

# Breakthroughs in Immunological Research Shaping Transplant Medicine

Mohammad Yusuf\*

Department of Surgical Transplantation, Aga Khan University, Pakistan

## Introduction

S (SOT) (1).

A (2).

C (3).

R (4).

[2]. U

(MHC) (3).

T (5).

## Description

A (6).

P M MEDLINE, E

W S

A E T B

15

S T

CD4+ T CD8+ T

[4].

CD28 CTLA-4, T

R

B (AMR).

(NK) (DC),

[5].

DNA (7).

(8).

B B AMR

B DNA

T (T)

M

[7]. T T

T

AI [10].

### Conclusion

F  
F  
S  
F  
AI  
B  
C

### References

1. Zieli ska K, Kukulski L, Wróbel M, Przybyłowski P, Rokicka D, et al. (2022) Carbohydrate Metabolism Disorders in Relation to Cardiac Allograft Vasculopathy (CAV) Intensification in Heart Transplant Patients According to the Grading Scheme Developed by the International Society for Heart and Lung Transplantation (ISHLT). *Ann Transplant* 27: 933420.

2. Rafa GM, Di Gesaro G, Sciacca S, Tuzzolino F, Turrisi M, et al. (2016) Heart transplant program at IRCCS-ISMETT: Impact of mechanical circulatory support on pre- and post-transplant survival. *Int J Cardiol* 219: 358-361.

3. Kitamura S (2012) Heart transplantation in Japan: a critical appraisal for the results and future prospects. *Gen Thorac Cardiovasc Surg* 60: 639-644.

4. Delgado JF, Reyne AG, de Dios S, López-Medrano F, Jurado A, et al. (2015) Influence of cytomegalovirus infection in the development of cardiac allograft vasculopathy after heart transplantation. *J Heart Lung Transplant* 3:1112-1119.

5. Wever-Pinzon O, Edwards LB, Taylor DO, Kfoury AG, Drakos SG, et al. (2017) Association of recipient age and causes of heart transplant mortality: Implications for personalization of post-transplant management-An analysis of the International Society for Heart and Lung Transplantation Registry. *J Heart Lung Transplant* 36: 407-417.

6. Saczkowski R, Dacey C, Bernier PL (2010) Does ABO-incompatible and ABO-compatible neonatal heart transplant have equivalent survival. *Interact Cardiovasc Thorac Surg* 10: 1026-1033.

7. Jeewa A, Manlhiot C, Kantor PF, Mital S, McCrindle BW, et al. (2014) Risk factors for mortality or delisting of patients from the pediatric heart transplant waiting list. *J Thorac Cardiovasc Surg* 147: 462-468.

8. Conway J, Manlhiot C, Kirk R, Edwards LB, McCrindle BW, et al. Mortality and morbidity after retransplantation after primary heart transplant in childhood: an analysis from the registry of the International Society for Heart and Lung Transplantation. *J Heart Lung Transplant* 33: 241-251.

9. R D Vanderlaan, C Manlhiot, L B Edwards, J Conway, B W McCrindle, et al. (2015) Risk factors for specific causes of death following pediatric heart transplant: An analysis of the registry of the International Society of Heart and Lung Transplantation. *Pediatr Transplant* 19: 896-905.

10. Sivathasan C, Lim CP, Kerk KL, Sim DK, Mehra MR, et al. (2017) Mechanical circulatory support and heart transplantation in the Asia Pacific region. *J Heart Lung Transplant* 36: 13-18.