Utilizing Routine Tests of Kidney Transplant Candidates to Improve Patient Safety and Delivery of HLA-Matched Platelets

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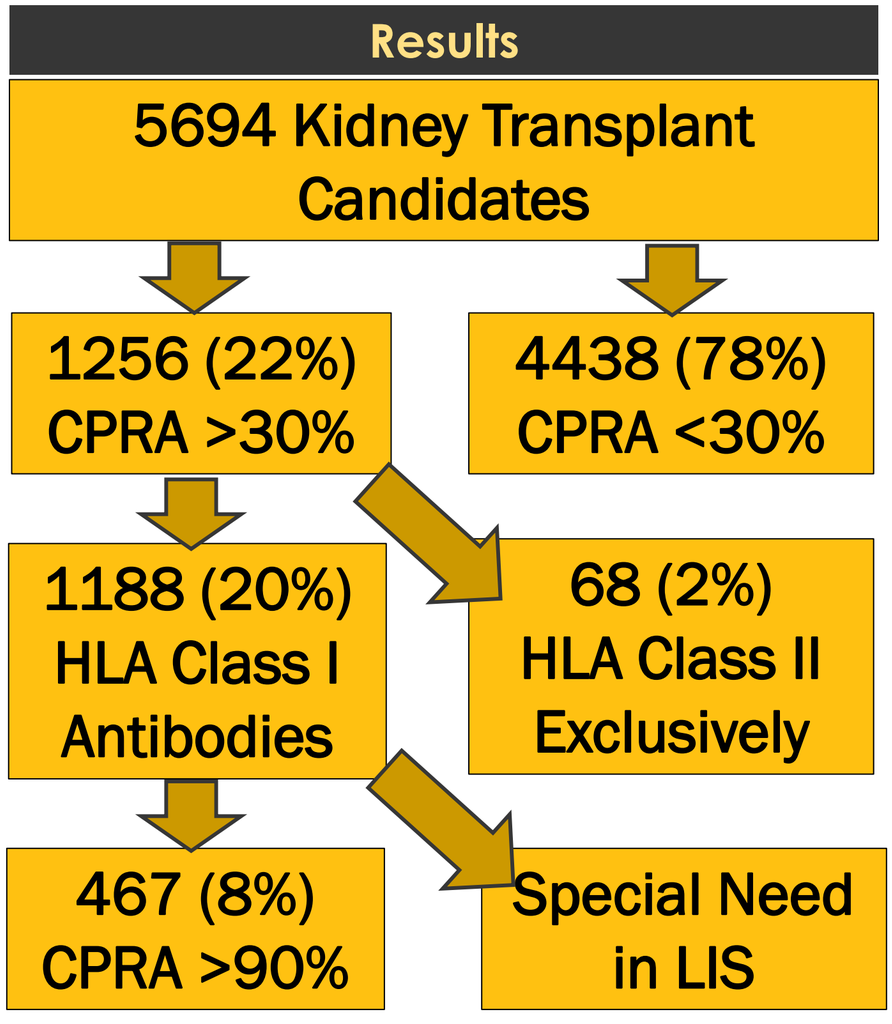
Introduction

Human leukocyte antigen (HLA) antibody testing is routinely performed on patients prior to transplant. At our institution, patients with a Calculated Panel Reactive Antibody (CPRA) of 30% or more are identified as candidates for HLA-matched platelets, usually in the context of hematologic malignancy. However, patients receiving PRA testing for kidney transplants through our partner institution were not being identified as candidates for HLA-matched platelets. Since the clinical identification of platelet refractoriness typically requires several days to complete testing and receive HLA-matched platelets, it is in the patient's best interest to be provided properly matched platelets as quickly as possible.

Materials and Methods

We conducted a database query of all kidney transplant candidates who received PRA testing over 5 years (2015-2020). All patients with a maximum CPRA of 30% or more, not due exclusively to HLA class II, were relayed to our institution's blood bank and a "special need" for HLA-matched platelets was added to their record in the laboratory computer system.

Results



Conclusion

It is useful for blood banks to have access to records of all patients with HLA antibodies to ensure that those patients receive timely, effective treatment with HLA-matched platelets if needed. Risk for severe platelet refractoriness was identified in 8% of kidney transplant candidates. We will develop a system to track these patients prospectively in the future.