

# USE OF THE CAPNOMETRY AS A RENAL GRAFT EVOLUTION PREDICTOR IN UNCONTROLLED CARDIAC ARREST DEATH DONORS

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**Introduction:** The modified Maastricht classification identifies type IIa donors as uncontrolled donors after cardiac death and includes those patients who do not recover spontaneous circulation after advanced life support. Capnometry or end-tidal carbon dioxide (Et-CO<sub>2</sub>) is clearly related to ventilation and tissue perfusion.

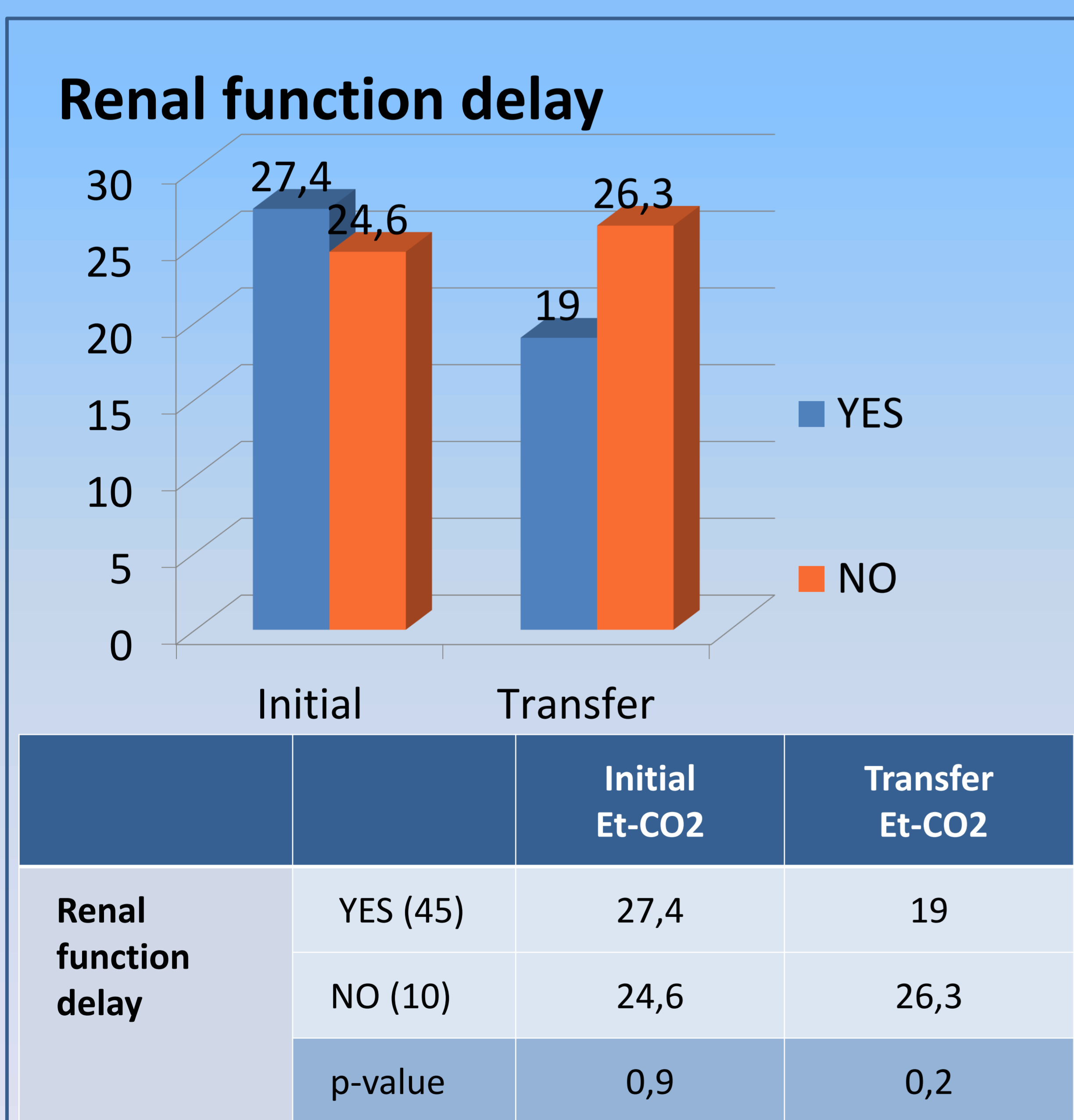
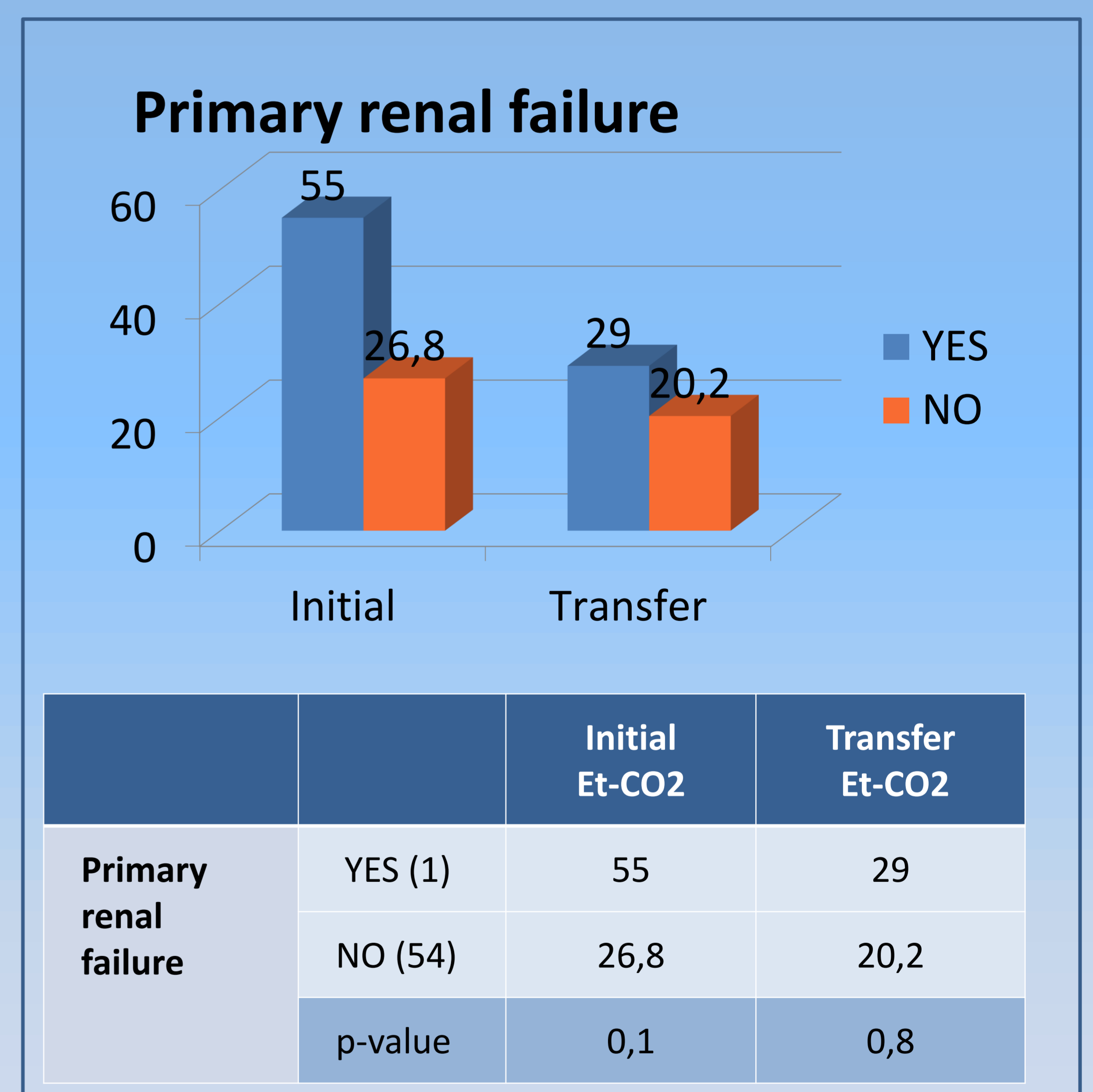
**Objective:** To correlate the levels of capnometry during resuscitation and preservation process with the viability and evolution of renal grafts. Therefore, the EtCO<sub>2</sub> may be a parameter to be assessed in the suitability of grafts from uDCD.

**Methodology:** Retrospective descriptive study from 2013 to 2017 based on the data collection from a series of potential donors transferred by SUMMA112 to Doce de Octubre University Hospital and the post-transplant evolution.

## Results:

	Grafted kidney (n=30)	No grafted kidney (n=7)	P-value
Age (years)	45,83	40,43	p=0,051
Gender (male/female)	26/4	7/0	p=0,306
Initial capnometry (mmHg)	26,6	21,57	p=0,471
Transfer capnometry (mmHg)	22,8	17,35	p=0,016
Smoker (%)	40	42,85	p=0,890
Time Cardiac Arrest- Advanced life support (min)	12,6	9,43	p=0,119
Normothermic perfusion (hours)	5,61	5,41	p=0,487

	Et-CO <sub>2</sub> (SD)	p Value
Grafted kidney	22,80 (±9,412)	<b>p=0,016</b>
No grafted kidney	17,35 (±10,323)	



**No patient has presented an acute graft rejection**  
**Graft survival was 100%**  
**No death occurred during the study period**

## Conclusions:

- A statistically significant association has been found between the capnometry values and the validity of the renal grafts
- It seems that there is an association between lower capnometry values with a delay in renal function of graft, although without statistical significance. This may be influenced by the sample size.
- A prospective study that analyzes the validity of the capnometry as a predictor of the organs suitability in the uDCD in more depth is needed.