

Sequential Optimization

Clinically Intuitive Multi-Objective Optimization for the MultiPlan® Treatment Planning System

With the addition of the Sequential Optimization feature to the MultiPlan® Treatment Planning System, Accuray introduces the next generation in treatment planning optimization tools. Sequential Optimization transforms the treatment planning process from a trial-and-error process into a state-of-the-art clinically intuitive process. Clinical objectives, rather than mathematical parameters, are the inputs into the Sequential Optimization planning process.

This tool provides a new treatment planning approach: sequential multi-objective optimization. With this approach specific clinical objectives (homogeneity, PTV coverage, conformality, organ at risk protection) are optimized in sequence. Sequential Optimization takes the guesswork out of the treatment planning process, building one clinical objective at a time.

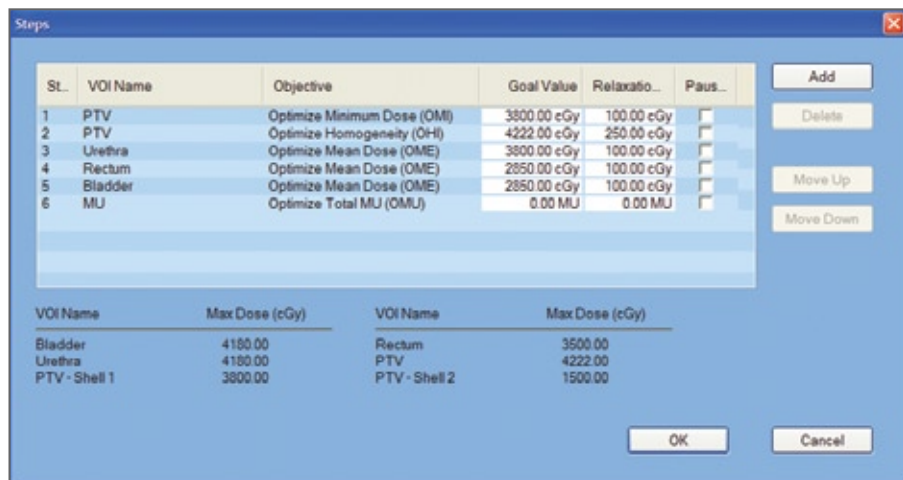
Consistent Quality Combined with Ease of Use

Sequential Optimization enables the clinician to input clinical objectives into the treatment planning process. Whether the primary clinical objective is to deliver a conformal treatment plan, a homogeneous, IMRT-style plan, or a heterogeneous, HDR-style plan, Sequential Optimization improves plan quality and makes the treatment planning procedure faster and more intuitive.

Consistency in the plans generated using Sequential Optimization is enhanced with the use of templates and scripts. Templates are created to define the overall plan objective for each clinical application. Scripts are created to define the individual objective for each target and critical structure. The combination of templates and scripts makes for an extremely powerful and flexible treatment planning process.

Workflow:

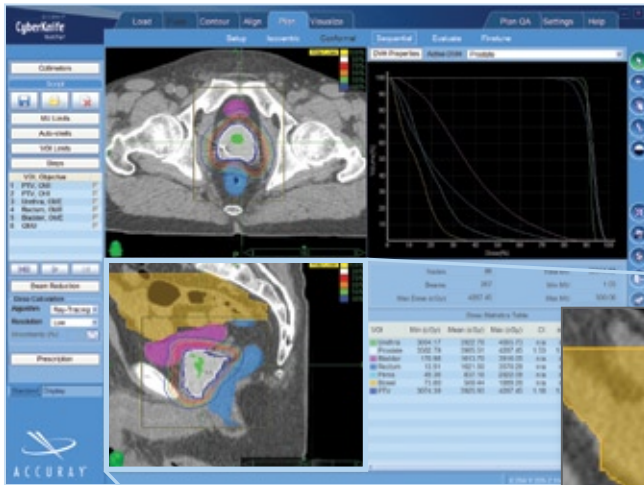
- Determine the overall clinical objective for the patient's treatment
- Determine the clinical objectives for each target and critical structure
- Generate steps to meet those objectives
- Sequence the steps into a script
- Run the script
- Evaluate the planning results as they are displayed throughout the Sequential Optimization process



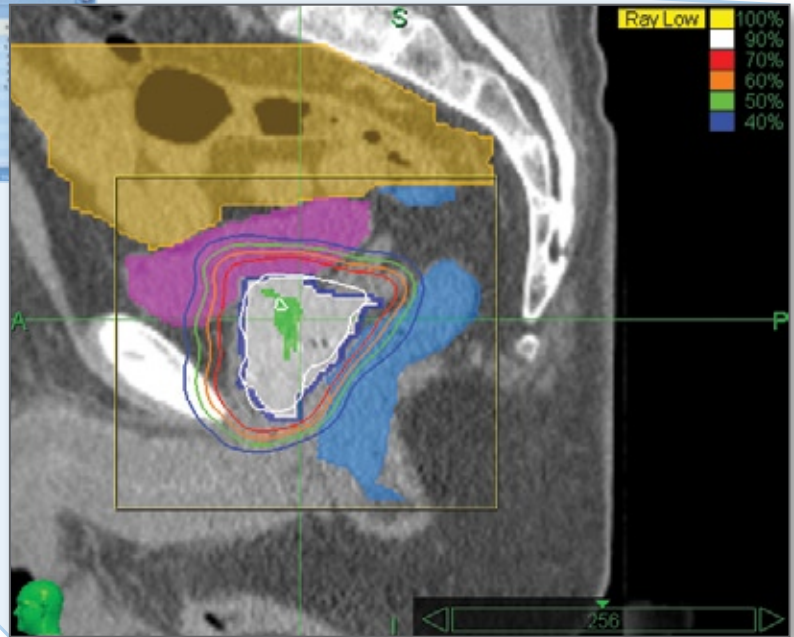
Build the script one optimization goal at a time. Sequence the goals to prioritize the optimization.

Treatment Planning Optimization Designed to Meet Clinical Objectives

Sequential Optimization streamlines the radiosurgery treatment planning process for each clinical application and each clinical objective. The high quality of the resulting treatment plan is demonstrated by not only meeting those objectives, but doing so in a fast and efficient manner that can be repeated consistently.



Review optimization results at regular intervals and at the end of each step. Previously met goals are held as constraints for the next step in the sequence.



The high conformality demonstrated in this treatment plan is easily achievable using Sequential Optimization.



ACCURAY®
CyberKnife®

Unprecedented Targeting Accuracy

Unrivalled Conformality and Dose Gradient

Unparalleled Healthy Tissue Preservation



ACCURAY®
Our Business Begins with Patients™

Accuray Worldwide Headquarters
1310 Chesapeake Terrace
Sunnyvale, CA 94089 USA
Tel: +1.408.716.4600
Toll Free: 1.888.522.3740, ext 4760
Fax: +1.408.716.4601
Email: sales@accuray.com

Accuray Europe
Tour Atlantique 25°
1 Place de la Pyramide
92911 Paris La Défense Cedex
France
Tel: +33.1.55.23.20.20
Fax: +33.1.55.23.20.39

Accuray Asia Ltd.
Suites 1702-1704, Tower 6
The Gateway, Harbour City
9 Canton Road, T.S.T.
Hong Kong
Tel: +852.2247.8688
Fax: +852.2175.5799

Accuray Japan K.K.
Level 28, Shinagawa Intercity Tower A
2-15-1 Konan, Minato-ku
Tokyo 108-6028
Japan
Tel: +81.3.6717.2895
Fax: +81.3.6717.4545