

## PARADIGM SHIFTS

### ACUTE RENAL FAILURE →→→ ACUTE KIDNEY INJURY

#### RIFLE

**Bellomo R, Ronco C, Kellum JA, et al. Acute renal failure—definition, outcome measures, animal models, fluid therapy and information technology needs: the Second International Consensus Conference of the Acute Dialysis Quality Initiative (ADQI) Group. *Crit Care*. 2004;8:R204-R212.**

*Prior to the establishment of the RIFLE criteria, there was no consensus definition of acute renal failure (ARF) in critically ill patients. The ADQI defined ARF according to the following criteria: R=risk; I=injury; F=Failure; L=loss; E=end-stage. The first three stages (R, I, F) reflect progressively severe increases in serum creatinine, decreases in estimated glomerular filtration rate and severity of oliguria within a seven-day period. The last two stages (L, E) reflect longer term renal function outcomes; L describes complete loss of kidney function requiring renal replacement therapy for greater than four weeks, and E describes end stage kidney disease requiring dialysis for longer than three months.*

#### AKIN

**Mehta RL, Kellum JA, Shah SV, et al. Acute Kidney Injury Network: report of an initiative to improve outcomes in acute kidney injury. *Crit Care*. 2007;11:R31.**

*This paper describes a further initiative to develop uniform standards for defining and classifying acute kidney injury (AKI) and to establish a forum for multidisciplinary interaction. Members of the Acute Kidney Injury Network (AKIN) included representatives from key societies in critical care and nephrology and additional experts in adult and pediatric AKI. The term AKI was proposed to represent the entire spectrum of acute renal failure. The AKIN criteria are based on acute alterations in serum creatinine or urine output, comprising stage 1, 2 and 3 AKI. These criteria simplified the RIFLE definitions to describe three stages evaluated over 48 hours. The parameter of estimated glomerular filtration rate was dropped, and an increase in serum creatinine of as little as 0.3 mg/dL was incorporated into stage 1 AKI.*

#### KDIGO

**Kellum JA, Lameire N for the KDIGO AKI Guideline Work Group. Diagnosis, evaluation, and management of acute kidney injury: a KDIGO summary (Part 1). *Crit Care*. 2013;17:204.**

*The AKIN criteria were further modified by the Kidney Disease: Improving Global Outcomes (KDIGO) group. This paper summarizes the first ever, international, multidisciplinary clinical practice guideline for AKI and focuses on definitions, risk assessment, evaluation, and treatment. AKI is defined as any of the following (with three stages of severity, 1, 2 and 3):*

- *Increase in serum creatinine by  $\geq 0.3$  mg/dL within 48 hours, or*
- *Increase in serum creatinine by  $\geq 1.5$  times baseline, which is known or presumed to have occurred within the prior 7 days, or*
- *Urine output  $< 0.5$  mL/kg/hour for 6 hours.*