET	95 1668 753 906 3422 Total 2424 699 122	2,8% 48,7% 22,0% 26,5%  100,0%  70,8% 20,4% 3,6%
0-15 16-55 56-64 65+  Total  Allocation program (all done ETKAS ESP AM Rescue	11 150 66 89 <b>316</b> <b>ors)</b> (A) 242 62 3 9	3 189 94 75 <b>361</b> 8 329 17 8 7	6 133 58 20 <b>217</b> (HR) 187 14 0 16	62 979 420 631 <b>2092</b> D 1336 554 77 125	13 174 102 86 <b>375</b> (NL) 274 50 34 17	0 42 13 4 <b>59</b> 56 2 0 1	95 1667 753 905 3420 Total ET 2424 699 122 175	0 1 0 1 2 Non-ET	95 1668 753 906 3422 Total 2424 699 122 177	2,8% 48,7% 22,0% 26,5%  100,0%  70,8% 20,4% 3,6% 5,2%
0-15 16-55 56-64 65+  Total  Allocation program (all done ETKAS ESP AM Rescue  Total  Allocation program	11 150 66 89 316 ors) (A) 242 62 3 9	3 189 94 75 361 8 329 17 8 7	6 133 58 20 <b>217</b> <b>HB</b> 187 14 0 16 <b>217</b>	62 979 420 631 <b>2092</b> <b>1</b> 1336 554 77 125 <b>2092</b>	13 174 102 86 <b>375</b> <b>W</b> 274 50 34 17	0 42 13 4 <b>59</b> \$10 56 2 0 1	95 1667 753 905 3420 Total ET 2424 699 122 175 3420	0 1 0 1 2 Non-ET	95 1668 753 906 3422 Total 2424 699 122 177 3422	2,8% 48,7% 22,0% 26,5% 100,0%  70,8% 20,4% 3,6% 5,2%  100,0%
0-15 16-55 56-64 65+  Total  Allocation program (all done ETKAS ESP AM Rescue  Total  Allocation program (donors 65+) ETKAS	11 150 66 89 316 ors) (A) 242 62 3 9 316	3 189 94 75 361 8 329 17 8 7 361	6 133 58 20 217  HB 187 14 0 16 217	62 979 420 631 <b>2092</b> D  1336 554 77 125 <b>2092</b>	13 174 102 86 <b>375</b> <b>(NL)</b> 274 50 34 17 <b>375</b>	0 42 13 4 59 550 550 550 550 550 550 550 550 550	95 1667 753 905 3420 Total ET 2424 699 122 175 3420	0 1 0 1 2 Non-ET	95 1668 753 906 3422 Total 2424 699 122 177 3422	2,8% 48,7% 22,0% 26,5% 100,0%  70,8% 20,4% 3,6% 5,2%  100,0%
0-15 16-55 56-64 65+  Total  Allocation program (all done ETKAS ESP AM Rescue  Total  Allocation program (donors 65+)  ETKAS ESP	11 150 66 89 316 ors) (A) 242 62 3 9 316	3 189 94 75 361 B 329 17 8 7 361 B	6 133 58 20 217  HB 187 14 0 16 217  HB 18 14	62 979 420 631 <b>2092</b> 1336 554 77 125 <b>2092</b> D	13 174 102 86 375  (NL) 274 50 34 17 375	0 42 13 4 59 SID 56 2 0 1 1 59 SID 0 2	95 1667 753 905 3420 Total ET 2424 699 122 175 3420 Total ET	0 1 0 1 2 Non-ET	95 1668 753 906 3422 Total 2424 699 122 177 3422 Total 84 699	2,8% 48,7% 22,0% 26,5% 100,0%  70,8% 20,4% 3,6% 5,2%  100,0%  10,0% 83,4%
0-15 16-55 56-64 65+  Total  Allocation program (all done ETKAS ESP AM Rescue  Total  Allocation program (donors 65+) ETKAS	11 150 66 89 316 ors) (A) 242 62 3 9 316	3 189 94 75 361 8 329 17 8 7 361	6 133 58 20 217  HB 187 14 0 16 217	62 979 420 631 <b>2092</b> D  1336 554 77 125 <b>2092</b> D	13 174 102 86 <b>375</b> <b>(NL)</b> 274 50 34 17 <b>375</b>	0 42 13 4 59 550 550 550 550 550 550 550 550 550	95 1667 753 905 3420 Total ET 2424 699 122 175 3420 Total ET	0 1 0 1 2 Non-ET	95 1668 753 906 3422 Total 2424 699 122 177 3422 Total 84	2,8% 48,7% 22,0% 26,5% 100,0%  70,8% 20,4% 3,6% 5,2%  100,0%

Table 4.4c(i) Kidney-only transplants (including kidney en bloc) - ETKAS allocation program

HLA - A, B, DR mismatches	2006	2007	2008	2009	2010	2009/2010
0	512	451	445	416	411	-1,2%
1	214	235	219	191	179	-6,3%
2	676	675	692	659	702	6,5%
3	768	850	753	828	772	-6,8%
4	233	298	261	249	307	23,3%
5	46	53	65	55	46	-16,4%
6	11	9	7	1	7	600,0%
not calculated	7	3	0	0	0	0,0 %
Total	2467	2574	2442	2399	2424	1,0%

Table 4.4c(i) (Continued)

Blood group	2006	2007	2008	2009	2010	2009/2010
A	1093	1136	1064	1020	1075	5,4%
AB	168	191	146	173	163	-5,8%
В	292	290	315	316	316	0,0%
0	914	957	917	890	870	-2,2%
Total	2467	2574	2442	2399	2424	1,0%
PRA	2006	2007	2008	2009	2010	2009/2010
0-5%	2197	2321	2207	2108	2161	2,5%
6-84%	245	226	219	266	236	-11,3%
85-100%	24	27	16	25	27	8,0%
Not reported	1	0	0	0	0	0,0 %
Total	2467	2574	2442	2399	2424	1,0%
Waiting time (months) based on date put on WL	2006	2007	2008	2009	2010	2009/2010
Pre-emptive	34	32	35	31	35	12,9%
0-5	36	37	39	37	30	-18,9%
6-11	77	97	83	69	72	4,3%
12-23	264	270	232	278	233	-16,2%
24-59	883	841	783	782	842	7,7%
60 +	1173	1297	1270	1202	1212	0,8%
Total	2467	2574	2442	2399	2424	1,0%
Sequence	2006	2007	2008	2009	2010	2009/2010
First	2042	2134	2049	2043	2104	3,0%
Repeat	425	440	393	356	320	-10,1%
Total	2467	2574	2442	2399	2424	1,0%
Recipient age	2006	2007	2008	2009	2010	2009/2010
0-15	82	77	102	67	91	35,8%
16-55	1544	1594	1550	1466	1521	3,8%
56-64	648	728	644	700	658	-6,0%
65+	193	175	146	166	154	-7,2%
Total	2467	2574	2442	2399	2424	1,0%

Table 4.4c(ii) Kidney-only transplants (including kidney en bloc) - 2010 - ETKAS allocation program

HLA - A, B, DR mismatches	A	В	HR	D	NL	(SLO)	Total	%
0	30	32	11	310	26	2	411	17,0%
1	18	22	12	102	20	5	179	7,4%
2	56	104	60	376	87	19	702	29,0%
3	73	136	55	378	103	27	772	31,8%
4	55	35	40	142	32	3	307	12,7%
5	9	0	9	23	5	0	46	1,9%
6	1	0	0	5	1	0	7	0,3%
Total	242	329	187	1336	274	56	2424	100,0%
Blood group	A	В	HR	D	NL	SLO	Total	%
A	110	126	85	629	99	26	1075	44,3%
AB	15	20	15	102	11	0	163	6,7%
В	29	31	27	180	42	7	316	13,0%
0	88	152	60	425	122	23	870	35,9%
Total	242	329	187	1336	274	56	2424	100,0%

Table 4.4c(ii) (Continued)

PRA	A	B	HR	D	NL	(SLO)	Total	%
0-5%	210	279	166	1194	266	46	2161	89,2%
6-84% 85-100%	28 4	38 12	21 0	131 11	8 0	10 0	236 27	9,7% 1,1%
Total	242	329	187	1336	274	56	2424	100,0%
Waiting time (months) based on date put on WL	A	В	HR	D	NL	(\$LO)	Total	%
Pre-emptive	5	9	0	17	4	0	35	1,4%
0-5	8	9	0	8	5	0	30	1,2%
6-11	12	23	1	23	12	1	72	3,0%
12-23	24	77	15	83	30	4	233	9,6%
24-59	125	157	94	286	144	36	842	34,7%
60 +	68	54	77	919	79	15	1212	50,0%
Total	242	329	187	1336	274	56	2424	100,0%
Sequence	A	В	HR	(D)	NL	(SLO)	Total	%
First	196	287	182	1144	241	54	2104	86,8%
Repeat	46	42	5	192	33	2	320	13,2%
Total	242	329	187	1336	274	56	2424	100,0%
Recipient age	A	В	HR	D	NL	(SLO)	Total	%
0-15	11	3	6	58	13	0	91	3,8%
16-55	144	184	126	876	150	41	1521	62,7%
56-64	62	90	53	355	85	13	658	27,1%
65+	25	52	2	47	26	2	154	6,4%
Total	242	329	187	1336	274	56	2424	100,0%

Table 4.4d(i) Kidney-only transplants (including kidney en bloc) - ESP allocation program

HLA - A, B, DR mismatches	2006	2007	2008	2009	2010	2009/2010
0	0	0	0	1	1	0,0%
1	3	4	3	9	16	77,8%
2	32	21	27	27	54	100,0%
3	81	96	79	124	131	5,6%
4	169	183	172	205	211	2,9%
5	147	192	168	216	190	-12,0%
6	76	84	83	88	87	-1,1%
not calculated	13	8	11	10	9	-10,0%
Total	521	588	543	680	699	2,8%
Blood group	2006	2007	2008	2009	2010	2009/2010
A	224	275	254	322	312	-3,1%
AB	17	22	19	17	31	82,4%
В	71	79	78	69	82	18,8%
0	209	212	192	272	274	0,7%
Total	521	588	543	680	699	2,8%
PRA	2006	2007	2008	2009	2010	2009/2010
0-5%	492	569	516	645	669	3,7%
6-84%	28	18	24	34	29	-14,7%
85-100%	1	1	3	0	1	
Not reported	0	0	0	1	0	-100,0%
Total	521	588	543	680	699	2,8%

Table 4.4d(i) (Continued)

Waiting time (months) based on date put on WL	2006	2007	2008	2009	2010	2009/2010
Pre-emptive	0	1	1	3	3	0,0%
0-5	4	3	2	2	6	200,0%
6-11	14	13	17	9	25	177,8%
12-23	58	92	81	110	122	10,9%
24-59	266	312	273	370	388	4,9%
60 +	179	167	169	186	155	-16,7%
Total	521	588	543	680	699	2,8%
Sequence	2006	2007	2008	2009	2010	2009/2010
First	473	550	509	636	654	2,8%
Repeat	48	38	34	44	45	2,3%
Total	521	588	543	680	699	2,8%

Table 4.4d(ii) Kidney-only transplants (including kidney en bloc) - 2010 - ESP allocation program

rable 4.4a(ii) Railey only trailep	oranie (moraani	g Kidney en L	100) 2010	Lor unoo	ation progra	••		
HLA - A, B, DR mismatches	A	В	HR	D	(NL)	(SLO)	Total	%
0	0	0	0	1	0	0	1	0,1%
1	2	0	1	13	0	0	16	2,3%
2	3	2	3	42	4	0	54	7,7%
3	17	4	0	100	10	0	131	18,7%
	17	8	4	166	16	0	211	30,2%
5	12	2	5	159	10	2	190	27,2%
	4	1	1	71	10	0	87	12,4%
Not calculated	7	0	0	2	0	0	9	1,3%
Not calculated								1,3 /6
Total	62	17	14	554	50	2	699	100,0%
Blood group	A	В	HR	D	NL	(SLO)	Total	%
A	36	8	4	249	15	0	312	44,6%
AB	2	0	0	24	5	0	31	4,4%
В	5	2	2	62	10	1	82	11,7%
0	19	7	8	219	20	1	274	39,2%
Total	62	17	14	554	50	2	699	100,0%
PRA	A	В	HR	D	NL	(SLO)	Total	%
0-5%	61	17	12	527	50	2	669	95,7%
6-84%	1	0	2	26	0	0	29	4,1%
85-100%	0	0	0	1	0	0	1	0,1%
Total	62	17	14	554	50	2	699	100,0%
Waiting time (months) based on date put on WL	A	B	HR	D	NL	(SLD)	Total	%
Pre-emptive	0	0	0	0	2	1	3	0,4%
0-5	0	0	1	5	0	0	6	0,9%
5-11	5	1	1	17	1	0	25	3,6%
12-23	18	4	6	90	3	1	122	17,5%
24-59	33	12	4	301	38	0	388	55,5%
24-39 60 +	6	0	2	141	6	0	366 155	22,2%
50 <del>T</del>				141			155	22,2/0
Total	62	17	14	554	50	2	699	100,0%
							Total	%
Sequence	A	B	HR	D	NL	(SLO)	Total	%
•	(A) 55	B 16	HR 14	<u>0</u> 517	50	2	654	93,6%
Sequence First Repeat								

Table 4.4e(i) Kidney-only transplants (including kidney en bloc) - AM allocation program

HLA - A, B, DR mismatches	2006	2007	2008	2009	2010	2009/2010
0	7	8	5	23	16	-30,4%
1	13	15	23	26	31	19,2%
2	11	19	19	26	44	69,2%
3	6	13	10	15	26	73,3%
4	1	4	1	5	5	0,0%
5	0	1	1	0	0	0,0%
Total	38	60	59	95	122	28,4%
Blood group	2006	2007	2008	2009	2010	2009/2010
A	19	26	23	43	50	16,3%
AB	0	5	0	3	5	66,7%
В	6	7	9	13	22	69,2%
0	13	22	27	36	45	25,0%
Total	38	60	59	95	122	28,4%
PRA	2006	2007	2008	2009	2010	2009/2010
0-5%	4	9	7	9	19	111,1%
6-84%	28	40	36	56	68	21,4%
85-100%	6	11	16	30	35	16,7%
Total	38	60	59	95	122	28,4%
Waiting time (months) based on date put on WL	2006	2007	2008	2009	2010	2009/2010
Pre-emptive	1	0	0	1	1	0,0%
0-5	1	2	0	2	1	-50,0%
6-11	2	4	1	4	1	-75,0%
12-23	5	7	7	11	17	54,5%
24-59	15	25	27	45	53	17,8%
60 +	14	22	24	32	49	53,1%
Total	38	60	59	95	122	28,4%
Sequence	2006	2007	2008	2009	2010	2009/2010
First	15	21	20	20	32	60,0%
Repeat	23	39	39	75	90	20,0%
Total	38	60	59	95	122	28,4%
Recipient age	2006	2007	2008	2009	2010	2009/2010
0-15	0	2	0	0	1	
16-55	31	40	40	71	88	23,9%
56-64	6	16	14	15	23	53,3%
65+	1	2	5	9	10	11,1%
Total	38	60	59	95	122	28,4%

Table 4.4e(ii) Kidney-only transplants (including kidney en bloc) - 2010 - AM allocation program

HLA - A, B, DR mismatches	A	В	D	(NL)	Total	%
0	0	2	9	5	16	13,1%
1	1	2	17	11	31	25,4%
2	1	3	29	11	44	36,1%
3	1	0	21	4	26	21,3%
4	0	1	1	3	5	4,1%
Total	3	8	77	34	122	100,0%

Table 4.4e(ii) (Continued)

(00111111111111111111111111111111111111						
Blood group	A	В	D	NL	Total	9
A	2	3	29	16	50	41,0%
AB	0	0	5	0	5	4,19
B 0	0 1	0 5	15 28	7 11	22 45	18,0° 36,9°
-	•					
Total	3	8	77	34	122	100,09
PRA	A	В	D	NL	Total	ç
0-5%	0	2	9	8	19	15,69
6-84%	2	2	43	21	68	55,7
85-100%	1	4	25	5	35	28,7
Total	3	8	77	34	122	100,0
Waiting time (months) based on date put on WL	A	В	D	NL	Total	•
Pre-emptive	0	0	0	1	1	0,8
0-5	0	0	1	0	1	0,8
6-11	0	0	0	1_	1	0,8
12-23 24-59	1	2	7	7	17 53	13,9
24-59 60 +	1 1	3 3	33 36	16 9	49	43,4 40,2
Total	3	8	77	34	122	100,0
Sequence	A	В	(D)	NL	Total	
First	0	2	17	13	32	26,2
Repeat	3	6	60	21	90	73,8
Total	3	8	77	34	122	100,0
Recipient age	A	В	Ф	NL	Total	
0-15	0	0	1	0	1	0,8
16-55	1	5	62	20	88	72,1
56-64	1	1	12	9	23	18,9
65+	1	2	2	5	10	8,2
Total	3	8	77	34	122	100,0
Table 4.5(i) Living donor kidney	y transplants – kidney	y-only – 2006 – 20	010			
Kidney-only	2006	2007	2008	2009	2010	2009/201
Related	517	587	609	614	688	12,1
Non-related	384	445	482	536	574	7,1
Total	901	1032	1091	1150	1262	9,7
	2006	2007	2008	2009	2010	2009/201
Related Brother / sister	<b>2006</b> 156	<b>2007</b>	<b>2008</b> 195	<b>2009</b>	<b>2010</b> 222	2009/20
Related  Brother / sister Father	2006 156 115	2007 181 128	<b>2008</b> 195 136	<b>2009</b> 195 110	<b>2010</b> 222 142	2009/20 <sup>-</sup> 13,8 29,1
Related  Brother / sister Father Mother	2006 156 115 187	2007 181 128 211	2008 195 136 209	2009 195 110 225	2010 222 142 231	2009/20 13,8 29,1 2,7
Related  Brother / sister  Father  Mother  Son / daughter	2006 156 115 187 26	2007 181 128 211 26	2008 195 136 209 39	2009 195 110 225 32	2010 222 142 231 43	2009/20 13,8 29,1 2,7 34,4
Related  Brother / sister Father Mother Son / daughter Grandfather / -mother	2006 156 115 187 26 10	2007  181 128 211 26 5	2008 195 136 209 39 6	2009  195 110 225 32 9	2010 222 142 231 43 4	2009/20 13,8 29,1 2,7 34,4 -55,6
Related  Brother / sister Father Mother Son / daughter Grandfather / -mother Uncle / aunt	2006 156 115 187 26	2007 181 128 211 26	2008 195 136 209 39	2009 195 110 225 32	2010 222 142 231 43	2009/20 13,8 29,1 2,7 34,4 -55,6 35,3
Related  Brother / sister Father Mother Son / daughter Grandfather / -mother Uncle / aunt Nephew / niece Cousin Blood related: NOS*	2006 156 115 187 26 10 12 9 0	2007  181 128 211 26 5 11 15	2008  195 136 209 39 6 14 4 2	2009  195 110 225 32 9 17 15	2010 222 142 231 43 4 23 11 12	2009/20 <sup>-</sup> 13,8 29,1 2,7 34,4 -55,6 35,3 -26,7 33,3
Related  Brother / sister Father Mother Son / daughter Grandfather / -mother Uncle / aunt Nephew / niece	2006 156 115 187 26 10 12 9	2007  181 128 211 26 5 11 15	2008  195 136 209 39 6 14 4	2009  195 110 225 32 9 17 15	2010 222 142 231 43 4 23 11	

Table 4.5(i) (Continued)

Non-related	2006	2007	2008	2009	2010	2009/2010
Spouse / partner	281	314	334	384	421	9,6%
Friend	0	29	41	42	48	14,3%
Anonymous donor	0	6	20	25	32	28,0%
Not blood related family	26	29	33	44	27	-38,6%
Not blood related: NOS*	77	67	54	41	46	12,2%
Total	384	445	482	536	574	7,1%

<sup>\*</sup> NOS - Not otherwise specified

Table 4.5(ii) Living donor kidney transplants – kidney-only – 2010

( )	<u> </u>						
Kidney-only	A	B	HR	D	NL	Total	%
Related	38	34	11	378	227	688	54,5%
Non-related	21	15	5	287	246	574	45,5%
Total	59	49	16	665	473	1262	100,0%
Related	A	В	HR	D	NL	Total	%
Brother / sister	17	11	0	105	89	222	32,3%
Father	3	8	3	85	43	142	20,6%
Mother	9	11	7	155	49	231	33,6%
Son / daughter	3	2	0	10	28	43	6,3%
Grandfather / - mother	2	0	0	0	2	4	0,6%
Uncle / aunt	2	1	0	13	7	23	3,3%
Nephew / niece	0	0	0	2	9	11	1,6%
Cousin	2	1	1	8	0	12	1,7%
Total	38	34	11	378	227	688	100,0%
Non related	A	В	HR	D	NL	Total	%
Spouse / partner	19	14	5	249	134	421	73,3%
Friend	1	0	0	19	28	48	8,4%
Anonymous donor	0	0	0	0	32	32	5,6%
Not blood related family	0	0	0	12	15	27	4,7%
Not blood related: NOS*	1	1	0	7	37	46	8,0%
Total	21	15	5	287	246	574	100,0%

<sup>\*</sup> NOS - Not otherwise specified

Figure 4.5 Dynamics of the Eurotransplant kidney transplant waiting list and transplants between 1969 and 2010 14000 12000 10000 8000 4000 2000 0 1969 1971 1973 1975 1977 1979 1981 1983 1985 1987 1991 1993 1995 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 450 892 1147 1200 934 1929 2135 2928 5150 6740 8376 9418 10510 11324 11975 12313 12524 12450 12653 12382 12251 11814 11393 11308 11082 11010 10768 □ Kidney waiting list 11 33 33 33 53 108 150 161 129 127 212 411 526 579 569 617 697 646 803 866 901 1032 1091 1150 1262 ■Living donor transplants 9 5 □Deceased donor transplants | 102 | 228 | 454 | 583 | 800 | 1050 | 1263 | 1645 | 1965 | 2665 | 3395 | 3293 | 3064 | 3110 | 3068 | 3050 | 3145 | 3121 | 3047 | 3352 | 3185 | 3383 | 3518 | 3703 | 3492 | 3561 | 3705 |

# 5. Thoracic organs: donation, waiting lists and transplants

Table 5.1(i) Deceased donors / hearts in Eurotransplant from 2006 to 2010

Donors						
Year of registration	2006	2007	2008	2009	2010	2009/2010
All donors	2299	2411	2233	2305	2415	4,6%
Non-heart donors	1293	1346	1260	1420	1469	4,6%
Heart donors	1006	1065	973	885	946	4,5%
Heart donors not used	419	467	390	305	315	-2,5%
Total heart donors used	587	598	583	580	631	8,1%
Hearts						
Year of registration	2006	2007	2008	2009	2010	2009/2010
Reported	1006	1065	973	885	946	4,5%
Offered	943	976	894	871	938	7,0%
Accepted	750	750	704	691	750	7,9%
Transplanted	587	598	583	580	631	8,1%

Note: Numbers are in some cases lower than in previous reports, because erroneously reported hearts from some NHB donors are now excluded

Table 5.1(ii) Deceased donors / hearts in Eurotransplant in 2010

Donors	Donors												
Donor country	A	В	HR	D	L	NL	(SLO)	Total ET N	lon-ET	Total	% al		
All donors	203	289	135	1315	3	259	44	2248	167	2415	100,0%		
Non-heart donors	115	176	94	781	1	177	13	1357	112	1469	60,7%		
Heart donors	88	113	41	534	2	82	31	891	55	946	39,2%		
Heart donors not used	20	46	8	149	2	34	11	270	45	315	13,0%		
Total heart donors used	68	67	33	385	0	48	20	621	10	631	26,1%		

Hearts											
Donor country	A	В	HR	D	L	NL	(SLO)	Total ET N	on-ET	Total	% of reported
Reported	88	113	41	534	2	82	31	891	55	946	100,0%
Offered	88	110	40	533	2	82	31	886	52	938	99,2%
Accepted	76	82	35	456	1	57	23	730	20	750	79,3%
Transplanted	68	67	33	385	0	48	20	621	10	631	66,7%

Table 5.2(i) Deceased donors / lungs in Eurotransplant from 2006 to 2010

Donors	Donors										
Year of registration	2006	2007	2008	2009	2010	2009/2010					
All donors	2299	2411	2233	2305	2415	4,8%					
Non-lung donors	1507	1509	1383	1426	1468	2,9%					
Lung donors	792	902	850	879	947	7,7%					
Lung donors not used	338	399	342	366	375	2,5%					
One lung used	38	45	44	29	33	13,8%					
Two lungs used	416	458	464	484	539	11,4%					
Total lung donors used	454	503	508	513	572	11,5%					

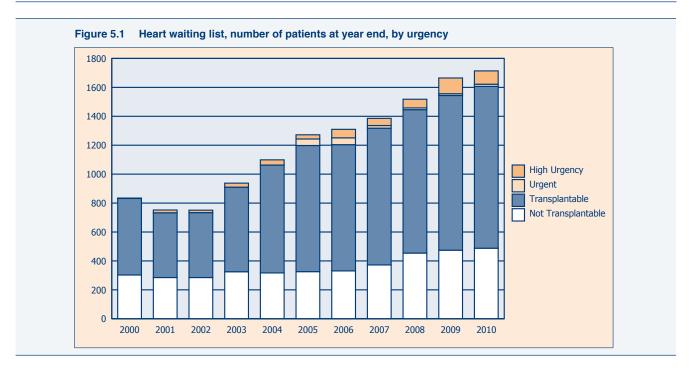
Table 5.2(i) (Continued)

Lungs						
Year of registration	2006	2007	2008	2009	2010	2009/2010
Reported	1556	1787	1677	1734	1873	8,0%
Offered	1516	1758	1646	1716	1847	7,6%
Accepted	1154	1333	1283	1342	1464	9,1%
Transplanted	870	961	972	997	1111	11,4%

Table 5.2(ii) Deceased donors / lungs in Eurotransplant in 2010

Donors											
Donor country	A	В	HR	D	L	NL	(SLO)	Total ET	Non-ET	Total	% all donors
All donors	203	289	135	1315	3	259	44	2248	167	2415	100,0%
Non-lung donors	128	145	106	862	1	142	18	1402	66	1468	60,8%
Lung donors	75	144	29	453	2	117	26	846	101	947	39,2%
Lung donors not used	24	41	13	173	0	57	14	322	53	375	15,5%
One lung used	3	9	2	17	0	2	0	33	0	33	1,4%
Two lungs used	48	94	14	263	2	58	12	491	48	539	22,3%
Total lung donors used	51	103	16	280	2	60	12	524	48	572	23,7%

Lungs											
Donor country	A	В	HR	D	L	NL	(SLO)	Total ET	Non-ET	Total	% of reported
Reported	150	282	58	898	4	229	52	1673	200	1873	100,0%
Offered	150	278	56	891	4	228	52	1659	188	1847	98,6%
Accepted	127	236	42	713	4	174	40	1336	128	1464	78,2%
Transplanted	99	197	30	543	4	118	24	1015	96	1111	59,3%



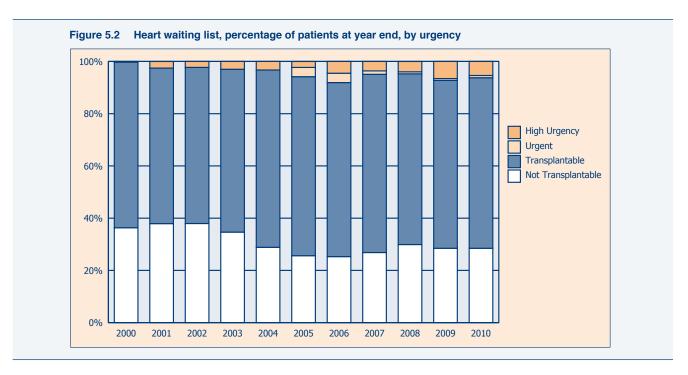


Table 5.3(i) Active heart transplant waiting list, as per December 31, from 2006 to 2010 - characteristics

	2006	2007	2008	2009	2010	2009/2010
Heart	904	933	989	1121	1158	3,3%
Heart + kidney	15	24	16	27	31	14,8%
Heart + liver	1	2	2	4	2	-50,0%
Heart + liver + kidney	0	0	0	0	1	
Heart + liver + pancreas	0	0	0	0	1	
Heart + lung	59	55	57	38	33	-13,2%
Heart + lung + kidney	0	0	0	1	0	-100,0%
Total	979	1014	1064	1191	1226	2,9%

Table 5.3(ii) Active heart transplant waiting list as per December 31, 2010 - characteristics

	A	В	HR	D	NL	SLO	Total	%
Heart	67	59	11	929	66	26	1158	94,5%
Heart + kidney	4	7	0	20	0	0	31	2,5%
Heart + liver	0	0	0	2	0	0	2	0,2%
Heart + liver + kidney	1	0	0	0	0	0	1	0,1%
Heart + liver + pancreas	0	0	0	1	0	0	1	0,1%
Heart + lung	2	1	0	29	1	0	33	2,7%
Total	74	67	11	981	67	26	1226	100,0%

Table 5.4(i) Active heart-only transplant waiting list as per December 31 - characteristics

Blood group	2006	2007	2008	2009	2010	2009/2010
A	434	442	469	528	531	0,6%
AB	17	22	22	25	34	36,0%
В	89	93	97	121	102	-15,7%
0	364	376	401	447	491	9,8%
Total	904	933	989	1121	1158	3,3%
% PRA current	2006	2007	2008	2009	2010	2009/2010
0-5 %	554	561	613	665	654	-1,7%
6-84 %	15	16	22	16	26	62,5%
85-100 %	2	0	0	1	1	0,0%
Not reported	333	356	354	439	477	8,7%

Table 5.4(i) (Continued)

Sequence	2006	2007	2008	2009	2010	2009/2010
First	885	923	979	1106	1140	3,1%
Repeat	19	10	10	15	18	20,0%
Total	904	933	989	1121	1158	3,3%
Waiting time (months) based on date put on WL	2006	2007	2008	2009	2010	2009/2010
0-5	298	330	303	372	355	-4,6%
6-11	180	168	209	230	208	-9,6%
12-23	228	203	216	226	276	22,1%
24+	198	232	261	293	319	8,9%
Total	904	933	989	1121	1158	3,3%
Age	2006	2007	2008	2009	2010	2009/2010
0-15	20	26	25	35	26	-25,7%
16-55	448	509	540	606	613	1,2%
56-64	326	304	315	364	410	12,6%
65+	110	94	109	116	109	-6,0%
Total	904	933	989	1121	1158	3,3%

Table 5.4(ii) Active heart-only transplant waiting list as per December 31, 2010 - characteristics

Blood group	A	В	HR	D	NL	SLO	Total	%
A	32	26	4	426	30	13	531	45,9%
AB	3	3		24	3	1	34	2,9%
В	5	8	1	84	4		102	8,8%
0	27	22	6	395	29	12	491	42,4%
Total	67	59	11	929	66	26	1158	100,0%
% PRA current	A	В	HR	D	NL	(SLO)	Total	%
0-5 %	15	22	4	556	53	4	654	56,5%
6-84 %	0	4	0	19	3	0	26	2,2%
85-100 %	0	0	0	1	0	0	1	0,1%
Not reported	52	33	7	353	10	22	477	41,2%
Total	67	59	11	929	66	26	1158	100,0%
Sequence	A	В	HR	D	NL	(SLO)	Total	%
First	66	57	11	914	66	26	1140	98,4%
Repeat	1	2	0	15	0	0	18	1,6%
Total	67	59	11	929	66	26	1158	100,0%
Waiting time (months) based on date put on WL	A	В	HR	D	(NL)	SLO	Total	%
0-5	30	30	7	249	26	13	355	30,7%
6-11	11	23	2	150	13	9	208	18,0%
12-23	22	6	1	235	10	2	276	23,8%
24+	4	0	1	295	17	2	319	27,5%
Total	67	59	11	929	66	26	1158	100,0%

Table 5.4(ii) (Continued)

Age	A	В	HR	D	NL	(SLO)	Total	%
0-15	1	1	0	21	2	1	26	2,2%
16-55	28	31	3	500	45	6	613	52,9%
56-64	27	21	8	322	18	14	410	35,4%
65+	11	6	0	86	1	5	109	9,4%
Total	67	59	11	929	66	26	1158	100,0%

# Table 5.5(i) Active heart + lung transplant waiting list as per December 31 - characteristics

Type of transplant	2006	2007	2008	2009	2010	2009/2010
Heart + lung	59	55	57	38	33	-13,2%
Heart + lung + kidney	0	0	0	1	0	-100,0%
Total	59	55	57	39	33	-15,4%

# Table 5.5(ii) Active heart + lung transplant waiting list, as per December 31 , 2010 - characteristics

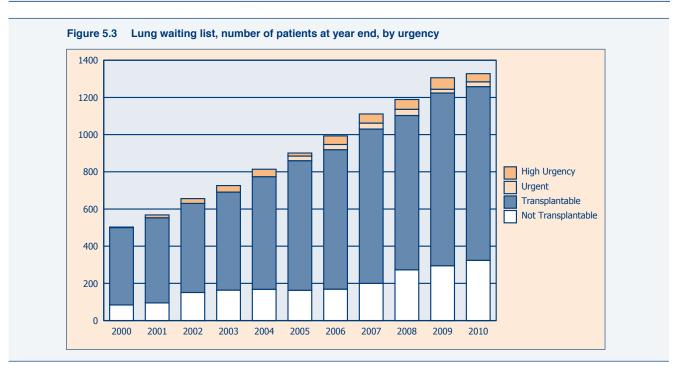
Type of transplant	A	B	D	NL	Total	%
Heart + lung	2	1	29	1	33	100,0%
Total	2	1	29	1	33	100,0%

# Table 5.6(i) Active heart + lung transplant waiting list as per December 31 - characteristics

Blood group	2006	2007	2008	2009	2010	2009/2010
A	24	25	27	22	19	-13,6%
AB	3	1	1	0	2	-
В	4	4	5	3	1	-66,7%
0	28	25	24	13	11	-15,4%
Total	59	55	57	38	33	-13,2%
% PRA current	2006	2007	2008	2009	2010	2009/2010
0-5 %	38	32	32	21	12	-42,9%
6-84 %	0	0	0	1	5	400,0%
Not reported	21	23	25	16	16	0,0%
Total	59	55	57	38	33	-13,2%
Sequence	2006	2007	2008	2009	2010	2009/2010
First	58	55	57	38	33	-13,2%
Repeat	1	0	0	0	0	0,0 %
Total	59	55	57	38	33	-13,2%
Waiting time (months) based on date put on WL	2006	2007	2008	2009	2010	2009/2010
0-5	9	14	11	8	7	-12,5%
6-11	8	8	11	2	4	100,0%
12-23	19	7	14	7	3	-57,1%
24+	23	26	21	21	19	-9,5%
Total	59	55	57	38	33	-13,2%
Age	2006	2007	2008	2009	2010	2009/2010
0-15	4	1	5	3	1	-66,7%
16-55	51	48	47	34	31	-8,8%
56-64	4	6	5	1	1	0,0%
				38	33	-13,2%

Table 5.6(ii) Active heart + lung transplant waiting list as per December 31, 2010 - characteristics

Blood group	A	В	D	(NL)	Total	%
A	1	1	16	1	19	57,6%
AB	1	0	1	0	2	6,1%
В	0	0	1	0	1	3,0%
0	0	0	11	0	11	33,3%
Total	2	1	29	1	33	100,0%
% PRA current	A	В	D	(NL)	Total	%
0-5 %	0	0	12	0	12	36,4%
6-84 %	0	0	5	0	5	15,2%
Not reported	2	1	12	1	16	48,5%
Total	2	1	29	1	33	100,0%
Sequence	A	В	D	NL	Total	%
First	2	1	29	1	33	100,0%
Total	2	1	29	1	33	100,0%
Waiting time (months) based on date put on WL	A	В	D	NL	Total	%
0-5	1	1	5	0	7	21,2%
6-11	1	0	3	0	4	12,1%
12-23	0	0	3	0	3	9,1%
24+	0	0	18	1	19	57,6%
Total	2	1	29	1	33	100,0%
Age	A	В	D	NL	Total	%
0-15	0	0	1	0	1	3,0%
16-55	2	1	27	1	31	93,9%
56-64	0	0	1	0	1	3,0%
Total	2	1	29	1	33	100,0%



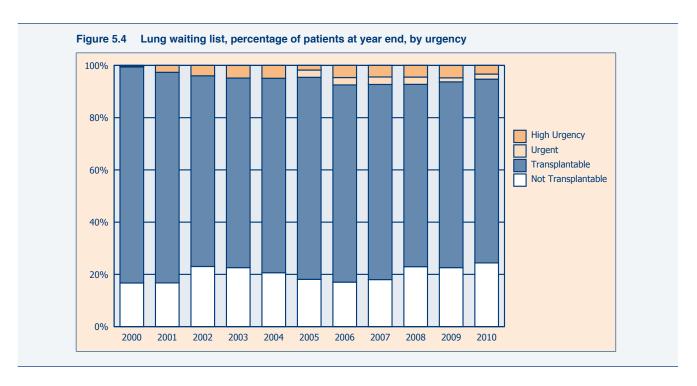


Table 5.7(i) Active lung transplant waiting list as per December 31 - characteristics

Type of transplant	2006	2007	2008	2009	2010	2009/2010
Lung	758	849	846	964	964	0,0%
Lung + kidney	2	3	5	2	2	0,0%
Lung + liver	5	4	8	6	5	-16,7%
Lung + heart	59	55	57	38	33	-13,2%
Lung + heart + kidney	0	0	0	1	0	-100,0%
Total	824	911	916	1011	1004	-0,7%

Table 5.7(ii) Active lung transplant waiting list as per December 31, 2010 - characteristics

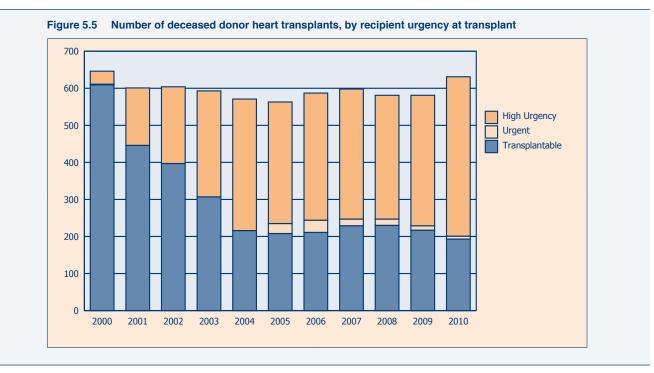
Type of transplant	A	В	D	NL	Total	%
Lung	55	88	609	212	964	96,0%
Lung + kidney	0	1	1	0	2	0,2%
Lung + liver	1	0	3	1	5	0,5%
Lung + heart	2	1	29	1	33	3,3%
Total	58	90	642	214	1004	100,0%

Table 5.8(i) Active lung-only transplant waiting list, as per December 31 - characteristics

Blood group	2006	2007	2008	2009	2010	2009/2010
A	281	322	333	391	402	2,8%
AB	25	21	10	21	11	-47,6%
В	78	84	76	74	77	4,1%
0	374	422	427	478	474	-0,8%
Total	758	849	846	964	964	0,0%
% PRA current	2006	2007	2008	2009	2010	2009/2010
0-5 %	411	475	486	568	572	0,7%
6-84 %	4	9	10	12	27	125,0%
85-100 %	0	0	0	1	2	100,0%
Not reported	343	365	350	383	363	-5,2%
Total	758	849	846	964	964	0,0%

Table 5.8(i) (Continued)

Sequence	2006	2007	2008	2009	2010	2009/2010
First	731	822	821	936	934	-0,2%
Repeat	27	27	25	28	30	7,1%
Total	758	849	846	964	964	0,0%
Waiting time (months) based on date put on WL	2006	2007	2008	2009	2010	2009/2010
0-5	264	289	265	319	262	-17,9%
6-11	157	171	179	183	178	-2,7%
12-23	164	181	203	222	231	4,1%
24+	173	208	199	240	293	22,1%
Total	758	849	846	964	964	0,0%
Age	2006	2007	2008	2009	2010	2009/2010
0-15	13	14	5	11	5	-54,5%
16-55	486	519	520	582	564	-3,1%
56-64	233	278	293	340	359	5,6%
65+	26	38	28	31	36	16,1%
Total	758	849	846	964	964	0,0%
Table 5.8(ii) Active lung-only trans	splant waiting list,	as per Decembe	r 31, 2010 - chara	acteristics		
Blood group	A	В	D	NL	Total	%
A	24	37	254	87	402	41,7%
AB	2	1	8	0	11	1,1%
В	5	11	44	17	77	8,0%
0	24	39	303	108	474	49,2%
Total	55	88	609	212	964	100,0%
% PRA current	A	В	D	NL	Total	%
0-5 %	6	13	361	192	572	59,3%
6-84 %	0	2	20	5	27	2,8%
85-100 %	0	1	1	0	2	0,2%
Not reported	49	72	227	15	363	37,7%
Total	55	88	609	212	964	100,0%
Sequence	A	В	D	NL	Total	%
First	52	86	586	210	934	97,0%
Repeat	3	2	23	2	30	3,0%
Total	55	88	609	212	964	100,0%
Waiting time (months) based on date put on WL	A	B	D	(NL)	Total	%
0-5	24	43	146	49	262	27,2%
6-11	16	20	93	49	178	18,5%
12-23	10	21	146	54	231	24,0%
24+	5	4	224	60	293	30,4%
Total	55	88	609	212	964	100,0%
A	A	В	D	NL	Total	%
Age				0	-	0,5%
0-15	1	0	4	Ü	5	0,5%
	1 34	0 38	4 363	0 129	5 564	58,5%
0-15 16-55 56-64	34 18	38 49	363 213	129 79	564 359	58,5% 37,2%
0-15 16-55	34	38	363	129	564	58,5%



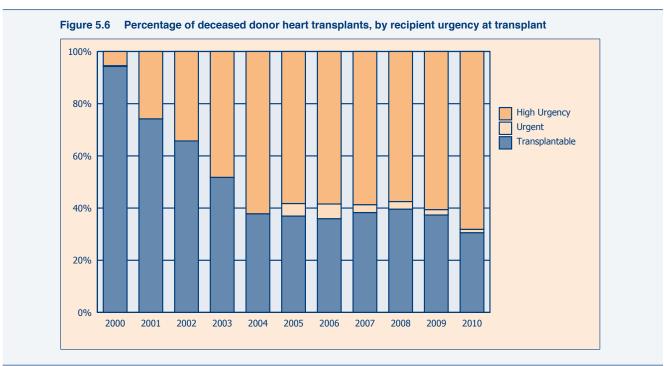


Table 5.9(i) Heart transplants from 2006 to 2010 - characteristics

Deceased donor heart transplants										
Type of transplant	2006	2007	2008	2009	2010	2009/2010				
Heart	539	562	544	553	602	8,9%				
Heart + kidney	15	13	10	8	11	37,5%				
Heart + liver	1	2	3	0	1					
Heart + both lungs	30	21	23	20	16	-20,0%				
Heart + both lungs + kidney	0	0	1	0	0	0,0%				
Heart + both lungs + liver	2	0	0	0	1					
Heart + pancreas + kidney	0	0	0	0	1					
Total	587	598	581	581	632	8,8%				

Table 5.9(i) (Continued)

Heart-only transplant										
Blood group	2006	2007	2008	2009	2010	2009/201				
A	231	271	219	238	280	17,6%				
AB	41	39	37	38	45	18,4%				
В	85	68	81	83	90	8,4%				
0	182	184	207	194	187	-3,6%				
Total	539	562	544	553	602	8,9%				
Waiting time (months) based on date put on WL	2006	2007	2008	2009	2010	2009/2010				
0-5	306	325	314	304	344	13,2%				
6-11	104	107	105	102	107	4,9%				
12-23	93	82	78	83	88	6,0%				
24-59	35	45	46	56	51	-8,9%				
60+	1	3	1	8	12	50,0%				
Total	539	562	544	553	602	8,9%				
Sequence	2006	2007	2008	2009	2010	2009/2010				
First	529	549	535	542	588	8,5%				
Repeat	10	13	9	11	14	27,3%				
Total	539	562	544	553	602	8,9%				
Recipient age	2006	2007	2008	2009	2010	2009/2010				
0-15	35	37	32	38	47	23,7%				
16-55	286	277	314	292	344	17,8%				
56-64	174	206	162	169	182	7,7%				
65+	44	42	36	54	29	-46,3%				
Total	539	562	544	553	602	8,9%				

Table 5.9(ii) Heart transplants 2010 - characteristics

Deceased donor heart transplants									
Type of transplant	A	В	HR	D	NL	(SLO)	Non-ET	Total	%
Heart	69	64	36	369	45	18	1	602	95,3%
Heart + kidney	0	4	0	6	0	1	0	11	1,7%
Heart + liver	0	0	0	1	0	0	0	1	0,2%
Heart + both lungs	0	0	0	15	1	0	0	16	2,5%
Heart + both lungs + liver	0	0	0	1	0	0	0	1	0,2%
Heart + pancreas + kidney	0	0	0	1	0	0	0	1	0,2%
Total	69	68	36	393	46	19	1	632	100,0%
Heart-only transplant									
Blood group	A	В	HR	D	NL	(SLO)	Non-ET	Total	%
A	29	25	18	177	23	8	0	280	46,5%
AB	3	2	6	33	1	0	0	45	7,5%
В	10	12	4	54	6	4	0	90	15,0%
0	27	25	8	105	15	6	1	187	31,1%
Total	69	64	36	369	45	18	1	602	100,0%

Table 5.9(ii) (Continued)

Waiting time (months) based on date put on WL	A	В	HR	<sub>D</sub>	NL	(SLD)	Non-ET	Total	%
0-5	41	33	29	213	14	13	1	344	57,1%
6-11	13	22	3	56	13	0	0	107	17,8%
12-23	11	9	3	52	9	4	0	88	14,6%
24-59	3	0	1	37	9	1	0	51	8,5%
60+	1	0	0	11	0	0	0	12	2,0%
Total	69	64	36	369	45	18	1	602	100,0%
Sequence	A	В	HR	D	NL	(SLO)	Non-ET	Total	%
First	67	64	36	360	43	17	1	588	97,7%
Repeat	2	0	0	9	2	1	0	14	2,3%
Total	69	64	36	369	45	18	1	602	100,0%
Recipient age	A	В	HR	D	NL	(SLO)	Non-ET	Total	%
0-15	6	2	1	35	2	0	1	47	7,8%
16-55	32	30	17	223	31	11	0	344	57,1%
56-64	27	26	16	97	11	5	0	182	30,2%
65+	4	6	2	14	1	2	0	29	4,8%
Total	69	64	36	369	45	18	1	602	100,0%

Table 5.10(i) Heart + lung transplants from 2006 to 2010 - characteristics

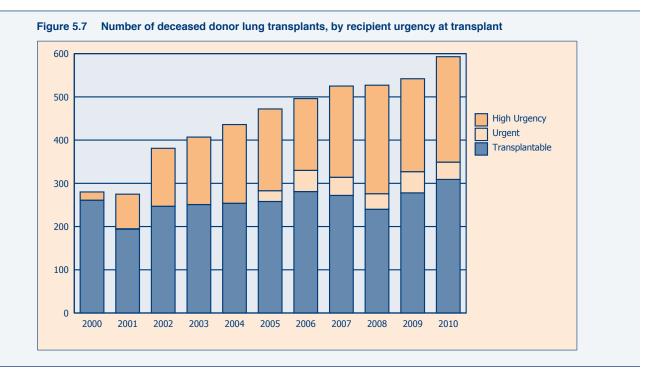
Deceased donor heart + lung trans	splants					
Type of transplant	2006	2007	2008	2009	2010	2009/2010
Heart + both lungs	30	21	23	20	16	-20,0%
Heart + both lungs + kidney	0	0	1	0	0	0,0%
Heart + both lungs + whole liver	2	0	0	0	1	<b></b>
Total	32	21	24	20	17	-15,0%
Heart + lung transplants						
Blood group	2006	2007	2008	2009	2010	2009/2010
A	11	10	11	7	6	-14,3%
AB	3	1	4	1	0	-100,0%
В	2	3	1	2	3	50,0%
0	16	7	8	10	8	-20,0%
Total	32	21	24	20	17	-15,0%
Waiting time (months) based on date put on WL	2006	2007	2008	2009	2010	2009/2010
0-5	17	8	15	9	9	0,0%
6-11	3	2	2	4	1	-75,0%
12-23	5	7	2	3	2	-33,3%
24-59	6	4	5	2	3	50,0%
60+	1	0	0	2	2	0,0%
Total	32	21	24	20	17	-15,0%
Sequence	2006	2007	2008	2009	2010	2009/2010
First	32	21	24	20	17	-15,0%
Total	32	21	24	20	17	-15,0%

Table 5.10(i) (Continued)

Recipient age	2006	2007	2008	2009	2010	2009/2010
0-15	1	2	1	1	2	100,0%
16-55	29	18	22	19	14	-26,3%
56-64	2	1	1	0	1	
Total	32	21	24	20	17	-15,0%

Table 5.10(ii) Heart + lung transplants 2010 - characteristics

Deceased donor heart + lung transplants				
Type of transplant	D	NL	Total	%
Heart + both lungs	15	1	16	94,1%
Heart + both lungs + liver	1	0	1	5,9%
Total	16	1	17	100,0%
Heart + lung transplants				
Blood group	D	NL	Total	%
A	6	0	6	35,3%
B O	3 7	0	3 8	17,6% 47,1%
Total	16	1	17	100,0%
Waiting time (months) based on date put on WL	D	(NL)	Total	%
0-5	9	0	9	52,9%
6-11	1	0	1	5,9%
12-23 24-59	2 2	0	2 3	11,8% 17,6%
60+	2	0	2	11,8%
Total	16	1	17	100,0%
Sequence	D	(NL)	Total	%
First	16	1	17	100,0%
Total	16	1	17	100,0%
Recipient age	(D)	NL	Total	%
0-15	2	0	2	11,8%
16-55	13	1	14	82,4%
56-64	1	0	1	5,9%
Total	16	1	17	100,0%



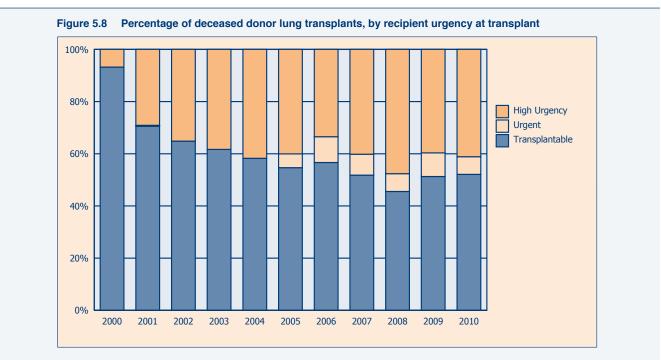


Table 5.11(i) Lung transplants from 2006 to 2010 - characteristics

Deceased donor lung transplants						
Type of transplant	2006	2007	2008	2009	2010	2009/2010
Single lung	121	90	82	79	75	-5,1%
Both lungs	337	409	419	435	496	14,0%
Single lung + kidney	0	1	0	0	0	·
Single lung + liver	1	0	0	0	0	
Both lungs + heart	30	21	23	20	16	-20,0%
Both lungs + kidney	3	0	1	2	2	0,0%
Both lungs + liver	2	4	1	3	3	0,0%
Both lungs + heart + kidney	0	0	1	0	0	·
Both lungs + heart + liver	2	0	0	0	1	
Total	496	525	527	539	593	10,0%

Table 5.11(i) (Continued)

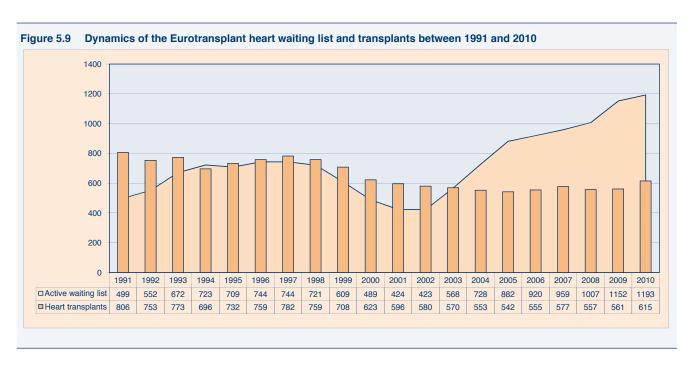
Lung-only transplant (including s	single and both lung	gs)				
Blood group	2006	2007	2008	2009	2010	2009/2010
A	206	229	219	220	231	5,0%
AB	28	36	24	30	37	23,3%
В	61	59	61	62	74	19,4%
0	163	175	197	202	229	13,4%
Total	458	499	501	514	571	11,1%
Waiting time (months) based on date put on WL	2006	2007	2008	2009	2010	2009/2010
0-5	225	235	240	238	270	13,4%
6-11	102	112	107	112	120	7,1%
12-23	79	89	89	89	114	28,1%
24-59	46	58	53	71	61	-14,1%
60+	6	5	12	4	6	50,0%
Total	458	499	501	514	571	11,1%
Sequence	2006	2007	2008	2009	2010	2009/2010
First	436	459	474	483	543	12,4%
Repeat	22	40	27	31	28	-9,7%
Total	458	499	501	514	571	11,1%
Recipient age	2006	2007	2008	2009	2010	2009/2010
0-15	7	9	16	8	11	37,5%
16-55	297	327	297	316	351	11,1%
56-64	141	142	165	175	189	8,0%
65+	13	21	23	15	20	33,3%
Total	458	499	501	514	571	11,1%

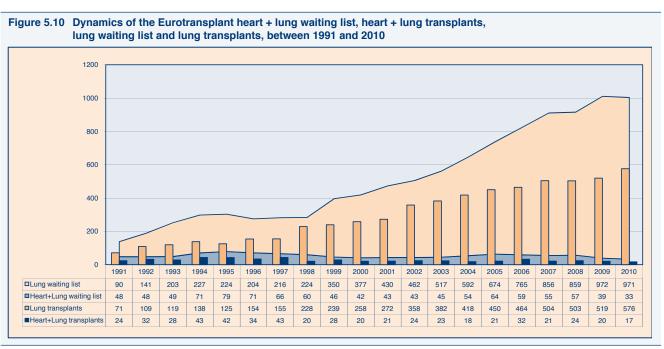
Table 5.11(ii) Lung transplants 2010 - characteristics

Deceased donor lung transplants						
Type of transplant	A	В	D	(NL)	Total	%
Single lung	5	21	44	5	75	12,6%
Both lungs	107	91	237	61	496	83,6%
Both lungs + heart	0	0	15	1	16	2,7%
Both lungs + kidney	1	0	1	0	2	0,3%
Both lungs + liver	1	2	0	0	3	0,5%
Both lungs + heart + liver	0	0	1	0	1	0,2%
Total	114	114	298	67	593	100,0%
Lung-only transplant (including singl	e and both lungs)	ı				
Blood group	A	В	D	NL	Total	%
A	45	43	114	29	231	40,5%
AB	8	2	24	3	37	6,5%
В	15	13	39	7	74	13,0%
0	44	54	104	27	229	40,1%
Total	112	112	281	66	571	100,0%
Waiting time (months) based on date put on WL	A	В	D	NL	Total	%
0-5	77	44	133	16	270	47,3%
6-11	22	32	59	7	120	21,0%
12-23	11	31	52	20	114	20,0%
24-59	2	5	32	22	61	10,7%
60+	0	0	5	1	6	1,1%
Total	112	112	281	66	571	100,0%

Table 5.11(ii) (Continued)

Sequence	A	В	D	NL	Total	%
First	105	107	266	65	543	95,1%
Repeat	7	5	15	1	28	4,9%
Total	112	112	281	66	571	100,0%
Recipient age	A	В	D	NL	Total	%
0-15	2	0	6	3	11	1,9%
16-55	80	54	175	42	351	61,5%
56-64	25	53	90	21	189	33,1%
65+	5	5	10	0	20	3,5%
Total	112	112	281	66	571	100,0%





# 6. Liver and intestine: donation, waiting lists and tranplants

Table 6.1(i) Deceased donors / livers in Eurotransplant from 2006 to 2010

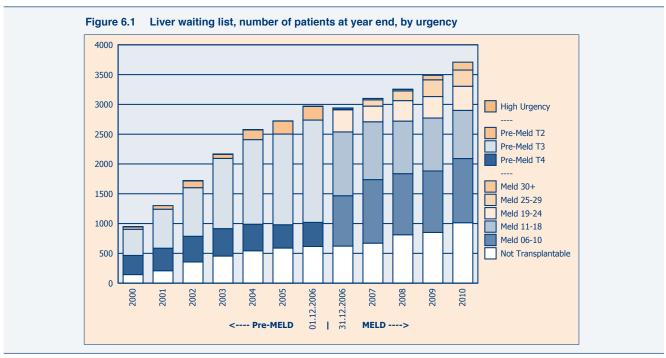
Donors						
Year of registration	2006	2007	2008	2009	2010	2009/2010
All donors	2299	2411	2233	2305	2415	4,8%
Non-liver donors	423	422	361	321	351	9,3%
Liver donors	1876	1989	1872	1984	2064	4,0%
Liver donors not used	481	420	322	353	330	-6,5%
One split used	2 45	3 53	5 56	2 60	5 59	150,0%
Both splits used						-1,7%
Whole liver used  Total liver donors used	1348	1513	1489	1569	1670	6,4%
Total liver donors used	1395	1569	1550	1631	1734	6,3%
Donor procedures						
Year of registration	2006	2007	2008	2009	2010	2009/2010
Whole liver procedure	1827	1932	1808	1919	1998	4,1%
Split liver procedure	49	57	64	65	66	1,5%
Total	1876	1989	1872	1984	2064	4,0%
Whole livers						
Year of registration	2006	2007	2008	2009	2010	2009/2010
Reported	1827	1932	1808	1919	1998	4,1%
Offered	1793	1901	1799	1913	1996	4,3%
Accepted	1682	1835	1739	1861	1955	5,1%
Transplanted	1348	1513	1489	1569	1670	6,4%
Split livers						
Year of registration	2006	2007	2008	2009	2010	2009/2010
Available split livers	98	114	128	130	132	1,5%
Split liver not used	6	5	11	8	9	12,5%
Split liver transplanted	92	109	117	122	123	0,8%

Table 6.1(ii) Deceased donors / livers in Eurotransplant in 2010

Donors											
Donor country	A	В	HR	D	L	NL	(SLO)	Total ET	Non-ET	Total	% all donors
All donors	203	289	135	1315	3	259	44	2248	167	2415	100,0%
Non-liver donors	34	35	5	71	0	72	1	218	133	351	14,5%
Liver donors	169	254	130	1244	3	187	43	2030	34	2064	85,5%
Liver donors not used	37	34	19	167	0	49	9	315	15	330	13,7%
One split used	0	1	1	2	0	1	0	5	0	5	0,2%
Both splits used	4	8	3	38	0	6	0	59	0	59	2,4%
Whole liver used	128	211	107	1037	3	131	34	1651	19	1670	69,2%
Total liver donors used	132	220	111	1077	3	138	34	1715	19	1734	71,8%
Donor procedures											
Donor country	A	В	HR	D	L	NL	(SLO)	Total ET	Non-ET	Total	%
Whole liver procedure	164	245	126	1203	3	180	43	1964	34	1998	96,8%
Split liver procedure	5	9	4	41	0	7	0	66	0	66	3,2%
Total	169	254	130	1244	3	187	43	2030	34	2064	100,0%

Table 6.1(ii) (Continued)

Whole livers											
Donor country	A	В	HR	D	L	NL	(SLO)	Total ET	Non-ET	Total	% reported
Reported	164	245	126	1203	3	180	43	1964	34	1998	100,0%
Offered	164	245	126	1203	3	180	43	1964	32	1996	99,9%
Accepted	161	240	125	1197	3	162	41	1929	26	1955	97,8%
Transplanted	128	211	107	1037	3	131	34	1651	19	1670	83,6%
Split livers											
Donor country	A	В	HR	D	L	NL	(SLO)	Total ET	Non-ET	Total	%
Available split livers	10	18	8	82	0	14	0	132	0	132	100,0%
Split liver not used	2	1	1	4	0	1	0	9	0	9	6,8%
Split liver transplanted	8	17	7	78	0	13	0	123	0	123	93,2%



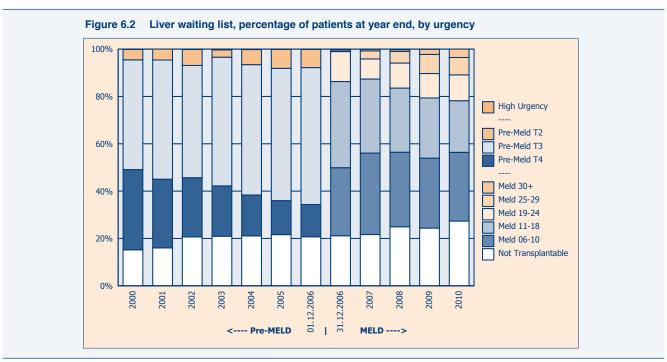


Table 6.2(i) Active liver transplant waiting list, as per December 31, from 2006 to 2010 - characteristics

Type of transplant	2006	2007	2008	2009	2010	2009/2010
Liver	2249	2351	2354	2525	2588	2,5%
Liver + heart	1	2	2	4	2	-50,0%
Liver + kidney	62	67	72	97	90	-7,2%
Liver + lung	5	4	8	6	5	-16,7%
Liver + pancreas	1	5	4	8	6	-25,0%
Liver + heart + kidney	0	0	0	0	1	
Liver + heart + pancreas	0	0	0	0	1	
Liver + kidney + pancreas	1	0	2	1	2	100,0%
Total	2319	2429	2442	2641	2695	2,0%

Table 6.2(ii) Active liver transplant waiting list, as per December 31, 2010 - characteristics

Type of transplant	A	В	HR	D	NL	SLO	Total	%
Liver	132	171	75	2087	115	8	2588	96,0%
Liver + heart	0	0	0	2	0	0	2	0,1%
Liver + kidney	3	19	0	63	5	0	90	3,3%
Liver + lung	1	0	0	3	1	0	5	0,2%
Liver + pancreas	0	2	0	4	0	0	6	0,2%
Liver + heart + kidney	1	0	0	0	0	0	1	0,0%
Liver + heart + pancreas	0	0	0	1	0	0	1	0,0%
Liver + kidney + pancreas	0	1	0	1	0	0	2	0,1%
Total	137	193	75	2161	121	8	2695	100,0%

Table 6.3(i) Active liver-only transplant waiting list as per December 31 - characteristics

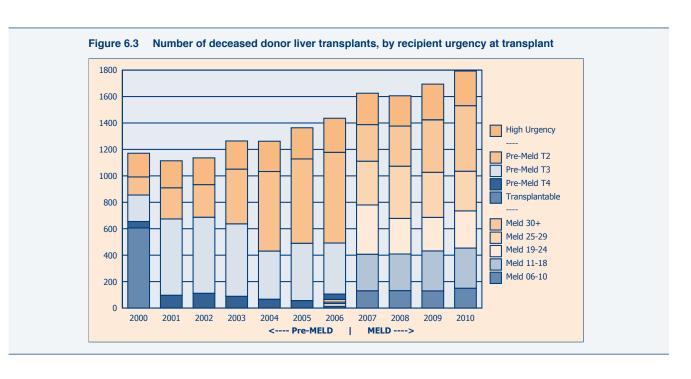
Blood group	2006	2007	2008	2009	2010	2009/2010
A	909	988	944	1075	1085	0,9%
AB	59	40	46	54	57	5,6%
В	282	275	267	280	314	12,1%
0	999	1048	1097	1116	1132	1,4%
Total	2249	2351	2354	2525	2588	2,5%
Sequence	2006	2007	2008	2009	2010	2009/2010
First	2120	2234	2233	2392	2456	2,7%
Repeat	129	117	121	133	132	-0,8%
Total	2249	2351	2354	2525	2588	2,5%
Waiting time (months) based on date put on WL	2006	2007	2008	2009	2010	2009/2010
0-5	783	690	665	733	723	-1,4%
6-11	416	398	363	433	451	4,2%
12-23	458	551	462	389	474	21,9%
24+	592	712	864	970	940	-3,1%
Total	2249	2351	2354	2525	2588	2,5%
Age	2006	2007	2008	2009	2010	2009/2010
0-15	63	69	70	70	59	-15,7%
16-55	1336	1403	1375	1440	1459	1,3%
56-64	659	660	683	745	800	7,4%
65+	191	219	226	270	270	0,0%
Total	2249	2351	2354	2525	2588	2,5%

Table 6.3(i) (Continued)

MELD score	2006	2007	2008	2009	2010	2009/2010
06-10	835	1055	1015	1021	1064	4,2%
11-18	1065	949	863	870	790	-9,2%
19-24	321	227	302	305	361	18,4%
25-29	10	97	149	260	253	-2,7%
30+	17	21	23	68	120	76,5%
Unknown	1	2	2	1	0	-100,0%
Total	2249	2351	2354	2525	2588	2,5%

Table 6.3(ii) Active liver-only transplant waiting list as per December 31, 2010 - characteristics

Blood group	A	В	HR	D	NL	(SLO)	Total	%
A	50	83	32	881	35	4	1085	41,9%
AB	14	3	5	33	2	0	57	2,2%
В	26	17	19	241	10	1	314	12,1%
0	42	68	19	932	68	3	1132	43,7%
Total	132	171	75	2087	115	8	2588	100,0%
Sequence	A	В	HR	D	NL	(SLO)	Total	%
First	121	156	75	1992	105	7	2456	94,9%
Repeat	11	15	0	95	10	1	132	5,1%
Total	132	171	75	2087	115	8	2588	100,0%
Waiting time (months) based on date put on WL	A	В	HR	D	NL	(SLD)	Total	%
0-5	69	78	25	510	38	3	723	27,9%
6-11	41	34	17	329	27	3	451	17,4%
12-23	18	20	9	408	18	1	474	18,3%
24+	4	39	24	840	32	1	940	36,3%
Total	132	171	75	2087	115	8	2588	100,0%
Age	A	В	HR	D	NL	(\$LO)	Total	%
0-15	5	6	1	43	4	0	59	2,3%
16-55	68	80	42	1185	77	7	1459	56,4%
56-64	41	52	30	649	27	1	800	30,9%
65+	18	33	2	210	7	0	270	10,4%
Total	132	171	75	2087	115	8	2588	100,0%
MELD score	A	В	HR	<b>D</b>	NL	(SLO)	Total	%
06-10	45	58	39	872	46	4	1064	41,1%
11-18	72	39	30	608	39	2	790	30,5%
19-24	10	33	5	285	26	2	361	13,9%
25-29	1	30	1	220	1	0	253	9,8%
30+	4	11	0	102	3	0	120	4,6%
Total	132	171	75	2087	115	8	2588	100,0%



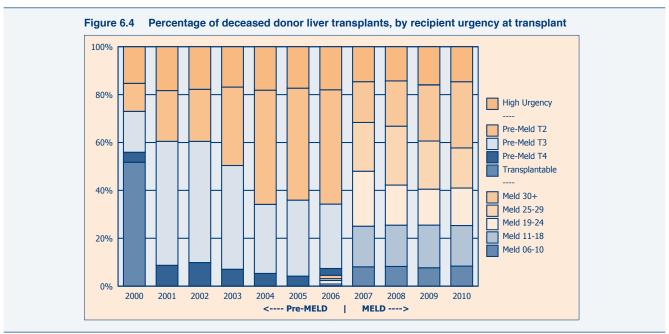


Table 6.4(i) Liver transplants from 2006 to 2010 - characteristics

Deceased donor liver transplants						
Type of transplant	2006	2007	2008	2009	2010	2009/2010
Split liver	90	105	113	121	118	-2,5%
Whole liver	1273	1439	1405	1516	1606	5,9%
Split liver + kidney	2	4	4	1	5	400,0%
Whole liver + kidney	61	64	73	45	52	15,6%
Whole liver + kidney en bloc	1	1	2	0	0	0,0%
Whole liver + pancreas	2	5	5	4	6	50,0%
Whole liver + kidney + pancreas	1	1	0	2	1	-50,0%
Whole liver + heart	1	2	3	0	1	
Whole liver + lung	1	0	0	0	0	0,0%
Whole liver + both lungs	2	4	1	3	3	0,0%
Whole liver + heart + both lungs	2	0	0	0	1	
Total	1436	1625	1606	1692	1793	6,0%

Table 6.4(i) (Continued)

Liver-only transplant (whole and	-r ,					
Blood group	2006	2007	2008	2009	2010	2009/2010
A	603	656	655	655	739	12,8%
AB	90	131	103	125	124	-0,8%
В	208	219	192	233	249	6,9%
0	462	538	568	624	612	-1,9%
Total	1363	1544	1518	1637	1724	5,3%
Waiting time (months) based on date put on WL	2006	2007	2008	2009	2010	2009/2010
0-5	801	1057	999	1098	1131	3,0%
6-11	221	194	238	289	263	-9,0%
12-23	198	185	160	136	177	30,1%
24-59	138	98	107	84	131	56,0%
60+	5	10	14	30	22	-26,7%
Total	1363	1544	1518	1637	1724	5,3%
Sequence	2006	2007	2008	2009	2010	2009/2010
First	1171	1321	1313	1404	1487	5,9%
Repeat	192	223	205	233	237	1,7%
Total	1363	1544	1518	1637	1724	5,3%
Recipient age	2006	2007	2008	2009	2010	2009/2010
0-15	100	117	107	107	118	10,3%
16-55	773	783	767	798	835	4,6%
56-64	361	497	462	527	552	4,7%
65+	129	147	182	205	219	6,8%
Total	1363	1544	1518	1637	1724	5,3%
MELD score	2006	2007	2008	2009	2010	2009/2010
Unknown	367	5	10	5	7	40,0%
06-10	147	117	119	123	138	12,2%
11-18	336	269	271	296	299	1,0%
19-24	158	353	253	242	270	11,6%
25-29	68	307	364	325	286	-12,0%
30+	33	259	273	377	467	23,9%
High Urgency	254	234	228	269	257	-4,5%
Total	1363	1544	1518	1637	1724	5,3%

Table 6.4(ii) Liver transplants 2010 - characteristics

Deceased donor liver transplants									
Type of transplant	A	В	HR	D	NL	(SLO)	Non-ET	Total	%
Split liver	3	3	2	102	8	0	0	118	6,6%
Whole liver	131	188	99	1048	116	23	1	1606	89,6%
Split liver + kidney	0	0	0	5	0	0	0	5	0,3%
Whole liver + kidney	4	17	2	24	5	0	0	52	2,9%
Whole liver + pancreas	0	0	0	5	1	0	0	6	0,3%
Whole liver + kidney + pancreas	0	0	0	1	0	0	0	1	0,1%
Whole liver + heart	0	0	0	1	0	0	0	1	0,1%
Whole liver + both lungs	1	2	0	0	0	0	0	3	0,2%
Whole liver + heart + both lungs	0	0	0	1	0	0	0	1	0,1%
Total	139	210	103	1187	130	23	1	1793	100,0%

Table 6.4(ii) (Continued)

Liver-only transplant (whole a	na split)								
Blood group	A	В	HR	D	NL	SLO	Non-ET	Total	%
A	52	77	48	502	51	9	0	739	42,9%
AB	7	4	6	99	4	3	1	124	7,2%
В	17	16	12	181	19	4	0	249	14,4%
0	58	94	35	368	50	7	0	612	35,5%
Total	134	191	101	1150	124	23	1	1724	100,0%
Waiting time (months) based on date put on WL	A	В	HR	D	NL	SLO	Non-ET	Total	9/
0-5	92	126	94	719	83	16	1	1131	65,6%
6-11	25	40	3	171	20	4	0	263	15,3%
12-23	15	15	1	132	11	3	0	177	10,3%
24-59	2	8	3	108	10	0	0	131	7,6%
60+	0	2	0	20	0	0	0	22	1,3%
Total	134	191	101	1150	124	23	1	1724	100,0%
Sequence	A	В	HR	D	NL	(SLO)	Non-ET	Total	9
First	123	164	99	976	104	20	1	1487	86,39
Repeat	11	27	2	174	20	3	0	237	13,79
Total	134	191	101	1150	124	23	1	1724	100,09
Recipient age	A	В	(HR)	D	(NL)	(SLO)	Non-ET	Total	9
0-15	6	8	0	84	19	0	1	118	6,89
16-55	56	82	47	580	58	12	0	835	48,49
56-64 65+	45 27	64 37	43 11	350 136	40 7	10 1	0 0	552 219	32,0% 12,7%
Total	134	191	101	1150	124	23	1	1724	100,0%
MELD score	A	В	HR	D	NL	(SLO)	Non-ET	Total	9
Unknown	0	0	1	5	0	0	1	7	0,49
06-10	39	14	2	72	6	5	0	138	8,09
11-18	58	22	24	164	20	11	0	299	17,39
19-24	15	25	52	135	41	2	0	270	15,79
25 <b>-</b> 29	3	75	13	174	20	1	Ö	286	16,69
30+	7	28	6	415	11	0	0	467	27,19
High Urgency	12	27	3	185	26	4	0	257	14,99
Total	134	191	101	1150	124	23	1	1724	100,0

Table 6.5(i) Living donor liver transplants - liver-only - 2006 to 2010

Liver-only	2006	2007	2008	2009	2010	2009/2010
Domino	10	10	7	3	6	100,0%
Related	86	78	66	83	114	37,3%
Non-related	20	13	9	13	18	38,5%
Total	116	101	82	99	138	39,4%

Table 6.5(i) (Continued)

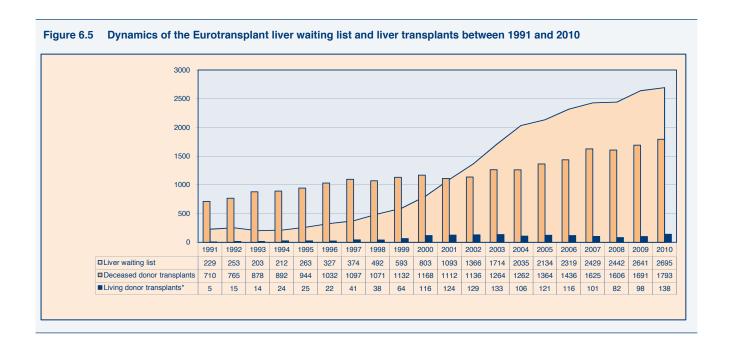
Related	2006	2007	2008	2009	2010	2009/2010
Brother / sister	11	10	6	9	8	-11,1%
Father	21	18	21	29	30	3,4%
Mother	19	27	24	25	48	92,0%
Son / daughter	28	15	10	11	15	36,4%
Grandfather / -mother	2	1	0	4	1	-75,0%
Uncle / aunt	2	1	3	4	8	100,0%
Nephew / niece	2	4	1	1	3	200,0%
Cousin	0	0	1	0	1	
Blood related : NOS*	1	2	0	0	0	0,0%
Total	86	78	66	83	114	37,3%
Non-related	2006	2007	2008	2009	2010	2009/2010
Spouse / partner	11	9	4	8	12	50,0%
Friend	0	1	1	1	2	100,0%
Not blood related family	3	3	3	3	3	0,0%
Not blood related: NOS*	6	0	1	1	1	0,0%
Total	20	13	9	13	18	38,5%

<sup>\*</sup>NOS Not otherwise specified

Table 6.5(ii) Living donor liver transplants - liver-only - 2010

Liver-only	A	В	HR	D	NL	Total	%
Domino	0	0	0	5	1	6	4,3%
Related	2	30	2	77	3	114	82,6%
Non-related	0	3	0	14	1	18	13,0%
Total	2	33	2	96	5	138	100,0%
Related	A	В	HR	D	NL	Total	%
Brother / sister	0	0	0	8	0	8	7,0%
Father	0	7	1	22	0	30	26,3%
Mother	1	14	1	29	3	48	42,1%
Son / daughter	1	5	0	9	0	15	13,2%
Grandfather / - mother	0	1	0	0	0	1	0,9%
Uncle / aunt	0	3	0	5	0	8	7,0%
Nephew / niece	0	0	0	3	0	3	2,6%
Cousin	0	0	0	1	0	1	0,9%
Total	2	30	2	77	3	114	100,0%
Non-related	A	В	HR	D	NL	Total	%
Spouse / partner	0	1	0	11	0	12	66,7%
Friend	0	0	0	2	0	2	11,1%
Not blood related family	0	1	0	1	1	3	16,7%
Not blood related: NOS*	0	1	0	0	0	1	5,6%
Total	0	3	0	14	1	18	100,0%

<sup>\*</sup> NOS Not otherwise specified



#### **Intestine transplants 2010**

On January 1, 2010, 32 recipients were on the waiting list for an intestine transplant (22 in Germany, 6 in Belgium, 0 in Austria, 4 in the Netherlands). During the year 2010, 17 recipients were registered for either an isolated intestine transplant (N=8) or for a combined intestine transplant (N=9).

As per December 31, 2010, 26\* recipients (16 in Germany, 6 in Belgium, 3 in Austria and 1 in the Netherlands) were awaiting either an isolated intestine transplant (N=16) or in combination with another organ (N=10).

Table 6.6 Number of intestinal transplants in 2010

Country	Center	Total
	GBCTP – Berlin	3
0	GFMTP- Frankfurt	2
Germany	GJETP – Jena	1
	GTUTP – Tübingen	4
Netherlands	NGRTP – Groningen	4
Total		14

Five transplants concerned isolated intestine transplants and nine concerned combined intestine transplants. In 2009, six isolated intestine transplants were performed and six combined intestine transplants.

Six patients deceased while awaiting a transplant (one death of a recipient that occurred already in 2008 was reported to ET in 2010). Four patients were removed from the waiting list.

Intestine-only: 13 patients registered T, 4 patients registered NT Combined: 7 patients registered T, 2 patients registered NT

<sup>\*</sup> Urgency status of patients on the waiting list as per December 31, 2010:

# 7. Pancreas and islets: donation, waiting lists and transplants

Table 7.1(i) Deceased donors / pancreas in Eurotransplant from 2006 to 2010

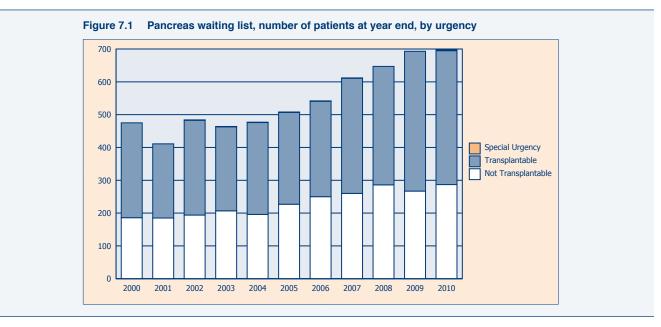
Year of registration	2006	2007	2008	2009	2010	2009/201
All donors	2299	2411	2233	2305	2415	4,8%
Non-pancreas donors	1311	1373	1312	1429	1471	2,99
Pancreas donors	988	1038	921	876	944	7,89
Pancreas donors not used	743	783	664	650	671	3,29
Pancreatic islet donors used	16	40	38	35	30	-14,39
Whole pancreas donors used	229	215	219	191	243	27,29
Total pancreas donors used	245	255	257	226	273	20,8%

Pancreas									
Year of registration	2006	2007	2008	2009	2010	2009/2010			
Reported	987	1038	921	876	944	7,8%			
Offered	951	981	880	835	920	10,2%			
Accepted	571	548	551	503	573	13,9%			
Transplanted	245	255	257	226	273	20,8%			

Table 7.1(ii) Deceased donors / pancreas in Eurotransplant in 2010

Donors											
Donor country	A	В	HR	D	L	(NL)	(SLO)	Total ET	Non-ET	Total	% all donors
All donors	203	289	135	1315	3	259	44	2248	167	2415	100,0%
Non-pancreas donors	145	102	97	872	0	67	24	1307	164	1471	60,9%
Pancreas donors	58	187	38	443	3	192	20	941	3	944	39,1%
Pancreas donors not used	26	147	30	281	3	168	13	668	3	671	27,8%
Pancreatic islet donors used	0	15	0	7	0	7	1	30	0	30	1,2%
Whole pancreas donors used	32	25	8	155	0	17	6	243	0	243	10,1%
Total pancreas donors used	32	40	8	162	0	24	7	273	0	273	11,3%

Pancreas											
Donor country	A	В	HR	D	L	NL	(SLO)	Total ET	Non-ET	Total	% reported
Reported	58	187	38	443	3	192	20	941	3	944	100,0%
Offered	58	181	38	432	3	186	20	918	2	920	97,5%
Accepted	44	107	17	281	1	114	9	573	0	573	60,7%
Transplanted	32	40	8	162	0	24	7	273	0	273	28,9%



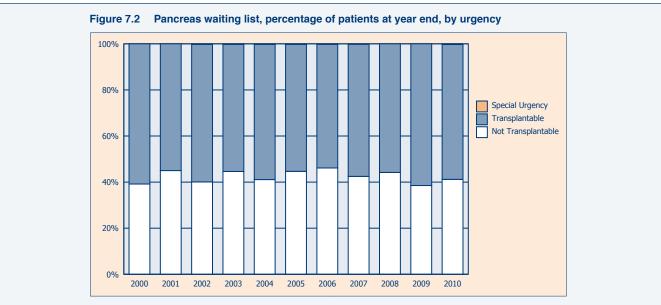


Table 7.2(i) Active pancreas transplant waiting list as per December 31 - characteristics

Type of transplant	2006	2007	2008	2009	2010	2009/2010
Pancreas	48	43	55	68	66	-2,9%
Pancreas + liver	1	5	4	8	6	-25,0%
Pancreas + kidney	242	304	300	349	335	-4,0%
Pancreas + liver + kidney	1	0	2	1	2	100,0%
Pancreas + liver + heart	0	0	0	0	1	
Total	292	352	361	426	410	-3,8%

Table 7.2(ii) Active pancreas transplant waiting list as per December 31, 2010 - characteristics

Type of transplant	A	В	HR	D	NL	Total	%
Pancreas	7	17	1	29	12	66	16,1%
Pancreas + liver	0	2	0	4	0	6	1,5%
Pancreas + kidney	19	19	5	269	23	335	81,7%
Pancreas + liver + kidney	0	1	0	1	0	2	0,5%
Pancreas + liver + heart	0	0	0	1	0	1	0,2%
Total	26	39	6	304	35	410	100,0%

Table 7.3a(i) Active pancreas-only transplant waiting list as per December 31 - characteristics

Blood group	2006	2007	2008	2009	2010	2009/2010
A	19	24	23	27	28	3,7%
AB	2	2	4	3	3	0,0%
В	8	3	7	9	8	-11,1%
0	19	14	21	29	27	-6,9%
Total	48	43	55	68	66	-2,9%
% PRA current	2006	2007	2008	2009	2010	2009/2010
0-5 %	44	39	48	55	56	1,8%
6-84 %	4	4	7	8	7	-12,5%
85-100 %	0	0	0	1	0	-100,0%
Not reported	0	0	0	4	3	-25,0%
Total	48	43	55	68	66	-2,9%
Sequence	2006	2007	2008	2009	2010	2009/2010
First	23	20	26	38	38	0,0%
Repeat	25	23	29	30	28	-6,7%
Total	48	43	55	68	66	-2,9%
Waiting time (months) based on date put on WL	2006	2007	2008	2009	2010	2009/2010
0-5	7	8	13	13	12	-7,7%
6-11	9	9	11	15	10	-33,3%
12-23	20	7	5	17	20	17,6%
24+	12	19	26	23	24	4,3%
Total	48	43	55	68	66	-2,9%
Age	2006	2007	2008	2009	2010	2009/2010
0-15	0	1	0	0	0	
16-55	42	38	49	58	56	-3,4%
56-64	6	4	5	8	6	-25,0%
65+	0	0	1	2	4	100,0%
Total	48	43	55	68	66	-2,9%

Table 7.3a(ii) Active pancreas-only transplant waiting list as per December 31, 2010 - characteristics

Blood group	A	B	HR	D	NL	Total	%
A	4	7	0	10	7	28	42,4%
AB	0	0	0	3	0	3	4,5%
В	1	3	1	3	0	8	12,1%
0	2	7	0	13	5	27	40,9%
Total	7	17	1	29	12	66	100,0%
% PRA current	A	В	HR	D	NL	Total	%
0-5 %	7	12	1	25	11	56	84,8%
6-84 %	0	2	0	4	1	7	10,6%
Not reported	0	3	0	0	0	3	4,5%
Total	7	17	1	29	12	66	100,0%
Sequence	A	В	HR	D	NL	Total	%
First	2	14	1	13	8	38	57,6%
Repeat	5	3	0	16	4	28	42,4%
Total	7	17	1	29	12	66	100,0%

Table 7.3a(ii) (Continued)

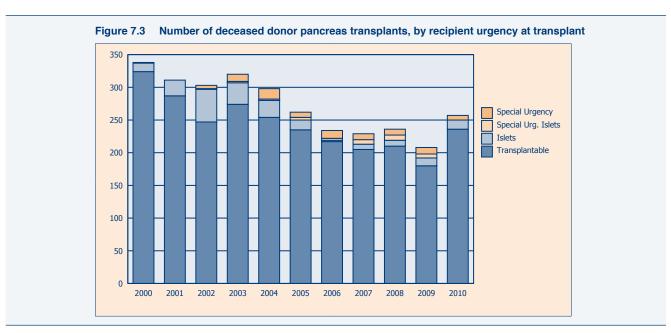
Waiting time (months) based on date put on WL	A	В	HR	D	NL	Total	%
0-5	1	1	1	8	1	12	18,2%
6-11	0	2	0	4	4	10	15,2%
12-23	0	11	0	6	3	20	30,3%
24+	6	3	0	11	4	24	36,4%
Total	7	17	1	29	12	66	100,0%
Age	A	В	HR	<b>D</b>	NL	Total	%
16-55	6	13	1	28	8	56	84,8%
56-64	1	2	0	1	2	6	9,1%
65+	0	2	0	0	2		6,1%
Total	7	17	1	29	12	66	100,0%

Table 7.3b(i) Active kidney + pancreas transplant waiting list as per December 31 - characteristics

Blood group	2006	2007	2008	2009	2010	2009/2010
A	97	127	116	132	132	0,0%
AB	3	9	10	8	5	-37,5%
В	40	48	50	71	55	-22,5%
0	102	120	124	138	143	3,6%
Total	242	304	300	349	335	-4,0%
% PRA current	2006	2007	2008	2009	2010	2009/2010
0-5 %	224	276	263	318	298	-6,3%
6-84 %	15	21	29	22	30	36,4%
85-100 % Not reported	2 1	5 2	8 0	5 4	3 4	-40,0% 0,0%
Total	242	304	300	349	335	-4,0%
Sequence	2006	2007	2008	2009	2010	2009/2010
First	232	276	273	324	306	-5,6%
Repeat	10	28	27	25	29	16,0%
Total	242	304	300	349	335	-4,0%
Waiting time (months) based on date put on WL	2006	2007	2008	2009	2010	2009/2010
0-5	76	90	72	78	77	-1,3%
6-11	79	87	91	77	76	-1,3%
12-23	69	94	93	119	96	-19,3%
24+ unknown	16 2	33 0	44 0	75 0	86 0	14,7% 0,0%
Total	242	304	300	349	335	-4,0%
						-,-,-
Age	2006	2007	2008	2009	2010	2009/2010
0-15	1	1	0	0	0	0,0%
16-55	223	273	274	308	295	-4,2%
55-64	17	28	25	38	37	-2,6%
65+	1	2	1	3	3	0,0%
Total	242	304	300	349	335	-4,0%

Table 7.3b(ii) Active kidney + pancreas transplant waiting list as per December 31, 2010 - characteristics

Blood group	A	В	HR	D	NL	Total	%
A	3	9	3	107	10	132	39,4%
AB	1	1	0	3	0	5	1,5%
В	7	3	2	40	3	55	16,4%
0	8	6	0	119	10	143	42,7%
Total	19	19	5	269	23	335	100,0%
% PRA current	A	В	HR	D	NL	Total	%
0-5 %	14	17	2	243	22	298	89,0%
6-84 %	5	1	1	22	1	30	9,0%
85-100 %	0	1	0	2	0	3	0,9%
Not reported	0	0	2	2	0	4	1,2%
Total	19	19	5	269	23	335	100,0%
Sequence	A	В	HR	D	NL	Total	%
First	13	18	5	248	22	306	91,3%
Repeat	6	1	0	21	1	29	8,7%
Total	19	19	5	269	23	335	100,0%
Waiting time (months) based on date put on WL	A	В	HR	D	(NL)	Total	%
0-5	7	4	4	55	7	77	23,0%
6-11	5	5	1	60	5	76	22,7%
12-23	3	2	0	81	10	96	28,7%
24+	4	8	0	73	1	86	25,7%
Total	19	19	5	269	23	335	100,0%
Age	A	В	HR	D	NL	Total	%
16-55	14	17	4	238	22	295	88,1%
56-64	5	2	1	28	1	37	11,0%
65+	0	0	0	3	0	3	0,9%
Total	19	19	5	269	23	335	100,0%



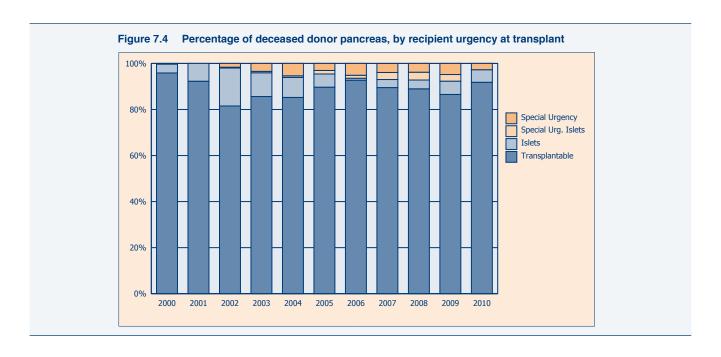


Table 7.4a(i) Pancreas transplants 2006 to 2010 - characteristics

Deceased donor pancreas transplan	ts					
Type of transplant	2006	2007	2008	2009	2010	2009/2010
Islets	5	15	17	18	14	-22,2%
Pancreas	31	29	20	13	24	84,6%
Pancreas + kidney	195	180	194	172	211	22,7%
Pancreas + kidney + whole liver	1	1	0	2	1	-50,0%
Pancreas + heart + kidney	0	0	0	0	1	
Pancreas + whole liver	2	5	5	4	6	50,0%
Total	234	230	236	209	257	23,0%
Pancreas-only transplants (whole)						
Blood group	2006	2007	2008	2009	2010	2009/2010
A	11	15	11	6	6	0,0%
AB	3	0	2	0	3	
В	4	5	1	2	3	50,0%
0	13	9	6	5	12	140,0%
Total	31	29	20	13	24	84,6%
Waiting time (months) based on date put on WL	2006	2007	2008	2009	2010	2009/2010
0-5	10	12	4	6	7	16,7%
6-11	9	3	4	2	4	100,0%
12-23	9	12	8	2	7	250,0%
24-59	2	2	4	2	6	200,0%
60 +	1	0	0	1	0	-100,0%
Total	31	29	20	13	24	84,6%
Sequence	2006	2007	2008	2009	2010	2009/2010
First	13	11	8	5	12	140,0%
Repeat	18	18	12	8	12	50,0%
Total	31	29	20	13	24	84,6%

Table 7.4a(i) (Continued)

Recipient age	2006	2007	2008	2009	2010	2009/2010
16-55	27	26	20	13	23	76,9%
56-64	4	3	0	0	1	
Total	31	29	20	13	24	84,6%

Table 7.4a(ii) Pancreas transplants 2010 - characteristics

Deceased donor pancreas transpla	nts							
Type of transplant	A	В	HR	D	NL	(SLO)	Total	Ç
Islets	0	7	0	3	4	0	14	5,49
Pancreas	4	0	1	14	5	0	24	9,3
Pancreas + kidney	27	22	5	142	14	1	211	82,1
Pancreas + kidney + liver	0	0	0	1	0	0	1	0,4
Pancreas + kidney + heart	0	0	0	1	0	0	1	0,4
Pancreas + liver	0	0	0	5	1	0	6	2,3
Total	31	29	6	166	24	1	257	100,0
Pancreas-only transplants (whole)								
Blood group	A	В	HR	D	NL	SLO	Total	
A	0	0	1	5	0	0	6	25,0
AB	1	0	0	2	0	0	3	12,5
В	0	0	0	1	2	0	3	12,5
0	3	0	0	6	3	0	12	50,0
Total	4	0	1	14	5	0	24	100,0
Waiting time (months)	A	В	HR	D	(NL)	(SLO)	Total	
based on date put on WL		•				310	Total	
0-5	1	0	1	4	1	0	7	29,2
6-11	2	0	0	2	0	0	4	16,7
12-23	1	0	0	3	3	0	7	29,2
24-59	0	0	0	5	1	0	6	25,0
Total	4	0	1	14	5	0	24	100,0
Sequence	A	В	HR	D	(NL)	(SLO)	Total	
First	1	0	1	7	3	0	12	50,0
Repeat	3	0	0	7	2	0	12	50,0
Total	4	0	1	14	5	0	24	100,0
Recipient age	A	В	HR	D	NL	(SLO)	Total	
16-55	4	0	1	13	5	0	23	95,8
56-64	0	0	0	1	0	0	1	4,2

Table 7.4b(i) Pancreas islet transplants 2006 to 2010

Year	2006	2007	2008	2009	2010	2009/2010
Recipients transplanted	3	8	9	11	10	-9,1%
Number of transplants	5	15	17	18	14	-22,2%
Number of donors used	18	40	37	36	30	-16,7%

100,0%

Total

Table 7.4b(ii) Pancreas islet transplants in 2010

Center	ВВСТР	GDRTP	NLBTP	Total
Recipients transplanted	3	3	4	10
Number of transplants	7	3	4	14
Number of donors used	21	3	6	30

Table 7.4c(i) Pancreas transplants 2006 to 2010 - characteristics

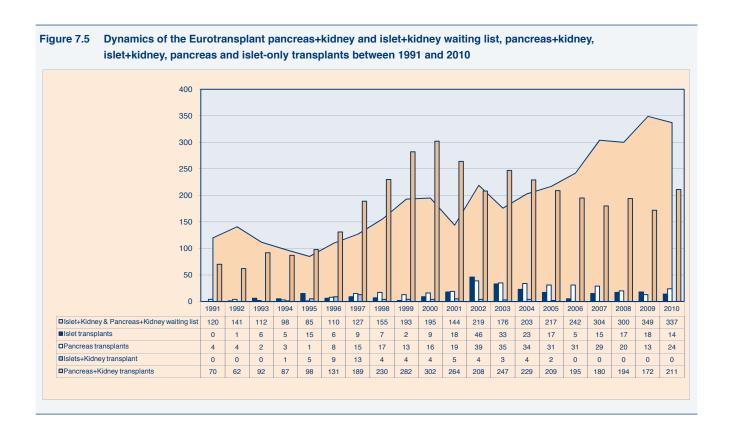
Whole pancreas + kidney (decea	sed donor) transpla	ants				
Blood group	2006	2007	2008	2009	2010	2009/2010
A	81	75	90	76	97	27,6%
AB	11	11	12	12	9	-25,0%
В	26	21	12	16	32	100,0%
0	77	73	80	68	73	7,4%
Total	195	180	194	172	211	22,7%
Waiting time (months) based on date put on WL	2006	2007	2008	2009	2010	2009/2010
0-5	35	32	34	35	46	31,4%
6-11	70	29	36	24	24	0,0%
12-23	76	97	83	80	72	-10,0%
24-59	14	20	38	28	63	125,0%
60+	0	2	3	5	6	20,0%
Total	195	180	194	172	211	22,7%
Sequence	2006	2007	2008	2009	2010	2009/2010
First	181	179	187	165	208	26,1%
Repeat	14	1	7	7	3	-57,1%
Total	195	180	194	172	211	22,7%
Recipient age	2006	2007	2008	2009	2010	2009/2010
0-15	1	0	1	0	0	0,0%
16-55	186	170	177	163	190	16,6%
56-64	7	10	15	9	21	133,3%
65+	1	0	1	0	0	0,0%
Total	195	180	194	172	211	22,7%

Table 7.4c(ii) Pancreas transplants 2010 - characteristics

Whole pancreas + kidney (decease	ed donor) transp	lants						
Blood group	A	В	HR	D	NL	(SLO)	Total	%
A	11	9	1	71	5	0	97	46,0%
AB	1	0	0	8	0	0	9	4,3%
В	5	1	2	23	1	0	32	15,2%
0	10	12	2	40	8	1	73	34,6%
Total	27	22	5	142	14	1	211	100,0%
Waiting time (months) based on date put on WL	A	В	HR	D	(NL)	(\$LO)	Total	%
0-5	16	9	5	15	0	1	46	21,8%
6-11	3	3	0	16	2	0	24	11,4%
12-23	5	5	0	54	8	0	72	34,1%
24-59	3	4	0	54	2	0	63	29,9%
60+	0	1	0	3	2	0	6	2,8%
Total	27	22	5	142	14	1	211	100,0%

Table 7.4c(ii) (Continued)

Sequence	A	В	HR	D	(NL)	(SLO)	Total	%
first	25	22	5	141	14	1	208	98,6%
repeat	2	0	0	1	0	0	3	1,4%
Total	27	22	5	142	14	1	211	100,0%
Recipient age	A	В	HR	D	NL	SLD	Total	%
0-15	0	0	0	0	0	0	0	0,0%
16-55	25	20	4	128	12	1	190	90,0%
56-64	2	2	1	14	2	0	21	10,0%
65+	0	0	0	0	0	0	0	0,0%
Total	27	22	5	142	14	1	211	100,0%



# 8. Twinning agreements between transplant programs within and outside Eurotransplant

Eurotransplant (ET) currently distinguishes three types of cooperation agreements between transplant centers within ET countries and transplant centers outside the ET area. Each of these models was introduced with a different focus:

#### Model A – Transplantation start-up and training program

The ET transplant center (ET-TC) helps a transplant center outside the ET area (non-ET-TC) to start-up a transplant program concerning a *specific type of organ for all patients*. For this purpose the ET-TC provides training in procurement and transplantation and takes care that the procurement in the non-ET-TC is performed according to ET standards. The transplantation takes place in the ET-TC. The non-ET-TC reports the donor organs to ET and places patients on the waiting list of the ET-TC. Organs reported by the non-ET-TC are allocated according to the general ET allocation rules considering the donors from the non-ET-TC as local donors of the ET-TC.

Currently the following twinning agreements Model A exist:

#### Lung transplantation

ET-transplant center	Non-ET transplant center	Number of patients transplanted from the non- ET-TC in 2010	Number of donor organs reported and transplanted from the non-ET-TC in 2010
Allgemeines Krankenhaus, UnivKlinik für Chirurgie Vienna, Austria	Tartu Universtiy Hospital Tartu, Estonia	0	1
Allgemeines Krankenhaus, UnivKlinik für Chirurgie Vienna, Austria	Chest Clinic Niocisa General Hospital, Strovolos/Nicosia, Cyprus	1	0
Allgemeines Krankenhaus, UnivKlinik für Chirurgie Vienna, Austria	Fakultná nemocnica s poliklinikou Bratislava Bratislava, Slovakia	4	3
Allgemeines Krankenhaus, UnivKlinik für Chirurgie Vienna, Austria	Orazágos Korányi Tbc és Pulmonológiai Intézet Budapest, Hungary	9	33

#### Model B – Transplantation support program

The ET transplant center (ET-TC) provides knowledge and experience to a transplant center outside the ET area (non-ET-TC) concerning a *specific type of organ for special patients*. For this purpose the ET-TC provides training in procurement and transplantation for these special patients and takes care that the procurement of organs reported to ET in the non-ET-TC is performed according to ET standards. The transplantation takes either place in the ET-TC or in the non-ET-TC. The non-ET-TC is encouraged to report all organs, for which no suitable recipients can be identified within the non-ET-country to ET. As minimum obligation after a transplantation took place, the non-ET-TC has to offer to the ET pool the organ(s) of the same type until transplantation was performed. The non-ET-TC places patients on the waiting list of the ET-TC. Organs reported by the non-ET-TC are allocated according to the general ET allocation rules considering the donors from the non-ET-TC as local donors of the ET-TC. ET monitors the exchange balance between the ET-TC and the non-ET-TC.

Currently the following twinning agreements Model B exist:

#### **Liver transplantation**

ET-transplant center	Non-ET transplant center	Number of patients transplanted from the non- ET-TC in 2010	Number of donor organs reported and transplanted from the non-ET-TC in 2010
Allgemeines Krankenhaus, UnivKlinik für Chirurgie Vienna, Austria	Semmelweis University Department of Liver Transplantation Budapest, Hungary	1	1
Allgemeines Krankenhaus, UnivKlinik für Chirurgie Vienna, Austria	University of Bratislava Univerzitná nemocnica Bratislava Bratislava, Slovakia	2	3

#### Model C – Delegated responsibilities for one (or several) transplant programs

The ET center executes transplantations (of one or several types of organs) for the patients of a non-ET center, region or country. The ET-TC takes care that the procurement of organs in the non-ET center, region or country is in line with ET standards. Transplantation takes place in the ET center. The non-ET center, region or country reports the donor organs to ET and places patients on the waiting list of the ET-TC. Organs reported by the non-ET-center, region or country are allocated according to the general ET allocation rules considering them as local donors of the ET-TC.

Currently no formal Model C twinning agreement exists, it is planned to formalize the long cooperation between the transplant center in Innsbruck, Austria and the region of Alto Adige and Trento in Italy according to these principles.

## 9. Histocompatibility Testing

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#### 9.1 Introduction

An ongoing task of the Eurotransplant Reference Laboratory (ETRL) is the improvement and maintenance of the high quality of HLA typing, screening for transplantation relevant antibodies and crossmatching in the Eurotransplant (ET) affiliated Tissue Typing Centers (TTC). This task is addressed by organizing schemes for External Proficiency Testing exercises (EPT). Furthermore, the ETRL initiates studies and promotes discussions on possible new recommendations with the help of the Tissue Typing Advisory Committee (TTAC). In addition, for almost 30 years the ETRL has addressed the problem of highly sensitized patients, by organizing and promoting the Acceptable Mismatch (AM) program within and outside ET. Finally, the ETRL supports the affiliated TTC and TTC from emerging countries. For example members of the ETRL have visited Estonia and Hungary to discuss the local situation in view of their possible future involvement in Eurotransplant. Finally, the ETRL provides 24 hours a day, 7 days a week duty for all transplantation relevant immunological aspects for all patients within ET, including the Acceptable Mismatch Program.

#### 9.2 Eurotransplant External Proficiency Testing Schemes

The results of the EPT Exercises, performed in 2010, to determine the individual performance of the TTC's are reported below:

#### 9.2.1 External Proficiency Testing on HLA typing

Each participating laboratory received 12 blood samples for typing and was asked to report the results prior to a certain deadline. For the analysis of the results the typing performed on behalf of the ETRL was taken as correct, as proposed by the External Proficiency Testing Committee of the European Federation for Immunogenetics (www.efiweb.org). The participants had to report their results on the basis of matching determinants, a translation of molecular typing results to serological equivalents, which are used in the matching algorithm and screening results. For a total of 648 reported typing results no discrepancy was seen for the HLA loci A, B, DR used in the allocation procedure.

In the period 2010, for the determinants of the loci HLA-A and -B 66.6% of the participants used a combination of the complement dependent cytotoxicity (CDC) and molecular techniques. The remaining used only molecular methods. No participant used serology as the only typing method. For HLA-DR and -DQ ca. 25% of the participants used a combination of techniques while the majority used molecular methods only. The results of HLA-A,B typing indicate that laboratories affiliated to ET as well as to other organ exchange organizations use the results of the serological typing as a marker for expression of antigens on the cell surface in order to evaluate the crossmatches.

#### 9.2.2 External Proficiency Testing on crossmatching

The participants of this External Proficiency Testing Exercise were asked to perform crossmatches using the cells provided for the Proficiency Testing Exercise on the sera of 4 different patients on the kidney waiting list from ET selected by the ETRL. The TTC applied the local crossmatch techniques, CDC, using dithiothreitol (DTT) to destroy IgM antibodies to simulate the day-to-day practice. The TTC were free to use unseparated peripheral blood cells, separated T and/or B cells but they had to report a final crossmatch result as it is done for organ donor procedures. Therefore, the average number of reports per category might vary (table 9.1). In total 48 sera had to be crossmatched per participant. For the centers not receiving the sera of the patients on the waiting list, i.e. German centers performing patient histocompatibility work only, Scandia Transplant laboratories, and centers from other organ exchange organizations such as the Czech Republic, 8 sera were selected by the ETRL and sent to the participants. These participants could report 48 crossmatches in total. The target cells and the respective results are presented in table 9.1.

Table 9.1 Report of the crossmatch results (DTT = dithiothreitol)

	PBL		T cells		B cells		Final results	
	(-) DTT	(+) DTT	(-) DTT	(+) DTT	(-) DTT	(+) DTT	(-) DTT	(+) DTT
Organ donor typing centers (N=30)	4.7	5.0	3.3	2.3	4.6	3.3	5.3	5.0
Recipient typing centers (N=25)	3.9	2.2	2.0	1.3	6.3	3.3	6.7	1.9

The difference in the % of discrepancies between the 2 groups of participants can be attributed to the sera used. While laboratories performing organ donor typing used sera of patients on the waiting list, the laboratories doing recipient typing only received selected sera from multiparous women and usual controls.

#### 9.2.3 External Proficiency Testing Exercise on screening

In 2010 the scheme of the EPT Exercise on screening for HLA specific antibodies comprised 2 shipments of 6 sera. The HLA typing of the serum donor, the immunizing partner and of one of the children is known in almost all instances, and is reported to the participants beforehand. The ETRL received results from 64 participants cooperating with solid organ transplant centers within and outside ET. Currently, the methods for screening for HLA specific antibodies are evolving rapidly, the reason why standardized analyses cannot be done yet. The ETRL adopted the idea to perform different analyses depending of the methods used. The basis of the analysis is the 75% consensus for positive results and the 95% consensus for negative results. If 75% or more of the participants report specificity being positive then this specificity is tagged positive. If 95% of the participants report a specificity as negative then this specificity is regarded as not recognized by the respective serum. At the beginning of the period the participants were informed that besides the standard result oriented analysis, where all methods are accepted, a specific CDC and a single antigen microsphere (Luminex SA) analysis would be done. This resulted into a problem because participants not having yet established a solid phase assay based on Luminex SA had to be penalized because of missing consensus specificities. In total 511 CDC based results were obtained with a total of 134 missing specificities! Only one participant of the 64 met all consensus results! For the Luminex SA part the number of specificities reaching a consensus ranged from 39-43. In the future more efforts will be made to standardize the screening methodology.

#### 9.3 Program for the highly sensitized patients in Eurotransplant

In 2010 the Acceptable Mismatch Program (AM) program organized and controlled by the ETRL has been an efficient tool to enhance transplantation of highly sensitized patients. This program is open for all patients of ET. Information for participation can be obtained directly from the ETRL, the ET Medical Administration, or from the ET website (http://etrl.eurotransplant. nl/cms/index.php).

In 2010, 135 patients on the Acceptable Mismatch waiting list have been transplanted with a crossmatch negative organ. Among those were 6 living transplants, one kidney pancreas, one from a marginal organ donor, 12 received the offer via the Eurotransplant kidney allocation system and finally 115 have been transplanted via the AM program. The summary of the number of patients transplanted is presented in figure 9.1. We observed a significant increase of submission to the AM program and also in the number of transplants, especially from Germany.

#### 9.4 Other activities

The ETRL site

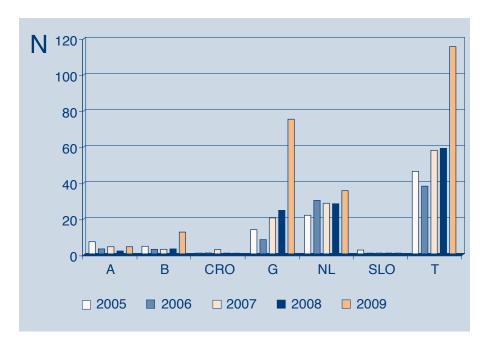
The site of the ETRL (http://etrl.eurotransplant.nl/cms/index.php)) is open for all laboratories working in the field of organ transplantation immunology and histocompatibility. Besides important information on the duties of the ETRL, the participants of the EPT can download the respective forms for the report of the results as well as the final analysis. Further information of future meetings within ET as well as reports of these meetings are found there. Two new programs already used for several years at the ETRL were put on the public site: the virtual-PRA, which is based on the HLA typing results of organ donors procured in the ET area (N=4000) but which also allows PRA calculations on the national data bases of Austria, Belgium, Germany and the Netherlands. The second program allows the calculation of the chance a highly sensitized patient has to obtain a crossmatch negative organ, when HLA type, blood group and acceptable mismatches are defined.

#### Annual Tissue Typers Meeting

The Annual Tissue Typers Meeting was held in September 2010 in Leiden. Over 150 participants from the different TTC were present. The topic was the clinical relevance of HLA specific and other antibodies in kidney transplantation. The impact of new techniques leading to a high virtual PRA value was extensively discussed. Patients with antibodies detectable in solid phase assays only, cannot be accepted in the AM Program, even if their virtual PRA value exceeds 85%. In addition the dispatch of patient sera for crossmatches in the donor center was discussed. Finally a short report on the EPT activities was delivered.

Figure 9.1 Number of patients transplanted via the AM program

#### **Transplanted AM patients**



# 10. Scientific Output in 2010

The names of authors who work at the Eurotransplant central office or Eurotransplant Reference Laboratory are in *Italic*.

#### **PUBLICATIONS - Articles / Abstracts**

Smits JM, Bij van der W, Rahmel AO, Laufer G, Meiser B

How to maximize the utilization of reported donor lungs in Eurotransplant? Impact of the rescue allocation policy on utilization rates

Clinical Transplants 2009: Cecka and Terasaki, Eds. UCLA Immunogenetics Center, Los Angeles, California.

Heidt S, Roelen DL, Vergunst M, Doxiadis II, Claas FH, Mulder A

Bortezomib affects the function of human b cells: possible implications for desensitization protocols

Clinical Transplants 2009: Cecka and Terasaki, Eds. UCLA Immunogenetics Center, Los Angeles, California.

Mulder A, Kardol MJ, Arn JS, Eijsink C, Franke ME, Schreuder GM, Haasnoot GW, Doxiadis II, Sachs DH, Smith DM, Claas FH

Human monoclonal HLA antibodies reveal interspecies crossreactive swine MHC class I epitopes relevant for xenotransplantation

Mol Immunol. 2010 Jan;47(4):809-15. [Epub 2009 Nov 22].

Regitz-Zagrosek V, Petrov G, Lehmkuhl E, Smits JM, Krohne HW, Münzel T, Weidner G

Heart transplantation in women with dilated cardiomyopathy

Transplantation. 2010 Jan 27;89(2):236-44.

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Considerations for patients awaiting heart transplantation

Thorac Cardiovasc Surg. 2010 Feb;58 Suppl 2:S179-84. [Epub 2010 Jan 25].

Spaderna H, Mendell NR, Zahn D, Wang Y, Kahn J, Smits JM, Weidner G

Social isolation and depression predict 12-month outcomes in the "waiting for a new heart study"

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Billen EV, Christiaans MH, Doxiadis II, Voorter CE, Berg van den-Loonen EM

HLA-DP antibodies before and after renal transplantation

Tissue Antigens. 2010 Mar;75(3):278-85. [Epub 2010 Jan 11].

Amir AL, D'Orsogna LJ, Roelen DL, Loenen van MM, Hagedoorn RS, Boer de R, Hoorn van der MA, Kester MG,

Doxiadis II, Falkenburg JH, Claas FH, Heemskerk MH

Allo-HLA reactivity of virus-specific memory T cells is common

Blood. 2010 Apr 15;115(15):3146-57. [Epub 2010 Feb 16].

Hoefer D, Ruttmann-Ulmer E, Smits JM, Vries de E, Antretter H, Laufer G

Donor hypo- and hypernatremia are predictors for increased 1-year mortality after cardiac transplantation

Transpl. Int. 2010 Jun 23;(6):589-93. [Epub 2009 Dec 14].

D'Orsogna LJ, Roelen DL, Doxiadis II, Claas FH

Alloreactivity from human viral specific memory T-cells

Transpl Immunol. 2010 Jun 25. [Epub ahead of print].

Rahmel AO

Organisation und Harmonisierung der Organverteilung in den Mitgliedsländern von Eurotransplant am Beispiel der Nierentransplantation

KfH Kuratorium für Dialyse und Nierentransplantation e.V., Neu-Isenburg, Patientenmagazin

KfH-aspekte August 2010, vol 2.

Groot de NG, Heijmans CM, Zoet YM, Ru de AH, Verreck FA, Veelen van PA, Drijfhout JW, Doxiadis GG, Remarque EJ, *Doxiadis II*, Rood van JJ, Koning F, Bontrop RE

AIDS-protective HLA-B\*27/B\*57 and chimpanzee MHC class I molecules target analogous conserved areas of HIV-1/SIVcpz

Proc Natl Acad Sci U S A. 2010 Aug 9 [Epub ahead of print].

Spaderna H, Zahn D, Schulze Schleithoff S, Stadlbauer T, Rupprecht L, *Smits JM*, Krohne HW, Münzel T, Weidner G **Depression and disease severity as correlates of everyday physical activity in heart transplant candidates** Transpl. Int. 2010 Aug;23(8):813-22. [Epub 2010 Feb 15].

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Critical Care staffs' attitudes, confidence levels and educational needs correlate with countries' donation rates: data from the Donor Action database

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Early renal failure after domino liver transplantation using organs from donors with primary hyperoxaluria type 1 Transplantation. 2010 Oct 15;90(7):782-5.

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Evaluation of the lung allocation score in highly urgent and urgent lung transplant candidates in Eurotransplant J Heart Lung Transplant. 2011 Jan;30(1):22-8. [Epub 2010 Sep 20].

Doxiadis II, Roelen D, Claas FH

Mature wines are better: CDC as the leading method to define highly sensitized patients

Curr Opin Organ Transplant. 2010 Sep 30. [Epub ahead of print]

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Christie JD, Edwards LB, Kucheryavaya AY, Aurora P, Dobbels F, Kirk R, Rahmel AO, Stehlik J, Hertz MI

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The Registry of the International Society for Heart and Lung Transplantation: thirteenth official pediatric heart transplantation report -2010

J Heart Lung Transplant. 2010 Oct;29(10):1119-28.

Aurora P, Edwards LB, Kucheryavaya AY, Christie JD, Dobbels F, Kirk R, Rahmel AO, Stehlik J, Hertz MI

The Registry of the International Society for Heart and Lung Transplantation: thirteenth official pediatric lung and heart-lung transplantation report -2010

J Heart Lung Transplant. 2010 Oct;29(10):1129-41.

Moers C, Varnav OC, Heurn van E, Jochmans I, Kirste GR, *Rahmel AO*, Leuvenink HG, Squifflet JP, Paul A, Pirenne J, Oeveren van W, Rakhorst G, Ploeg RJ

The value of machine perfusion perfusate biomarkers for predicting kidney transplant outcome Transplantation. 2010 Nov 15;90(9):966-73.

Jochmans I, Moers C, Smits JM, Leuvenink HG, Treckmann J, Paul A, Rahmel AO, Squifflet JP, Heurn van E, Monbaliu D, Ploeg RJ, Pirenne J

Machine perfusion versus cold storage for the preservation of kidneys donated after cardiac death: a multicenter, randomized, controlled trial

Ann Surg. 2010 Nov;252(5):756-64.

Verduin EP, Lindenburg IT, Smits-Wintjens VE, Klink van JM, Schonewille H, Kamp van IL, Oepkes D, Walther FJ, Kanhai HH, *Doxiadis II*, Lopriore E, Brand A

Long-Term follow up after intra-Uterine transfusionS; the LOTUS study

BMC Pregnancy Childbirth. 2010 Dec 1;10:77.

Kessler JH, Khan S, Seifert U, Le Gall S, Chow KM, Paschen A, Bres-Vloemans SA, Ru de A, Montfoort van N, Franken KL, Benckhuijsen WE, Brooks JM, Hall van T, Ray K, Mulder A, *Doxiadis II*, Swieten van PF, Overkleeft HS, Prat A, Tomkinson B, Neefjes J, Kloetzel PM, Rodgers DW, Hersch LB, Drijfhout JW, Veelen van PA, Ossendorp F, Melief CJ **Antigen processing by nardilysin and thimet oligopeptidase generates cytotoxic T cell epitopes** Nat Immunol. 2011 Jan;12(1):45-53. [Epub 2010 Dec 12].

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Screening of viral specific T-cell lines for HLA alloreactivity prior to adoptive immunotherapy may prevent GvHD Transpl Immunol. 2010 Dec 15. [Epub ahead of print]

Zahn D, Weidner G, Beyersmann J, Smits JM, Deng MC, Kaczmarek I, Meyer S, Reichenspurner H, Mehlhorn U, Wagner FM, Spaderna H

Composite risk scores and depression as predictors of competing waiting-list outcomes: the Waiting for a New Heart Study

Transpl. Int. 2010 Dec;23(12):1223-32.

Book article:

Rahmel AO

L'optimisation des regles de répartition des greffons au service de la lutte contre la pénurie, l'expérience d'EuroTransplant

Réflexions éthiques sur la pénurie d'organes en Europe; Sous la direction de Yvanie Caillé et Michel Doucin; L'Harmattan, 2010; 49-51.

#### **INVITED LECTURES**

1. Organ Expert Committee Meeting, Canadian Blood Services January 11, 2010, Toronto, Canada

Organ and Tissue Donation and Transplantation - Allocation Principles *Rahmel AO* 

2. Wissenschaftliches Symposium der Bundesärztekammer zur Lage der Transplantationsmedizin in Deutschland January 26-27, 2010, Berlin, Germany

Ist die Allokation nach Dringlichkeit und Erfolgsaussicht noch zeitgemäß? Rahmel AO

3. Walter-Brendel-Kolleg für Transplantationsmedizin

March 5-10, 2010, Wildbad Kreuth, Germany

Organverteilung durch ET Rahmel AO

4. The Triple 'C' Course-ESOT

April 7-9, 2010, Schlangenbad, Germany

Risk assessment in organ transplantation: Methods and tools *Smits JM* 

5. Meeting of the Council of Representatives of Scandiatransplant

May 19, 2010, Helsinki, Finland

Principles of cooperation in Eurotransplant

Rahmel AO

### 6. 21. Workshop für experimentelle und klinische Lebertransplantation und Hepatologie June 28-30, 2010, Wilsede, Germany

Aktuelle ET-Zahlen zur LTx: keine oder nur Brennpunkte?

Rahmel AO

#### 7. XXIII International Congress of The Transplantation Society

August 15-19, 2010, Vancouver, Canada

Principles of organ allocation (all organs) (Postgraduate Weekend Workshop)

Rahmel AO

#### 8. 9th International Congress on Lung Transplantation

September 16 – 17, 2010, Paris, France

Lung allocation and practice in Europe

Smits JM

#### 9. 9th International Congress on Lung Transplantation

September 16 – 17, 2010, Paris, France

Evaluation of the emergency lung transplantation program in Eurotransplant

Smits JM

#### 10. Viszeralmedizin 2010

September 17, 2010, Stuttgart, Germany

Aktueller Stand der Leberallokation

Rahmel AO

#### 11. European Organ Donation Congress, 22nd ETCO

September 25, 2010, Cardiff, Wales, UK

International cooperation in organ allocation and transplantation

Rahmel AO

#### 12. IASGO CME Postgraduate Course

September 27, 2010, Essen, Germany

Eurotransplant standards in organ donation and allocation

Rahmel AO

#### 13. 19. Jahrestagung der Deutschen Transplantationsgesellschaft

October 7, 2010, Hamburg, Germany

Stand der Richtlinien ET

Rahmel AO

#### 14. Pflegesymposium

#### October 7, 2010, Hamburg, Germany

Aktuelle Entwicklung der Organallokation und -transplantation in den Eurotransplant-Ländern

Rahmel AO

#### 15. Transplantasyon Congress

October 14, 2010, Eskisehir, Turkey

Transplantation: Where we are? – EURO Tx

Rahmel AO

#### 16. Austrotransplant 2010

October 28, 2010, Villach, Austria

Patientenwanderung in Eurotransplant – Wie damit umgehen?

Rahmel AO

#### 17. Journalists Workshop on Organ Donation and Transplantation

November 10, 2010, Brussels, Belgium

Introduction to organ donation and transplantation

Rahmel AO

#### 18. ESOT Hesperis Course

#### November 14, 2010, Regensburg, Germany

Liver allocation *Rahmel AO* 

#### 19. Kurs Curriculum Organspende

#### November 18, 2010, Hamburg, Germany

Dringlichkeit/Erfolgsaussicht/Chancengleichheit/Allokationsregeln Rahmel AO

20. 3<sup>rd</sup> Belgian Meeting on Transplantation of Organs from Non-Heart-Beating Donors

#### November 25, 2010, Brussels, Belgium

Allocation algorithms within Eurotransplant  $Rahmel\ AO$ 

#### **ORAL PRESENTATIONS**

## 1. $30^{th}$ Annual meeting of the International Society for Heart and Lung Transplantation April 21 – 24, 2010, Chicago, IL, USA

Evaluation of the lung allocation score in high urgent and urgent lung transplant candidates in Eurotransplant  $Smits\ JM$ 

#### 2. ILTS 16th Annual International Congress

June 16-19, 2010, Hong Kong, China

MELD-Score Has Substantial Impact on Outcome of Liver Transplantation *Rahmel AO, Boogert L, Smits JM,* Rogiers X on behalf of the ELIAC

# 11. Eurotransplant personnel related statistics

Intake	Number of new employees	Number of employees (Dec. 31, 2010)	Intake percentage
Regular	11	72	15,3%
Student	11	29	37,9%
Total	22	101	21,8%

Outflow	Exit number Mumber of employee (Jan. 1, 201	
Regular	9	70 12,9%
Student	7 2	25 28,0%
Total	16	16,8%

Employees on December 31, 2010	Numbers	FTE	FTE*
Students	29	9,50	
Part-timer Part-timer	32	24,44	
Full-timer	28	28,00	
Full-timer + (>36 hours/week)	12	13,28	
Total	101	75,22	

<sup>\*</sup> The calculation of the number of FTE's is based on the number of employees actually working for ETI during the year (taking into account the shared services and the exit or entrance of employees during the year).

Breakdown of fte	Gross FTE	Recharged or Charged *	Nett FTE
Personel in fte's	75,22	10,59	64,63

<sup>\*</sup> The fte's based on the shared services will partially be recharged to the Dutch Transplant Foundation and NBF-BIS Foundation. Activitities which are done by personnel from the Dutch Transplant Foundation or NBF-BIS are charged to Eurotransplant.

	Male			Female
Divison Male/Female	Nr.	%	Nr.	%
Regular	32	44,4%	40	55,6%
Students	15	51,7%	14	48,3%
Total	47	46,5%	54	53,5%

Absentee rates	Gross absenteeism*	Nett absenteeism**	Average absentee frequencies	Average absentee duration
Regular	3,38%	2,42%	1,3	6,8 days
Students	0,13%	0,13%	0,1	4,7 days

<sup>\*</sup> Gross absenteeism concerns all absenteeism caused by illness.

In case of insured absenteeism, the employer receives sickness benefits for the absenteeism. This involves absenteeism related to pregnancy or maternity, organ donation or with regard to employees who have a prior history of insured absenteeism.

<sup>\*\*</sup> Nett absenteeism concerns all absenteeism caused by illness, excluding insured absenteeism.

## 12. Abbreviated financial statements

Abbreviated financial statements of Stichting Eurotransplant International Foundation, for the year ended December 31, 2010

For a full understanding of the Foundation's financial position and results, the abbreviated financial statements should be read in conjunction with the financial statements from which the abbreviated financial statements have been derived.

Balance sheet		
Assets	31.12.2010	31.12.2009
	x € 1.000	x € 1.000
Fixed assets	345	555
Short term receivables	2.426	2.403
Liquid assets	2.432	1.909
	5.202	4.067
	5.203	4.867
Liabilities	31.12.2010	31.12.2009
Liubillies	x € 1.000	x € 1.000
	<u> </u>	<u> </u>
Capital	235	235
Reserve funds	2.795	2.536
Provisions	59	55
Short term liabilities	2.114	2.042
	5.203	4.867
Statement of income and charges	2010	2000
Income	2010 x € 1.000	2009
Income	<u> </u>	<u>x</u> € 1.000
Registration fees	6.583	6.457
Procurement fees	2.402	2.347
Miscellaneous	197	203
	9.183	9.007
	<del></del>	
	2010	2009
Charges	<u>x € 1.000</u>	x € 1.000
0.1.	4.442	4.051
Salaries  Programment changes	4.443	4.051
Procurement charges General expenses	2.408 858	2.334 839
Medical expenses	70	69
Transport	6	12
Housing	270	256
Depreciation	233	293
Audits	352	308
Miscellaneous	166	53
	8.806	8.216
Equalization registrations and audits	117	205

259

587

Exploitation balance

#### Appropriation of the exploitation balance

Addition General Reserve	797	574
Addition Reserve Fund Reorganization	368	0
Addition Reserve Fund Housing	400	0
Addition Reserve Fund Clearinghouse procurement fees	250	0
Addition Reserve Fund Integration new member states	250	0
Release Reserve Fund Explantation costs		12
	<u>259</u>	587

#### **Accounting policies**

General accounting principles for the preparation of the financial statements

The annual accounts have been prepared in accordance with Guideline 640 of the Dutch Accounting Guidelines.

Valuation of assets and liabilities and determination of the result takes place under the historical cost convention. Unless presented otherwise at the relevant principle for the specific balance sheet item, assets and liabilities are presented at face value.

Income and expenses are accounted for on accrual basis. Profit is only included when realized on the balance sheet date. Losses originating before the end of the financial year are taken into account if they have become known before preparation of the annual accounts.

#### Comparative figures

In 2010 the foundation changed the presentation of several items in the statement of income and charges, to provide more relevant information to the users of the annual accounts and to align the presentation with the internal monthly reporting. The comparitive figures have been changed accordingly.

#### Changes in estimates

In 2010 the foundation signed a new rental agreement which expires in 2016. Based on this agreement, management estimates that the economic useful life of office equipment and furniture will end in 2016. Depreciation has been adjusted accordingly, resulting in increased depreciation charges in 2010 of  $\in$  2.418 and  $\in$  14.506 cumulative in the years 2011 - 2016.

#### Financial instruments

Financial instruments be both primary financial instruments, such as receivables and payables, and financial derivatives. For the principles of primary financial instruments, reference is made to the treatment per balance sheet item.

#### Translation of foreign currency

Receivables, liabilities and obligations denominated in foreign currency are translated at the exchange rates prevailing at balance sheet date.

Transactions in foreign currency during the financial year are recognized in the financial statements at the exchange rates prevailing at transaction date. The exchange differences resulting from the translation as of balance sheet date, taking into account possible hedge transactions, are recorded in the profit and loss account.

#### Principles of valuation of assets and liabilities

#### Tangible fixed assets

Tangible fixed assets are presented at cost less accumulated depreciation and, if applicable, less impairments in value. Depreciation is based on the estimated useful life and calculated as a fixed percentage of cost, taking into account any residual value. Depreciation is provided from the date an asset comes into use.

#### Accounts receivable

Receivables are included at face value, less any provision for doubtful accounts. These provisions are determined by individual assessment of the receivables.

Other receivables, prepaid expenses, accruals and short term liablities These items are stated at nominal value.

#### Reserve Funds

Reserve Funds are formed for future expenditures which should be covered out of the available assets. The Reserve Funds can be considered as reserves as set out in Dutch Accounting Guideline 640.309 whereas the setting of the objective of each Reserve Fund is determined by the Board of Management.

#### **Provisions**

The provision for jubilee is based on the expected costs for a series of years. Payments for a jubilee are deducted from the provision.

#### Provision for employee benefits

Industry pension fund scheme:

The pension plan according to the Collectieve Labour Agreement for General Hospitals is financed through contributions to an industry pension fund (the pension provider). The pension obligations of this plan are valued according to the 'valuation to pension fund approach'. This approach accounts for the contribution payable to the pension provider as an expense in the statement of income and charges.

#### Principles for the determination of the result

#### Registration fees

Registration fees are taken into account as of the date of entry on the waiting list of Eurotransplant.

#### Operating (government) grants

Operating grants are included in the statement of income and charges in the year to which the subsidized costs are charged.

#### Charges

The general expenses of Stichting Eurotransplant International are stated on the basis of transaction costs.

Certain general expenses of the Nederlandse Transplantatie Stichting, Stichting BISLIFE and Stichting Eurotransplant International Foundation are made for common account. Such costs are divided between the three foundations on the basis of activity-levels.

#### Exploitation Balance

The exploitation balance is defined as the difference between income and charges, based on the above mentioned policies.

#### Independent auditor's report

To the Board of Management and Board of Directors of Stichting Eurotranspiant International Foundation at Leiden

The accompanying abbreviated financial statements, which comprise the abbreviate balance sheet as at 31 December 2010, the abbreviated statement of income and charges, and related notes, are derived from the audited annual accounts of Stichting Eurotranspiant International Foundation for the year ended 31 December 2010. We expressed an unqualified audit opinion on those financial statements in our report dated April 27, 2011. Those annual accounts, and the abbreviated financial statements, do not reflect the effects of events that occurred subsequent to the date of our report on those annual accounts.

The abbreviated financial statements do not contain all the disclosures required by Guideline for annual reporting 640 "Not-for-profit organisations" of the Dutch Accounting Standards Board. Reading the abbreviated financial statements, therefore, is not a substitute for reading the audited financial statements of Stichting Eurotransplant International Foundation.

#### Management's responsibility

The Board of Directors is responsible for the preparation of the abbreviated financial statements in accordance with the accounting policies as applied in the 2010 annual accounts of Stichting Eurotranspiant International Foundation, which are also described in the notes to the abbreviated financial statements.

#### Auditor's responsibility

Our responsibility is to express an opinion on the abbreviated financial statements based on our procedures, which were conducted in accordance with Dutch Law, including the Dutch Standard on Auditing 810 "Engagements to report on summary financial statements".

#### Opinion

In our opinion, the abbreviated financial statements derived from the audited annual accounts of Stichting Eurotranspiant International Foundation for the year ended 31 December 2010 are consistent, in all material respects, with those annual accounts, in accordance with the Guideline for annual reporting 640 "Not-for-profit organisations" of the Dutch Accounting Standards Board.

April 27, 2011

Deloitte Accountants B.V.

Already signed: drs. G.J.W. Coppus RA

#### List of abbreviations

ACO Approved Combined Organ
AM Acceptable Mismatch
BMI Body Mass Index

CDC Complement Dependent Cytotoxicity
DPA Donation Procedure Application

DTT Dithiothreitol

EFRETOS European FRamework for the EvaluaTion of Organ transplantS

ELIAC ET Liver Intestine Advisory Committee
ENIS ET Network Information System
EPAC ET Pancreas Advisory Committee
EPT External Proficiency Testing
ESDP ET Senior DR-matching Program

ESOT European Society for Organ Transplantation

ET Eurotransplant ETEC ET Ethics Committee

ETHAC ET Thoracic Advisory Committee
ETKAC ET Kidney Advisory Committee
ETKAS ET Kidney Allocation System

ETP ET Policy Plan

ETRIP ET Registry of Islets and Pancreas

ETRL ET Reference Laboratory

EU European Union
FC Financial Committee
FTE Full Time Equivalent
HLA Human Leucocyte Antigen

HSYI award
ISWG
Henk Schippers Young Investigators award
Information Services Working Group

ISHLT International Society for Heart & Lung Transplantation

ISO International Organization for Standardization

LAS Lung Allocation Score

MELD Model End stage Liver Disease

NBF-BIS Netherlands Bone Foundation-Bio Implant Services

NTS Nederlandse Transplantatie Stichting
OPC Organ Procurement Committee
PRA Panel Reactive Antibodies

RESCUE Center offer in case of imminent loss of organ due to organ quality of

logistical problems

SAN Storage Area Network

SOP Standard Operation Procedures

SPA Solid Phase Assays

TTAC Tissue Typing Advisory Committee

TTC Tissue Typing Centers

UNOS United Network for Organ Sharing

VAD Ventricular Assist Device