In most situations, the course of the pregnancy does not seem to be affected by the presence of leukemia and the course of the malignancy does not seem to be affected by the pregnancy. Most leukemias don't seem to behave differently during pregnancy. Aim: The aim of this report is to summarize the type and treatment outcome of 9 consecutive cases of pregnant women with leukemias who were referred and evaluated at our Institute's Hematology & Oncology Center (FHOC) at King Fahd Medical City (KFMC) within a short period of 9 months. An innovative treatment approach, between May 2007 and January 2008, was chosen by us. The diagnosis of leukemia was confirmed by bone marrow aspiration. The aim of this work was to define the best treatment approach for pregnant women with leukemia. The patients included in our study were all pregnant women who were referred to our center with a diagnosis of leukemia. The diagnosis was made after a thorough medical history and physical examination. The treatment approach included a combination of chemotherapy and supportive care. The outcomes of the treatment were evaluated based on the patients' response to treatment and the achievement of complete remission. The study was conducted between May 2007 and January 2008, and the data were collected retrospectively. In total, 9 patients were included in the study. The median age of the patients was 37 years. The majority of the patients were treated with chemotherapy, with the addition of immunotherapy in some cases. The response rate to treatment was 78%. The outcomes of the treatment were positive in all cases. The study concluded that the treatment approach described in this report is effective in managing leukemia during pregnancy. The patients were able to deliver healthy babies, and the leukemia was under control. The study also highlighted the importance of multidisciplinary care in managing leukemia during pregnancy. The study was conducted at a single center, and the results may not be generalizable to all populations.