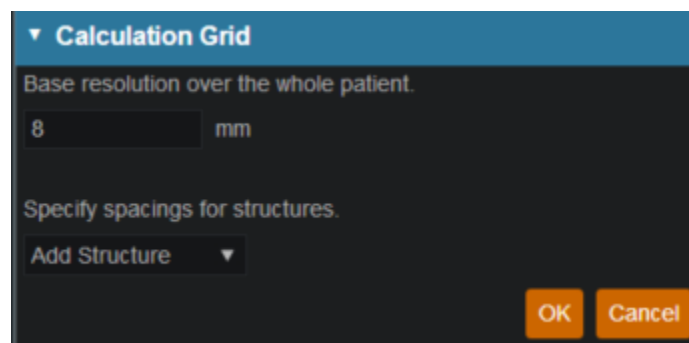


=====**Fix Me!**=====
=====**Dose Grid**===== - need to add RSP Image and overrides prior to this

Astroid utilizes a calculation grid that allows for local grid resolution to be specified on a per structure basis. This allows for improved optimizer performance in terms of both speed and resultant plan quality. A uniform sized base calculation grid is created over the entire patient structure. This base resolution can generally be set to a size much larger than the value needed for accurate clinical dose resolution. The user can then reduce the grid sizes in critical areas, generally the high gradient regions and target areas that require homogeneous dose, by assigning appropriate structures a smaller grid spacing value. A common configuration is to use a base resolution of 8mm, 4mm within critical OARs and the PTV/CTV and 2mm in a thin (rind) region surrounding the PTV. This provides sufficient dose information for the optimizer to maintain uniform dose to targets, drive down dose to OARs, and achieve steep dose fall at the boundaries of targets and healthy tissue. An example of constructing such a grid is given below.

1. Open the Calculation Grid block
 1. The default base resolution is set in the site specific configuration settings and is applied throughout the entire patient
 2. This value may be adjusted if needed



2. If you want to use a smaller grid in a target or OAR choose that structure from the dropdown and then specify the desired resolution
 1. Note that allowable resolutions are scaled down by powers of 2 from the base resolution by using the +/- on either side of the region spacing setting

▼ Calculation Grid

Base resolution over the whole patient.

8 mm

Specify spacings for structures.

Add Structure ▼

target

PTV

OK Cancel

s1 - Prostate + 0mm (in 3D)

seminal vesicles

OAR

Patient

2cm

Bladder

Prostate

Rectum

bladder neck

bowel

left femoral hea

neurovascular bu

penile bulb

right femoral he

s2 - Patient - PTV - (Prostate + 0mm (in 3D))

testes

urethra

▼ Calculation Grid

Base resolution over the whole patient.

8 mm

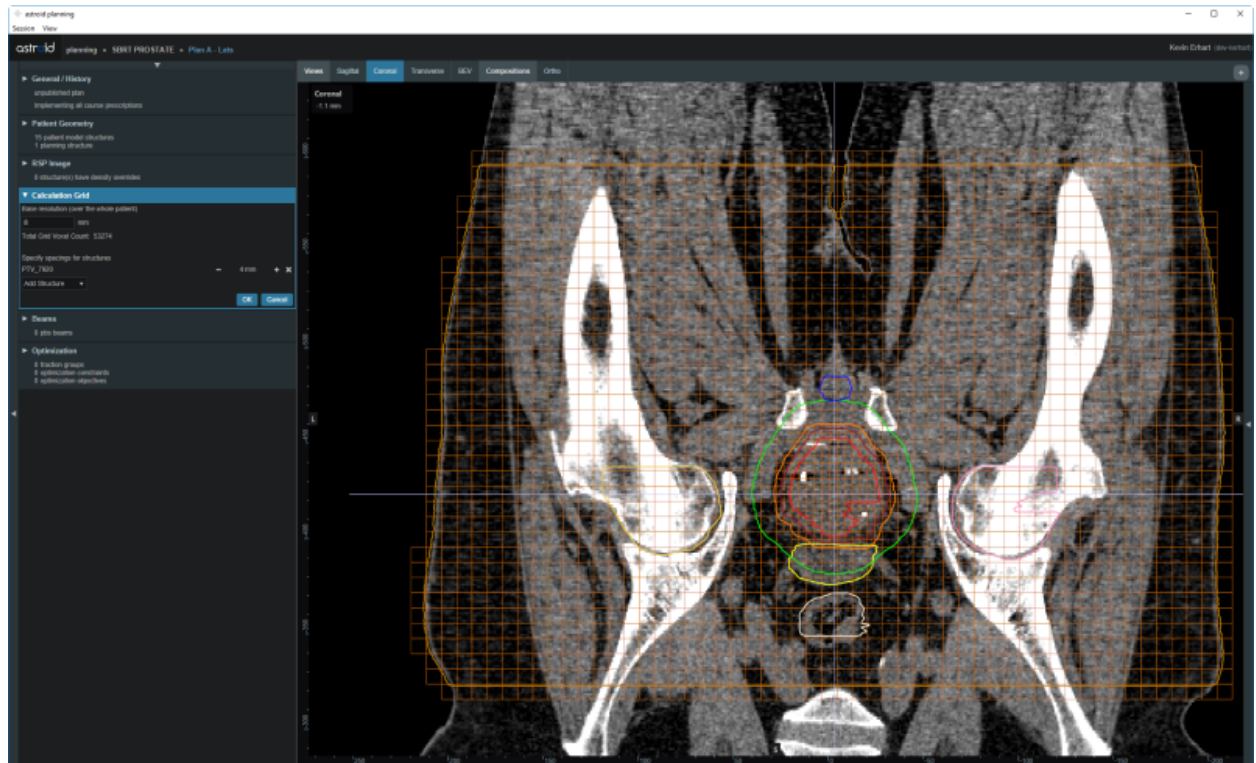
Specify spacings for structures.

PTV ▼ - 4 mm + ✕

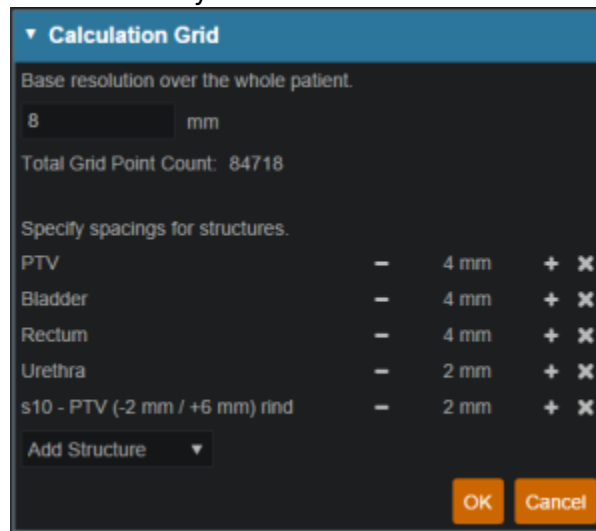
Add Structure ▼

OK Cancel

2. Notice the different size grid in the PTV and the patient



3. Additional structures with different resolutions may be added, such as for a high resolution dose-falloff region using a rind structure or very small OARs



4. Once the appropriate regions and resolutions have been set, click *Ok* to save the calculation grid
1. The Calculation Grid block can be revisited at any time to adjust the grid if needed

From:
<http://apps.dotdecimal.com/> - decimal App Documentation

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