

**MGRS MonGReS**

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**Abstract**

Analysis of renal biopsies by light, immunofluorescence, and electron microscopy (LM, IF, and EM, respectively), along with selective use of other analytic methods, is central to the diagnosis of monoclonal gammopathy of renal significance (MGRS). In many cases, such biopsies are performed in patients with monoclonal gammopathy of undetermined significance (MGUS): individuals with laboratory evidence of a circulating M-protein but no definitive evidence of a plasma cell dyscrasia or lymphoma.

Electron microscopy plays a vital role in the analysis of monoclonal deposits in patients with MGUS. In many cases, EM (usually in combination with IF) provides a definitive diagnosis. It sometimes helps establish a diagnosis unexpected based on clinical clues (e.g., M-protein light-chain type). In other instances, it may yield findings of limited specificity that nonetheless provide guidance for further diagnostic work-up. In rare cases, EM may give potentially misleading information that could elicit an incorrect diagnosis in inexperienced hands.

In a separate set of cases, renal M-protein deposits are occasionally found in patients with no prior evidence of a circulating M-protein. In some instances, one or more serologic tests may have been performed, but failed to detect a circulating M-protein (perhaps in some instances because the M-protein has a strong propensity for tissue deposition). In other patients, the relevant tests may simply not have been performed. This presentation will provide examples of all of these categories and suggest ways of avoiding diagnostic pitfalls.