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THE IMPACT OF AGE ON ACCEPTABLE MEASURED GFR FOR LIVING KIDNEY DONATION

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INTRODUCTION AND AIMS: Recommendations on the GFR threshold to accept living kidney donation are not consensual. The recent K/DIGO guidelines suggested to reset the conventional cutoff value of 80 to 90 mL/min/1.73 m². While GFR physiologically declines with age, it is unclear whether and how age should be taken into account for selecting acceptable pre-donation GFR.

METHODS: In this multicentric retrospective study conducted in 2007 kidney donors in France, we evaluated the impact of age using two thresholds (80 and 90 mL/min/1.73 m²). Three groups of donors were defined according to baseline GFR: <80, 80-89.9, ≥90 mL/min/1.73 m².

RESULTS: Thirty-two percent of donors were selected despite a GFR below 90 mL/min/1.73 m². Donors with the lowest GFR were significantly older (60 ± 9 years vs. 47 ± 11 years, p < 0.0001). The lifetime-standardized renal reserve, defined as the pre-donation mGFR value divided by the expected number of remaining years of life, was similar across all baseline GFR groups. In a subgroup of 132 donors with repeated mGFR 5 years after donation, the magnitude of GFR decrease was similar in all groups (-34.3%, -33.9%, and -34.9% respectively).

CONCLUSIONS: In conclusion, decision to accept individuals with GFR lower than 90 mL/min/1.73 m² for kidney donation is highly dependent on the age of the candidate. Our data suggest that a threshold value lower than 90 mL/min/1.73 m² is reasonable for older donors and more generally, that considering age-calibrated GFR may improve efficiency of the selection process.