

## **LASER THERAPY IN CANCER TREATMENT**

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Laser therapy is very popular nowadays. It uses high-intensity light to treat cancer and other illnesses. For example, lasers can be used to shrink or destroy tumors and they are most commonly used to treat superficial cancers, i. e. cancers on the surface of the body or the lining of internal organs, such as basal cell skin cancer and the early stages of some other cancers, such as cervical and non-small cell lung cancer. Lasers also may be used to relieve certain symptoms of cancer, such as bleeding or obstruction. These powerful beams can be used to shrink or destroy a tumor that is blocking patient's trachea (windpipe) or esophagus. Lasers also can be used to remove colon polyps or tumors that are blocking the colon or stomach.

Laser therapy is simply amazing. It can be used alone, but most often it is combined with other treatments, such as surgery, chemotherapy or radiation therapy. In addition, lasers can seal nerve endings to reduce pain after surgery and seal lymph vessels to reduce tumor and limit the spread of tumor cells.

Laser therapy is often given through a flexible endoscope which is fitted with optical fibers. It is inserted through an opening into the body. Laser light is then precisely aimed to cut or destroy the tumor. Laser-induced interstitial thermotherapy (LITT) also uses lasers to treat some cancers. Although it is expensive, but it is very effective. It is similar to a cancer treatment called hyperthermia. Hyperthermia uses heat to shrink tumors by damaging or killing cancer cells.

Another type of cancer treatment that uses lasers is photodynamic therapy. In photodynamic therapy, a certain drug, called a photosensitizer or photosensitizing agent, is injected into a patient and absorbed by cells all over the patient's body. After a couple of days, the agent is found mostly in cancer cells. Laser light is then used to activate the agent and destroy cancer cells.

Lasers are better and more precise than scalpels, because they do less damage to normal tissues. As a result, patients usually have less pain, bleeding, swelling and scarring. With laser therapy, operations are usually shorter. Laser therapy can often be done on an outpatient basis. As a result, it takes less time for patients to heal after laser surgery. Patients are less likely to get infections. They should consult their health care provider whether laser therapy is appropriate for them.

But we should admit that laser therapy has several limitations. First of all surgeons must have specialized training before they can do laser therapy, and strict safety precautions must be followed. Also, laser therapy requires bulky equipment and it is rather expensive. In addition, the effects of laser therapy may not last long, so patients should repeat their treatment to get the full benefit.

Thus, laser therapy has definitely great future.