INTRODUCTION
Rheumatoid arthritis (RA) can manifest in several organ systems; however, kidney disease in RA is often overlooked and frequently attributed to the nephrotoxicity of the drugs used to manage the disease (disease-modifying antirheumatic drugs or DMARDs). Consideration of RA as a potential cause of kidney disease is important since early diagnosis and treatment may increase survival.

CASE DESCRIPTION
77-year-old woman with a history of COPD, rheumatoid arthritis (not on medication), hypothyroidism, and hypertension was evaluated over multiple admissions for a progressively worsening rash on her lower extremities and an acute kidney injury (AKI).

Physical Exam: Erythematous, non-pruritic, non-painful, non-blanching petechial rash on the bilateral lower extremities.

HOSPITAL COURSE
Initial evaluation of the rash resulted in a vasculitis workup. The AKI was attributed to NSAID-induced ATN and dehydration. Improved with oral steroids and IVFs with subsequent discharge. Returned five days later with worsening rash that spread to the upper extremities and worsening renal function. A glomerulonephritis workup was initiated.

First Admission:
- Creatinine 2.0 mg/dl
- UA significant for protein (>=300 mg/dl), RBC (>75/HPF)
- Positive rheumatoid factor (450.9 IU/mL), elevated ESR (27MM)
- Negative normal ANCA, ANA, hepatitis panel, CMV DNA, West Nile antibodies, HIV antibodies, complement levels, kappa lambda ratio, cryoglobulins, and MPO antibodies
- Skin biopsy: minimal perivascular inflammation
- Creatine on discharge was 1.4 mg/dl.

Second Admission:
- Creatinine 3.1 mg/dl
- UA significant for protein (>=300 mg/dl), RBC (25-50/HPF)
- Kidney biopsy: necrotizing glomerulonephritis with crescents suggestive of pauci-immune glomerulonephritis (immunofluorescence staining showed a prominence of IgA without immune complexes on electron microscopy).

DISCUSSION
Rapidly progressive glomerulonephritis (RPGN) is a nephritic syndrome that advances to end-stage renal disease (ESRD) within weeks to months if left untreated. RPGN as a complication of RA is rare and usually seen with concomitant systemic vasculitis and positive ANCA serology. Thus, RPGN may be difficult to diagnose in those with RA without vasculitis and negative ANCA serology. Difficulty establishing a diagnosis can inadvertently delay treatment and lead to fatal results.

TEACHING POINTS
- Early identification and treatment of RPGN is critical in preventing irreversible damage and potential fatality.
- Aggressive measures such as kidney biopsy and initiation of immunosuppression should be considered for patients with RA (not on DMARDs) who present with signs of nephritic syndrome.