

# Hyperleukocytosis/Leukapheresis in Patients with Leukemia

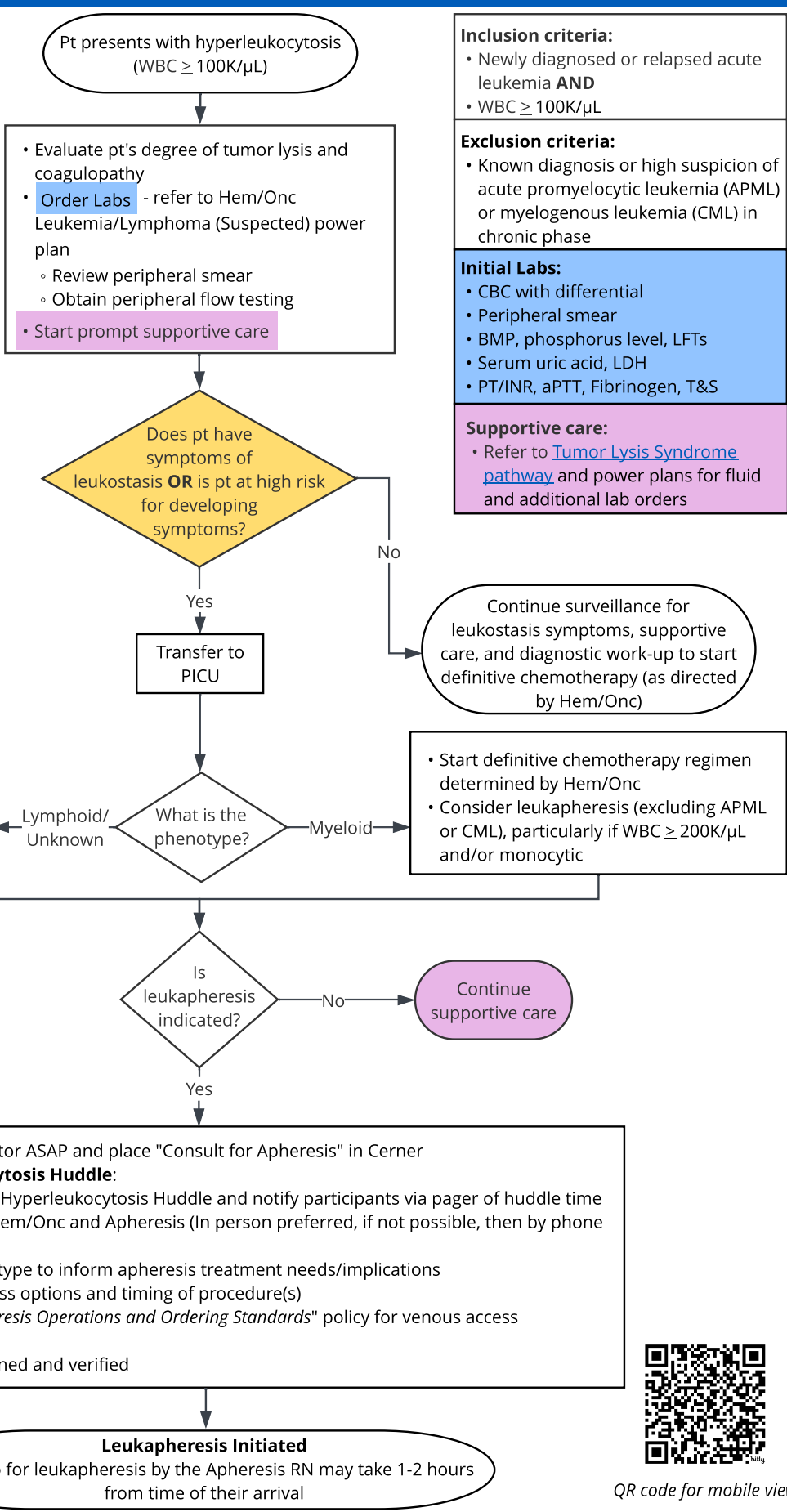
Associated Power Plans: Hem/Onc Leukemia/Lymphoma (Suspected), Tumor Lysis Pathway



**Children's Mercy**  
KANSAS CITY

Evidence Based Practice

Symptoms of Leukostasis	
Affected System	Signs & Symptoms
Central Nervous System	<ul style="list-style-type: none"> <li>Headache, dizziness, vision disturbance</li> <li>Tinnitus</li> <li>Ataxia</li> <li>Confusion, somnolence/coma</li> <li>Papilledema, retinal hemorrhage, retinal vein distension</li> <li>Cranial nerve palsies</li> </ul>
Cardiovascular	<ul style="list-style-type: none"> <li>Tachycardia/bradycardia &amp; hypotension</li> <li>Peripheral vascular occlusion</li> <li>Pulmonary hypertension</li> <li>Myocardial infarction, arrhythmias</li> </ul>
Respiratory	<ul style="list-style-type: none"> <li>Tachypnea, dyspnea at rest</li> <li>Hypoxia/hypoxemia</li> <li>Respiratory failure</li> <li>Pulmonary leukostasis syndrome:                             <ul style="list-style-type: none"> <li>Bilateral infiltrates, tachypnea, hypoxia</li> </ul> </li> </ul>
Renal/ Metabolic	<ul style="list-style-type: none"> <li>Oliguria, anuria, acute kidney injury</li> <li>Tumor lysis syndrome (<a href="#">link to pathway</a>)</li> </ul>
Other	<ul style="list-style-type: none"> <li>Priapism</li> <li>Disseminated intravascular coagulation</li> </ul>
High Risk for Development of Symptoms of Leukostasis	
<ul style="list-style-type: none"> <li>Leukemia NOS with WBC <math>\geq</math> 200K/<math>\mu</math>L</li> <li>Pts with presumed acute myelogenous leukemia (AML)</li> </ul>	



**Inclusion criteria:**

- Newly diagnosed or relapsed acute leukemia **AND**
- WBC  $\geq$  100K/ $\mu$ L

**Exclusion criteria:**

- Known diagnosis or high suspicion of acute promyelocytic leukemia (APML) or myelogenous leukemia (CML) in chronic phase

**Initial Labs:**

- CBC with differential
- Peripheral smear
- BMP, phosphorus level, LFTs
- Serum uric acid, LDH
- PT/INR, aPTT, Fibrinogen, T&S

**Supportive care:**

- Refer to [Tumor Lysis Syndrome pathway](#) and power plans for fluid and additional lab orders

**Abbreviations:**  
NOS = No other symptoms  
T&S = type and screen



QR code for mobile view