

## Renal biopsy in light chain cast nephropathy

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Royal V, Leung N, Troyanov S, Nasr SH, Écotière L, LeBlanc R, Adam BA, Angioi A, Alexander MP, Asunis AM, Barreca A, Bianco P, Cohen C, Drosou ME, Fatima H, Fenoglio R, Gougeon F, Goujon J-M, Herrera GA, Knebelmann B, Lepori N, Maletta F, Manso R, Motwani SS, Pani A, Rabant M, Rennke HG, Rocatello D, Rosenblum F, Sanders PW, Santos A, Soto K, Sis B, Touchard G, Venner CP, Bridoux F; International Kidney and Monoclonal Gammopathy Research Group. Clinicopathologic predictors of renal outcomes in light chain cast nephropathy: a multicenter retrospective study. *Blood*. 2020;135(21):1833-1846.

**1. Your patient is a 72-year-old man with light chain cast nephropathy (LCCN) and multiple myeloma (MM). According to the retrospective study by Royal and colleagues, which of the following statements about clinical and pathological features of LCCN in patients with MM is correct?**

- Mean estimated glomerular filtration rate (eGFR) was  $13 \pm 11$  mL/min per  $1.73 \text{ m}^2$ , and 82% had stage 3 acute kidney injury. The mean number of casts was 3.2 per square millimeter in the cortex
- Tubulointerstitial lesions were seldom seen
- Extent of cast formation was not associated with eGFR at the time of LCCN diagnosis
- Treatment response rate was low

**2. According to the retrospective study by Royal and colleagues, which of the following statements about the predictive value of clinical and pathological features of LCCN in patients with MM is correct?**

- Predictive value of renal biopsy findings was dependent on the hematologic response
- Extent of cast formation and degree of interstitial fibrosis/tubular atrophy were significantly associated with renal recovery in multivariate analysis
- Higher eGFR during follow-up correlated with overall survival, driven solely by hematologic response
- Predictors of renal response in this study varied markedly from those identified in previous research

**3. According to the retrospective study by Royal and colleagues, which of the following statements about clinical and pathological features of LCCN in patients with MM is correct?**

- Renal biopsy does not appear to add significant predictive value to that obtained from initial clinical assessment
- The study proves that treatment adaptation should be based on renal pathology findings
- In patients with MM and suspected LCCN, renal biopsy is useful only in confirming whether LCCN is present
- For routine clinical practice, the investigators suggest reporting the highest number of casts per square millimeter in the cortex, using simple cutoffs of <5, 5 to 10, and >10 casts per square millimeter