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Eurotransplant mission statement

1. To achieve an optimal use of available donor organs and tissues;
2. To secure a transparent and objective selection system, based upon medical criteria;
3. To assess the importance of factors which have the greatest influence on transplant results;
4. To support donor procurement to increase the supply of donor organs and tissue;
5. To further improve the results of transplantation through scientific research;
6. Promotion, support and coordination of organ transplantation in the broadest sense of terms.

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Board of Eurotransplant International Foundation

as per December 31, 1996

Prof. Dr. Y. Vanrenterghem, Leuven	president
Drs. H.M.A. Schippers, The Hague	secretary/treasurer
Prof. Dr. U. Frei, Berlin	on behalf of the kidney / pancreas section
Prof. Dr. J.P. van Hooff, Maastricht	on behalf of the kidney / pancreas section
Prof. Dr. A. Haverich, Hannover	on behalf of the thoracic section
Prof. Dr. J. Vanhaecke, Leuven	on behalf of the thoracic section
Prof. Dr. B. Ringe, Göttingen	on behalf of the liver section
Prof. Dr. M.J.H. Slooff, Groningen	on behalf of the liver section
Prof. Dr. E. Dupont, Brussels	on behalf of the tissue typing section
Prof. Dr. G. Opelz, Heidelberg	on behalf of the tissue typing section
Prof. Dr. F.X. Lackner, Vienna	ethical advisor
Prof. Dr. F. Mühlbacher, Vienna	on behalf of the Austrian Transplant Society
Prof. Dr. B. de Hemptinne, Gent	on behalf of the Belgian Transplant Society
Prof. Dr. G. Kootstra, Maastricht	on behalf of the Dutch Transplant Society
Prof. Dr. P. Neuhaus, Berlin	on behalf of the German Transplant Society
Prof. Dr. F. H.J. Claas, Leiden	on behalf of the Eurotransplant Reference Laboratory

TRANSPLANT ACTIVITIES IN 1996

Center- code	Center / City	Surgeon	Physician	Transplant coordinators.
Renal Transplant Centers				
Austria				
GA	Medizinische Universitätsklinik, Graz	P. Petritsch	H. Holzer	R. Resch
IB	Chirurgische Universitätsklinik, Innsbruck	R. Margreiter, A. Königsrainer	C. Bösmüller, K. Lhotta	H. Fetz, P. Schobel
OE	Krankenhaus der Elisabethinen, Linz	H.-J. Böhmig	H.-K. Stummvoll	E. Leitner
OL	Allgemeines Krankenhaus, Linz	P. Brücke	J. Zazgornik	C. Gabriel
WD	Kinderdialyse Allgemeines Krankenhaus, Wien	F. Mühlbacher, R. Steininger	E. Balzar	W. Blaicher, H. Pokorny
WG	Universitätsklinik für Chirurgie, Wien	F. Mühlbacher, R. Steininger	W. Hörl, J. Kovarik	W. Blaicher, H. Pokorny
Belgium				
AN	Universitair Ziekenhuis Antwerpen, Edegem	D. Ysebaert	M. Debroe	G. Van Beeumen, W. Van Donink
BJ	Academisch Ziekenhuis der Vrije Universiteit, Brussel	J. Lamote	D. Verbeelen	B. Amerijckx, P. Everard
BR	Hôpital Erasme, Bruxelles	L. Depauw, P. Kinnaert	P. Vereerstraeten	E. Angenon, V. Duthie, B. Van Haelewijk
GE	Universitair Ziekenhuis, Gent	J. De Roose, U. Hesse, F. Vermassen	N. Lameire	L. Colenbie, M. Vandervennet
LA	Cliniques Universitaires St. Luc, Bruxelles	J. Squifflet	Y. Pirson	V. Dumont, C. Lecomte, P. Vanormelingen
LE	Kinderdialyse Universitair Ziekenhuis Gasthuisberg, Leuven	W. Coosemans	R. Lombaerts	L. Roels, F. Van Gelder
LG	Centre Hospitalier Universitaire, Liège	M. Meurisse	M. Beaujean	M.-H. Delbouille, M.-F. Hans
LM	Universitair Ziekenhuis Gasthuisberg, Leuven	W. Coosemans	Y. Vanrenterghem	L. Roels, F. Van Gelder
Germany				
AK	Universitätsklinikum der Rheinisch-Westfälischen TH, Aachen	G. Jakse	H.-G. Sieberth	A. Homburg
AU	Zentralklinikum, Augsburg	H. Loeprecht	D. Renner	C. Schulz
BB	Ruhr Universität, Bochum	J. Klempnauer, M. Büsing	E. Hecking	A. Deiss
BE	Universitätsklinikum Benjamin Franklin, Berlin	K. Miller	G. Offermann	E. Müller
BM	Kliniken der Freien Hansestadt, Bremen	K. Dreikom	A. Lison	Th. Grote
BO	Klinikum der Urologischen und Medizinischen Universität, Bonn	S.C. Müller	H.-U. Klehr, T. Sauerbruch	E. Backhaus
BS	Klinikum der Humboldt-Universität, Berlin	A. Lindecke	H. Neumayer, J. Lippert	C. Wesslau
BV	Klinikum Rudolf Virchow der Humboldt-Universität, Berlin	P. Neuhaus	U. Frei	D. Horch
DR	Technischen Universität, Dresden	M. Wirth	P. Gross	N.H. Hildebrandt
DU	Med. Einrichtungen der Heinrich-Heine-Universität, Düsseldorf	W. Sandmann	B. Grabensee	G.R. Hetzel, B. Schaepers
EB	Krankenhaus im Friedrichshain, Berlin	G. May	P. Müller	C. Wesslau
ES	Klinikum der Universität, Essen	F. Eigler	Th. Philipp	R. Abel
-	Städtische Kliniken, Medizinische Klinik III, Fulda	P. Hanke	W. Fassbinder	U. Bednarz
FM	Klinikum der Johann-Wolfgang-Goethe-Universität, Frankfurt	D. Jonas, P. Kramer	E. Scheuermann, W. Schoeppe	S. Schleede
FR	Klinikum der Albert-Ludwigs-Universität, Freiburg	G. Kirste	P. Schollmeyer	M. Blümke, F. Schaub
GI	Klinikum der Justus-Liebig-Universität, Gießen	W. Padberg	W. Ernst, S. Friemann	W. Ernst
GO	Klinikum der Georg-August-Universität, Göttingen	B. Ringe	G.A. Müller	R. Werner
HA	Klinikum der Martin-Luther-Universität, Halle	J. Schabel	R. Eismann	C. Wachsmuth
HB	Klinikum der Ruprecht-Karls-Universität, Heidelberg	G. Staehler	R. Eismann	E. Frey
HG	Universitäts-Krankenhaus Eppendorf, Hamburg	H. Hurland	R. Stahl	C. Clausen, B. Hollenrieder

Center- code	Center / City	Surgeon	Physician	Transplant coordinators.
HM	Nephrologisches Zentrum Niedersachsen, Hamm. Münden	W. Schott, K. Rohwer	E. Quellhorst	K. Rohwer
HO	Klinikum der Medizinischen Hochschule, Hannover	R. Pichlmayr	K. Koch	F. Vogelsang
HS	Klinikum der Universität des Saarlandes, Homburg/Saar	M. Ziegler	H. Köhler, W. Riegel	C. Friedrichssohn
JE	Klinikum der Friedrich-Schiller-Universität, Jena	J. Schubert	H. Sperschneider	R. Börner
KI	Klinikum Christian-Albrechts-Universität, Kiel	D. Henne-Bruns	H. Kraemer-Hansen	G. Schütt, N. Robien
KK	Kinderklinik der Universität, Köln	H. Pichlmaier	C. Baldamus	M. Pollok
KL	Klinik der Universität Köln-Lindenthal, Köln	A.H. Hölscher	C. Baldamus	M. Pollok
KM	Städtische Krankenanstalten Köln-Merheim, Köln	A. Paul, H. Troidl	W. Arns, M. Weber	W. Arns
KS	III. Medizinische Klinik, Kaiserslautern	W. Seybold-Epting	F. Albert, U. Schmidt	S. Schleede
LP	Klinikum der Universität, Leipzig	J. Haus	H. Achenbach	T. Weiskirchen
LU	Klinikum der Medizinischen Universität, Lübeck	J. Hoyer	L. Fricke	L. Fricke, E. Petersen
MA	Klinikum der Stadt, Mannheim	D. Lorenz, P. Trede	F.J. van der Woude, P. Schnülle	A. Müller
MH	Klinikum Rechts der Isar der Technischen Universität	C.D. Heidecke	F. Kopp	C. Schulz, W. Eberhardt
ML	Klin. Großhadern der Ludwig-Maximilians-Universität, München	W. Land	B. Zanker	C. Schulz
MN	Klinikum der Westfälischen Wilhelms-Universität, Münster	K.H. Diel	C. Spieker	S. Kley, M. Mauritz
MR	Klinikum Lahnberge der Philipps-Universität, Marburg	H. Riedmiller	H. Lange	U. Heck
MZ	Klinikum der Johannes-Gutenberg-Universität, Mainz	R. Hohentellner	E. Wandel	C. Kreber-Walther, S. Schleede
NB	Med. Einrichtungen der Universität Erlangen-Nürnberg, Nürnberg	K. Schrott	I. Hauser	K. Burkhardt, L. Renders
RO	Klinikum der Universität, Regensburg	K.W. Jauch, C. Zülke	B.K. Krämer	L. Renders, C. Burkhardt
RB	Klinikum der Universität, Rostock	H. Seiter, R. Templin	R. Schmidt	F.-P. Nitschke
ST	Katharinenhospital, Stuttgart	G. Jenal	C. J. Olbricht	M. Kalus
TU	Klinikum der Eberhard-Karls-Universität, Tübingen	W. Lauchart	H. Becker	C. Fischer-Fröhlich
UL	Klinikum der Universität, Ulm	D. Abendroth	C. Wanner	M. Schimmer
WZ	Klinikum der Julius-Maximilians-Universität, Würzburg	H. Frohmüller		D. De Cicco
Luxembourg				
LX	Centre Hospitalier de Luxembourg	S. Lamy	P. Duhoux	R. Differding
The Netherlands				
AW	Academisch Medisch Centrum, Amsterdam	C. Kox	J. Wilimink	J. Popma
GR	Academisch Ziekenhuis, Groningen	H. Mensink, R. Ploeg	A. Tegzess	R. van Ginkel, J. Kranenburg, P. van Wijngaarden
LB	Academisch Ziekenhuis, Leiden	J. Ringers	H. de Fijter	M. van Gorp, M. Kruyswijk
MS	Academisch Ziekenhuis, Maastricht	G. Kootstra	J. van Hooff	A. Oomen
NY	Academisch Ziekenhuis St. Radboud, Nijmegen	F. Buskens	R. Koene	H. van Wezel, W. Hordijk,
RD	Academisch Ziekenhuis Dijkzigt, Rotterdam	J. Jeekel	W. Weimar	M. Kruyswijk, M. Groot, M. van Gorp
RS	Sophia Kinderziekenhuis, Rotterdam	J. Bergmeijer	J. Nauta	M. Kruyswijk, M. Groot, M. van Gorp
UT	Academisch Ziekenhuis, Utrecht	R. van Reedt Dortland	R. Hené	P. Batavier, D. Naafs, J. Popma
UW	Wilhelmina Kinderziekenhuis, Utrecht	N. Bax	J. van Gool, M. Lilien	P. Batavier, D. Naafs, J. Popma

Center- code	Center / City	Surgeon	Physician	Transplant coordinators.
Heart Transplant Centers				
Austria				
GA	Chirurgische Universitätsklinik, Graz	K-H. Tscheliessnigg	W. Klein	R. Resch
IB	Chirurgische Universitätsklinik, Innsbruck	R. Margreiter, H. Antretter	O. Pachinger	H. Fetz, P. Schobel
WG	Universitätsklinik für Chirurgie, Wien	G. Laufer, M. Grimm, W. Wisser	R. Pacher	K. Mallinger, G. Kuchling
Belgium				
AN	Universitair Ziekenhuis Antwerpen, Edegem	A. Mouljin	V. Conraads	G. Van Beeumen, W. Van Donink
AS	Onze Lieve Vrouw Ziekenhuis, Aalst	F. Wellens	M. Goethals	T. Gooris, W. Tack
BR	Hôpital Erasme, Bruxelles	M. Antoine, J. Leclercq	J. Vachery	E. Angenon, V. Duthie, B. Van Haelewijck
GE	Universitair Ziekenhuis, Gent	G. Van Nooten, F. Caes	G. Van Nooten	F. De Somer
LA	Cliniques Universitaires St. Luc, Bruxelles	J. Schoevaerdt, P. Noirhomme	M. Goenen	V. Dumont, C. Lecomte, P. Vanormelingen
LG	Centre Hospitalier Universitaire, Liège	R. Limet	J-C. Demoulin	M-H. Delboulle, M-F. Hans
LM	Universitair Ziekenhuis Gasthuisberg, Leuven	W. Daenen	J. Vanhaecke	L. Roels, F. Van Gelder
Germany				
AK	Universitätsklinikum der Rheinisch-Westfälischen TH, Aachen	B. Messmer, F. Schöndube	P. Hanrath	A. Homburg
BA	Herz- & Diabeteszentrum Nordrhein-Westfalen, Bad Oeynhausen	R. Körfer, K. Minami	M. Körner	H. Gromzik, S. Wlost
-	Bergmannsheil, Bochum	A. Laczkovics		
BD	Deutsches Herzzentrum, Berlin	R. Hetzer	M. Hummel	N. Franz, H. Kriegler
BH	Kerckhoff Klinik, Bad Nauheim	W. Kloevekorn	M. Schlepper	A. Friedl
BK	Benedikt Kreuz Rehabilitationszentrum, Bad Krozingen	W. Peck	H. Roskamm	M. Wiessner
BS	Klinikum der Humboldt-Universität, Berlin	W. Konertz	G. Baumann	W. Lohse
DR	Technischen Universität Dresden	S. Schüller		N.H. Hildebrandt
DU	Med. Einrichtungen der Heinrich Heine Universität, Düsseldorf	E. Gams	T. Petzold	G.R. Hetzel, B. Schaepers
ES	Klinikum der Universität, Essen	Ch. Reidemeister	B. Schönfelder	R. Abel
FD	Klinikum Fulda, Thorax-, Herz- und Gefäßchirurgie, Fulda	Th. Stegmann	T. Bonzel	H-U. Günther
FM	Klinikum der Johann-Wolfgang-Goethe-Universität, Frankfurt	P. Satter	A. Hartmann	J. Gossmann
FR	Klinikum der Albert-Ludwigs-Universität, Freiburg	F. Beyersdorf	G. Hasenfuß	M. Blümke, F. Schaub
GI	Klinikum der Justus-Liebig-Universität, Gießen	F. Dapper	J. Bauer, W. Haberbosch	J. Bauer, W. Haberbosch
GO	Klinikum der Georg-August-Universität, Göttingen	M. Baryalei	H. Figulla	R. Werner
HA	Klinikum der Martin-Luther-Universität, Halle	H.K.G. Zerkowski		B. Landgraf, C. Wachsmuth
HB	Klinikum der Ruprecht-Karls-Universität, Heidelberg	S. Hagl	R. Lange	M. Heinen
HG	Universitäts-Krankenhaus Eppendorf, Hamburg	P. Kalmar	W. Rödiger	C. Clausen, B. Hollemieder
HO	Klinikum der Medizinischen Hochschule, Hannover	H. Borst	P. Lichtlen	F. Vogelsang
HS	Klinikum der Universität des Saarlandes, Homburg-Saar	H.J. Schäfers	H.J. Schieffer	C. Friedrichsohn
KI	Klinikum der Christian-Albrechts-Universität, Kiel	D. Regensburger	A. Jäckle	G. Schütt, N. Robien
KL	Klinik der Universität Köln-Lindenthal, Köln	E. de Vivie	E. Erdmann	F. Kuhn-Regnier
KS	Klinik für Herz- und Thoraxchirurgie, Kaiserslautern	W. Seybold-Epting	H. Glunz	S. Schleede
LP	Klinikum der Universität, Leipzig	F.W. Mohr		T. Weiskirchen
MD	Deutsches Herzzentrum, München	H. Meisner, M. Overbeck	B. Permanetter	C. Schulz
ML	Klin. Großhadern der Ludwig-Maximilians-Universität, München	B. Reichart, P. Überfuhr	B. Meiser	C. Schulz
MN	Klinikum der Westfälischen Wilhelms-Universität, Münster	H. Scheld	M. Weyand	S. Kley, M. Mauritz

Center- code	Center / City	Surgeon	Physician	Transplant coordinators.
MZ	Klinikum der Johannes-Gutenberg-Universität, Mainz	U. Hake	J. Meyer	C. Kreber-Walther, S. Schleede
RB	Klinikum der Universität, Regensburg	D. Birnbaum	M. Kaiser	L. Renders, C. Burkhardt
TU	Klinikum der Eberhard-Karls-Universität, Tübingen	G. Ziemer	M. Jurmann	C. Fischer-Frölich
WZ	Klinikum der Julius-Maximilians-Universität, Würzburg	R-E. Silber	R-E. Silber	D. De Cicco
		A. Wiesenthaler, M. Aghaui		
The Netherlands				
-	Academisch Ziekenhuis, Groningen	T. Ebels	M. Simoons	R. van Ginkel, J. Kranenburg, P. Nieboer
RD	Academisch Ziekenhuis Dijkzigt, Rotterdam	B. Mochtar	N. de Jonge	M. Kruyswijk, M. Groot, M. van Gurp
UT	Academisch Ziekenhuis, Utrecht	J. Lalpor, J. Bredee		P. Batavier, D. Naafs, J. Popma
Lung Transplant Centers				
Austria				
IB	Chirurgische Universitätsklinik, Innsbruck	R. Margreiter, L. Müller	Ch. Prior	H. Fetz, P. Schobel
WG	Universitätsklinik für Chirurgie, Wien	A. Zuckermann, W. Klepetko,	W. Klepetko	T. Birsan
Belgium				
BR	Hôpital Erasme, Bruxelles	Ph. de Franquen	M. Estenne	E. Angenon, V. Duthie, B. Van Haelewijk
LA	Cliniques Universitaires St. Luc, Bruxelles	J. Schoevaerdt	E. Installe	V. Dumont, C. Lecomte, P. Vanormelingen
LM	Universitair Ziekenhuis Gasthuisberg, Leuven	T. Lerut	G. Verleden	L. Roels, F. Van Gelder
Germany				
BA	Herz- & Diabeteszentrum Nordrhein Westfalen, Bad Oeynhausen	R. Körfer, K. Minami	M. Körner	H. Gromzik, S. Wlost
BD	Deutsches Herzzentrum, Berlin	R. Hetzer	M. Hummel, R. Ewert	N. Franz, H. Kriegler
DR	Technischen Universität Dresden	S. Schüller		N.H. Hildebrandt
ES	Klinikum der Universität, Essen	Ch. Reidemeyer	B. Schönfelder	R. Abel
FD	Klinikum Fulda, Thorax-, Herz- und Gefäßchirurgie, Fulda	Th. Stegmann	T. Bonzel	H-U. Günther
HO	Klinikum der Medizinischen Hochschule, Hannover	H. Borst	H. Fabel	F. Vogelsang
HS	Klinikum Universität des Saarlandes, Homburg/Saar	H.J. Schäfers	G. Sybrecht	C. Friedrichssohn
KI	Klinikum der Christian-Albrechts-Universität, Kiel	D. Regensburger	A. Jäckle	G. Schütt, N. Robien
ML	Klin. Großhadern der Ludwig-Maximilians-Universität, München	H. Fuerst, B. Reichart	W. Voglmeier, F. Kur	C. Schulz
MN	Klinikum der Westfälischen Wilhelms-Universität, Münster	H. Scheld	M. Weyand	S. Kley, M. Mauritz
MZ	Klinikum der Johannes-Gutenberg-Universität, Mainz	E. Mayer	R. Ferlitz	C. Kreber-Walther, S. Schleede
The Netherlands				
GR	Academisch Ziekenhuis, Groningen	W. de Boer, T. Ebels, J. Meuzelaar	W. van der Bij	R. van Ginkel, J. Kranenburg, P. van Wijngaarden
Liver Transplant Centers				
Austria				
GA	Chirurgische Universitätsklinik, Graz	K-H. Tscheliessnigg	J-A. Kreis	R. Resch
IB	Chirurgische Universitätsklinik, Innsbruck	R. Margreiter, A. Königsrainer,	W. Vogel	H. Fetz, P. Schobel
		H. Pernthaler		
WG	Universitätsklinik für Chirurgie, Wien	F. Mühlbacher, R. Steininger	A. Gangl	H. Pokorny, W. Blaicher

Center- code	Center / City	Surgeon	Physician	Transplant coordinators.
Belgium				
BR	Hôpital Erasme, Bruxelles	M. Gelin	M. Adler	E. Angenon, V. Duthie, B. Van Halewijck
GE	Universitair Ziekenhuis, Gent	B. De Hemptinne, U. Hesse, P. Pattyn	J. Versteck (†)	L. Colenbie, M. Vandervennet
LA	Cliniques Universitaires St. Luc, Bruxelles	J. Otte	A. Geubel, E. Sokal	M. Jansen, F. Roggen
LG	Centre Hospitalier Universitaire, Liège	P. Honoré, M. Meurisse	J. Beléiche	M-H. Delbouille, M-F. Hans
LM	Universitair Ziekenhuis Gasthuisberg, Leuven	R. Aerts	J. Fevery	L. Roels, F. Van Gelder
Germany				
AK	Universitätsklinikum der Rheinisch-Westfälischen TH, Aachen	V. Schumpelick	S. Matern	R. Kasperk
-	Knappschaftskrankenhaus, Bochum	M. Büsing	J. Klempnauer	A. Deiss
BO	Chirurgische Universitätsklinik, Bonn	A. Himer, A. Müller	U. Spengler	E. Backhaus
BV	Klinikum Rudolf Virchow der Humboldt-Universität, Berlin	P. Neuhaus	U. Frei	D. Horch
ES	Klinikum der Universität, Essen	F. Eigler	J. Erhard	R. Abel
FM	Klinikum der Johann-Wolfgang-Goethe-Universität, Frankfurt	A. Encke	W. Allers	W. Allers
FR	Klinikum der Albert-Ludwigs-Universität, Freiburg	G. Kirsche	H. Blum	M. Blümke, F. Schaub
GO	Klinikum der Georg-August-Universität, Göttingen	B. Ringe	G. Ramadori	R. Werner
HB	Klinikum der Ruprecht-Karls-Universität, Heidelberg	Ch. Herfarth, G. Otto	M. Sterneck	E. Frey
HG	Universitäts-Krankenhaus Eppendorf, Hamburg	Ch. Broelsch	M. Manns	T. Karbe, R. Küttemeier
HO	Klinikum der Medizinischen Hochschule, Hannover	R. Pichlmayr		F. Vogelsang
JE	Klinikum der Friedrich-Schiller-Universität, Jena	J. Scheele	H. Kraemer-Hansen	R. Börner
KI	Klinikum der Christian-Albrechts-Universität, Kiel	B. Kremer		G. Schütt, N. Robien
KL	Klinik der Universität Köln-Lindenthal, Köln	T. Beckurts		G. Kerp
KM	Städtische Krankenanstalten Köln-Merheim, Köln	A. Paul		G. Kerp, A. Frohn
LP	Klinikum der Universität, Leipzig	J. Haus	J. Mössner	T. Weiskirchen
MB	Klinikum Otto-von-Guericke Universität, Magdeburg	H. Lippert, T. Manger	K. Ridwelski, J. Fahlke, M. Pross	C. Wachsmuth, J. Falke
MH	Klinikum Rechts der Isar der Technischen Universität, München	C.D. Heidecke	V. Schusdziarra	C. Schulz
ML	Klin. Großhadern der Ludwig-Maximilians-Universität, München	H-J. Krämling	A. Gerbes	C. Schulz
MN	Klinikum der Westfälischen Wilhelms-Universität, Münster	N. Senninger	K.H. Diel	S. Kley, M. Mauritz
NB	Chirurgische Klinik der Universität Erlangen-Nürnberg, Erlangen	W. Hohenberger		K. Burkhardt, L. Renders
RB	Klinikum der Universität, Regensburg	K.W. Jauch, M. Anthuber		L. Renders, C. Burkhardt
RO	Klinikum der Universität, Rostock	U.T. Hopt, W. Schareck		F-P. Nitschke
TU	Klinikum der Eberhard-Karls Universität, Tübingen	W. Lauchart	S. Liebe, M. Lühr	C. Fischer-Fröhlich
WZ	Klinikum der Julius-Maximilians-Universität, Würzburg	W. Timmermann	H. Becker	D. De Cicco
The Netherlands				
GR	Academisch Ziekenhuis, Groningen	P. de Jong, E. Peeters, M. Slooff	E. Haagsma, L. Meerman, I. Klompmaaker	R. van Ginkel, J. Kranenburg, P. van Wijngaarden
LB	Academisch Ziekenhuis, Leiden	O. Terpstra	B. van Hoek	M. van Gorp, M. Kruyswijk, M. Groot
RD	Academisch Ziekenhuis Dijkzigt, Rotterdam	J. IJzermans, H. Tilanus	H. Metselaar	M. Kruyswijk, M. Groot, M. van Gorp
Pancreas Transplant Centers				
Austria				
IB	Chirurgische Universitätsklinik, Innsbruck	R. Margreiter, A. Königsrainer, D. Offner	M. Lechleitner, W. Steurer	H. Fetz, P. Schobel

Center- code	Center / City	Surgeon	Physician	Transplant coordinators.
Belgium				
AN	Universitair Ziekenhuis Antwerpen, Edegem	D. Ysebaert	M. Debroe	G. Van Beeumen, W. Van Donink
BJ	Academisch Ziekenhuis der Vrije Universiteit, Brussel	L. Depaauw	D. Pipeleers	C. Hendrickx
BR	Hôpital Erasme, Bruxelles	U. Hesse	F. Fery	E. Angenon, V. Duthie, B. Van Haelewijk
GE	Universitair Ziekenhuis, Gent	J. Squifflet	B. De Hemptinne	L. Colenbier, M. Vandervennet
LA	Cliniques Universitaires St. Luc, Bruxelles	M. Meurisse	B. Vandeleene	C. Lecomte, V. Dumont
LG	Centre Hospitalier Universitaire, Liège	R. Aerts, W. Coosemans	M. Beaujean	M-H. Delbouille, M-F. Hans
LM	Universitair Ziekenhuis Gasthuisberg, Leuven		Y. Vanrenterghem	L. Roels, F. Van Gelder
Germany				
BB	Knappschaftskrankenhaus, Bochum	M. Büsing	M. Nauck	A. Deiss
BV	Klinikum Rudolf Virchow der Humboldt-Universität, Berlin	P. Neuhaus	U. Frei	D. Horch
ES	Klinikum der Universität, Essen	F. Eigler	J. Friedrich	R. Abel
GI	Klinikum der Justus-Liebig-Universität, Gießen		R.G. Bretzel	M. Brendel
HG	Universitäts-Krankenhaus Eppendorf, Hamburg	Ch. Broelsch	M. Sterneck	T. Karbe, R. Küttemeier
MH	Klinikum Rechts der Isar der Technischen Universität, München	C.D. Heidecke		C. Schulz, W. Eberhardt
ML	Klin. Großhadern der Ludwig-Maximilians-Universität, München	W. Land	R. Landgraf, B. Zanker	C. Schulz
MR	Klinikum Lahnberge der Philips-Universität, Marburg	M. Rothmund	H. Lange	L. Viorescu, U. Heck
RO	Klinikum der Universität, Rostock	U.T. Hopt, W. Schareck	R. Hampel	F-P. Nitschke
TU	Klinikum der Eberhard-Karls-Universität, Tübingen	I. Irkin, W. Lauchart	H. Becker	C. Fischer-Fröhlich
UL	Klinikum der Universität, Ulm	D. Abendroth		M. Schimmer
The Netherlands				
GR	Academisch Ziekenhuis, Groningen	R. Ploeg, R. van Schilfgaarde	A. Tegzess	R. van Ginkel, J. Kranenburg, P. Nieboer
LB	Academisch Ziekenhuis, Leiden	J. Ringers	H. de Fijter	M. van Gorp, M. Kruyswijk, M. Groot
Tissue Typing Laboratories				
ETRL	Eurotransplant Reference Laboratory, Academisch Ziekenhuis, Leiden, the Netherlands		F. Claas, I. Doxiadis, G. Schreuder	
Austria				
GA	Universitätsklinik, Abteilung für Transfusionsmedizin und Immunohämatologie, Graz		G. Lanzer	
IB	Universitätsklinik, HLA Labor, Innsbruck		D. Schönitzer	
OL	Allgemeines Krankenhaus, Blutzentrale, Linz		B. Blauth	
OW	Allgemeines Krankenhaus, HLA Labor, Wels		C. Artman	
WG	Institut für Blutgruppenserologie, Wien		W. Mayr	
Belgium				
AN	Bloedtransfusiecentrum Antwerpen, Belgische Rode Kruis, Edegem		L. Muylle	
BJ	Academisch Ziekenhuis der Vrije Universiteit, Bloedtransfusiecentrum Jette, Brussel		C. Demanet	
BR	Hôpital Erasme, Tissue typing laboratory, Bruxelles		E. Dupont	
GE	Universitair Ziekenhuis, Tissue typing laboratory, Gent		B. Vandekerckhove	

Center-
code / City

LA	Université de Louvain, Tissue typing laboratory, Bruxelles		M. de Bruyère
LG	Laboratoire des Groupes Sanguins, Liège		C. Bouillenne
LM	Bloedtransfusiecentrum, Belgische Rode kruis, Leuven		M.P. Emonds
Germany			
AK	Mikrobiologie am Universitätsklinik der Rheinisch-Westfälischen TH, Aachen		K. Schweitzer
BE	Klinikum Steglitz der Freien Universität, Labor für Gewebetypisierung, Berlin		S. Bünte
BV	Klinikum Rudolf Virchow der Humboldt-Universität, Berlin		R. Blasczyk
EB	Krankenhaus im Friedrichshain, HLA Labor, Berlin		C. Schönemann
DU	Institut für Blutgerinnung und Transfusionsmedizin, Düsseldorf		B. Kuntz
ER	Institut für Klinische Immunologie, Erlangen		R. Waßmuth
ES	Klinikum der Universität, Abteilung für Immunogenetik, Essen		H. Grosse-Wilde
FM	Immunohaematologie, Blutspendedienst Hessen, Frankfurt		C. Seidl
FR	Blutspendedienst, Labor für Gewebetypisierung, Freiburg		H. Lang
GI	Institut für Klinische Immunologie und Transfusionsmedizin, Gießen		G. Mueller-Eckhardt
GO	Klinikum der Universität, HLA Labor, Göttingen		H. Neumeyer
HA	Institut für Pathologische Biochemie, Interdisziplinäres Typisierungslabor, Halle		H. Machulla
HG	Universitäts-Krankenhaus Eppendorf, HLA Labor, Hamburg		P. Kühnl
HM	Institut Kassel des Blutspendedienst Hessen, Kassel		H.D. Weibhaar
HB	Institut für Immunologie und Serologie, Heidelberg		G. Opelz
HO	Klinikum der Medizinischen Hochschule, Immunohaematologie/Blutbank, Hannover		H. Robin-Winn
JE	Institut für Transfusionsmedizin, HLA-Labor, Jena		W. Altermann
KI	Klinikum der Christian-Albrechts-Universität, HLA Labor, Kiel		E. Westphal
KM	Institut für Transfusionsmedizin, Köln-Merheim		M. Dörner
KS	Institut für Rechtsmedizin, Transplantationsimmunologie, Kaiserslautern		B. Thiele
LP	Institut für Transfusionsmedizin, Leipzig		S. Schröder
LU	Institut für Immunologie und Transfusionsmedizin, Lübeck		G. Bein
ML	Kinderklinik der Ludwig-Maximilians-Universität, HLA Labor, München		E. Albert
MR	Klinikum Lahnberge der Philipps-Universität, HLA Labor, Marburg		F. Weidenbach
MZ	Klinikum der Johannes-Gutenberg Universität, HLA Labor, Mainz		W. Hitzler
RO	Klinikum der Universität, Abteilung für Transfusionsmedizin, HLA Labor, Rostock		D. Barz
TU	Klinikum der Eberhard-Karls-Universität, Abteilung für Transfusionswesen und Blutbank, Tübingen		D. Wernet
UL	DRK Blutspendezentrale, Transplantationsimmunologie, Ulm		S. Goldmann
Luxembourg			
LX	Centre Hospitalier, HLA Labor, Luxembourg		F. Hentges
The Netherlands			
AW	Centraal Laboratorium Bloedtransfusiedienst, Nederlandse Rode Kruis, Amsterdam		N.M. Lardy
GR	Laboratorium voor Bloedgroeps-serologie, Groningen		S. Lens
LB	Academisch Ziekenhuis, Immunohaematologie, Leiden		F. Claas, G. Schreuder
MS	Academisch Ziekenhuis, Laboratorium voor weefseltypering, Maastricht		E. van den Berg-Loonen
NY	Academisch Ziekenhuis St. Radboud, Leucocytlaboratorium, Nijmegen		W. Allebes
UT	Academisch Ziekenhuis, Bloedbank, Utrecht		G. de Gast

Foreword

The new Articles of Association of the Eurotransplant International Foundation, accepted in 1994 by the General Assembly, aimed to guarantee a decentralized decision making process by representatives from the different countries and disciplines, elected in a democratic way. Over the past year, the many advisory committees of Eurotransplant (ET) have met at regular intervals and have formulated a lot of recommendations to the ET Board. After discussion, most of these recommendations have been accepted and implemented. By doing so, the primary objective of the Board is to guarantee a fair and objective allocation of the available organs in the interest of the patients, desperately waiting for a new life with their transplanted organ. Along the same line, the Board during its last meeting in June 1997, agreed on the following mission statement saying that 'Eurotransplant is a service organization to the transplant candidates through the collaborating transplant programs within Eurotransplant'.

In March 1996, the new ET kidney allocation system, based on the algorithm originally described by Wucjiak and Opelz, was implemented. The results of this new allocation system were closely monitored by the Kidney Advisory Committee and if needed the algorithm was adjusted. As already mentioned in the ET newsletters, the primary objectives of this new system were rapidly realized. A lot of long waiting patients have been transplanted and the national import-export ratio is in balance while a high degree of HLA compatibility is still maintained. The implementation of this new system has been well accepted by most of the ET centers, although some of them have temporarily seen a substantial drop in their transplant activities. The persisting discrepancy between the number of kidneys retrieved and the number of organs transplanted is for some centers and regions difficult to accept. Although the weight of the so-called distance factor has been increased, the low number of patients on the waiting list in many of these centers remains the main reason for this imbalance. Despite the persistence of this problem, I am happy to see that the number of violations of the new ET kidney allocation system is low and does not increase. I hope that further constructive discussions can bring a solution which is acceptable for all centers and continues to serve primarily the interest of all patients.

Also the allocation of livers remained a matter of controversy over the last year. On several occasions, the Liver Advisory Committee discussed the issue of allocation and the discussion is still going on. The initiatives taken by some of the liver transplant programs to split the liver in order to increase the number of transplantable livers should receive more attention and support.

It can be hoped that the acceptance of a new legislation on organ donation and transplantation in the Netherlands in 1996 and, more recently, also in Germany will facilitate the discussions on organ allocation. In these two countries future organ allocation has to be done by an officially recognized organ allocation organization. I am confident that Eurotransplant International will meet the criteria to do this job.

During the last year the Board has further stimulated the scientific output of the foundation. Thanks to the continuous efforts of the Directors and the ET staff, several important papers have been published while presentations have been given at most of the leading transplant congresses. For the near future the following goals have been set:

- a closer collaboration with the various existing transplant registries in order to ease the data exchange between the transplant programs and the national and international registries, including Eurotransplant;
- smoothening the collection of follow-up data in such a way that it does not increase the extra work for the centers;
- stimulation and initiation of participation in scientific studies and analyses of the transplant centers.

I would like to end this foreword by thanking all colleagues working in the many ET transplant centers throughout Austria, the Benelux and Germany for their continuous support and confidence in the Eurotransplant organization. Close collaboration, solidarity in the interest of the patient and open and fair discussion when problems occur are essential for the future of Eurotransplant. Last but not least, I would cordially like to thank the ET Directors and the ET staff for preparing this Annual Report.

Prof. Dr. Y. Vanrenterghem
President

Introduction

Following decisions taken by the Board of Eurotransplant and the introduction of a remodelled Eurotransplant computer database, the data content and presentation of this Annual Report 1996 has undergone major changes in comparison with the Annual Report of previous years. In order to visualize the direct need of organs and to have a more realistic assessment of organ allocation, the Board decided to disclose only waiting list figures on **actively** waiting patients. Thus, (temporarily) non-transplantable patients have been excluded from all waiting list figures.

New is an overview of the publications which, as a result of the epidemiological and scientific analyses performed, have appeared during the year 1996. The Board of Eurotransplant Foundation as a whole also serves as the Scientific Committee. The Board as well as the Directors have set for the near future a few important goals with regard to scientific output, which are already mentioned in the Foreword of the President.

In its core business, i.e. the allocation of donor organs according to well defined and accepted criteria, a few important developments have taken place at Eurotransplant. In particular, the acceptance of legislation on organ donation and transplantation in The Netherlands (1996) and in Germany (1997). Allocation procedures have received major attention in these laws and will certainly have a great impact on the day-to-day work at the central office and in the transplant centers in the coming years. We are confident that we are able to meet these new challenges for all of us.

For everything that has been achieved during the nearly 30 years of Eurotransplant's existence we, on behalf of the central office, would like to acknowledge and thank all colleagues in Eurotransplant involved in the various fields of organ donation and transplantation. Thanks to them we are again able to provide you with a wealth of information over the year 1996. May this Annual Report be a reflection of our sincere gratitude to all of you.

A special word of thanks goes to Dr. Johan De Meester, for looking after the data and performing the different analyses. For typing and preparing the Annual Report we would like to thank Ms. Jacqueline Engel.

Bernard Cohen
Director

Guido G. Persijn
Medical Director

1. Report of the Board of Stichting Eurotransplant International Foundation

Drs. B. Haase-Kromwijk, Eurotransplant International Foundation, Leiden, the Netherlands

The Board of Stichting Eurotransplant International Foundation met four times, on January 17, April 22, June 21 and September 25/26, 1996.

Following the retirement of Prof. J.J. Van Rood, on May 1, 1996, Prof. Y. Vanrenterghem, Leuven, Belgium, became the new president of Eurotransplant International Foundation. Prof. M. Slooff from Groningen, the Netherlands, was appointed as vice-president of the Board and Prof. F. Lackner, from Vienna, Austria, as ethical expert and subsequently as chairman of the Ethics Committee. A re-election schedule for Board members was approved: each year, three Board members A are to be elected by the Assembly.

In 1996, it became apparent that, although the Eurotransplant Network Information System project has been implemented and completed according to planning, the Eurotransplant Automation Department could no longer cope with growing demands from the Committees and users. Based on the advice of an external consultant, the Board approved a strategic information plan. The Automation Department will be restructured into an Information Department.

The progress of the new housing of Eurotransplant was discussed several times. Plans to construct a new building in the direct neighborhood of the University Hospital Leiden, which should be completed in 2000, were approved. A new house style was approved for Eurotransplant International Foundation.

The Board prepared the official cooperation with Czech Transplant. Unfortunately, the signing of the agreement in which all aspects of organizational, financial and legal actions were described, was postponed until further notice by the Czech government.

A new kidney allocation program was implemented and was subject to continuous evaluation and finetuning. Upon recommendation of the Non-resident Working Group, the Board also approved an adaptation of the kidney allocation system in order to reduce non-resident patients on the renal waiting list.

The Board furthermore stated that centers which would systematically violate the exchange rules would outplace themselves from the Eurotransplant organization.

The Board approved that the HIT program of Prof. G. Opelz for highly immunized patients should be continued by the Eurotransplant Reference Laboratory (ETRL). The original procedure of shipment of all donor spleens to the ETRL for serological retyping was abolished in order to reduce costs. A new quality assurance program will be set up.

The central role of Eurotransplant in collecting follow-up data on transplanted patients – in close collaboration with international registries – was reconfirmed.

The Board approved many recommendations from the Advisory Committees, which are regularly published in the Eurotransplant newsletters.

In 1996, the Advisory Committees were composed as follows.

KIDNEY ADVISORY COMMITTEE (ETKAC)

Name	From	Until	Successor of	Remarks
Prof.Dr. Y. Vanrenterghem (LM)	09.1994	12.1996		chairman, representative Board
Prof.Dr. U. Frei (BV)	12.1996		Prof.Dr. Y. Vanrenterghem (LM)	chairman, representative Board
Prof.Dr. F.H.J. Claas (LB)	09.1994			representative TTAC
Dr. P. Duhoux (LX)	09.1994			representative Luxemburg
Prof.Dr. H. Grosse-Wilde (ES)	09.1994	12.1996		representative Germany (4/4)
Dr. A. Hoitsma (NY)	09.1994			representative Netherlands (1/2)
Prof.Dr. G. Kirste (FR)	07.1996		Prof.Dr. B. Buchholz	representative Germany 1/4)
Dr. R. Kramar (OW)	09.1994			representative Austria (1/2)
Prof.Dr. F. Mühlbacher (WG)	09.1994			representative Austria (2/2)
Prof.Dr. G. Offermann (BE)	09.1994			representative Germany (2/4)
Dr. Y. Pirson (LA)	09.1994			representative Belgium (1/2)
Prof.Dr. R. Templin (RO)	09.1994	12.1996		representative Germany (3/4)
Prof.Dr. W. Weimar (RD)	09.1994			representative Netherlands (2/2)
Prof.Dr. N. Lameire (GE)	09.1994			representative Belgium (2/2)
Prof.Dr. G. Offner (HO)	09.1994			external advisor
Prof.Dr. G. Opelz (HB)	09.1994			external advisor
Dr. Th. Wujciak (HB)	09.1994			external advisor
Prof.Dr. B. Buchholz (MN)	04.1994	05.1996		representative Germany (1/4)
Dr. U. Schmidt (KS)	12.1996		Prof.Dr. R. Templin (RO)	representative Germany (3/4)
Prof.Dr. K. Dreikorn (BM)	12.1996		Prof.Dr. H. Grosse-Wilde (ES)	representative Germany (4/4)
Dr. G.G. Persijn (ET)	09.1994			secretary

LIVER ADVISORY COMMITTEE (ELAC)

Name	From	Until	Successor of	Remarks
Prof.Dr. M.J.H. Slooff (GR)	09.1994			chairman, representative Board
Prof.Dr. B. de Hemptinne (GE)	09.1994			representative Belgium (1/2)
Dr. J. Erhard (ES)	09.1994			representative Germany (1/3)
Prof.Dr. R. Margreiter (IB)	09.1994			vice-chairman, representative Austria (1/1)
Dr. H.J. Metselaar (RD)	04.1995			representative Netherlands (1/1)
Prof.Dr. P. Neuhaus (BV)	09.1994			representative Germany (2/3)
Prof.Dr. J.B. Otte (LA)	09.1994			representative Belgium (2/2)
Prof.Dr. B. Ringe (GO)	09.1994			representative Germany (3/3)
Dr. J. de Boer (ET)	09.1994	12.1995		secretary
Dr. H. De Winter (ET)	01.1996		Dr. J. de Boer (ET)	secretary

PANCREAS ADVISORY COMMITTEE (PAC)

Name	From	Until	Succesor of	Remarks
Prof.Dr. G. Kootstra (MS)	08.1994			chairman, representative Board
Prof.Dr. D. Abendroth (UL)	08.1994			representative Germany (1/3)
Prof.Dr. F.H.J. Claas (LB)	08.1994			representative TT Assembly
Prof.Dr. U.T. Hopt (RO)	08.1994			vice-chairman, representative Germany (2/3)
Dr. A. Königsrainer (IB)	08.1994			representative Austria (1/1)
Dr. H.H.P.J. Lemkes (LB)	12.1995			representative Netherlands (1/1)
Prof.Dr. J-P. Squifflet (LA)	08.1994			representative Belgium (1/1)
Dr. B.J. Hering (GI)	08.1994	08.1996		representative Germany (3/3)
Prof.Dr. R.G. Bretzel (GI)	09.1996		Dr. B.J. Hering (GI)	representative Germany (3/3)
Dr. J. De Meester (ET)	08.1994			secretary

THORACIC ADVISORY COMMITTEE (ThAC)

Name	From	Until	Successor of	Remarks
Prof.Dr. A. Haverich (HO)	09.1994			chairman, representative Board
Dr. W.J. de Boer (GR)	09.1994			representative Netherlands (1/2)
Prof.Dr. S. Hagl (HB)	09.1994			representative Germany (1/4)
Dr. N. de Jonge (UT)	09.1994			representative Netherlands (2/2)
Dr. G. Laufer (WG)	09.1994			representative Austria (1/2)
Prof.Dr. B. Reichart (ML)	09.1994			representative Germany (2/4)
Prof.Dr. J. Schoevaerds (LA)	09.1994			representative Belgium (1/2)
<i>Prof.Dr. S. Schüler (DR)</i>	<i>09.1994</i>	<i>12.1996</i>		<i>representative Germany (4/4)</i>
Dr. K. Tscheliessnigg (GA)	09.1994			representative Austria (2/2)
Prof.Dr. J. Vanhaecke (LM)	09.1994			vice-chairman, representative Belgium (2/2)
Prof.Dr. Th. Wahlers (HO)	09.1994			representative Germany (3/4)
Prof.Dr. H. Scheld (MN)	12.1996		Prof.Dr. S. Schüler (DR)	representative Germany (4/4)
Dr. M. Loebe (BD)	12.1995			external advisor
Dr. M. Antoine (BR)	06.1995			external advisor
Dr. J. De Meester (ET)	09.1994			secretary

TISSUE TYPING ADVISORY COMMITTEE (TTAC)

Name	From	Until	Successor	Remarks
Prof.Dr. F.H.J. Claas (LB)	09.1995			chairman, representative Board
Dr. G. Bein (LU)	09.1995			representative Germany (1/2)
Dr. M.P. Emonds (LM)	09.1995			representative Belgium (1/1)
Dr. F. Hentges (LX)	09.1995			representative Luxemburg (1/1)
Dr. G. Holzberger (Kassel)	09.1995	12.1996		representative Germany (2/2)
Dr. S. Lems (GR)	09.1995			representative Netherlands (1/1)
Prof.Dr. W. Mayr (WG)	09.1995			representative Austria (1/1)
Dr. I.I.N. Doxiadis (ETRL)	09.1995			secretary

ORGAN PROCUREMENT COMMITTEE (OPC)

Name	From	Until	Successor of	Remarks
Prof.Dr. B. Ringe (GO)	09.1995			chairman, representative Board
Dr. P. Wamser (WG)	03.1996			representative TC's Austria
<i>Prof.Dr. R. Margreiter (IB)</i>	<i>09.1995</i>	<i>03.1996</i>		<i>representative ELAC</i>
Ms. B. Van Haelewijk (BR)	09.1995			representative TC's Belgium
Mr. J. Kranenburg (GR)	09.1995			representative TC's Netherlands
Dr. J. Erhard (ES)	06.1996		Prof.Dr. R. Margreiter (IB)	representative ELAC
Dr. F-P. Nitschke (RO)	09.1995			representative TC's Germany (1/2)
Prof.Dr. J-P. Squifflet (LA)	09.1995			representative PAC
Prof.Dr. Th. Wahlers (HO)	09.1995			representative ThAC
Mr. R. Werner (GO)	09.1995			representative TC's Germany (2/2)
Prof.Dr. G. Kirste (FR)	05.1996		Prof.Dr. B. Buchholz	representative ETKAC
<i>Prof.Dr. B. Buchholz (MN)</i>	<i>09.1995</i>	<i>05.1996</i>		<i>representative ETKAC</i>
Dr. J. de Boer (ET)	09.1995			secretary

COMPUTER SERVICES WORKING GROUP (CSWG)

Name	From	Until	Successor of	Remarks
Prof.Dr. F. Mühlbacher (WG)	09.1995			chairman, representative Board
Prof.Dr. G.A. Verpooten (AN)	09.1995			representative Belgium
Dr. F.A. Zantvoort (BM)	09.1995			vice-chairman, representative Germany
Dr. A. Hoitsma (NY)	09.1995			representative ETKAC + Netherlands
Dr. R. Kramar (OW)	09.1995			representative Austria
Dr. S. Lems (GR)	06.1996			representative TTAC
Dr. H.J. Metselaar (RD)	06.1996			representative ELAC
Dr. W.J. de Boer (GR)	09.1995			representative ThAC
Mr. H. Riedl (DSO)	09.1995			external advisor
Dr. H.H.P.J. Lemkes (LB)	12.1995			representative PAC
Drs. B. Haase-Kromwijk (ET)	09.1995			secretary

ETHICS COMMITTEE

Name	From	Until	Successor of	Remarks
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Prof.Dr. F. Lackner (WG)	10.1996		Prof.Dr. J.J. van Rood	chairman, representative Board
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Prof.Dr. F. Eigler (ES)	12.1996		Prof.Dr. W. Land (ML)	representative Germany
Dr. Th. van Willigenburg				external advisor
Dr. T. Gutmann				external advisor
Drs. B. Haase-Kromwijk (ET)	05.1995			secretary

FINANCIAL COMMITTEE

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Drs. B. Cohen (ET)	05.1995			secretary

2. Eurotransplant: donation, waiting lists and transplants

J. De Meester, MD, Eurotransplant International Foundation, Leiden, The Netherlands

2.1 Donation and donor organ availability in 1996

2.1.1 Cadaveric organ donors from the Eurotransplant area

The statistics on donation only deal with cadaveric donors, of whom at least one single organ has been used in a transplant. Excluded are donors, reported to and/or offered by Eurotransplant, but from whom not a single one organ transplant was realised (1994: N=77; 1995: N=89; 1996: N=76).

The total number of cadaveric donors, used in 1996 (N=1647), was nearly similar to the 1995 number (N=1620) [Table 2.1]. The donation figures of each Eurotransplant country are clearly fluctuating on a plateau. The total number of donors further increased slightly from 1620 in 1995 to 1647 in 1996. It should be noted that liver donation and transplantation still enjoys expansion (N=+109, +13%), and more pancreata were actually used in a clinical transplant (N=+35, +29%) [Table 2.2].

Comparing 1995 and 1996, there was no further increase of the usage of elderly donors (aged over 55 years): 350 in 1995 versus 348 in 1996 [Table 2.3]. In 1996, a higher number of donors with AB0 blood group type 0 was noted (N=742), in comparison with 1995 (N=654), while the AB0 blood group type A and AB showed 5% and 30% decrease respectively.

Table 2.1 Number of cadaveric organ donors, from the Eurotransplant area and used for a transplant, from 1993 to 1996

Country	population (million)	1993	1994	1995	1996	pmp	1995/1996
Austria	8	207	171	172	184	23.0	+ 6.9%
Belgium	10	217	228	196	212	21.2	+ 8.2%
Germany	80	1095	982	1022	1012	12.6	–
Luxemburg	0.4	9	4	2	13	32.5	–
Netherlands	15	221	196	228	226	15.1	–
Total	113.4	1749	1581	1620	1647	14.5	+ 1.7%

Table 2.2 Number of cadaveric organ donors, from the Eurotransplant area and used for a transplant, by organ, from 1993 to 1996

Year	1993	1994	1995	1996
Organ donors total	1749	1581	1620	1647
Kidney	1720	1544	1585	1607
Heart	785	725	746	773
Lung	146	155	144	168
Liver	844	827	825	934
Pancreas	100	97	119	154

Table 2.3 Demographic data on the cadaveric organ donors, from the Eurotransplant area and used for a transplant in 1996

Country	Total	Age (years)			Sex		AB0 Blood group				Cause of death		
		0–15	16–55	≥56	Male	Female	A	AB	B	0	Accident	Natural	Suicide
Austria	184	10	144	30	113	71	78	8	20	78	68	106	10
Belgium	212	24	155	33	129	83	95	5	11	101	101	95	16
Germany	1012	66	710	236	598	414	405	36	119	452	359	608	45
Luxemburg	13	0	12	1	8	5	8	0	2	3	7	5	1
Netherlands	226	15	163	48	124	102	88	9	21	108	81	141	4
Total	1647	115	1184	348	972	675	674	58	173	742	616	955	76
	100%	7%	72%	21%	59%	41%	41%	4%	10%	45%	37%	58%	5%

As shown in Table 2.4, the percentage of multi-organ donation has gradually increased over the last 4 years, from 61% in 1993 to 67% in 1996. Differences between the Eurotransplant countries remained: Austria and Belgium are ahead of Germany and The Netherlands. However, these differences are less pronounced when the denominator donor population is limited to heart-beating cadaveric kidney donors aged from 16 to 55 years (N=1136/1607; 71%): Austria, 77%; Belgium, 84%; Germany, 74%; The Netherlands, 77%.

2.1.2 Cadaveric organ donors from outside the Eurotransplant area

From outside the Eurotransplant area, organs from 224 donors were offered to the duty office of Eurotransplant. Organs from 100 donors were actually accepted and transplanted within the Eurotransplant area.

These organ offers from outside the Eurotransplant area can be divided into two categories:

- The first category consists of donor organs, offered by another European organ exchange organization, in case these organs can not be used within the local organization. Through this international collaboration, 21 donor livers, 15 donor hearts, 12 donor kidneys (3 HIT kidneys) and 4 donor lungs were transplanted in the Eurotransplant area.
- To the second category belong donor organs, which are made available to a Eurotransplant transplant program by an individual center from outside the Eurotransplant area, in the frame work of an educational collaboration.

Organs from a cadaveric donor which can not be used at the foreign center are considered as a local donor on the account of the fellow Eurotransplant transplant program. For these 'local donor' organs, the usual organ allocation procedures of Eurotransplant are applicable.

In total, 50 donor livers, 8 donor hearts, 2 donor kidneys and 4 donor lungs were used in the Eurotransplant area.

2.1.3 Living donor transplants

In 1996, 246 living donors gave their next-of-kin a kidney: +35 (+16%) [Table 2.7]. Twenty-two times, a liver transplant was performed using a liver segment from a living related donor or using the explanted native liver of a patient who got a liver transplant ('domino'). One 'domino' heart transplant was done, using the native healthy heart of a patient who received a heart/lung transplant.

2.2 Active patient waiting list at the end of 1996

Compared with 1995, a major increase on the 'transplantable' waiting list at the end of 1996 was noted for liver (+24%) and pancreas (+32%) [Table 2.5]. A 4-5% rise was present for kidney and heart. Heart/Lung and lung waiting lists were about 10% lower.

Table 2.4 Type of organ donation in 1996

Country	Kidney donor				No-kidney donor	Cadaveric donor	
	Total	Kidney-only	Multi-organ	%MOD		Total	
Austria	178	52	126	71%	6	184	11%
Belgium	203	45	158	78%	9	212	13%
Germany	991	357	634	64%	21	1012	62%
Luxemburg	13	2	11	85%	0	13	<1%
Netherlands	222	79	143	64%	4	226	14%
Total 1996	1607	535	1072	67%	40	1647	100%
Total 1995	1585	585	1000	63%	35	1620	
Total 1994	1544	549	995	64%	37	1581	
Total 1993	1720	671	1049	61%	29	1749	

In the Eurotransplant organization, a *kidney donor* is defined as a donor from whom at least one kidney is transplanted (thus, not only procured). A kidney donor from whom also at least one non-renal organ is used in a transplant, is called a multi-organ donor. When only one or more non-renal organs are used, the donor is classified as a *no-kidney donor*.

2.3 Inflow on the waiting list during 1996

Registrations comprise listing for a first transplant as well as for repeat transplants, irrespective of the urgency code at the time of listing [Table 2.6]. More registrations were noted with regard to liver (+12%), pancreas (+39%) and heart (+9%). The number of registrations for a kidney transplant has decreased over the last 4 years.

2.4 Outflow from the waiting list during 1996

2.4.1 Organ transplants from non-living donors

In 1996, 5216 cadaveric donor organs were used in 5053 transplant operations [Table 2.7]; the lower number of transplant operations is due to multiple organ transplants, e.g. pancreas/kidney, heart/lung, etc. A higher number of cadaveric transplants was noted for pancreas (+35; +29%) and for liver (+88; +9%).

With regard to organ allocation, local and regional transplants were, on average, realized in 63% of heart transplantations and 54% of kidney transplantations. As in 1995, organ exchange was present in 60-65% with regard to liver, heart/lung, lung and pancreas transplants.

Table 2.5 Size of the active Eurotransplant waiting list, by organ, on December 31, 1992 to 1996

December 31,	1992	1993	1994	1995	1996
Organ,					
Kidney	9023	9419	10157	10510	10988
Heart	552	672	723	709	744
Heart/Lung	48	49	71	79	71
Lung	141	203	227	224	204
Liver	253	203	212	263	327
Pancreas	165	134	147	138	182

Data reported concern a snapshot of the waiting lists on the last day of each calendar year; only the patients who are actively awaiting an organ transplant have been counted. Patients who are awaiting a simultaneous multiple organ transplant, are registered on the waiting list of each organ awaited. Therefore, the organ-specific waiting list rather represents the need for organs than the actual number of patients. Patients on the waiting list, having the urgency code 'Not Transplantable', have been excluded.

Table 2.6 Registrations on the Eurotransplant waiting list, by organ, from 1993 to 1996

Year	1993	1994	1995	1996
Organ,				
Kidney	5164	5059	4886	4826
Heart	1368	1218	1208	1319
Heart/Lung	78	93	81	71
Lung	223	223	226	219
Liver	1067	1114	1240	1393
Pancreas	121	123	157	219

Table 2.7 Number of transplants within the Eurotransplant area, by organ, from 1993 to 1996

Year	1993	1994	1995	1996
Cadaveric donors				
Transplanted organs,				
Kidney	3293	2997	3064	3083
Heart	773	696	732	759
Heart/Lung	28	43	42	34
Lung	119	138	125	154
Liver	878	892	944	1032
Pancreas	100	96	119	154
Transplant operations,				
Total	5071	4746	4899	5053
Living donors				
Kidney	126	168	211	246
Heart ('domino')	0	2	0	1
Lung (lung lobe)	0	0	1	0
Liver (segment or 'domino')	14	24	25	22

2.4.2 Mortality on the waiting list

In 1996, 1137 patients died whilst awaiting a, first or repeat, organ transplant, irrespective of their urgency code on the waiting list [Table 2.8]. Considering also the transplant candidates on the waiting list with the urgency code 'NT', the mortality ratio per registration event did not change much in 1996: 14% for heart, 18% for heart/lungs, 15% for lung and 9% for liver.

Table 2.8 Mortality on the Eurotransplant waiting list, by organ, from 1993 to 1996

Year	1993	1994	1995	1996
Organ,				
Kidney	443	496	522	545
Heart	319	316	303	293
Heart/Lung	26	28	28	28
Lung	42	62	70	71
Liver	125	142	167	200
Pancreas	1	0	0	0

3. Kidney: donation, waiting lists and transplants

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3.1 Kidney donors

Table 3.1 gives an overview of the usage and non-usage of the 1695 potential kidney donors who were reported to the central office of Eurotransplant in 1996. No kidneys were retrieved in 28 organ donors. Upon inspection at the time of procurement as well as of transplantation, 191 kidneys were judged to be unsuitable for a transplant due to renal pathology, vascular tree abnormalities, atherosclerosis of the renal arteries and nephrectomy-related damage to vessels and/or ureter.

In summary, from a total of 1607 kidney donors, the kidneys were used. From 20 donors, kidneys were used en-bloc; from 96 donors, one single kidney was transplanted, and both kidneys were used from 1491 donors. A total of 30 non-heart-beating kidney donors were reported, leading to the transplantation of 44 kidneys, of which 9 occurred outside Eurotransplant.

The kidney availability in Eurotransplant per million inhabitants shows a small gradual increase over the last 3 years, from 26.4 in 1994 to 27.3 in 1996. Belgium recovered from last years fall, reaching again 40 donor kidneys per million inhabitants. Austria and Belgium are still far ahead of Germany and The Netherlands, looking at kidney availability per million inhabitants, respectively 44 and 40, versus 24 and 28.

In 1996, the number of donors aged over 55 years showed no increase on 1995 and contributed 21% to the donor population used for kidney transplantation [Table 3.2]. There were more donors having the AB0-0 blood group (1995: N=644; 1996: N=717), while less AB0-AB donors were present (1995: N=81; 1996: N=58). Non-accidental causes of death further increased, a trend already observed over the last decade.

Table 3.1 Usage and non-usage of cadaveric kidney donors, from the Eurotransplant area, between 1993 and 1996

	1993	1994	1995	1996
Total nr. of kidney donors reported	1809	1632	1681	1695
Kidney donors from whom no kidneys were procured	38	32	24	28
Total nr. of potential available kidney donors	1771	1600	1657	1667
Total nr. of potential available donor kidneys [*]	3542	3200	3314	3334
Kidney not available for transplant	30	17	23	36
– donor with a single kidney	9	6	5	11
– permission for only 1 kidney	4	0	6	5
– kidneys en-bloc ^o , pediatric as well as adult donor	17	11	12	20
Total nr. of inspected and/or procured donor kidneys	3512	3183	3291	3298
No transplantation	198	184	246	200
– medical reasons	192	178	240	191
– organizational reasons	3	1	3	3
– no suitable recipients	2	5	3	6
– other reasons	1	0	0	0
Transplantation	3314 ⁺	2999 ⁺⁺	3045 ⁺⁺⁺	3098 ⁺⁺⁺⁺
Effectuated kidney donors	1720	1544	1585	1607

* Conversion: 1 donor = 2 kidneys

^o Kidneys en-bloc, used in a transplant, are counted as 1 kidney used and 1 kidney not available; the transplantation of 2 adult donor kidneys in the same transplant operation is also considered as the transplantation of 1 kidney.

+ 7 donor kidneys transplanted in 1994

++ 8 donor kidneys transplanted in 1995

+++ 3 donor kidneys transplanted in 1996

++++ 6 donor kidneys transplanted in 1997

Table 3.2 Demographic data on cadaveric kidney donors, from the Eurotransplant area and used for a transplant in 1996

Country	Total	Age (years)			Sex		ABO Blood group				Cause of death		
		0-15	16-55	≥56	Male	Female	A	AB	B	0	Accident	Natural	Suicide
Austria	178	10	139	29	110	68	77	8	18	75	67	101	10
Belgium	203	21	150	32	125	78	93	5	10	95	96	91	16
Germany	991	63	693	235	584	407	396	36	118	441	353	593	45
Luxemburg	13	0	12	1	8	5	8	0	2	3	7	5	1
Netherlands	222	15	160	47	122	100	89	9	21	103	81	137	4
Total	1607	109	1154	344	949	658	663	58	169	717	604	927	76
	100%	7%	72%	21%	59%	41%	41%	4%	10%	45%	37%	58%	5%

Table 3.3 Total number of actively waiting patients on the kidney waiting list on December 31, from 1992 to 1996

December 31,	1992	1993	1994	1995	1996
Austria	868	817	794	819	839
Belgium	814	923	952	1007	1016
Germany	6437	6735	7446	7674	8112
Luxemburg	21	13	17	17	16
Netherlands	883	931	948	993	1005
Total	9023	9419	10157	10510	10988

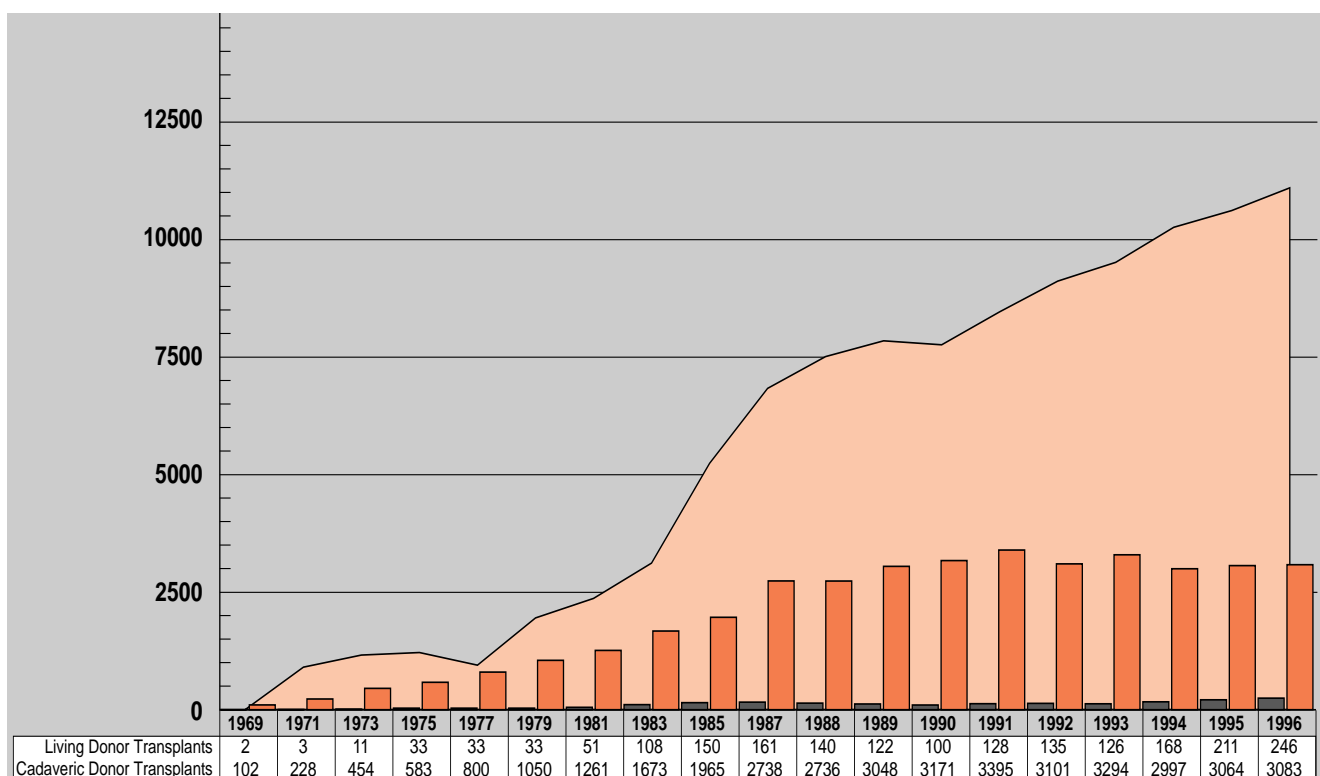


Figure 3.1 Dynamic of the Eurotransplant kidney waiting list and kidney transplants, from 1969 to 1996

Table 3.4 Cadaveric kidney transplant Waiting List: characteristics, per country

Kidney Waiting List December 31, 1996		Austria	Belgium	Germany	Luxemburg	Netherlands	Total 1996	Total 1995	
Total		839	1016	8112	16	1005	10988	10510	
Type of transplant	KI-only	815	993	8038	16	993	10855	10405	
	KI/HE	5	0	2	0	0	7	4	
	KI/LI	2	3	11	0	0	16	12	
	KI/PA	16	20	50	0	12	98	72	
	KI/IS	1	0	11	0	0	12	17	
Kidney-only waiting list		815	993	8038	16	993	10855	100% 10405	
Age (years)	0–15	3	10	71	1	19	104	1%	142
	16–55	588	847	5956	13	720	8124	75%	7967
	56+	224	136	2011	2	254	2627	24%	2296
ABO	A	323	319	3307	4	330	4283	39%	4020
	AB	8	7	187	1	21	224	2%	176
	B	70	94	790	2	94	1050	10%	984
	0	409	571	3751	9	548	5288	49%	5221
	Not yet reported	5	2	3	0	0	10	–	4
%PRA current	0–5%	630	870	6930	12	709	9151	85%	8711
	6–84%	164	103	1017	4	233	1521	14%	1466
	85–100%	14	12	82	0	51	159	1%	184
	Not yet reported	7	8	9	0	0	24	–	44
Sequence	First	645	824	6747	14	717	8947	82%	8546
	Repeat	170	169	1291	2	276	1908	18%	1859
Time waiting (years)	0–1	534	596	4145	11	484	5770	53%	5511
	2–4	178	309	3032	4	397	3920	36%	3632
	5+	103	88	861	1	112	1165	11%	1262
Residency	Living in ET	745	567	8018	16	991	10315	95%	9924
	Living outside ET	70	448	20	0	2	540	5%	481

3.2 Waiting list

The overall kidney waiting list increased from 10510 at the end of 1995 to 10988 at the end of 1996 [Table 3.3, Figure 3.1]. This 4.5% growth is comparable to that noted over the previous 4 years, with the exception of the 11.5% increase over the calendar year 1994.

The new Eurotransplant Kidney(-only) Allocation System, introduced on March 11, 1996, has resulted in a higher transplant rate of long waiting transplant candidates, of pediatric patients, and in a catch-up of the kidney export, noted in 1995 for the non-German countries of Eurotransplant. The impact is noticed in the analysis of the Eurotransplant kidney-only waiting list at December 31, 1996 (N=10855) [Table 3.4].

The increase of the active kidney-only transplant waiting list is exclusively on the account of Germany, due to the decreased kidney-only transplant activity in 1996 (minus 197 transplants). The number of pediatric recipients, less than 16 years old, decreased from 142 to 104 (-27%). In each country, kidney-only transplant candidates having ABO blood group type 0 were the largest group on the waiting list. The distribution of the current HLA-sensitization showed a reduction of the currently 'Highly Immunized' patients ($\geq 85\%$ PRA), from 184 to 159. The ratio between patients awaiting a repeat transplant and patients awaiting their first transplant did not change, the Netherlands having the highest percentage of patients awaiting a re-transplant (28%). At the end of 1996, less patients had a waiting time of more than 5 years (N=1165; 11%), in clear contrast to rising trend noticed over the last years (1995: N=1262/10405 (12%)). With regard to matchability, i.e. eligibility for consideration in an allocation match run, the same portion (5%) had some missing match data: missing ABO blood group, missing PRA%, outdated PRA% screening. The number of non-resident transplant candidates, patients who do not live in one of the 5 Eurotransplant countries, increased by 12%, from 481 to 540.

Table 3.5 Inflow and Outflow on the cadaveric kidney transplant Waiting List in 1996, per country

		Austria	Belgium	Germany	Luxemburg	Netherlands	Total 1996	Total 1995
Registrations	Total	458	486	3170	12	700	4826	4886
	First transplant	374	408	2746	10	574	4112	4148
	Repeat transplant	84	78	424	2	126	714	738
Outflow								
	Transplantation	347	410	1887	14	425	3083	3064
	Mortality on the waiting list	64	41	351	0	89	545	522
	De-listing	42	46	425	3	78	554	490

Table 3.6 Kidney transplants in 1996: characteristics, per country

		Austria	Belgium	Germany	Luxemburg	Netherlands	Total 1996	Total 1995
<i>Cadaveric Donor</i>	<i>Total</i>	347	410	1887	14	425	3083	3064
Type of transplant	KI-only	335	394	1766	14	406	2915	2938
	KI/HE	2	0	7	0	0	9	6
	KI/LI	3	3	11	0	2	19	16
	KI/PA	6	13	95	0	17	131	98
	KI/IS	1	0	8	0	0	9	5
	KI/LU	0	0	0	0	0	0	1
Kidney-only transplants		335	394	1766	14	406	2915	2938
HLA-A,B,DR mismatch								
	0	47	64	478	2	81	672	619
	1	33	40	191	1	51	316	313
	2	100	134	511	2	117	864	822
	3	113	118	439	6	123	799	905
	4	32	36	119	3	34	224	256
	5	9	2	18	0	0	30	17
	6	1	0	10	0	0	11	6
Age (years)	0–15	12	20	107	0	17	156	109
	16–55	238	272	1209	12	295	2026	2084
	56+	85	102	450	2	94	733	745
AB0	A	141	173	722	5	165	1206	1276
	AB	22	10	118	1	14	165	199
	B	42	42	262	4	38	388	1382
	0	130	169	664	4	189	1156	1081
%PRA prior to transplant								
	0–5%	272	364	1537	14	320	2508	2553
	6–84%	58	28	202	0	81	369	360
	85–100%	5	2	27	0	5	39	25
Time waiting (years)	0–1	210	294	1065	12	281	1862	1748
	2–4	60	77	455	2	86	680	914
	5+	65	23	246	0	39	373	276
Sequence	First	266	348	1441	14	353	2422	–
	Repeat	69	46	325	0	53	493	–
Residency	Living in ET	298	343	1766	14	406	2827	2853
	Living outside ET	37	51	0	0	0	88	85
Special kidney transplant groups								
	High Urgency	12	1	51	0	1	65	59
	Non Heart Beating Donor	6	3	0	0	26	35	31
	Acceptable Mismatch (AM)	0	1	0	0	14	15	11
	Highly Immunized Trial (HIT)	6	2	17	0	0	25	19
	En bloc, pediatric donor	3	2	11	0	0	16	14
	En bloc, adult donor	0	1	4	0	0	5	0
<i>Living Donor</i>	<i>Total</i>	18	18	129	0	81	246	211
Type of donor	Living Related	14	14	104	0	75	207	199
	Living Unrelated	4	4	25	0	6	39	12
<i>Total Kidney Transplant Activity</i>		<i>365</i>	<i>428</i>	<i>2016</i>	<i>14</i>	<i>506</i>	<i>3329</i>	<i>3275</i>

3.3 Inflow on the waiting list during 1996

Also in 1996, for the third year in row, there were less registrations for a kidney transplant: N=4886, -1% (1994: -2%; 1995: -3%) [Table 3.5]; but because the inflow always exceeded the outflow, the waiting list continues to increase. Unaltered was the 15% portion of registrations for a repeat kidney transplant.

3.4 Outflow from the waiting list during 1996

3.4.1 Kidney transplants from non-living donors

The number of cadaveric kidney transplants performed in 1996 in the Eurotransplant area amounted to 3083 [Table 3.5, Table 3.6], comparable to 1995 (N=3064).

The characteristics of the kidney-only transplants, performed in the Eurotransplant area (N=2915) [Table 3.6], illustrate the impact of the new Eurotransplant Kidney(-only) Allocation System.

Kidney-only transplantation with '000' HLA-A,B,DR mismatches between donor and recipient was realized in 23% (N=672/2915). Considerably more pediatric patients received a transplant in 1996 (N=156), almost +50% on 1995 (N=109). Thanks to the higher number of ABO-0 donors, more ABO-0 kidney-only transplants were noted; as such, also the usage of ABO-0 kidneys for recipients with other blood groups slightly increased, 9.2% versus the usual 8% noted over the last 4 years.

More long-waiting patients, having a waiting time of 5 years or more, were transplanted: 1995, N= 276 versus 1996, N=373, an increase of 35%.

Thirty-nine currently 'Highly Immunized' patients were transplanted, about 10% of the 'HI' waiting list. The regular Eurotransplant kidney allocation program succeeded in the transplantation of 25 'HI' patients (64%), while the AM and HIT program contributed 2 and 12 transplants respectively.

The total 1996 activity of the AM program, however, amounted to 15 transplants while 25 transplants in Eurotransplant were realized through the HIT protocol. Additionally, six kidneys were transplanted in HIT-patients outside Eurotransplant (Switzerland, N=4; Czech Republic, N=1; Slovak Republic, N=1).

Sixteen kidney-en-bloc transplants from pediatric donors were done (1995: N=14). From 5 adult donors, both kidneys were used for the transplantation of 1 patient, in order to transplant sufficient functional renal mass.

Although there was a major adjustment of the national kidney exchange balances, on average, a similar percentage of donor kidneys could be transplanted locally or regionally: 55% in 1996 (N=1606/2915) versus 56% in 1995 (N=1662/2938).

3.4.2 Mortality on the waiting list

A total number of 545 patients were reported to have died in 1996 whilst registered on the waiting list for kidney transplantation [Table 3.5]. The mortality ratio per registration event during the calendar year 1996 attained 2.9%, comparable to 1995.

3.4.3 De-listing

A portion of patients (N=554), similar to the patients having died on the kidney transplant waiting list, was de-listed in 1996 [Table 3.6]; reasons were, poor transplant candidate, living donor kidney transplant, patient was no longer interested, etc.

3.5 Living donor kidney transplants

The number of living donor kidney transplants further increased, from 211 in 1995 to 246 in 1996, now achieving 6% of the total Eurotransplant kidney transplant activity.

The living unrelated donor kidney transplants, in particular, were responsible for the 1996 increase: from 12 in 1995 to 39 in 1996. In this group spousal transplants accounted for 90%.

With regard to the living related kidney transplants (N=207), mothers donated a kidney in 79 cases, siblings in 65, fathers in 53 and other related family members in 10 cases.

A survey of the living donor kidney transplant activity, per country and per center, is shown in the Addenda.

3.6 Kidney-only ‘High Urgency’ program

Transplant candidates awaiting a kidney-only transplant, being in a very poor physical and/or psychological condition, are eligible for the urgency code ‘High Urgency’.

In 1996, 68 patients were newly registered on the ‘HU’ kidney-only waiting list [Table 3.7]. Lack of dialysis access and dialysis-related complications were reported as the principle reason for being ‘HU’.

A kidney transplant was realized in 65 cases (N=65/(68+9); 84%). Only 4 ‘HU’ patients were transplanted with a local donor kidney, which emphasizes the need of a central donor kidney pool. Due to an hierarchical upgrade in the new ET kidney-only allocation system, practically all ‘HU’ kidney transplants were realized within 3 days (median of 17 days in 1995 versus median of 1 day in 1996). In March 1997, this upgrade was to some extent down-regulated in the ET kidney allocation system.

Table 3.7 Dynamics on the kidney ‘High Urgency’ waiting list, from 1990 to 1996

Year	On waiting list on Jan 1	Newly registered	Transplanted	Died on HU waiting list	Withdrawn from HU waiting list	On waiting list on Dec 31
1990	5	88	59	2	20	12
1991	12	58	61	0	4	5
1992	5	52	42	0	9	6
1993	6	55	42	0	12	7
1994	7	62	49	0	10	10
1995	10	68	59	0	10	9
1996	9	68	65	0	12	0

4. Thoracic Organs: donation, waiting lists and transplants

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4.1 Thoracic organ donors

4.1.1 Heart donors

Table 4.1 gives an overview of the usage and non-usage of the 1052 potential heart donors who were reported to the central office of Eurotransplant in 1996. Twelve percent of donor hearts were discarded on inspection during procurement. In summary, hearts of 773 donors were used for a transplant; from 34 donors, the heart was used in a heart/lung en bloc transplant. The last 4 years, the number of heart donors used has clearly reached a plateau in the Eurotransplant area. Hearts from donors aged over 55 years were less often used in 1996 (N=38; 5%) than in 1995 (N=43; 6%) [Table 4.2].

4.1.2 Lung donors

Table 4.3 gives an overview of the usage and non-usage of the 386 potential lung donors who were reported to the central office of Eurotransplant in 1996. Upon inspection, 17% donor lungs were found to be unsuitable for transplantation. Lungs from 168 donors were ultimately used in a transplant; only in 18% of the heart donors, the lungs also were grafted. From 34 donors, lungs were used as a heart/lung bloc. Lungs from 92 donors were used for a double lung transplant, while, from 27 donors, only one lung was used. From 15 donors, the 2 lungs were separately used in two recipients. Lung donors, aged over 55 years, were rarely used for a lung transplant [Table 4.4].

Table 4.1 Usage and non-usage of cadaveric heart donors, from the Eurotransplant area, between 1993 and 1996

	1993	1994	1995	1996
Total nr. of heart donors reported	1058	1012	1034	1052
No donor heart procurement:	247	216	210	176
– no time for selection / offer withdrawn	16	11	5	8
– medical reasons	200	149	153	125
– no suitable recipient due to donor size	16	23	15	14
– no suitable recipient due to donor blood group	1	4	4	1
– center out of capacity / recipient unfit	7	2	3	5
– transport problems / other organizational reasons	5	8	11	8
– cardiovascular instability of donor	8	19	19	15
Donor heart inspection/procurement:	811	796	824	876
No transplantation	26	71	78	103
– organ unsuitable for transplantation	26	69	76	102
– no back-up recipient (positive cross-match)	0	2	2	1
Transplantation	785*	725**	746	773
– donor for heart/lung	32	43**	40	34
– donor for heart	753*	682**	706	739

* 1 heart transplanted in 1994

** 1 heart and 1 heart/lung transplanted in 1995

Table 4.2 Demographic data on cadaveric heart donors, from the Eurotransplant area and used in a transplant in 1996

Country	Total	Age (years)			Sex		ABO Blood group				Cause of death		
		0–15	16–55	≥56	Male	Female	A	AB	B	0	Accident	Natural	Suicide
Austria	95	5	88	2	64	31	39	3	14	39	45	45	5
Belgium	108	12	92	4	70	38	51	0	6	51	52	48	8
Germany	478	36	414	28	283	195	181	17	60	220	218	225	35
Luxemburg	10	0	10	0	7	3	6	0	2	2	6	4	0
Netherlands	82	6	72	4	44	38	29	7	7	39	37	41	4
Total	773	59	676	38	468	305	306	27	89	351	358	363	52
	100%	8%	87%	5%	61%	39%	40%	3%	11%	45%	46%	47%	7%

Table 4.3 Usage and non-usage of cadaveric lung donors, from the Eurotransplant area, between 1993 and 1996

	1993	1994	1995	1996
Total nr. of lung donors reported	369	374	319	386
No donor lung procurement:	216	187	159	183
– no time for selection / offer withdrawn	12	9	3	4
– medical reasons	173	141	120	132
– no suitable recipient due to donor size	4	12	5	4
– no suitable recipient due to donor blood group	3	0	3	0
– center out of capacity / recipient unfit	16	10	12	28
– transport problems / other organizational reasons	7	12	10	9
– cardiovascular instability of donor	1	3	6	6
Donor lung inspection/procurement: (either 1 lung or 2 lungs per donor)	153	187	160	203
No transplantation	7	32	16	35
– organ unsuitable for transplantation	7	32	16	34
– no back-up recipient	0	0	0	1
Transplantation	146	155*	144	168
– donor for heart/lung	32	43*	40	34
– donor for double lungs	61	65	72	92
– donor for 1 single lung	42	31*	26	27
– donor for 2 single lungs	11	16	6	15

* 1 heart/lung and 1 single lung transplanted in 1995

Table 4.4 Demographic data on cadaveric lung donors, from the Eurotransplant and used for a transplant in 1996

Country	Total	Age (years)			Sex		ABO Blood group				Cause of death		
		0–15	16–55	≥56	Male	Female	A	AB	B	0	Accident	Natural	Suicide
Austria	33	1	30	2	20	13	15	2	4	12	14	17	2
Belgium	33	4	29	0	23	10	14	0	2	17	17	13	3
Germany	76	7	65	4	48	28	28	1	9	38	32	35	9
Luxemburg	1	0	1	0	0	1	1	0	0	0	0	1	0
Netherlands	25	0	25	0	10	15	10	0	4	11	9	15	1
Total	168	12	150	6	101	67	68	3	19	78	72	81	15
	100%	7%	89%	4%	60%	40%	41%	2%	11%	46%	43%	48%	9%

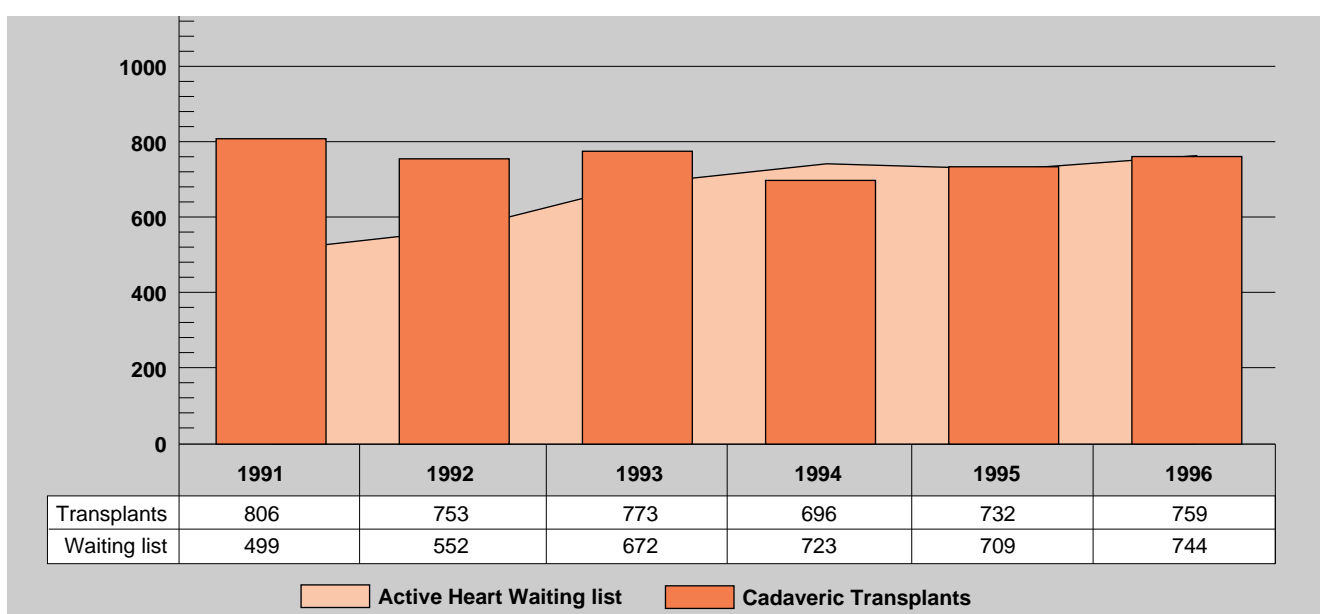


Figure 4.1 Dynamic of the Eurotransplant heart waiting list and heart transplants, from 1991 to 1996

4.2 Waiting lists

The number of actively waiting heart transplant candidates went up by 5%, in particular on the account of Austria and Germany [Tables 4.5a,b,c; Tables 4.6a,b,c; Figures 4.1-4.3]. A lower number of heart/lung transplant candidates was noted for Belgium at the end of 1996, decreasing from 20 to 11. The Eurotransplant lung transplant waiting list has levelled off at the end of 1996.

Table 4.5a Cadaveric heart transplant Waiting List: characteristics, per country

Heart Waiting List December 31, 1996		Austria	Belgium	Germany	Netherlands	Total 1996	%	Total 1995
Number		145	37	536	26	744	100%	709
Type of transplant	HE-only	140	37	534	26	737	99%	705
	HE/KI	5	0	2	0	7	1%	4
Age (years)	0-5	0	0	5	0	5	1%	9
	6-15	1	0	1	0	2	-	7
	16-55	76	18	288	24	406	55%	401
	56+	68	19	242	2	331	44%	292
AB0	A	65	14	262	14	355	48%	345
	AB	2	3	19	0	24	3%	18
	B	15	5	58	5	83	11%	66
	0	63	15	197	7	282	38%	280
Sequene	First	143	35	531	26	735	99%	686
	Repeat	2	2	5	0	9	1%	13
Time waiting (months)	0-5m	60	25	287	19	391	52%	390
	6-11m	34	8	145	4	191	26%	181
	12-23m	41	3	94	3	141	19%	124
	24m+	10	1	10	0	21	3%	14
Residency	Living in ET	144	35	533	26	738	99%	
	Living outside ET	1	2	3	0	6	1%	

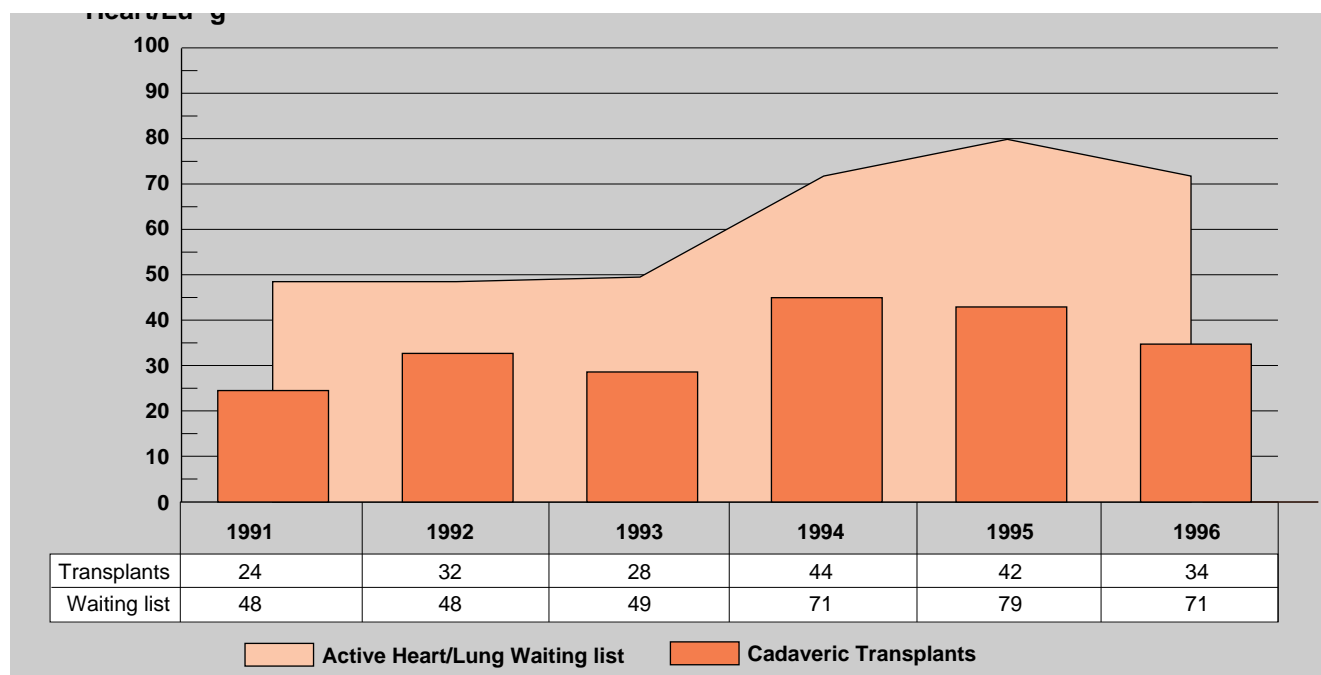


Figure 4.2 Dynamic of the Eurotransplant heart/lung waiting list and heart/lung transplants, from 1991 to 1996

Tables 4.5 show the characteristics of the active thoracic organ waiting lists as per December 31, 1996. Austria has an extra-ordinary high number of patients on the heart transplant waiting list (18 pmp), in contrast to the other Eurotransplant countries (Belgium, 3.7 pmp; Germany, 6.7 pmp and the Netherlands, 1.7 pmp). Mainly the ABO blood group type A patients accumulate on the heart waiting list (48%). Of all the organ waiting lists, the heart waiting list includes the highest percentage of recipients aged over 55 years (44%; N=331). Half of the patients have a waiting time of 6 months or more. ABO blood group type O patients were most frequent on the heart/lung waiting list. Forty percent was already waiting for one year or more.

Table 4.5b Cadaveric heart/lung transplant Waiting List: characteristics, per country

Heart/Lung Waiting List December 31, 1996		Austria	Belgium	Germany	Netherlands	Total 1996	%	Total 1995
Number		2	11	57	1	71	100%	79
Type of transplant	HE/LU	2	11	56	1	70	99%	79
	HE/LU/LI	0	0	1	0	1	1%	–
Age (years)	6–15	0	1	5	0	6	8%	8
	16–55	1	9	50	1	61	86%	70
	56+	1	1	2	0	4	6%	1
ABO	A	0	4	19	1	24	34%	25
	AB	0	0	1	0	1	1%	0
	B	1	2	9	0	12	17%	14
	O	1	5	28	0	34	48%	40
Sequence	First	2	11	56	1	70	99%	78
	Repeat	0	0	1	0	1	1%	1
Time waiting (years)	0+	1	8	33	0	42	59%	55
	1+	1	1	11	1	14	20%	15
	2+	0	2	13	0	15	21%	9
Residency	Living in ET	2	11	55	1	69	97%	
	Living outside ET	0	0	2	0	2	3%	

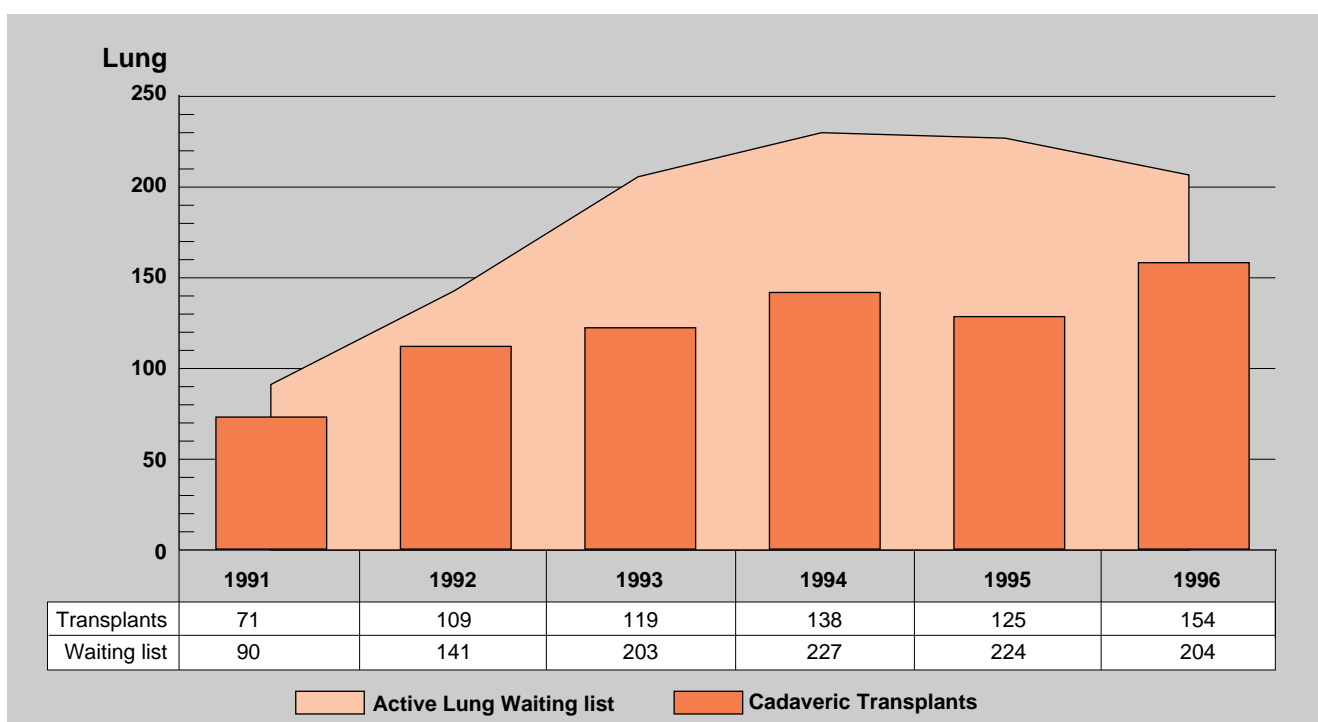


Figure 4.3 Dynamic of the Eurotransplant lung waiting list and lung transplants, from 1991 to 1996

The majority of patients on the lung waiting list (N=157; 77%) was awaiting a double lung transplant. Dual single lung allocation is often hampered by absence of suitable patients, because of small single lung waiting lists. Waiting times of one year or more were already noted in 47% of lung transplant candidates.

Table 4.5c Cadaveric lung transplant Waiting List: characteristics, per country

Lung Waiting List December 31, 1996		Austria	Belgium	Germany	Netherlands	Total 1996	%	Total 1995
Number		15	21	119	49	204	100%	224
Type of transplant	Double	10	13	93	41	157	77%	
	Double /Liver	0	0	1	0	1	–	
	Single left	0	4	5	0	9	4%	
	Single right	1	2	9	8	20	10%	
	Either single	4	2	12	0	18	9%	
Age (years)	6–15	1	0	2	0	3	1%	2
	16–55	13	17	104	42	176	87%	191
	56+	1	4	13	7	25	12%	31
ABO	A	6	11	54	24	95	47%	104
	AB	0	0	4	1	5	2%	11
	B	1	2	14	3	20	10%	21
	0	8	8	47	21	84	41%	88
Sequence	First	15	20	113	49	197	97%	217
	Repeat	0	1	6	0	7	3%	7
Time waiting (years)	0+	9	17	53	28	107	53%	142
	1+	3	3	33	21	60	29%	50
	2+	3	1	33	0	37	18%	32
Residency	Living in ET	15	20	118	49	202	99%	
	Living outside ET	0	1	1	0	2	1%	

The transplant candidates on the thoracic organ waiting lists are assigned a medical urgency code, used for the prioritization in the allocation procedure.

Code HU: High Urgency

Eligible are only patients having a heart graft failure within 3 days after the previous transplant.

This code does not exist with regard to lung transplant candidates.

In case a patient is on the 'High Urgency' list, the offer and exchange of a donor heart (and lungs) is mandatory.

Code SU: Special Urgency

Eligible are patients, being in a critical medical condition, however not eligible for HU.

There is no mandatory offer, but, in case a donor heart, heart/lung and/or lung is made available to the pool of Eurotransplant, these SU patients have priority over the elective transplantable patients.

Code T: Transplantable

Elective transplantable patients with end-stage heart and/or end-stage lung disease.

Code NT: Not Transplantable

This code is assigned whenever a patient has a temporary contra-indication for transplantation.

Temporary is defined as lasting maximum 6 months.

4.3 Inflow on the thoracic waiting list during 1996

The number of registrations for a first heart transplant rose again, +10% [Table 4.6a]; this increase was exclusively on the account of Germany. Belgium is responsible for the decrease in the registration of heart/lung transplant candidates (minus 10) [Table 4.6b]. The number of new lung transplant candidates listed in 1996 was similar to the 1995 figure [Table 4.6c]. Listing for a redo thoracic transplant remains low.

4.4 Outflow from the waiting list during 1996

4.4.1 Thoracic organ transplants from non-living donors

Heart transplants rose 4% on 1995, parallel to a higher donor report in the Eurotransplant area [Table 4.6a]. The usage of AB0-0 donor hearts for non-0 recipients amounted to 18%. Sixty percent of the recipients had their transplant within 6 months after listing [Table 4.7a]. Heart transplantation of small infants is done only in Germany (N=22).

The majority of the recipients of a heart/lung transplant (N=21; 62%) had a waiting time of less than 6 months [Table 4.7b].

In comparison with the waiting list ratio between single (23%) and double lung transplants (77%), slightly more single lung transplants (36%) were done than double lung transplants (64%) [Tables 4.5c and 4.7c]. Similar to the heart/lung transplant recipients, the majority of the lung transplant recipients had their lung transplant within 6 months after listing (N=109; 71%).

With regard to donor heart allocation, local and regional heart transplants were realized in 63%. Organ exchange was more frequent with regard to heart/lung, double lung and single lung transplants, 47%, 59% and 74% respectively.

Table 4.6a Inflow and Outflow on the cadaveric heart transplant Waiting List in 1996, per country

Heart Waiting List		Austria	Belgium	Germany	Netherlands	Total 1996	Total 1995
Registrations	Total	178	130	941	70	1319	1208
	First transplant	170	117	923	69	1279	1172
	Repeat transplant	8	13	18	1	40	36
Outflow	Transplantation	104	107	488	60	759	732
	Mortality on the waiting list	30	17	228	18	293	303
	De-listing	18	8	169	5	200	168

Table 4.6b Inflow and Outflow on the cadaveric heart/lung transplant Waiting List in 1996, per country

Heart/Lung Waiting List		Austria	Belgium	Germany	Netherlands	Total 1996	Total 1995
Registrations	Total	1	12	57	1	71	81
	First transplant	1	12	56	1	70	81
	Repeat transplant	0	0	1	0	1	0
Outflow	Transplantation	1	10	22	1	34	42
	Mortality on the waiting list	0	7	21	0	28	28
	De-listing	0	2	3	0	5	4

Table 4.6c Inflow and Outflow on the cadaveric lung transplant Waiting List in 1996, per country

Lung Waiting List		Austria	Belgium	Germany	Netherlands	Total 1996	Total 1995
Registrations	Total	27	36	118	38	219	226
	First transplant	26	34	114	37	211	219
	Repeat transplant	1	2	4	1	8	7
Outflow	Transplantation	29	19	86	20	154	125
	Mortality on the waiting list	15	5	38	13	71	70
	De-listing	0	0	11	3	14	18

4.4.2 Mortality on the waiting list

In 1996, the number of patients dying on the waiting list whilst awaiting their thoracic organ transplant was similar to 1995 [Table 4.6]. The mortality ratio, per registration event, on the thoracic waiting list remained, also in 1996, the highest of all organs (>10%).

4.4.3 De-listing

Two hundred patients were removed from the heart transplant waiting list, because of other reasons than death or transplantation [Table 4.6a]: no longer a suitable transplant candidate, too good for a transplantation, other therapeutic approach, etc.

Table 4.7a Heart transplants in 1996: characteristics, per country

		Austria	Belgium	Germany	Netherlands	Total	%
Cadaveric Donor Heart Transplants		104	107	488	60	759	100%
Type of transplant	HE-only	102	107	481	60	750	99%
	HE/KI	2	0	7	0	9	1%
Urgency code	HU	5	3	3	1	12	2%
	SU	14	10	82	10	116	15%
	Transplantable	85	94	403	49	631	83%
Age (years)	0-5	0	0	22	0	22	3%
	6-15	3	2	20	1	26	3%
	16-55	39	50	245	37	371	49%
	56+	62	55	201	22	340	45%
AB0	A	42	58	209	23	332	44%
	AB	3	3	33	3	42	5%
	B	18	9	69	8	104	14%
	0	41	37	177	26	281	37%
Sequence	First	92	97	478	58	725	96%
	Repeat	12	10	10	2	34	4%
Time waiting (months)	0-5m	66	70	286	33	455	61%
	6-11m	22	30	88	15	155	20%
	12-23m	13	7	99	12	131	17%
	24m+	3	0	15	0	18	2%
Residency	Living in ET	104	97	485	60	746	98%
	Living outside ET	0	10	3	0	13	2%
Living Donor Heart Transplants		0	1	0	0	1	
Total Heart Transplant Activity		104	108	488	60	760	

Table 4.7b Heart/Lung transplants in 1996: characteristics, per country

		Austria	Belgium	Germany	Netherlands	Total	%
Heart/Lung Transplants		1	10	22	1	34	100%
Urgency code	SU	0	2	2	0	4	12%
	Transplantable	1	8	20	1	30	88%
Age (years)	0-15	0	1	3	0	4	12%
	16-55	1	9	19	1	30	88%
AB0	A	0	5	12	0	17	50%
	AB	0	0	2	0	2	6%
	B	0	1	3	0	4	12%
	0	1	4	5	1	11	32%
Sequence	First	1	10	22	1	34	100%
	Repeat	0	0	0	0	0	0%
Time waiting (years)	0+	0	9	22	1	32	94%
	1+	1	1	0	0	2	6%
Residency	Living in ET	1	9	21	1	32	94%
	Living outside ET	0	1	1	0	2	6%

4.4.4 Thoracic organ transplants from living donors

One 'domino' heart transplant was performed, the organ being offered by the central office of the organ exchange organisation of United Kingdom and Ireland (UKTSSA).

4.5 Thoracic 'High Urgency' program

The number of 'High Urgency' requests for a heart transplant in 1996 amounted to 20 [Table 4.8]. Twelve 'HU' hearts transplants were realized; six died shortly after being listed as 'HU'. Three of the 5 'HU' lung patients got a first lung transplant; on July 1, 1996, the 'HU' urgency code was cancelled because of poor results of early acute lung re-grafting.

Table 4.7c Lung transplants in 1996: characteristics, per country

		Austria	Belgium	Germany	Netherlands	Total	%
Lung Transplants		29	19	86	20	154	100%
Type of transplant	Double	17	5	59	17	98	64%
	Single left	9	11	12	1	33	21%
	Single right	3	3	15	2	23	15%
Urgency code	HU	0	0	5	0	5	3%
	SU	3	3	11	0	17	11%
	Transplantable	26	16	70	20	132	86%
Age (years)	6-15	0	1	4	1	6	4%
	16-55	22	7	66	14	109	71%
	56+	7	11	16	5	39	25%
AB0	A	8	7	42	8	65	43%
	AB	4	1	6	2	13	8%
	B	3	2	13	2	20	13%
	0	14	9	25	8	56	36%
Sequence	First	28	19	80	19	146	95%
	Repeat	1	0	6	1	8	5%
Time waiting (years)	0+	28	19	72	20	139	91%
	1+	1	0	4	0	5	3%
	2+	0	0	10	0	10	6%
Residency	Living in ET	25	19	86	18	148	96%
	Living outside ET	4	0	0	2	6	4%

Table 4.8 Dynamics on the 'High Urgency' thoracic organ waiting lists, from 1992 to 1996

		Requests	Transplants	Deaths on HU waiting list	Withdrawals from HU waiting list
Heart	1992	25	18	2	5
	1993	15	7	2	6
	1994	8	5	2	1
	1995	16	11	2	3
	1996	20	12	6	2
Heart/Lung	1992	3	0	2	1
	1993	1	0	1	0
	1994	1	0	0	1
	1995	1	0	1	0
	1996	0	0	0	0
Lung	1992	8	5	1	2
	1993	6	4	1	1
	1994	0	0	0	0
	1995	3	3	0	0
	1996	5	5	0	0

4.6 Thoracic ‘Special Urgency’ program

In July 1996, a heart give-back (‘pay-back’) procedure was installed in case a ‘Special Urgency’ patient got a non-local donor heart; the motivation was to keep the average waiting time till the transplantation of a ‘SU’ patient within 1 week. The restriction of the number of ‘SU’ transplants in relation to the center’s transplant volume was maintained.

Transplants were realized in 74% of the heart ‘SU’ requests, 33% of the heart/lung ‘SU’ requests, and in 51% of the lung ‘SU’ requests [Table 4.9]. The ‘SU’ heart transplants did not surpass the threshold of 15% of the total heart transplant activity of Eurotransplant [Table 4.7a]. There was a higher turnover on the ‘SU’ heart waiting list. Waiting time for a ‘SU’ heart/lung transplants varied from 2 weeks to 4 months. Death ratio on the ‘SU’ lung waiting list was high.

Table 4.9 Dynamics on the ‘Special Urgency’ thoracic organ waiting lists, from 1992 to 1996

		On waiting list on January 1	Requests	Transplants	Deaths on SU waiting list	Withdrawals from SU waiting list	On waiting list on December 31
Heart	1992	0	103	76	17	8	2
	1993	2	125	104	12	10	1
	1994	1	119	97	10	10	3
	1995	3	144	107	15	14	11
	1996	11	145	116	12	26	2
Heart/Lung	1992	0	6	3	3	0	0
	1993	0	7	4	1	1	1
	1994	1	6	4	2	1	0
	1995	0	14	8	3	2	1
	1996	1	11	4	2	2	4
Lung	1992	0	13	9	2	1	1
	1993	1	24	17	4	3	1
	1994	1	18	14	1	3	1
	1995	1	28	19	6	3	1
	1996	1	34	18	8	6	3

5. Liver: donation, waiting lists and transplants

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5.1 Liver donors

Table 5.1 gives an overview of the usage and non-usage of the 1223 potential liver donors, from the Eurotransplant region, who were reported to the central office of Eurotransplant in 1996. Significantly less donor livers were declined upon offer; however, at the time of procurement, the discard was much higher, increasing from 117 donor livers (12%) in 1995 to 192 (17%) in 1996. The total number of Eurotransplant donors of whom the liver was used in a transplant (N=934) showed a 13% increase on 1995. Thirty-one donor livers were splitted for a transplant in two different recipients.

The number of elderly liver donors, aged over 55 years (N=104) more than doubled that of the elderly heart donors (N=38) [Table 5.2]. This illustrates the broader suitability of elderly donor livers for transplantation. The use of liver and heart donors showed a striking difference with respect to the donors who died from a natural cause, 486 and 363 respectively. In general, simultaneous heart and liver donation in 1996 was present in 65% of the liver donors used and in 78% of the heart donors, comparable to 1995.

Table 5.1 Usage and non-usage of cadaveric donor livers, from the Eurotransplant area, between 1993 and 1996

	1993	1994	1995	1996
Total nr. of liver donors reported	1160	1119	1189	1223
No donor liver procurement:	298	217	246	97
– no time for selection / offer withdrawn	7	9	3	9
– medical reasons	275	185	222	63
– no suitable recipient due to donor size	5	2	4	4
– no suitable recipient due to donor blood group	1	6	2	2
– center out of capacity / recipient unfit	2	2	1	5
– transport problems / other organizational reasons	3	2	2	1
– cardiovascular instability of donor	5	11	12	13
Donor liver inspection/procurement:	862	902	943	1126
No transplantation	18	75	118	192
– organ unsuitable for transplantation	18	74	117	192
– no back-up recipient (positive cross-match)	0	1	1	0
Transplantation	844*	827**	825	934
– split-liver donors	5	17	14	31
– liver donors	839*	810**	811	903

* 1 liver transplanted in 1994

** 1 liver transplanted in 1995

Table 5.2 Demographic data on cadaveric liver donors, from the Eurotransplant area and used for a transplant in 1996

Country	Total	Age (years)			Sex		ABO Blood group				Cause of death		
		0–15	16–55	≥56	Male	Female	A	AB	B	0	Accident	Natural	Suicide
Austria	113	9	95	9	71	42	47	6	14	46	46	61	6
Belgium	145	20	112	13	90	55	59	3	8	75	74	60	7
Germany	535	44	427	64	320	215	207	16	64	248	222	281	32
Luxemburg	7	0	7	0	3	4	4	0	2	1	3	4	0
Netherlands	134	13	103	18	67	67	53	4	13	64	50	80	4
Total	934	86	744	104	551	383	370	29	101	434	395	486	53
	100%	9%	80%	11%	59%	41%	40%	3%	11%	46%	42%	52%	6%

5.2 Waiting list

The number of patients, actively awaiting a liver transplant, showed a 22% increase, comparing December 31, 1995 and 1996 [Table 5.3, Figure 5.1].

The active liver waiting list as per December 31, 1996 (N=327) showed the following characteristics [Table 5.3]. The percentage of pediatric transplant candidates (<16 years of age) on the liver waiting list (14%) was the highest of all organ transplant waiting lists. Nineteen patients were awaiting a repeat liver transplant. Half of patients on the waiting list had a waiting time of 3 months or less. The number of non-residents, liver transplant candidates who do not live in one of the 5 Eurotransplant countries, was 18 (6%); Belgium accounted for 14 of these non-resident patients.

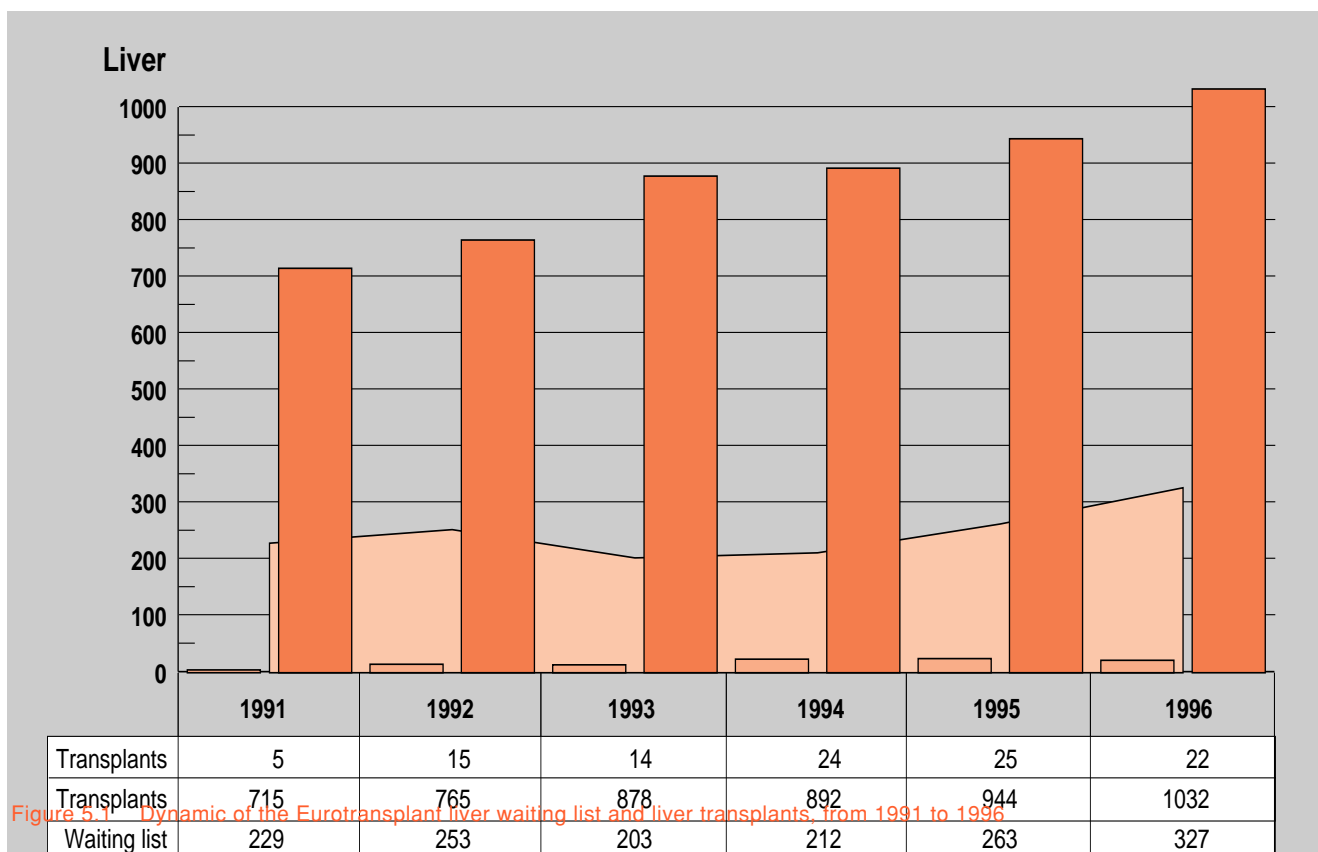


Table 5.3 Cadaveric liver transplant Waiting List: characteristics, per country

		Active Liver Waiting list				Cadaveric donor Transplants		Living donor Transplants	
Liver Waiting List December 31, 1996		Austria	Belgium	Germany	Netherlands	Total 1996	%	Total 1995	
Number		33	55	209	30	327	100%	269	
Type of transplant	LI-only	31	52	197	30	310	95%	256	
	LI/KI	2	3	11	0	16	5%	12	
	LI/LU	0	0	1	0	1	–	1	
Age (years)	0–5	3	10	16	6	35	11%	22	
	6–15	0	2	8	1	11	3%	14	
	16–55	22	27	139	19	207	63%	167	
	56+	8	16	46	4	74	23%	66	
AB0	A	6	18	87	6	117	36%	67	
	AB	5	1	7	0	13	4%	8	
	B	5	10	31	1	47	14%	41	
	0	17	26	84	23	150	46%	153	
Sequence	First	32	51	197	28	308	94%	262	
	Repeat	1	4	12	2	19	6%	7	
Time waiting (months)	0–2m	21	36	110	15	182	56%	131	
	3–5m	2	6	51	4	63	19%	63	
	6–11m	8	8	30	9	55	16%	51	
	12m+	2	5	18	2	27	9%	24	
Residency	Living in ET	32	41	206	30	309	94%	–	
	Living outside ET	1	14	3	0	18	6%	–	

The liver transplant candidates on the waiting list are assigned a medical urgency code, used for prioritization in the allocation procedure.

Code HU: High Urgency

Eligible are patients with a de novo hepatic failure, ranging from subacute to fulminant onset, patients with a rapidly progressive Wilson's disease and Budd-Chiari syndrome, patients in need of a repeat transplant due to an irreversible life-threatening graft failure(*), patients with severe hepatic trauma, and anhepatic patients.
Liver tumours are no indication for a HU request.

In case a patient is on the 'High Urgency' waiting list, the offering and exchange of a donor liver is mandatory.

Code T: Transplantable

Elective transplantable patients with end-stage liver disease.

Code NT: Not Transplantable

This code is assigned whenever the patient has a temporary contra-indication for a liver transplant.

(* Please note that as of July 1, 1997, liver graft failure should occur within 14 days after the previous liver transplant.

5.3 Inflow on the liver waiting list during 1996

The number of registrations for a first transplant in 1996 [N=1196] showed a 7% increase on 1995 [N=1121]. In contrast to the decrease seen in 1995, registrations for a repeat liver transplant rose by 66%, from 119 to 197 [Table 5.4].

5.4 Outflow from the liver waiting list during 1996

5.4.1 Liver transplants from non-living donors

The higher number of liver donors in 1996 as well as the successful collaboration of Austrian and German liver transplant programs with centers outside Eurotransplant pushed the number of liver transplants further up: N=1032, +9% on 1995 (N=944). As in 1995, Hamburg, Germany, played a leading role in the realisation of cadaveric split-liver transplants (45%).

The contribution of split-liver transplants amounted to 6% of the total liver transplant activity [Table 5.5]. The majority of the pediatric liver transplants was under six years of age. Seventy-five AB0-0 donor livers were used for the transplantation of non-0 liver patients (16%); nine AB0-incompatible liver transplants were done. Repeat liver transplants comprised 14% of the total number of liver transplants. Even when the 'HU' liver transplants are excluded from the calculation of the waiting time till transplantation, still 60% of the recipients got a liver transplant within 3 months after listing. The transplantation of non-residents accounted for 9% of the liver transplant activity.

5.4.2 Mortality on the waiting list

The number of patients dying on the waiting list in 1996 whilst awaiting their liver transplant amounted to 200 [Table 5.4]. The mortality ratio on the liver waiting list, per registration event, however, remained around 10%.

5.4.3 De-listing

In 1996, 111 patients were de-listed, because of other reasons than cadaveric transplantation or death [Table 5.4]: poor transplant candidate, living donor liver transplant, recovery of liver function, etc.

Table 5.4 Inflow and Outflow on the cadaveric liver transplant Waiting List in 1996, per country

Liver Waiting List		Austria	Belgium	Germany	Netherlands	Total 1996	Total 1995
Registrations	Total	174	193	921	105	1393	1240
	First transplant	158	167	780	91	1196	1121
	Repeat transplant	16	26	141	14	197	119
Outflow	Transplantation	132	135	689	76	1032	944
	Mortality on the waiting list	22	25	137	16	200	167
	De-listing	16	8	65	22	111	92

5.5 Living donor liver transplants

Brussels St.Luc (Belgium) and Hamburg (Germany) continued their program to perform living-(un)related segmental liver transplants. One 'domino' liver transplantation was performed; the native liver of a patient who himself underwent a liver transplant and suffered from a familial amyloid polyneuropathy [FAP], was re-used.

Table 5.5 Liver transplants in 1996: characteristics, per country

		Austria	Belgium	Germany	Netherlands	Total	%
Cadaveric Donor Liver Transplants		132	135	689	76	1032	100%
Type of transplant	LI whole	127	123	625	74	949	92%
	LI split	2	9	53	0	64	6%
	LI/KI	3	3	10	2	18	2%
	LI split/KI	0	0	1	0	1	–
Urgency code	HU-first	9	15	78	15	117	11%
	HU-repeat	10	12	55	6	83	8%
	Transplantable	113	108	556	55	832	81%
Age (years)	0–5	0	21	34	10	65	6%
	6–15	6	4	25	7	42	4%
	16–55	76	75	451	51	653	63%
	56+	50	35	179	8	272	26%
AB0	A	55	58	301	21	435	42%
	AB	16	0	41	6	63	6%
	B	19	10	92	9	130	13%
	0	42	67	255	40	404	39%
Sequence	First	118	119	593	66	886	86%
	Repeat	14	26	96	10	146	14%
Time waiting (months)	0–2m	101	88	510	46	745	72%
	3–5m	13	23	103	12	151	15%
	6–11m	12	13	59	14	98	9%
	12m+	6	11	21	4	42	4%
Residency	Living in ET	118	93	659	76	946	91%
	Living outside ET	14	42	30	0	86	9%
Living Donor Liver Transplants		0	12	10	0	22	
Total Liver Transplant Activity		132	147	699	76	1054	

5.6 Liver ‘High Urgency’ program

In 1996, the ‘High Urgency’ liver requests comprised 18% of the total number of entries on the waiting list (N=257/1393) [Table 5.6]. There was a higher need for a ‘HU’ repeat liver transplant than in 1995. Mortality rate varied around 15%. The likelihood of receiving a transplant, while on the HU liver waiting list, attained 80%, of which 90% occurred within 24 hours.

‘High Urgency’ liver transplants accounted for 19% of the total number of liver transplants performed in 1996, comparable to the previous calendar years.

Table 5.6 Dynamics on the ‘High Urgency’ liver waiting list, from 1992 to 1996

Year	HU requests	Transplants	Deaths on HU waiting list	Withdrawals from HU waiting list
1992	190	136	13	41
1993	235	203	15	17
1994	221	165	31	25
1995	198	164*	23	11
1996	257	201*	25	31
Reason for HU liver transplant				
Subacute-Fulminant hepatic failure (first transplant)				
1992	108	72	9	27
1993	124	105	11	8
1994	121	94	12	15
1995	116	91*	18	7
1996	146	118*	14	14
Irreversible graft failure (repeat transplant)				
1992	82	64	4	14
1993	111	98	4	9
1994	100	71	19	10
1995	82	73	5	4
1996	111	83	11	17

* 1 liver transplant in the next calendar year

6. Pancreas: donation, waiting lists and transplants

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6.1 Pancreas donors

In 1996, 674 pancreas donors were reported to the central office of Eurotransplant. Table 6.1 gives an overview of the usage and non-usage of the pancreas donors.

Over the years, there was no major increase in the number of pancreas offers. Fortunately, today, more pancreata are used in a clinical transplant. Pancreata of 139 donors were used in a whole pancreas transplant, almost all being a pancreas/kidney transplant. From only 18% of the liver donors, aged between 10 and 50 years, the pancreas was used as well in a transplant. In addition, pancreas offers were low from large volume liver transplant programs.

Since the majority of the donor pancreata were only made available as a pancreas-only offer, the disposition was most often directed to the islet-transplant programs and/or programs involved in pancreas-transplant-oriented research [N=277]. Thirty-three pancreata were, prior to their transplant, processed into pancreatic islets suspensions [N=15 transplants]; islet transplant practices vary from one pancreas per islet transplant to multiple pancreata per islet transplant.

6.2 Waiting list

The overall number of patients on the waiting list for a pancreas transplant increased by 32% over 1996 [Table 6.2]. This was on the account of pancreas/kidney transplantation in all Eurotransplant countries, with the exception of Germany.

Table 6.1 Usage and non-usage of pancreas donors, from the Eurotransplant area, between 1993 and 1996

	1993	1994	1995	1996
Total nr. of pancreas donors reported	702	664	667	674
No pancreas donor procurement:	234	175	200	177
– no time for selection / offer withdrawn	7	9	3	7
– medical reasons	155	121	146	105
– no suitable recipient: size or blood group	5	2	1	1
– center/bank out of capacity / recipient unfit	47	24	34	47
– transport problems/other organizational reasons	16	16	7	13
– cardiovascular instability of donor	4	3	9	4
Pancreas donor inspection/procurement:	468	489	467	497
No transplantation	14	52	49	81
– organ unsuitable for transplantation/research	12	49	49	80
– no back-up recipient (positive cross-match)	2	3	0	1
Whole pancreas transplantation	94	91	99	139
Research & Islet transplantation	360	346	319	277
– β cell project, Brussels	184	181	187	221
→ islet transplants (1 transplant : n donors)	0	1	6	3
– pancreas islet research, Gießen	163	119	72	32
→ islet transplants (1 transplant : 1 donor)	6	5	12	11
– local and other pancreas banks	13	46	60	24
→ islet transplants Innsbruck	0	0	2	1
Islet transplantation, total	6	6	20	15

The characteristics of the pancreas/kidney waiting list at December 31, 1996 (N=98) are shown in Table 6.2. The majority of patients on the pancreas/kidney waiting list had the ABO blood group type A (N=45; 46%). About 10% of the pancreas/kidney waiting list had a current PRA of 6% or more. Less patients had a waiting time of 1 year or more (N=14; 14%), in comparison with 1995 (N=22/72; 30%).

Table 6.2 Pancreas Waiting List: characteristics, per country

Pancreas Waiting List December 31, 1996		Austria	Belgium	Germany	Netherlands	Total 1996	Total 1995	
Total		22	42	106	12	182	138	
Type of transplant	PA/KI	16	20	50	12	98	72	
	IS/KI	1	–	11	–	12	17	
	PA-only	2	–	8	–	10	10	
	IS-only	3	22	37	–	62	40	
Pancreas/Kidney Waiting List		16	20	50	12	98	100% 72	
Age (years)	16–40	11	8	32	5	56	57%	47
	41+	5	12	18	7	42	43%	25
ABO	A	3	9	31	2	45	46%	27
	AB	0	0	0	0	0	–	1
	B	2	5	6	1	14	14%	6
	O	11	6	13	9	39	40%	38
%PRA current	0–5%	12	19	44	10	85	90%	62
	6–84%	2	1	4	2	9	9%	7
	85–100%	0	0	1	0	1	1%	1
	Not yet reported	2	0	1	0	3	–	2
Time waiting as PA/KI (months)	0–5m	9	8	34	5	56	57%	30
	6–11m	5	6	11	6	28	29%	20
	12–23m	2	4	2	1	9	9%	12
	24m+	0	2	3	0	5	5%	10

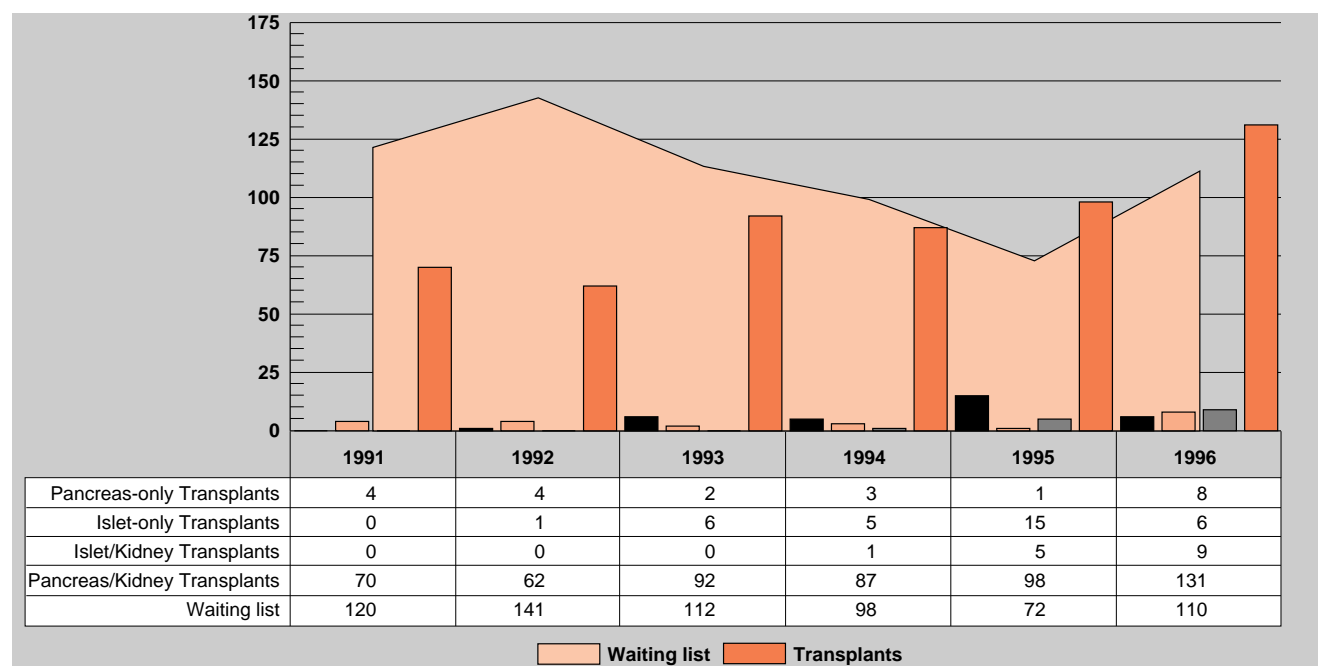


Figure 6.1 Dynamic of the Eurotransplant pancreas/kidney waiting list, pancreas/kidney transplants, pancreas-only, islet-only and islet/kidney transplants, from 1991 to 1996

6.3 Inflow on the pancreas waiting list during 1996

All Eurotransplant countries listed more diabetic patients for a pancreas(/kidney) transplantation, from 124 in 1995 to 186 in 1996 (+31%) [Table 6.3]. The β -cell Transplant Project of Brussels-Jette initiated a European islet-transplant waiting list, for the time being restricted to their collaborating programs.

6.4 Outflow from the waiting list during 1996

6.4.1 Pancreas transplants from non-living donors

Following a plateau phase after the major boost in 1993, pancreas/kidney transplantation displayed in 1996 again a significant increase, +34%, from 98 to 131 [Figure 6.1]. Pancreas-only, islet/kidney and islet-only transplants comprised about 15% of the total pancreas transplant activity [Table 6.4].

Transplant activities and pancreas exchange, per country and per center, are shown in detail in the Addenda.

Table 6.3 Inflow and Outflow on the cadaveric pancreas transplant Waiting List in 1996, per country

Pancreas Waiting List		Austria	Belgium	Germany	Netherlands	Total 1996	Total 1995
Registrations	Total	24	45	129	21	219	157
	Pancreas	21	23	121	21	186	124
	First pancreas transplant	19	23	111	21	174	113
	Repeat pancreas transplant	2	0	10	0	12	11
	Islet						
	First islet transplant	3	22	8	0	33	33
Outflow	Transplantation	8	16	113	17	154	119
	Mortality on the waiting list	0	0	0	0	0	0
	De-listing	3	2	3	0	8	15

Table 6.4 Pancreas transplants from non-living donors in 1996: characteristics, per country

Pancreas Transplants	Austria	Belgium	Germany	Netherlands	Total		
Total Pancreas Transplant Activity	8	16	113	17	154		
Type of transplant							
PA/KI	6	13	95	17	131		
IS/KI	1	–	8	–	9		
PA-only	1	–	7	–	8		
IS-only	–	3	3	–	6		
Pancreas/Kidney transplants	6	13	95	17	131	100%	
HLA-A,B,DR mismatch	0	0	1	0	1	1%	
	1	0	2	0	4	3%	
	2	0	2	2	11	8%	
	3	1	6	7	30	23%	
	4	2	2	32	41	32%	
	5	2	0	29	33	25%	
	6	1	0	9	11	8%	
Age (years)	16–40	4	7	64	12	87	66%
	41+	2	6	31	5	44	34%
ABO	A	2	6	34	7	49	37%
	AB	0	0	3	0	3	2%
	B	1	0	11	1	13	10%
	0	3	7	47	9	66	51%
%PRA prior to transplant	0–5%	4	12	92	15	123	94%
	6–84%	2	1	3	2	8	6%
Time waiting as PA/KI (months)	0-5m	5	10	77	14	106	81%
	6-11m	1	1	13	1	16	13%
	12m+	0	2	5	2	9	6%

Table 6.4 shows the characteristics of the pancreas/kidney transplants (N=131). The Belgian pancreas/kidney transplant programs adhere to a limited number of HLA-antigen mismatches; none of the transplants had two HLA-DR mismatches. In 11% (N=8/74), ABO blood group type 0 donors were used for pancreas/kidney transplants in recipients with non-0 blood groups (1995: N=9/98). For the majority of the recipients, the waiting time till transplant was less than 6 months: N=106, 81%.

6.4.2 Mortality on the waiting list

None of patients, awaiting a pancreas/kidney transplant, died on the waiting list in 1995 and in 1996.

7. Histocompatibility Testing

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Introduction

Improvement of the quality of tissue typing, screening and crossmatching is the ongoing task of the Eurotransplant Reference Laboratory (ETRL). This task is addressed by organizing quality control exercises for the Tissue Typing Centers (TTC) participating in Eurotransplant, initiating studies, and discussing possible new recommendations within the Tissue Typing Advisory Committee (TTAC).

7.1 Eurotransplant Proficiency Testing

The quality control schemes applied through 1996 for the determination of the individual performance of the Tissue Typing Centers in the frame of Eurotransplant are reported.

7.1.1 Quality control exercise on HLA typing

In 1996, this exercise consisted of a send out of 16 peripheral blood samples. Every TTC received 8 samples and had to report the results within one month after shipment. The vast majority of the laboratories reported the results in time. The introduction of the 75% consensus rule, as requested by the European Federation of Immunogenetics (EFI), facilitated the acceptance of possible discrepancies. The results for the HLA-A,B and HLA-DR typings are summarized in Table 7.1.

Table 7.1: Quality control exercise on HLA typing

	Total typings	N discrepant	% discrepant
HLA-A,B	354	16	4.5
HLA-DR	361	3	0.8

A consensus for HLA-A,B,DR typing was always reached with one exception. In contrast to previous years, for the first time the discrepancy rate for HLA-A,B was higher than the one for HLA-DR. This result can be explained by the routine use of molecular techniques for HLA-DR typing. We may expect equal results for HLA-A,B typing when similar techniques are routinely used by the TTC.

7.1.2 Quality control exercise on HLA-DR typing by DNA

Two exercises (DNA#07 and DNA#08) with 10 samples each were sent to the participants (N = 47). DNA was isolated from either spleen material from organ donors, peripheral blood from healthy blood donors, or cell lines. Some rare alleles and rare haplotypes were included. Only one laboratory is not yet performing DNA typing and therefore did not submit any results. The overall discrepancy rate for HLA-DR “broad” specificities was less than 0.25%. Two typical problems, presented in Table 7.2, were observed.

Table 7.2: Quality control exercise on HLA-DR typing by DNA: problem cases

Sample	Typing HLA-DRB1	Results Correct	Discrepant	Other alleles
DNA#0801	*1415, 1502	39	8	DRB1*08 (N= 8)
DNA#0802	*0401, 1327	3	41 ¹	DRB1*1301 (N=29) DRB1*03 (N= 9) DRB1*13/03 (N= 3)

The allele HLA-DRB1*1327 is identical to DRB1*1301 with a mutation in codon 26 mimicking a DRB1*03.

¹ = discrepancy based on the DRB1 allele level

In summary, the results of DNA typing are adequate and comparable to the last years results. It is noticeable that almost all TTC succeeded in implementing this new typing technique in a short time and use it routinely with good results.

7.1.3 Quality control exercise on crossmatching

As in the past, TTC participating in this quality control exercise had to perform a crossmatch using the cells of the send out and four different Eurotransplant patient sera selected by the ETRL. The TTC used the local crossmatch techniques simulating the situation during duty. In total 24 sera had to be crossmatched per TTC.

In summary the obtained results were as follows:

- HLA specific antibodies of the IgG type were in the vast majority of the cases correctly defined.
- Non donor specific HLA antibodies did not cause problems in the crossmatch.
- Allo- or autoantibodies of the IgM type still caused problems, as well as weak HLA specific antibodies.
- Dithiothreitol (DTT) was used by almost all laboratories, with adequate results.

7.1.4 Quality control exercise on screening

For the quality control exercise on screening the participating laboratories received in regular intervals serum samples from the ETRL and were asked to test them in their usual screening procedures. In total 16 sera were screened per TTC. The panel size used by the participants ranged between 30 and 100 HLA typed cells. The results revealed a high concordance in the case of IgG HLA class I specific antibodies, while HLA antibodies of the IgM type were several times defined as being negative (possible loss of activity during shipment). All but one TTC reported the specificity of the sera.

In summary, the tissue typing laboratories in Eurotransplant are able to define correctly the specificity of HLA antibodies, when these are of the IgG type and reacting towards HLA-A,B,C antigens. HLA specific antibodies of the IgM type, auto-antibodies and antibodies towards HLA-DR,DQ still cause some problems.

7.1.5 Proficiency testing on donor retyping

For the last time the retyping of almost all donors has been done at the ETRL, since the Board of Eurotransplant decided in 1996 to discontinue this activity. For this last period 1995 – 1996, 1568 spleen samples arrived at the ETRL. The retyping for HLA-A,B,DR was done using serology and occasionally by DNA. The HLA-DR typing was additionally performed by molecular means (PCR-SSO). The results are depicted in Table 7.3. For the first time the HLA-DR discrepancy rate is lower than the one for HLA-A,B. We may assume that the introduction of DNA based techniques during the duty hours helped to reduce the discrepancy rate.

Table 7.3: Donor Retyping in the period 1995 – 1996.

	N discrepant	% discrepancy
Typing for HLA-A,B	48+3*	3.3
Typing for HLA-DR	37+3*	2.6
Typing for HLA-A,B,DR	88	5.6

* = 3 donors with discrepant typings for HLA-A,B and HLA-DR

For the fourth consecutive year the results of the proficiency testing on donor retyping showed more than 90% concordance for HLA-A,B,DR typing (Table 7.4). The number of laboratories with a 100% concordance increased by two and only one TTC was below the 85% threshold [concordance 80%]. The overall quality of donor typing within Eurotransplant seems to have stabilized.

Table 7.4: HLA-A,B,DR concordance rate in Eurotransplant

Year	Concordance average	Range	100% N TTC	<85% N TTC
1988	89	73–100	5	9
1989	89	70–100	4	5
1990	84	69–100	4	9
1991	90	67–100	3	6
1992	91	79–100	6	5
1993	94	60–100	13	4
1994	93	81–100	12	3
1995	94	80–100	14	1

N concerns only TTC with ≥10 retypings done by ETRL.

In conclusion the overall incidence of discrepancies in HLA typing for the TTC in Eurotransplant is about 4%. Some of these discrepancies are presumably due to administrative errors.

7.2 Eurotransplant serum sets

Serum sets for HLA-A,B,C and HLA-DR,DQ are regularly compiled by the ETRL. This effort is realized through the cooperation of many HLA laboratories within and outside Eurotransplant. The aim of the distribution of the sets remains the same as formulated before: to realize uniform HLA-A,B,C and HLA-DR,DQ typing of organ donors and potential organ recipients and their family members.

In 1995, set # 19 was prepared for HLA-DR,DQ. The set consisted of 44 sera including positive and negative control. The set allows unambiguous typing for DR1, DR2 (DR15, DR16), DR3, DR4, DR5 (DR11, DR12), DR6 (DR13, DR14), DR7, DR8, DR9, DR10. Typing for DR8 is still difficult but possible.

The set # 18 for HLA-A,B,C typing was introduced in 1994, and used through 1996. This set consisted of 120 sera including a negative control. All HLA specificities occurring normally in the caucasoid population can be typed with this set. The problematic areas appeared to be the splits of HLA-A10 (A34 and A66), the splits of HLA-A19 (especially the discrimination between A30 and A31) and weak reactions with anti-HLA-B14 and anti-HLA-B21 sera.

In order to evaluate the performance of the sera in the serum sets as many as possible typing results (serum scores and interpretation) should be submitted by the affiliated laboratories to ET/ETRL. In addition, these data help to minimize clerical errors in the typing.

Typing laboratories inside and outside Eurotransplant are kindly requested to submit sera to be included in the sets. The ETRL can offer local sera in return to help to complete the local sets.

7.3 Other activities

The annual tissue typers meeting was held on September 26, 1996. Besides the presentation of the results of the different quality control exercises, the results of the DTT study were discussed. The latest recommendations of the Board of Eurotransplant were presented as well.

7.3.1 Third extramural meeting

The third extramural meeting was held on February 16, 1996, in Frankfurt, Germany. More than 50 members of Eurotransplant affiliated laboratories participated. This meeting is intended to act as a forum for ideas and problems occurring in the daily work leaving sufficient time for further discussions and short comments. Several aspects of screening and crossmatching were discussed. The presentation of so-called difficult patients and possible solutions made this meeting valuable.

7.3.2 Acceptable mismatch program

The waiting list for the acceptable mismatch program, which was developed to increase the potential donor pool for highly sensitized patients, consisted of 103 patients at the end of 1996. Until now 233 patients were transplanted with an HLA-DR matched cross-match negative donor via this program.

7.3.3 Recipient retyping study

In cooperation with the German Society for Immunogenetics (DGI), the ETRL will perform a study on recipient retyping in 1997.

7.3.4 Site visits

Members of the ETRL visited four tissue typing laboratories affiliated to Eurotransplant because of actual problems in typing and/or screening. One visit was paid to a new laboratory. These visits helped in all instances to solve the respective problems and to improve the quality of the laboratories and their communication to the ETRL.

7.3.5 Tissue Typing Advisory Committee

The cooperation between the ETRL and the TTAC is very fruitful opening new ways in discussion and definition of new rules within Eurotransplant. All centers can and should have input of ideas. The TTCs receive both the agenda and a summary of the minutes of the TTAC.

7.4 Future perspectives

The donor retyping program of selected samples started in September 1996. The ETRL has still to receive continuously donor EDTA blood samples from the TTCs within Eurotransplant.

One of the major challenges for 1997 will be the organization of the Highly Immunized Tray (HIT) program, initially done by Prof. Dr. G. Opelz, Heidelberg, Germany.

The results of the quality control exercises in screening and crossmatching are still not adequate. Therefore, the ETRL will concentrate on these two aspects of serological testing. Education, wet bench teaching in the ETRL, teaching course(s), as well as site visits, may help to overcome this problem. In addition, efforts will be made to maintain the high level of tissue typing in the future.

8. Publications

G.G. Persijn, M.D., Ph.D., Eurotransplant International Foundation, Leiden, The Netherlands

Introduction

The collection of data regarding organ donors and recipients which is part of the daily routine at the central office of Eurotransplant in Leiden leads to a unique database. Most of these epidemiological data are laid down in the Eurotransplant annual reports. However, this database is also used for scientific and statistical analyses by the staff and collaborators of Eurotransplant and the Eurotransplant Reference Laboratory as well as by some Eurotransplant transplant centers. The results of these efforts are reflected by presentations, abstract submissions and publications. It was felt that an overview of all abstracts and publications would serve the Eurotransplant community and might stimulate the centers to initiate and/or participate in joint studies or analyses. The Eurotransplant data belong to the providers of the data, i.e. the transplant centers; the central office in Leiden is the custodian of all collected data and welcomes any data requests.

This overview may therefore be seen as an acknowledgement and tribute to all the contributors in the field from which we all are so dependent.

8.1 Publications (in alphabetical order)

Claas FHJ, Giphart MJ, Schreuder GMTh:

Histocompatibiliteit

MEDISCHE IMMUNOLOGIE 1996 pp. 107-125

Eds. R. Benner, JJM van Dongen, W van Ewijk en JJ Haaijman

Publ. Bunge, Utrecht

Claas FHJ:

Das HLA system

BLUT, VON DER MAGIE ZUR WISSENSCHAFT 1996 pp. 59-62

Eds. PFW Strengers, WG van Aken u.a.

Publ. Spektrum Akademische Verlag Heidelberg, Berlin

Cohen B:

Einige aktuelle Überlegungen zur Organallokation.

ZUR GERECHTIGKEIT DER ORGANVERTEILUNG 1996 pp. 7-13

Eds. R. Lachmann, N. Meuter

Publ. Gustav Fisher Verlag, Stuttgart

Cohen B, D'Amato J:

Contemporary ethical considerations related to organ transplantation

TRANSPLANTATION PROCEEDINGS 1996 (28): 144-145

Doxiadis IIN, Claas FHJ:

Proposal for an International Registry and Depository of hyperacute rejection after kidney transplantation.

ASHI QUARTERLY, summer 1996, (20): 3-6

Doxiadis IIN, Smits JMA, Schreuder GMTh, Persijn GG, van Houwelingen HC, van Rood JJ, Claas FHJ:

Association between specific HLA combinations and probability of kidney allograft loss: the taboo concept.

THE LANCET 1996 (348): 850-853

Doxiadis IIN, Smits JMA, Stobbe I, Schreuder GMTh, Persijn GG, van Houwelingen H, van Rood JJ, Claas FHJ:

Taboo HLA mismatches in cadaveric renal transplantation: definition, analysis and possible implications.

TRANSPLANTATION PROCEEDINGS 1996 (28): 224

De Jong IJ, Reinders ME, Kranenburg J, De Meester MJM, Persijn GG:
Multi-organ donation in the Netherlands: Limited by consent and policy.
TRANSPLANT INTERNATIONAL 1996 (9): 430-432

De Meester MJM:

Eurotransplant allocation procedures: The basics, March 1996.
ZUR GERECHTIGKEIT DER ORGANVERTEILUNG 1996 pp. 167-177
Eds. R. Lachmann, N. Meuter,
Publ. Gustav Fischer Verlag, Stuttgart

Persijn GG:

Organspende und Transplantation bei Eurotransplant: Aktuelle Entwicklungen bis 1995.
ORGANSPENDE: ORGANISATION, KOOPERATION UND VERTEILUNG 1996 pp. 12-22
Eds. J. Hauss, S. Vogt
Publ. Pabst Science Publishers, Lengerich

Persijn GG, De Meester MJM, Smits JMA:

Kidney transplantation from living donors in Eurotransplant.
TRANSPLANTATION PROCEEDINGS 1996 (28): 3562-3565

Persijn GG, De Meester MJM, Smits JMA, Doxiadis IIN:

Einfluß der Histokompatibilität auf die langfristige Transplantatüberlebenszeit in Eurotransplant.
ZEITSCHRIFT FÜR TRANSPLANTATIONS MEDIZIN 1996 (8): 69-72

Roels L, De Meester MJM:

The relative impact of a presumed consent legislation on thoracic organ donation in the Eurotransplant area.
JOURNAL OF TRANSPLANT COORDINATION 1996 (6): 174-177

Van Rood JJ, Claas FHJ:

Impact of histocompatibility testing, or the Yin-Yang of transplantation.
TRANSPLANTATION BIOLOGY: CELLULAR AND MOLECULAR ASPECTS 1996 pp. 341-354
Eds. NL Tilney, TB Strom and LC Paul
Publ. Lippincott-Raven Publishers, Philadelphia

Smits JMA:

HLA compatibility in renal transplantation.
EUROTRANSPLANT NEWSLETTER 1996 (132): 13-14

Smits JMA, De Meester MJM, Persijn GG, Claas FHJ, van Houwelingen HC:

The outcome of kidney grafts from multiorgan donors and kidney only donors.
TRANSPLANTATION 1996 (62): 767-771

Smits JMA, Persijn GG, De Meester MJM:

Living unrelated renal transplantation: the new alternative.
TRANSPLANT INTERNATIONAL 1996 (9): 252

Vanrenterghem Y, Persijn GG:

The implementation of the new Eurotransplant Kidney Allocation System.
ETCO Newsletter 1996 (14): 28-29
EUROTRANSPLANT NEWSLETTER 1996 (131): 4-7

Verduyn W, Anholts JDH, Versluis LF, Parlevliet J, Drabbels J, De Meester MJM, Tilanus MGJ, Doxiadis IIN,
Giphart MJ, Schreuder GMT:

Six newly identified HLA-DRB alleles: DRB1*1121, *1419, *1420, *1421, DRB3*0203 and DRB5*0105.
TISSUE ANTIGENS 1996 (48): 80-86

Wight C, Cohen B:

Shortage of organs for transplantation.
BRITISH MEDICAL JOURNAL 1996 (312): 989-990

Wight C, Cohen B:

A shortage of supply.

ADVANCES IN TRANSPLANTATION 1996 (4)
(suppl. to Hospital update, Transplant Special)

Wight C, Jager K, Blok G, van Dalen J, Cohen B:

Overview of the European Donor Hospital Education Programme.

TRANSPLANTATION PROCEEDINGS 1996 (28): 422-423

Zantvoort FA, D'Amaro J, Persijn GG, Cohen B, Schreuder GMTh, van Rood JJ, Thorogood J:

The impact of HLA-A matching on long-term survival of renal allografts

TRANSPLANTATION 1996 (61): 841-844

8.2 Abstracts (in alphabetical order of the first author)

De Boer J, Slooff M, Erhard J, de Hemptinne B, Margreiter R, Metselaar H, Neuhaus P, Otto JB, Ringe B, De Meester J, De Winter H, Persijn GG, on behalf of the Eurotransplant liver transplant programs:

Eurotransplant allocation program for High Urgency (HU) liver transplantation.

XVI International Congress of the Transplantation Society Barcelona, 1996

Doxiadis IIN, Claas FHJ:

Proposal for an International Registry and Depository of hyperacute rejection after kidney transplantation.

TRANSPLANTATION PROCEEDINGS 1996 (28): 225

Doxiadis IIN, de Lange P, D'Amaro J, De Meester JMJ, Schreuder GMTh, Claas FHJ:

Differential effects of repeated HLA mismatches in renal transplantation: HLA class II mismatches are detrimental HLA class I are not.

HUMAN IMMUNOLOGY 1996 (49) sup. 1: 7

Doxiadis IIN, Schreuder GMTh, Claas FHJ:

Three years experience with proficiency testing of HLA-DR typing using molecular methods: Bye bye serology?

HUMAN IMMUNOLOGY 1996 (49) sup. 1: 125

De Meester JMJ, Smits JMA, Persijn GG, Vanrenterghem Y:

Interactive effects of preservation solutions and cold ischemia time on kidney graft outcome.

NEPHROLOGY DIALYSIS TRANSPLANTATION 1996 (11): 295

Persijn GG:

Immunologic evaluation of kidney patients prior to transplantation.

1st SLOVENE CONGRESS OF NEPHROLOGY WITH INTERNATIONAL PARTICIPATION 1996 pp. 129-130

Stobbe I, Doxiadis IIN, Smits JMA, van Rood JJ, Claas FHJ:

Why are some HLA mismatches taboo?

HUMAN IMMUNOLOGY 1996 (47) :163

De Winter H, De Boer J, De Meester J, Persijn GG, Aerts R, Gelin M, Otte JB, de Hemptinne B:

Epidemiology of liver transplants (txp) in Belgium during a 12-month period.

ACTA GASTROENTEROLOGICA BELGICA 1996: C17

A

Addendum

Table 1 Number of patients actively on the waiting list on December 31, 1996, stratified by organ, per country and center

Country	Center	Kidney	Kidney/ Pancreas*	Pancreas*	Heart	Heart/ Lung	Lung	Liver
Austria	GA	110	–	–	24	–	–	2
	IB	257	14	5	12	1	4	18
	OE	75	–	–	–	–	–	–
	OL	51	–	–	–	–	–	–
	OW	–	–	–	–	–	–	–
	WD	5	–	–	–	–	–	–
	WG	324	3	–	109	1	11	13
	TOTAL	822	17	5	145	2	15	33
Belgium	AN	29	2	–	2	–	–	–
	AS	–	–	–	5	–	–	–
	BJ	16	–	22	–	–	–	–
	BR	369	5	–	8	8	14	4
	GE	54	2	–	4	–	–	9
	LA	247	3	–	5	–	3	31
	LE	3	–	–	–	–	–	–
	LG	57	2	–	5	–	1	8
	LM	221	6	–	8	3	3	3
	TOTAL	996	20	22	37	11	21	55
Germany	AK	73	–	–	6	–	–	–
	BA	–	–	–	159	7	2	–
	BB	172	18	3	3	1	–	–
	BD	–	–	–	83	17	9	–
	BE	327	–	–	–	–	–	–
	BH	–	–	–	4	–	–	–
	BK	–	–	–	1	–	–	–
	BM	181	–	–	–	–	–	–
	BO	77	–	–	–	–	–	12
	BS	124	–	–	1	–	–	–
	BV	99	1	–	–	–	–	22
	DR	36	–	–	11	3	2	–
	DU	339	–	–	6	–	–	–
	EB	370	–	–	–	–	–	–
	ES	320	–	–	6	2	2	9
	FD	–	–	–	23	–	2	–
	FM	269	–	–	9	–	1	4
	FR	274	4	–	4	–	–	3
	GI	142	11	37	13	–	–	–
	GO	113	–	–	9	–	–	9
	HA	108	–	–	10	–	1	–
	HB	275	–	–	30	–	3	6
	HG	180	–	–	–	–	–	15
	HM	247	–	–	–	–	–	–
	HO	822	2	–	20	23	56	74
	HS	81	–	–	6	–	15	–
	JE	118	–	–	–	–	–	5
	KI	100	–	–	17	–	16	4
	KK	4	–	–	–	–	–	–
	KL	110	1	–	2	–	–	1
	KM	220	–	–	–	–	–	2
	KR	–	–	–	4	–	–	–
	KS	114	–	–	1	–	–	–
LP	48	–	–	7	–	–	6	
LU	274	–	–	–	–	–	–	
MA	89	–	–	–	–	–	–	
MB	–	–	–	–	–	–	4	
MD	–	–	–	18	–	–	–	
MH	167	–	–	–	–	–	–	
ML	665	11	3	49	3	6	8	
MN	257	–	–	26	1	3	2	
MR	109	1	–	–	–	–	–	
MZ	79	–	–	5	–	1	–	
NB	254	–	–	–	–	–	3	
RB	62	2	–	–	–	–	2	
RO	96	4	2	–	–	–	1	
ST	165	–	–	–	–	–	–	
TU	120	2	–	–	–	–	17	
UL	211	4	–	–	–	–	–	
WZ	160	–	–	–	3	–	1	
	TOTAL	8051	61	45	536	57	119	209
Luxemburg	LX	16	0	0	0	0	0	0
Netherlands	AW	130	–	–	–	–	–	–
	GR	231	4	–	–	1	49	20
	LB	143	6	–	–	–	–	4
	MS	86	2	–	–	–	–	–
	NY	128	–	–	–	–	–	–
	RD	168	–	–	19	–	–	6
	RS	10	–	–	–	–	–	–
	UT	93	–	–	7	–	–	–
UW	4	–	–	–	–	–	–	
	TOTAL	993	12	0	26	1	49	30
Eurotransplant	TOTAL	10878	110	72	744	71	204	327

*Note: islet/kidney and/or islet-only transplant candidates are listed at IB, Austria (1 islet/kidney, 3 islet-only), in BJ, Belgium (22 islet-only) and in GI, Germany (11 islet/kidney, 37 islet-only).

Table 2a Cadaveric donor activities in 1996, stratified by type of donation, per country and center

Donor country	Donor center	Total number of donors reported			KIDNEY DONOR			NO-KIDNEY DONOR
		Total	No transplant	Transplant	TOTAL	MOD	% MOD	
					KI only	MOD	% MOD	
Austria	GA	25	1	24	2	19	90.5	3
	IB	56	4	52	14	38	73.1	0
	OE	5	0	5	4	1	20.0	0
	OL	8	1	7	0	7	100.0	0
	OW	3	0	3	0	3	100.0	0
	WG/WD	97	4	93	32	58	64.4	3
	TOTAL		194	10	184	52	126	70.8
Belgium	AN	21	0	21	12	8	42.9	0
	AS	3	0	3	0	3	100.0	0
	BJ	11	1	10	3	6	66.6	1
	BR	33	3	30	7	18	72.0	5
	GE	41	3	38	2	35	94.6	1
	LA	47	2	45	14	31	68.9	0
	LG	28	3	25	1	22	95.6	1
	LM/LE	40	0	40	6	34	85.0	0
	TOTAL		224	12	212	45	158	77.8
Germany	AK	12	0	12	4	8	66.7	0
	BB	14	2	12	4	8	66.7	0
	BE	14	1	13	5	8	61.5	0
	BM	19	1	18	7	11	61.1	0
	BO	23	0	23	1	22	95.4	1
	BV	13	1	12	3	9	75.0	0
	DR	11	0	11	2	8	80.0	1
	DU	45	2	43	18	24	57.1	1
	EB/BS	46	2	44	8	33	80.5	3
	ES	43	1	42	11	31	73.8	0
	FD	6	0	6	2	3	60.0	1
	FM	19	1	18	4	14	77.8	0
	FR	25	1	24	13	11	45.8	0
	GI	15	0	15	7	8	53.3	0
	GO	19	0	19	7	12	63.2	0
	HA/MB	27	2	25	4	21	84.0	0
	HB	19	0	19	5	12	70.6	2
	HG	35	2	33	10	23	69.7	0
	HO/HM	94	1	93	44	48	52.2	1
	HS	14	0	14	8	6	42.9	0
	JE	37	2	35	6	26	81.2	3
	KI	13	0	13	0	13	100.0	0
	KL	20	1	19	6	13	68.4	0
	KM	25	1	24	11	12	52.2	1
	KS	9	2	7	3	3	50.0	1
	LP	30	3	27	6	21	77.8	0
	LU	32	1	31	15	16	51.6	0
	MA	14	0	14	7	7	50.0	0
	ML/MH/AU	89	2	87	31	54	63.5	2
	MN	41	2	39	20	19	48.7	0
	MR	10	0	10	5	5	50.0	0
	MZ	9	0	9	1	8	88.9	0
	NB	51	3	48	19	28	59.6	1
RB	12	1	11	1	10	90.9	0	
RO	39	1	38	11	25	69.4	2	
ST	11	1	10	6	4	40.0	0	
TU	22	0	22	11	11	50.0	0	
UL	30	1	29	13	15	53.6	1	
WB	14	0	14	8	6	42.9	0	
WZ	30	1	29	10	19	65.5	0	
TOTAL		1051	39	1012	357	634	63.9	21
Luxemburg	LX	13	0	13	2	11	84.6	0
Netherlands	AW	35	4	31	11	19	63.3	1
	GR	37	1	36	5	30	85.7	1
	LB	20	1	19	7	12	63.2	0
	MS	40	4	36	21	15	41.7	0
	NY	55	3	52	15	36	70.6	1
	RD/RS	34	1	33	12	20	62.5	1
	UT/UW	20	1	19	8	11	57.9	0
TOTAL		241	15	226	79	143	64.4	4
Eurotransplant, Total		1723	76	1647	535	1072	66.7	40
Czech Republic#		37	9	28	2	0		26
Denmark		1	0	1	0	0		1
France		24	18	6	1	0		5
Greece		4	3	1	0	0		1
Hungary#		14	2	12	0	1		11
Israel		4	2	2	0	0		2
Italy		18	15	3	0	0		3
Norway		10	4	6	0	0		6
Poland#		4	0	4	0	0		4
Slovak Republic#		13	3	10	0	0		10
Spain		52	40	12	4	0		8
Sweden		9	5	4	1	0		3
Switzerland		16	12	4	1	0		3
United Kingdom/Ireland		18	11	7	0	0		7
From outside Eurotransplant, Total		224	124	100	9	1		90

: organ-specific cooperation with Eurotransplant transplant programs

Table 2b Cadaveric donor activities in 1996, stratified by organ used in a transplant, per country and per center

Donor Country	Donor Center	Kidney <i>Donor</i>	Organs	Heart	Lung	Liver	Pancreas (including Islet)
Austria	GA	21	42	20	4	16	1
	IB	52	103	26	7	36	7
	OE	5	10	1	—	1	—
	OL	7	14	7	2	7	2
	OW	3	6	2	1	1	1
	WG/WD	90	177	39	19	52	—
	TOTAL	178	352	95	33	113	11
Belgium	AN	21	41	7	1	8	1
	AS	3	6	3	1	2	—
	BJ	9	18	5	3	7	3
	BR	25	48	18	4	19	3
	GE	37	72	16	5	36	1
	LA	45	88	24	7	25	6
	LG	23	46	15	4	21	8
	LM/LE	40	79	20	8	27	6
TOTAL	203	398	108	33	145	28	
Germany	AK	12	23	7	—	6	—
	BB	12	24	4	1	8	3
	BE	13	24	6	1	6	2
	BM	18	35	9	—	9	—
	BO	22	43	15	3	19	2
	BV	12	24	7	2	4	1
	DR	10	19	7	1	7	2
	DU	42	79	9	—	21	—
	EB/BS	41	80	29	13	27	7
	ES	42	82	19	3	28	5
	FD	5	10	4	1	2	—
	FM	18	34	10	—	13	2
	FR	24	46	7	—	10	—
	GI	15	30	7	1	7	2
	GO	19	37	11	1	10	—
	HA/MB	25	47	16	2	19	5
	HB	17	33	9	—	12	1
	HG	33	63	17	1	18	1
	HO/HM	92	177	38	7	42	1
	HS	14	27	3	—	5	—
	JE	32	62	19	4	23	6
	KI	13	26	8	4	13	2
	KL/KK	19	38	9	1	12	2
	KM	23	46	10	—	11	5
	KS	6	12	3	—	3	—
	LP	27	52	16	—	15	2
	LU	31	61	14	2	13	3
	MA	14	27	7	—	4	1
	ML/MH/AU	85	165	43	6	47	23
	MN	39	68	13	—	17	1
	MR	10	19	4	1	2	1
	MZ	9	16	6	3	4	—
	NB	47	86	19	5	26	2
RB	11	20	9	2	7	1	
RO	36	69	23	5	19	6	
ST	10	18	4	—	2	2	
TU	22	42	4	1	11	3	
UL	28	54	14	2	13	5	
WB	14	26	3	—	5	1	
WZ	29	55	16	3	15	1	
TOTAL	991	1899	478	76	535	101	
Luxemburg	LX	13	26	10	1	7	0
Netherlands	AW	30	56	14	5	19	1
	GR	35	78	19	5	27	4
	LB	19	38	8	2	11	1
	MS	36	65	7	—	13	1
	NY	51	98	16	3	34	5
	RD/RS UT/UW	32 19	61 37	9 9	5 5	19 11	2 —
TOTAL	222	423	82	25	134	14	
Eurotransplant, Total		1607	3098	773	168	934	154
Czech Republic#		2	2	—	—	26	—
Denmark		—	—	1	—	—	—
France		1	2	5	—	—	—
Greece		—	—	1	—	—	—
Hungary#		1	2	5	2	11	—
Israel		—	—	—	—	2	—
Italy		—	—	1	2	—	—
Norway		—	—	—	—	6	—
Poland#		—	—	—	—	4	—
Slovak Republic#		—	—	3	2	9	—
Spain		4	5	4	1	3	—
Sweden		1	1	—	—	3	—
Switzerland		1	2	1	1	1	—
United Kingdom/Ireland		—	—	2	—	6	—
From outside Eurotransplant, Total		10	14	23	8	71	0

: organ-specific cooperation with Eurotransplant transplant programs

Table 3a Cadaveric donor transplant activities in 1996, stratified by organ, per country and per center

Country	Center	Kidney	Kidney/ Pancreas*	Pancreas*	Heart	Heart/ Lung	Lung	Liver
Austria	GA	38	–	–	21	–	–	7
	IB	109	7	1	26	1	8	49
	OE	24	–	–	–	–	–	–
	OL	14	–	–	–	–	–	–
	WD	11	–	–	–	–	–	–
	WG	144	–	–	57	–	21	76
	Total		340	8	1	104	1	29
Belgium	AN	25	2	–	4	–	–	–
	AS	–	–	–	16	–	–	–
	BJ	18	–	3	–	–	–	–
	BR	74	3	–	16	6	5	19
	GE	36	1	–	7	–	–	40
	LA	100	3	–	20	–	6	44
	LE	8	–	–	–	–	–	–
	LG	22	1	–	22	4	–	11
	LM	114	3	–	22	4	8	21
Total		397	13	3	107	10	19	135
Germany	AK	16	–	–	4	–	–	2
	AU	8	–	–	–	–	–	–
	BA	–	–	–	83	3	–	–
	BB	29	33	3	–	–	–	1
	BD	–	–	–	62	11	21	–
	BE	67	–	–	–	–	–	–
	BH	–	–	–	3	–	–	–
	BK	–	–	–	6	–	–	–
	BM	29	–	–	–	–	–	–
	BO	17	–	–	–	–	–	22
	BS	25	–	–	5	–	–	–
	BV	14	8	–	–	–	–	126
	DR	4	–	–	15	1	–	–
	DU	79	–	–	3	–	–	–
	EB	61	–	–	–	–	–	–
	ES	87	1	–	4	–	2	52
	FD	1	–	–	9	–	2	–
	FM	50	–	–	10	–	–	13
	FR	76	–	–	6	–	–	12
	GI	22	8	3	20	–	–	–
	GO	28	–	–	8	–	–	20
	HA	32	–	–	20	–	–	–
	HB	56	–	–	17	–	–	43
	HG	55	1	–	12	–	–	86
	HM	67	–	–	–	–	–	–
	HO	157	–	–	25	2	23	93
	HS	25	–	–	4	–	5	–
	JE	38	–	–	–	–	–	25
	KI	19	–	–	25	–	10	23
	KK	1	–	–	–	–	–	–
	KL	31	–	–	8	–	–	1
	KM	49	–	–	–	–	–	12
	KS	20	–	–	4	–	–	–
LP	28	–	–	15	–	–	26	
LU	60	–	–	–	–	–	–	
MA	15	–	–	–	–	–	–	
MB	–	–	–	–	–	–	6	
MD	–	–	–	11	–	–	–	
MH	42	1	–	–	–	–	10	
ML	130	30	2	56	4	18	46	
MN	65	–	–	28	1	–	7	
MR	31	3	–	–	–	–	–	
MZ	12	–	–	4	–	5	–	
NB	71	–	–	–	–	–	27	
RB	14	–	–	12	–	–	8	
RO	36	8	2	–	–	–	5	
ST	18	–	–	–	–	–	–	
TU	25	6	–	2	–	–	16	
UL	37	4	–	–	–	–	–	
WZ	36	–	–	7	–	–	7	
Total		1784	103	10	488	22	86	689
Luxemburg	LX	14	0	0	0	0	0	0
Netherlands	AW	49	–	–	–	–	–	–
	GR	74	5	–	1	1	20	42
	LB	47	12	–	–	–	–	7
	MS	50	–	–	–	–	–	–
	NY	81	–	–	–	–	–	–
	RD	57	–	–	28	–	–	27
	RS	9	–	–	–	–	–	–
	UT	37	–	–	31	–	–	–
UW	4	–	–	–	–	–	–	
Total		408	17	0	60	1	20	76
Eurotransplant, Total		2943	140	14	759	34	154	1032

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Note: islet/kidney and/or islet transplantations were performed in IB, Austria (1 Islet/Kidney), in BJ, Belgium (3 Islet-only) and in GI, Germany (8 Islet/Kidney, 3 Islet-only).

Table 3b Living donor transplant activities in 1996, stratified by organ, per country and per center

Country	Center	Kidney			Heart	Liver			
		Living Related	Living Unrelated	Total	Domino Total	Living Related	Living Unrelated	Domino	Total
Austria	IB	5	3	8	-	-	-	-	-
	OE	1	0	1	-	-	-	-	-
	WD	3	0	3	-	-	-	-	-
	WG	5	1	6	-	-	-	-	-
	TOTAL	14	4	18	0	0	0	0	0
Belgium	AS	0	0	0	1	-	-	-	-
	BR	3	1	4	-	-	-	-	-
	GE	2	0	2	-	-	1	1	1
	LA	9	3	12	-	11	-	-	11
	TOTAL	14	4	18	1	11	0	1	12
Germany	AK	1	1	2	-	-	-	-	-
	BB	0	1	1	-	-	-	-	-
	BE	2	1	3	-	-	-	-	-
	BM	1	1	2	-	-	-	-	-
	BS	4	1	5	-	-	-	-	-
	BV	5	0	5	-	-	-	-	-
	DU	1	0	1	-	-	-	-	-
	EB	1	0	1	-	-	-	-	-
	FM	5	1	6	-	-	-	-	-
	FR	10	7	17	-	-	-	-	-
	GI	10	0	10	-	-	-	-	-
	GO	2	1	3	-	-	-	-	-
	HA	2	0	2	-	-	-	-	-
	HB	9	1	10	-	-	-	-	-
	HG	1	2	3	-	9	1	0	10
	HM	1	0	1	-	-	-	-	-
	HO	21	2	23	-	-	-	-	-
	KM	2	0	2	-	-	-	-	-
	LU	4	0	4	-	-	-	-	-
	MH	4	0	4	-	-	-	-	-
	ML	2	4	6	-	-	-	-	-
MN	4	0	4	-	-	-	-	-	
NB	4	0	4	-	-	-	-	-	
RB	1	0	1	-	-	-	-	-	
RO	1	0	1	-	-	-	-	-	
ST	6	0	6	-	-	-	-	-	
WZ	0	1	1	-	-	-	-	-	
TOTAL	104	25	129	0	9	1	0	10	
Luxemburg	LX	0	0	0	0	0	0	0	0
Netherlands	AW	6	0	6	-	-	-	-	-
	GR	10	0	10	-	-	-	-	-
	LB	5	0	5	-	-	-	-	-
	MS	8	3	11	-	-	-	-	-
	NY	22	0	22	-	-	-	-	-
	RD	18	0	18	-	-	-	-	-
	RS	1	0	1	-	-	-	-	-
	UT	5	3	8	-	-	-	-	-
TOTAL	75	6	81	0	0	0	0	0	
Eurotransplant, Total		207	39	246	1	20	1	1	22

Table 4 Organ exchange of the Eurotransplant countries, based upon the transplant activities in 1996**Table 4a Survey of donor kidney exchange in 1996**

Transplant country Donor country	Austria	Belgium	Germany	Luxemburg	Netherlands	ET	Others ^a	Total available	Difference
Austria	258	8	73	0	11		0	350	-3
Belgium	13	263	96	3	21		3	399	+11
Germany	66	104	1626	2	85		14	1897	-10
Luxemburg	0	12	4	8	2		0	26	-12
Netherlands	7	22	79	1	305		9	423	+2
Total Eurotransplant	344	409	1878	14	424	3069	26	3095	-12
Others ^b	3	1	9	0	1	14	0	14	+12
Total transplanted	347	410	1887	14	425	3083	26	3109	

a. Transplant country: Others: Switzerland (12), Turkey (4), Pakistan (3), Oman (3), Czech Republic (1), Denmark (1), Slovak Republic (1), Spain (1).

b. Donor country: Others: Spain (5), Czech Republic (2), France (2), Hungary (2), Switzerland (2), Sweden (1).

Table 4b Survey of donor heart exchange in 1996

Transplant country Donor country	Austria	Belgium	Germany	Netherlands	ET	Others ^a	Total available	Difference
Austria	79	0	14	0		0	93	+11
Belgium	4	86	10	0		1	101	+6
Germany	12	11	426	4		1	454	+34
Luxemburg	0	7	3	0		0	10	-10
Netherlands	3	3	19	56		0	81	-21
Total Eurotransplant	98	107	472	60	737	2	739	+20
Others ^b	6	0	16	0	22	0	22	-20
Total transplanted	104	107	488	60	759	2	761	

a. Transplant country: Others: Italy (1), United Kingdom (1).

b. Donor country: Others: France (5), Hungary (5), Spain (4), Slovak Republic (2), United Kingdom/Ireland (2), Denmark (1), Greece (1), Italy (1), Switzerland (1).

Table 4c Survey of donor heart/lung exchange in 1996

Transplant country Donor country	Austria	Belgium	Germany	Netherlands	ET	Others ^a	Total available	Difference
Austria	1	1	0	0		0	2	-1
Belgium	0	6	1	0		0	7	+3
Germany	0	3	20	0		1	24	-2
Netherlands	0	0	0	1		0	1	-
Total Eurotransplant	1	10	21	1	33	1	34	-
Others ^b	0	0	1	0	1	0	1	-
Total transplanted	1	10	22	1	34	1	35	

a. Transplant country: Others: Sweden (1).

b. Donor country: Others: Slovak Republic (1).

Table 4d Survey of donor double lungs exchange in 1996

Transplant country Donor country	Austria	Belgium	Germany	Netherlands	ET	Others ^a	Total available	Difference
Austria	9	0	9	2		0	20	-3
Belgium	0	4	6	3		1	14	-9
Germany	1	1	33	2		0	37	+21
Luxemburg	1	0	0	0		0	1	-1
Netherlands	2	0	7	10		0	19	-2
Total Eurotransplant	13	5	55	17	90	1	91	+6
Others ^b	4	0	3	0	7	0	7	-6
Total transplanted	17	5	58	17	97	1	98	

a. Transplant country: Others: Switzerland (1).

b. Donor country: Others: Hungary (2), Italy (2), Slovak Republic (1), Spain (1), Switzerland (1).

Table 4e Survey of donor single lung exchange in 1996

Transplant country Donor country	Austria	Belgium	Germany	Netherlands	ET	Others ^a	Total available	Difference
Austria	7	1	7	1		1	17	-5
Belgium	3	8	2	1		0	14	-
Germany	2	3	15	1		0	21	+7
Netherlands	0	2	4	0		0	6	-3
Total Eurotransplant	12	14	28	3	57	1	58	-1

a. Transplant country: Others: Sweden (1).

Table 4f Survey of donor liver exchange in 1996

Transplant country Donor country	Austria	Belgium	Germany	Netherlands	ET	Others ^a	Total available	Difference
Austria	71	3	28	7		1	110	+20
Belgium	8	66	53	10		2	139	-13
Germany	27	37	425	26		2	517	+118
Luxemburg	0	4	3	0		0	7	-7
Netherlands	7	15	77	31		0	130	-54
Total Eurotransplant	113	125	586	74	898	5	903	+64
Others ^b	17	1	49	2	69	0	69	-64
Total transplanted	130	126	635	76	967	5	972	

a. Transplant country: Others: Denmark (2), France (1), Italy (1), United Kingdom/Ireland (1).

b. Donor country: Others: *Czech Republic* (26), *Hungary* (11), *Slovak Republic* (9), Norway (6), United Kingdom/Ireland (6), *Poland* (3), Spain (3), Israel (2), Sweden (2), Switzerland (1).

Table 4g Survey of donor split liver exchange in 1996

Transplant country Donor country	Austria	Belgium	Germany	Netherlands	ET	Others ^a	Total available	Difference
Austria	2	0	4	0		0	6	-4
Belgium	0	6	6	0		0	12	-3
Germany	0	2	34	0		0	36	+18
Netherlands	0	1	7	0		0	8	-8
Total Eurotransplant	2	9	51	0	62	0	62	+3
Others ^b	0	0	3	0	3	1	4	-3
Total transplanted	2	9	54	0	65	1	66	

a. Transplant country: Others: Sweden (1).

b. Donor country: Others: Poland (2), Sweden (1).

Table 4h Survey of donor pancreas/kidney exchange in 1996

Transplant country Donor country	Austria	Belgium	Germany	Netherlands	Total available	Difference
Austria	3	0	5	1	9	-3
Belgium	0	11	9	4	24	-11
Germany	3	0	78	3	84	+11
Netherlands	0	2	3	9	14	+3
Total Eurotransplant	6	13	95	17	131	

Table 4i Survey of donor islet/kidney exchange in 1996

Transplant country Donor country	Austria	Belgium	Germany	Netherlands	Total available	Difference
Austria	1	0	0	0	1	-
Belgium	0	0	1	0	1	-1
Germany	0	0	7	0	7	+1
Total Eurotransplant	1	0	8	0	9	

Table 5 Organ exchange in cadaveric-donor transplantation, in 1996, between the Eurotransplant transplant programs

* How to read the Tables 5a-i

1. Country
 - 2a. Transplant region or center, at which the organ-specific transplants were performed
 - 2b. Donors centers and/or transplant centers within the transplant region (center codes, see page 8 - 14)
3. Donors
 - 3a. *Reported*, total number of organ-specific donors reported to Eurotransplant, of whom organs were transplanted in 1996
 - 3b. *Not used*, number of organ-specific donors not used
 - 3c. *Single organ*, number of organ-specific donors of whom only one kidney or one lung was used
 - 3d. *Two single organs*, number of donors from whom the 2 lungs have been used in 2 different recipients
4. Organs used Total, total number of organs which have been used in a transplant which took place in 1996
5. Destination of organs
 - 5a. *Outside country*, number of organs shipped outside the donor country
 - 5b. *Same country*, number of organs shipped to another center outside the region but in the same country
 - 5c. *Same region*, number of organs shipped to another center in the region
 - 5d. *Local center*, number of organs used at the local center
6. Origin of transplanted organs
 - 6a. *Local center*, number of organs transplanted at the local center
 - 6b. *Same region*, number of organs, received from another center from the same region
 - 6c. *Same country*, number of organs, received from another center outside the region but from the same country
 - 6d. *Outside country*, number of organs, received from outside the donor country
7. Transplants Total, total number of organ transplants performed during 1996
8. Exchange balance, difference between Organs used Total and Transplants Total, i.e. net import:export balance
 - '+' means, more import than export
 - '-' means, more export than import

The programs in italic represent the individual donor and/or transplant centers in a transplant region. Transplant regions reflect the status at December 31, 1996.

Table 5a Survey of donor kidney exchange in 1996

1	2a	2b	4	5a	5b	5c	5d/6a	6b	6c	6d	7	8	
Country	Region	Center code	Kidneys used	Destination / Origin							Kidney trans- plants	Exchange balance	
				Total	Outside country	Same country	Same region	Local center	Same region	Same country			Outside country
			Total	Outside country	Same country	Same region	Local center	Same region	Same country	Outside country	Total		
Austria	Graz	GA	42	7	15		20		9	9	38		
		Innsbruck	IB	101	35	9		57		29	30	116	+15
		Upper Austria	OE	10	1	4		2	3	3	5	13	24
			OL	14	3	5		3	2	5	4	14	
			OW	6	2	4		-	-	-	-	-	
	Wien	WG	177	44	29		104		18	33	155	-22	
		WD	-	-	-		3		5	3	11		
		WG	177	44	29		101		13	30	144		
		TOTAL		350	92	66		192		66	89	347	-3
	Belgium Luxemburg	Bel_1	AN	41	18	9		30	33	30	5	14	82
BJ			18	5	2		5	9	12	1	7	29	
LG			46	16	9		11	10	8	2	3	23	
LX			26	6	3		9	8	2	1	3	14	
Bruxelles		BR	48	15	6		27		15	35	77	+29	
		LA	88	27	11		50		12	41	103	+15	
Bel_2		AS	6	3	1		2		-	-	-	-	+4
		GE	73	28	7		25	23	2	3	9	37	
		LE	-	-	-		-	0	2	0	6	8	
		LM	79	21	6		1	41	24	19	33	117	
Belgium Luxemburg	TOTAL	399	133	51		215/222		53	135	410	+11		
	TOTAL	26	6	3		17/10		1	3	14	-12		
Germany	Aachen	AK	23	6	4		13		2	1	16	-7	
		BB	24	5	7		12		32	18	62	+38	
	Bochum	BE	24	1	3		11	9	31	16	11	67	+48
		BV	24	2	3		16	3	13	5	2	23	
		EB	80	7	19		32	22	6	22	11	61	
		BS	-	-	-		-	-	9	11	5	25	
		UNI-TVN	185	22	66		31	66	31	45	22	164	-21
		BM	35	5	13		9	8	3	17	1	29	
		HG	63	7	18		9	29	11	10	6	56	
		KI	26	3	12		5	6	4	5	4	19	
		LU	61	7	23		8	23	13	13	11	60	
	UNI-RP	126	27	40		30	29	30	7	8	74	-52	
		BO	43	3	13		16	11	3	2	1	17	
		HS	29	9	8		2	10	12	1	2	25	
		KS	12	1	3		1	7	7	1	5	20	
		MZ	16	6	7		2	1	8	3	0	12	
		WB	26	8	9		9	-	-	-	-	-	
	Düsseldorf	DU	79	14	21		44		23	12	79	0	
		ES	82	14	18		50		24	14	88	+6	
	Essen	74	11	20		15	28	15	26	12	81	+7	
		Fulda	10	3	1		5	1	-	0	0	1	
		FM	34	6	9		2	17	13	12	8	50	
		GI	30	2	10		8	10	2	14	4	30	
	Freiburg	FR	46	3	6		37		27	12	76	+30	
		GO	37	13	13		11		11	6	28	-9	
	Göttingen	247	52	90		23	82	23	34	7	146	-101	
		DR	19	4	11		2	2	1	0	4		
		HA	45	14	11		5	15	8	6	3	32	
		JE	62	11	21		4	26	6	4	2	38	
		LP	52	12	16		8	16	5	5	2	28	
		RO	69	11	31		4	23	3	18	0	44	
	Heidelberg	HB	33	6	11		16		31	8	56	+23	
175		18	40		117	70	37	224	37	224	+49		
Hannover	HM	-	-	-		35		23	9	67			
	HO	-	-	-		82		47	28	157			
Köln	84	5	30		27	22	27	22	10	81	-3		
	KK	-	-	-		-	1	0	0	1			
	KL	38	3	12		15	8	12	9	2	31		
	KM	46	2	18		12	14	14	13	8	49		
Mannheim	MA	27	5	13		9		4	2	15	-12		
	161	25	50		24	62	24	22	13	121	-40		
UNI-NBav	NB	86	11	27		9	39	13	12	7	71		
	RB	20	1	12		3	4	5	3	2	14		
	WZ	55	13	11		12	19	6	7	4	36		
UNI-SBav	165	9	32		124	8	54	33	211	8	+46		
	AU	-	-	-		8	0	0	0	8			
	MH	-	-	-		25	14	4	43	4	43		
	ML	-	-	-		91	40	29	160	6	65	-3	
Münster	MN	68	7	22		39		20	6	34	+15		
	Marburg	19	3	8		8		23	3	34	-11		
Stuttgart/Tübingen	60	8	20		9	23	9	11	6	49			
	ST	18	2	6		4	6	5	4	3	18		
	TU	42	6	14		5	17	7	3	31			
Ulm	UL	54	8	14		32		8	1	41	-13		
	TOTAL	1897	271	550		1076		550	261	1887	-10		
Netherlands	Amsterdam	AW	56	25	10		21		17	11	49	-7	
		Groningen	GR	68	17	22		29		23	27	79	+11
	Leiden	LB	38	7	15		16		19	24	59	+21	
		Maastricht	MS	65	14	20		31		9	10	50	-15
	Nijmegen	NY	98	26	22		50		11	20	81	-17	
		Rotterdam	61	17	16		28		24	14	66	+5	
		RD	61	17	16		26		22	9	57		
		RS	-	-	-		2		2	5	9		
	Utrecht	UT	37	12	17		8		19	14	41	+4	
		37	12	17		8		16	13	3	37		
		UW	-	-	-		0		3	1	4		
TOTAL	423	118	122		183		122	120	425	+2			
Eurotransplant, Total			3095	620	792		1683		792	608	3083	-12	
From/To outside ET			14	14	0		0		0	26	26	+12	
Total			3109	634	792		1683		792	634	3109	0	

Table 5b Survey of donor heart exchange in 1996

1	2a	2b	3a	3b	4	5a	5b	5c	5d/6a	6b	6c	6d	7	8		
Country	Region	Center code	Donors Report Total	Donors Not Used	Lungs Used Total	Destination / Origin								HE/LU National trans-Exchange Balance		
						Outside country	Same country	Same region	Local center	Same region	Same country	Outside country	plants Total			
Austria	Graz Innsbruck Wien	GA	23	3	20	1	1		18		1	2	21			
		IB	32	7	25	2	2		21		1	4	26			
		WG	80	32	48	11	2	4	31	4	3	19	57			
		OE	2	1	1	1	0	0	-	-	-	-	-	-		
		OL	6	0	6	2	1	3	-	-	-	-	-	-		
		OW	2	0	2	1	0	1	-	-	-	-	-	-		
		WG	70	31	39	7	1	-	31	4	3	19	57			
	TOTAL		135	42	93	14	5		74		5	25	104	+11		
Belgium Luxemburg	Bel_1 Antwerpen Liège Aalst Bruxelles Bruxelles Bel_2	AN	51	15	36	10	6	10	10	10	4	2	26			
		BJ	10	4	6	3	0	2	1	2	0	1	4			
		LG	8	3	5	1	2	2	-	-	-	-	-	-		
		LX	22	7	15	3	3	0	9	8	4	1	22			
		AS	11	1	10	3	1	6	-	-	-	-	-	-		
		BR	3	0	3	0	0		3	-	8	5	16			
		BR	18	3	15	3	3		9	-	2	3	20			
		LA	27	3	24	2	7		15	-	2	3	20			
		GE	53	20	33	3	7	9	14	9	3	3	29			
		LM	19	6	13	1	3	7	2	2	1	2	7			
	LM	34	14	20	2	4	2	12	7	2	1	22				
	TOTAL		141	40	101	15	20		66/72		21	14	107	+6		
Belgium Luxemburg	TOTAL		11	1	10	3	1		6/0		0	0	0	-10		
Germany	UNI-NRW Aachen Düsseldorf Essen Köln L Münster Berlin Berlin DHZ Berlin Charité Bad Nauheim Bad Krozingen UNI-TSA Dresden Halle Leipzig Fulda Frankfurt Freiburg Gießen Göttingen Heidelberg UNI-TVN Hamburg Kiel Hann/B.Oeyn B.Oeynhausen Hannover Homburg/Saar Kaiserslautern München München DHZ München GH Mainz UNI-NBav Regensburg Würzburg Tübingen	AK	112	28	84	8	40	11	25	11	7	4	47			
		Bochum	7	0	7	1	3	0	3	0	0	1	4			
		DU	17	8	9	0	4	0	-	-	-	-	-	-		
		ES	26	7	19	1	9	5	4	0	0	0	4			
		KL	10	1	9	1	4	0	4	2	1	1	8			
		KM	13	3	10	1	5	4	-	-	-	-	-	-		
		MN	16	3	13	0	2	-	11	9	6	2	28			
		BO	16	3	13	3	8	2	-	-	-	-	-	-		
		BD	40	5	35	1	4	30	0	30	19	13	62			
		BD	0	0	0	0	0	0	0	30	19	13	62			
		BE	7	1	6	0	0	6	-	-	-	-	-	-		
		BV	8	1	7	0	2	5	-	-	-	-	-	-		
		EB	25	3	22	1	2	19	-	-	-	-	-	-		
		BS	0	0	0	-	-	0	0	2	3	5				
		BH	0	0	0	-	-	0	0	3	0	3				
		BK	0	0	0	-	-	0	0	4	2	6				
		DR	69	14	55	1	7	33	14	33	3	0	50			
		DR	6	0	6	0	1	4	1	13	1	0	15			
		HA	24	8	16	1	2	6	7	11	2	0	20			
		JE	22	5	17	0	2	15	-	-	-	-	-	-		
		LP	17	1	16	0	2	8	6	9	0	0	15			
		FD	4	0	4	0	0		4	-	5	0	9			
		FM	14	4	10	0	3		7	-	2	1	10			
		FR	10	3	7	0	2		5	-	1	0	6			
		GI	8	1	7	0	5		2	-	7	11	20			
		GO	13	2	11	0	5		6	-	1	1	8			
		HB	11	2	9	0	1		8	-	7	2	17			
		TVN	75	15	60	7	23	21	9	21	4	3	37			
		HG	23	6	17	2	7	4	4	7	1	0	12			
		KI	10	2	8	1	1	1	5	14	3	3	25			
		LU	17	3	14	3	6	5	-	-	-	-	-	-		
		RO	25	4	21	1	9	11	-	-	-	-	-	-		
		HO/BA	63	18	45	2	4	20	19	20	52	17	108			
		BA	0	0	0	-	-	-	-	20	48	15	83			
		BM	11	2	9	1	1	7	-	-	-	-	-	-		
		HO/HM	52	16	36	1	3	13	19	0	4	2	25			
		HS	5	2	3	0	2		1	-	2	1	4			
		KS	5	2	3	0	0		3	-	1	0	4			
		MA	7	0	7	0	0		-	-	-	-	-	-		
		ML/MD	48	8	40	2	6	5	27	5	32	3	67			
		MD	-	-	-	-	-	-	0	5	6	0	11			
		ML	48	8	40	2	6	5	27	0	26	3	56			
		MR	4	1	3	1	2		-	-	-	-	-	-		
		MZ	9	0	9	1	5	1	2	1	1	0	4			
		MZ	6	0	6	0	4	-	2	1	1	0	4			
		WB	3	0	3	1	1	1	-	-	-	-	-	-		
		UNI-NBav	47	4	43	1	25	11	6	11	2	0	19			
		NB	21	2	19	0	12	7	-	-	-	-	-	-		
		RB	11	2	9	1	3	0	5	7	0	0	12			
		WZ	15	0	15	0	10	4	1	4	2	0	7			
		TU	11	4	7	1	6	0	0	0	1	1	2			
		ST	7	3	4	1	3	0	-	-	-	-	-	-		
		TU	4	1	3	0	3	-	0	0	1	1	2			
		UL	16	4	12	3	9	-	-	-	-	-	-	-		
			TOTAL		571	117	454	28	156		270		156	62	488	+34
		Netherlands	Rotterdam Utrecht	RD	47	9	38	14	3	15	6	15	6	1	28	
AW	16			2	14	5	2	7	-	-	-	-	-			
LB	11			3	8	3	0	5	-	-	-	-	-			
MS	9			2	7	4	0	3	-	-	-	-	-			
RD	11			2	9	2	1	-	6	15	6	1	28			
UT	60			17	43	11	6	22	4	22	3	3	32			
GR	23			4	19	4	1	14	0	0	0	1	1			
NY	26			10	16	4	4	8	-	-	-	-	-	-		
UT	11	3	8	3	1	-	4	22	3	2	31					
	TOTAL		107	26	81	25	9		47		9	4	60	-21		
Eurotransplant, Total			965	226	739	85	191		463		191	405	759	+20		
From/ To outside ET	Twinning		9	2	7	2	0	5	0	0	0	0	0			
	No twinning		58	43	15	15	0	0	0	0	0	2	2			
	TOTAL		67	45	22	17	0	5	0	0	0	2	2	-20		
Total			1032	271	761	102	191	5	463		191	107	761	0		

Table 5c Survey of donor heart/lung exchange in 1996

1	2a	2b	3a	3b	4	5a	5b	5c	5d/6a	6b	6c	6d	7	8		
Country	Region	Center code	Donors Report Total	Donors Not Used	Heart/Lung Used Total	Destination / Origin						HE/LU trans-plants Total	National Exchange Balance			
						Outside country	Same country	Same region	Local center	Same region	Same country	Outside country				
Austria	Graz	GA	1	1	0	0	0		0		0	0	0			
		Innsbruck	IB	4	3	1	0	0		1		0	0	1		
		Wien	WG	3	2	1	1	0	0	0	0	0	0	0		
			OL	1	0	1	1	0	0	-	-	-	-	-		
			WG	2	2	0	0	0	-	0	0	0	0	0		
	TOTAL		8	6	2	1	0		1		0	0	1	-1		
Belgium	Bel_1	AN	1	0	1	0	1	0	-	-	-	-	-			
		LG	1	1	0	0	0	-	-	-	-	-	-			
		Bruxelles	BR	3	0	3	0	0		3		1	2	6		
		Bruxelles	LA	2	2	0	0	0		0		0	0	0		
		Leuven	LM	4	1	3	1	0	2	0	2	0	2	4		
			GE	4	1	3	1	0	2	0	0	0	0	0		
			LM	0	0	0	0	0	-	0	2	0	2	4		
			TOTAL		11	4	7	1	1		5		1	4	10	+3
		Germany	UNI-NRW	DU	2	2	0	0	0	0	-	-	-	-	-	
ES	1			1	0	0	0	-	0	0	0	0	0			
KL	3			3	0	0	0	0	0	-	-	-	-			
MN	0			0	0	0	0	0	0	0	1	0	1			
BO	2			0	2	1	1	0	-	-	-	-	-			
Berlin DHZ	BD			9	2	7	0	1	6	0	6	4	1	11		
	BD			0	0	0	0	0	-	0	6	4	1	11		
	BE			2	2	0	0	0	0	-	-	-	-	-		
	EB			7	0	7	1	0	6	-	-	-	-	-		
UNI-TSA	DR			9	6	3	0	2	1	0	1	0	0	1		
	JE			2	1	1	0	1	-	0	1	0	0	1		
	LP			5	3	2	0	1	1	-	-	-	-	-		
	UNI-TVN			2	2	0	0	0	0	-	-	-	-	-		
	HG			7	5	2	0	2	0	0	0	0	0	0		
	KI			2	2	0	0	0	0	-	-	-	-	-		
	RO			1	1	0	0	0	-	0	0	0	0	0		
Hannover	HO			4	2	2	0	2	0	-	-	-	-	-		
	HO			3	1	2	0	0	0	2	0	2	1	5		
	BM			1	1	0	0	0	0	-	-	-	-	-		
	HO/HM			2	0	2	0	0	-	2	0	2	1	5		
Homburg/Saar	HS			0	0	0	0	0	0	0	0	0	0	0		
-	KS			1	1	0	0	0	-	-	-	-	-	-		
-	MA	0	0	0	0	0	-	-	-	-	-	-				
München	ML	11	8	3	0	1	2	2	2	0	0	4				
-	MR	1	0	1	0	1	-	-	-	-	-	-				
UNI-NBav	WZ	4	3	1	0	1	-	-	-	-	-	-				
Tübingen	TU	4	3	1	1	0	0	0	0	0	0	0				
	TU	4	3	1	1	0	-	0	0	0	0	0				
-	UL	2	0	2	1	1	-	-	-	-	-	-				
	TOTAL		59	35	24	4	9		11		9	2	22	-2		
Netherlands	Groningen	GR	9	8	1	0	0	1	0	1	0	0	1			
		AW	2	2	0	0	0	-	-	-	-	-	-			
		GR	1	1	0	0	0	-	0	1	0	0	1			
		LB	1	1	0	0	0	-	-	-	-	-	-			
		MS	1	1	0	0	0	-	-	-	-	-	-			
		NY	3	3	0	0	0	-	-	-	-	-	-			
		UT	2	1	1	0	0	1	-	-	-	-	-			
	TOTAL		9	8	1	0	0		1		0	0	1	0		
Eurotransplant, Total			87	53	34	6	10		18		10	6	34	0		
From/ To outside ET	Twinning		3	2	1	1	0	0	0	0	0	0	0			
	No twinning		12	12	0	0	0	0	0	0	0	1	1			
	TOTAL		15	14	1	1	0	0	0	0	0	1	1	0		
Total			102	67	35	7	10		18		10	7	35	0		

Table 5e Survey of donor single lung exchange in 1995

1	2a	2b	3a	3c	3d	4	5a	5b	5c	5d/6a	6b	6c	6d	7	8
Country	Region	Center code	Donors	Donors	Donors	Single lungs used Total	Destination / Origin							Lung transplants Total	National Exchange Balance
			Report Total	Single lung	2 single lung		Outside country	Same country	Same region	Local center	Same region	Same country	Outside country		
Austria	Graz	GA	2	2	0	2	2	0		0		0	0	0	
	Innsbruck	IB	0	0	0	0	0	0		0		0	1	1	
	Wien	WG	9	3	6	15	8	0	0	7	0	0	4	11	
	TOTAL		11	5	6	17	10	0		7		0	5	12	-5
Belgium	-	BJ	3	3	0	3	1	2		-		-	-	-	
	Bruxelles	BR	0	0	0	0	0	0		0		4	1	5	
	Gent	GE	1	1	0	1	1	0		-		-	-	-	
	Bruxelles	LA	4	3	1	5	2	1		2		0	2	4	
	Liège	LG	1	1	0	1	1	0		-		-	-	-	
	Leuven	LM	3	2	1	4	1	1		2		0	3	5	
TOTAL		12	10	2	14	6	4		4		4	6	14	0	
Germany	UNI-NRW		1	1	0	1	0	0	0	1	0	0	0	1	
		ES	1	1	0	1	0	0	-	1	0	0	0	1	
	Berlin DHZ	BD	1	1	0	1	0	1	1	0	1	0	1	2	
		BD	-	-	-	0	0	0	-	0	1	0	1	2	
		BV	1	1	0	1	0	0	1	-	-	-	-	-	
	UNI-TSA		2	1	1	3	0	3	0	0	0	0	0	0	
		HA	1	0	1	2	0	2	-	0	0	0	0	0	
		JE	1	1	0	1	0	1	0	-	-	-	-	-	
	Fulda	FD	1	1	0	1	0	1		0		0	2	2	
	-	GO	1	0	2	2	1	1		-		-	-	-	
	UNI-TVN		2	1	1	3	0	3	0	0	0	0	0	0	
		KI	1	0	1	2	0	2	-	0	0	0	0	0	
		RO	1	1	0	1	0	1	0	-	-	-	-	-	
	Hannover	HO	1	0	1	2	0	2	0	0	0	2	5	7	
Homburg/Saar	HS	0	0	0	0	0	0		0		1	0	1		
München	ML	1	1	0	1	1	0		0		7	5	12		
Mainz	MZ	2	2	0	2	0	0		2		1	0	3		
UNI-NBav		3	1	2	5	2	3		-		-	-	-		
	NB	2	1	1	3	1	2		-		-	-	-		
	WZ	1	0	1	2	1	1		-		-	-	-		
TOTAL		15	9	6	21	6	11		4		11	13	28	+7	
Netherlands	Groningen	GR	5	4	1	6	6	0	0	0	0	0	3	3	
		GR	1	1	0	1	1	0	-	0	0	0	3	3	
		LB	1	1	0	1	1	0	0	-	-	-	-	-	
		RD	1	1	0	1	1	0	0	-	-	-	-	-	
		UT	2	1	1	3	3	0	0	-	-	-	-	-	
TOTAL		5	4	1	6	6	0		0		0	3	3	-3	
Eurotransplant, Total			43	28	15	58	28	15		15		15	27	57	-1
From/ To outside ET	Twinning		0	0	0	0	0	0	0	0	0	0	0	0	
	No twinning		0	0	0	0	0	0	0	0	0	0	1	1	
TOTAL		0	0	0	0	0	0	0	0	0	0	1	1	+1	
Total		43	28	15	58	28	15		15		15	28	58	0	

Table 5f Survey of donor whole liver exchange in 1996

1	2a	2b	3a	3b	4	5a	5b	5c	5d/6a	6b	6c	6d	7	8
Country	Region	Center code	Donors	Donors	Livers	Destination / Origin							Liver	National
			Report	Not Used	Used	Outside	Same	Same	Local	Same	Same	Outside	trans-	Exchange
			Total	Total	Total	country	country	region	center	region	country	country	plants	Balance
													Total	
Austria	Graz	GA	20	6	14	9	0		5		0	2	7	
	Innsbruck	IB	44	9	35	11	1	0	23	3	1	20	47	
		OE/OL/OW	11	2	9	5	0	4	-	-	-	-	-	-
	Wien	WG	72	20	52	14	1	0	37	1	1	37	76	
	TOTAL		147	37	110	39	2		69		2	59	130	+20
Belgium	-	AN	12	4	8	7	1		-		-	-	-	
		BJ	9	2	7	7	0		-		-	-	-	
	Bruxelles	BR	27	8	19	7	1		11		3	5	19	
	Gent	GE	39	4	35	13	3		19		2	16	37	
	Bruxelles	LA	33	11	22	9	0		13		4	21	38	
	Liège	LG	25	4	21	16	3		2		1	8	11	
	Leuven	LM	40	13	27	14	2	0	11	0	0	10	21	
		AS	3	1	2	2	0	0	-	-	-	-	-	-
	LM	37	12	25	12	2	-	11	-	0	10	21	-	
	TOTAL		185	46	139	73	10		56		10	60	126	-13
Germany	Aachen	AK	7	1	6	2	4		0		1	1	2	
	Bonn	BO	21	3	18	2	5		11		5	6	22	
	Berlin	BV	50	13	37	5	10	20	2	20	40	64	126	
		BE	8	2	6	2	2	2	-	-	-	-	-	-
		BV	11	7	4	1	1	-	2	20	40	64	126	
		EB	31	4	27	2	7	18	-	-	-	-	-	-
		DR	8	1	7	1	6	-	-	-	-	-	-	-
	Essen	ES	66	11	55	10	17	14	14	14	14	7	49	
		Bochum	8	0	8	1	3	3	1	0	0	0	1	
		DU	26	6	20	4	5	11	-	-	-	-	-	-
		ES	32	5	27	5	9	-	13	14	14	7	48	
	Frankfurt	FM	18	3	15	2	5	1	7	1	3	2	13	
		FD	3	1	2	1	0	1	-	-	-	-	-	-
		FM	15	2	13	1	5	-	7	1	3	2	13	
	Freiburg	FR	12	2	10	1	2	6	7	-	2	3	12	
		GI	10	3	7	1	6	-	-	-	-	-	-	-
	Göttingen	GO	15	5	10	2	6	-	2	-	5	10	17	
	Heidelberg	HB	42	10	32	7	9	12	4	12	11	13	40	
		HB	14	2	12	5	3	-	4	12	11	13	40	
		HS	7	2	5	2	1	2	-	-	-	-	-	-
		KS	6	3	3	0	1	2	-	-	-	-	-	-
		MA	4	1	3	0	1	2	-	-	-	-	-	-
		MZ	6	2	4	0	2	2	-	-	-	-	-	-
		WB	5	0	5	0	1	4	-	-	-	-	-	-
	Hamburg	HG	43	17	26	4	13	3	6	3	22	26	57	
		HG	28	14	14	1	7	-	6	3	22	26	57	
		LU	15	3	12	3	6	3	-	-	-	-	-	-
	Hannover	HO	76	27	49	8	6	4	31	4	22	25	82	
		BM	11	3	8	3	1	4	-	-	-	-	-	-
		HO/HM	65	34	41	5	5	-	31	4	22	25	82	
	Jena	JE	33	10	23	3	9	-	11	-	7	7	25	
	Kiel	KI	13	0	13	1	7	-	5	-	9	9	23	
	Köln L	KL	16	4	12	4	8	-	0	-	1	0	1	
	Köln M	KM	12	2	10	1	5	-	4	-	5	3	12	
	Leipzig	LP	25	10	15	0	9	-	6	-	17	3	26	
	Magdeburg	MB/HA	21	3	18	3	15	-	0	-	6	0	6	
	München	MH	0	0	0	0	0	-	0	5	4	1	10	
	München	ML	56	10	46	6	11	5	24	-	8	13	45	
	Münster	MN	24	7	17	7	7	-	3	-	2	2	7	
		MR	5	3	2	1	1	-	-	-	-	-	-	-
	Nürnberg	NB	35	9	26	6	7	-	13	-	8	6	27	
	Regensburg	RB	10	3	7	1	3	-	3	-	4	1	8	
	Rostock	RO	24	7	17	8	7	-	2	-	2	1	5	
	Tübingen	TU	18	6	12	0	3	0	9	0	2	2	13	
		ST	4	2	2	0	2	0	-	-	-	-	-	-
		TU	14	4	10	0	1	-	9	0	2	2	13	
		UL	14	2	12	3	9	-	-	-	-	-	-	-
Würzburg	WZ	18	3	15	3	11	-	1	-	1	5	7		
	TOTAL		692	175	517	92	201		224		201	210	635	+118
Luxembourg	TOTAL		11	4	7	7	0		0		0	0	0	-7
Netherlands	Groningen	GR	96	14	82	65	6	4	7	4	4	27	42	
		GR	30	4	26	17	2	-	7	4	4	27	42	
		MS	16	3	13	11	1	1	-	-	-	-	-	
		NY	38	5	33	28	2	3	-	-	-	-	-	
		UT	12	2	10	9	1	-	-	-	-	-	-	
	Leiden	LB	13	2	11	8	1	-	2	0	3	2	7	
		AW	25	6	19	16	0	3	-	-	-	-	-	
	Rotterdam	RD	25	7	18	10	3	-	5	3	3	16	27	
	TOTAL		159	29	130	99	10		21		10	45	76	-54
Eurotransplant, Total			1194	291	903	310	223		370		223	374	967	+64
From/	Twinning		64	15	49	22	0	27	0	0	0	0	0	
To outside ET	No twinning		52	32	20	20	0	0	0	0	0	5	5	
	TOTAL		116	47	69	42	0	27	0	0	0	5	5	-64
Total			1310	338	972	352	223	27	370	223	379	972	0	0

Table 5g Survey of donor split liver exchange in 1996

1	2a	2b	3a	4	5a	5b	5c	5d/6a	6b	6c	6d	7	8
Country	Region	Center code	Donors	Livers	Destination / Origin							Liver transplants Total	National Exchange Balance
			Report Total	Used Total	Outside country	Same country	Same region	Local center	Same region	Same country	Outside country		
Austria	Graz Innsbruck	GA	2	4	4	0		0		0	0	0	
		IB	1	2	0	0		2		0	0	2	
	TOTAL		3	6	4	0		2		0	0	2	-4
Belgium	Gent Bruxelles Leuven	GE	1	2	0	0		2		0	1	3	
		LA	3	6	3	0		3		1	2	6	
		LM	2	4	3	1		0		0	0	0	
	TOTAL		6	12	6	1		5		1	3	9	-3
Germany	Bonn	BO	1	2	0	2		0		0	0	0	
		ES	2	4	1	1	2	0	2	2	0	4	
	Essen	ES	1	2	1	1	0	0	2	2	0	4	
		DU	1	2	0	0	2	-	-	-	-	-	
		GO	0	0	0	0		0		0	3	3	
	Göttingen	MB/HA	1	2	0	2		0		0	0	0	
		HB	1	2	0	1		1		0	2	3	
	Heidelberg	HG	5	10	0	0	2	8	2	11	8	29	
		HG	4	8	0	0	0	8	2	11	8	29	
	Hamburg	LU	1	2	0	0	2	-	-	-	-	-	
		HO	2	4	0	2	0	2	0	4	5	11	
		BM	1	2	0	2	0	-	-	-	-	-	
	Hannover	HO/HM	1	2	0	0	0	2	0	4	5	11	
		KM	1	2	0	1		0		0	0	0	
	Köln M	ML/MH	1	2	0	2		0		0	1	1	
		RO	2	4	1	3		0		0	0	0	
	Rostock	TU	1	2	0	1		1		1	1	3	
Tübingen		UL	1	2	0	2		-	-	-	-		
	TOTAL		18	36	2	18		18		18	20	54	+18
Netherlands	Groningen	GR	3	6	6	0	0	0	0	0	0	0	
		GR	1	2	2	0	0	0	0	0	0	0	
		NY	1	2	2	0	0	-	-	-	-	-	
		UT	1	2	2	0	0	-	-	-	-	-	
	Rotterdam	RD	1	2	2	0		0		0	0	0	
	TOTAL		4	8	8	0		0		0	0	0	-8
Eurotransplant, Total			31	62	20	19		23		19	23	65	+3
From/ To outside ET	Twinning		1	2	0	0	2	0	0	0	0	0	
	No twinning		1	2	1	0	0	1	0	0	0	0	
	TOTAL		2	4	1	0	2	1	0	0	0	1	-3
Total			33	66	21	19	2	24		19	23	66	0

Table 5h Survey of donor pancreas exchange for pancreas & islet transplantation in 1996

1	2b	3a	3b		4						7				
Country	Center code	Donor Report Total	Donor Not Used	Pancreas disposition to								Pancreas transplants			
				Research				Pancreas Transplantation							
				BJ	GI	FR	Others	PA-only	PA/KI	IS/KI	IS-only	PA-only	PA/KI	IS/KI	IS-only
Austria	GA	12	8	3	-	-	-	-	1	-	-	-	-	-	-
	IB	22	14	1	-	-	-	1	5	1	-	1	6	1	0
	OL	8	4	1	1	-	-	-	2	-	-	-	-	-	-
	OW	2	1	-	-	-	-	-	1	-	-	-	-	-	-
	WG	2	1	1	-	-	-	-	-	-	-	-	-	-	-
	TOTAL	46	28	6	1	0	0	0	1	9	1	0	1	6	0
Belgium	AN	16	2	13	-	-	-	-	1	-	-	0	2	-	-
	AS	3	1	1	1	-	-	-	-	-	-	-	-	-	-
	BJ	8	2	3	-	-	-	-	-	-	'3'	-	-	0	'3'
	BR	12	5	4	-	-	-	-	3	-	-	0	3	-	-
	GE	31	6	24	-	-	-	-	1	-	-	0	1	-	-
	LA	32	8	18	-	-	-	-	5	1	-	0	3	-	-
	LG	9	1	-	-	-	-	-	8	-	-	0	1	-	-
	LM	32	7	19	-	-	-	-	6	-	-	0	3	-	-
	TOTAL	143	32	82	1	0	0	0	0	24	1	3	0	13	0
Germany	AK	2	2	-	-	-	-	-	-	-	-	-	-	-	-
	BB	5	2	-	-	-	-	2	1	-	-	3	33	-	-
	BE	4	2	-	-	-	-	-	2	-	-	-	-	-	-
	BM	8	4	2	2	-	-	-	-	-	-	-	-	-	-
	BO	19	7	5	2	3	-	-	2	-	-	-	-	-	-
	BV	5	3	1	-	-	-	-	1	-	-	0	8	-	-
	DR	6	2	1	-	1	-	-	2	-	-	-	-	-	-
	DU	10	6	4	-	-	-	-	-	-	-	-	-	-	-
	EB	16	6	2	1	-	-	-	7	-	-	-	-	-	-
	ES	19	9	4	1	-	-	-	4	-	1	0	1	-	-
	FD	1	0	1	-	-	-	-	-	-	-	-	-	-	-
	FM	11	7	1	1	-	-	-	2	-	-	-	-	-	-
	FR	8	0	-	-	8	-	-	-	-	-	-	-	-	-
	GI	5	3	-	-	-	-	-	1	1	-	-	-	8	3
	GO	5	2	2	-	1	-	-	-	-	-	-	-	-	-
	HA	15	6	4	-	-	-	-	2	3	-	-	-	-	-
	HB	7	4	1	1	-	-	-	-	-	1	-	-	-	-
	HG	8	5	1	1	-	-	-	1	-	-	0	1	-	-
	HO/HM	8	5	1	-	1	-	-	1	-	-	-	-	-	-
	HS	3	3	-	-	-	-	-	-	-	-	-	-	-	-
	JE	17	9	1	1	-	-	-	6	-	-	-	-	-	-
	KI	9	3	4	-	-	-	-	2	-	-	-	-	-	-
	KL	13	3	6	1	1	-	-	2	-	-	-	-	-	-
	KM	10	4	1	-	-	-	-	5	-	-	-	-	-	-
	KS	2	0	2	-	-	-	-	-	-	-	-	-	-	-
	LP	18	11	4	1	-	-	-	1	1	-	-	-	-	-
	LU	13	5	5	-	-	-	-	2	1	-	-	-	-	-
	MA	3	1	-	-	1	-	-	-	1	-	-	-	-	-
	ML	34	9	2	-	-	-	-	2	21	-	2	31	-	-
	MN	9	6	2	-	-	-	-	1	-	-	-	-	-	-
	MR	4	2	1	-	-	-	-	1	-	-	0	3	-	-
	MZ	3	1	2	-	-	-	-	-	-	-	-	-	-	-
NB	10	1	4	1	2	-	-	2	-	-	-	-	-	-	
RB	3	1	-	-	1	-	-	1	-	-	-	-	-	-	
RO	15	7	2	-	-	-	-	1	4	-	1	8	-	-	
ST	2	0	-	-	-	-	-	2	-	-	-	-	-	-	
TU	10	2	2	1	1	1	-	3	-	-	0	6	-	-	
UL	13	5	2	1	-	-	-	4	-	1	0	4	-	-	
WB	4	2	1	-	-	-	-	-	-	1	-	-	-	-	
WZ	16	7	6	2	-	-	-	-	-	1	-	-	-	-	
TOTAL	373	157	77	17	20	1	7	7	84	7	3	7	95	8	3
Luxemburg	TOTAL	6	4	2	0	0	0	0	0	0	0	0	0	0	0
Netherlands	AW	15	8	5	-	1	-	-	1	-	-	-	-	-	-
	GR	22	9	9	-	-	-	-	4	-	-	-	5	-	-
	LB	6	2	2	1	-	-	-	1	-	-	-	12	-	-
	MS	9	3	5	-	-	-	-	1	-	-	-	-	-	-
	NY	35	8	22	-	-	-	-	5	-	-	-	-	-	-
	RD	10	3	4	1	-	-	-	2	-	-	-	-	-	-
	UT	9	4	4	-	-	-	1	0	-	-	-	-	-	-
TOTAL	106	37	51	2	1	1	-	14	-	-	0	17	0	0	
Eurotransplant, Total		674	258	218	21	21	2	8	131	9	6	8	131	9	6

Table 5i Survey of donor kidney exchange for pancreas/kidney & islet/kidney transplantation in 1996

1	2a	2b	4	5a	5b	5c	5d/6a	6b	6c	6d	7	8	
Country	Region	Center code	Pancreas Kidneys Used Total	Outside country	Same country	Destination/Origin Same region	Local center	Same region	Same country	Outside country Total	Pancreas Kidney transplants	National Exchange Balance	
Austria	Graz Innsbruck Upper Austria	GA	1	1	0		0		0	0	0	-1	
		IB	6	2	0		4		0	3	7	+1	
			3	3	0	0	0	0	0	0	0	0	-3
		OL	2	2	0	0	-	-	-	-	-	-	-
		OW	1	1	0	0	-	-	-	-	-	-	-
	TOTAL		10	6	0		4		0	3	7	-3	
Belgium Luxemburg	Bel_1 Bruxelles Bruxelles Bel_2	AN	9	5	3	0	1	0	1	1	3	-6	
		LG	1	0	1	0	0	0	1	1	2		
		BR	8	5	2	0	1	0	0	0	1		
		LA	3	0	0		3		0	0	3	0	
			6	4	1		1		1	1	3	-3	
			7	5	0	0	2	0	2	0	4	-3	
		GE	1	0	0	0	1	0	0	1			
		LM	6	5	0	0	1	0	2	0	3		
Belgium	TOTAL		25	14	4		7		4	2	13	-12	
Germany	Bochum Berlin UNI-TVN UNI-RP Essen Frankfurt/Gießen UNI-TSA Heidelberg Hannover Köln Mannheim UNI-NBav UNI-SBav Münster Marburg Stuttgart/Tübingen Ulm	BB	1	0	0		1		23	9	33	+32	
			10	0	2	7	1	7	0	0	8	-2	
			2	0	0	2	-	-	-	-	-	-	
			1	0	0	-	1	7	0	0	8		
			7	0	2	5	-	-	-	-	-	-	
			6	1	5	0	0	0	1	0	1	-5	
			1	0	1	0	0	0	1	0	1		
			2	1	1	0	-	-	-	-	-	-	
			3	0	3	0	-	-	-	-	-	-	
			3	0	3	0	0	0	0	0	0	0	-26
			2	0	2	0	-	-	-	-	-	-	
			1	0	1	0	-	-	-	-	-	-	
			4	1	2		1		0	0	1	-3	
			4	0	3	0	1	0	6	1	8	+4	
			2	0	2	0	0	0	0	0	0		
			2	0	1	0	1	0	6	1	8		
			17	1	14	1	1	1	6	0	8	-9	
			2	1	1	0	-	-	-	-	-	-	
			3	0	2	1	-	-	-	-	-	-	
			6	0	6	0	-	-	-	-	-	-	
			2	0	2	0	-	-	-	-	-	-	
			4	0	3	0	1		6	0	8		
			1	0	1		0		0	0	0	-1	
			1	0	1		0		0	0	0	-1	
			7	0	7	0	0	0	0	0	0	-7	
			2	0	2	0	-	-	-	-	-	-	
			5	0	5	0	-	-	-	-	-	-	
	1	0	1		0		0	0	0	0	-1		
	4	0	4	0	0	0	0	0	0	0	-4		
	2	0	2	0	-	-	-	-	-	-			
	1	0	1	0	-	-	-	-	-	-			
	1	0	1	0	-	-	-	-	-	-			
	21	2	1	0	18	0	7	6	31	+10			
		MH				0	1	0	1				
		ML				18	0	6	6	30			
		MN	1	0	1		0	0	0	0	-1		
		MR	1	0	1		0	2	1	3	+2		
			5	0	2	1	2	1	2	6	+1		
		ST	2	0	1	1	-	-	-	-			
		TU	3	0	1	-	2	1	2	6			
		UL	4	1	0		3	1	0	4	0		
	TOTAL		91	6	48		37		48	18	103	+12	
Netherlands	Amsterdam Groningen Leiden Maastricht Nijmegen Rotterdam	AW	1	0	1		0		0	0	0	-1	
		GR	4	1	0		3		1	1	5	+1	
		LB	1	0	0		1		4	7	12	+11	
		MS	1	1	0		0		0	0	0	-1	
		NY	5	3	2		0		0	0	0	-5	
		RD	2	0	2		0		0	0	0	-2	
	TOTAL		14	5	5		4		5	8	17	+3	
Eurotransplant, Total			140	31	57		52		57	31	140	0	

*The regional cooperations, existing with regard to kidney transplantation, have been used.

Balance sheet and exploitation result of Stichting Eurotransplant International Foundation

Balance sheet

	31.12.1996 × Dfl. 1000	31.12.1995 × Dfl. 1000
Assets		
Short term receivables	4.461	3.935
Liquid assets	5.248	5.085
	<u>9.709</u>	<u>9.020</u>
Liabilities		
Equity	519	519
Reserve funds	3.920	3.774
Short term liabilities	5.270	4.727
	<u>9.709</u>	<u>9.020</u>

Statement of income and charges

	1996 × Dfl. 1000	1995 × Dfl. 1000
Income		
Registration fees a	5.700	5.393
Miscellaneous b	197	331
	<u>5.897</u>	<u>5.724</u>
Charges		
Salaries c	2.895	2.876
General expenses d	1.306	1.362
Medical expenses e	459	446
Transport f	320	294
Housing g	287	236
Depreciation h	441	318
Miscellaneous i	128	136
	<u>5.835</u>	<u>5.668</u>
Exploitation-balance	62	55
	<u>5.897</u>	<u>5.724</u>

Accounting policies

Current assets and liabilities

These are stated at nominal value. For doubtful accounts a provision has been made.

Exploitation balance

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

Auditor's report

We have audited the financial statements of Stichting Eurotransplant International Foundation for the year ended December 31, 1996 from which the summarized financial statements were derived, in accordance with relevant auditing standards. In our report dated April 25, 1997 we expressed an unqualified opinion on the financial statements from which the summarized financial statements were derived. These financial statements are the responsibility of the Foundation's management.

In our opinion, the accompanying summarized financial statements are consistent, in all material respects, with the financial statements from which they were derived.

For a better understanding of the Foundation's financial position and the results of its operations for the period and the scope of our audit, the summarized financial statements should be read in conjunction with the financial statements from which the summarized financial statements were derived and our audit report thereon.

Leiden, April 25, 1997

Deloitte & Touche