

ARROContour
Borderline Resectable Pancreatic
Cancer

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Simulation

- Supine with arms up in alpha cradle or other immobilization. PO and IV contrast if available.
- Consider 4D-CT to evaluate motion. Superior/inferior displacement may be >1.5 cm

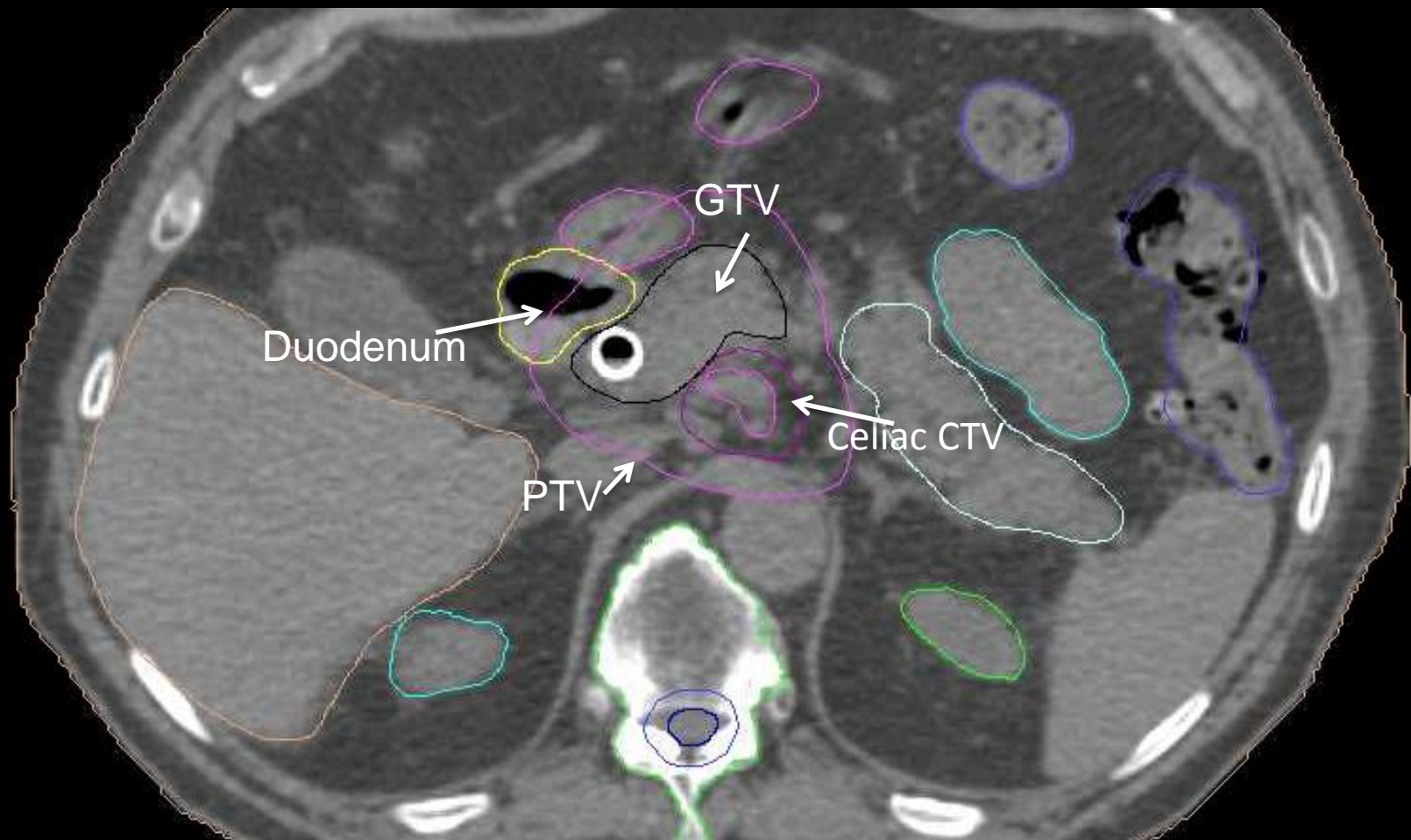


4D Simulation

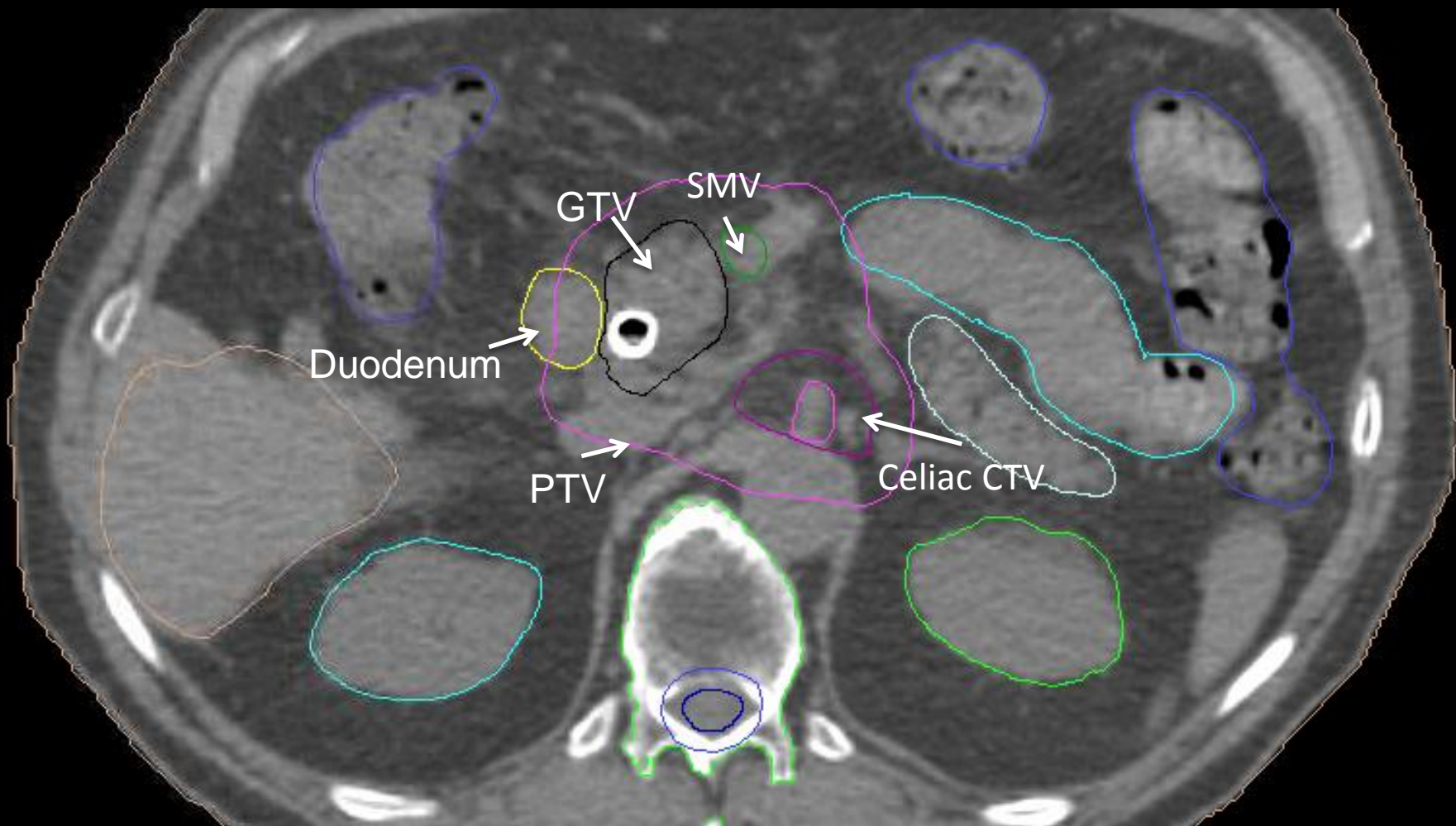
Contours

- CTV includes
 - Primary mass
 - SMA origin with ~ 7mm margin
 - SMA and SMV vessels adjacent to the pancreatic head
 - Enlarged lymph nodes
 - +/- Celiac axis depending on tumor location
- Alternative → primary tumor + margin
- PTV
 - PTV = CTV + 1cm expansion
 - 4D-CT obtained for all patients
 - Respiratory gating used if motion >1.0 cm (40-60% phase)
 - ITV of primary mass created if motion < 1.0 cm.
- OAR:
 - Small bowel, large bowel, duodenum, stomach, liver, kidneys (preferentially spared if renal perfusion scan reveals dominance), cord

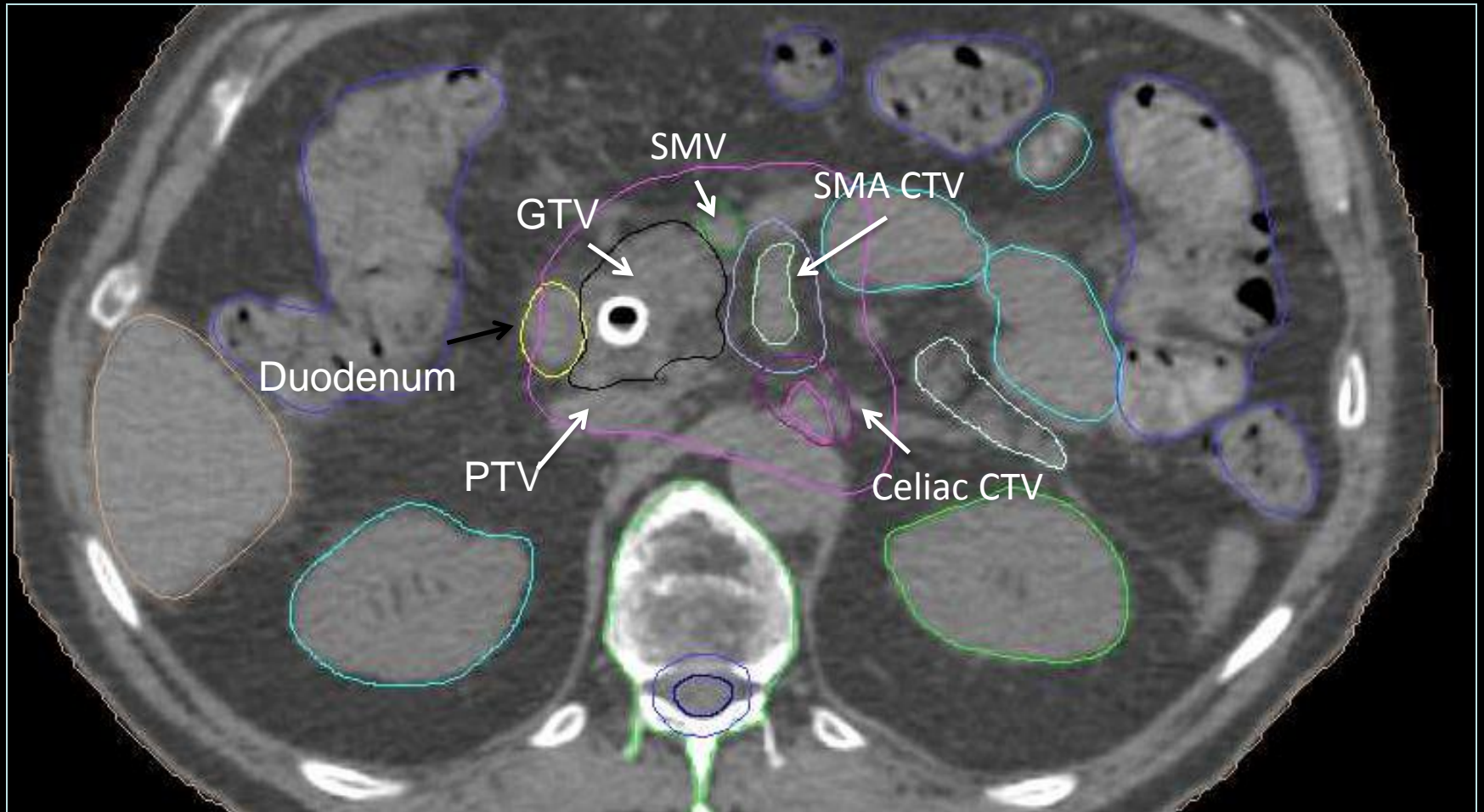
Representative Target Volumes



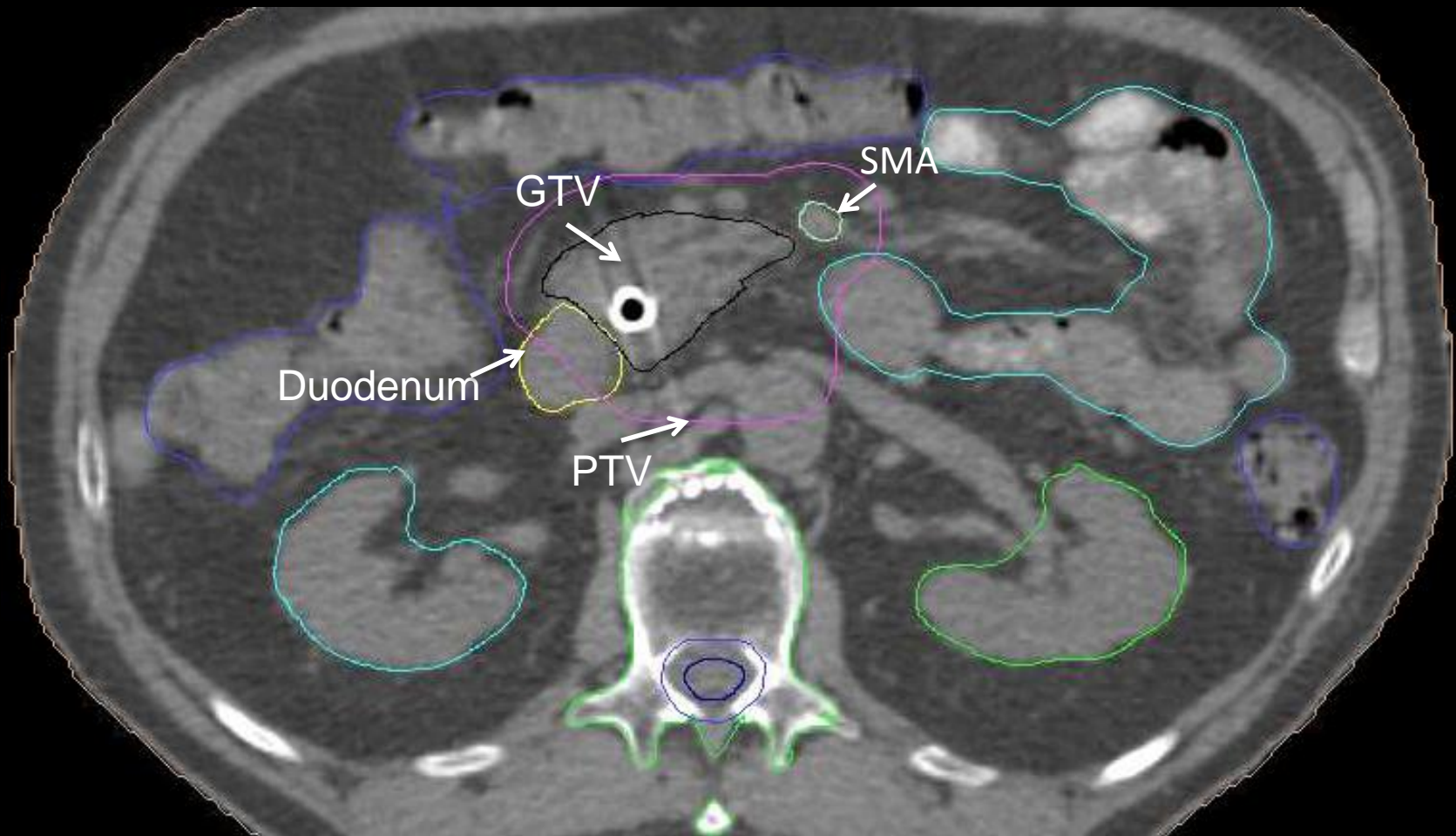
Representative Target Volumes



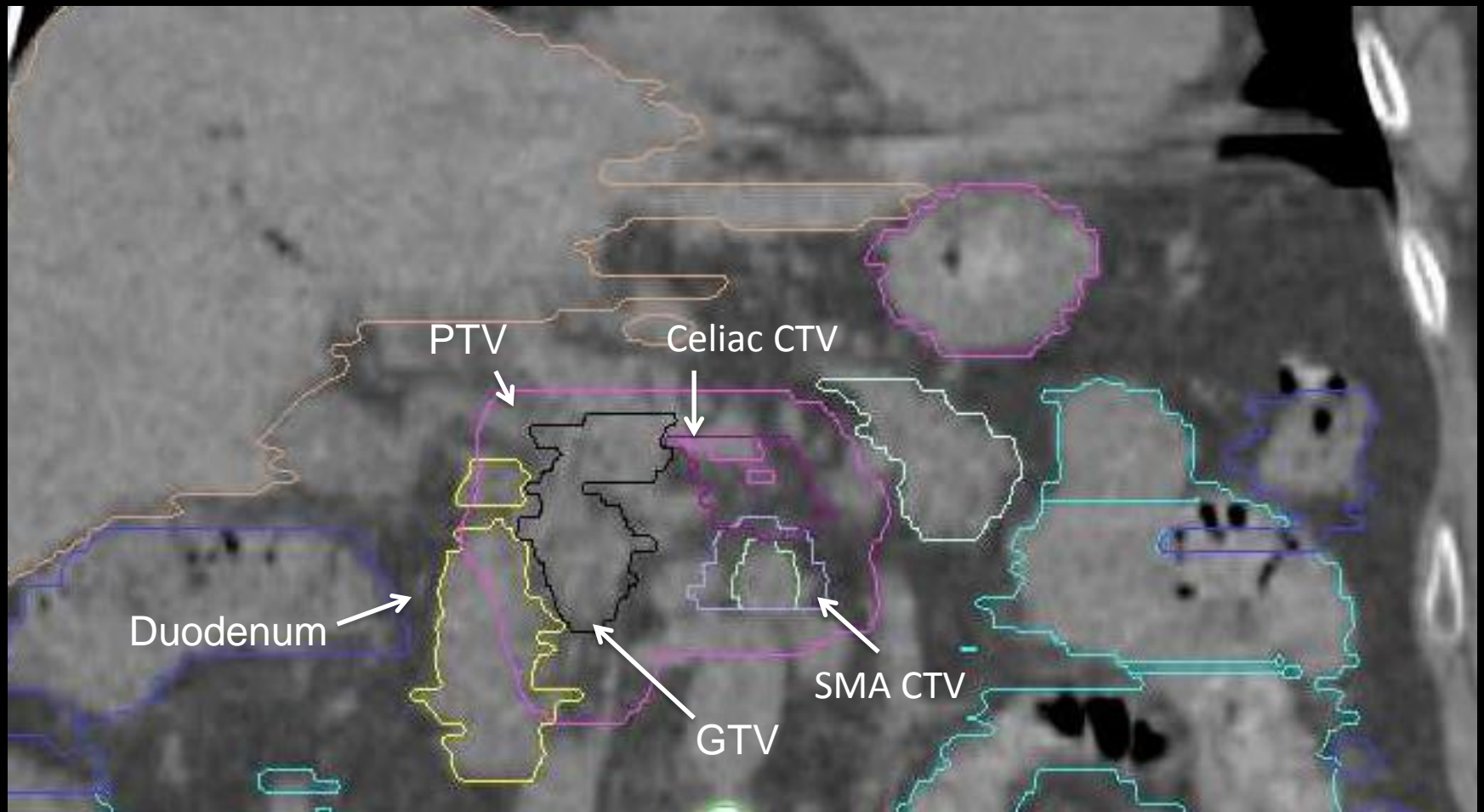
Representative Target Volumes



Representative Target Volumes



Representative Target Volumes



IMRT Constraints

Table 2. Dose Constraints for IMRT Optimization

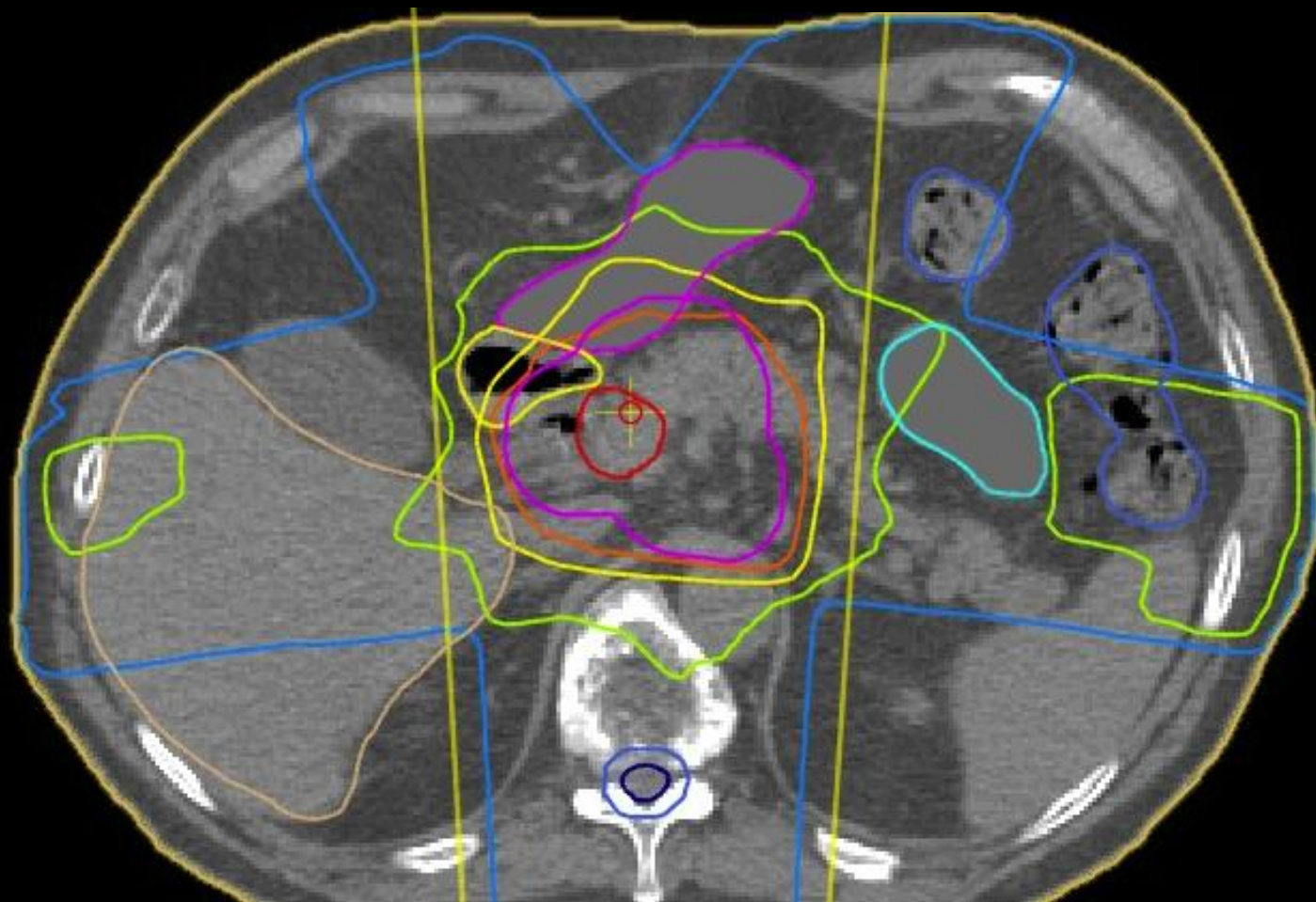
Structure	Constraints	%
PTV	5040 cGy (1.8 Gy/Fx)	> 95%
Liver	Volume at 3000 cGy	< 30%
Liver mean dose	<2800 cGy	-
L Kidney and R Kidney	1500 cGy	<25%
Stomach	4500 cGy	<25%
Stomach Max Dose	5300 cGy	-
Duodenum Max Dose	5300 cGy	-
Small Bowel	4500 cGy	<25%
Small Bowel Max Dose	5300 cGy	-
Large Bowel	4500 cGy	<50%
Large Bowel Max Dose	5300 cGy	-

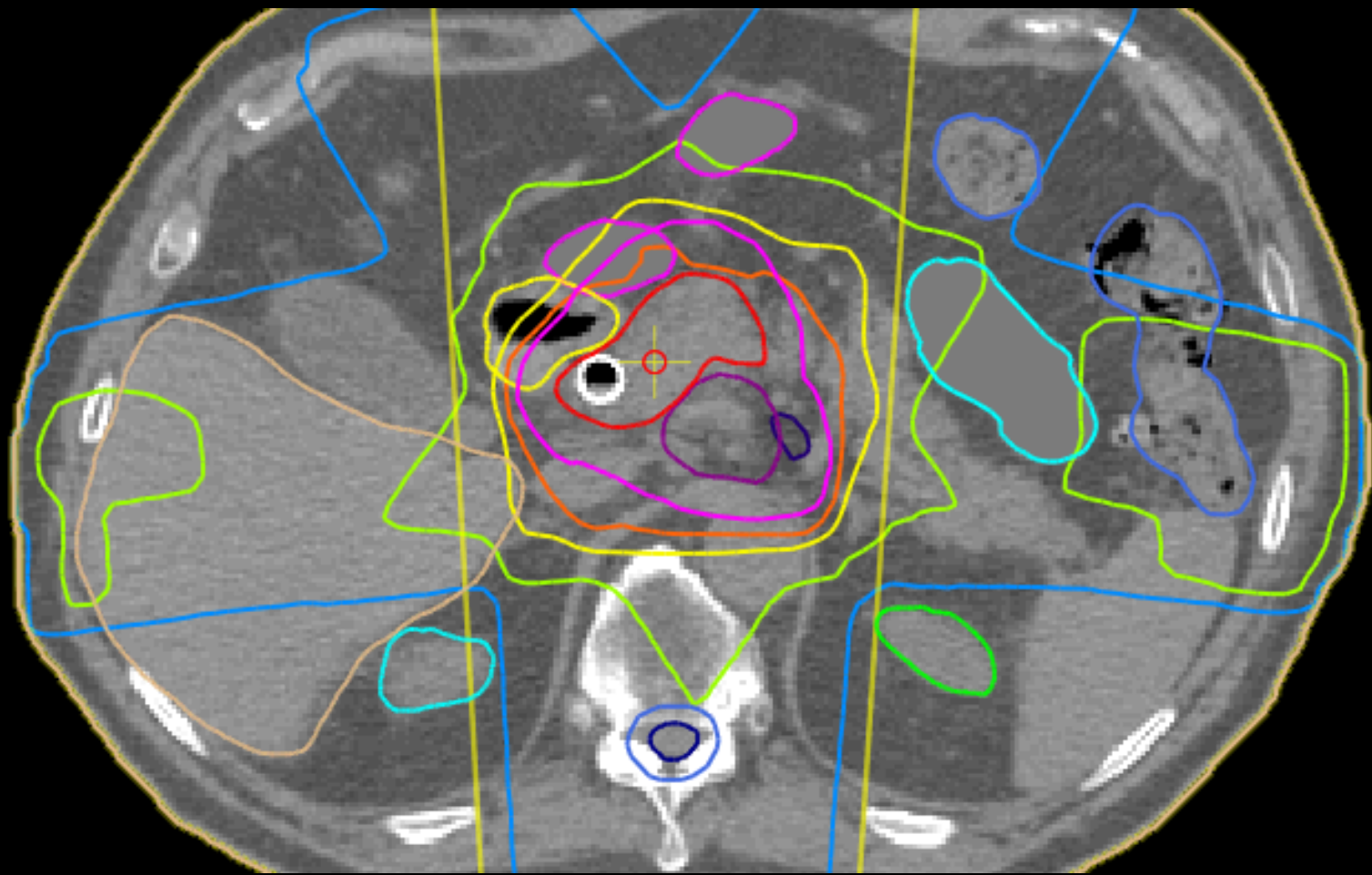
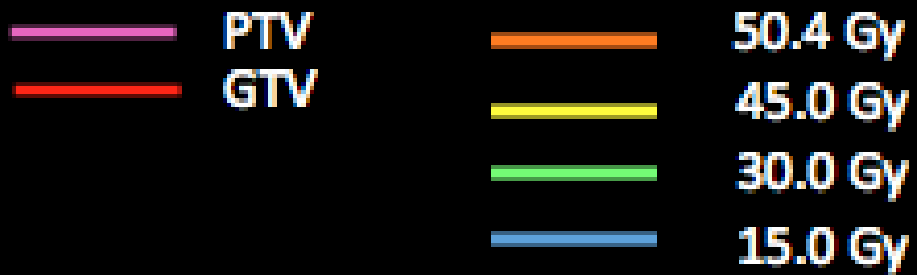
PTV
GTV

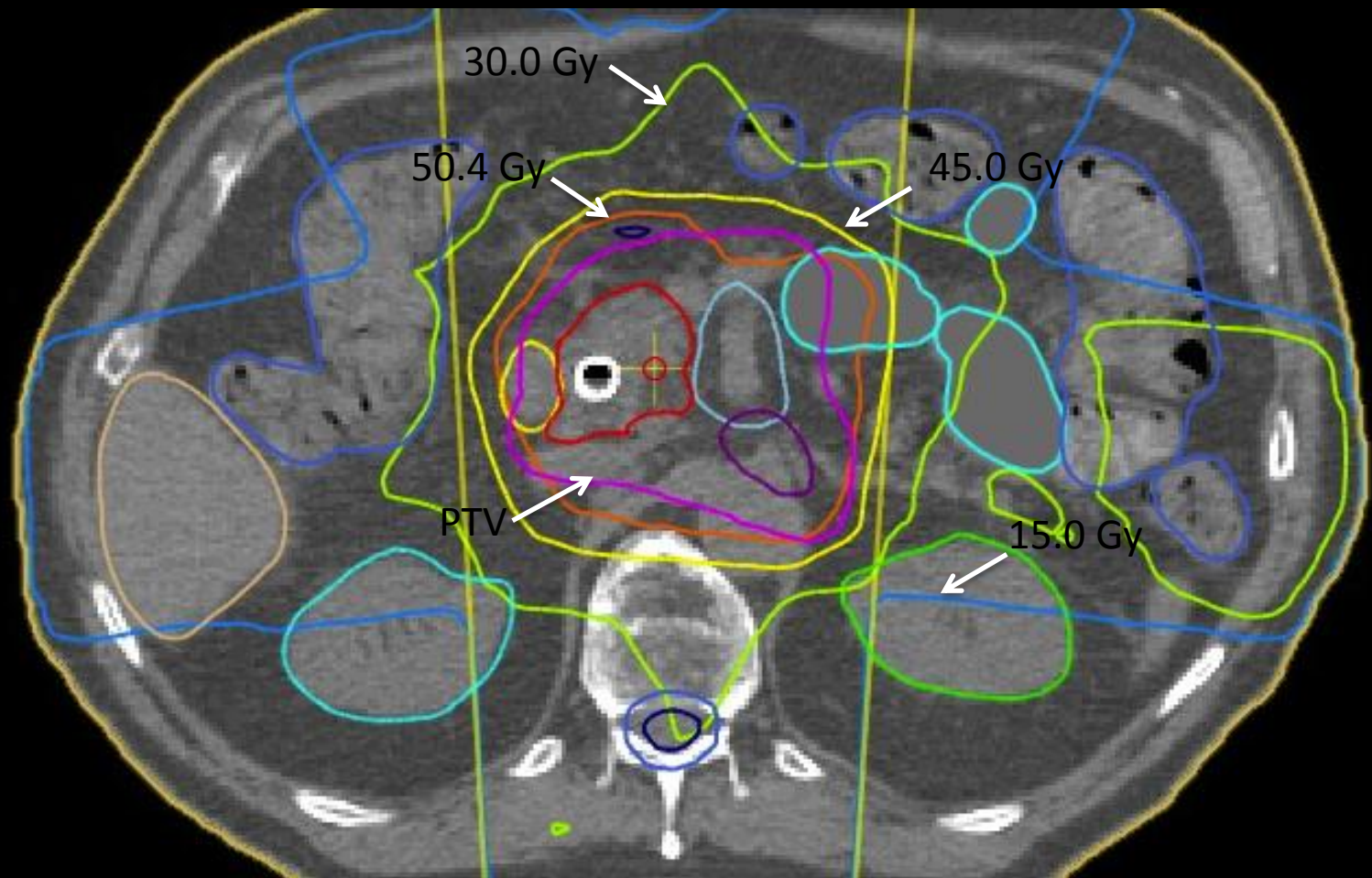
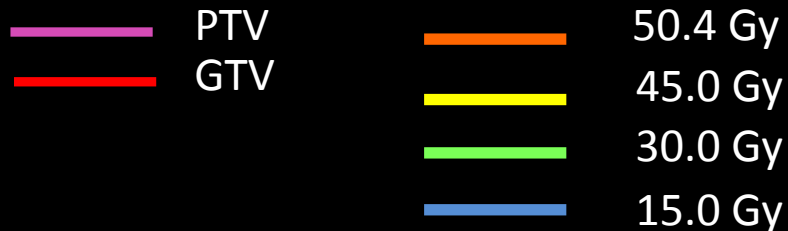
50.4 Gy
45.0 Gy
30.0 Gy
15.0 Gy

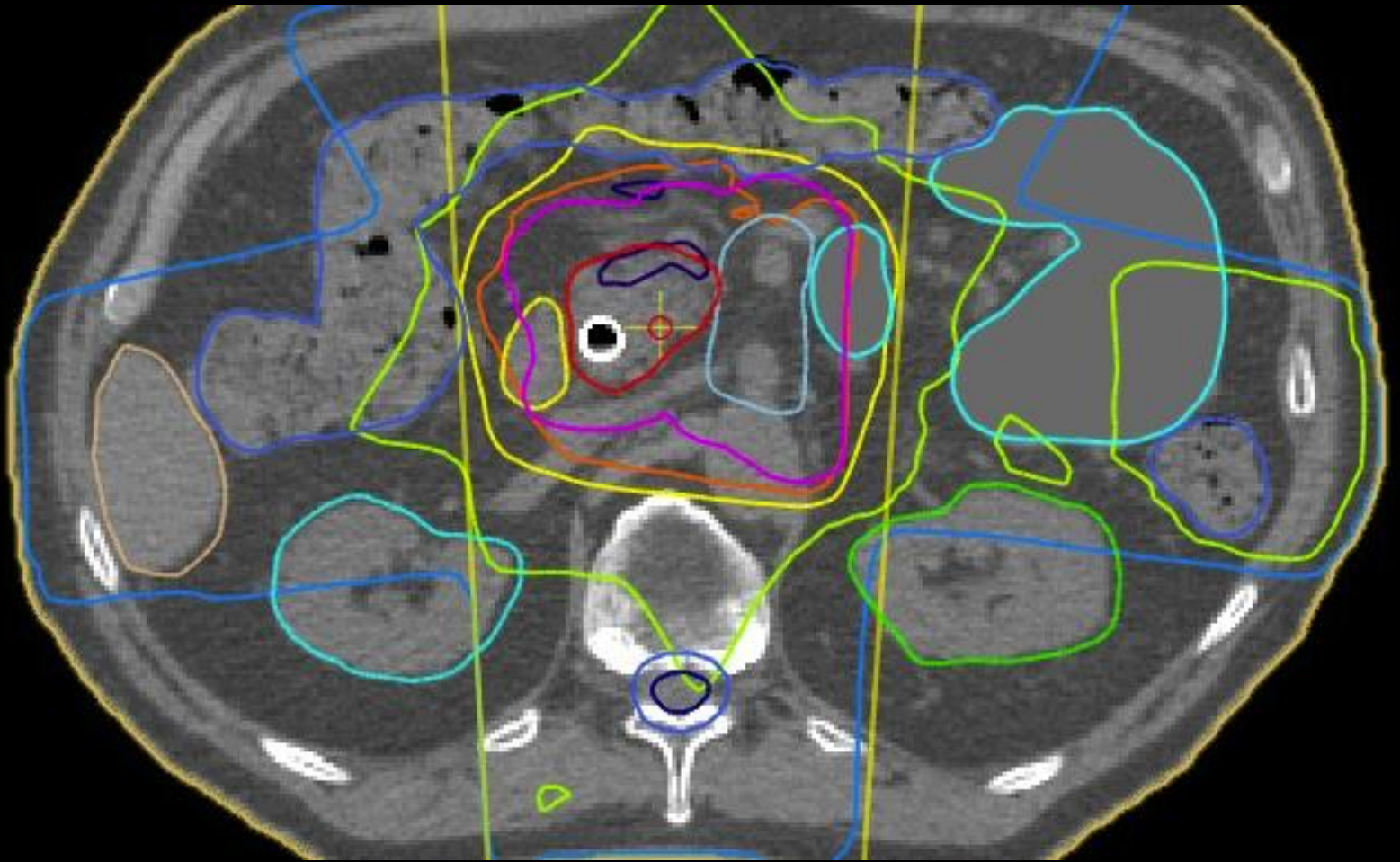
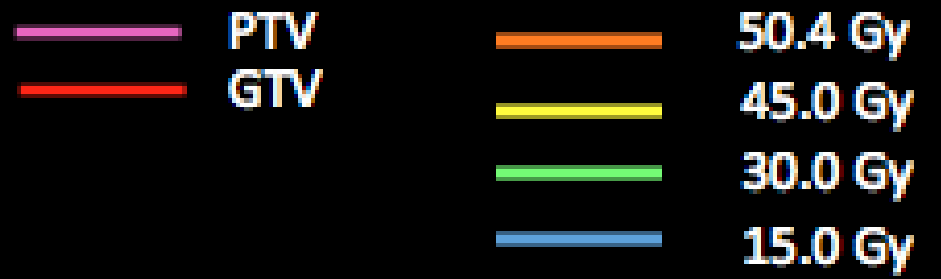
R

L









— PTV

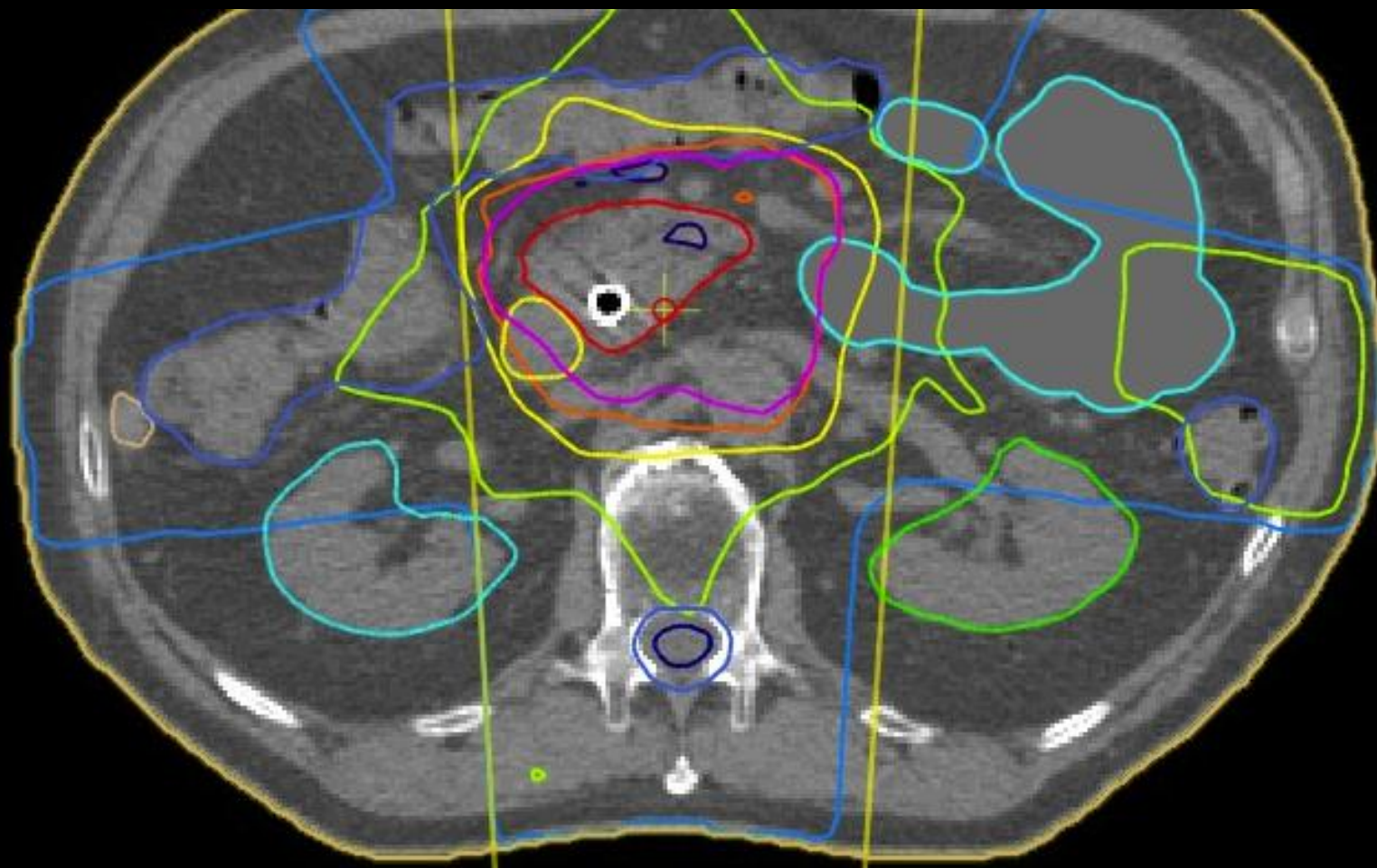
— GTV

— 50.4 Gy

— 45.0 Gy

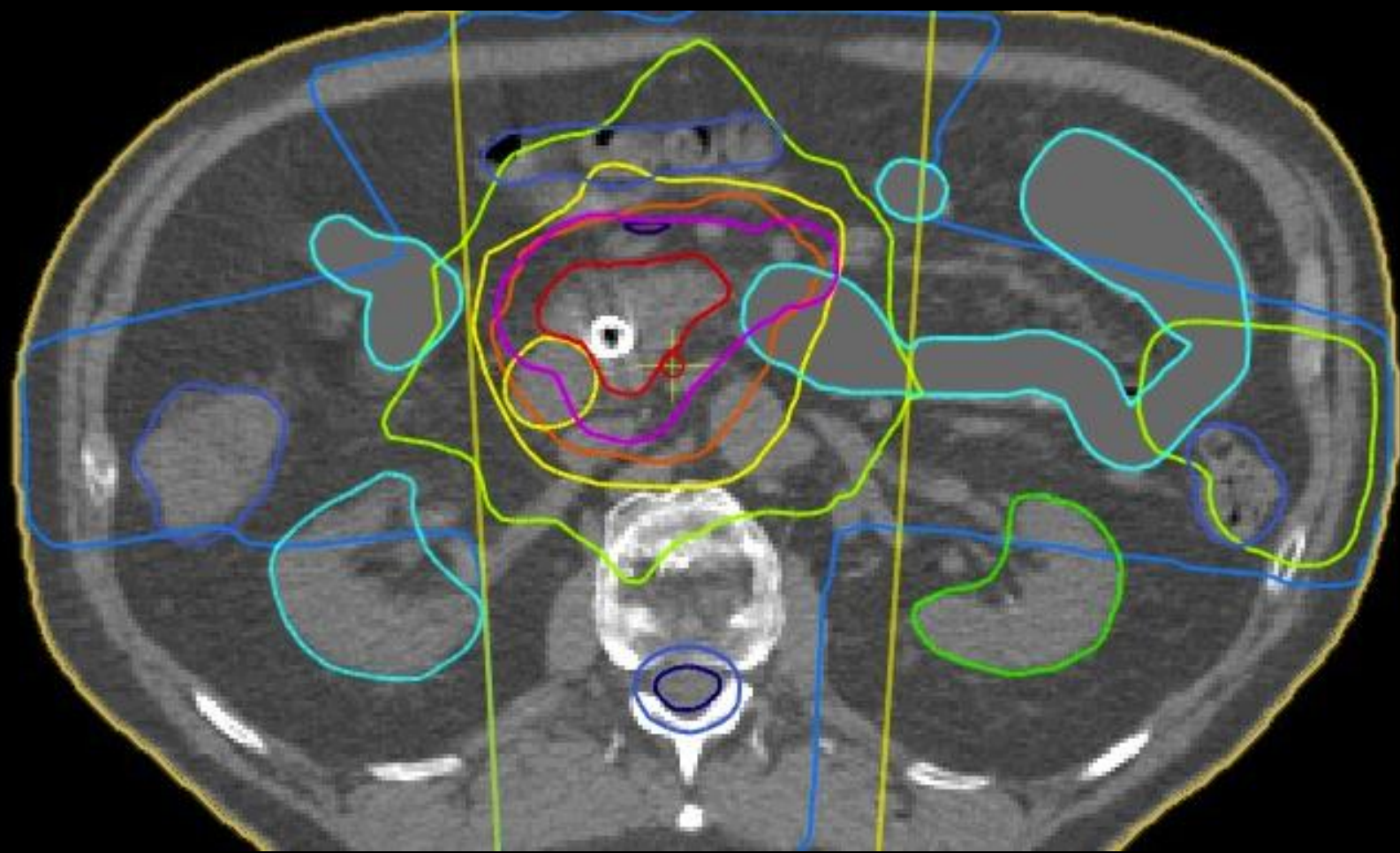
— 30.0 Gy

— 15.0 Gy



— PTV
— GTV

— 50.4 Gy
— 45.0 Gy
— 30.0 Gy
— 15.0 Gy



Dose Volume Histogram

