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**Diagnosis, Response Assessment and Treatment Outcomes in Acute Myeloid Leukemia (AML)**

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**Abstract**

Leukemia occurs when a person's entire bone marrow tissue space is occupied by cancer cells or blasts that are young, dysfunctional, undifferentiated, and proliferating cells. In this situation, there is no space left for the bone marrow to be able to produce normal blood cells such as platelets, red and white blood cells. These patients suffer from severe bleeding due to decreased platelets or due to a decrease in white blood cells, which are often diagnosed with dangerous infections that cause death in these patients. The exact cause of leukemias is not yet known, but a number of factors have been identified that play a role in the development of these cancers, including high doses of radiation or atomic radiation, prolonged exposure to certain chemicals, and some Mentioned viruses and some genetic diseases such as Down syndrome or underlying diseases.

**Keywords:** Cancer; Cells; Tissues; Tumors; Prevention; Prognosis; Diagnosis; Imaging; Screening, Treatment; Management

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## Introduction

The presence of these factors in a person does not mean that it necessarily causes this cancer, but it can be effective in causing the disease. "Patients often present with nonspecific disease," he said. "Patients sometimes present with multiple bruises due to decreased production of platelets and blood cells with problems such as bleeding from the nose or other parts of the body." Patients may also be prone to recurrent infections, fever, and recurrent colds due to decreased white blood cell production. Losing more than 10% of body weight in less than 6 months is one of the most important early symptoms. Refer to. These patients experience severe sweating during sleep at night, so that when the person wakes up, the whole bed is wet due to excessive sweating. It can be an alarm in a person and must be diagnosed. To diagnose the disease, the doctor uses several diagnostic methods such as blood tests, bone marrow biopsy and flow cytometry as needed. The simplest diagnostic method for this cancer is to use a peripheral blood sample or CBC. "Peripheral blood morphology, biopsy or bone marrow sampling, flow cytometry, and genetic testing are other ways to diagnose this type of cancer," he said. Bone marrow sampling is performed. In this method, cancer cells are diagnosed by evaluating the morphology of the cells. To accurately diagnose the type of lymphoid or myeloid cancers, etc., another facility called flow cytometry is used. Other features, called flow cytometry, can be used to accurately diagnose the type of lymphoid or myeloid cancers. Patients with chronic myeloid cancer (CML) are treated with only an oral medication, and the patient is treated for years without any problems or complications. If cancers enter from the dormant phase to other phases of the disease, complex chemotherapy is the most common treatment. This treatment tries to kill the cancer cells and bring the disease to the so-called extinction phase, but this method is not a definitive treatment or cure for the disease. Patients with bone marrow cancer are discharged from the hospital after the treatment

process and go home. "These people are prone to infections for a long time due to a weakened immune system, chemotherapy and the use of various drugs. To prevent infections, these patients are advised to follow the tips of using fully cooked foods, washing." Regular handling, thorough washing and disinfection of fruits, staying at home, avoiding crowded places, staying away from people with various infections are among the mentioned cases. Coronary heart disease, which causes problems and complications to normal and healthy people in the community; It causes more severe complications in patients undergoing chemotherapy and a weakened immune system [1-567].

## Results and Discussion

Due to the special conditions of these patients, the Covid 19 vaccine is a priority for these patients. Due to the special conditions and the severity of the disease, we only recommend the Chinese vaccine for these patients. These people must observe the quarantine conditions more than other people in the community. Our only advice to these patients is to use a mask, which is more desirable if they use two masks at the same time. Of course, observing social distances up to two meters is also recommended for these people. It is also important to wash your hands, but the most important thing is to use a mask and observe social distances.

## Conclusions

People who live in the same house with these patients should also follow the hygienic instructions and use the mask seriously, because if they get Covid 19 disease, they can endanger the lives of these patients; Therefore, these patients and those who come in contact with them should strictly follow the health instructions and quarantine conditions. Most of these patients have an emergency situation and if the bone marrow is not transplanted in time, their disease will recur. The response to treatment is very difficult. Some patients do not have an emergency situation, such as those with



thalassemia, about whom we can wait and their bone marrow transplant is delayed. The treatment of these patients did not happen and we continued the treatment process of the patients with the same seriousness and speed of the previous years.

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