

# Living related renal transplantation from grandparental donors to paediatric recipients

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The greatest gift a parent can give a child during all the ups and downs of life is love.

— *Doc Childre* —

AZ QUOTES



The greatest gift a parent can give a child during all the ups and downs of life is love.

Grandparents  
give the  
greatest gift of all...

**UNCONDITIONAL LOVE**



# Case history

- 10 year old girl
  - ESKD on PD ?cause
- Maternal grandfather aged 50 years
- Out of centre referral as donor multiple vessels
  - 3 R + 3 L renal arteries
- UTI at 1 month
- PCr = 56 (eGFR = 95)



# Paediatric recipients

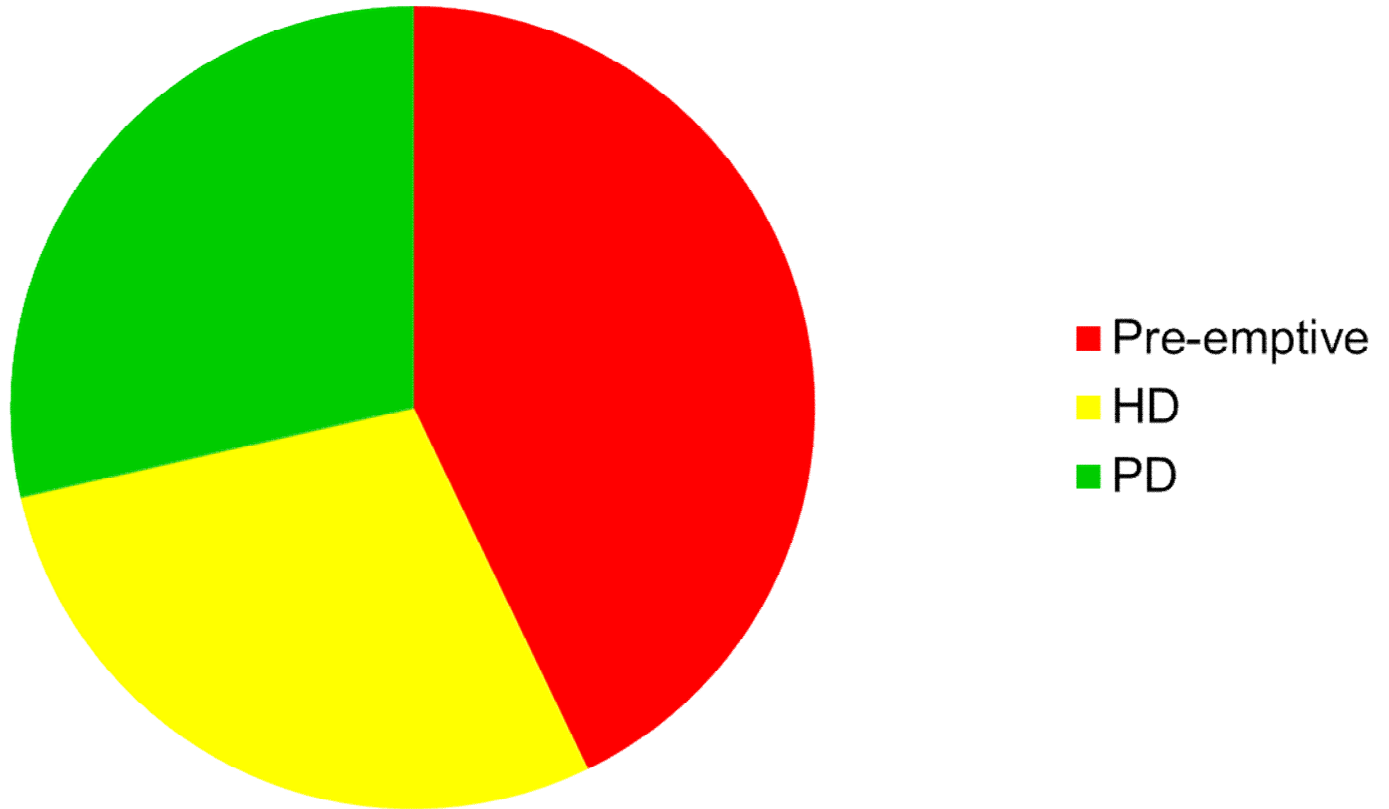
- 7 children
  - between 8 September 2009 and 2 May 2017
  - 4 girls (57%); 3 boys (43%)
  - PCr = 353 - 526 $\mu$ mol/l; 2 retransplanted
  - aged 2.1 - 11.7 (median 6.9) years at transplant
  - weight of 10.8 - 46.9 (median 16.8) kg
    - 4 INTRAPERITONEAL (UNDER 20kg)
  - 4 outside referrals of complex cases
    - 2 COMPLEX RECIPIENTS “UNTRANSPLANTABLE”
    - 1 COMPLEX DONOR ANATOMY

# Cause of ESKD



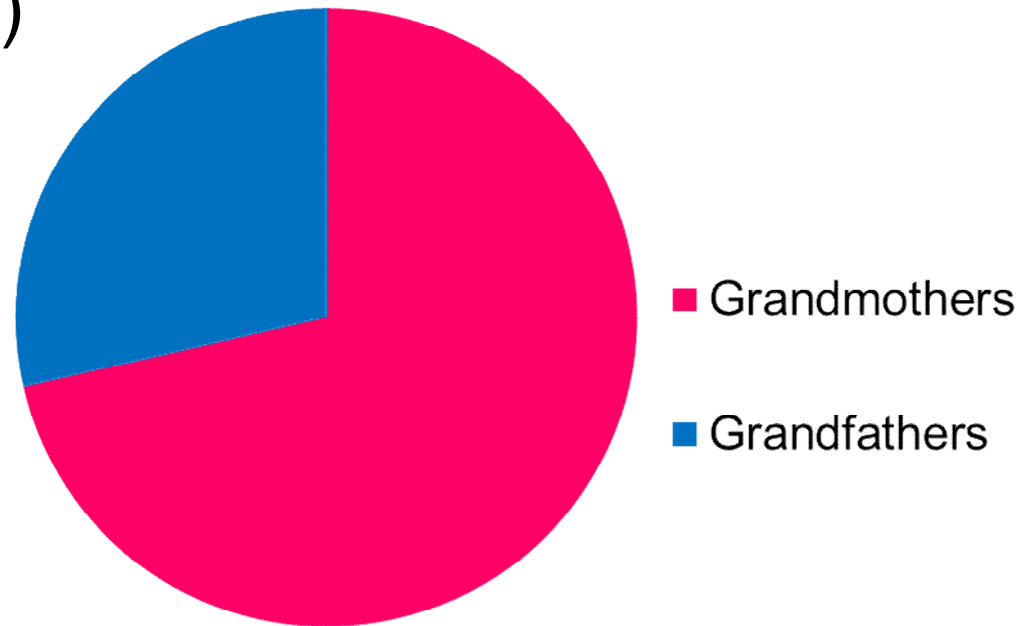
- PUV = 1*  
*Cloaca = 1*
- CAKUT
  - FSGS/CNS
  - HIV

# Modalities of ESKD



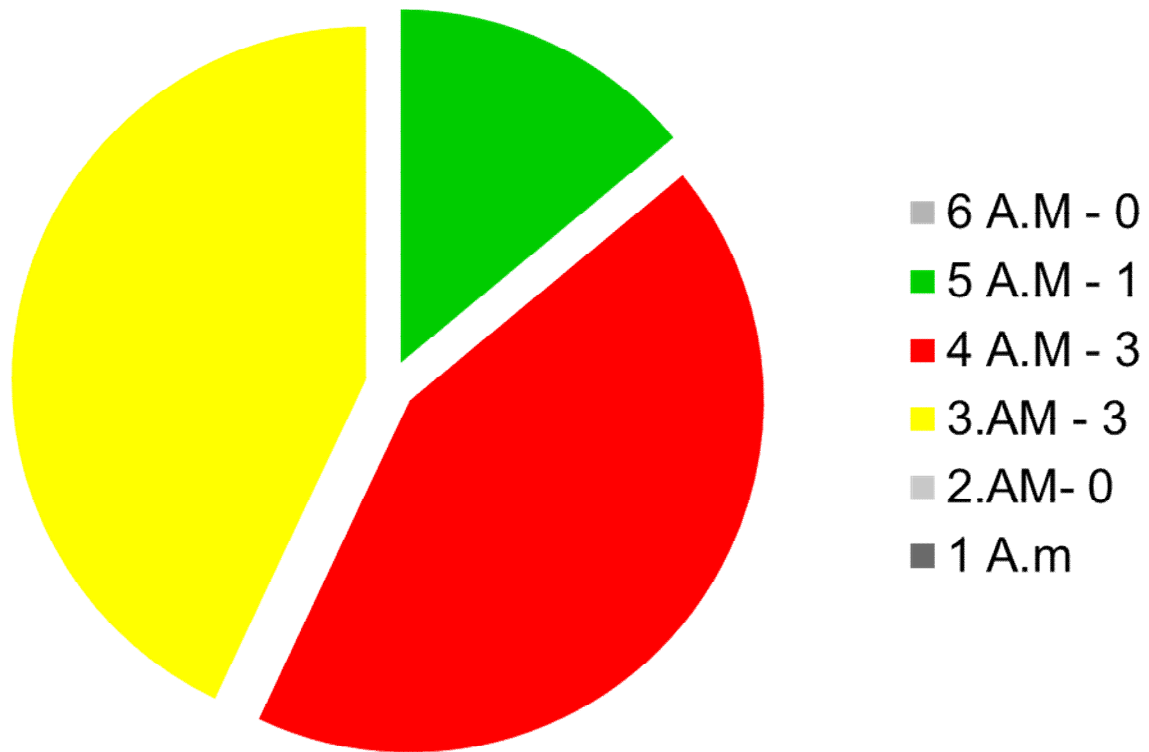
# Grandparental donors

- 5 grandmothers (71%)
- 2 grandfathers (29%)
  - aged = 45 - 56  
(median 50) years
  - eGFR = 72 - 89  
(median 84) mls/min
  - all blood group compatible:
    - 4 O DONORS TO O RECIPIENTS
    - 3 O DONORS TO A RECIPIENTS





# Mismatches



# Why did the grandparents donate ?

- 2 families wanted to use parents for subsequent LRD in future
- 2 psychosocial issues
  - father in prison, mother drug addiction, child protection issues and child cared for by grandmother (donor)
  - mother psychological issues, father absent; child cared for by grandmother (donor)
- 2 patients had failed parental LRD
  - other parent medically unsuitable
- 1 parent medically unsuitable; absent father

# Recipient follow up

- Post-transplant follow-up
  - 1.0 months - 7.5 years (median 2.8 years)
- 100% patient survival
- 86% renal allograft survival
  - retroviral disease
- Good renal allograft function
  - plasma creatinine of 56 - 92 $\mu$ mol/l
  - eGFR of 52 - 83mls/min/1.73m<sup>2</sup>

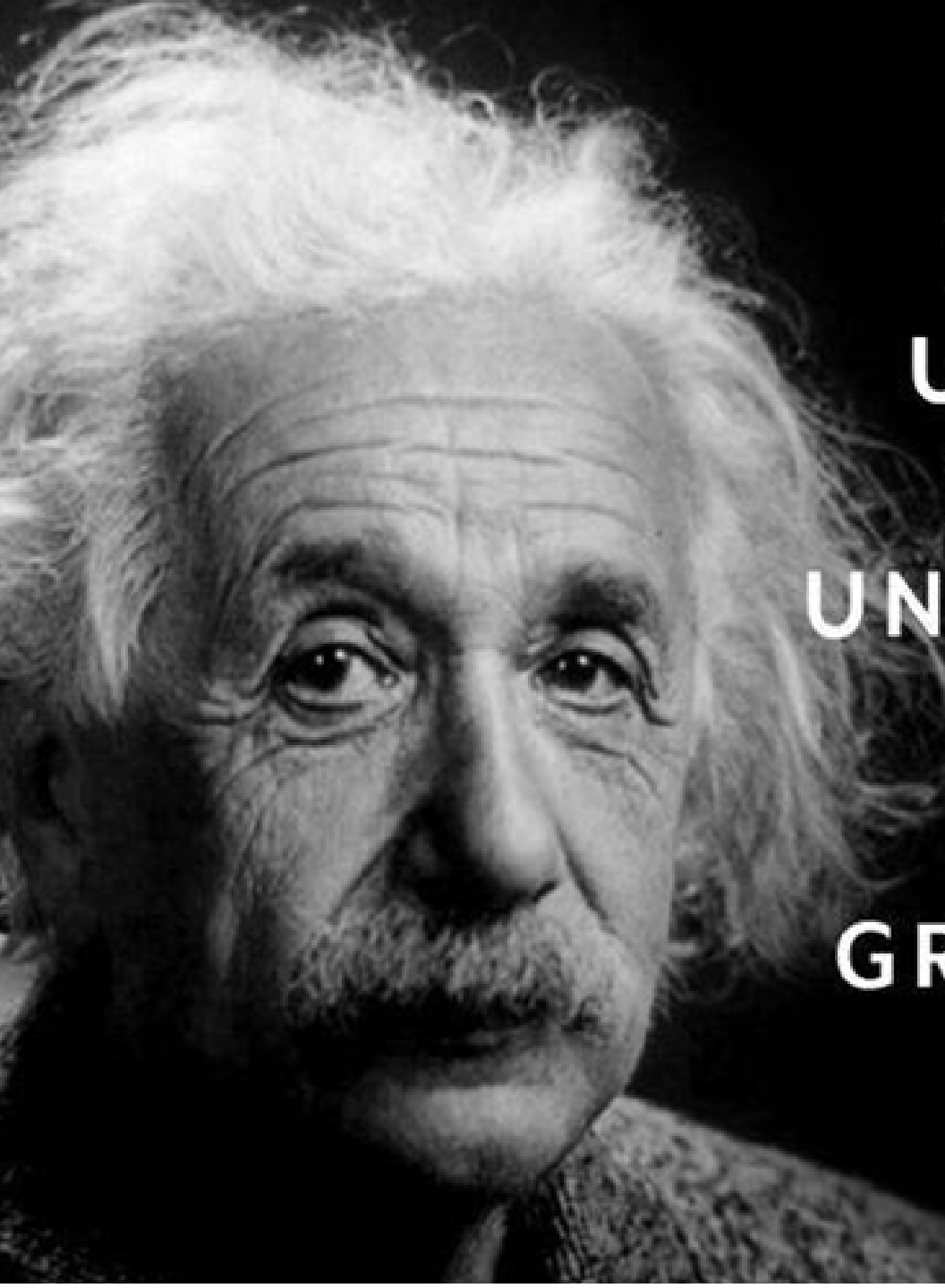
# No acute rejection episodes

- 4 biopsies performed in 3 patients
  - no rejection
  - mild chronic changes



# Conclusions

- Excellent patient and renal allograft survival with grandparental donors
- Improved outcomes
  - psychosocial input
  - post-transplant psychological evaluation



**YOU DO  
NOT REALLY  
UNDERSTAND  
SOMETHING  
UNLESS YOU CAN  
EXPLAIN IT  
TO YOUR  
GRANDMOTHER.**

*– Albert Einstein*