

Role of blood lactate levels in kidney suitability for donation after circulatory death: a retrospective analysis

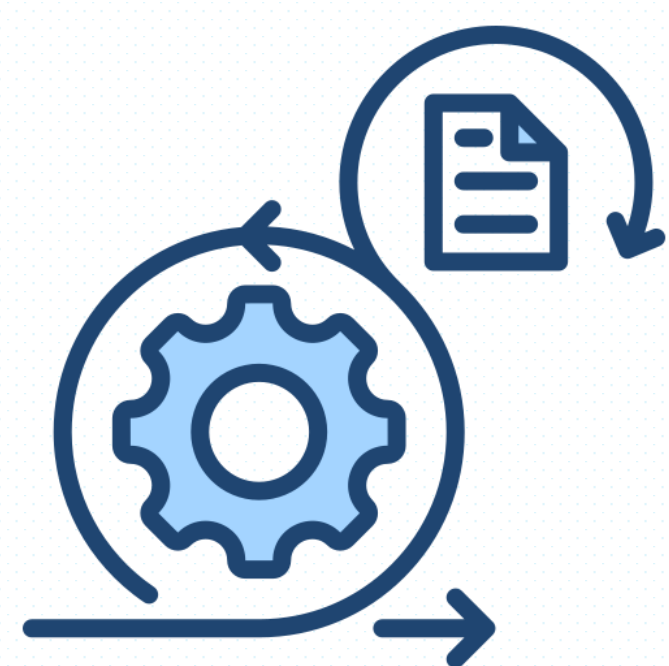
Melegari G¹, Baroni S¹, Arturi F², Rinaldi S¹, Dallai C¹, Donelli D³, Mori G⁴, Barbieri A²

¹Department of Anaesthesia and Intensive Care, Polyclinic Teaching Hospital of Modena, 41121 Modena, Italy; ²School of Anaesthesia and Intensive Care, University of Modena and Reggio Emilia, 41121 Modena, Italy ; ³School of Medicine, University of Modena and Reggio Emilia, 41121 Modena, Italy; ⁴Nephrology Dialysis and Kidney Transplantation Unit, University Hospital of Modena, 41121 Modena, Italy

BACKGROUND

Donation after Circulatory Death (DCD) has emerged as a vital strategy to address organ shortages in transplantation. However, IRI remains a significant challenge, impacting organ viability and outcomes. This study explores the correlation between blood lactate levels during transplantation Normothermic Reperfusion (nRP) and kidney suitability for transplantation, aiming to identify potential biomarkers that could guide donor selection and organ assessment.

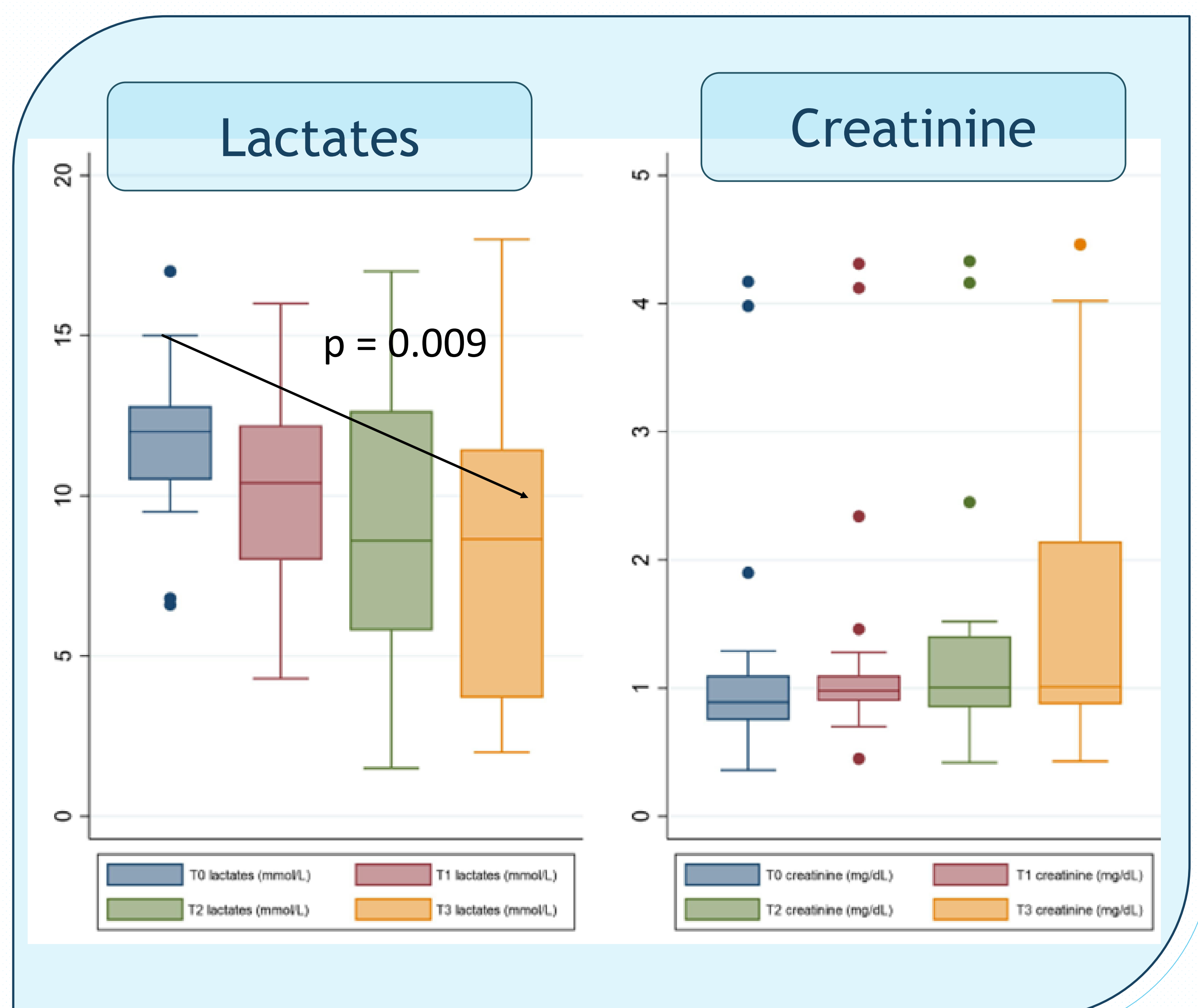
METHODS



2018-2019: 21 cDCDs
nRP + CytoSorb performed for donor management
t0-t1-t2-t3 hourly sampling for Creatinine, Lactate Levels quantification

RESULTS

- t₀ lactate levels correlated negatively with Karpinski scores
- Creatinine levels increased during nRP but did not correlate with organ suitability
- Age also significantly predicted suitability



CONCLUSIONS

No negative correlation between an increase in lactate levels in the blood during procurement and negative outcomes. Conversely, higher levels of lactate in younger and healthier patients may suggest better mitochondrial function, while a significant decrease in lactate levels may indicate reduced organ damage and increased suitability for transplantation.