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ummary.

From December 12, 1893, through December 31, 1995, a total of 305 adult islet allografts and one adult islet xenograft including historical cases have been performed at 38 institutions worldwide including 174 at 13 institutions in North America, 131 at 23 institutions in Europe, and one elsewhere. The total number of diabetic patients reported to be insulin independent for at least seven days at  $\geq 1$ ,  $\geq 3$ ,  $\geq 6$ ,  $\geq 12$ ,  $\geq 24$ ,  $\geq 36$  and  $\geq 48$  month(s) after adult islet allotransplantation through December 31, 1995, is 39, 36, 26, 24, 16, 10, 4, and 1, respectively.

In an analysis by era, the percentages of pretransplant C-peptide negative patients (type 1 diabetes and pancreatectomy-induced diabetes) who showed basal C-peptide levels  $\geq 1$  ng/mL at  $\geq 1$  month posttransplant and who became insulin independent for more than 7 days in the 1985-89 era (n=28) were 25 % and 7 %, and in the 1990-94 era (n=131) 57 % (n=75) and 20 % (n=26), respectively (p=0.003, p=0.169).

A detailed analysis was performed on 96 pretransplant C-peptide negative patients with type 1 diabetes who received adult islet allografts between 1990 and 1994. One year patient and islet allograft survival (as defined by basal C-peptide  $\geq 1$  ng/mL) rates were 95 % and 27 %, and 7 % of the recipients were insulin independent at one year follow-up. Recipient age, sex, duration of diabetes, number of donor pancreata and islet purity did not influence one-year graft survival rates. Establishment of insulin independence was facilitated 1) if islets were isolated from pancreata with a mean preservation time  $< 8$  hrs., 2) if  $> 6,000$  islet equivalents (number of islets if all had a diameter of 150  $\mu$ m) per kg bodyweight of the recipient were transplanted, 3) if islets were transplanted into the liver via the portal vein, and 4) if induction immunosuppression comprised T-cell antibodies (see page 14, m). In the 1990-94 period, only recipients treated with ALG/ATG but not with OKT3 remained insulin-independent at  $\geq 1$  yr after transplantation.

30/96 pretransplant C-peptide negative islet allograft recipients with type 1 diabetes met all four aforementioned characteristics of long-term insulin independent recipients (ALG / ATG but not OKT3). 21 of these 30 patients (70 %) showed basal C-peptide levels  $\geq 1$  ng/mL, 25/30 (83 %) had HbA1c levels  $< 7$  %, and 6/30 (20 %) were insulin independent at  $\geq 1$  yr follow-up, respectively.

In this preselected group of patients, insulin independent (9/30) and insulin dependent recipients (21/30) did not differ in regard to age, BMI, diabetes duration, pre-tx HbA1c, pre-tx insulin requirements, donor age, cold storage time, and IEQ/kg, but the former had significantly higher basal C-peptide levels at 1 month ( $3.0 \pm 0.4$  vs  $1.4 \pm 0.3$  ng/mL, p = 0.0223) and at one year ( $2.3 \pm 0.1$  vs  $0.5 \pm 0.2$  ng/mL, p = 0.0003) posttransplant, respectively. These results seem to suggest that factors difficult to record such as islet viability and/or degree of islet implantation may determine clinical success.