Wireless photodynamic therapy device

MARKET OPPORTUNITY

Primary market: Oncology market
- $109 billion by 2020
- Segmented into drugs, surgery, chemotherapy, radiation therapy, targeted therapy, immunotherapy, hormonal therapy, hyperthermia, stem cell transplant and other therapies

Specific market: Photodynamic therapy market
- Valued at USD 2,031.3 Million in 2016.
- Estimated to reach USD 3,095.9 Million in 2022, growing at a compound annual growth rate of 7.30% between 2016 and 2022

TECHNOLOGY

It is a light-emitting device that can be implanted near a tumour and powered wirelessly by a radio-frequency field. The light delivered by the device activates light-sensitive drugs (photodynamic therapy), destroying malignant cells with minimal side effects outside of the treatment region.

CATEGORY

Medical devices

STAGE OF DEVELOPMENT

TRL3

APPLICATIONS

1. Glioblastoma
2. Hepatocellular carcinoma
ADVANTAGES
1. Non-mutagenic (can be performed multiple times without fear of introducing oncogenic DNA mutations)
2. Non-scarring
3. High selectivity to cancer tissue
5. Can activate photosensitizers through thick tissues (>3 cm).

STATUS
Patent pending. Available for research collaboration and licensing

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