Directionally Emitting Radioactive Sources for Brachytherapy

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WARF: P03086US

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing radioactive seeds that emit radiation in a directional pattern for improved treatment of diseased tissue at the interface between diseased and healthy tissue.

Overview

Brachytherapy is a radiation treatment in which small, radioactive seeds are placed into a patient's body to destroy diseased tissue. In placing these radiation sources, particularly in the region between healthy tissue and diseased tissue, practitioners must balance the need to provide a sufficient dose to destroy diseased tissue while minimizing the risk to healthy tissue.

The Invention

UW-Madison researchers have developed radioactive seeds that emit radiation in a directional pattern for improved treatment of diseased tissue at the interface between diseased and healthy tissue. Each seed has a shield that partially blocks the radiation, controlling the direction of the emission. They are placed in diseased tissue by a needle and anchored so that they cannot rotate. These radiation sources are particularly useful in permanent-implant brachytherapy for the treatment of prostate cancer.

Applications

- Treating cancer, particularly of the prostate, breast, esophagus and larynx

Key Benefits

- Provides improved treatment in the region between healthy and diseased tissue
- Enables better control of radiation dose
- May reduce adverse effects of radiation on sensitive, healthy tissue
- Simple to place and orient
- Several methods may be used to stabilize the seeds.

Additional Information

For More Information About the Inventors

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Tech Fields

- Radiation Therapy : Other radiation therapy technologies

For current licensing status, please contact Jeanine Burmania at jeanine@warf.org or 608-960-9846