

System and method for learning and accumulating optimal strategies for radiation treatment planning

Value Proposition

Radiotherapy is used as the primary therapy or in combination with another therapy in 40% of all oncology cases seen in the modern age. Unlike new pharmacological solutions, radiotherapy equipment exists all around the world. However, the process of personalizing the radiotherapy solution is extremely labor intensive, sometimes accounting for 50% of the total hours a radiology oncologist spends working and can take over a week to implement with a new patient. This high level of human involvement also leads to inconsistency in treatment across the country. A fully automated solution would not only save valuable time for practitioners but has the potential to improve patient outcomes across the board.

Technology

The invention proposes a new method for applying machine learning to radiotherapy. Building on existing algorithms that assist in optimal dose delivery, this method considers planner knowledge, making further adjustments normally handled by an individual. This combination strategy has the potential to make the first completely human free solution for the radiotherapy market the market.

Advantages

This technology innovates to include planner experience as part of the optimization - the first method proposed to do so. This should result in a faster planning stage, meaning the ability to see more patients or spend less on human intervention throughout.

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 Inventor(s)

- Wu, Qingrong
- Ge, Yaorong
- Palta, Manisha
- Sheng, Yang
- Wang, Chunhao
- Yin, Fang-Fang
- Zhang, Jihan

 College

School of Medicine (SOM)

**For more information
please contact**

Chang Villacreses, David
9196683401

david.chang.villacreses@duke.edu