

Appendix C

NON-TECHNICAL ABSTRACT:

Autologous bone marrow transplantation is a technique which makes safe the very high doses of chemotherapy and radiation which are required to eradicate some populations of leukemia cells. The marrow is removed from the hip bones of the patient at the time of remission induced by conventional dose chemotherapy, stored and re-infused into the patient after intensive therapy in order to restore marrow function. Peripheral blood will also be used for the restoration of hematopoietic function following transplantation. Although the responses seen of metastatic and advanced ovarian cancer in poor prognosis patients is often dramatic following the intensive therapy used in the bone marrow transplantation, patients who respond do not exhibit increased survival. This indicates that additional therapy following recovery from the transplant might be beneficial. In order to make possible the delivery of relatively intensive doses of Taxol following autologous transplant, we will introduce the MDR-1 cDNA into the stem cells of patients with ovarian cancer before storage for transplant. To accomplish this, a portion of the bone marrow and peripheral blood cells stored from patients will be incubated with the marking vector. This vector will introduce a MDR-1 cDNA into these neoplastic cells. If the neoplastic cells contain the marker, then they will exhibit increased levels of resistance to the unmodified cells. The establishment of this marker in the cells will promote their growth over unmodified cells of conventional dose chemotherapy if given following the autograft. If this is the case, we will be in a position to test high dose Taxol delivered after autologous transplant in ovarian cancer and alter the unfavorable natural history of this disease. The results of this study will be used to improve the therapy given to patients with ovarian cancer. It is not designed to benefit the patients themselves.