Table 1Definition of AKI based on either a50% rise OR an increase of 0.3 mg/dl overserum baseline creatinine levels

Serum creatinine (mg/dl) and AKI

	Rise by	
Baseline	50%	0.3
0.4	0.6	0.7
0.6	0.9	0.9
0.8	1.2	1.1
1.0	1.5	1.3
1.2	1.8	1.5

As the baseline serum creatinine increases, the

discrepancy between the two definitions increases significantly.

clearance. Patients with a serum creatinine >0.6 mg/dl do exhibit a more marked increase of creatinine when AKI is defined by a 50% rise. For instance, with a baseline creatinine of 1.0 mg/dl AKI may be reached when creatinine rises to 1.3 mg/dl or to 1.5 mg/dl depending on the definition used. Thus, it may be worthwhile to analyse the data of Wong *et al* with the hypothesis, that AKI defined by a 50% increase discriminates even more clearly between survivors and non-survivors, and may be a predictor of non-reversal of AKI.

Alexander L Gerbes

Correspondence to Professor Alexander L Gerbes, Klinikum of the University of Munich, Liver Center Munich, Munich, Germany; gerbes@med.unimuenchen.de

Competing interests None.

Provenance and peer review Not commissioned; internally peer reviewed.

Received 19 December 2012 Accepted 21 December 2012 Published Online First 11 January 2013



▶ http://dx.doi.org/10.1136/gutjnl-2013-304576

Gut 2013;**62**:1091. doi:10.1136/gutjnl-2012-304378

REFERENCES

- Tsien CD, Rabie R, Wong F. Acute kidney injury in decompensated cirrhosis. *Gut* 2013;62: 131–7
- Salerno F, Gerbes AL, Gines P, et al. Definition, diagnosis, prevention and treatment of hepatorenal syndrome in cirrhosis. A consensus workshop of the international ascites club. Gut 2007;56:1310–18.
- Wong F, Nadim MK, Kellum JA, et al. A working party's proposal for a revised classification system of renal dysfunction in patients with cirrhosis. Gut 2011;60:702–9.
- Gerbes AL, Gülberg V, Bilzer M, et al. Evaluation of serum Cystatin C concentration as a marker of renal function in patients with cirrhosis of the liver. Gut 2002;50:106–10.

Gerbes AL, Benesic A, Vogeser M, et al. Serum neutrophil gelatinase-associated lipocalin—a sensitive novel marker of renal impairment in liver cirrhosis? Digestion 2011;84:82–3.

The impact of acute kidney injury in cirrhosis: does definition matter?

In their important study, Tsien *et al*¹ demonstrated for the first time that minor increases of serum creatinine have major clinical impact in outpatients with cirrhosis, ascites and normal serum creatinine. Patients with acute kidney injury (AKI) had a slow constant increase of serum creatinine over time and, interestingly, a reduced survival probability. These data support the concept that not only hepatorenal syndrome, but also minor changes of normal serum creatinine may have clinical importance.^{2 3} However, no predictors of reversal of AKI could be identified. Possibly, more sensitive markers of reduced glomerular filtration rate, such as cystatin C^4 or NGAL, may be suitable predictors. Another aspect of AKI remains to be elucidated: AKI stage 1 is defined by an increase of serum creatinine of at least 50% or 0.3 mg/dl over serum baseline. These changes, however, may denote different changes of creatinine, as illustrated in table 1, and consequently, even more marked differences of creatinine



The impact of acute kidney injury in cirrhosis: does definition matter?

Alexander L Gerbes

Gut 2013 62: 1091 originally published online January 11, 2013 doi: 10.1136/gutjnl-2012-304378

Updated information and services can be found at: http://gut.bmj.com/content/62/7/1091.1

These include:

References	This article cites 5 articles, 4 of which you can access for free at: http://gut.bmj.com/content/62/7/1091.1#BIBL
Email alerting service	Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to: http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to: http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to: http://group.bmj.com/subscribe/