

# **The reasons for potential donor ineligibility in living donor kidney transplants at the Libyan transplant Authority.**

## **A Retrospective, Single-Center Cohort Study**

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# Introduction

**Kidney transplantation from living donors has revolutionized treatment for end-stage renal disease, It is not only to increase access to kidney transplantation but can also offer recipients significantly improved outcomes compared to deceased donor transplants. This improvement is marked by better graft survival rates, reduced waiting times, and enhanced quality of life post-transplantation, in Libya it is the only way to help those in need of a transplant since Deceased Organ Donation “DOD” has not started yet .**

**In Libya, the demand for kidney transplants has steadily increased, mirroring global trends. However, this growing demand is challenged by a limited supply of eligible donors, exacerbated by strict eligibility criteria necessary to ensure donor and recipient safety.**

# Objectives

**To comprehensively investigate and categorize the primary reasons for potential donor ineligibility in living donor kidney transplants at the Libyan transplant Authority.**

# Methods

**A retrospective cohort study was conducted, analyzing medical records from 2004 to 2023 at the Libyan transplant Authority. Criteria for potential donor ineligibility were identified and categorized.**

# Results

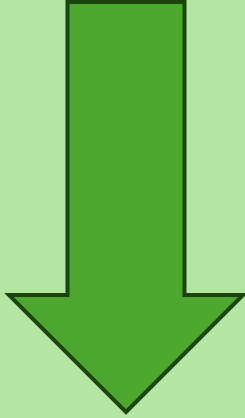
Over the two decades at the Libyan transplant Authority in the period 2004 to 2023, 522 successful kidney transplants from living donors were performed where a total of 1197 donors 707 65 % males and 420 35 %females, came to donate their kidneys to their ESRD relatives, as religion and law in Libya allows only relatives up to grade 4 plus spouses and husbands to donate, 522 donors were eligible to donate 43.6% while 675 were ineligible to donate 56.4%, 434 M 64%, 241 Females 36% their age ranges from 18 years to 69 Years with median age of 42.8 years, were generally older compared to the eligible donors which was 36 years.

# Results continue

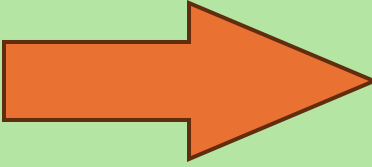
The dropout rate was 56.4% (675 out of 1197).

The study delved into the records of 675 potential donors who were found not to qualify for donation, and we found that the main reasons for rejecting a donor were ABO Incompatibility (194 donor 28.7 %) hypertension (117 donor 17.3 %). High BMI (104 donors 15.4%), diabetes mellitus 80 donors 11.9 %), social (60donors 8.9%) Immunological: mainly positive panel-reactive antibodies “PRA” and positive cross match and or positive donor specific antibodies “DSA” (31 donors 4.5%), anatomical variations (20 donor 3), Kidney Stone (17 donors 2.5%) cardiovascular (12 donors 1.7 %), others (40 donors 6.1%).

**Total donors  
presented  
no: 1197 100 %**



**Donated  
no 522  
43.6 %**



**Ineligible  
No. 675  
56.4 %**

- ABO incomp. 194 28.7%**
- HPN 117 17.3 %**
- H BMI 104 15.4%**
- Diabetes 80 11.9%**
- Social 60 8.9%**
- Immunological 31 4.5%**
- Anatomical 20 3%**
- Renal stones 17 2.5%**
- Cardiovascular 12 1.7%**
- Others 40 6.1%**

**These findings underline the multifaceted factors influencing the donor selection process, emphasizing the need for improved evaluation methods and interventions to mitigate modifiable barriers**

# Conclusion

The study advocates a holistic evaluation framework that considers anatomical, medical, psychological, and social aspects equally.

The correlation between age and ineligibility, especially regarding medical reasons in donors over 60, warrants attention. Age-specific evaluation protocols might be beneficial for older potential donors.

The findings also emphasize the importance of psychological and social evaluations. These insights have significant implications for refining donor selection processes.

Further research is needed to explore intervention strategies and to assess the long-term outcomes for donors at the borderline of eligibility criteria. This study underscores the need for ongoing research in the field of donor evaluation and selection. Future studies could focus on developing intervention strategies to address modifiable ineligibility factors