

# Photodynamic Therapy

ELE 482 BME Seminar April 15, 2002

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PHOTOFRIN (porfimer sodium) is a photosensitizing agent used in the photodynamic therapy of tumors. Photodynamic therapy, a treatment now being used in patients with certain types of cancer, uses a combination of a photoactive drug, and light from a laser. Both work to allow the doctor to specifically target and destroy cancer cells while limiting damage to surrounding healthy tissue. PHOTOFRIN therapy is indicated for patients with completely obstructing esophageal cancer, or for patients with partially obstructing esophageal cancer. It is also used in the reduction of obstruction in patients with completely or partially obstructing endobronchial non-small cell lung cancer for patients whose cancer cannot be treated by surgery or radiotherapy.

After being selected for this type of treatment the patient is first given an injection of PHOTOFRIN. The drug is then absorbed by the body's tissues, including cancer tissue. Over the next couple of days, the drug will largely be eliminated from most healthy tissue, but will remain in cancer cells. (It will also remain for a while longer in skin.) Approximately 40 to 50 hours after the PHOTOFRIN injection, light from a laser will be directed at the cancer cells. The application of light activates the drug imbedded in the cancerous cells. This takes approximately 5 to 40 minutes depending on the amount of tumor the doctor wants to treat. For many patients the entire procedure takes under one hour. The light will activate the drug present within those cells and destroy them. Because PHOTOFRIN is retained to a greater degree by cancer cells than by healthy cells, most of the healthy tissue surrounding the tumor will not be affected.

After treatment, patients must be careful during the first 30 days after the PHOTOFRIN injection to avoid bright lights and direct sunlight. They don't have to limit themselves to dark rooms, in fact, it's important to get some indoor light, because low levels of light will help break down the drug in their skin and make them less photosensitive. Patients should also protect their eyes by wearing dark sunglasses (less than 4% white light transmittance). These precautions are in place in order to deter the threat of skin burns caused by the activation of this drug by light.

Once treated patients will often experience two major side effects associated with photodynamic therapy with PHOTOFRIN: 1) Local swelling and inflammation occurring in and around the treated area may cause physical discomfort including pain in the chest or abdomen and breathing difficulties. 2) Because PHOTOFRIN is a photoactive drug, from the moment of injection photosensitivity will surely occur, due to the continued presence of the drug in the skin.

The introduction of this drug has resulted in often-dramatic improvements in patients with cancers of the esophagus and trachea, results are often observed within days, and seen in more than 75% of those treated. Cost of the treatment is a fraction of that found in conventional and laser surgery, which can range from 12 to 20 thousand dollars.

In our age of science Axcan Scandipharm seems to have taken step toward developing so called miracle treatments for often fatal ailments.