

# CJASN

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## Special Feature

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**937 The Clinician and Estimation of Glomerular Filtration Rate by Creatinine-based Formulas: Current Limitations and Quo Vadis**

*Rossini Botev, Jean-Pierre Mallié, Jack F.M. Wetzels, Cécile Couchoud, and Otto Schüic*

### On the Cover

*What's the diagnosis?* Chronic thrombotic microangiopathies are characterized by tremendous remodeling of glomerular capillary walls, with a membranoproliferative pattern of glomerular injury, in the absence of immune type deposits. On this electron micrograph, the endothelium is displaced from the original basement membrane by marked subendothelial widening due to cellular interposition, electron-lucent defects, and newly formed basement membrane material, resulting in “double contours”; electron-dense deposits are not present along the capillary wall. The findings can be seen in a number of diseases characterized by repetitive injury and repair of endothelial cells, such as hemolytic uremic syndrome, thrombotic thrombocytopenic purpura, transplant glomerulopathy, the renal involvement of the lupus anticoagulant or anti-phospholipid antibody syndrome, scleroderma, renal complications during pregnancy (severe pre-eclampsia, HELLP syndrome, post-partum hemolytic uremic syndrome), drugs with vascular toxicity (such as cocaine, amphetamines, and nasal decongestants), and toxicity of chemotherapeutic and immunosuppressive regimen (gemcitabine, VEGF inhibitors, mitomycin, bleomycin plus cisplatin, cyclosporine, tacrolimus). (Image and text provided by Dr. Vanesa Bijol, Brigham and Women’s Hospital)