Workflow*box*™ 2.0

Zero-Click™ Automation for Radiotherapy

MIRADA
The Imaging Software People

True Automation

Workflow Box™ 2.0 is the next generation of Mirada's Zero-Click™ platform for radiotherapy planning, incorporating machine learning techniques for the first time in clinical practice. Through vendor-neutral automation and batch processing, it saves you time and facilitates easier adherence to guidelines. Behind the automation lies Mirada's industry-leading Deformable Image Registration (DIR) and our latest innovation, Deep Learning Contouring (DLC), which lead to workflows for consistent, repeatable accuracy.

Workflow Box's intelligent automation takes over the tasks you want to automate and leaves you more time for the tasks that cannot be automated, like true patient care.

Our Zero-Click workflows are easy to customize to suit your department and include automated routing of data between DICOM nodes, various research applications, and the autocontouring workflows below:

Deep Learning Contouring

DLCExpert
Deep Learning Contouring

DLCExpert™ workflows use a form of artificial intelligence to automate organs-at-risk contouring. Using multi-layer artificial neural networks, Mirada's DLC is trained to mimic clinical contours and can be trained specifically on your contours. It is the first clinical DLC product and has been developed by Mirada in collaboration with the MAASTRO clinic[1] (Maastricht, The Netherlands). After performing qualitative assessments using a variant of the Turing Test, Mirada found that DLCExpert achieves a contouring acceptance rate comparable to a clinical standard, while MAASTRO Clinic's own assessment[1] showed improved time savings compared to both manual and atlas-based contouring.

Atlas Based Contouring

Embrace:CT
Multi Atlas Contouring

Embrace:MR
Multi Atlas Contouring

Embrace:CT™ and Embrace:MR™ workflows use our proven DIR engine and multi-atlas technology to provide significant time savings with our industry-leading atlas-based contouring[2,3]. As well as improving efficiency, effective atlas-based contouring helps you adopt and adhere to standardized contouring protocols in your RT department. You can use your existing cases to create atlases yourself, and then choose from your own atlas library to fine-tune the results of this workflow so that it suits your preferences.

Adaptive Therapy and Replanning

Re:Contour
Adaptive and Replanning

Re:Contour™ workflows use Mirada's DIR algorithms to adapt contours from an existing treatment plan to a new planning dataset for adaptive therapy and re-planning cases. As a result, Re:Contour often dramatically reduces the time required to delineate organs-at-risk on follow-up radiotherapy simulation images.

Publications:
1 T.Lustberg et. al. Clinical evaluation of atlas and deep learning based automatic contouring for lung cancer, Radiotherapy & Oncology 2018 - 2 A.Gulyban et al. Single vs. multi-atlas auto-segmentation for prostate RT: Comparison of two commercial systems. Radiotherapy & Oncology 2017;123(S1):S135-136 - 3 D.Gugyeras et. al. Multi-atlas auto-segmentation for H&N OARs: accuracy and time efficiency, SEETRO 2017

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