

JOINT EVENT

5<sup>th</sup> Annual Congress on **EMERGENCY NURSING & CRITICAL CARE**  
&  
**26<sup>TH</sup> CANCER NURSING & NURSE PRACTITIONERS CONFERENCE**  
July 16-17, 2018 | London, UK

**Tumor lysis syndrome (TLS): An electrolyte emergency****Jan Garza Dennis**

MD Anderson Cancer Center, USA

**Objective:** Tumor lysis syndrome (TLS) refers to the constellation of metabolic disturbances that may follow the initiation of cancer treatment. It can occur in patients with bulky, rapidly proliferating, treatment-responsive tumors such as high-grade lymphomas, acute leukemias, Burkitt's lymphomas, as well as in chronic leukemias with high white cell counts. TLS results from the release of intracellular ions and metabolic byproducts into the systemic circulation that contribute to electrolyte abnormalities resulting in acute systemic symptoms and potentially death if not identified and managed early. This poster will illustrate an evidence-based approach to the assessment, identification and management of TLS by advanced practice providers (APPs).

**Methods:** An evidence-based algorithm is utilized for the identification, treatment and monitoring of tumor lysis syndrome at a National Cancer Institute-designated comprehensive cancer center. Application of this algorithm will be presented in the context of a case study, including diagnostic testing and treatment protocols. The case study focuses on a 48 year old man with T cell prolymphocytic leukemia who presented with hyperkalemia, hyperuricemia, hyperphosphatemia, elevated blood urea nitrogen (BUN) and creatinine and hypocalcemia.

**Results:** Patient JG was identified as high risk according to the algorithm with hyperleukocytosis, LDH greater than 2x normal, uric acid greater than 7.5 and high risk disease. JG was treated with allopurinol due to 6-PD deficiency. By day 6 this patient's lab work indicated TLS and acute kidney injury (AKI), suggesting need for aggressive continuous renal replacement therapy (CRRT). Clinically the patient was very advanced in TLS/AKI and due to G6PD deficiency; we were not able to treat with rasburicase. Implementation of an evidence-based algorithm can be applied for the successful treatment and management of TLS, a potentially life-threatening oncologic emergency. The case study demonstrates how application of the algorithm resulted in care of the patient.

janganza@mdanderson.org