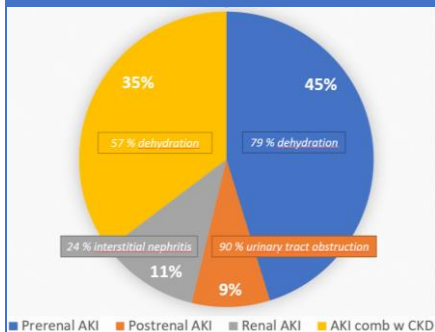


# CLINICAL CHARACTERISTICS AND IN-HOSPITAL OUTCOMES FOR 1519 PATIENTS WITH AKI

Christina Montgomerie, MD, PhD student<sup>1</sup>, Marie Evans, MD, PhD<sup>2</sup>, Jonas Spaak, MD, PhD<sup>3</sup>, Stefan H Jacobson, MD, professor<sup>1</sup>

<sup>1</sup>Dept of Clinical Sciences, Karolinska Institutet and Dept of Renal Medicine, Danderyd University Hospital. <sup>2</sup>Dept of Renal Medicine, Karolinska University Hospital and CLINTEC, Karolinska Institutet. <sup>3</sup>Dept of Clinical Sciences, Karolinska Institutet and Dept of Cardiology, Danderyd Univ Hosp. All Stockholm, Sweden



Distribution of AKI in the SPARC study cohort and their most common etiologies, respectively.

## Conclusion

- This study provides data from the Stockholm Prospective Acute Renal failure Cohort (SPARC), a large, contemporary acute kidney injury (AKI) cohort.
- We confirm that both patient characteristics and short-term outcomes differ substantially in patients depending on AKI etiology.
- Greatest in-hospital reduction of sCr was seen in patients with prerenal and postrenal AKI, whereas patients with renal and combined AKI had poorer renal recovery.
- This is of importance for prognostic evaluation upon admission and further resource planning.

## Introduction

AKI is seen in about 15% of hospitalized patients but remains poorly defined and studied. We aimed to describe laboratory findings and short-term hospital outcomes in relation to cause of AKI in a large cohort of consecutive patients.

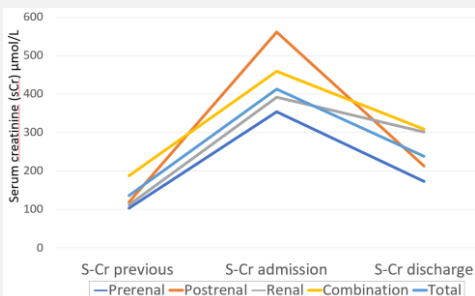
## Methods

The SPARC study included 1 519 consecutive patients with AKI admitted to the nephrology department at Danderyd University Hospital, Sweden, between 2009 and 2018. Patients on dialysis care were excluded. Detailed data on presentation and in-hospital outcome was collected and analyzed.

	Total	Prerenal	Postrenal	Renal	Combined	p-value
Etiology of AKI (%)	100%	45%	8.8%	11%	35%	-
<b>AT ADMISSION</b>						
Mean age (years)	72.5 (16.1)	73 (16)	76 (14)	61 (21)	75 (14)	<0.001*
Female gender	41.4%	49.8%	23.1%	44.6%	34.1%	<0.001*
sCr (μmol/L)	413 (293)	354 (260)	561 (456)	391 (260)	459 (271)	<0.001*
CRP (mg/dL)	79.3 (98)	82.5 (99.7)	97.2 (97.5)	74.9 (89.3)	71.9 (97.7)	0.047*
Haemoglobin (g/L)	116 (23)	121 (23.6)	113 (21.8)	111 (20.8)	111 (21.1)	<0.001*
Potassium (mmol/L)	4.5 (0.92)	4.4 (0.9)	4.7 (1)	4.3 (0.7)	4.9 (0.9)	<0.001*
Bicarbonate (mmol/L)	21 (4.4)	21.1 (4)	20 (4.1)	21 (3)	20 (4)	<0.001*
Systolic BP (mmHg)	130 (25.3)	125 (23.9)	141 (26.7)	142 (25)	132 (25.4)	<0.001*
<b>OUTCOME</b>						
Length of stay (days)	8.3 (6.4)	7.3 (5.5)	7.6 (5.1)	10.6 (7.8)	9.0 (7.1)	<0.001*
Discharge sCr	238 (207)	172 (179)	213 (176)	301 (232)	308 (210)	<0.001*
Renal recovery (≥30% sCr decrease)	63.2	76.1	72.9	40.4	51.4	<0.001*
Deaths (%)	4.4%	4.5%	0.9%	2.5%	5.6%	0.114*

Values are presented as per cent or mean (SD).

a= ANOVA. b=  $\chi^2$ -test. c= Fisher-test



S-Cr previous to admission and in-hospital changes according to etiology of AKI and in total.

## Results

Most common etiology was prerenal AKI (n=687), followed by combined (defined as chronic kidney disease combined with any type of AKI) (n=536), renal (n=166), and postrenal (n=130) AKI. Patients with renal AKI were younger, had longer duration of stay, and had higher bicarbonate levels. Patients with prerenal AKI had lower sCr, blood pressure and higher Hb upon admission. 63.2% of patients recovered with a sCr decrease of at least 30% from admission during their stay. Most of these were patients with prerenal, followed by postrenal AKI. There was no difference in mortality between the four etiologies of AKI.



Christina Montgomerie  
Christina.montgomerie@ki.se  
+46812359377  
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