



IMPROVEMENT OF RENAL FUNCTION AFTER CARDIAC RESYNCHRONIZATION THERAPY IMPLANTATION IN PATIENTS WITH HEART FAILURE

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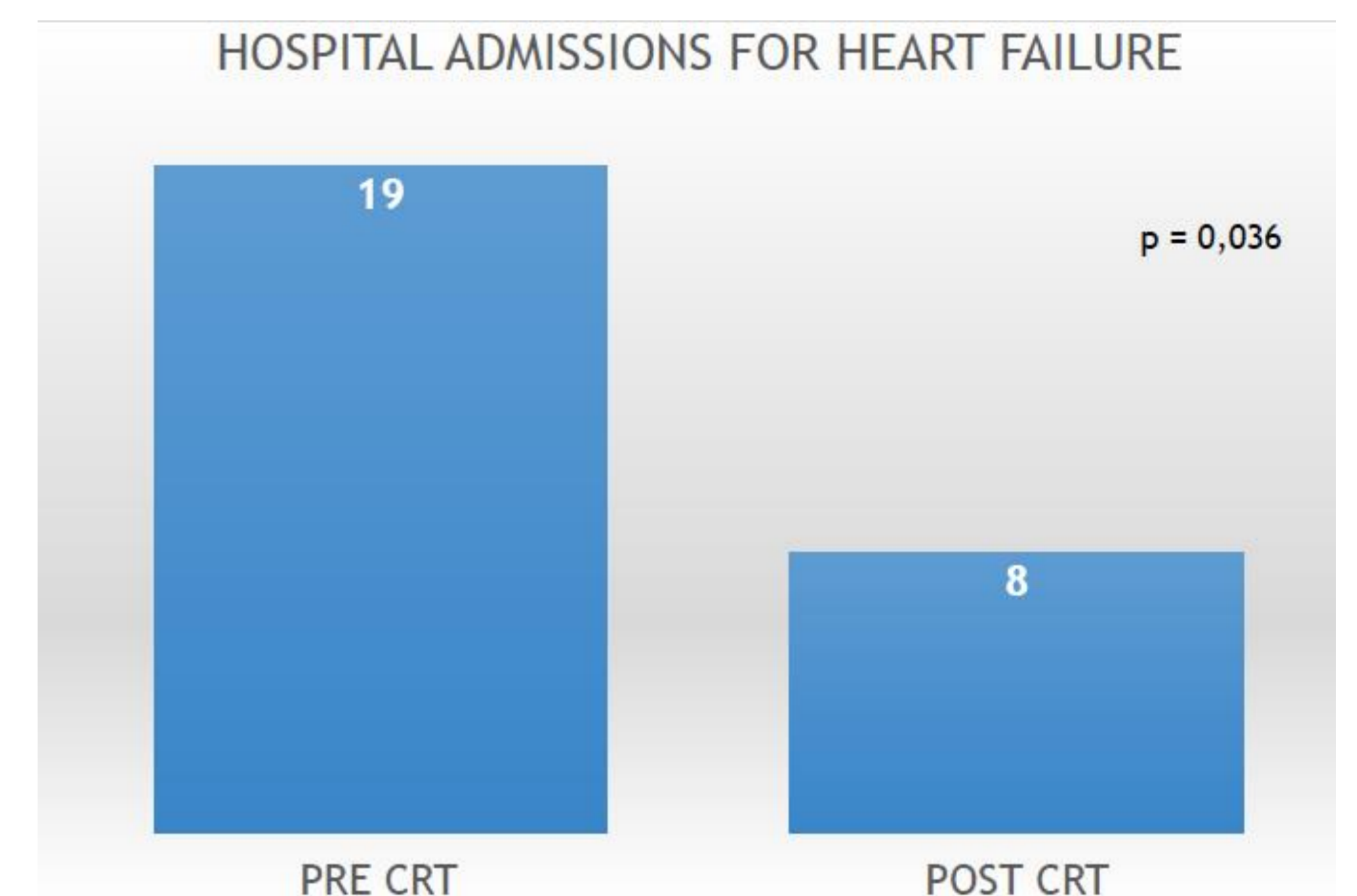
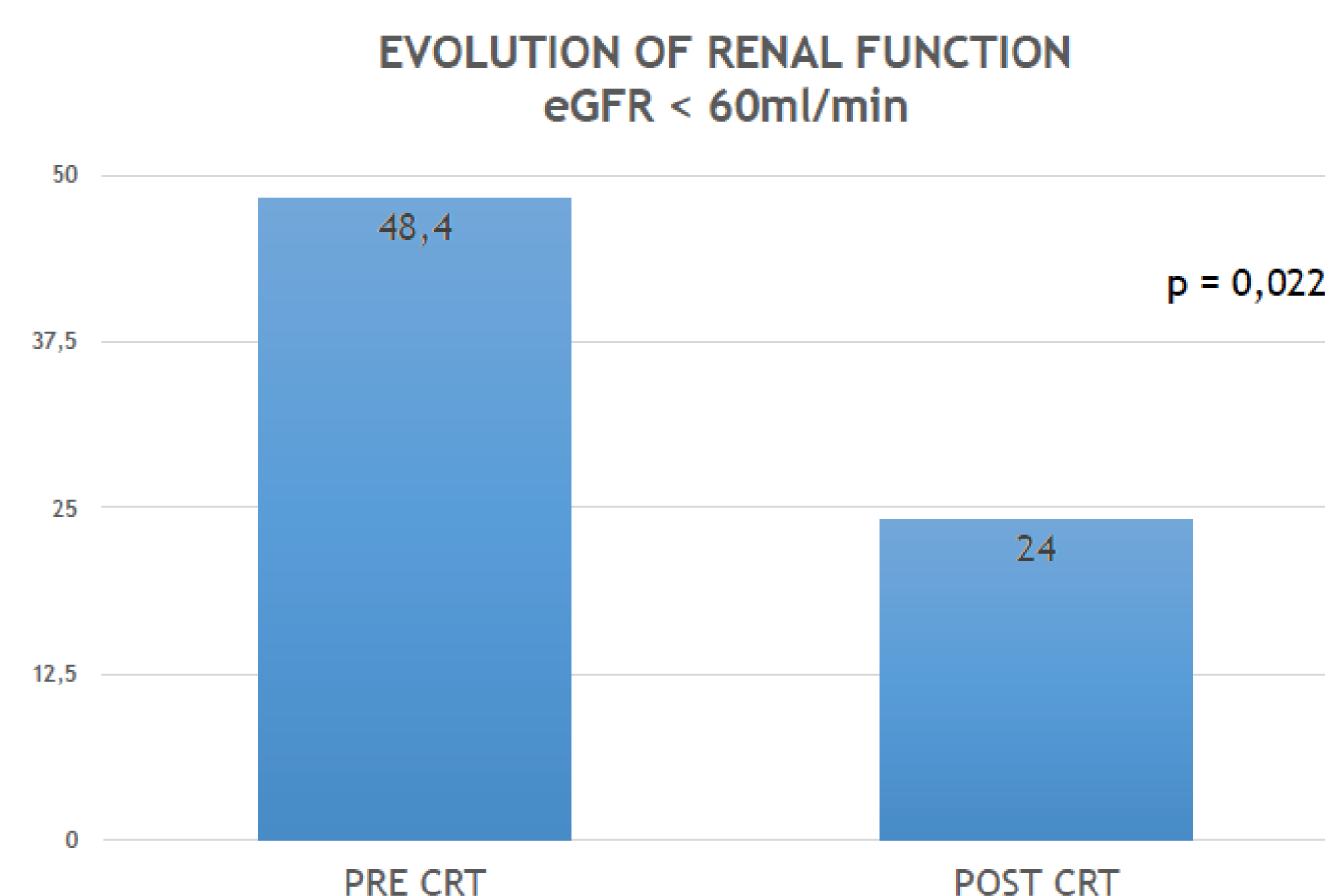
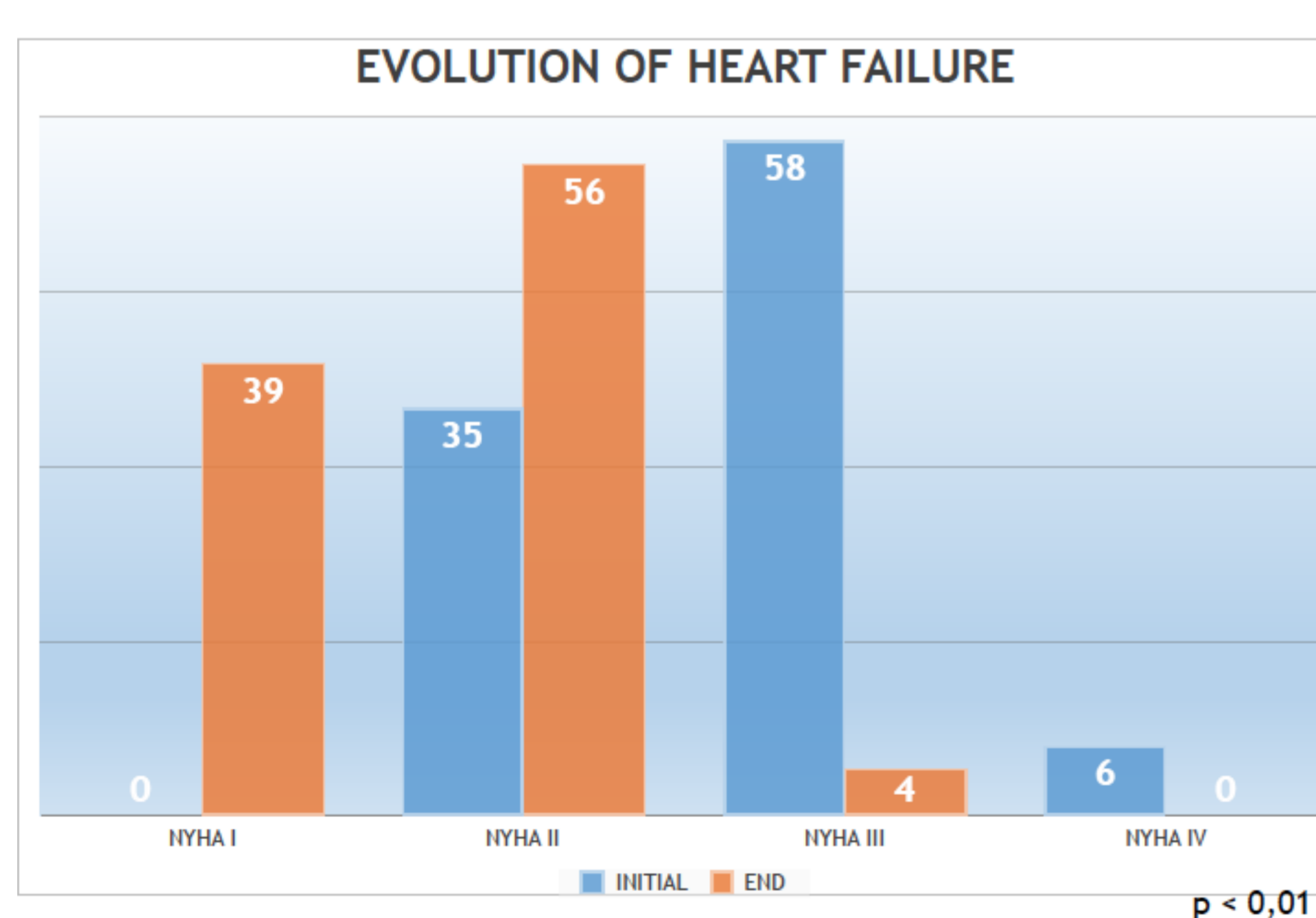
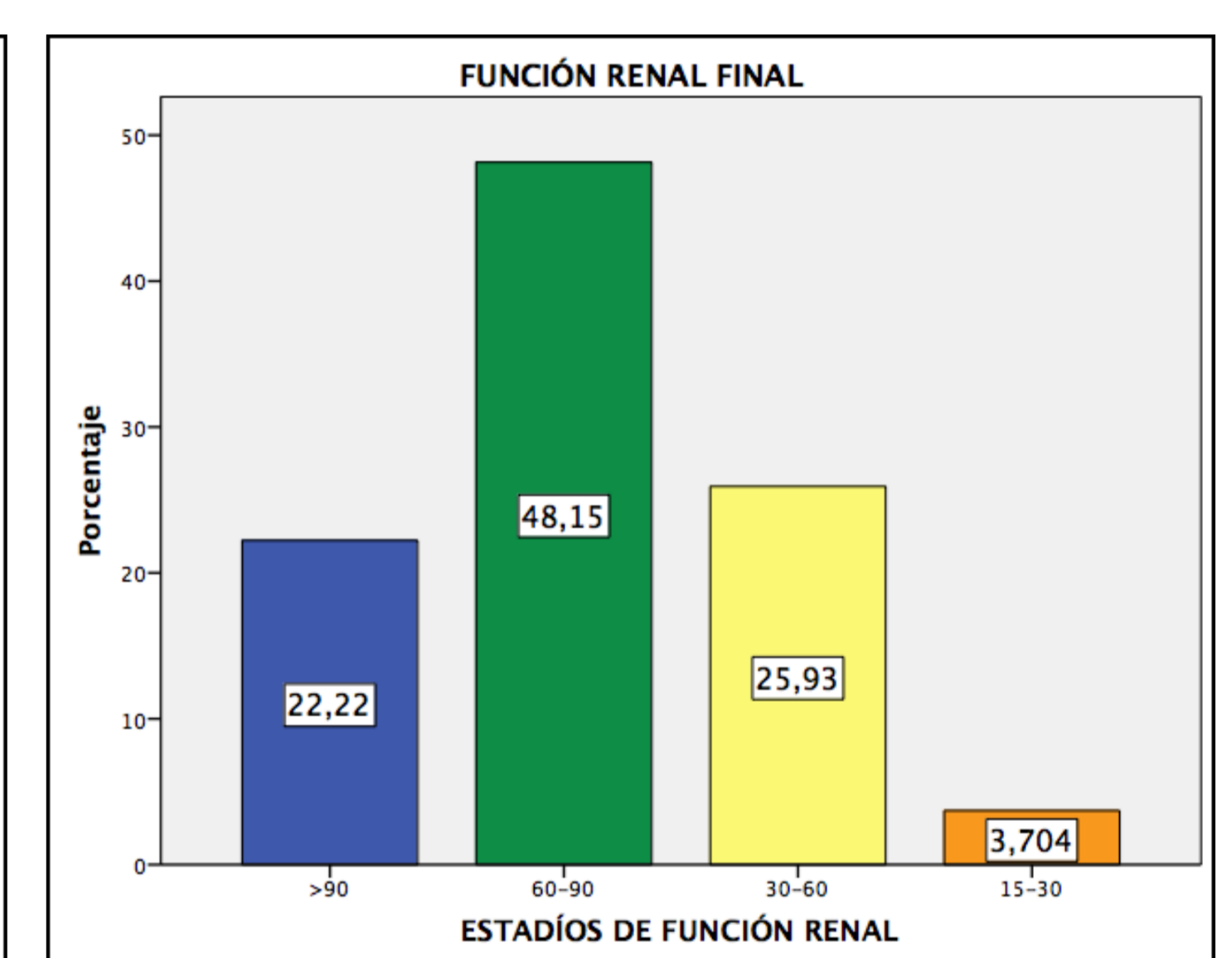
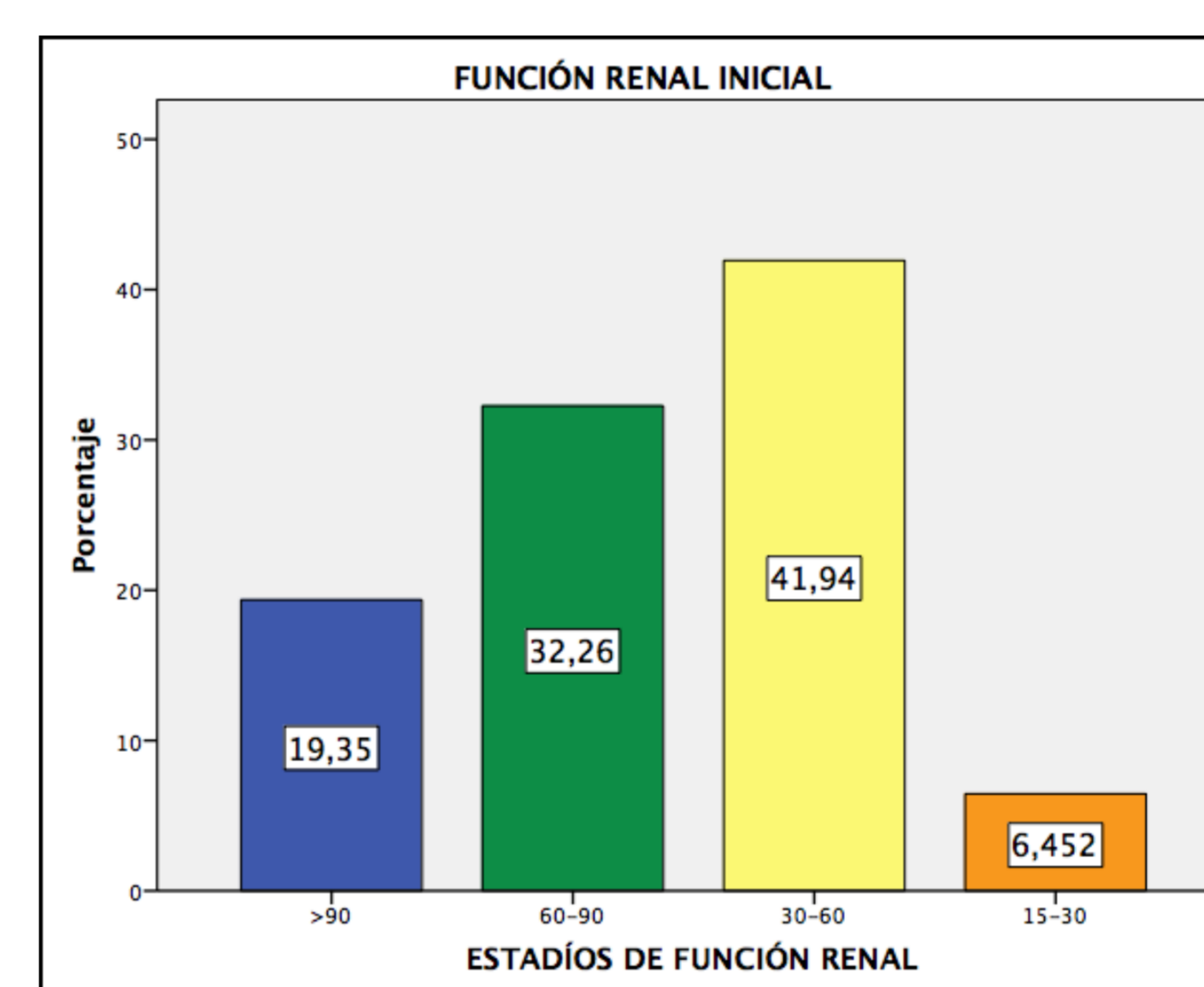
INTRODUCTION AND AIMS: Renal insufficiency is highly prevalent in heart failure and is associated with poor prognosis, including patients eligible for cardiac resynchronization therapy (CRT), but studies are limited. The aim of this study is to assess the relationship between improvement in renal function and hospital admissions of decompensated HF after implantation of the CRT device.

METHODS: Observational descriptive study. 31 patients who presented with depressed left ventricular ejection fraction (LVEF)<35%, QRS>120ms and NYHA functional class II-IV were undergoing CRT device from June 2010 to December 2012. Renal function was assessed by estimated GFR was calculated using CKD-EPI before and at 2 years follow up, being insufficient when it was less than 60ml/min; also we analyzed clinical variables and associated comorbidity. Statistical analysis with SPSS 18.0. Dichotomous data are presented as percentages and are compared using the Chi² test. Continuous data are presented as mean +/- SD and T-Student was used to compare them. A p <0.05 was considered statistically significant.

RESULTS: 31 patients were included. At baseline, the mean age was 68.4+/-9.3 years; 80.6% of males, mean LVEF of 28.2+/-6.9%, 64.6% in functional class III-IV, 61.3% ischemic cardiopathic, 64.5% hypertension, 35.5% diabetics, 48,4% renal insufficiency. At 2 years follow up after CRT implantation, renal insufficiency was 24% (p=0.022), improving stage renal insufficiency. To evaluated hospital admissions for HF at 2 years follow up, a significant decrease in hospital admissions was observed (19 vs 8, p=0,036).

	MEAN + SD
AGE (years)	68 ± 9
CREATININE (mg/dl)	1,3 ± 0,6
eGFR (ml/min)	67 ± 25
FEVI (%)	28,5 ± 7
Stimulated QRS (mseg)	191 ± 25
DTDVI (mm)	70 ± 11

	PRE CRT	POST CRT	p
CREATININE (mg/dl)	1,3 ± 0,6	1,0 ± 0,3	< 0,01
eGFR (ml/min)	67 ± 25	70 ± 21	< 0,01
FEVI (%)	28,5 ± 7	40 ± 8	< 0,03
Stimulated QRS (mseg)	186 ± 42	133 ± 2	< 0,01
DTDVI (mm)	70 ± 11	62 ± 9	< 0,01



CONCLUSIONS: CRT improves renal insufficiency in up to 50% of patients. The reduction hospital admissions for heart failure could be related to improvement of both heart failure and renal failure after cardiac resynchronization therapy implantation.

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