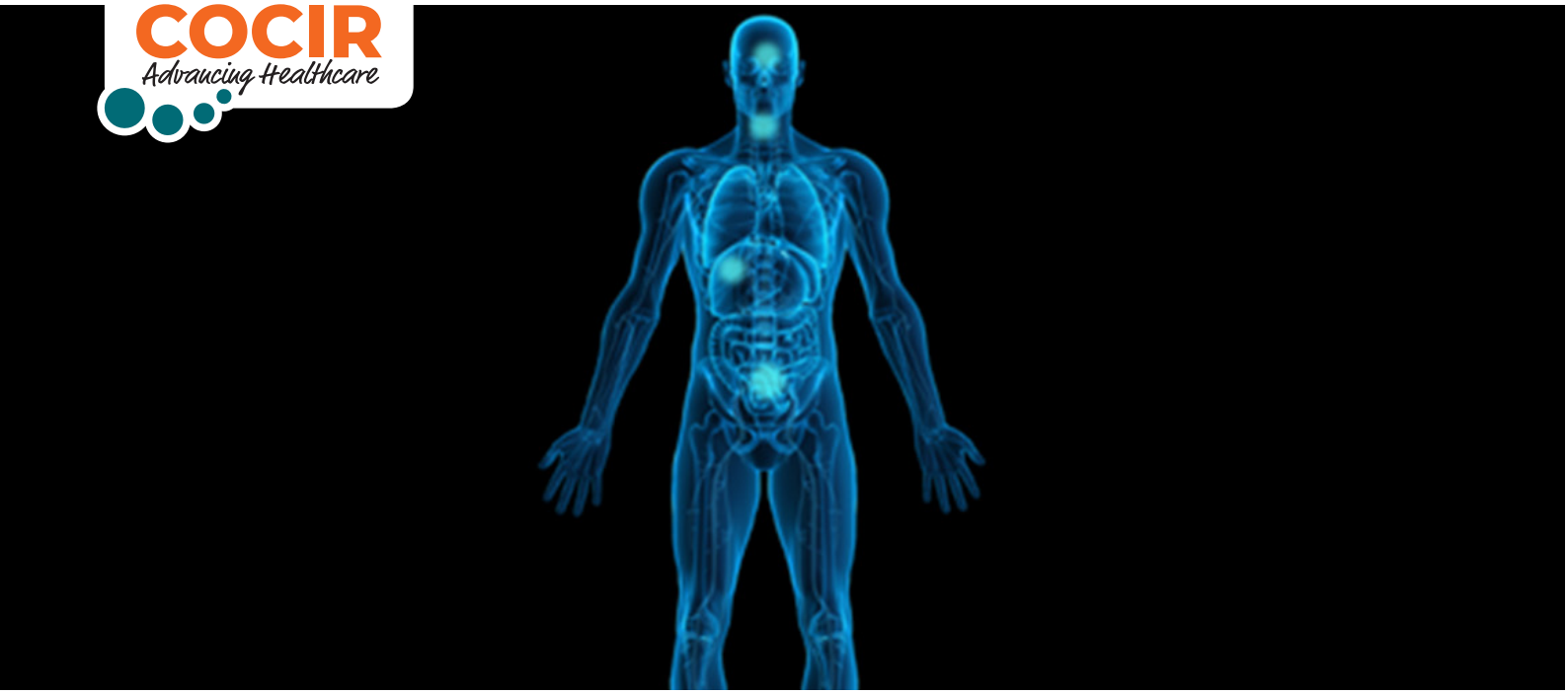

AI BASED RADIOTHERAPY TREATMENT PLANNING SOLUTION

MEDICAL FIELD, OR MEDICAL METHOD

Radiotherapy

TYPE

☑ Decision support ☐ Autonomous decision making

CATEGORY

☐ Prevention ☐ Detection ☐ Diagnosis ☑ Treatment
☐ Other

DESCRIPTION

RapidPlan™ is a machine learning application that predicts the Dose Volume Histogram (DVH) of a radiotherapy treatment plan based on information from a historical collection of treatment plans.

The predicted DVH permits to generate automatically optimal optimization objectives to achieve a plan quality, equivalent to the expertise of the manual planner.

AIM / PURPOSE

Streamline the planning process by reducing the repetitive nature of manual treatment planning.

Reduce the variability in plan quality by promoting treatment planning best practices.

OUTPUT / RESULTS

Radiotherapy treatment plans that represent the best practices of the institution that created the RapidPlan™ model.

AI METHODOLOGY

RapidPlan™ uses Machine Learning, a combination of Principal Component Analysis (PCA) and regression techniques.

INPUT / SIZE OF THE DATA

Best practice plans created by the institutions, each RapidPlan™ model (treatment area specific) contains between 20 and 100 plans (no maximum limits for the number of treatment plans)

REFERENCE DOCUMENTS / LINKS / PUBLICATIONS

http://medicalaffairs.varian.com/download/RapidPlanBibliography_RAD10400F_December2019.pdf

SOURCE

Varian