

TRANSFUSION IN ONCOLOGY

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Cancer patients often have hematological disorders, and can affect erythrocytes, platelets, leukocytes or blood proteins. Therefore, transfusion support is essential in the treatment of oncological patients. However, blood transfusion is not risk-free and some complications may appear, mostly mild, and some serious, but they can lead to death. Indeed, even oncologic patients can develop alloimmune or autoimmune processes during the transfusion support of their treatments. Alloimmunization is a significant risk of transfusions and is the second leading cause of transfusion-associated death. Despite the high degree of immunosuppression (both by the basic disease itself and the drugs used in its treatment), oncologic patients can still mount an immune response to erythrocyte antigens, platelets or leukocyte foreign. Hospitalized patients may present autoantibodies against blood cells. When the immune system is involved, an autoimmune hemolytic anemia, autoimmune thrombocytopenia or more rarely neutropenia may appear. The autoimmune haemolytic anaemia may be produced by cold and warm autoantibodies and may mediate intravascular or extravascular autoimmune haemolysis in oncology patients. A better understanding of testing realized in the immunohematology laboratory will allow oncology providers to make informed decisions on the risk/benefit ratio of transfusion for their individual patients. Further, this understanding will allow improved communication between oncology providers and the transfusion Service in instances of transfusion histories, new antibody formation, and unexpected adverse transfusion sequelae.

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