



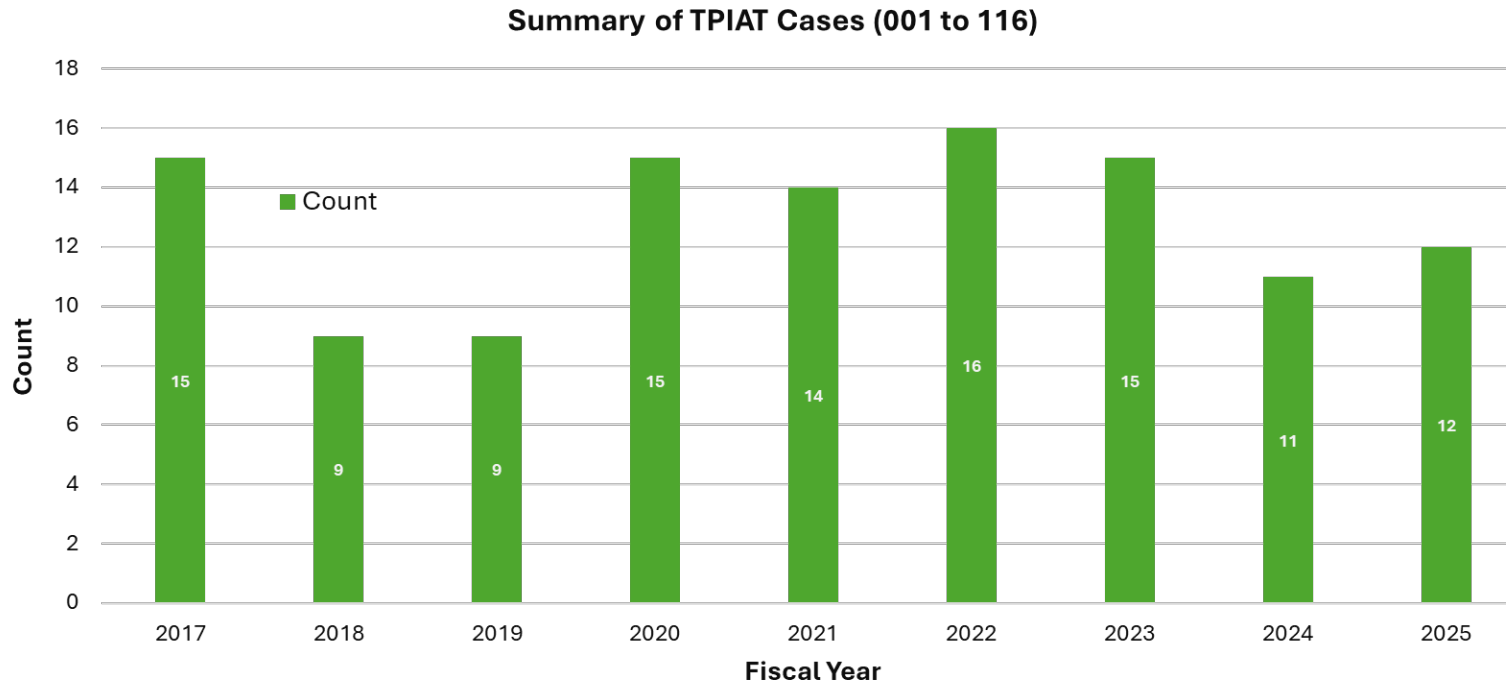
VCU Update CITR 2025

Mazhar A. Kanak, Ph.D.,

Associate Professor, Surgery (Transplant)
Director, Islet Cell Transplant Lab
Hume-Lee Transplant Center

Clinical Update

- TPIAT program started at VCU in July 2016
- 118 TPIAT cases have been performed to date

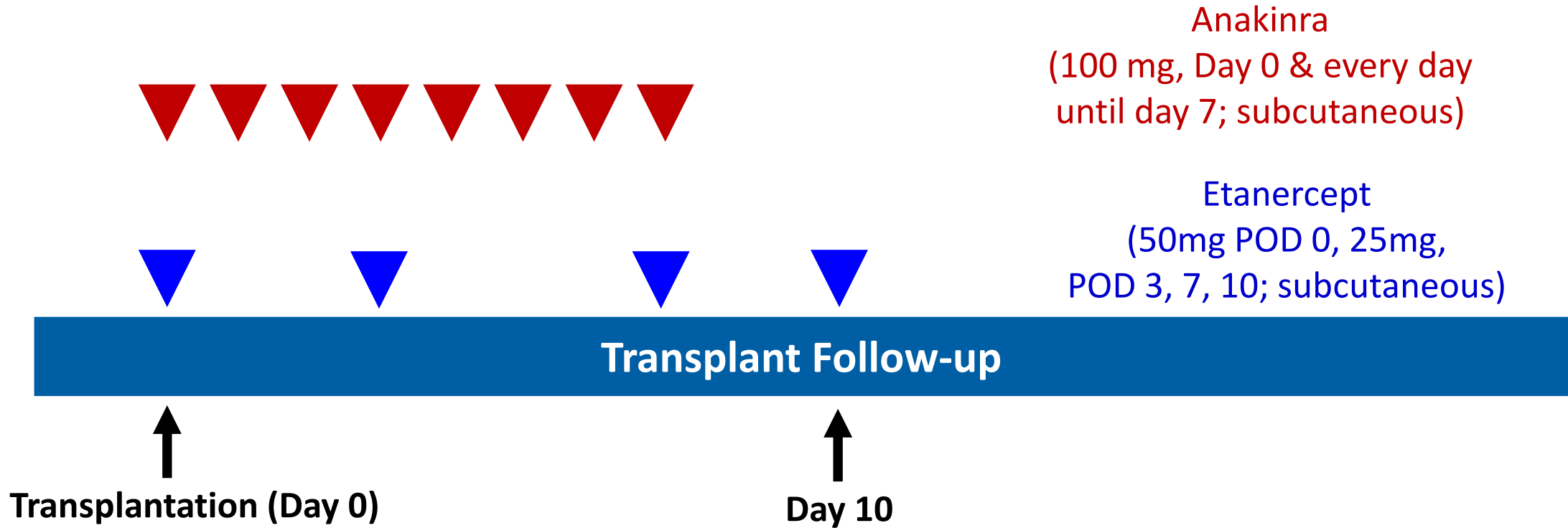


Marlon Levy, MD, FACS



Aamir Khan, MBBS

Anti-inflammatory Protocol



Patient Characteristics

Patients Characteristics	
Age (yr)	45±13
Gender; Male/Female	42/76
Body weight (kg)	75±19
BMI (kg/m ²)	26±7
Disease period (yr)	7.2 ± 7.2
Diabetes/Non-Diabetes	31/87
Cause of CP	n (%)
Autoimmune	2
Alcoholic	16
Genetic	22
Anatomic Anomaly (Pancreatic Divisum, Sphincter Oddi Dysfunction etc.,)	13
Idiopathic	44
Other (Hyperlipidemia, surgical, gall stones)	12
Recurrent Acute Pancreatitis	11
Patient Race and Ethnicity	n (%)
Caucasian	82 (69.5)
African American	23 (19.5)
Asian	2 (1.7)
American Indian or Alaskan Native	1 (0.8)
Hispanic or Latino	4 (3.4)
Unknown	6 (5.1)

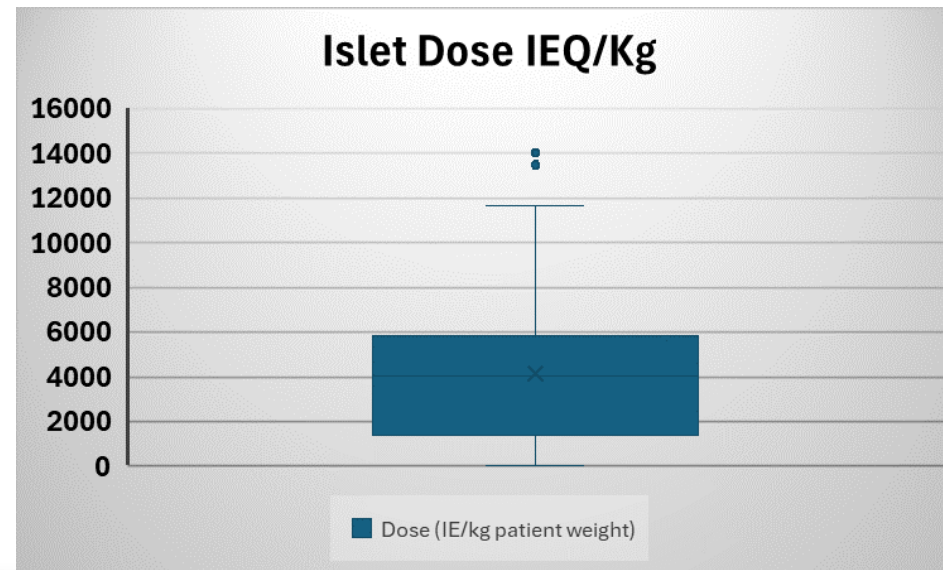
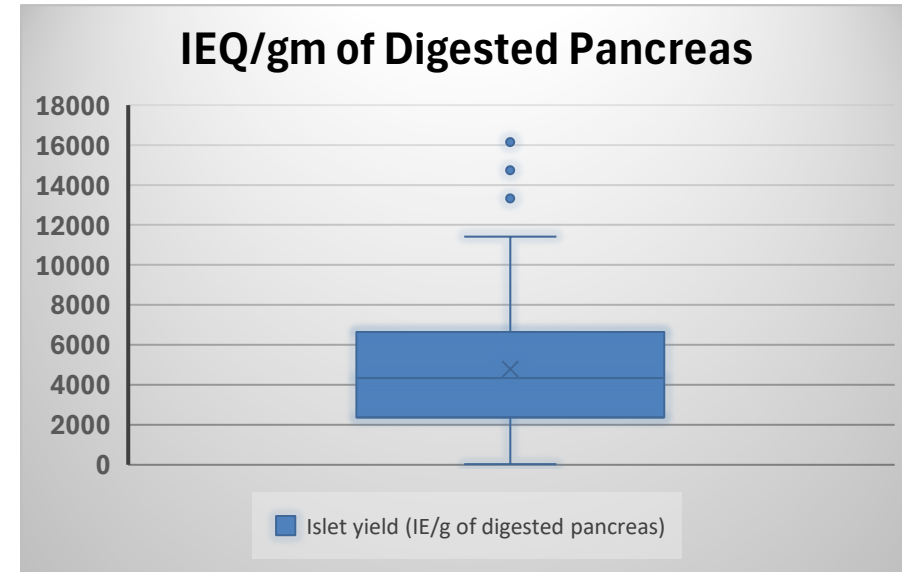
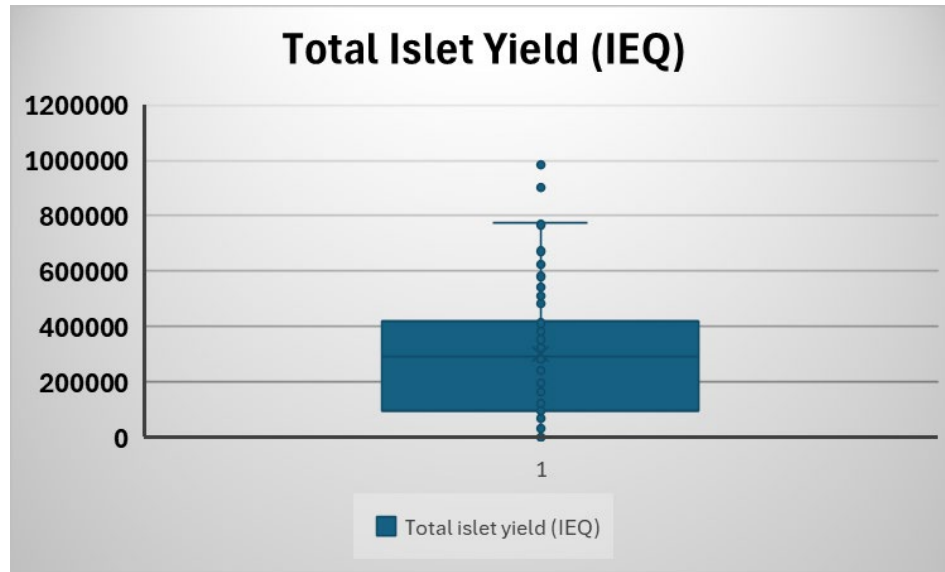
Pancreas and Islet Isolation Characteristics

Pancreas and islet isolation Characteristics

Trimmed Pancreas weight (g)	79.1 ± 33.2
Cold ischemia time (min)	67 ± 11
Distension score*	8.1 ± 2.3
Digestion time (min)	18.6 ± 7.6
Dilution time (min)	34.4 ± 6.2
Post-digestion count	
Islet yield (10^3 IE)	286 ± 206
% Purification	39.80
Final product	
Islet yield (10^3 IE)	301 ± 221
Islet yield/pancreas weight (IE/g)	4787 ± 3170
Islet yield/patient body weight (IE/kg)	4150 ± 3081
Tissue volume (ml)	14.8 ± 12.7
Viability (%)	95.5 ± 3.85
Purity (%)	29 ± 24

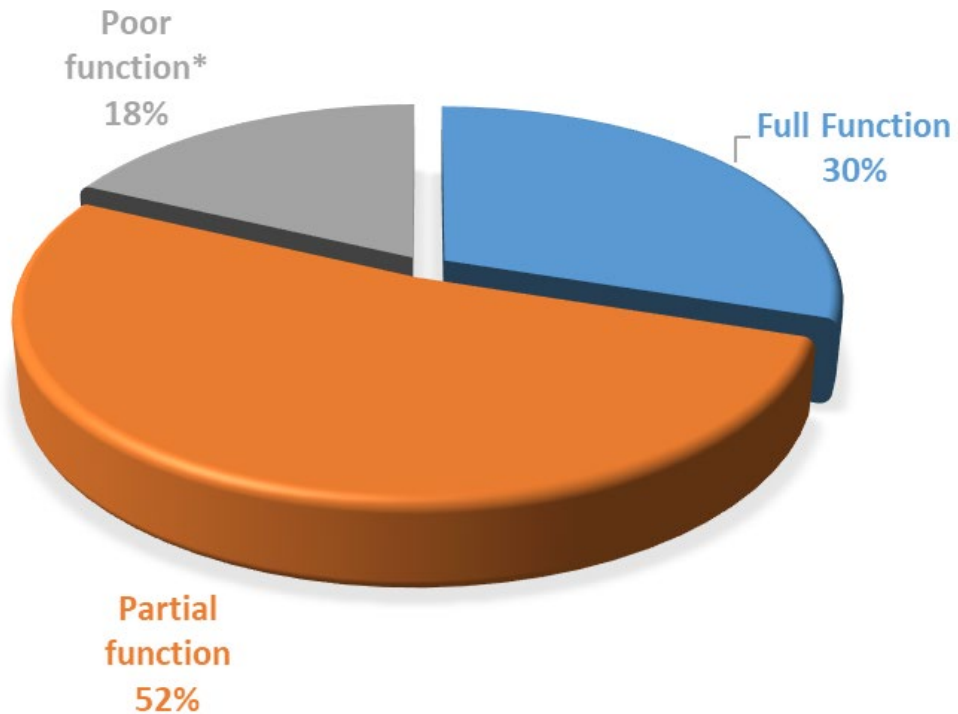
*Scoring; 10 excellent 1 worse

Yield and dose of Islet Transplanted

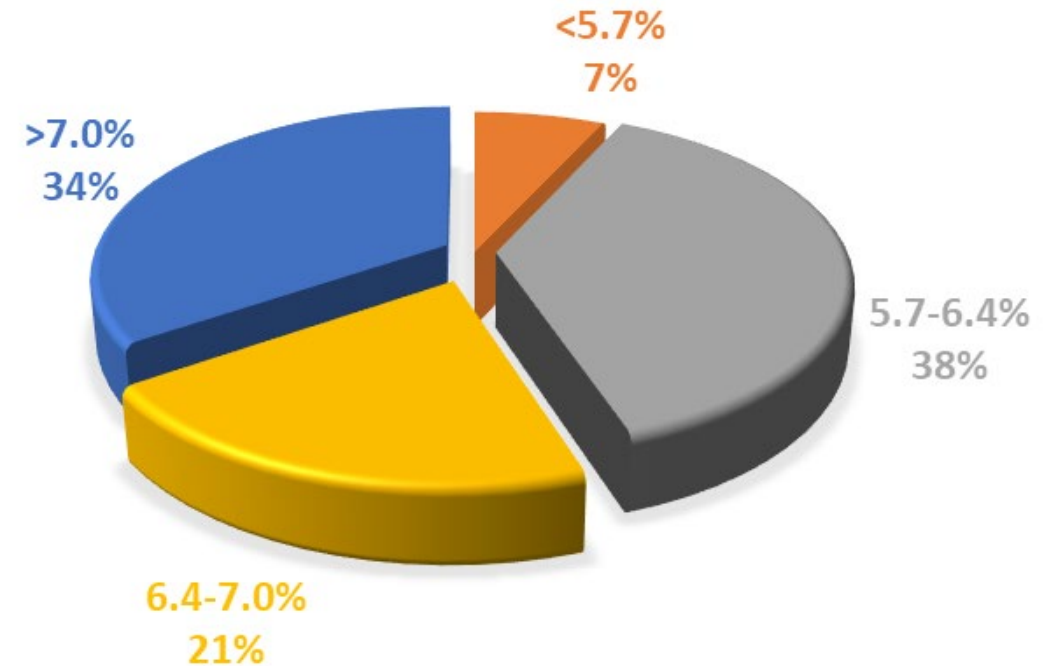


Metabolic Outcome All Patients (N=110)

TPIAT OUTCOME

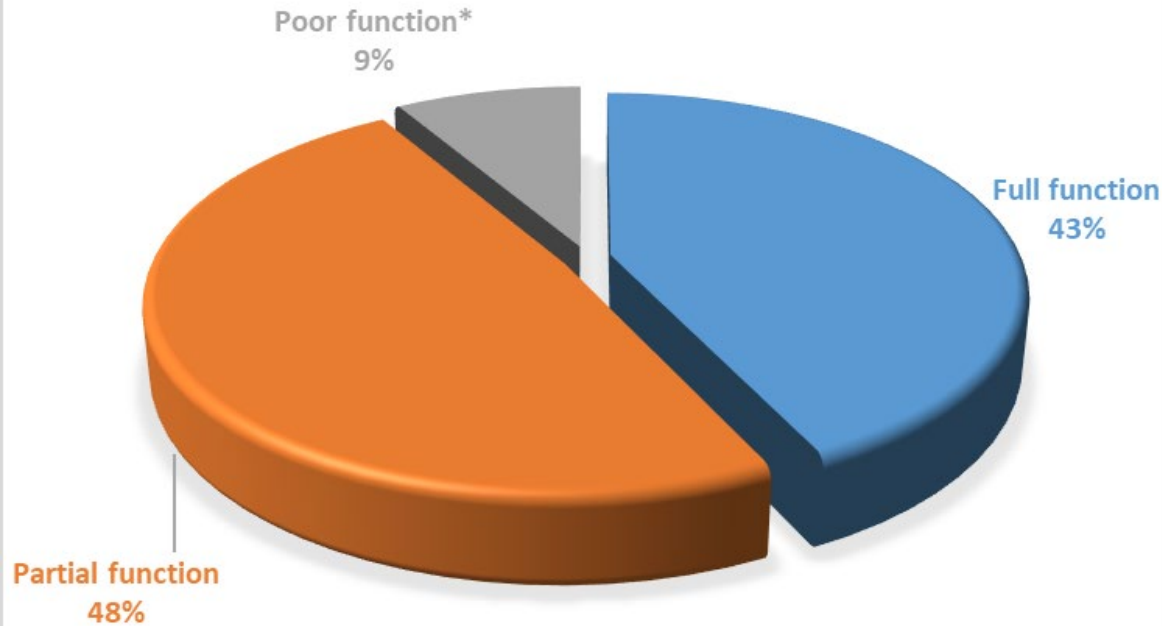


HBA1C (1 YEAR)

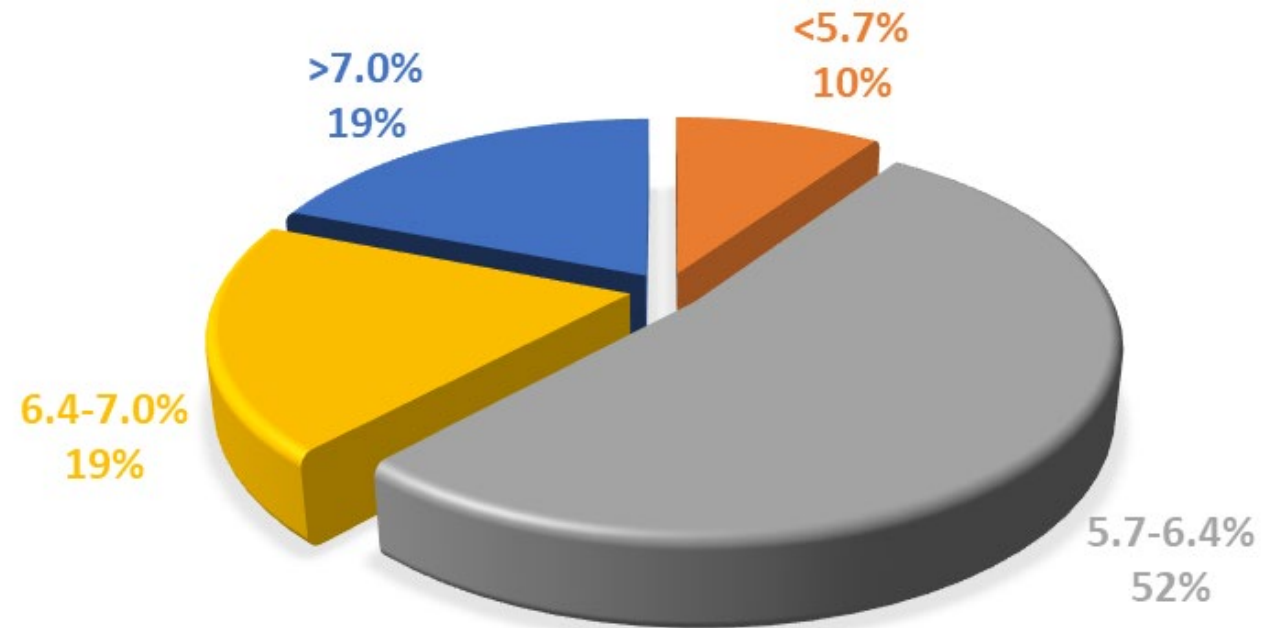


Metabolic Outcome Non-Diabetic Pre-TPIAT

TPIAT OUTCOME

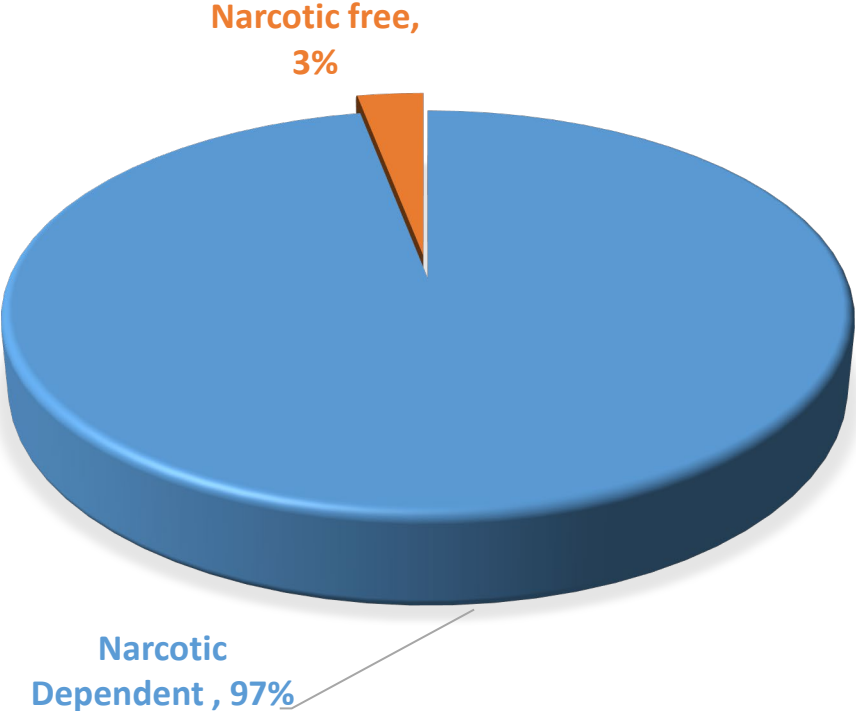


HBA1C (NON-DIABETIC)

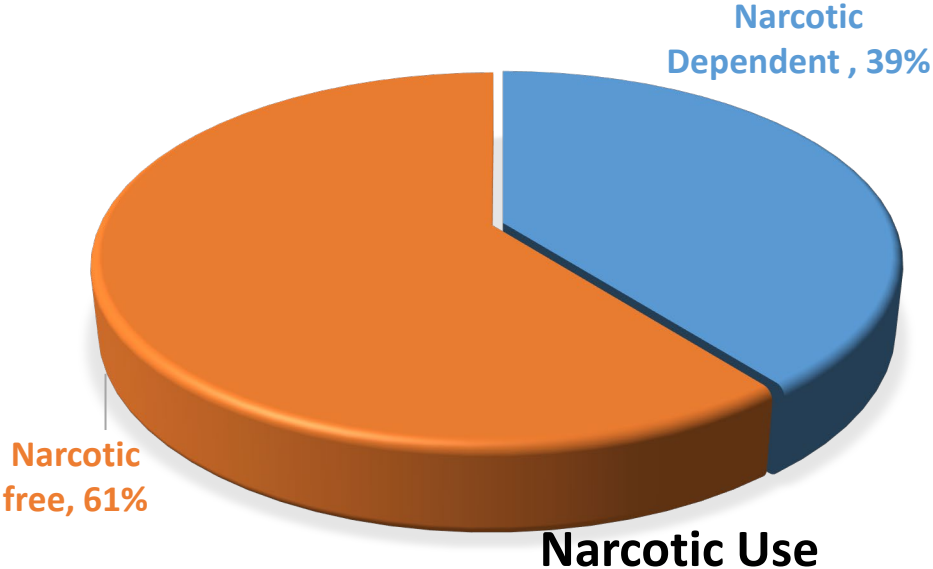


Narcotic Usage Data

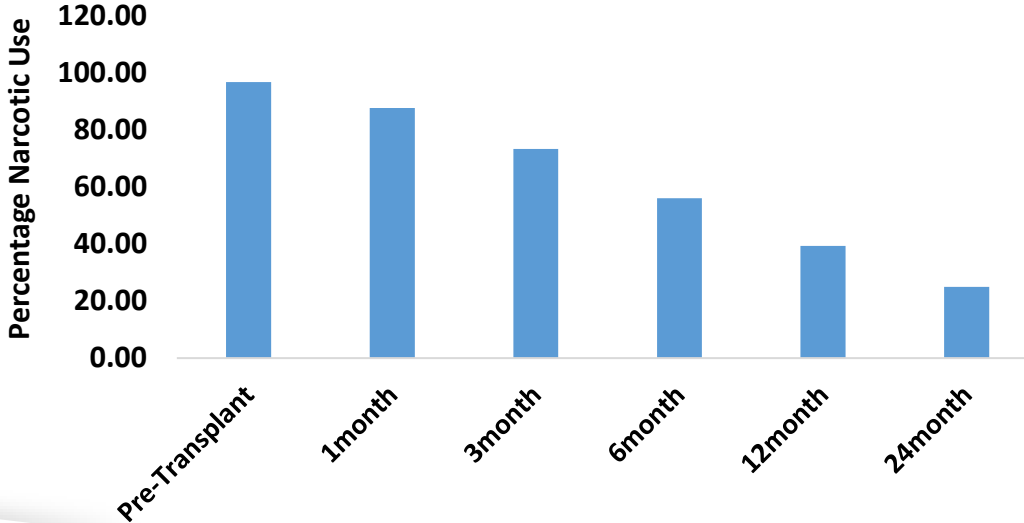
BEFORE TPIAT



1 YEAR POST-TPIAT

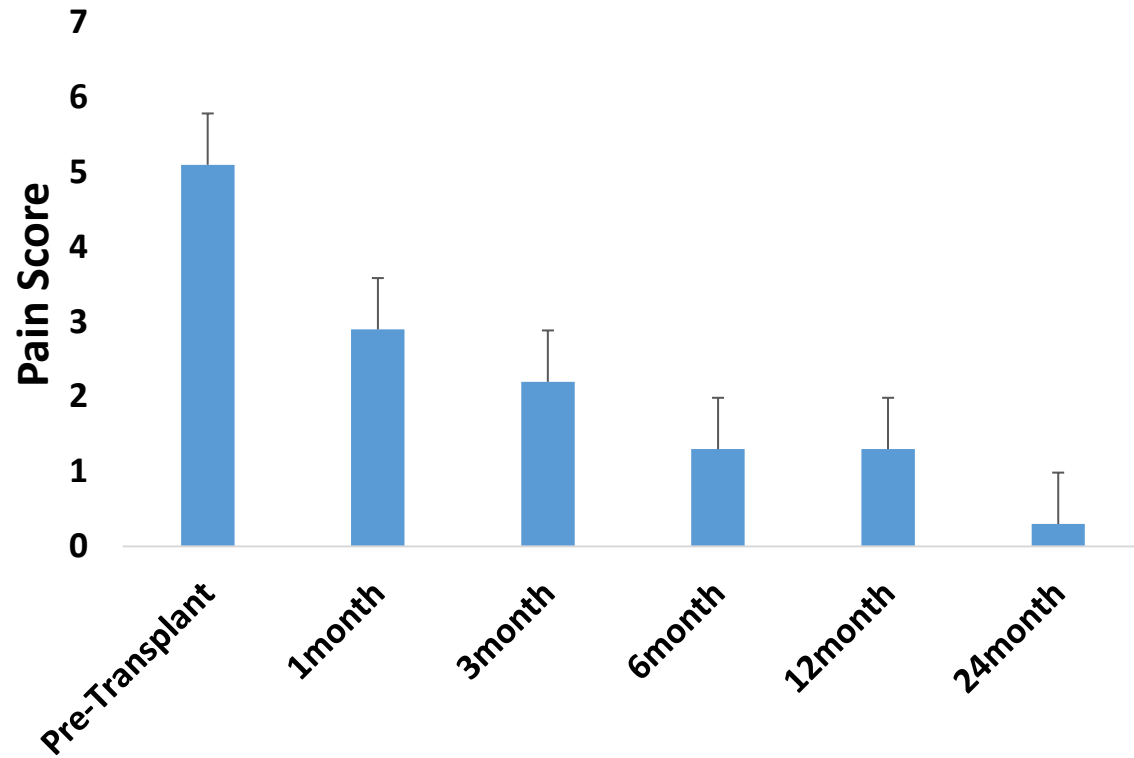


Narcotic Use

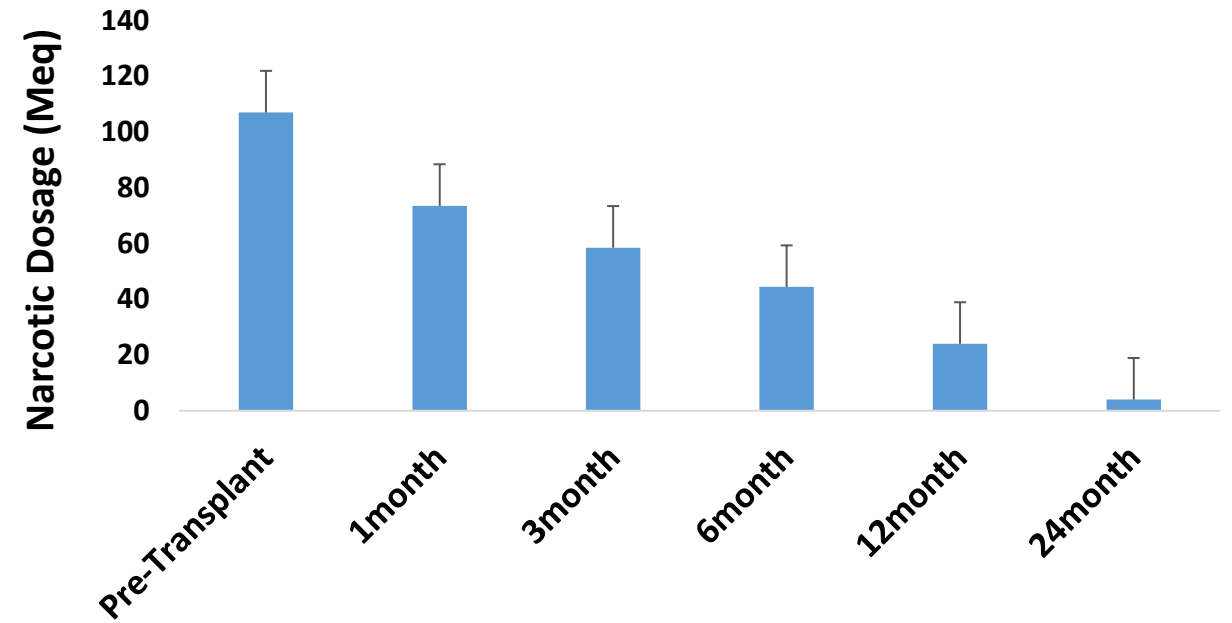


Pain Data

Pain Score



Narcotic dosage



Team Members and Acknowledgements

- Aamir Khan, M.D., Surgical Director
- Mazhar A. Kanak, Ph.D., Islet Lab Director
- Prathab Saravanan, Ph.D., Assistant Director
- Jagan Kalivarathan, Ph.D., Islet Lab Manager
- Shujauddin Mohammed, Ph.D., Post-doc Fellow
- Roel Rabara, Molecular Lab Technician
- Jason Elijah Burch, Islet Lab Technician
- Lyndy Johnson, Islet Transplant Coordinator
- Giorgi Mchedlishvili, Clinical Research Coordinator
- Emmes Corporation, CITR

