ABSTRACT OF PROTOCOL

This protocol is a study of patients with advanced cancer who have failed standard therapy. In an attempt to increase the patient's immune response to the tumor, the interleukin-2 (IL-2) gene will be introduced into a tumor cell line established from the patient. These gene-modified autologous tumor cells will then be injected into the thigh of the patient. This injection will augment the immune responses of the patient because a subcutaneous location will be utilized as well as the immune stimulatory effects of the IL-2 secreted by the gene modified tumor cells. To further utilize the immune system of the patient to fight their tumor, stimulated lymphocytes will be cultured from either the draining lymph nodes or the injected tumor itself. These lymphocytes will be expanded in vitro and given intravenously to the patient along with IL-2 in a manner similar to current tumor infiltrating lymphocyte clinical protocols. Animal models have shown both the injection of gene modified tumor cells and the derived stimulated lymphocytes to have important antitumor effects.

The patients will be evaluated for antitumor effects engendered by the injection of the gene modified tumor cells themselves as well as after the infusion of the cultured lymphocytes. The injection of gene modified tumor cells may serve to "immunize" the patient to their tumor and may be amenable to use in a wide variety of tumor types, especially those that are poorly immunogenic. This protocol may also increase the effectiveness of adoptive immunotherapy as well as expand the use of cultured lymphocytes to other malignancies not currently amenable to TIL therapy.