

# CJASN

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### On the Cover

*What's the diagnosis?* Dysmorphic red blood cells in a patient with a proliferative glomerulonephritis (400× magnification). The presence of dysmorphic red blood cells may be helpful in differentiating glomerular bleeding from extrarenal bleeding from a urothelial source. With urothelial bleeding the red blood cells are typically uniform and round, appearing similar to their appearance on a peripheral blood smear. Dysmorphic red blood cells, as seen in this image, are characterized by blebs, budding and marked variability in size and shape due to segmental loss of membrane. It is thought that the morphologic damage to the red blood cells results from mechanical trauma as they pass through breaks in the glomerular basement membrane. The presence of >5% acanthocytes (dysmorphic red blood cells characterized by ring forms with vesicular protrusions) is thought to be >95% specific for glomerular bleeding. (Image and text provided by Paul M. Palevsky, MD, FASN, Renal Section, VA Pittsburgh Healthcare System and Renal-Electrolyte Division, University of Pittsburgh School of Medicine, Pittsburgh, PA)