

How can AI help radiotherapy with ART-Plan™?

What is radiation therapy planning?

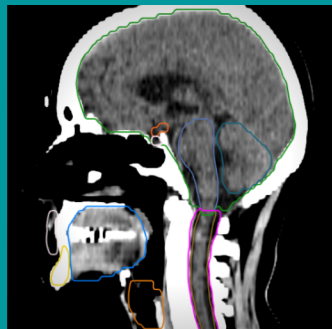
In radiotherapy, high-energy rays are often used to damage cancer cells and stop them from growing and dividing. Treatment planning is an essential step of the radiotherapy workflow. This is an overly complex task requiring hours or even days to optimize an individual patient case in a trial-and-error fashion. Artificial Intelligence can be an important ally to reinvent radiation treatment planning.

Without AI

1

Delineation

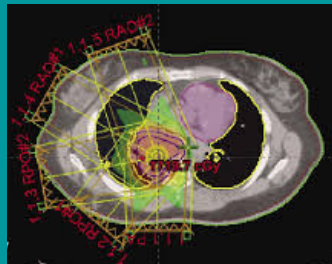
- Health professionals need to manually delineate all organs that need to be protected during treatment
- Tedious, time-consuming task
- High variability between doctors



2

Dosimetry

- Calculation of the dose to be prescribed in trial-and-error fashion
- Many re-calculations needed until doctors agree on a plan



3

Treatment

- Changes in patient's anatomies (e.g. weight loss, organ movement) are not taken into account for consecutive treatments
- This results in suboptimal outcome for the patient including higher side-effects



With AI

1

Delineation

- Delineations take only 3 minutes for more than 80 organs at risk
- Health professionals only need to double-check the contours, saving up to 95% of their precious time

2

Dosimetry

- The software calculates the optimal dose automatically based on the constraint
- Professionals only need to check and readjust for specific patients

3

Treatment

- At each session, the patient receives a new plan according to their most current biological parameters
 - more accurate treatments
 - less sessions needed
 - better resource allocation