



A Short Description on Tumor Glow[®]

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DESCRIPTION

Tumor Glow[®], a type of intraoperative molecular imaging, relies on injectable dyes specifically designed to localize to cancerous tissue rather than normal tissue. Illuminating the tumor will improve the odds of all cancer patients. That's why we're leading the way in exploring new technologies that can make tumors shine under near-infrared cameras. Tumor Glow[®] technology was developed to improve visibility of undetected tumors, improve outcomes, and reduce the likelihood of subsequent surgery. Head and neck cancer accounts for about 4 percent of all cancers in the United States, according to the National Cancer Center. There are several types that affect the mouth, throat, larynx, sinuses, and salivary glands. About 75% of these cancers are caused by the use of tobacco and alcohol, but more and more are associated with the Human Papillomavirus (HPV). Overall, researchers estimate that more than 65,000 Americans will be diagnosed with head and neck cancer in 2017. Treatment may include surgery, radiation therapy, chemotherapy, or a combination thereof. When these cancers have spread or recurred, one of the most commonly affected areas is the lymph nodes. Lymph nodes act as a filter for the immune system, and many head and neck cancers spread there early in the process. Cancer of these lymph nodes may go undetected during surgery. In short, this procedure can leave microscopic cancer cells in the patient's body. To minimize this risk, doctors often remove lymph nodes that may be suspicious during surgery, but this removal carries the risk of damaging healthy tissue. Penmedison offers patients the opportunity for surgeons and oncologists at the Precision Surgery Center to enroll in clinical trials to test the effectiveness of these dyes.

MECHANISM

Prior to surgery, patients are injected with a dye that "shines" cancer cells under near-infrared light, which are not normally

visible on CT scans. During surgery, the tumor glows brightly under a near-infrared camera, leading the surgeon to cancerous tissue in previously undetected areas. The results so far have been extraordinary. This technique has great expectations for doctors as it can increase the accuracy and accuracy of removing the entire tumor. Tumor Glow[®] helps with early detection of small tumors and hopefully better treatment outcomes for cancer patients. There are two main benefits to using Tumor Glow[®] technology. The first advantage is that knowing where the tumors will ensure that the surgeon can remove all tumors and cancers. Tumor Glow[®] makes the patient's surgery safer by enabling higher accuracy and allowing the surgeon to remove only the cancer and nothing else. Another benefit we have seen is the ability of dyes to "find" cancerous lymph nodes. This is especially important because identifying lymph node disease may require more chemotherapy or tells the oncologist that your cancer is advanced. This technique allows you to identify which lymph nodes should be removed and which lymph nodes should be left alone.

ADVANTAGES

- Complete resection of tumors with negative margins
- Reduce the risk of local recurrence
- Identifying cancerous lymph nodes
- Introducing optical student examination or real-time diagnosis in the operating room
- More accurate staging
- Early detection of precancerous lesions
- Minimize the removal of unwanted tissue
- Shortening hospital stay
- Increment to get positive results

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