Drug reaction with eosinophilia and systemic symptoms (DRESS syndrome) is a serious drug reaction that is typically treated with corticosteroids and withdrawal of the offending drug. We report a case of prednisone-induced DRESS syndrome with acute interstitial nephritis.

CASE REPORT
A previously healthy 65-year-old male was given a prednisone taper for a non-specific fever and cough. He misunderstood the prednisone dosing and took 180mg on day 1, 120mg day 2, and 80mg day 3. Day 4 he developed a rash and presented to his primary care doctor for evaluation. While waiting in the lobby, he had a near-syncopal event and was admitted to the hospital for further evaluation. On admission, dermatology was consulted for the rash. On exam, he had a diffuse mild morbilliform rash on his trunk with minimal involvement of extremities (Fig. 1). His only medications were three days of prednisone and long-standing atorvastatin, which he had been on for more than one year. The dermatology consult team felt this was likely a viral exanthem and did not need specific treatment. On hospital day 8, dermatology was asked to return for worsening rash. Since admission, he had been started on prednisone 40mg daily with persistently worsening rash, rising eosinophilia, and new acute renal failure. On exam, he had prominent facial edema and dusky red macules and thin papules diffusely on his face, trunk, and extremities (Fig. 2a, 2b, 2c). Labwork revealed leukocytosis (WBC 25,4000/...
ul), prominent eosinophilia (absolute eosinophil count 2.3 K/μL, normal 0-0.5 K/μL), an elevated IgE (203 IU/mL, normal 7-135 IU/mL), elevated creatinine (1.99 from baseline 0.98), and eosinophils in a urine specimen. His ALT was mildly elevated (46 U/L, normal 10-40), normal AST and TSH. Labwork was normal or negative for ANA, RPR, HIV, streptococcus pneumonia urine antigen; antibodies to aspergillus, blastomycosis, coccidiomycosis, histoplasmosis; PCR testing for influenza, RSV, metapneumovirus, rhinovirus, adenovirus, parainfluenza, parvovirus, CMV. He did have an elevated EBV at 10,200 copies/mL (normal <2000 copies/mL). A skin biopsy from a follicular papule at his arm showed an interface dermatitis with eosinophils. Nephrology had been consulted for acute renal failure and performed a kidney biopsy that confirmed acute interstitial nephritis.

The primary and consulting teams discussed the relative role of drug reaction and EBV infection in his presentation, as both can cause a morbilliform rash and facial edema. It was noted that facial edema in EBV infection typically appears very early in the disease and our patient did not develop it until hospital day 6-7. Additionally, there is significant controversy in nephrology literature if EBV can cause acute interstitial nephritis with recent publications documenting no virus present in affected tissue. Further, the primary and consulting teams discussed the relative role of drug reaction and EBV infection in his presentation, as both can cause a morbilliform rash and facial edema. It was noted that facial edema in EBV infection typically appears very early in the disease and our patient did not develop it until hospital day 6-7. Additionally, there is significant controversy in nephrology literature if EBV can cause acute interstitial nephritis with recent publications documenting no virus present in affected tissue.

The following is an abstract from another of the top 10 CSF resident presentations.

**Malignant to Benign Ratio of Skin Biopsies: A Retrospective Study of an Australian Public Hospital Dermatology Department**

Introduction: Accurate identification of malignant lesions is important for patient safety as well as reducing the number of benign lesions removed and thus reducing costs and workload. By quantifying malignant to benign biopsy ratios at this point in time we can see if current methods have improved the accuracy of diagnosis. This also helps effectively assess the impact of new vectors in skin cancer diagnosis when they are introduced.

Methods: 6,546 biopsies/excisions were performed in an 18-month period from July 2010 until December 2011 in the Dermatology OPD at a Tertiary Teaching Hospital. Dermatology Registrars and Consultants were involved in assessing lesions for biopsy.

Results: The Biopsy to Treatment Ratio (BTR) was calculated as the total number of biopsies divided by the number of non-melanoma skin cancers identified. The BTR of 1.97 indicated about one in two biopsies identified a skin cancer. The ratio of melanoma to nevi was 1:6.5 (55 melanomas were diagnosed). The ratio of melanoma to benign pigmented lesion was 1:14.7 giving a Number Needed to Treat (NNT) of 15.

Discussion/Conclusion: A previous study1 of skin cancer clinics in Australia reported NNT as 29 and BTR of 3. NNT in this study may be lower because benign lesions referred only to pigmented, not non-pigmented lesions. Biopsies in this study were for many different conditions not just suspected skin cancers and thus the BTR would be lower if only suspected skin cancers were included. The melanoma to nevi ratio in this study is better than 1:15.5 reported previously in a small study using digital dermoscopy to monitor high-risk patients2. In a study3 of fully qualified dermatologists who all used dermoscopy, melanoma to nevi ratios was 1:4.3. This suggests more experience and stringent use of dermoscopy could improve biopsy accuracy.

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acute interstitial nephritis is typically treated with prednisone, yet our patient had development and worsening of his disease on prednisone. Lastly, the reactivation of EBV, HHV-6, and other human herpes viruses in patients with DRESS syndrome is well documented in the literature.2-6 The consensus between the primary team, dermatology, infectious disease, nephrology, and rheumatology was that the patient’s presentation was a better fit with DRESS syndrome due to development and worsening of disease on prednisone rather than improvement.

MANAGEMENT AND DISCUSSION
With the diagnosis of DRESS syndrome, the prednisone was stopped and dexamethasone was started. Dexamethasone was selected because it is a Group C steroid in a different allergy classification than Group A prednisone. It has a low allergic potential and low risk for cross-reaction with prednisone. With this treatment, his rash cleared rapidly and completely. His labs returned to normal.

We report this unusual case of prednisone-induced DRESS syndrome. It is important to always critically evaluate the medication list for possible drug reactions causing dermatologic disease. ■

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Adapted from a presentation given at the Cosmetic Surgery Forum 2011 in Las Vegas, NV (cosmeticsurgeryforum.com). This presentation was selected as one of the top 10 resident presentations at the meeting.