

## OBJECTIVE/ BACKGROUND

- Kidney transplantation is the preferred treatment for end-stage renal disease (ESRD) as it helps improve survival, quality of life, and reduce health care cost compared to dialysis.<sup>1</sup>
- Nevertheless, graft survival remains a significant concern, and the risk of graft failure increases with the use of kidneys from donors with a high kidney donor profile index (KDPI).<sup>1</sup>
- Graft failure in kidney transplantation refers to the loss of function of a transplanted kidney.
- The KDPI is a score that ranges from 0 to 100 percent. A KDPI of 0 percent indicates that the donor's kidney has the best expected post-transplant survival compared to all other kidneys recovered in the United States and vice versa.
- High KDPI kidneys (≥85) were once commonly discarded due to concerns about poor graft survival rates.<sup>1</sup>
- However, several studies have shown that kidney transplantations with higher kidney donor profile index (KDPI) scores reduced mortality rates compared with remaining on dialysis or the waitlist hoping to receive a lower KDPI kidney.<sup>2</sup>

### Objective

- This study aims to describe the rate of 5-year graft failure of high KDPI (≥85) kidney transplants between sex and across different age groups.

## METHODS

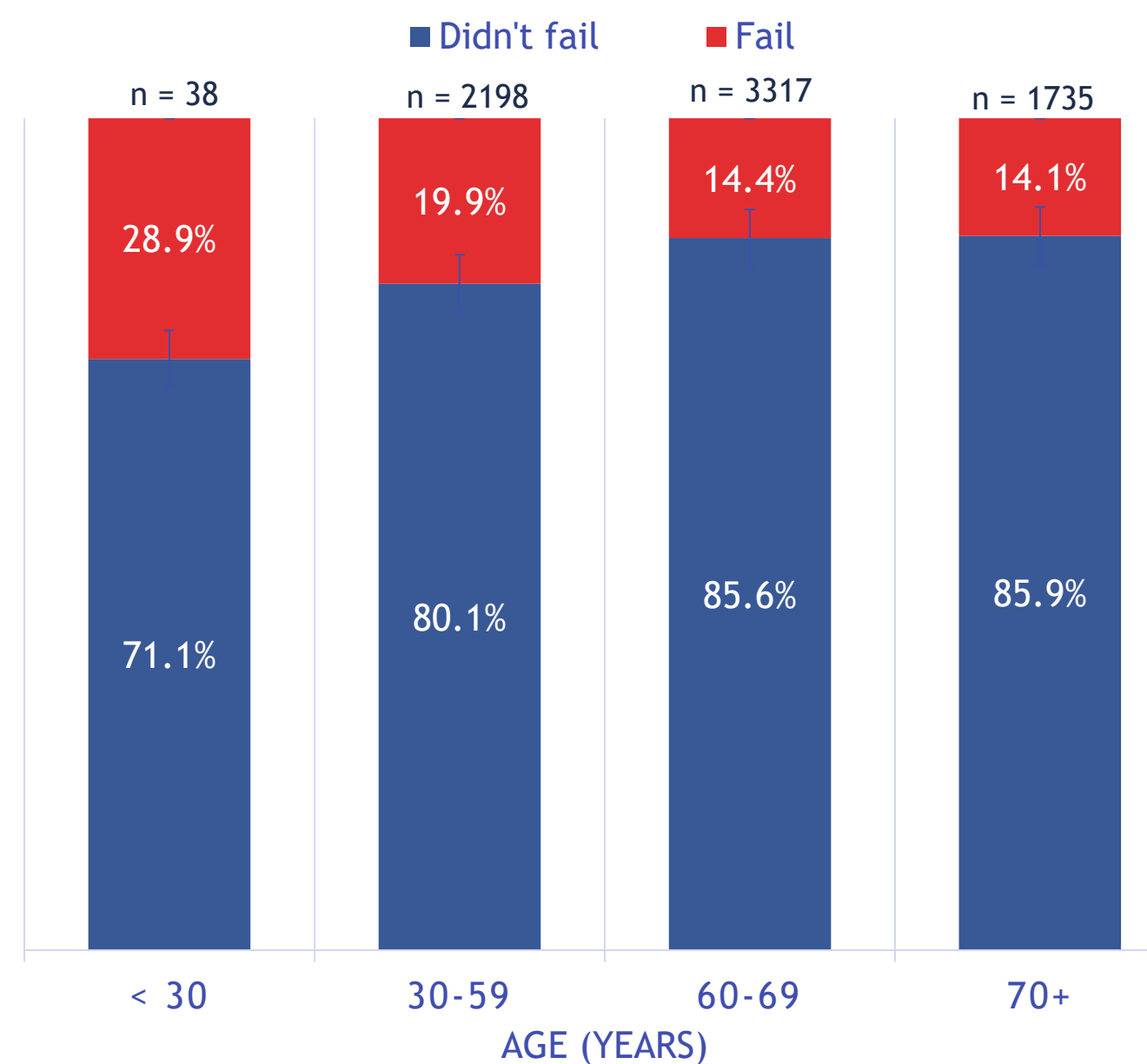
- Recipients of ≥85 KDPI kidneys from 01/01/2010 to 06/30/2019 were identified using The United Network for Organ Sharing's Organ Procurement and Transplantation Network (UNOS OPTN).
- Graft failure was defined as death, returning to dialysis, or kidney re-transplantation.
- Absolute and relative frequencies were used to describe the rate of 5-year graft failure in the population of ≥85 KDPI kidneys.

## RESULTS

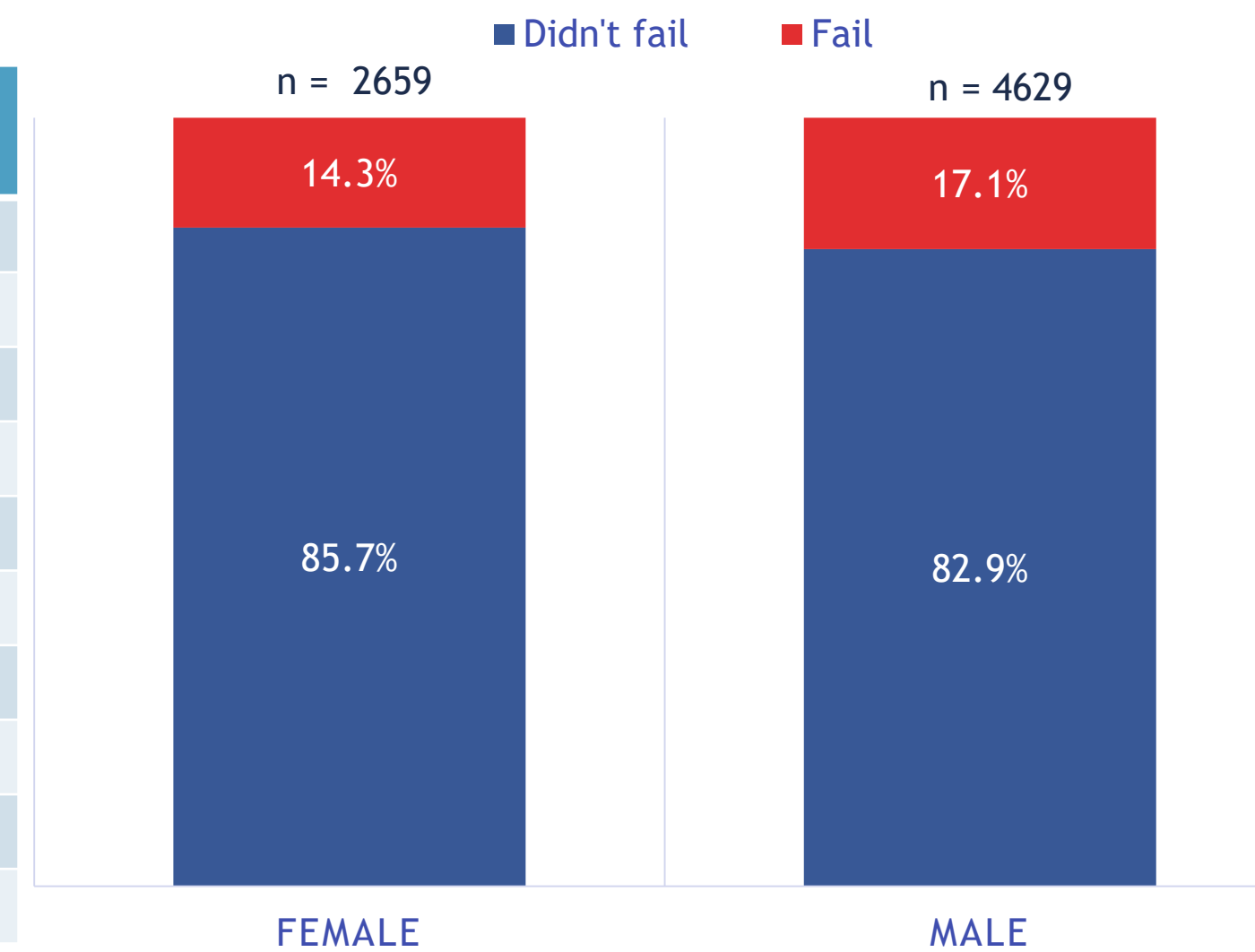
**TABLE 1: BASELINE CHARACTERISTICS OF TRANSPLANT RECIPIENTS WITH A KDPI ≥ 85**

Characteristics	N (%) N = 7288
Age, year categories	
<30	38 (0.5)
30-59	2198 (30.2)
60-69	3317 (45.5)
≥70	1735 (23.8)
Male	4629 (63.5)
Transplant year categories	
2010-2012	2272 (31.2)
2013-2015	2027 (27.8)
2016-2019	2989 (41.0)

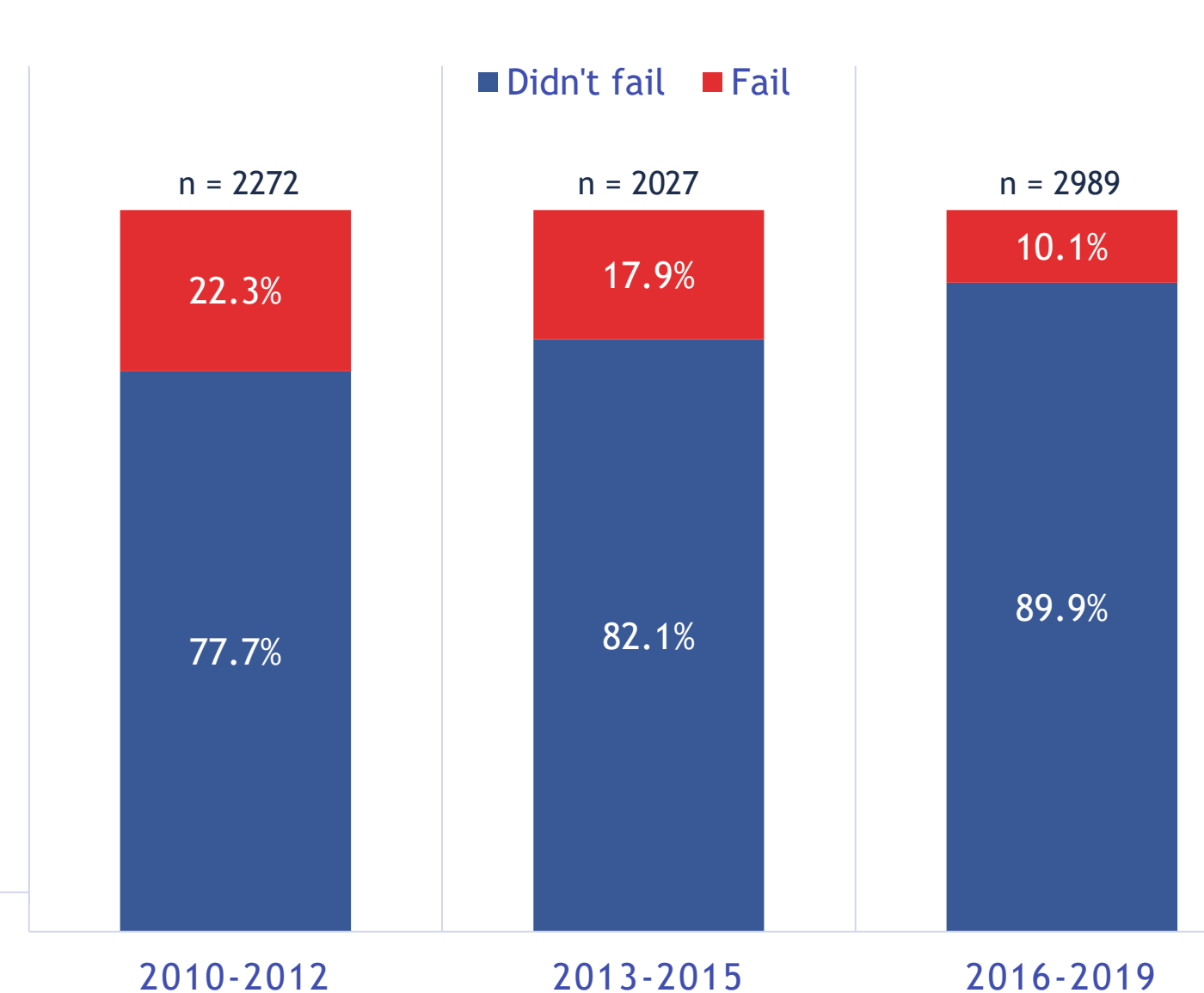
**FIGURE 1: RATE OF 5-YEAR GRAFT FAILURE BY AGE CATEGORIES IN PATIENTS WITH A KDPI ≥ 85**



**FIGURE 2: RATE OF 5-YEAR GRAFT FAILURE BY GENDER IN PATIENTS WITH A KDPI ≥ 85**



**FIGURE 3: RATE OF 5-YEAR GRAFT FAILURE BY TRANSPLANT YEARS IN PATIENTS WITH A KDPI ≥ 85**



- Of the 106,416 kidney transplants, 7,288 (6.8%) cases utilized ≥85 KDPI kidneys.
- Among ≥85 KDPI kidneys, the 5-year graft failure rate was 16.1% (1,171/7,288)

## CONCLUSION

- The study shows differences in the rates of 5-year graft failure of higher KDPI kidney recipients based on sex and age groups.
- Importantly, the 5-year graft failure seemed to be greater in younger age groups.
- This information could be helpful to decision-makers on kidney transplant resource allocation based on KDPI scores.

## REFERENCES

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