



Definition:

Tumor Lysis Syndrome: is when a cell dies and lysis of the cell liberates intracellular contents (nucleic acid, potassium, phosphorous) into extracellular circulation. With massive cell death, large amounts of intracellular contents overwhelm the kidney. Two major complications can result:

1. Acute renal failure from hyperuricemia and hyperphosphatemia
2. Cardiopulmonary arrest from hyperkalemia or hypocalcemia.

RISK FACTORS	ASSESS PATIENT FOR SYMPTOMS
<ul style="list-style-type: none"> Recent chemotherapy (esp. 24-72 hrs after, but within last 5-7 days for large, bulky, highly proliferative tumor). <p>Malignant Disease:</p> <ul style="list-style-type: none"> High grade lymphomas (e.g., Burkitt's with abdominal masses) Leukemias (especially ALL, AML, CML in blast crisis, CLL, APL) Rare in solid tumors since they respond more slowly to chemo, but has been seen in SCLC, breast, testicular, medulloblastoma, hepatoblastoma, metastatic GI, soft tissue sarcoma, vulva. <p>Other Causes:</p> <ul style="list-style-type: none"> Diseases listed above exquisitely Sensitive to chemotherapy Decreased fluid intake Patient did not take allopurinol as prescribed Pre-treatment renal insufficiency High WBC, lymphadenopathy Splenomegaly ↑ LDH, especially in high tumor burden Corticosteroids 	<p>Hallmark Symptoms: Diarrhea, lethargy, muscle cramps, nausea, paresthesias, vomiting, and weakness.</p> <p>Assess for Additional Symptoms: ↓</p> <p>Hyperuricemia: <i>GI effects</i> - nausea, vomiting, anorexia, diarrhea. <i>Renal effects</i> - flank pain, hematuria, cloudy urine, crystalluria, urine pH<7, decreased or absent urine output, weight gain, hypertension, edema. <i>Miscellaneous</i> - pain and swelling at joints, lethargy.</p> <p>Hyperkalemia: <i>Cardiac effects</i> - cardiac arrest. <i>Neuromuscular effects</i> - nerve and muscle irritability (twitching), muscle cramps or spasms, paresthesias, muscle weakness. <i>GI effects</i> - nausea, diarrhea, and intestinal colic.</p> <p>Hyperphosphatemia: <i>Renal effects</i> - decreased or absent urine output, edema, hypertension, and weight gain. <i>Metabolic effects</i> - hypocalcemia, which may be accompanied by neurologic and cardiac signs and symptoms.</p> <p>Hypocalcemia: <i>Cardiac effects</i> - cardiac arrest <i>Neurologic symptoms</i> - muscle cramping and twitching, tetany, grimacing, carpopedal spasm, laryngospasm, convulsions, seizures, paresthesias, confusion, loss of recent memory, delirium, lethargy.</p> <p>Psychosocial Signs: Apprehension, confusion, delirium.</p>

Action

A:

1. If situation is emergent (e.g., severe symptoms heralding cardiovascular or renal collapse) instruct patient to attend nearest major emergency department.
2. Notify the emergency department of patient's condition.
3. Relay information to Doctor in Charge.

B:

1. If situation is not emergent (patient indicates they feel well enough to wait for a follow-up call), contact Doctor in Charge for instructions.
2. Instruct patient/caregiver to call if symptoms worsen or change.

Note:

ASA, thiazide diuretics, probenecid, radiographic dyes block tubular reabsorption of uric acid.