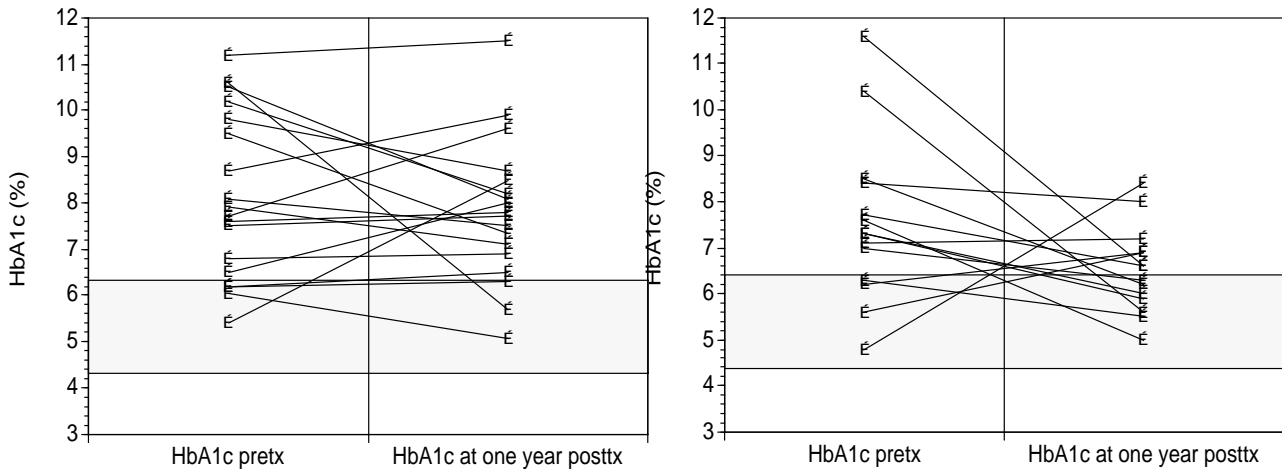


## HbA1c before and One Year After Adult Islet Allotransplantation according to Basal C-Peptide Levels\*



\* HbA1c levels both before and one year after islet transplantation were available only in 32 out of 55 pretransplant C-peptide negative type-I diabetic patients transplanted from 1990-92 (see page 9)

## The Insulin-Independent Cases

### The Zurich Case (Transplantation 29: 76-77, 1980)

A 32-yr-old uremic patient, who had insulin-dependent diabetes for 22 years, received simultaneously with a kidney transplant an intrasplenic injection of pancreatic microfragments from a 2.5-yr-old totally histoincompatible donor. Immunosuppression was induced with antilymphocyte globulin, cyclophosphamide, azathioprine, and prednisone. Exogenous insulin therapy was stopped at 9 months posttransplant, and the patient remained insulin independent until shortly before her sudden death 20 months after transplantation. Unfortunately, pre- and postoperative C-peptide data were not reported in this remarkable case to clearly document the preoperative insulin-dependent status and the posttransplant islet function. Nevertheless, the Zurich patient, transplanted in 1979, displayed special aspects such as the simultaneously transplanted kidney, the use of T-cell antibodies for induction immunosuppression, and the potentially long interval between the time of transplant and the begin of the insulin-independent state. These aspects should prove to be important characteristics of islet allograft recipients who became insulin independent in 1989 or later.

### Insulin Independence After Simultaneous Liver and Adult Islet Transplantation Summary of Cases through Dec 31, 1993

Institution	Year of Tx	No. of Donors	IEQ <sup>1</sup> x 1000	Site of Tx	Period of Insulin Independence Post Tx	Comments
Paris	1988	1	150 <sup>2</sup>	epiploic flap	month 7 - 49	hemochromatosis
Paris	1990	1	250 <sup>2</sup>	epiploic flap	day 1 - 8	type-I diabetes
Pittsburgh	1990	1	474	liver	month 2 - > 42 <sup>3</sup>	simult. islet, liver and kidney tx; CMV inf.
Pittsburgh	1990	1	289	liver	month 2 - 4	cluster tx/FK 506 <sup>5</sup>
Pittsburgh	1990	2	578	liver	month 2 - 15	cluster tx/FK 506
Pittsburgh	1990	2	258	liver	month 5 - 15	cluster tx/FK 506
Pittsburgh	1990	1	285	liver	month 3 - 10	cluster tx/FK 506 <sup>5</sup>
Pittsburgh	1990	2	726	liver	month 2 - 20	cluster tx/FK 506 <sup>5</sup>
Pittsburgh	1990	2	332	liver	month 1 - 15	cluster tx/FK 506 <sup>5</sup>
Milan	1992	2	830	liver	month 2 - 14	residual C-peptide secretion pre tx
Verona	1993	1	325	liver	month 2 - > 8 <sup>4</sup>	type-I diabetes, marked pre-tx basal C-peptide

1) IEQ = islet equivalents 2) number of islets 3) as of June 10, 1993 4) as of March 14, 1994 5) died off insulin

## Insulin Independence After Adult Islet Transplantation into Type I Diabetic Patients Summary of Cases through Dec 31, 1993

Institution	Year of Tx	No. of Donors		IEQ* x 1000	Islet Purity	Site of Tx	Type of Tx	HLA Match		Induction- Immunosuppression	Period of Insulin Independence Post Tx	Glucose Control †
		Fresh	Cryo					AB	DR			
St. Louis	1989	1.4	-	785		p.v. <sup>Δ</sup>	IAK*	1/3	2/1	ALG (+M-Pred)	day 10 - 25	i.v. Insulin
St. Louis	1990	1	+ 2	550+555	98%	p.v. <sup>Δ</sup>	IAK*	1/2/2	1/1/0	ALG (+M-Pred)	day 33 - 341	i.v. Insulin
St. Louis	1993	1	+ 7	1,354	90%	p.v. <sup>Δ</sup>	SIK*	2 (fresh)	1 (fresh)	OKT3 (CsA+AZA+Pred)	day 92 - > 210 #	i.v. Insulin
Edmonton	1990	1	+ 4	243+368	70%	p.v. <sup>Δ</sup>	SIK*	3 (fresh) 1/0/2/0	0 (fresh) 0 (cryo)	ALG (+M-Pred, AZA, CsA at day 10)	day 69 - 821	i.v. Insulin
Edmonton	1992	1	+ 5	284+308	55%	p.v. <sup>Δ</sup>	SIK*	3 1/0/0/1/0	1 (fresh) 1/1/0/0/1 (cryo)	ALG (+M-Pred, AZA, CsA at day 8)	day 155 - 166	i.v. Insulin
Milano	1990	1	-	592	95%	p.v. <sup>Δ</sup>	IAK*	1	0	ALG (+M-Pred, CsA, AZA)	day 120 - 330	i.v. Insulin
Milano	1990	2	-	482	75%	p.v. <sup>Δ</sup>	IAK*	1/2	1/0	ALG (+M-Pred, CsA, AZA)	day 60 - 1,178	i.v. Insulin
Milano	1991	1	+ 2	453+370	80%	p.v. <sup>Δ</sup>	SIK*	ND	ND	ALG (+M-Pred, CsA, AZA)	day 210 - 360 + day 480 - 635	i.v. Insulin
Milano	1992	2	-	613	80%	p.v. <sup>Δ</sup>	IAK*	ND	ND	ALG (+Pred, CsA, AZA)	day 150 - > 545 #	i.v. Insulin
Miami	1990	3	-	1,122	55%	p.v. <sup>Δ</sup>	IAK*	0/2/0	1/1/0	OKT3 (+M-Pred, CsA, AZA)	day 42 - 78	i.v. Insulin
Miami	1990	3	-	1,209	50%	p.v. <sup>Δ</sup>	IAK*	0/0/0	0/1/0	OKT3 (+M-Pred, CsA, AZA)	day 87 - 125	i.v. Insulin
Mnpls	1992	1	-	536	1%	p.v. <sup>Δ</sup>	SIK*	1	1	ALG (+Pred+CsA+DSG)	day 326 - > 753 #	i.v. Insulin
Mnpls	1992	1	-	626	1%	p.v. <sup>Δ</sup>	SIK*	2	0	ALG (+Pred+CsA+DSG)	day 123 - 231	i.v. Insulin
Giessen	1992	1	-	351	92%	p.v. <sup>Δ</sup>	IAK*	2	1	ATG (+M-Pred+CsA)	day 400 - > 473 #	i.v. Insulin

\* IEQ: Islet Equivalents (no. of islets if all had a diameter of 150 μm)  
 IAK: Islet After Kidney  
 SIK: Simultaneous Islet and Kidney

Δ portal vein  
 † in the early posttransplant period  
 # as of March 14, 1994