

NON-TECHNICAL ABSTRACT OF PROTOCOL

Many patients have malignant brain tumors that have not responded to standard therapies. For these patients, a new approach to treat their cancer (tumor) will be tested. Animal studies have been done using cancer cells into which a cancer fighting gene has been placed. When these modified cancer cells are returned to the animal, the animal can fight the cancer cells better. The returning of the gene modified cancer cells can be helpful in fighting the cancer cells in several ways.

1. Injecting tumor cells under the skin has been shown to increase the responses of the animal's white cells in fighting the tumor cells.
2. Before returning the cancer cells, they can be made to release a potent white cell activating factor (interleukin-4) by placing the gene for interleukin-4 into the tumor cells. If these gene modified cancer cells are used, the release of interleukin-4 by the cancer cells further increases the ability of the animal's white cells to fight the cancer cells by activating these white cells.

This protocol is designed to mimic the results obtained with animals.

Patients with malignant brain tumors who have not responded to therapy will have a piece of their brain tumor surgically removed and brought to the laboratory. In the laboratory, the brain tumor cells will be grown and the interleukin-4 gene will be put into the tumor cells. These gene modified brain tumor cells, which now produce interleukin-4, are then injected under the skin of the patient. In a few weeks, white cells are removed from the area of injected brain tumor cells and from lymph nodes in the groin and grown to large numbers in the laboratory in the presence of interleukin-2 and interleukin-4 for special studies. During this time and afterwards, the patient is watched for signs that the therapy may be helping destroy their brain tumor. Since this therapy is new, it is not known how well it will work in people. The patients will also be watched for possible harmful effects from the therapy. After many patients with many different kinds of cancer have this new therapy, the doctors will be able to tell how safe this new therapy is and begin to assess how well it works.