



**Pre-operative Proteinuria in Left Ventricular Assist Devices and Clinical Outcome.**

Rahatullah Muslem, BSc,<sup>a,b</sup> Kadir Caliskan, MD, PhD,<sup>a</sup> Sakir Akin, MD,<sup>c</sup> Kavita Sharma, MD,<sup>e</sup> Nisha A. Gilotra, MD,<sup>e</sup> Jasper J. Brugts, MD, PhD, MSc, FESC<sup>a</sup> Brian Houston, MD,<sup>f</sup> Glenn Whitman, MD,<sup>e</sup> Ryan J. Tedford, MD,<sup>e</sup> Dennis A. Hesselink, MD, PhD,<sup>d</sup> Ad J.J.C. Bogers, MD, PhD,<sup>b</sup> Olivier C. Manintveld, MD, PhD,<sup>a</sup> and Stuart D. Russell, MD,<sup>b</sup>

<sup>a</sup> Department of Cardiology, <sup>b</sup>Department of Cardiothoracic Surgery, <sup>c</sup>Intensive Care and <sup>d</sup>Department of Internal Medicine, Division of Nephrology and Renal Transplantation Erasmus MC, University Medical Center Rotterdam, the Netherlands, <sup>e</sup>Johns Hopkins Heart and Vascular Institute, Baltimore, Maryland, USA, <sup>f</sup>Medical University of South Carolina, Charleston, South Carolina, USA

**Running title: Predictive value of proteinuria in CF-LVAD patients**

**Conflict of interest (all authors):** none.

Corresponding author:

Kadir Caliskan, MD, PhD

Thoraxcenter, Room Bd 577,

Erasmus MC, University Medical Center Rotterdam

's-Gravendijkswal 230,

3015 CE Rotterdam, The Netherlands.

E-mail: k.caliskan@erasmusmc.nl

**Abstract**

**Background** – This study evaluated the association of pre-operative proteinuria before CF-LVAD implantation in relation to mortality and the need for RRT during the first year of follow-up.

**Methods** – A retrospective, multicenter cohort study was conducted, evaluating all CF-LVAD patients (n=241) implanted in the two participating tertiary referral centers. Patients were included if they had a urine dipstick performed within 7 days before CF-LVAD implantation. Proteinuria was defined as  $\geq$  trace.

**Results** – In total, 173 (72%) patients were included (mean age  $52.3 \pm 13.3$ , 78% male, mean estimated GFR  $60.1 \pm 25.9$  mL/min per  $1.73$  m<sup>2</sup>). Forty-two patients (24%) had pre-operative proteinuria. The observed 3-months and 1-year survival in patients with proteinuria vs. without proteinuria was 57% vs 86% and 52% vs. 78% (Log-rank  $p < 0.001$ ), respectively. In addition, during the first year post-implantation, 32% of the patients with proteinuria and 15% of the patients without proteinuria required RRT (Log-rank  $p = 0.02$ ). Multivariate Cox-regression analysis confirmed that pre-operative proteinuria was an independent predictor for mortality

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