- Although prophylactic intrathecal chemotherapy is required in all patients with ALL or hyperleukocytic AML, very few patients require urgent intrathecal chemotherapy (coma, seizures, cauda equina syndromes).
- Classic induction therapy is based on a combination of prednimustine, vincristine, and an anthracycline (daunorubicin in most studies), with or without the addition of cyclophosphamide.
- In cases of emergency due to very high tumor burden, progressive septic shock should be treated first (beginning with 0.5 mg/kg prednisone for the first dose), patients with high tumor burden should be carefully monitored, because they can rapidly develop a severe acute tumor lysis syndrome (ATLS).
- For patients with increasing or stagging WBCC counts or without biotitc indicators of tumor response for lymphomas especially increasing lactate dehydrogenase [LDH] levels) after two full doses of steroids, emergency administration of vincristine with or without daunorubicin as early as day 2 is required.
- The main complication of acute promyelocytic leukemia (APL) is DIC, with disseminated intravascular coagulation essentially related to hemorrhages located in the CNS.
- Although APL is remarkably sensitive to anthracyclines, the emergency treatment of APL with chemotherapy appears to be inferior to administration of all-trans-retinoic acid (ATRA).
- The choice of cytoreductive regimen depends on the type of malignancy before treatment is initiated, but if lineage cannot be determined, a non-lineage-specific protocol for a specific NHL but to be efficient in ensuring survival with limited toxicity.
- The clinical course of these patients is generally fulfilling, especially once ICU admission is required.
- Supportive care is essential in DIC and should include repeated platelet transfusions to reach a minimum platelet count greater than 50,000/mm3 permanently; correction of the prothrombin time and of fibrinogenemia with fresh-frozen plasma (2 to 4 units to start with) to ensure a prothrombin time less than 2.5 times normal; and a fibrinogen level greater than 1 g/L before the start of the treatment.
- Emergency initiation of chemotherapy in non-Hodgkin's lymphomas (NHLs) can be necessary in the following clinical situations: 1. Massive pleural or pulmonary involvement compromising hematosis or cardiac involvement is possible, compromising oxygenation or hemodynamic stability.
- The use of leukodepleted packed red cells (100 U/kg/day) is controversial, requires platelet counts permanent superior vena cava syndrome.
- As soon as appropriate transfusion support is initiated, chemotherapy should be started, always with progressive dosing, to reduce the leukemic load as quickly as possible.
- The role of leukostasis is to rapidly decrease blood viscosity through plasmapheresis, which leads to rapid alleviation of the initial symptoms.
- The optimal dosing is controversial in the literature, and doses ranging from 2 to 4 mg/kg/day can be considered as appropriate.
- Emergency treatment of lymphoma, and doses ranging from 2 to 4 mg/kg/day can be considered as appropriate.

- Therapy-related leukopenia has been reported to be of benefit for patients with AML who have high WBCC counts, and it is routinely used in some centers for acute hyperleukocytic leukemia.
- Severe hemophagocytic syndrome is now well recognized as a common presenting feature in NHL and HD.
- The clinical presentation is confounding-it precisely mimics a septic shock, with fever, chills, vasoplastic shock, acute respiratory failure, and oligocytic renal failure but severe pancytopenia, high blood transfusion requirements, organomegaly, lymph node enlargement, and hepatic dysfunction days or weeks before the occurrence of this pseudo-septic shock should suggest the diagnosis of severe hemophagocytic syndrome.
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- Administration of high-dose methotrexate, a key drug in the treatment of CNS NHL, is not necessary in an emergency situation.

- With the exception of confirmed or suspected Burkitt's lymphomas (which require smaller doses of steroids on day 1), treatment of bulky NHLs should be started with steroids at 1 mg/kg/day of methylprednisolone or equivalent on day 1 and completed as early as day 2 with vincristine (1 mg/m2 once, maximum total dose 2 mg) in the absence of severe preexisting peripheral neuropathy and cyclophosphamide (500 to 700 mg/m2 in day 2 in the absence of uncontrolled ATLS.
- CNS involvement - Patients with NHL of the CNS who display focal deficits, alterations of the level of consciousness, or seizures should receive emergency steroid therapy with at least 1 mg/kg/day of methylprednisolone or equivalent.
- Burkitt's lymphoma - The risk of an overwhelming ATLS is so high in patients with Burkitt's lymphomas that steroids alone should be administered first and in increasing doses.
- Hodgkin lymphoma - Emergency chemotherapy is a necessity in HD, but life-threatening mediastinal or cardiac involvement is possible, compromising oxygenation or hemodynamic stability.
- The paradox is that the drug of choice should be high-dose methotrexate, a key drug in the treatment of CNS NHL, is not necessary in an emergency situation.