

lek. Paweł Skrzypek

Ewaluacja protokołu i wyników przeszczepienia trzustki i trzustki z nerką w Klinice Chirurgii Ogólnej i Transplantacyjnej, Szpitala Klinicznego Dzieciątka Jezus UCK WUM. – streszczenie ang.

**Rozprawa na stopień doktora nauk medycznych i nauk o zdrowiu
w dyscyplinie nauki medyczne**

Promotor: Prof. dr hab. n. med. Wojciech Lisik

Klinika: Klinika Chirurgii Ogólnej i Transplantacyjnej



Obrona rozprawy doktorskiej przed Radą Dyscypliny Nauk Medycznych
Warszawskiego Uniwersytetu Medycznego

Warszawa 2026

Wykaz publikacji stanowiących pracę doktorską:

1. Śmigielska K, Skrzypek P, Czerwiński J, Michalak G, Durlik M, Grochowicki T, Nazarewski S, Szmidt J, Ziaja J, Król R, Cierpka L, Lisik W, Kosieradzki M. *Usefulness of Pancreas Donor Risk Index and Pre-Procurement Pancreas Allocation Suitability Score: Results of the Polish National Study*. Ann Transplant. 2018 May 25;23:360-363. doi: 10.12659/AOT.909654. PMID: 29798972; PMCID: PMC6248280.
2. Skrzypek P, Śmigielska K, Ziemiański P, Kosieradzki M, Lisik W. *Retrospective Analysis of Pancreas Transplants in Poland in Years 1998-2015*. Transplant Proc. 2020 Sep;52(7):2074-2080. doi: 10.1016/j.transproceed.2020.02.116. Epub 2020 Jul 24. PMID: 32713819.
3. Zienkiewicz D, Kalman P, Skrzypek P, Ziemiański P, Pacholczyk M, Kosieradzki M, Lisik W. *Combined Liver-Pancreas Transplantation as Novel Treatment for Patient With Cystic Fibrosis: A Case Report*. Transplant Proc. 2024 May;56(4):1013-1017. doi: 10.1016/j.transproceed.2024.03.034. Epub 2024 May 14. PMID: 38749862.
4. Skrzypek P, Buksińska-Lisik M, Ziemiański P, Respondek A, Śmigielska K, Sadowski K, Domienik-Karłowicz J, Kosieradzki M, Kosieradzki M, Lisik W. *Substantial reduction of cardiovascular risk in pancreatic transplant recipients - has been **accepted for publication** in the Annals of Transplantation; January 29, 2026*

Streszczenie w języku angielskim:

Title: Evaluation of the protocol and outcomes of pancreas and simultaneous pancreas-kidney transplantation at the Department of General and Transplant Surgery, Infant Jesus Clinical Hospital, University Clinical Center of the Medical University of Warsaw.

Pancreas transplantation represents a major surgical, medical, and organizational challenge. It requires meticulous recipient selection, careful donor evaluation, and precise coordination of organ procurement and transplantation. The procedure is technically demanding, carries substantial perioperative risk, and calls for the highest level of surgical expertise. Despite advances in surgical techniques and immunosuppressive therapy, the outcomes of pancreas transplantation have long remained suboptimal both in Poland and internationally.

The aim of this doctoral dissertation was to evaluate pancreas transplantation outcomes in Poland, to validate the predictive donor-assessment scales P-PASS and PDRI in the Polish population, and to analyze the effects of a new procedural protocol implemented at the Department of General and Transplant Surgery, Infant Jesus Clinical Hospital, Medical University of Warsaw. Additionally, the research included long-term follow-up focused on the metabolic and cardiovascular benefits of pancreas transplantation.

The first stage of the study comprised a nationwide retrospective analysis of all pancreas transplants performed in Poland between 1998 and 2015. Within the project *“Usefulness of Pancreas Donor Risk Index and Pre-Procurement Pancreas Allocation Suitability Score: Results of the Polish National Study”*, the largest national database of donors and recipients was created, encompassing 407 cases. The analysis demonstrated that both the P-PASS and PDRI scales—widely used within Eurotransplant and OPTN—showed limited predictive value under Polish conditions, with accuracy comparable to random selection. However, donor age and body mass index (BMI) were confirmed as key predictors of transplant outcomes.

The second publication, *“Retrospective Analysis of Pancreas Transplants in Poland in Years 1998–2015,”* revealed no significant improvement in long-term results over nearly two decades. One year after surgery, fewer than 70% of grafts retained satisfactory function. The analysis further identified optimal donor and recipient profiles—favorable outcomes were observed for donors younger than 30 years with a BMI below 25, and for recipients aged 21–30 years.

Based on these findings, and on the clinical experience of the surgical team, a new standardized protocol for donor selection, organ procurement, graft preparation, and postoperative management was implemented in 2016. This comprehensive approach resulted in a marked improvement in clinical outcomes: graft survival at one year increased to 93%, aligning the center's results with the best European and international standards.

The third study, "*Combined Liver-Pancreas Transplantation as Novel Treatment for a Patient with Cystic Fibrosis: A Case Report*," documented a pioneering combined liver and pancreas transplantation in Poland, demonstrating the team's advanced technical and organizational capabilities.

The final investigation, "*Substantial Reduction of Cardiovascular Risk in Pancreatic Transplant Recipients*," evaluated long-term metabolic and cardiovascular benefits following pancreas transplantation. Cardiovascular risk was assessed using the TyG index (Triglyceride-Glucose Index), a validated surrogate marker of insulin resistance and predictor of atherosclerotic and metabolic diseases. A significant reduction in TyG index values was observed as early as three months post-transplantation, driven by decreased serum glucose and triglyceride levels. These findings confirm the long-term cardiovascular benefits of successful pancreas transplantation beyond glycemic control and insulin independence.

In summary, this dissertation documents the progress and outcomes achieved by pancreas transplantation team led by Professor Wojciech Lisik in the Medical University of Warsaw. Implementation of a new, rigorously standardized protocol has led to a substantial improvement in graft survival and patient outcomes. The results confirm that pancreas transplantation not only restores normoglycemia but also significantly reduces long-term cardiovascular risk, representing an effective causal therapy for selected patients with advanced type 1 diabetes.