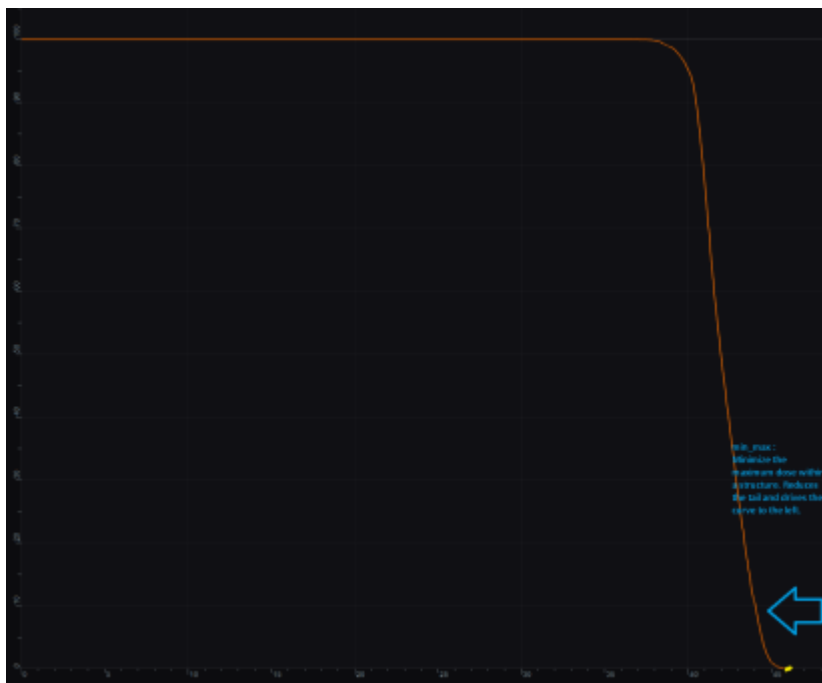


# Optimization Objectives

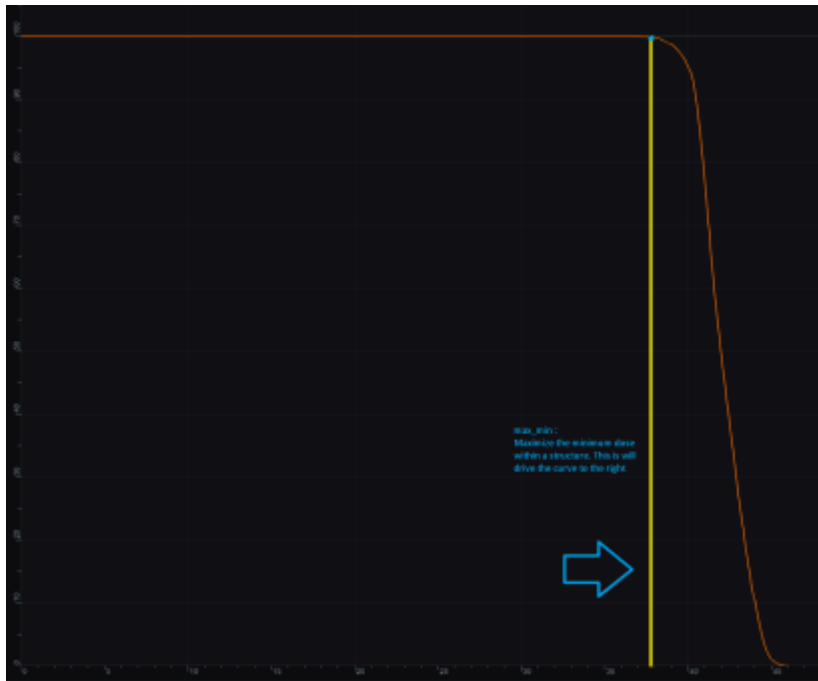
*Objectives* communicate to the optimizer the goals that are important to strive for in your plan. *Objectives* are set at the *Plan* level under *Plan Constraints/Objectives* and they apply to the total, combined dose from all beams. *Objectives* are not given relative importance at this point and can they can be added in order you desire within impacting the results as the *Objectives* drive the solution of the Multi Criteria Optimization (MCO). It should also be noted that for each *objective* a corresponding *Navigation Slider* will be presented to allow for exploration of trade-offs in the case of competing objectives (for more information about the MCO process and how objective importance/weighting is handled in Astroid refer to [this article](#)).

The following objective selections are available in Astroid:

- **min\_max**: Minimize the maximum dose within a structure
- **max\_min**: Maximize the minimum dose within a structure



**min\_max**: Minimize the Max Dose

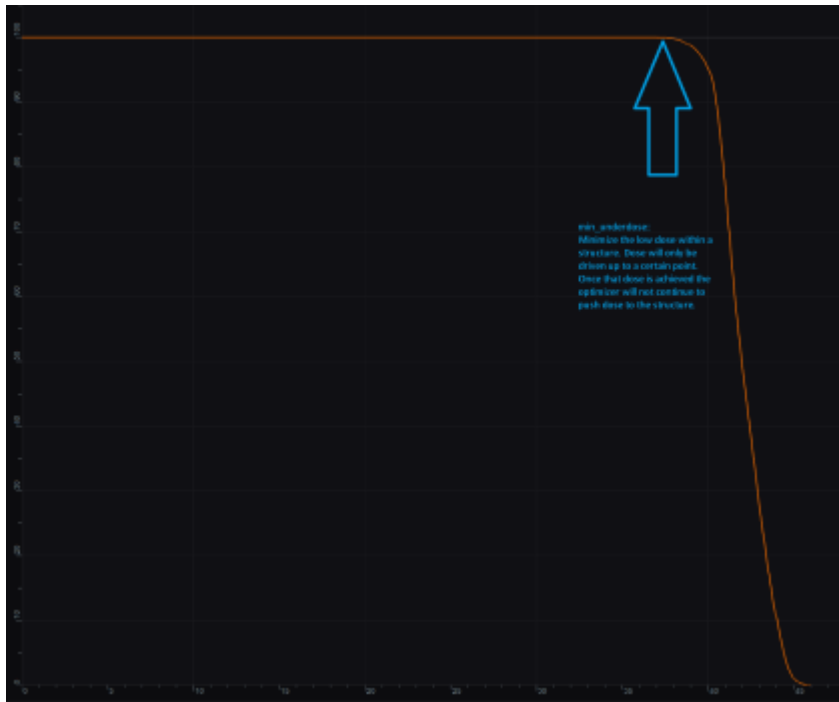


max\_min: Maximize the Min Dose

- **min\_mean**: Minimize the mean dose within a structure
- **max\_mean**: Maximize the mean dose across the structure
- **min\_overdose**: Minimize the high dose within a structure
  - Dose will only be driven down to the specified limit (this is often more relevant than min\_max, since it may not be beneficial to continue minimizing beyond a certain dose level)
- **min\_underdose**: Minimize the low dose within a structure
  - Dose will only be driven up to the specified limit (this is often more relevant than max\_min, since it may not be beneficial to continue maximizing beyond a certain dose level)



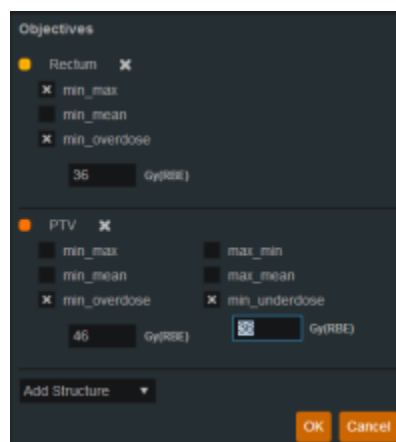
min\_overdose: Minimize the high dose



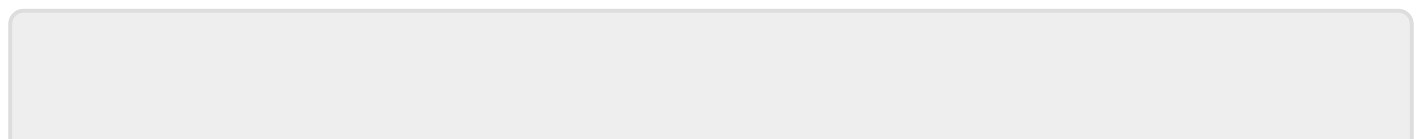
min\_underdose: Minimize the low dose

## Working with Objectives

1. Open the *Objectives* sub-block contained in the *Plan Constraints/Objectives* block
2. Choose the structures to apply objectives
3. Check the boxes for the objectives to apply to the structure and set the dose level if applicable



Once all the *Objectives* have been set the user can move to *Navigation* block to start the MCO.



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