



The Role of Blood Transfusion in Cancer Treatment

Once upon a time, the diagnosis of cancer was perceived as terminal illness that carried little hope of survival, but new developments in the diagnosis, evaluation and treatment of malignancies have resulted in much improved patient outcomes. Years of research by physicians and scientists have increased the odds of long term survival. Surgical techniques that spare healthy tissues, radiation therapy delivered in precise doses and locations, and less toxic chemotherapy regimens have also made the side effects of treatment less taxing on the patient's quality of life. A little known fact in this improved scenario for those affected by a life threatening malignancy is that, to get through the treatment successfully, they may need to receive transfusions. Whether radical surgery (resulting in blood loss), chemotherapy (affecting bone marrow function), or marrow transplantation (to replace diseased tissue) are used to eradicate cancer, blood may need to be transfused to help the patient until fully capable of self-sustaining function.

Patients undergoing treatment for cancer may require transfusions of:

- **PLATELETS:** small cell fragments that maintain the integrity of the inner lining of our blood vessels and can stop leaks that may show up as bleeding from the intestinal tract, gums, lungs or kidneys. A single patient may need every day to receive the platelets obtained from 6 to 12 whole blood donors. When special machines are used to harvest only platelets, a single donor may donate enough platelets to treat one or two patients in a day. Chemotherapy treatment may impair platelet production severely, requiring daily platelet transfusions for several days or weeks.
- **RED BLOOD CELLS:** when these oxygen carrying cells drop in numbers (a condition referred to as anemia), the lack of adequate flow of oxygen to vital organs may result in severe fatigue, dizziness or cardiac insufficiency. Patients who do not respond to treatment with stimulants of red blood cell production, or who are bleeding need red blood cell transfusions on a regular basis.
- **PLASMA:** the clotting factors and proteins in plasma may be needed in patients who have to take blood thinners. Certain complications of bone marrow transplantation require the use of massive amounts of plasma to perform daily blood exchanges.

While modern medicine has improved the outcome for many patients with a diagnosis of cancer, the blood transfusion support needed to carry out successfully the treatment plan places a constant strain on the community organizations dedicated to recruit the volunteer blood donors needed to meet the demand for blood components. Next time you drive by a blood donor center, or your place of employment, church or civic club holds a blood drive, please take the time to donate blood and offer another fellow human a fighting chance in the courageous battle against a common enemy, cancer.

German F. Leparo, M.D.
Chief Medical Officer
Florida Blood Services

Florida Blood Services is an independent, not for profit, community based healthcare provider for the blood needs of patients at medical facilities throughout the Tampa Bay area. Over 800 volunteer donations are required daily. For further information or donation locations, call 1-800-68-BLOOD (25663) or visit www.fsblood.org