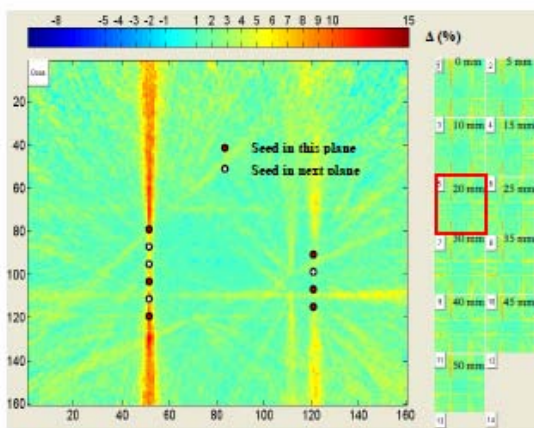


FASTER AND ACCURATE METHOD FOR REAL TIME BRACHYTHERAPY DOSIMETRY

Sopartec, the technology transfer company of the Université catholique de Louvain (UCL), presents a new calculation method for dose distribution in brachytherapy.



Technology Keywords

- Real-time calculation
- Accurate
- Monte Carlo calculation
- Seed shadowing effect

Technology Market : Brachytherapy

Brachytherapy, which involves the precise and permanent placement of radiation sources directly at the site of the cancerous tumor, represents an effective treatment option for prostate and breast cancers. A critical part of the treatment planning is an accurate determination of dose distribution in the patient. However, in order to correct the positioning errors or deviations that may occur during the placement of the seeds, it is recommended to perform a dose optimization in parallel to the insertion of the seeds.

The UCL/Atomic Energy Commission of Syria invention

The current dose distribution calculation methods are either inaccurate (no consideration of the shadowing of the seed radiation by the neighboring seeds – interseed attenuation) or slow (due to heavy computational steps).

UCL and AECS researchers have therefore developed a new calculation method that is based on Monte Carlo simulation and that :

- is faster than complete Monte Carlo simulations (few seconds);
- calculates dose distribution in 3D;
- corrects for the interseed effect -> more accurate than current systems;
- is compatible with current treatment planning systems.

Technology Status

This work is the subject of a patent application : European patent application filed on 21/09/2010. (internal file reference number : UCL-010)

Sopartec would like to talk to companies interested in developing and commercializing this opportunity.

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