

Female patient

Interobserver variation in organs at risk
contouring in the pelvis - National guidelines
and contouring atlas by the Danish
Multidisciplinary Cancer Groups

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Klüver-Kristensen², Anja Ør Knudsen², Camilla Kronborg⁴, Henriette
Lindberg⁵, Christine Madsen³, Lene Sonne Mouritsen⁵, Christina
Nyborg², Trine Jakobi Nøttrup⁶, Stine Ellebjerg Petersen⁴, Eva Serup-
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Submitted to Radiother. Oncol. 2025

- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
- Urethra
- Uterus
- Vagina
- Vulva



Tip: Sigmoid

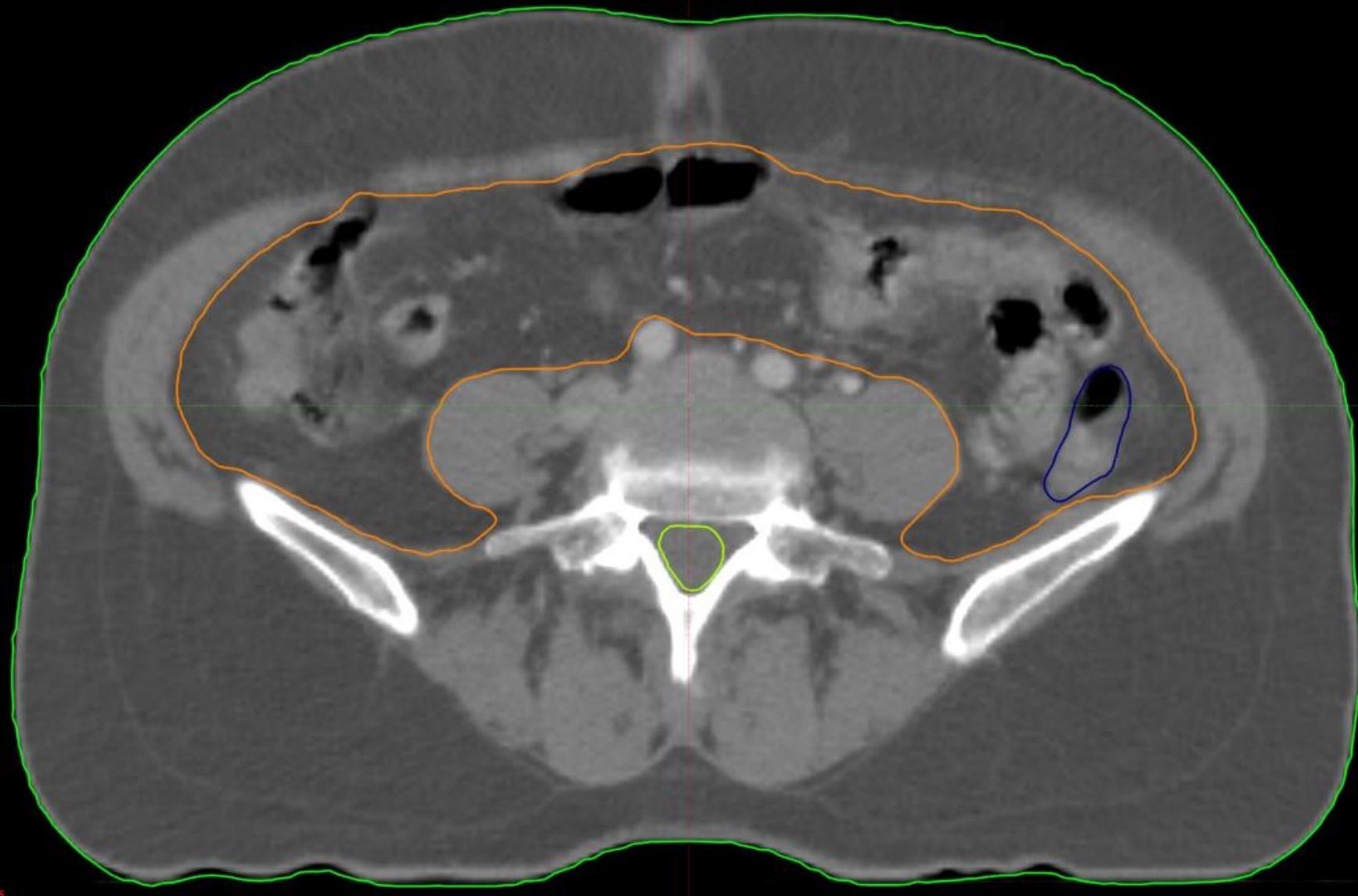
The superior limit of the sigmoid (green arrow) is defined by the uppermost axial CT slice displaying (yellow arrow).

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- Vulva

10:30



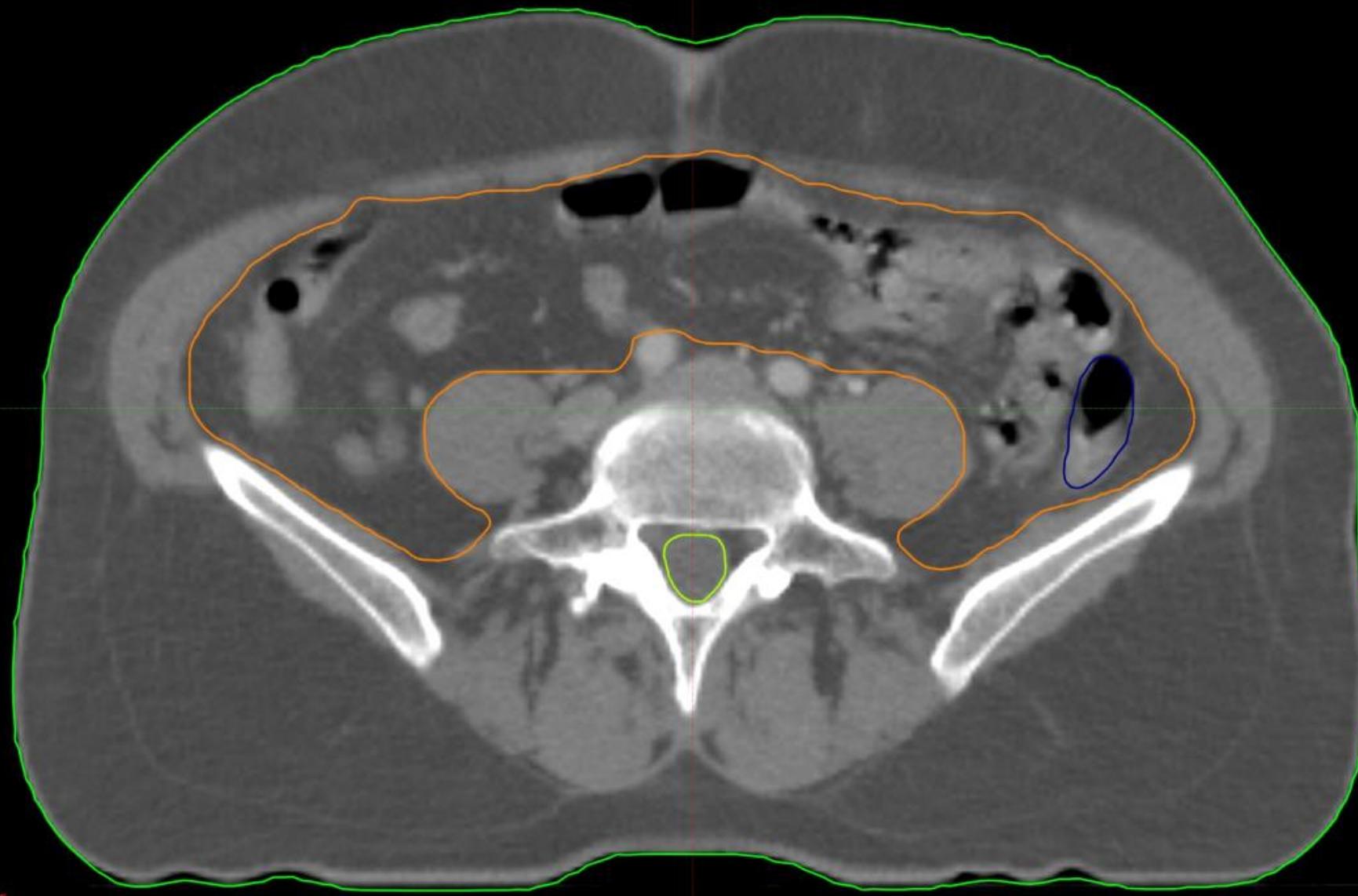
Standard, iWFS
Z: -21.60 cm



-  AnalCanal
 -  AnoRectum
 -  BODY
 -  Bladder
 -  BowelBag
 -  CaudaEquina
 -  FemoralHead_L
 -  FemoralHead_R
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 -  Sacrum
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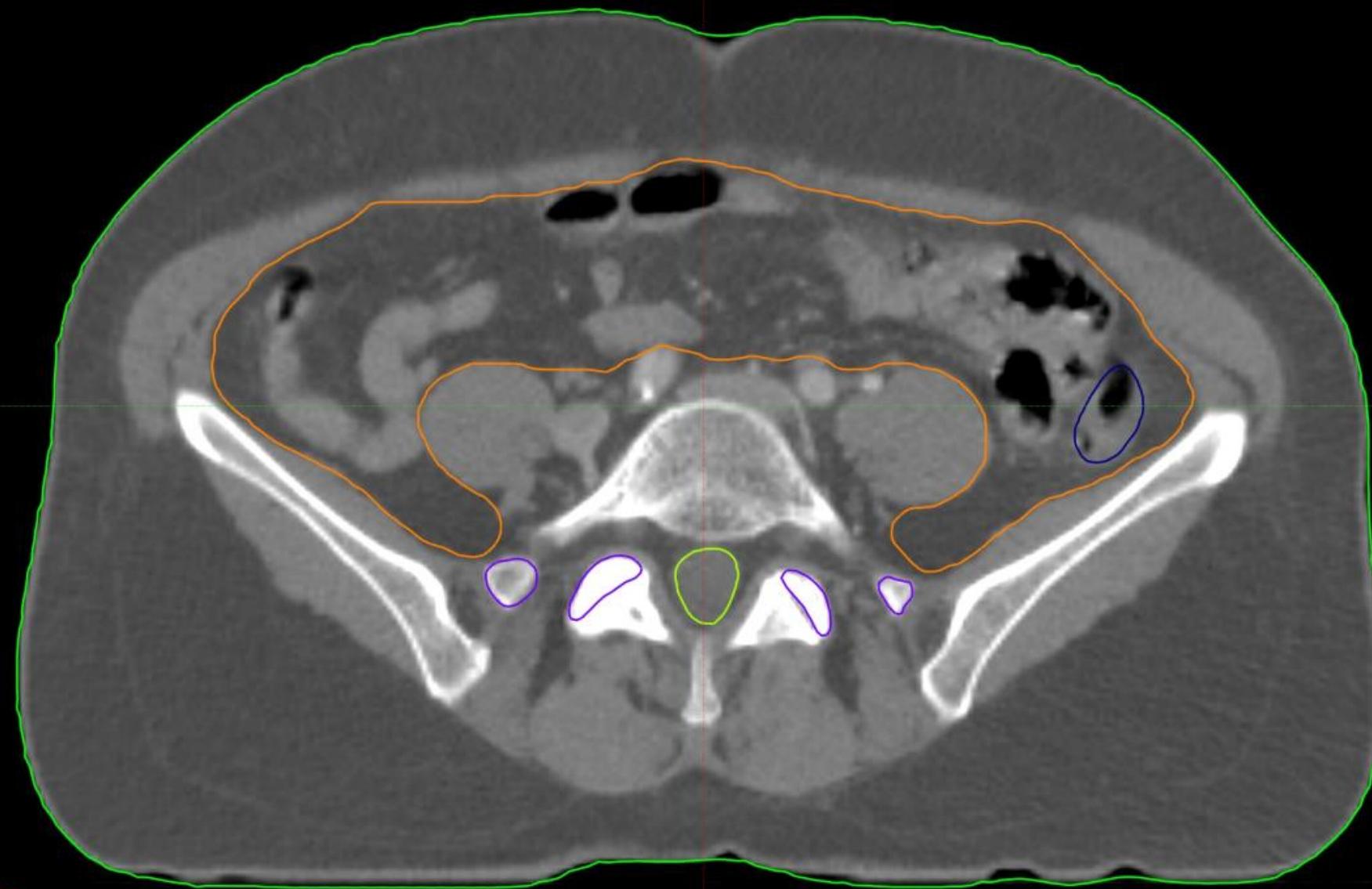
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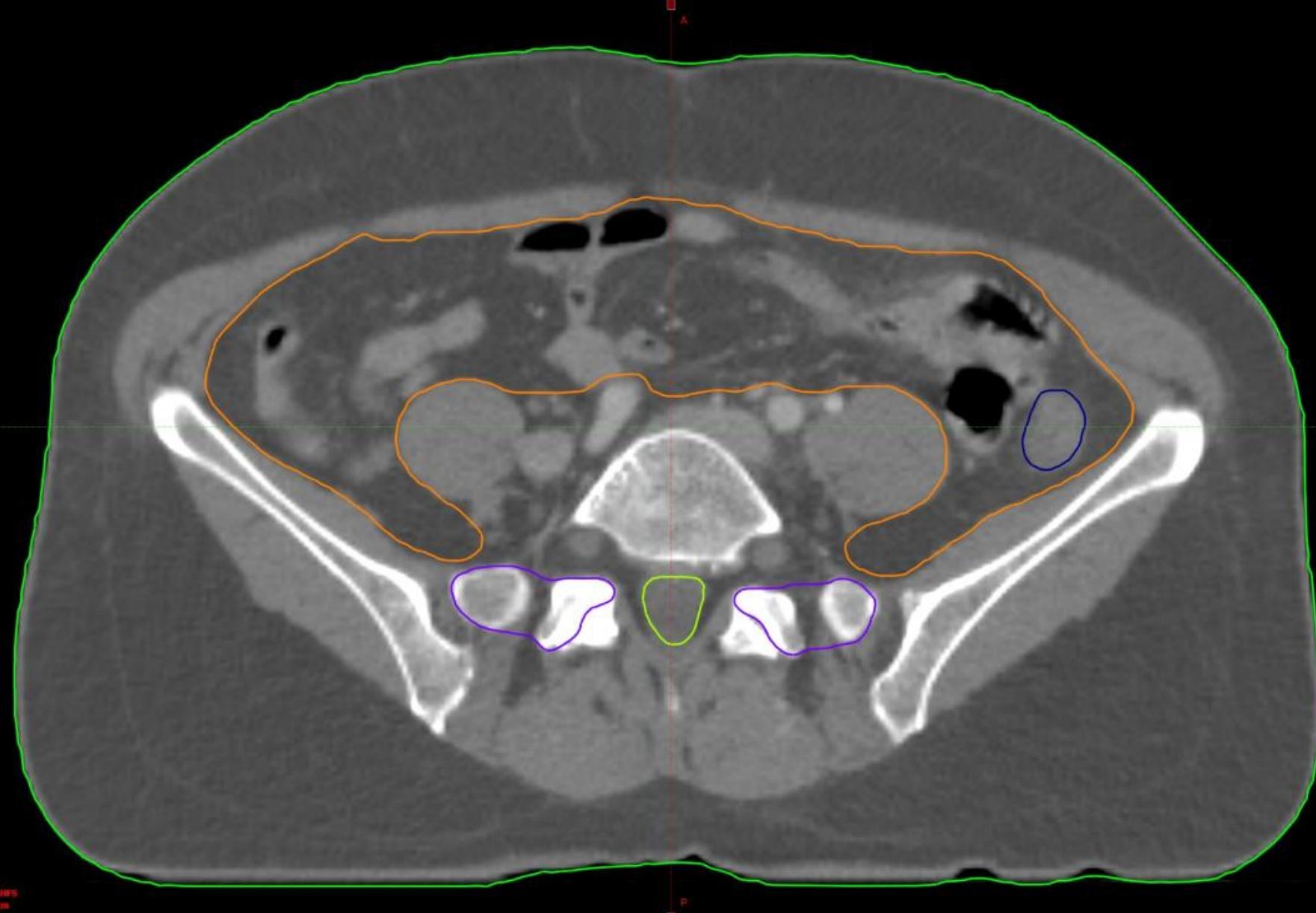


Standard, iWFS
Z: -22.80 cm

- AnalCanal
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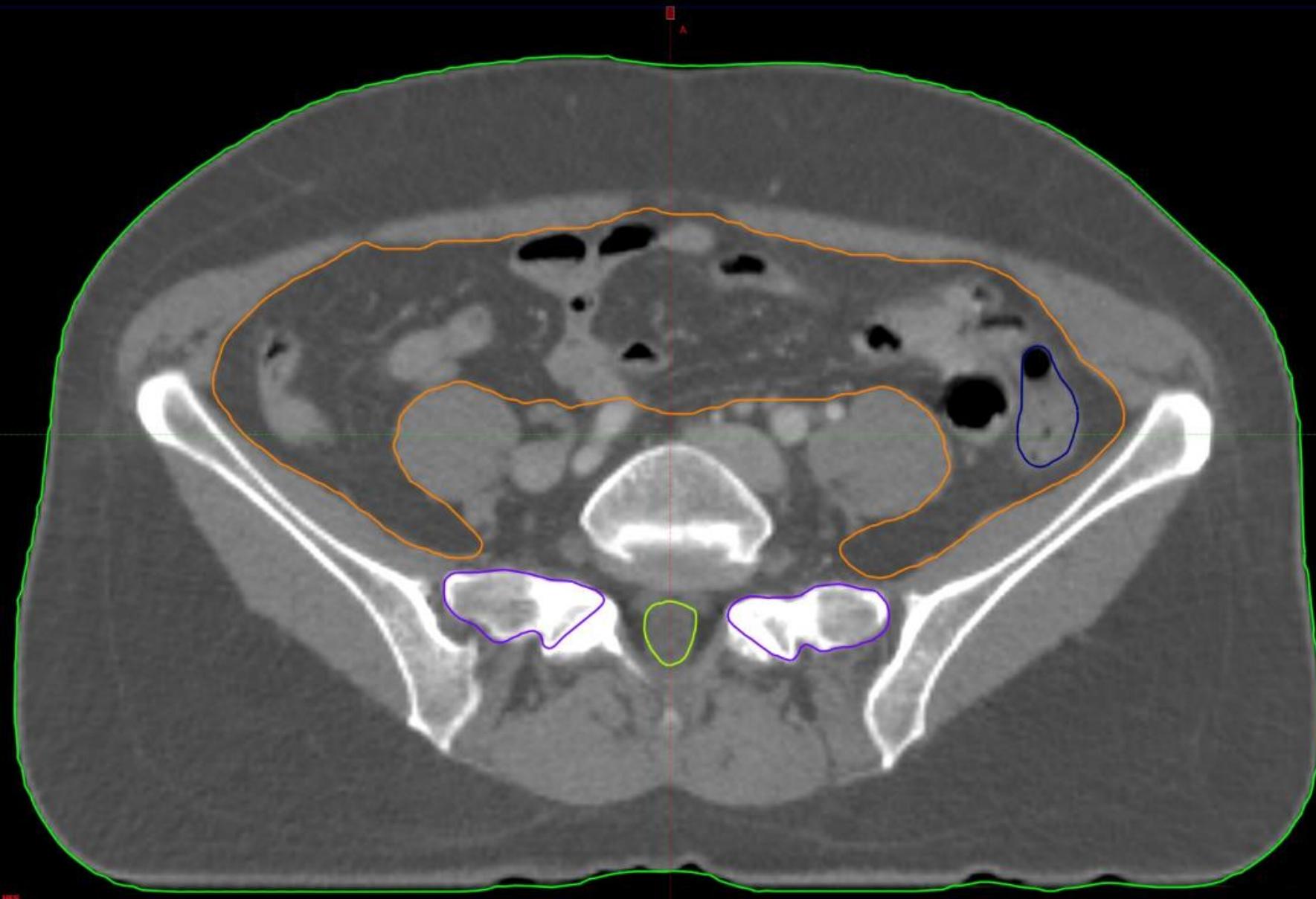




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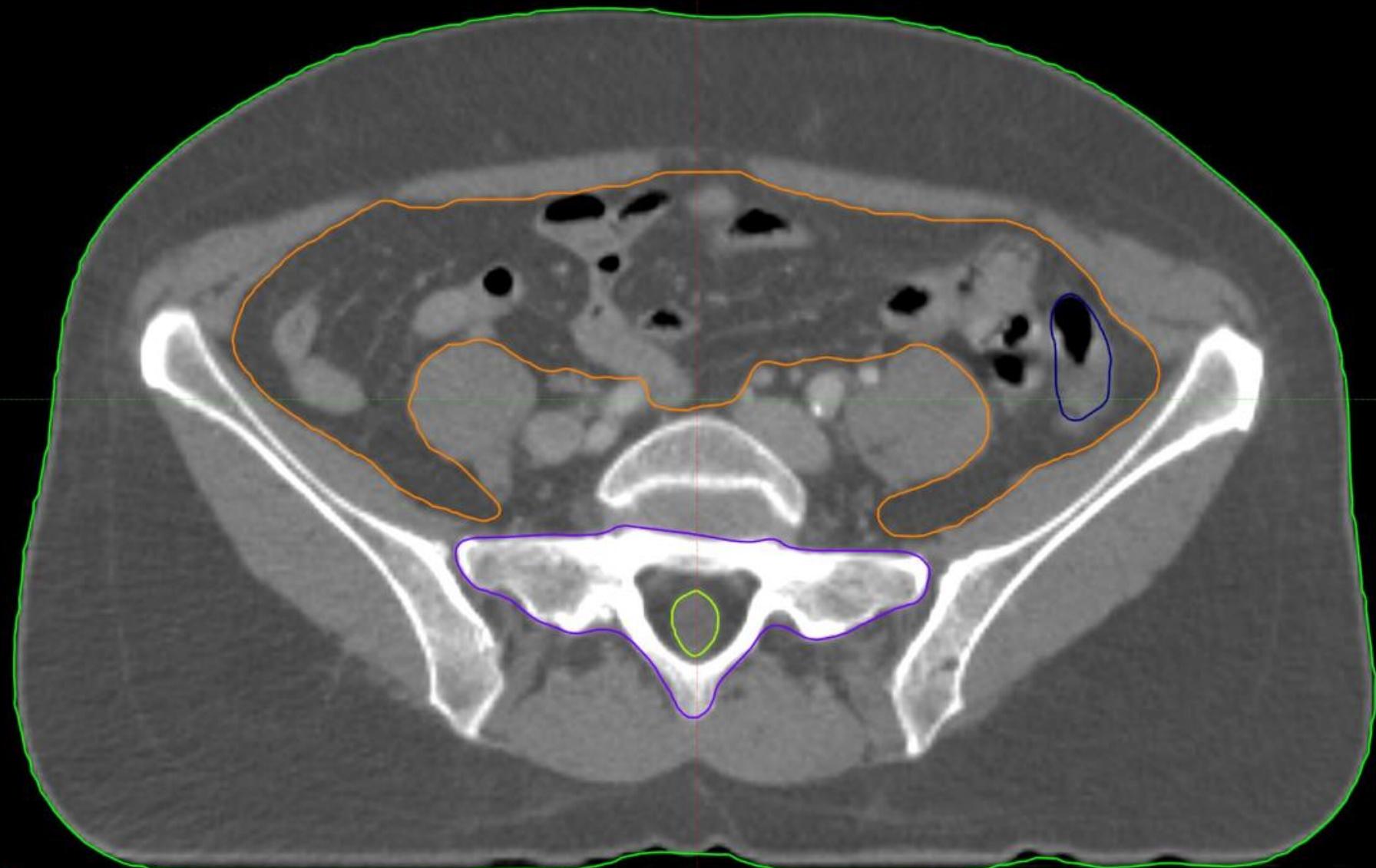


Standard, IWS
Z: -24,00 cm



- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
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- Uterus
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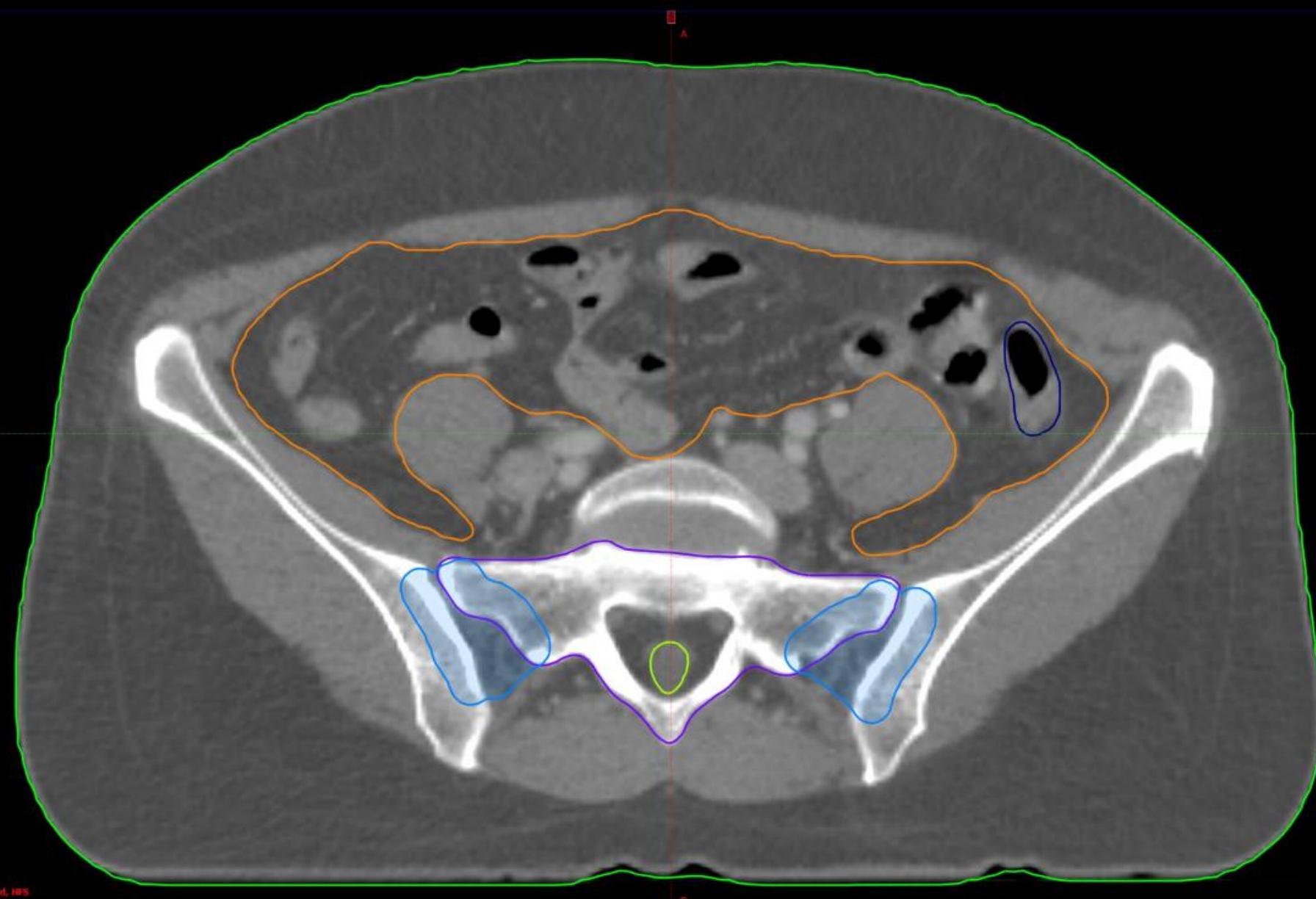


Standard, IWS
Z: -24.40 cm



- AnalCanal
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- BowelBag
- CaudaEquina
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Standard, IWS
Z: -24,00 cm



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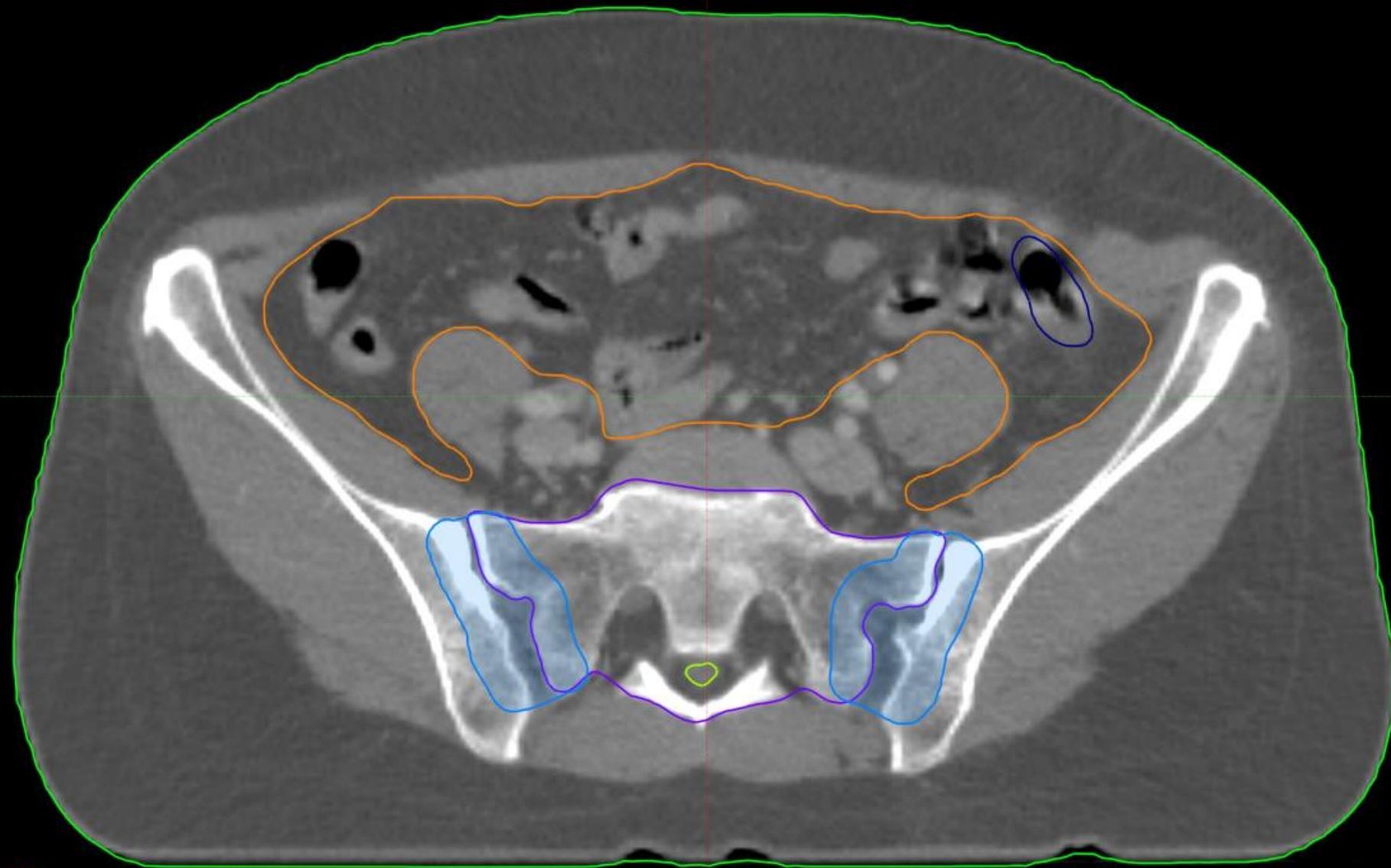


Standard, iWFS
Z: -25,20 cm



- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
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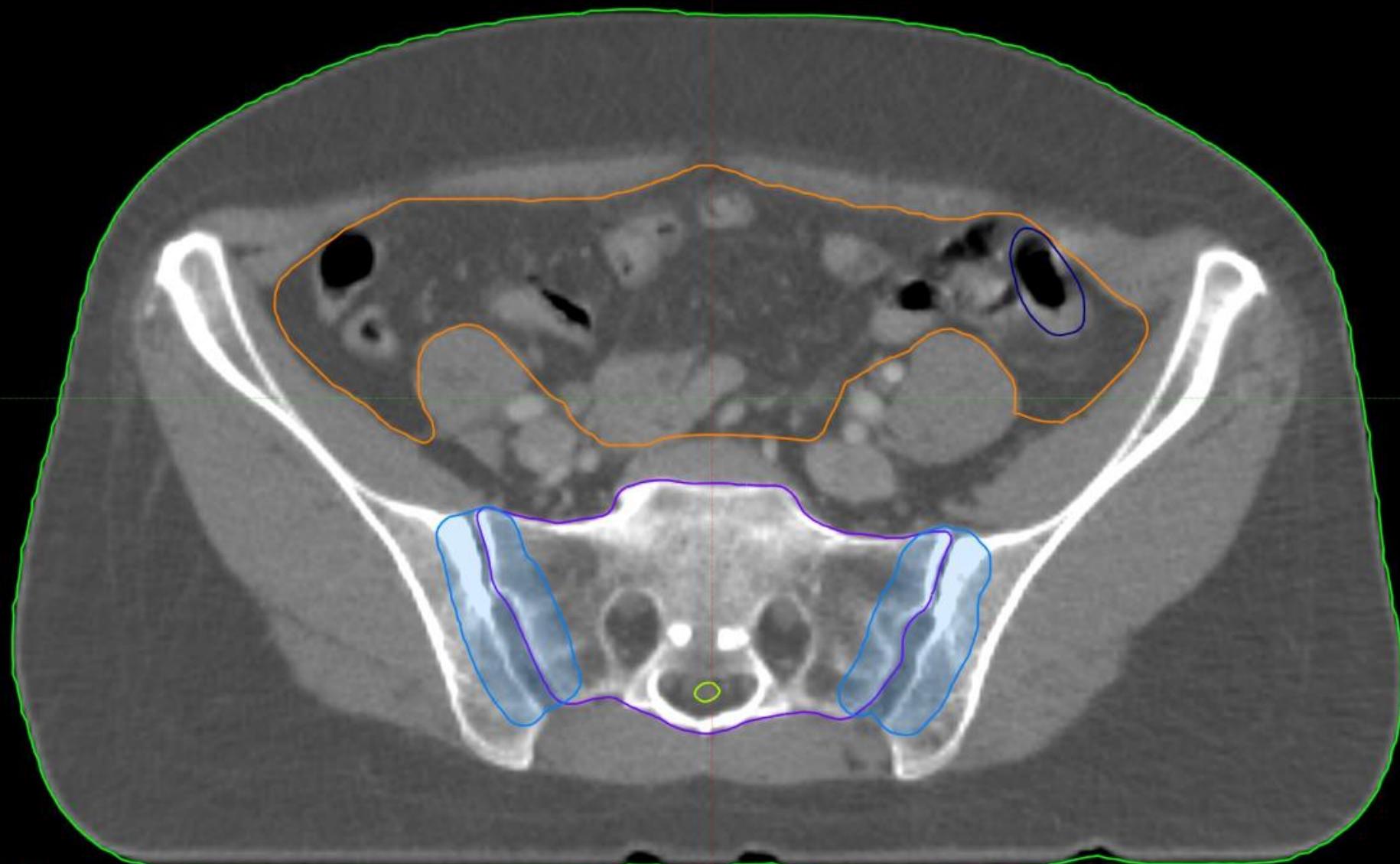


Standard, iWFS
Z: -25.60 cm



- AnalCanal
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- BowelBag
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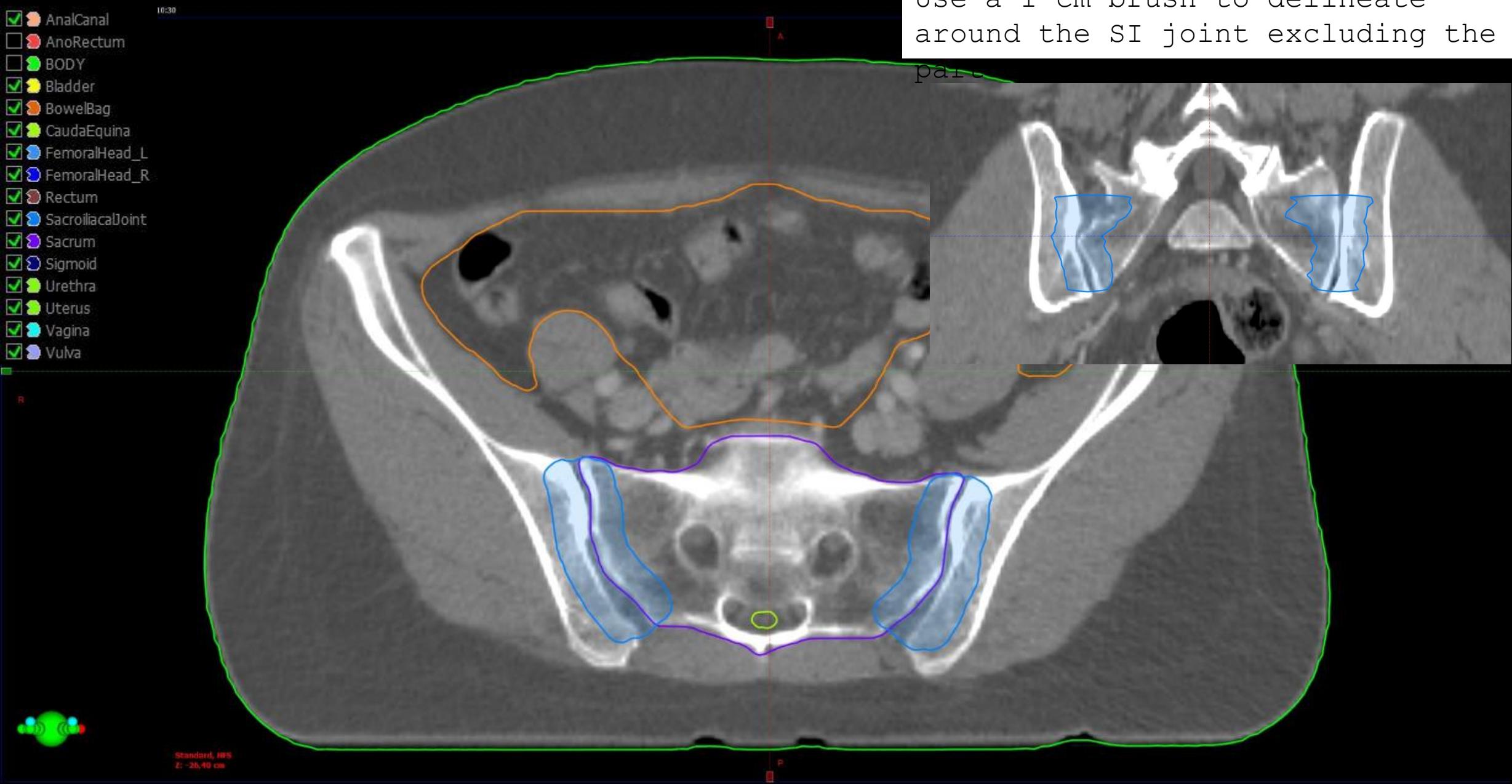


Standard, iWFS
Z: -26,00 cm



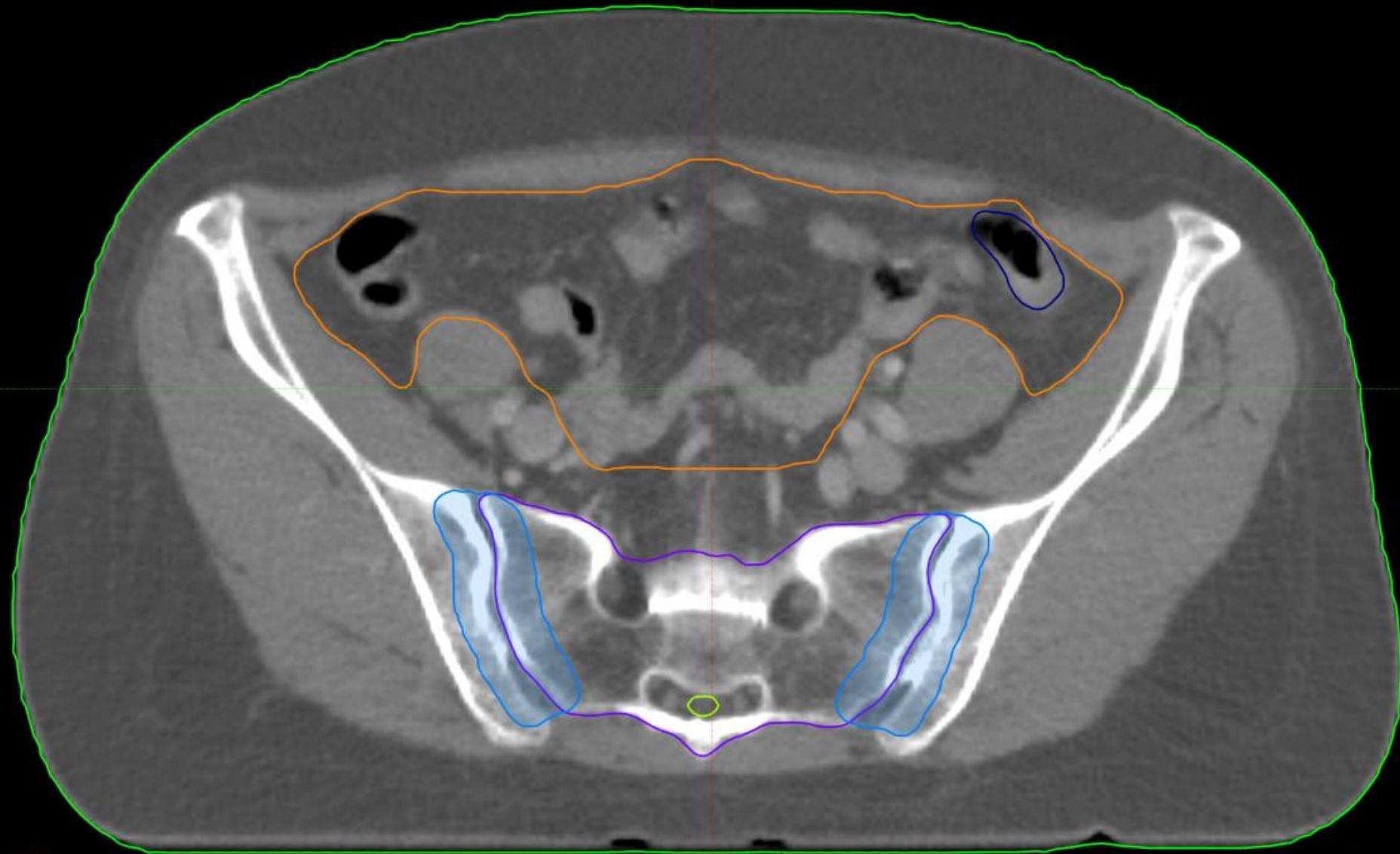
Tip: SacroiliacaJoint

Use a 1 cm brush to delineate around the SI joint excluding the part



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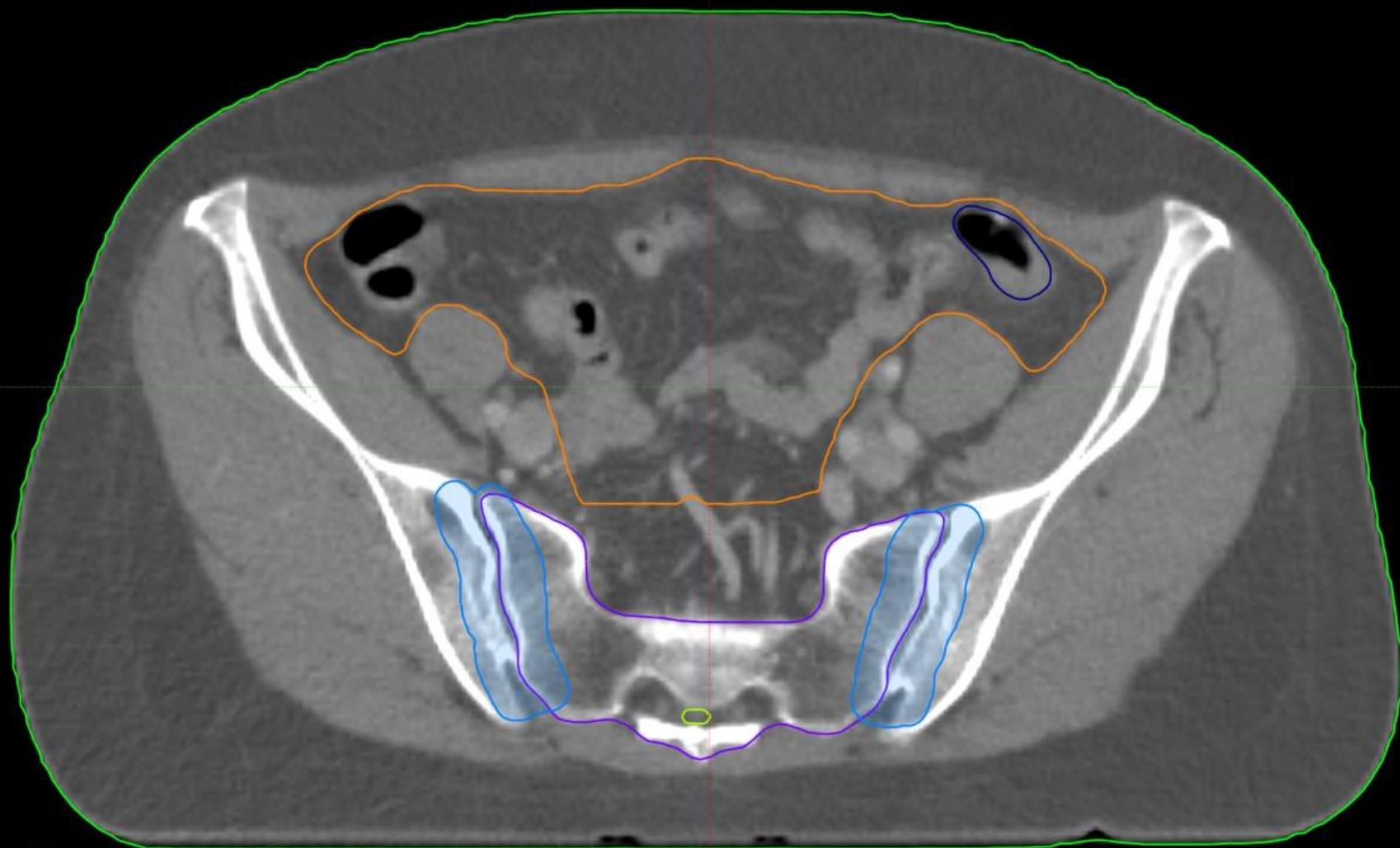
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Standard, iWFS
Z: -26,80 cm

- AnalCanal
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- BODY
- Bladder
- BowelBag
- CaudaEquina
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- Rectum
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- Sacrum
- Sigmoid
- Urethra
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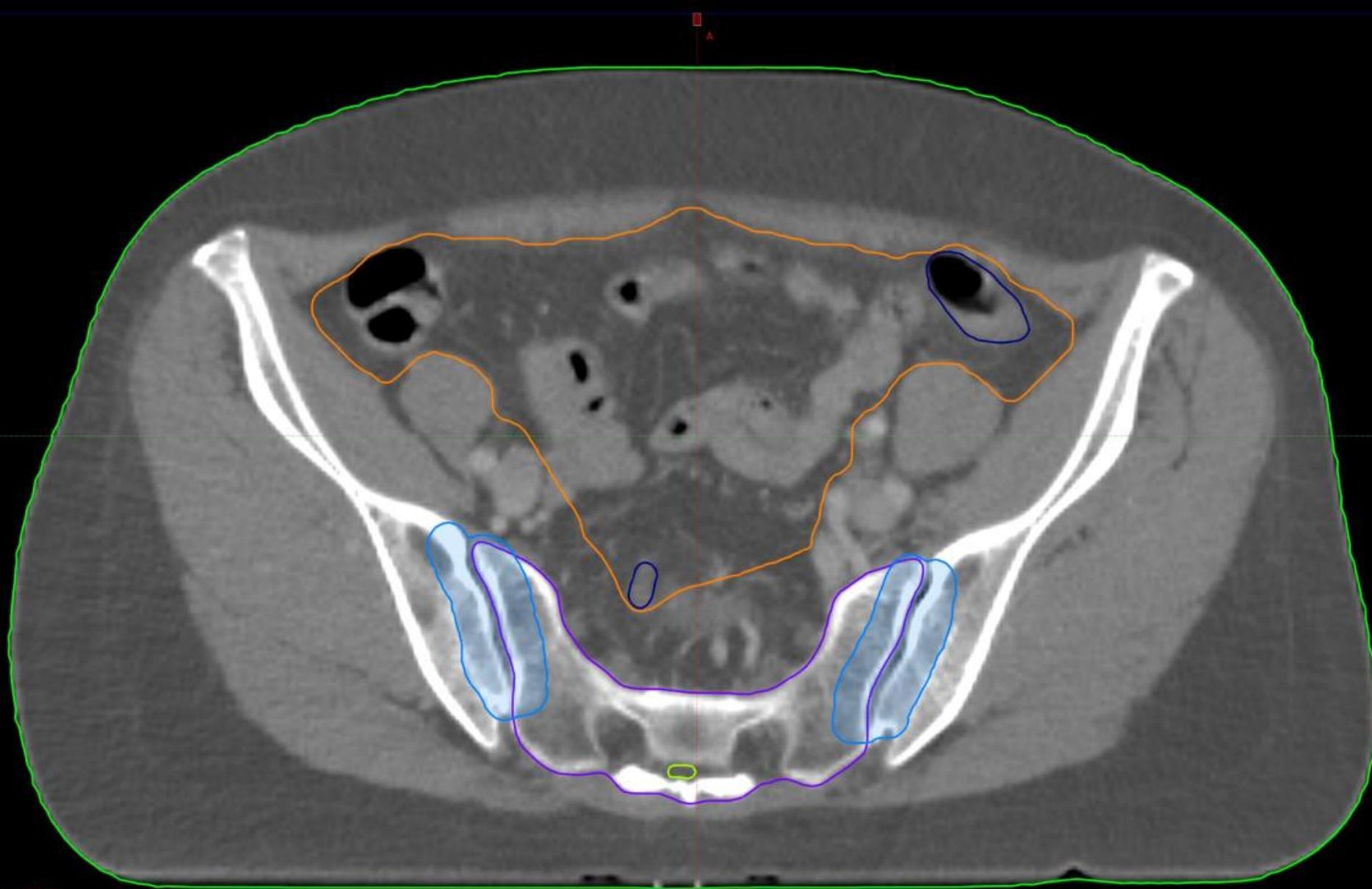


Standard, iWFS
Z: -27.20 cm



- AnalCanal
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- BODY
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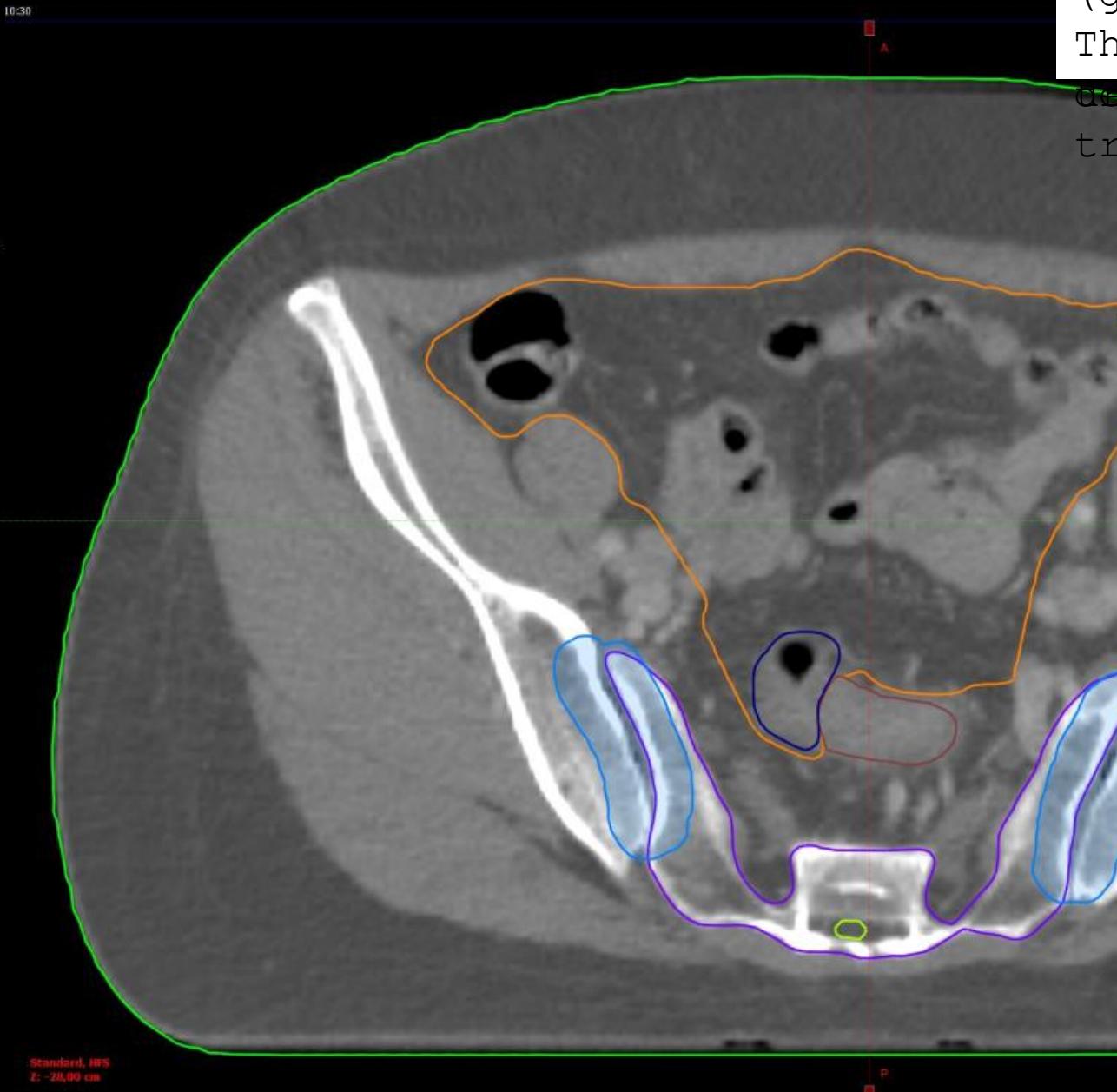
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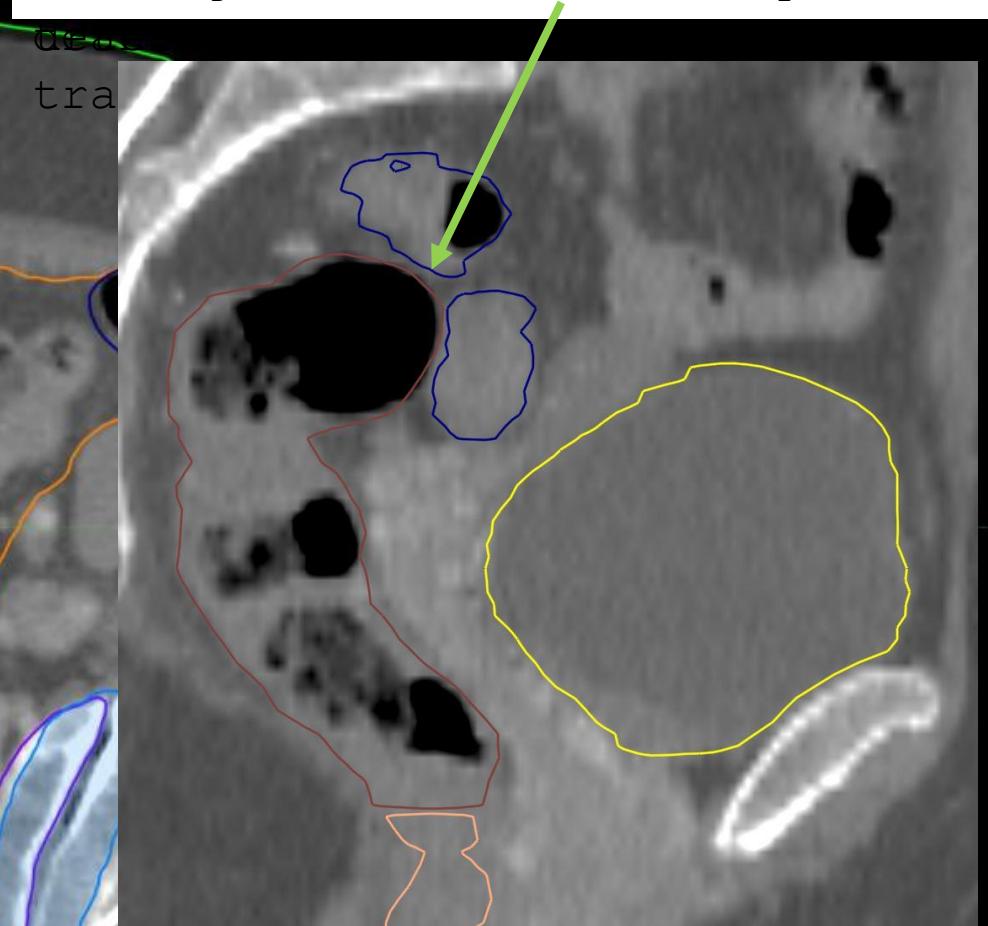
Standard, iWFS
Z: -27.00 cm



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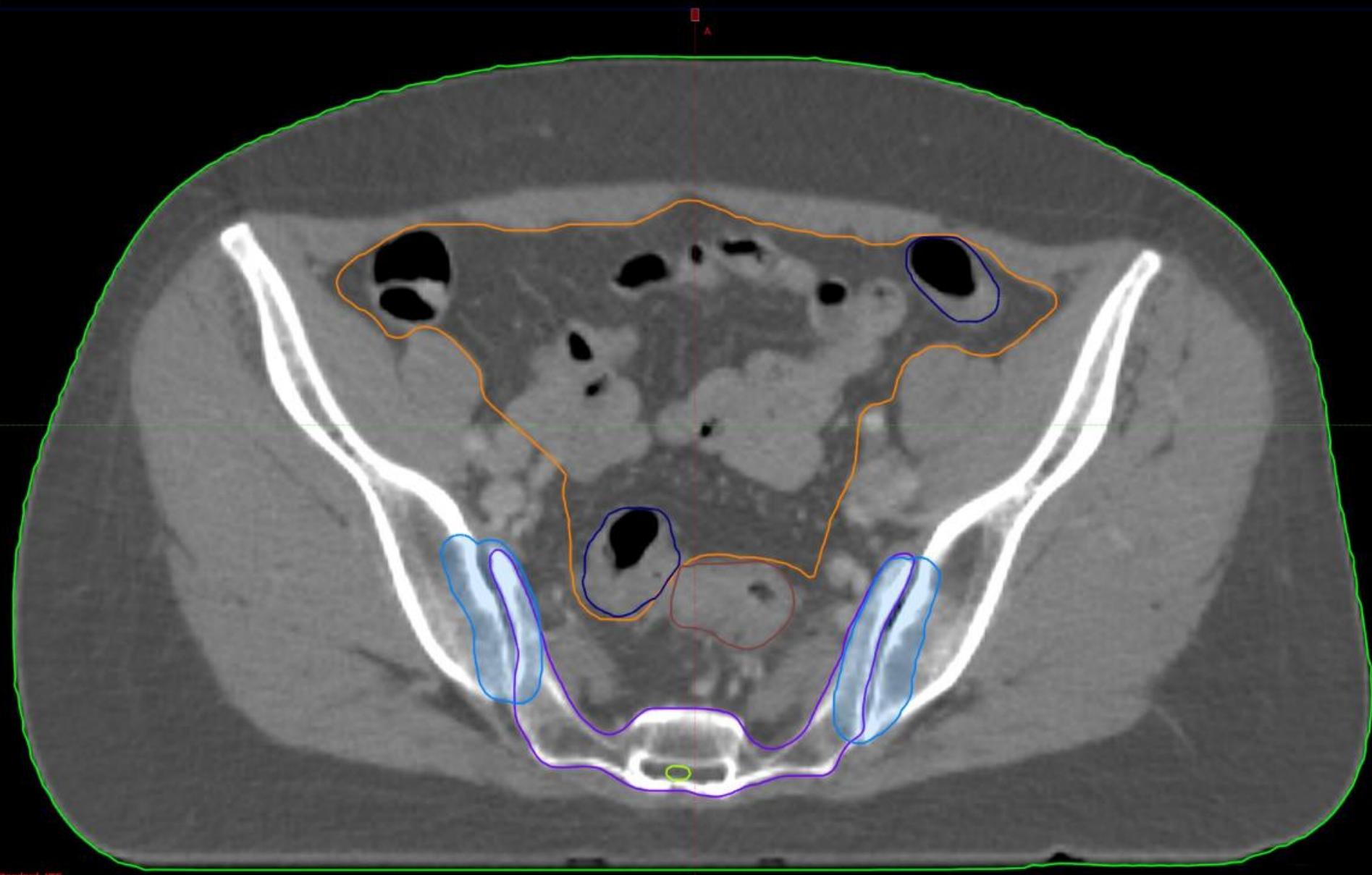


Tip: Recto-sigmoid transition
(green arrow)
The sagittal view often helps to



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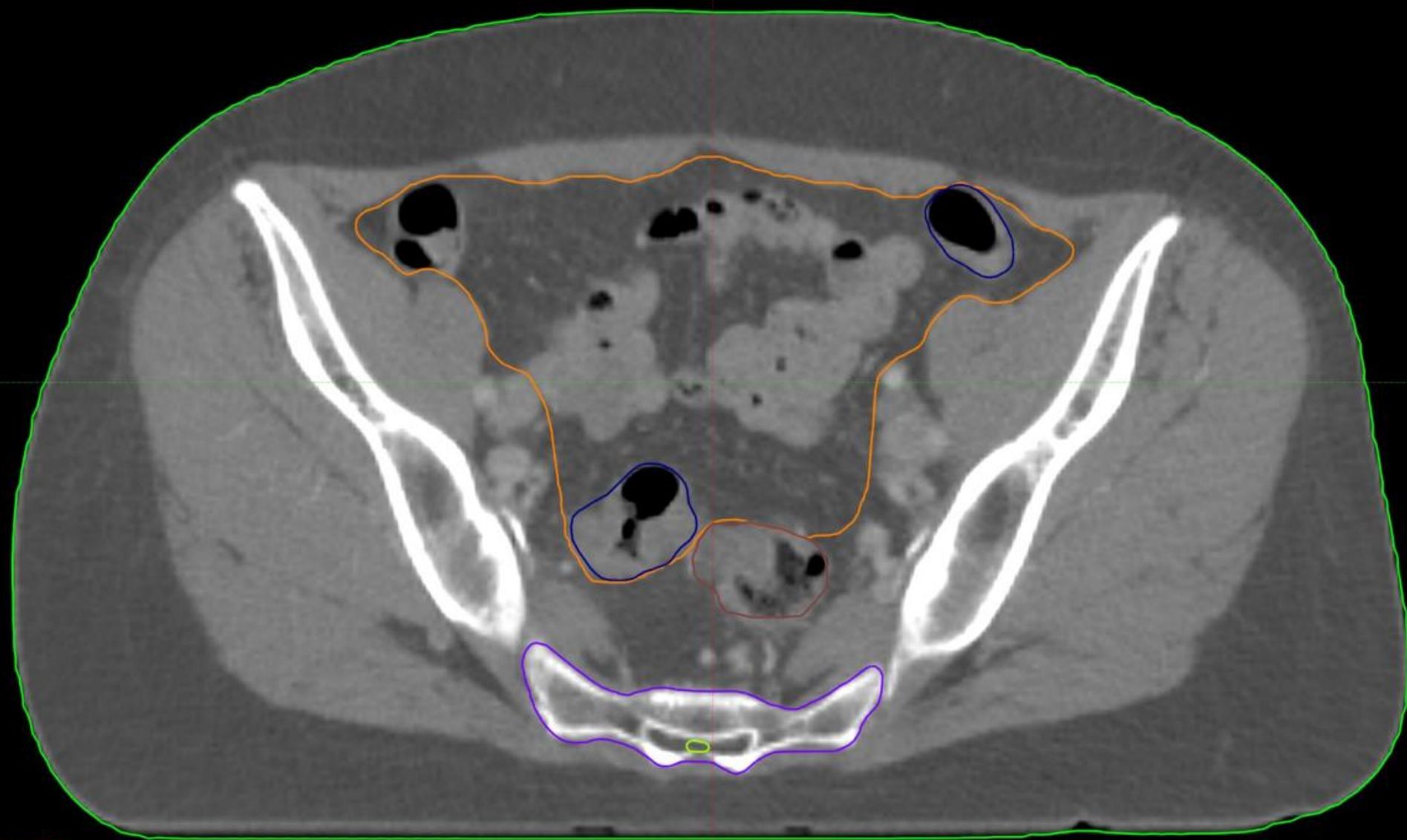
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Standard, iWFS
Z: -28.40 cm

- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
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- Rectum
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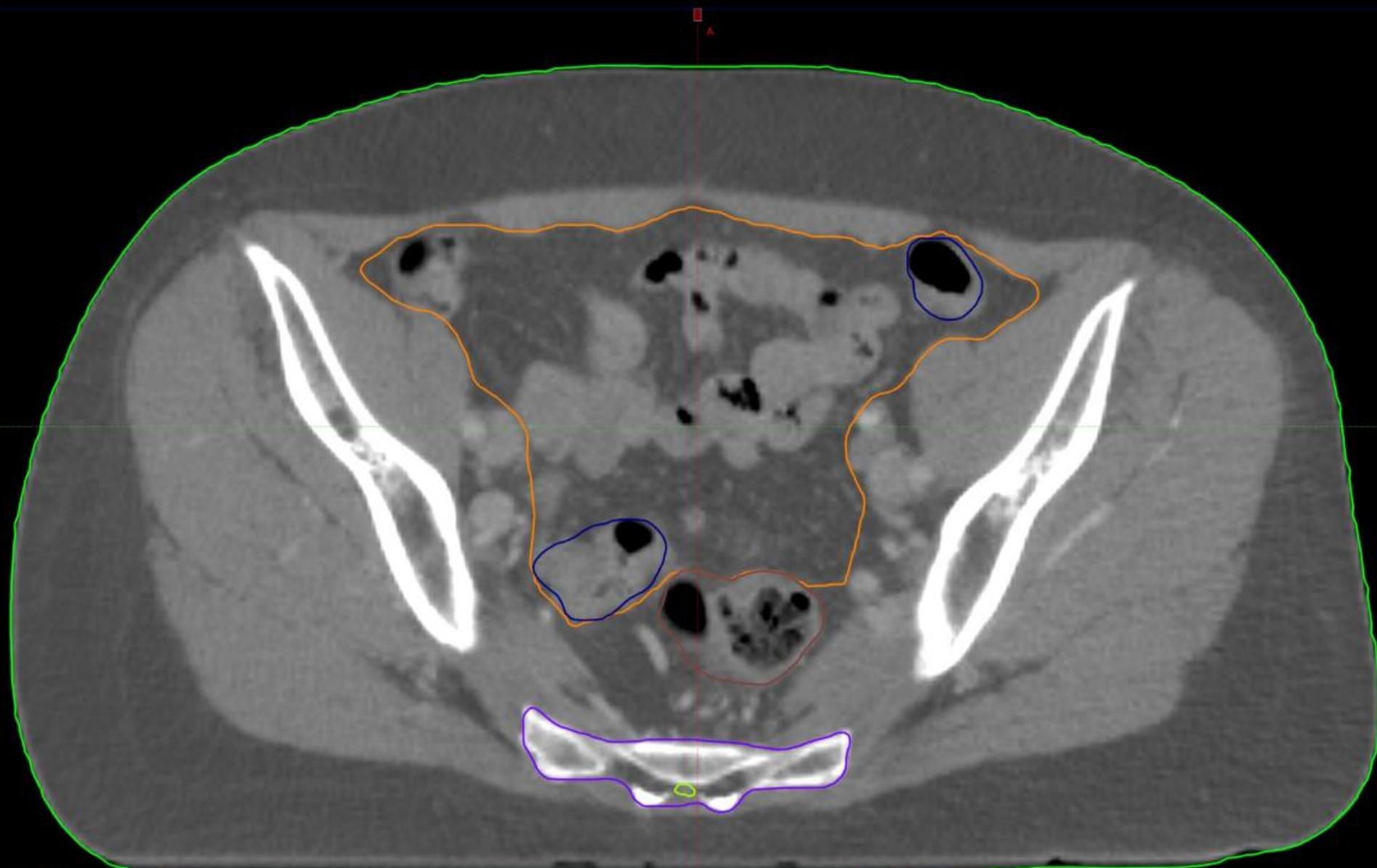


Standard, iWFS
Z: -28.00 cm



- AnalCanal
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- FemoralHead_R
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Standard, iWFS
Z: -29.20 cm



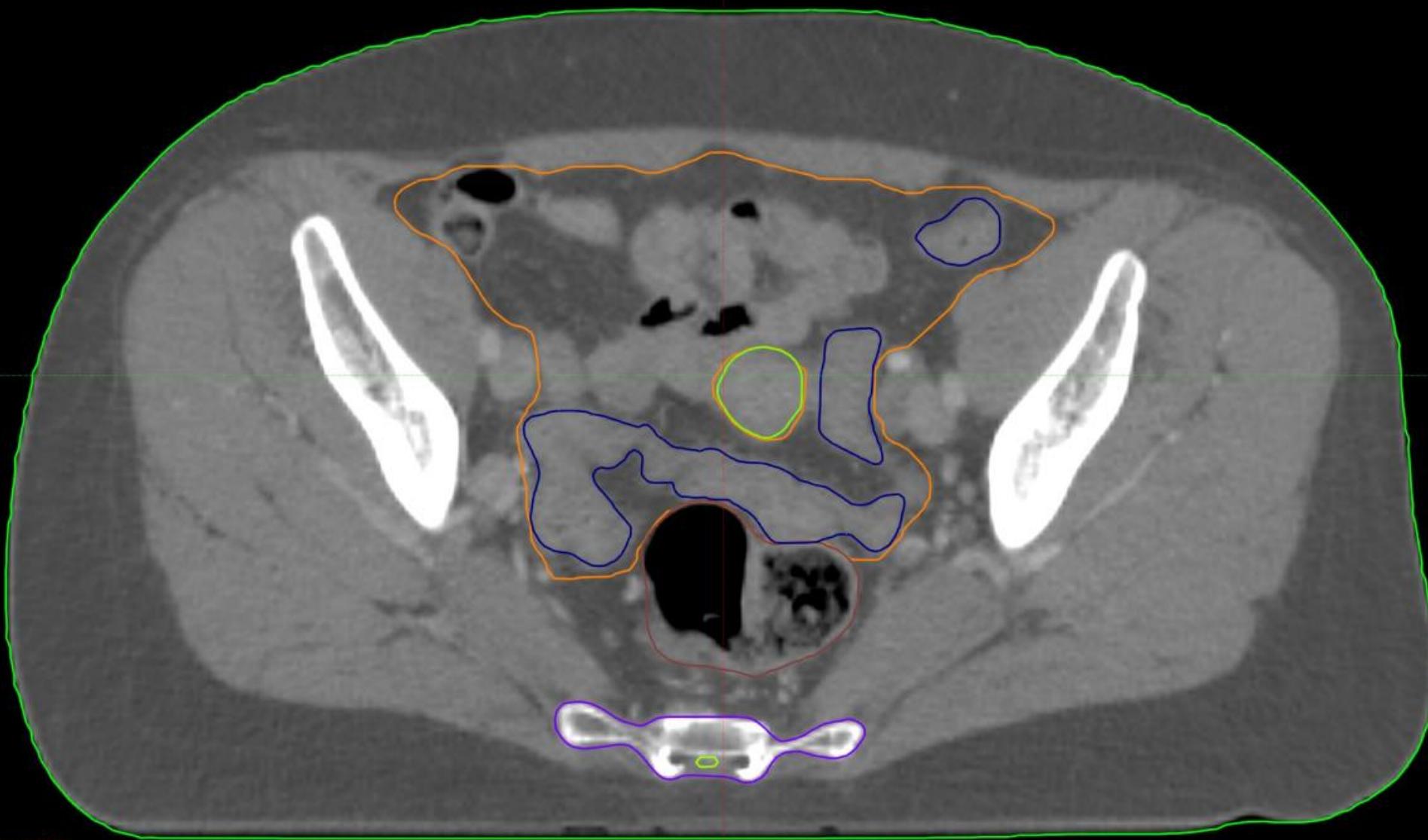
- AnalCanal
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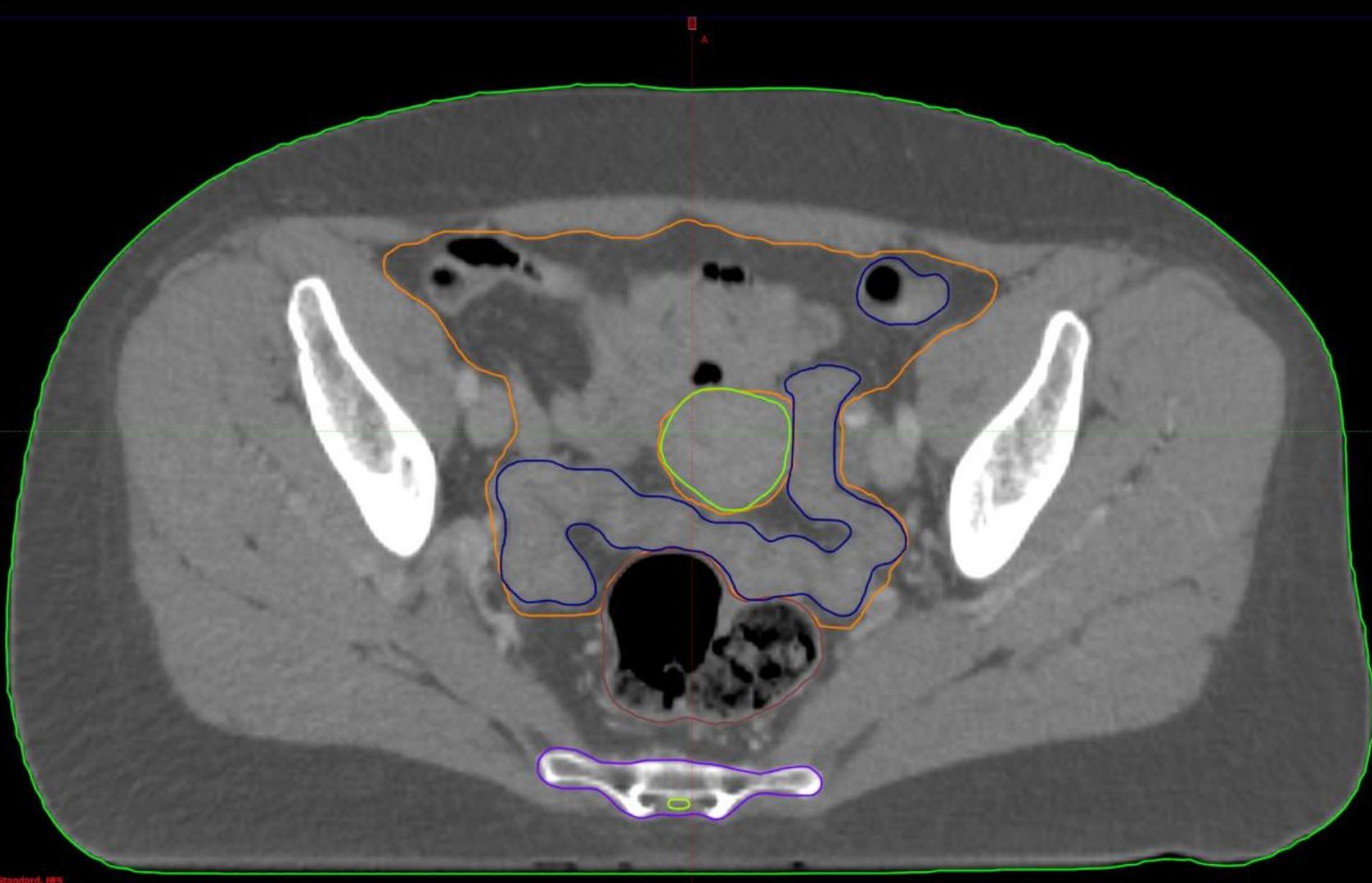
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Standard, iWFS
Z: -30.00 cm

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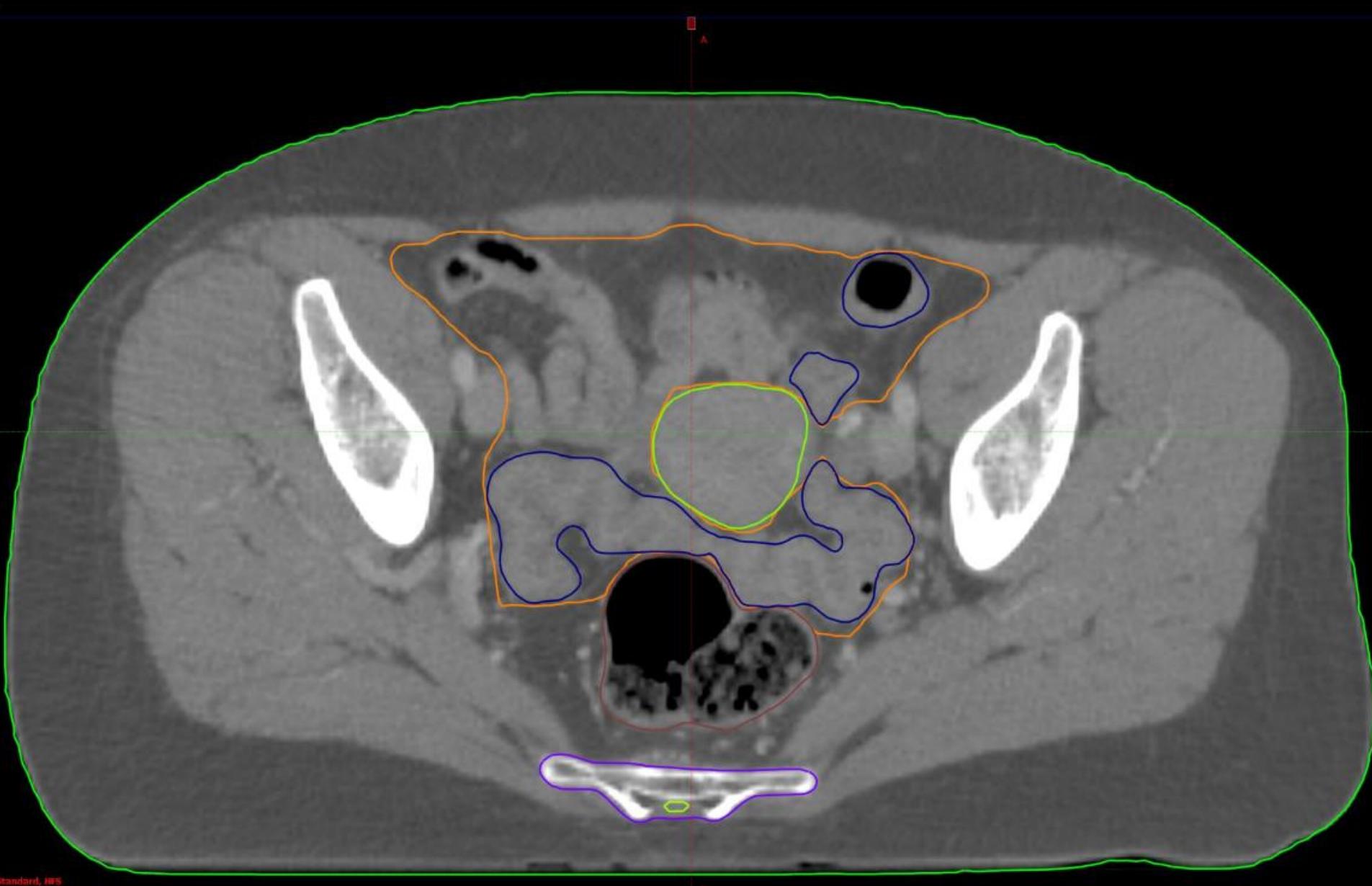
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Standard, IWS
Z: -30,40 cm

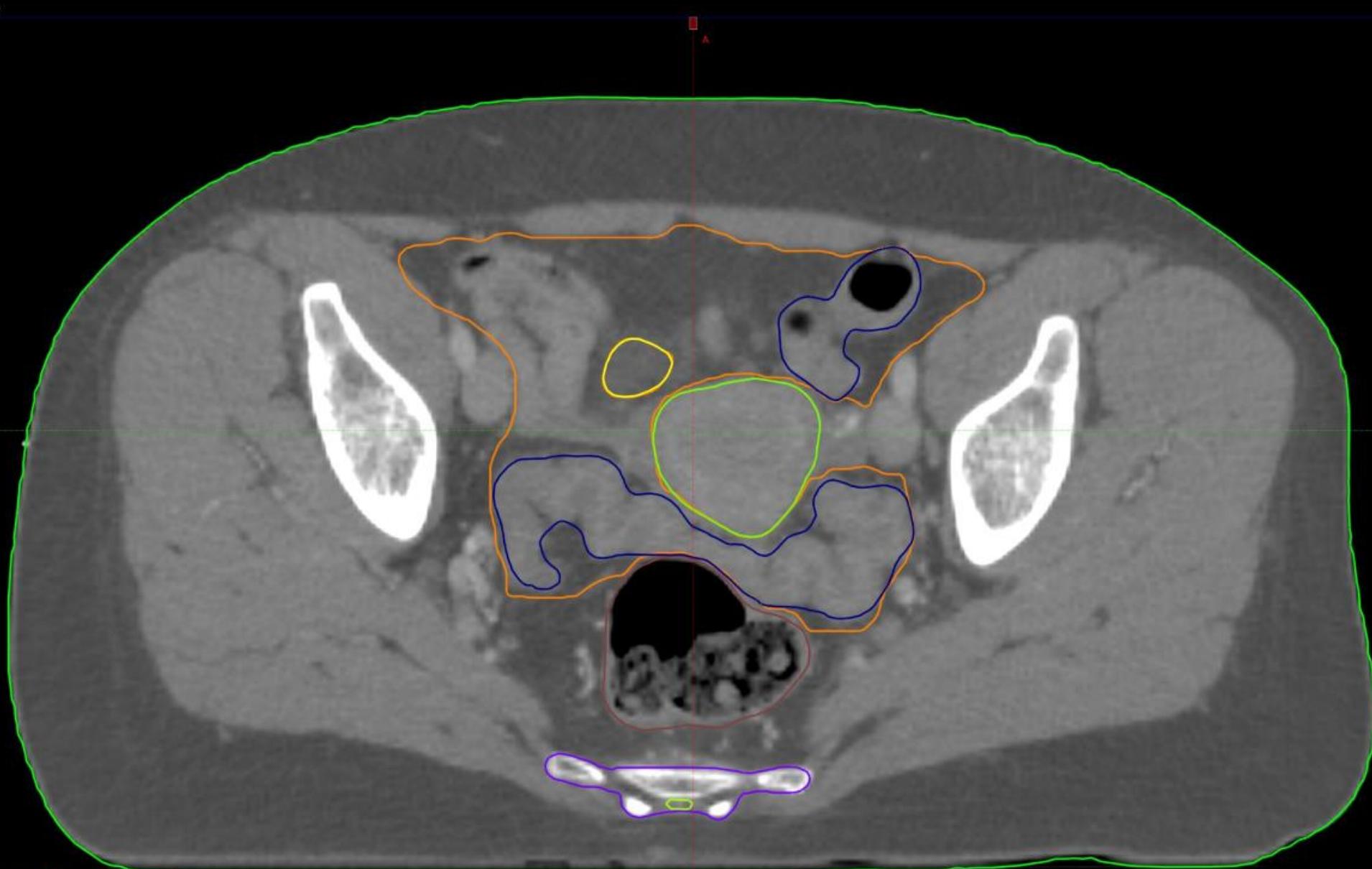
- AnalCanal
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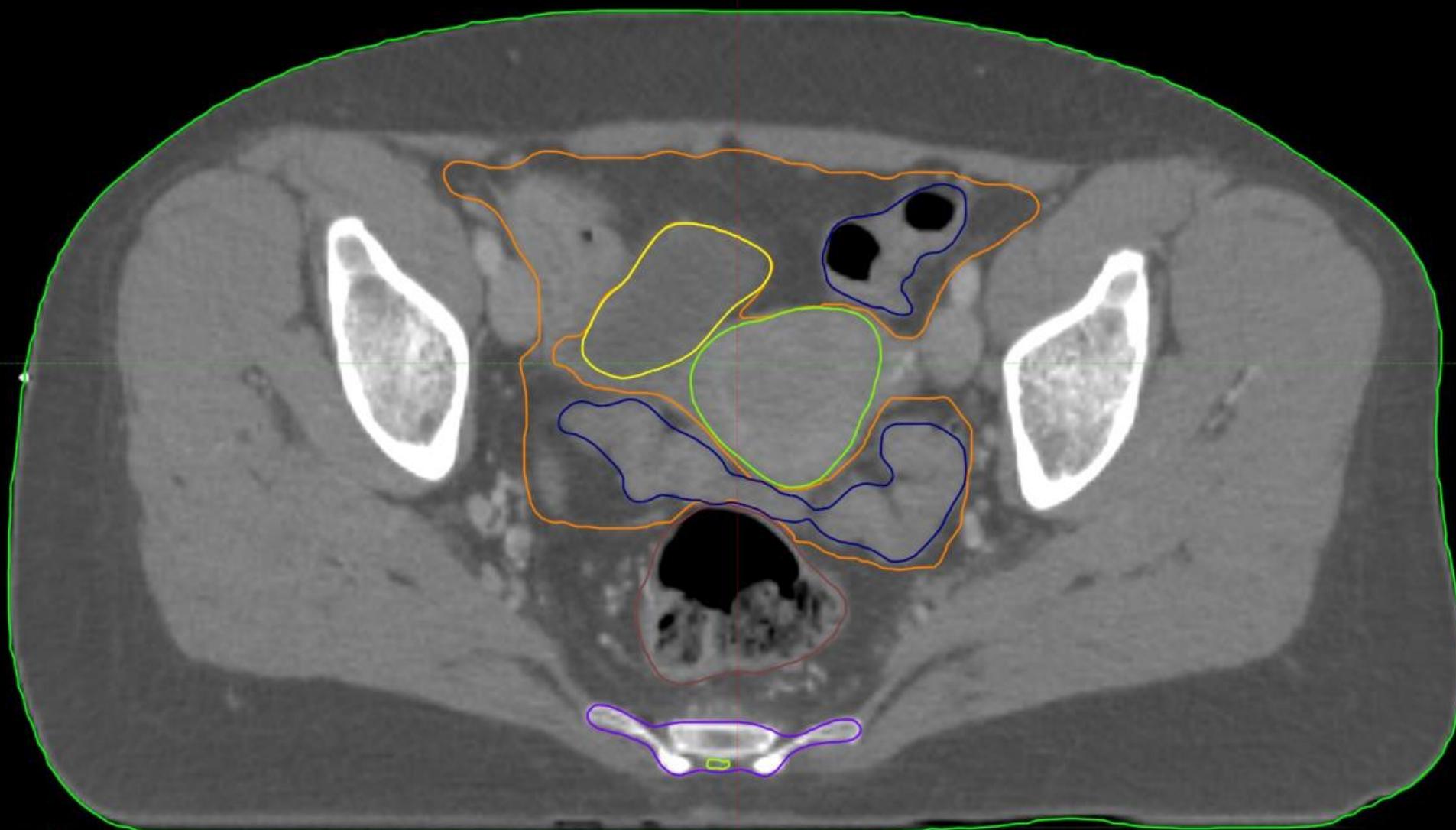


Standard, iWFS
Z: -31,20 cm



- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
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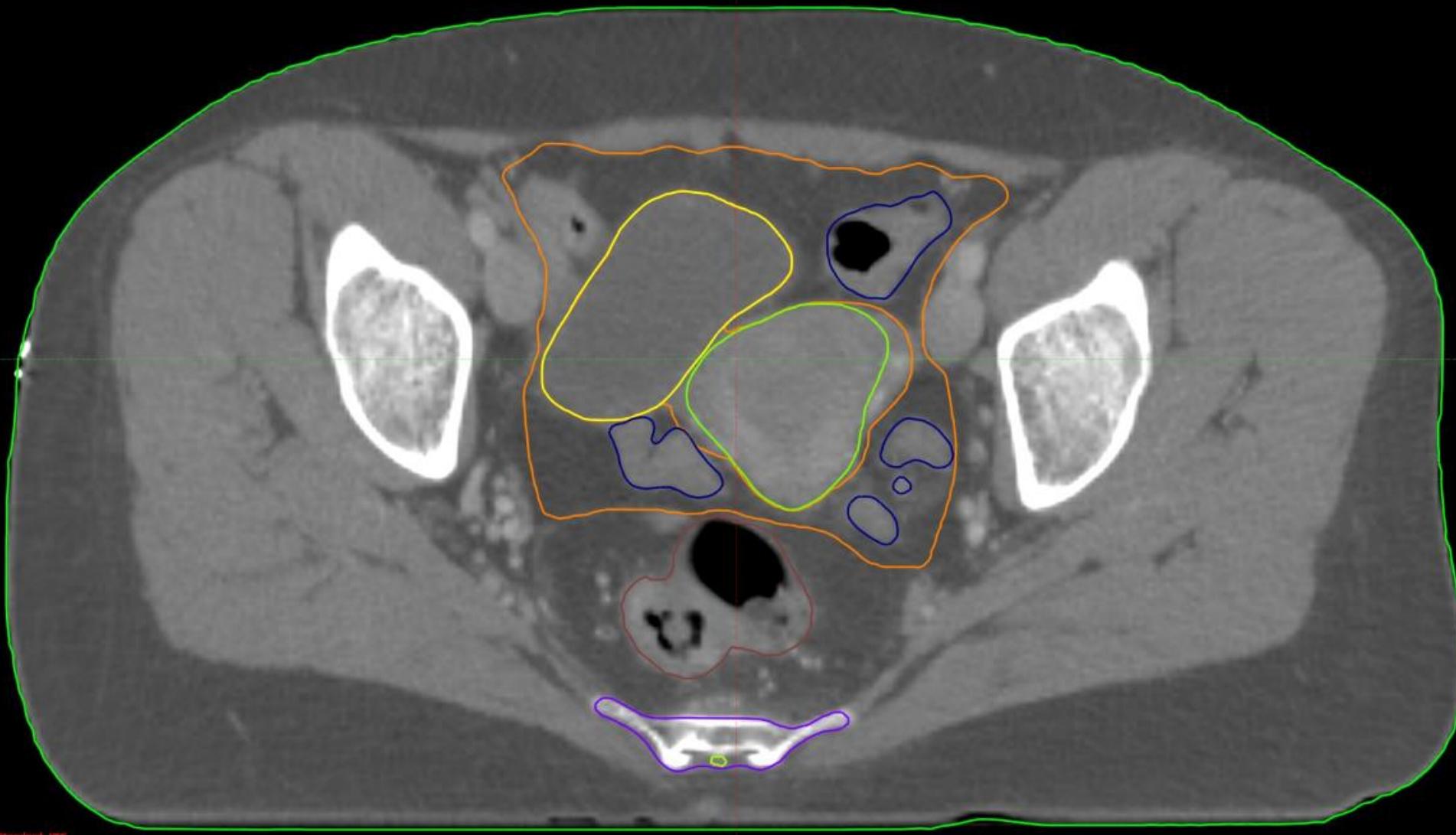


Standard, iWFS
Z: -31.60 cm



- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
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- SacroiliacJoint
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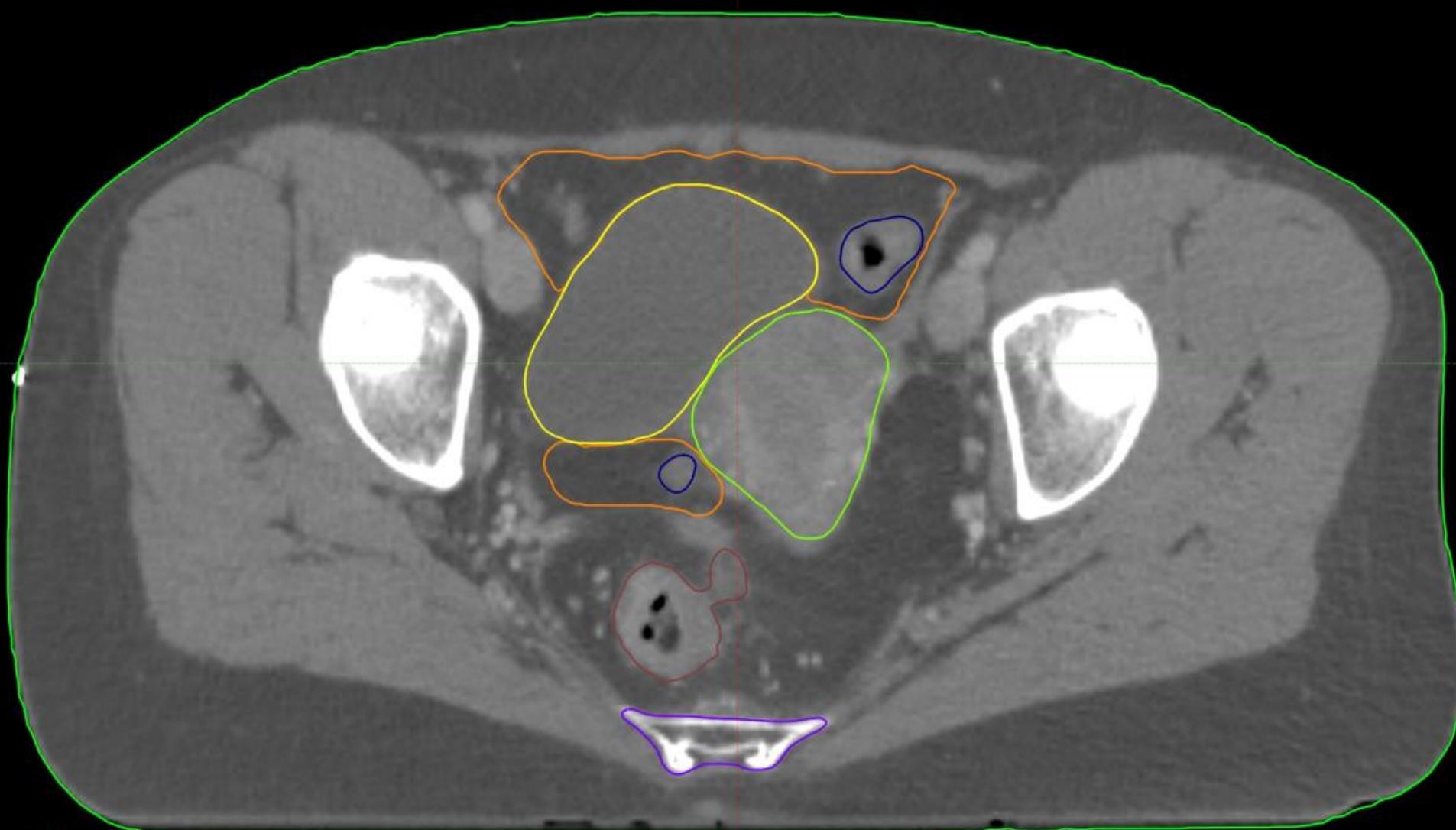


Standard, iWPS
Z: -32.00 cm



- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
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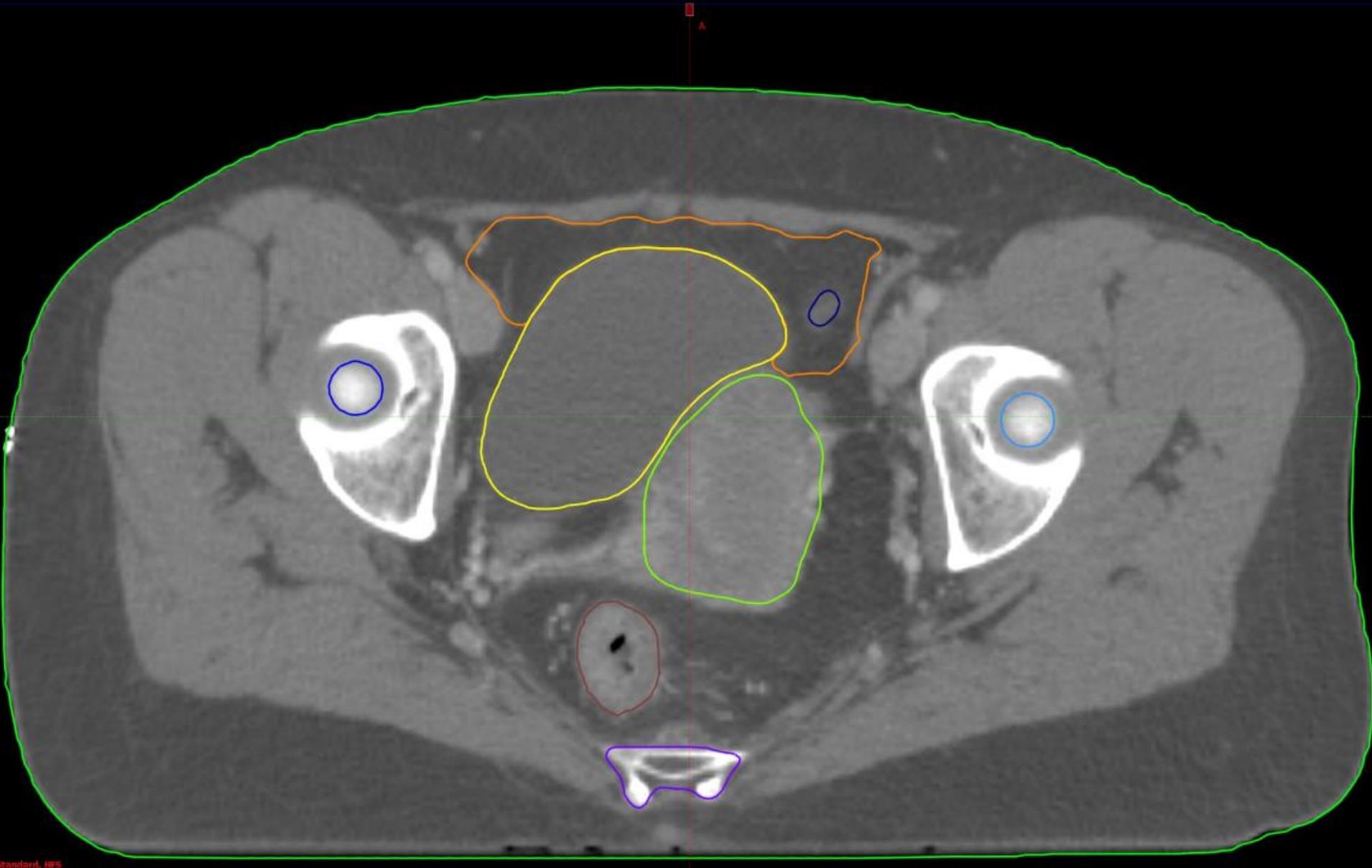


Standard, IWS
Z: -32,40 cm



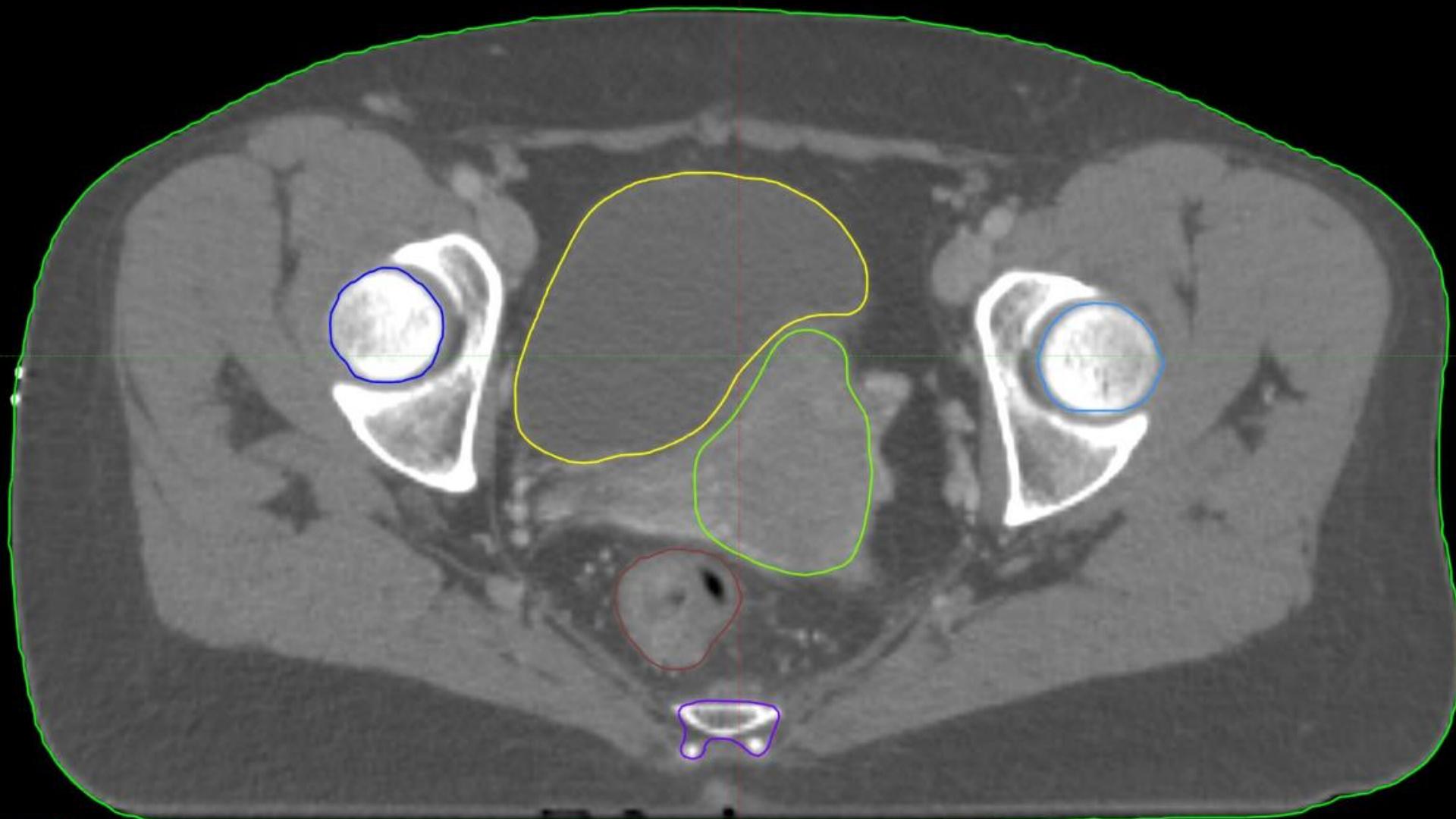
- AnalCanal
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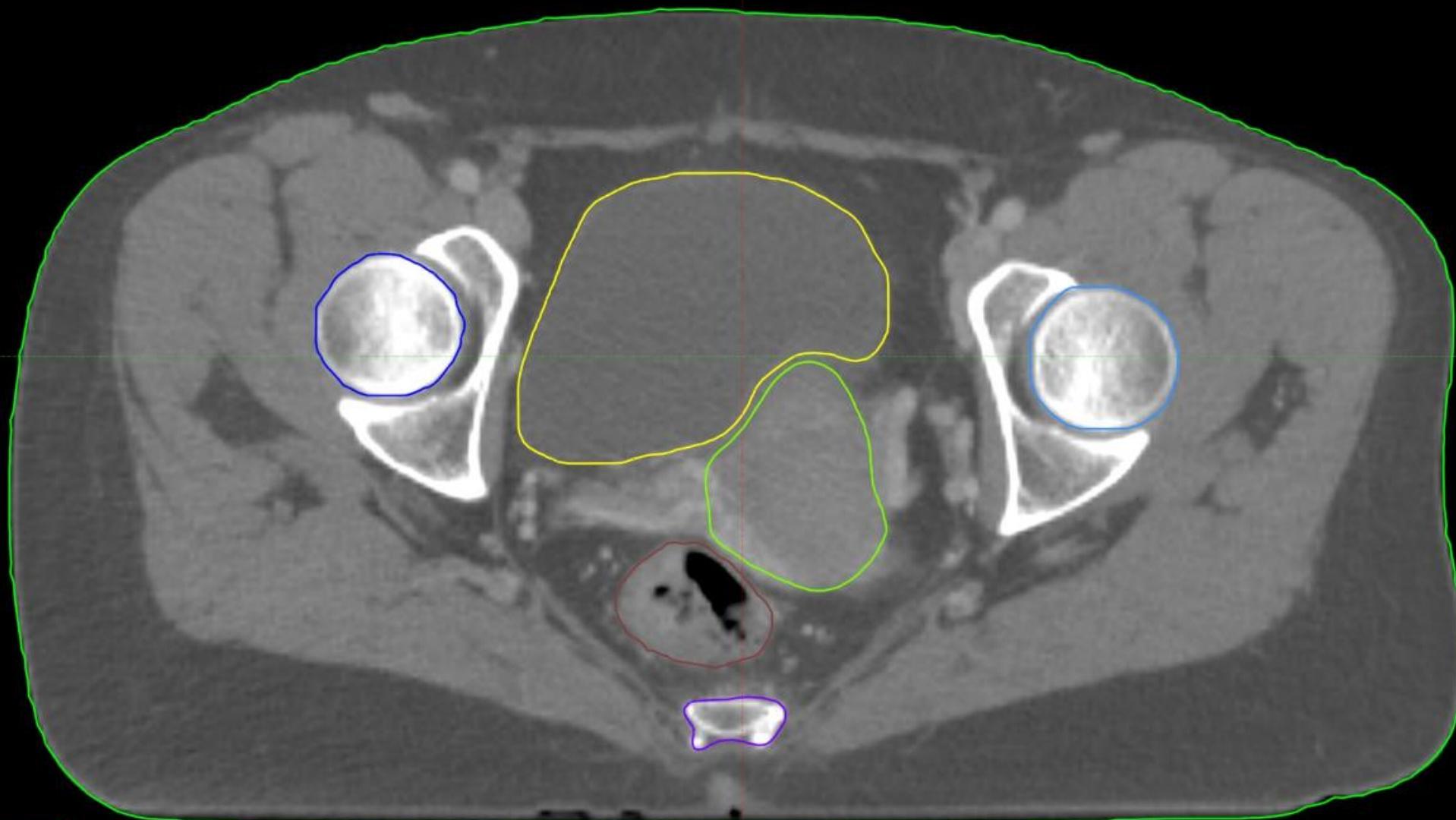
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Standard, iWPS
Z: -33.20 cm

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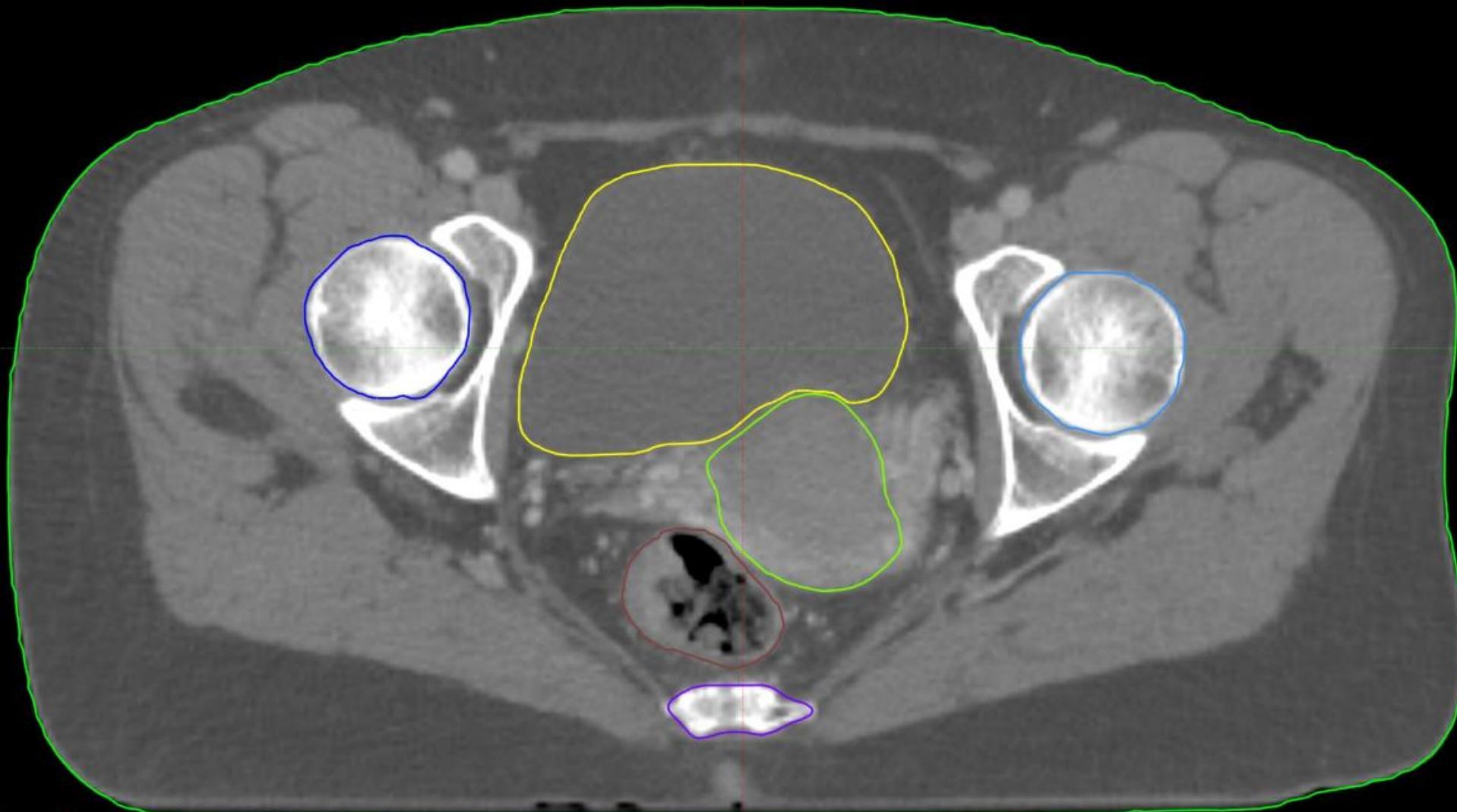
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Standard, iWFS
Z: -33.60 cm

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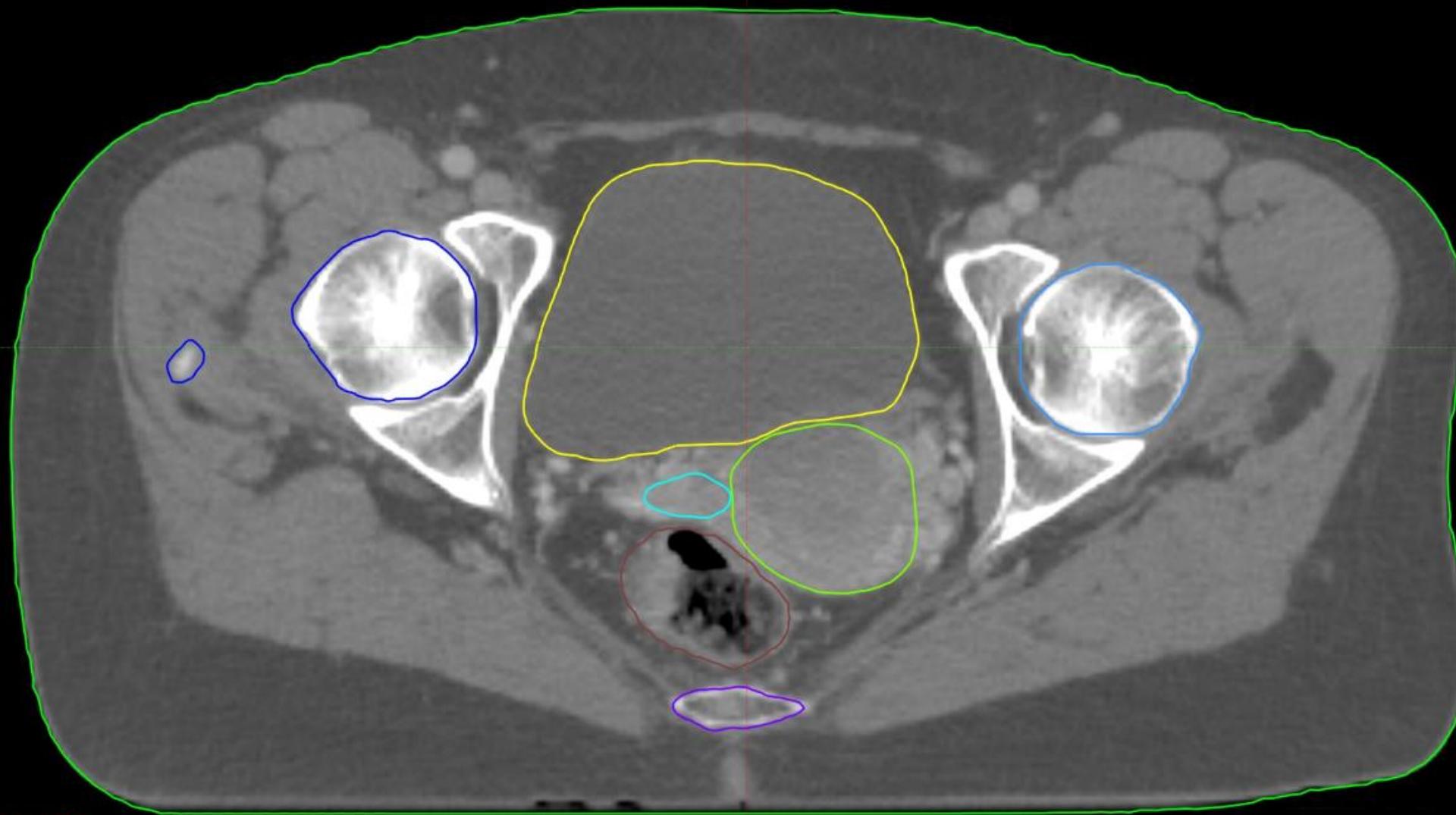


Standard, iWFS
Z: -34,00 cm



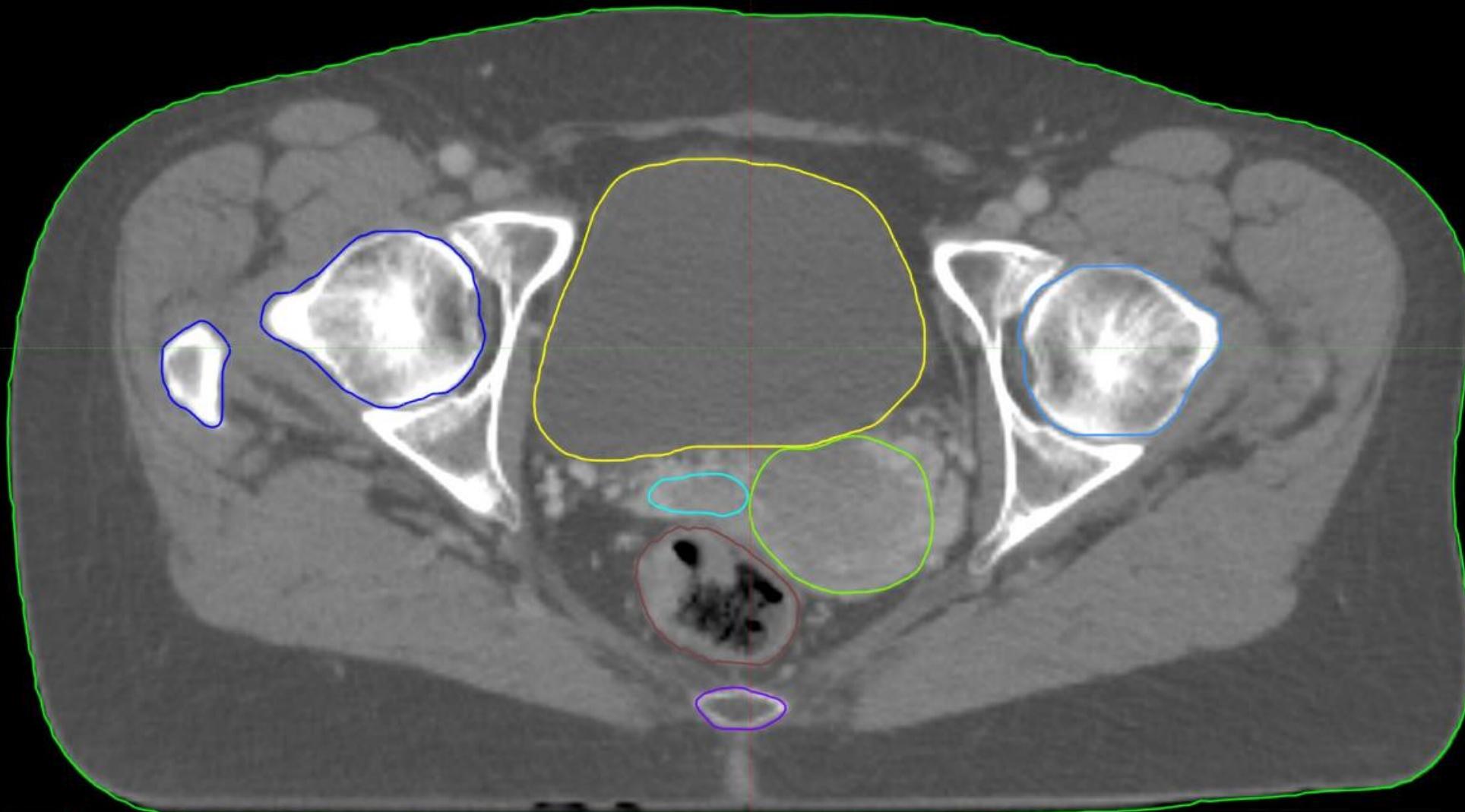
- AnalCanal
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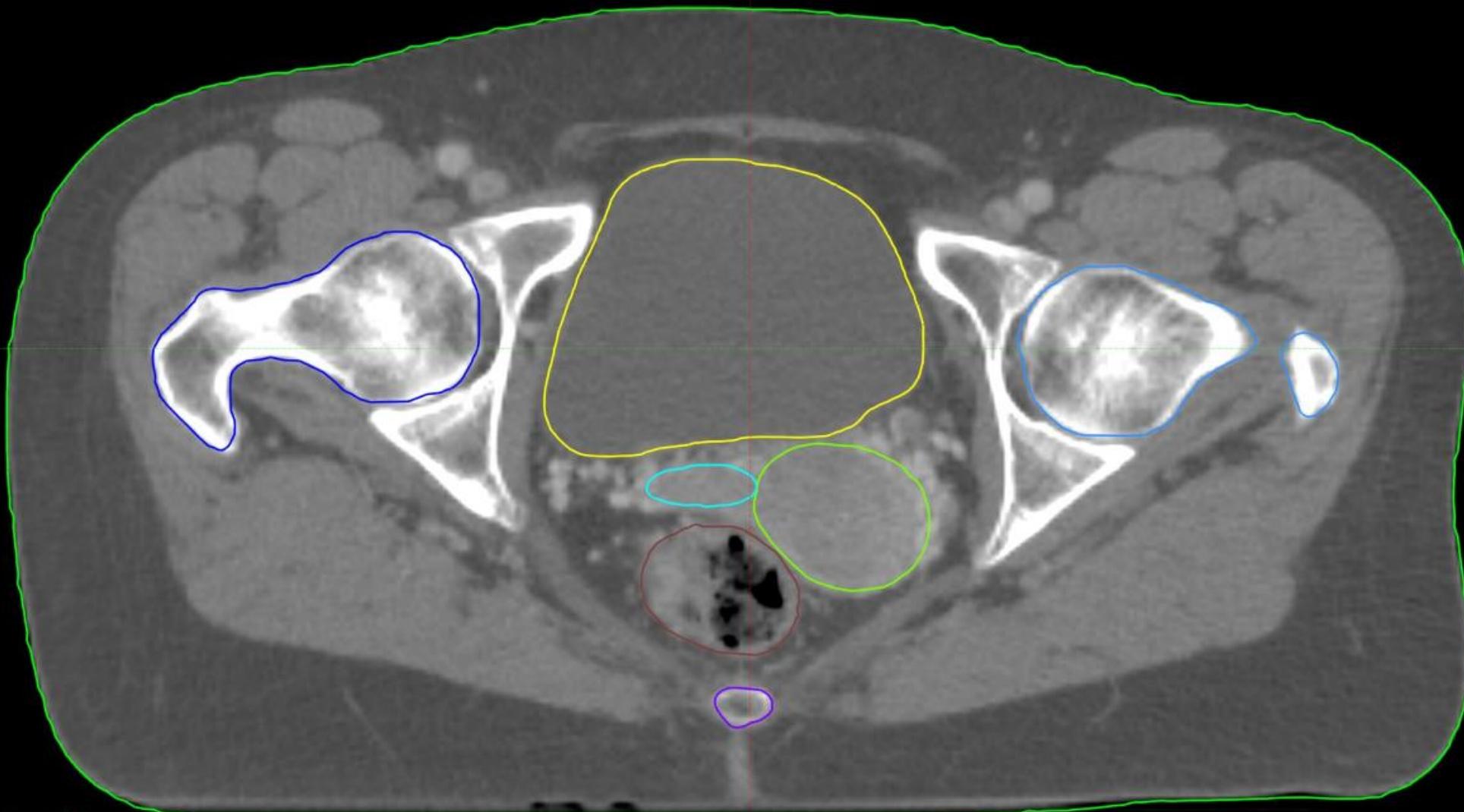


Standard, iWPS
Z: -34,00 cm



- AnalCanal
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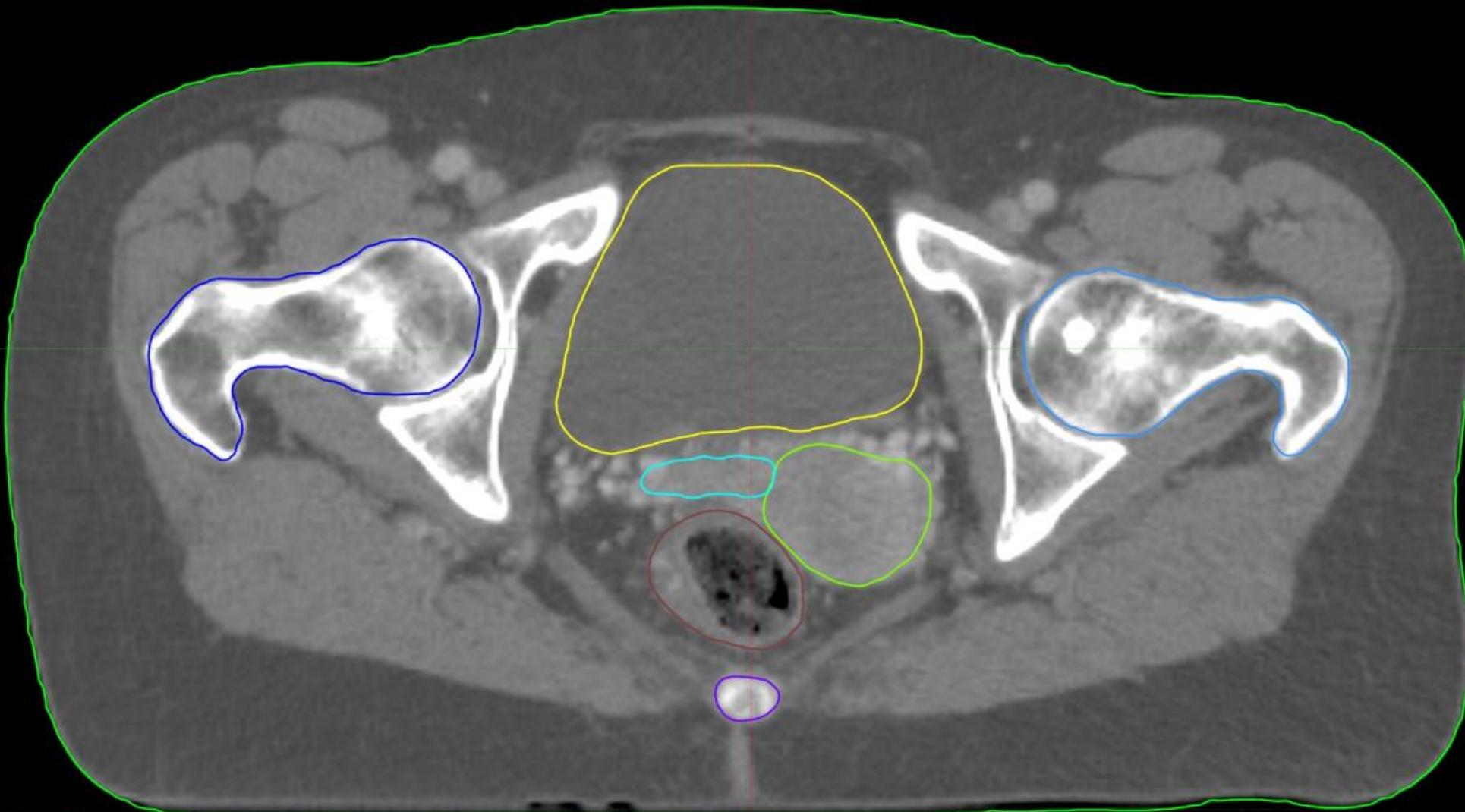
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Standard, iWFS
Z: -35,20 cm

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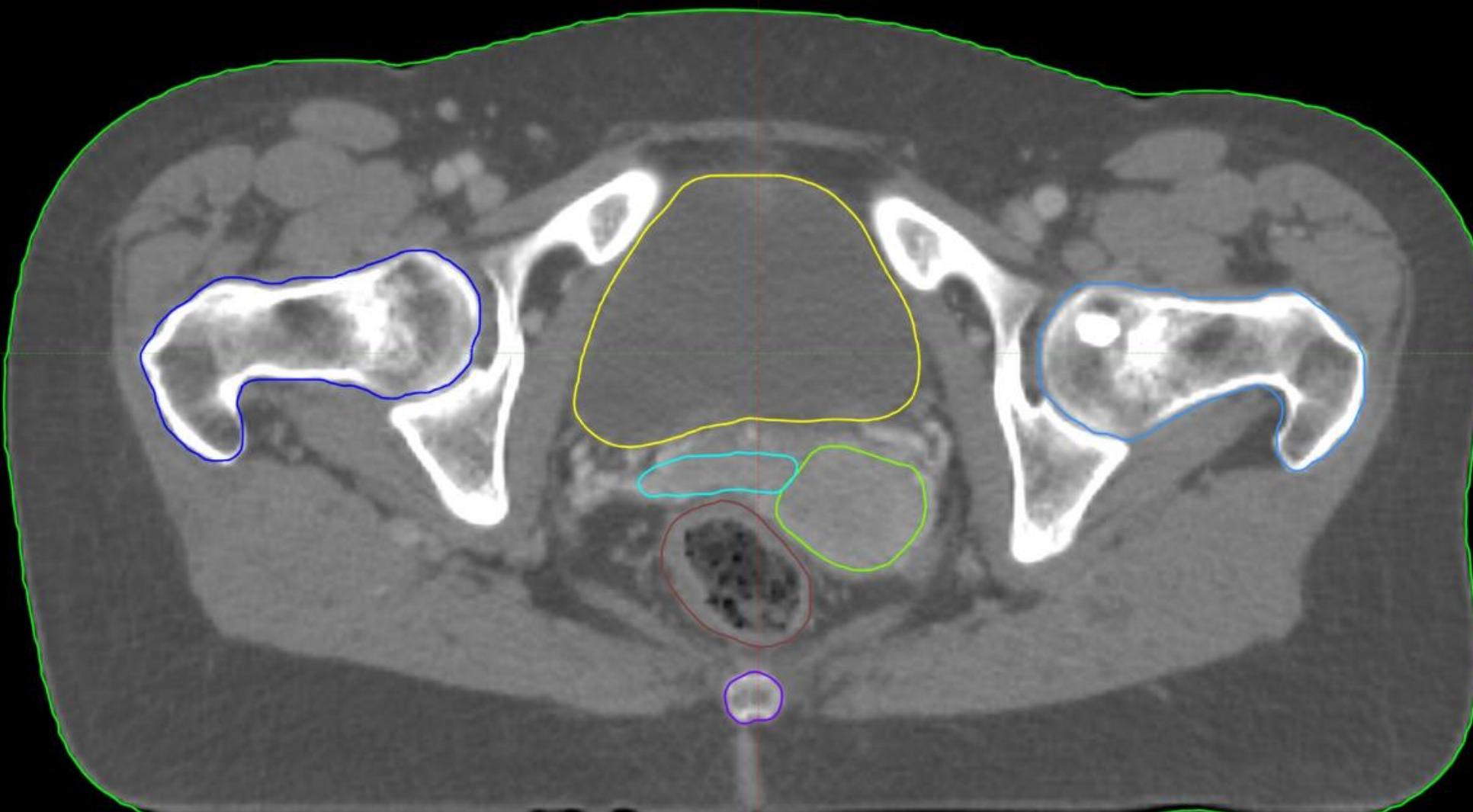
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Standard, IWS
Z: -35,60 cm

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- Bladder
- BowelBag
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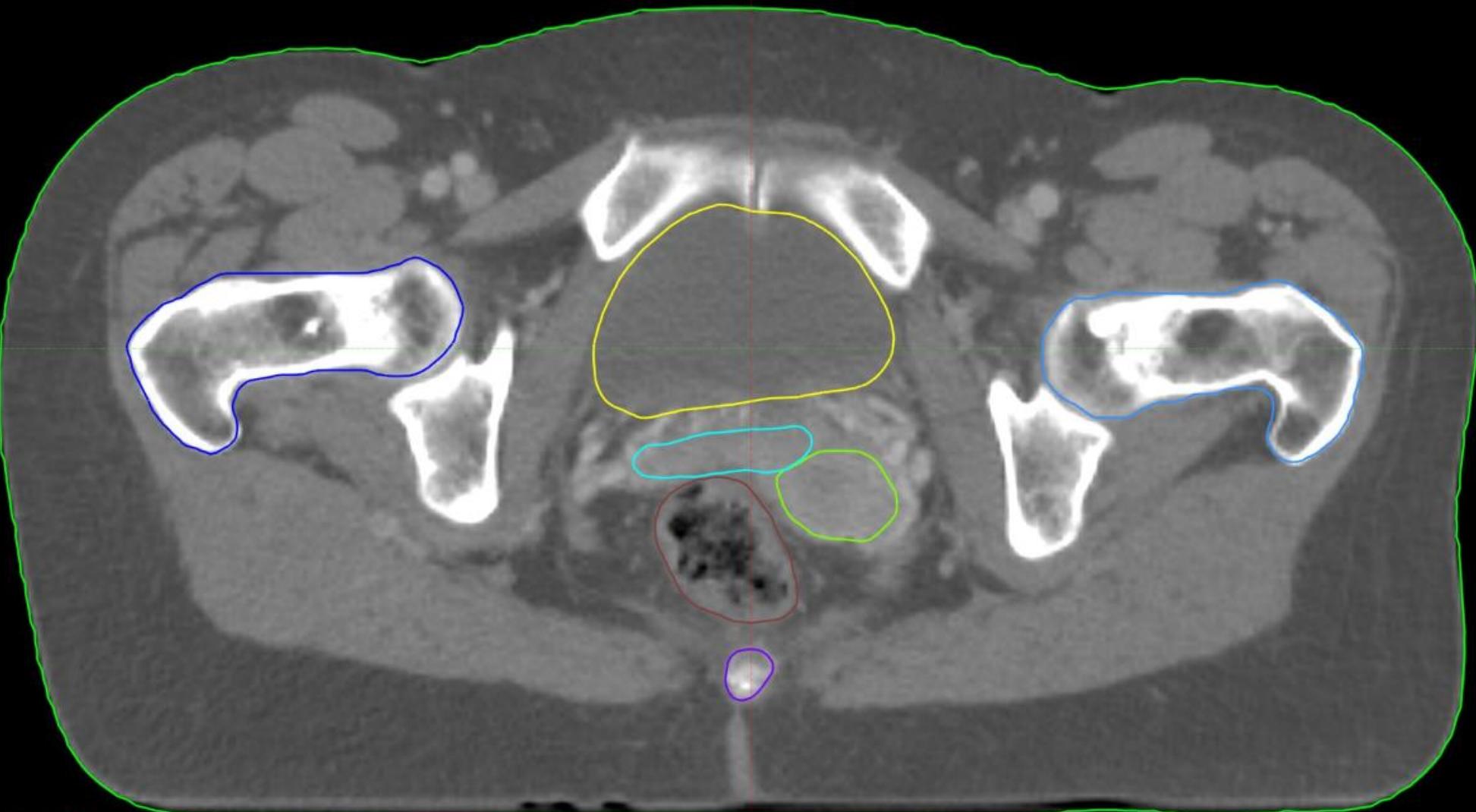
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Standard, iWFS
Z: -36,00 cm

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- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
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- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
- Urethra
- Uterus
- Vagina
- Vulva

10:30

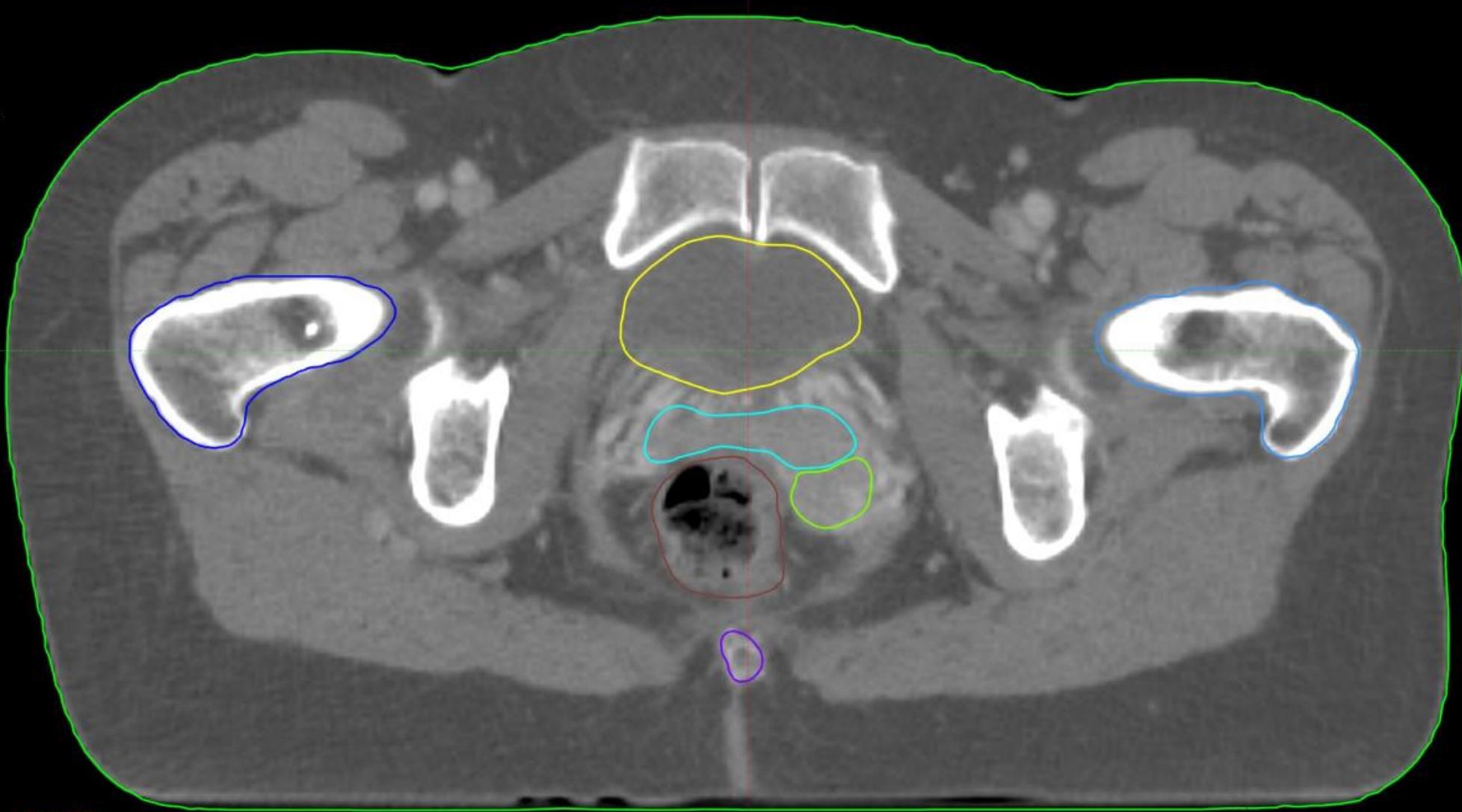


Standard, iWFS
Z: -38.40 cm



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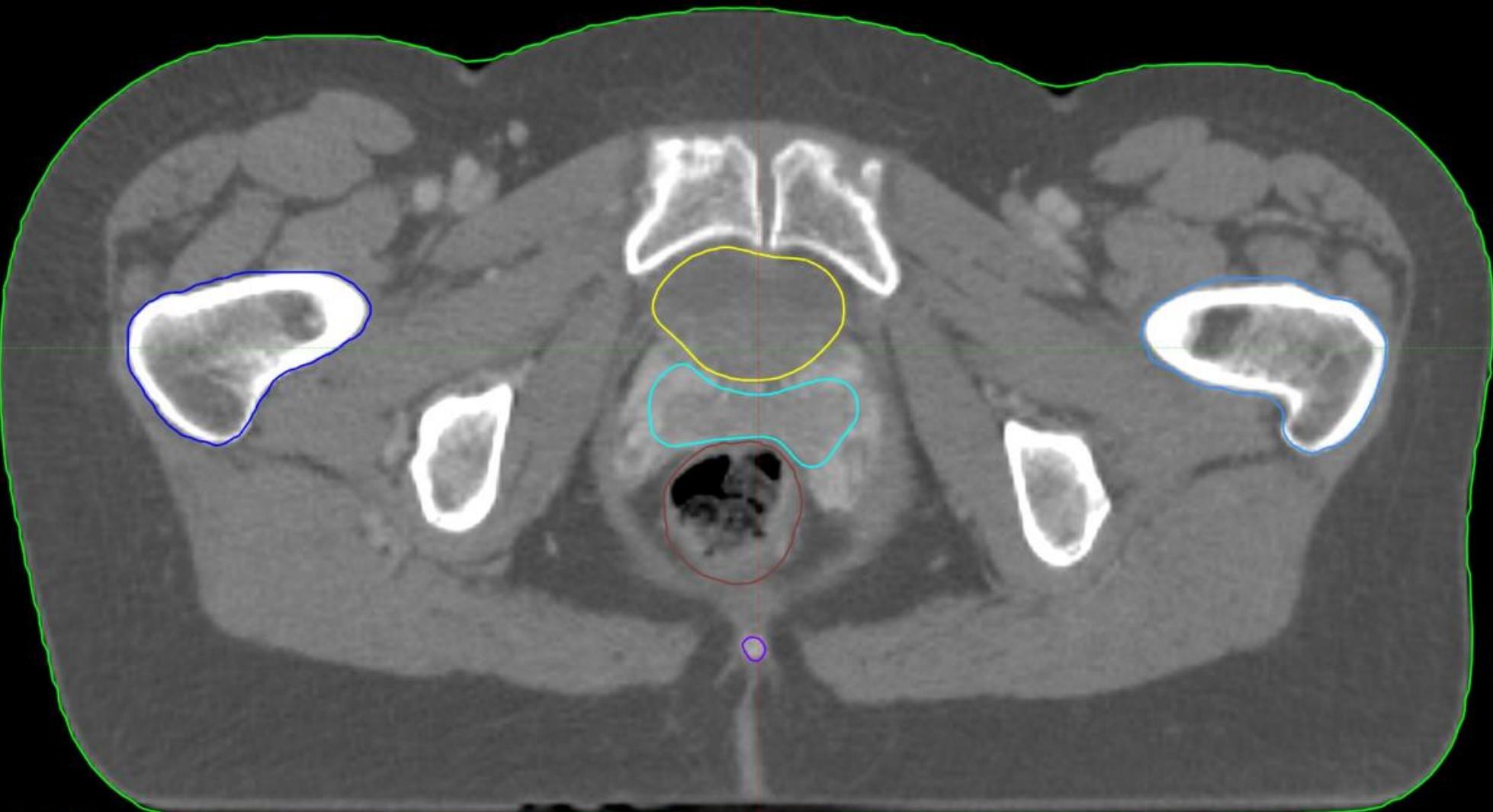
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Standard, iWFS
Z: -30,00 cm

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- BODY
- Bladder
- BowelBag
- CaudaEquina
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- Vulva

10:30

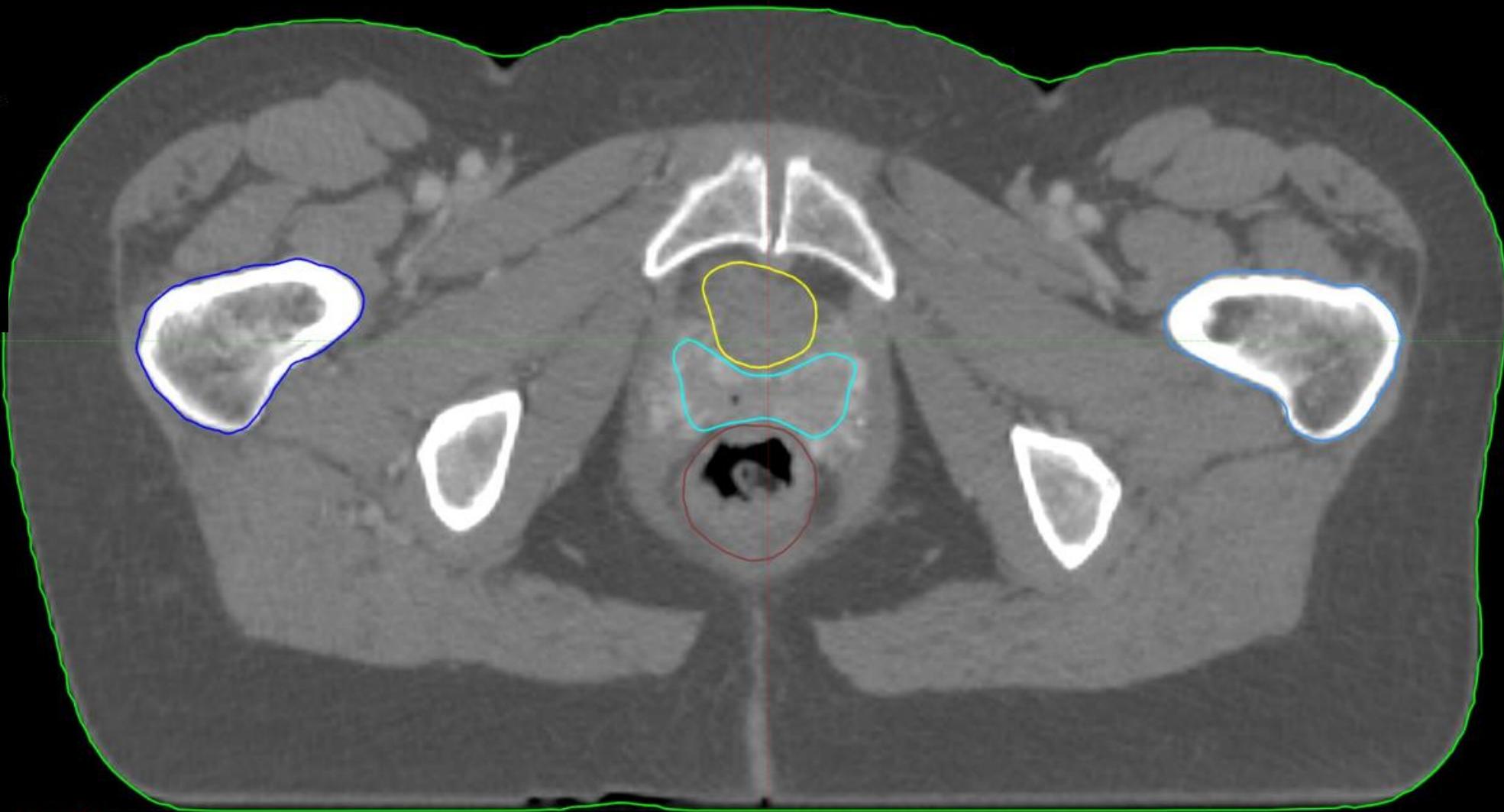


Standard, iWFS
Z: -37.20 cm



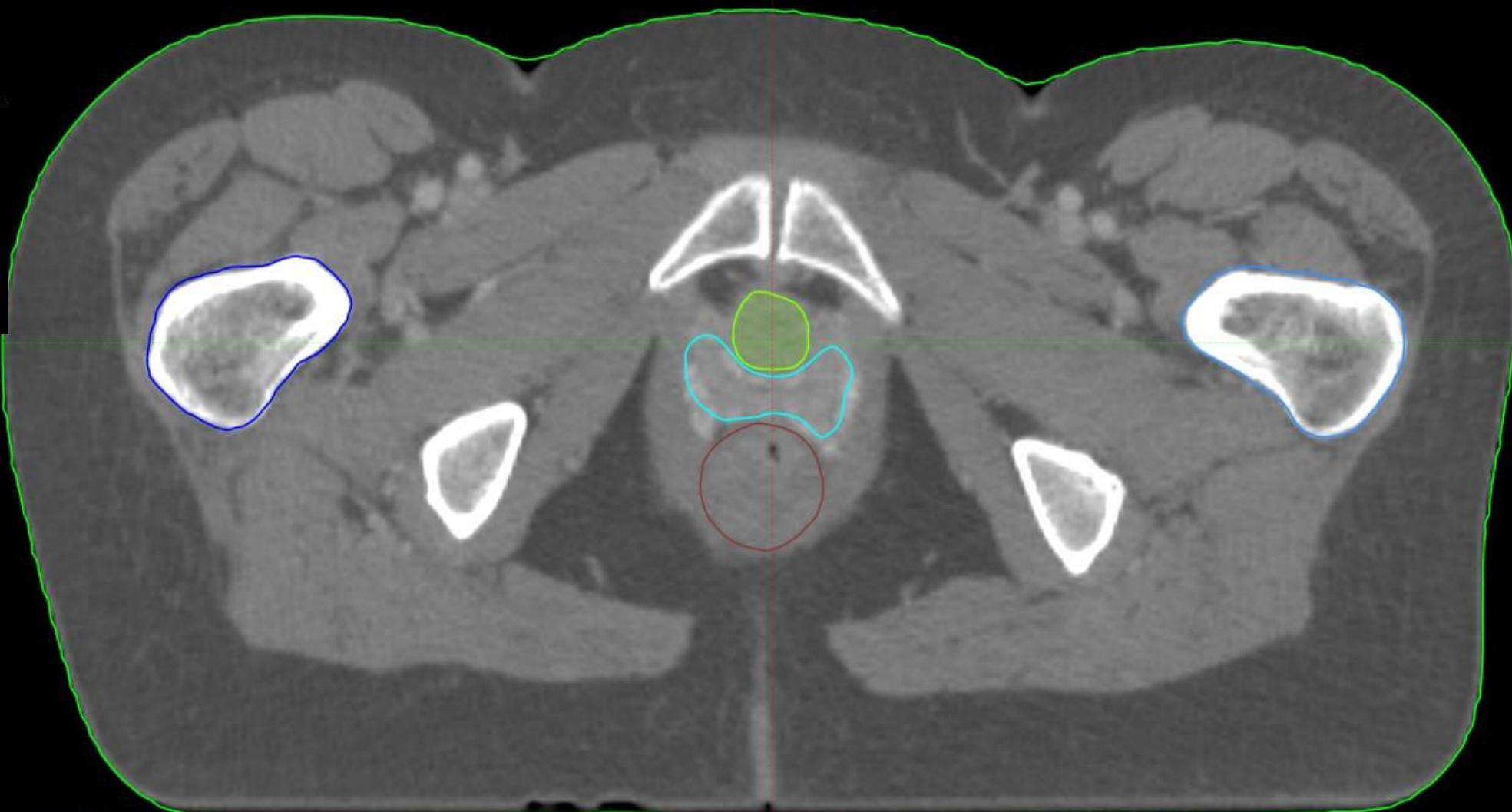
- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
- Urethra
- Uterus
- Vagina
- Vulva

10:30



- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
- Urethra
- Uterus
- Vagina
- Vulva

10:30

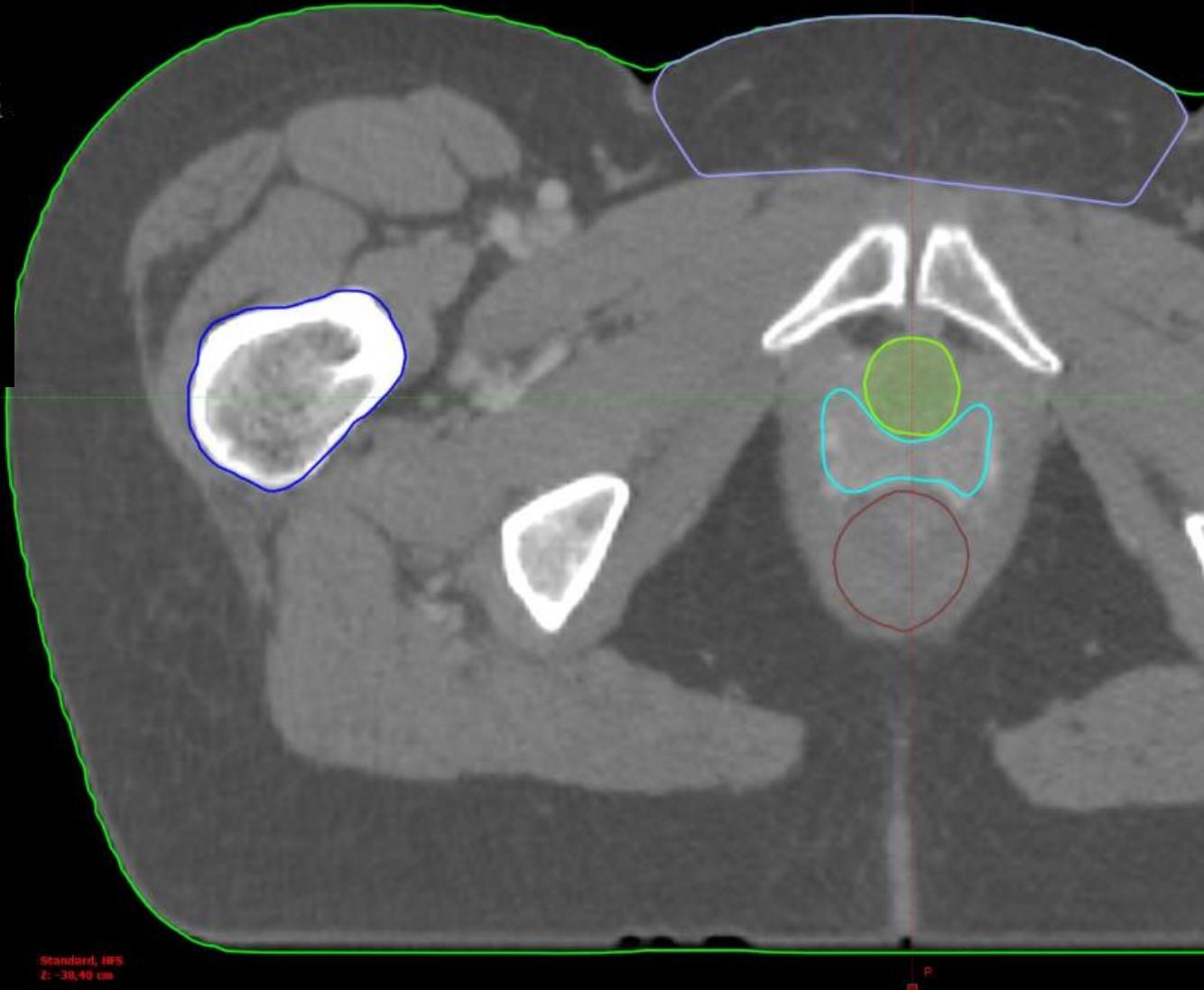


Standard, iWFS
Z: -38,00 cm



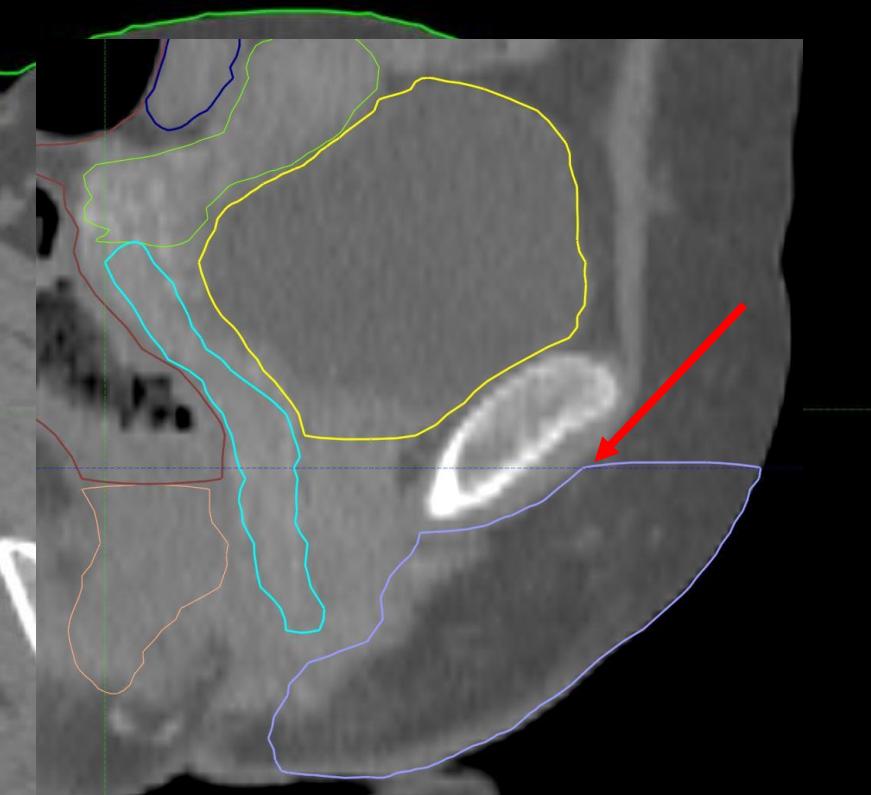
- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
- Urethra
- Uterus
- Vagina
- Vulva

10:30



Tip: Vulva

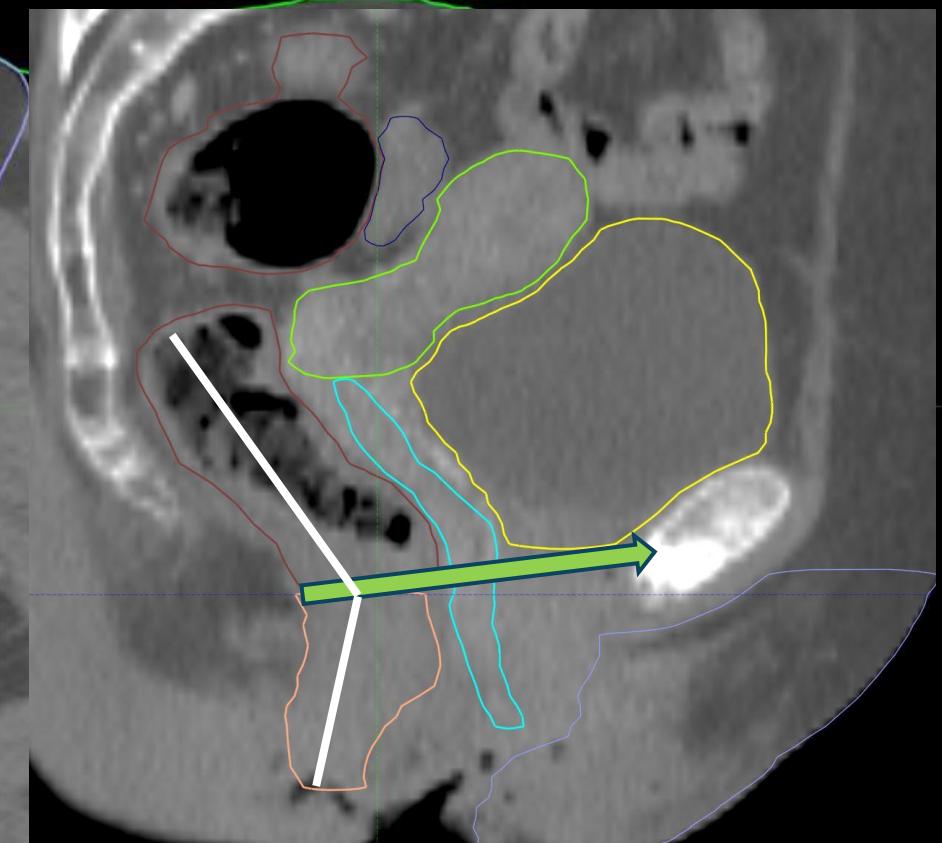
Cranial border: Red arrow



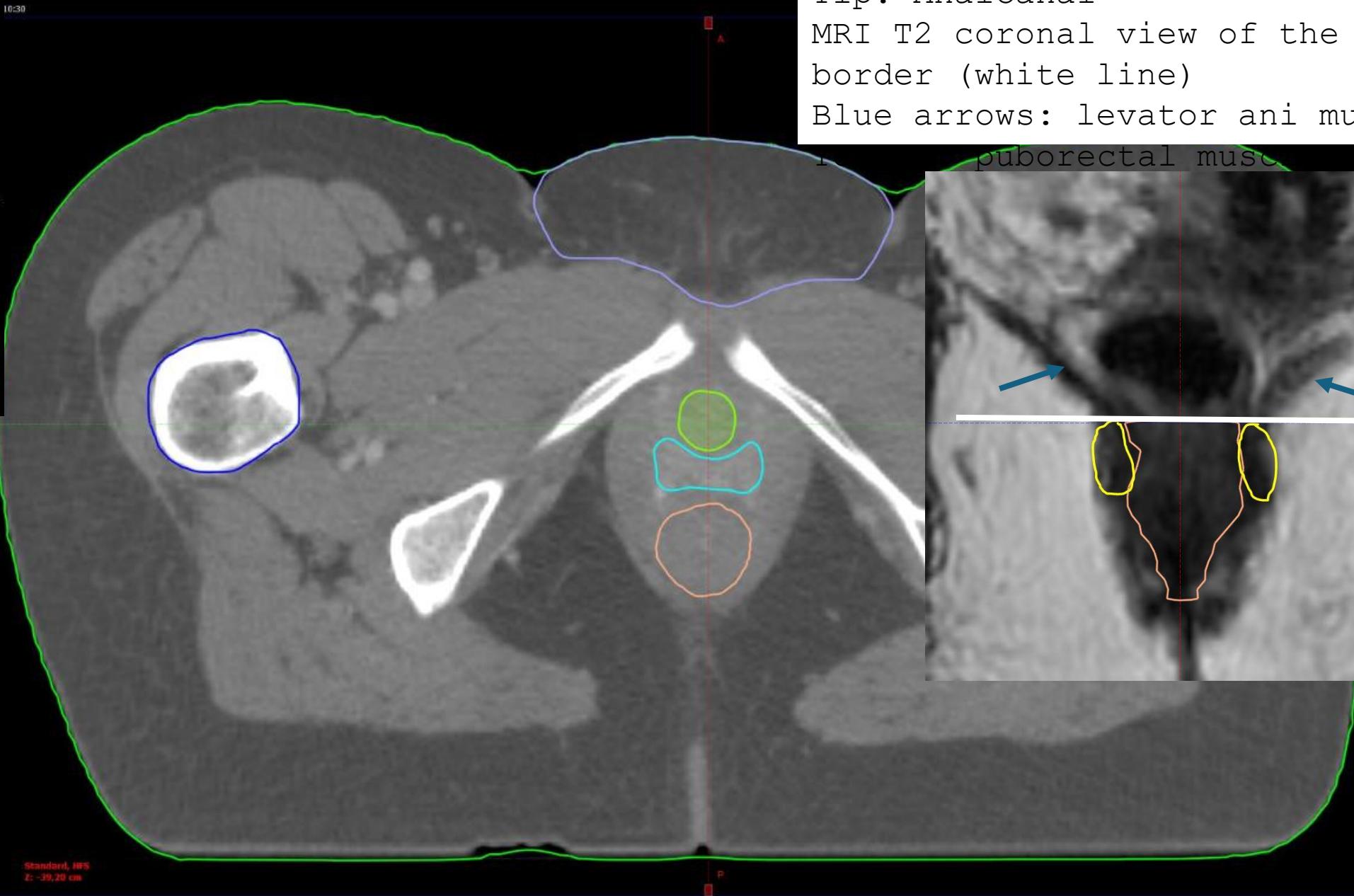


Tip: AnalCanal

Note the traction exerted by the puborectal muscle (indicated by the green arrow), which defines



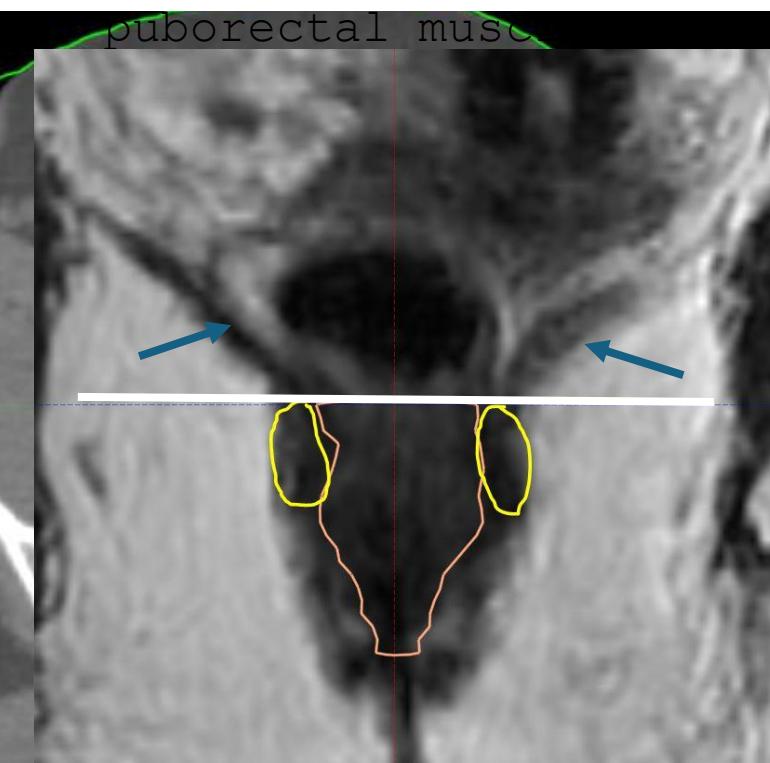
- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
- Urethra
- Uterus
- Vagina
- Vulva



Tip: Anal Canal

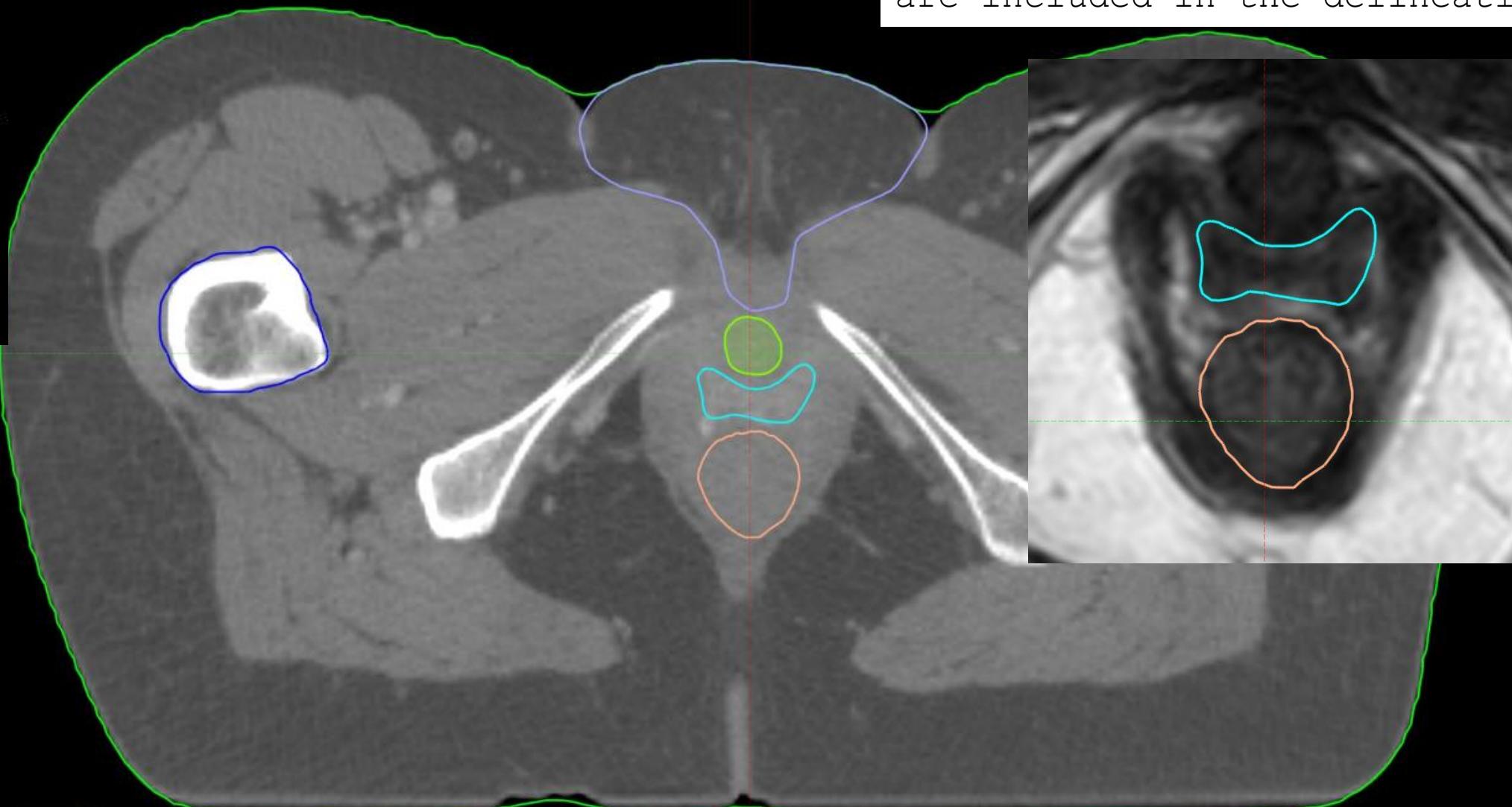
MRI T2 coronal view of the upper border (white line)

Blue arrows: levator ani muscle

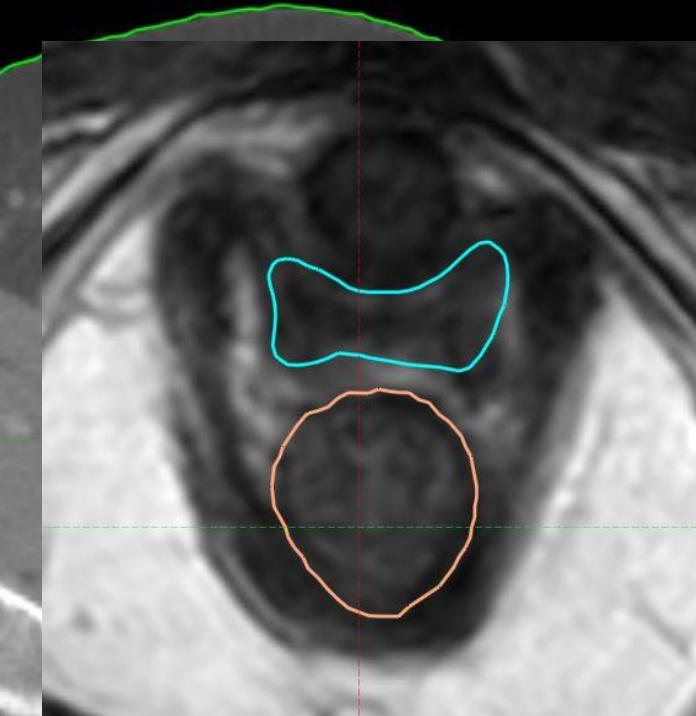


- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
- Urethra
- Uterus
- Vagina
- Vulva

10:30

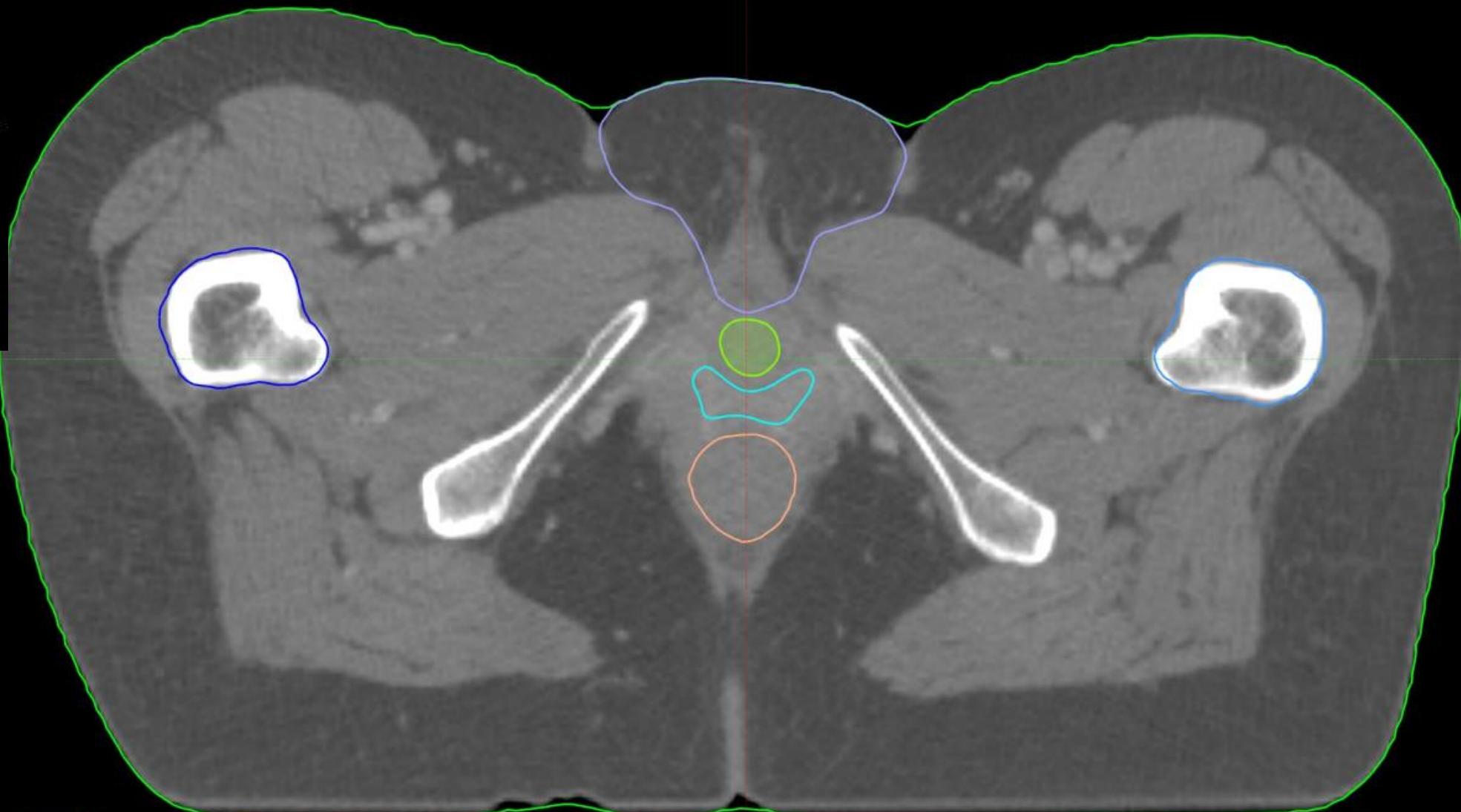


Tip: Anal Canal cranial part
Internal and external sphincter
are included in the delineation.



- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
- Urethra
- Uterus
- Vagina
- Vulva

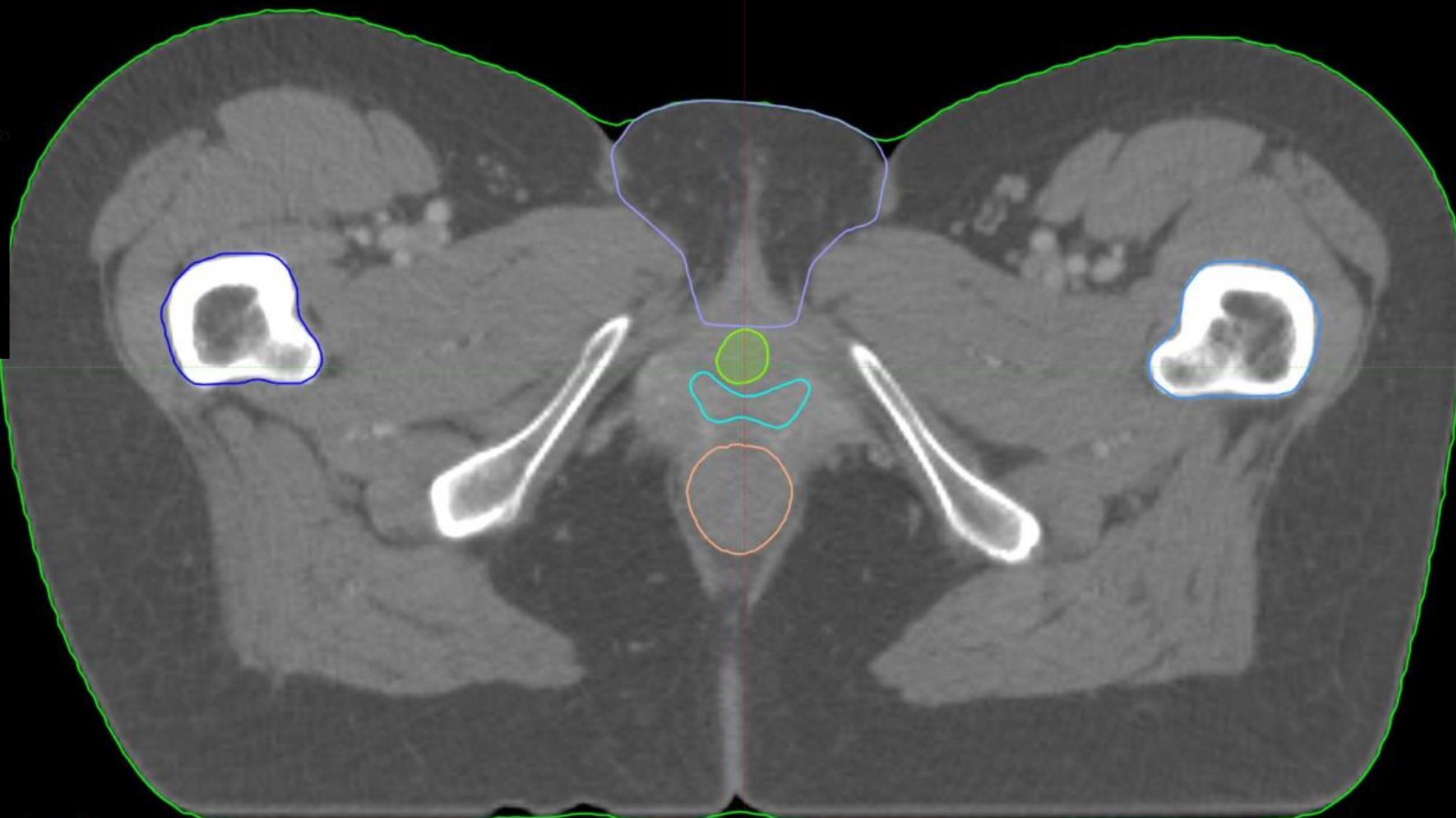
10:30



Standard, iWPS
Z: -40.00 cm

- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
- Urethra
- Uterus
- Vagina
- Vulva

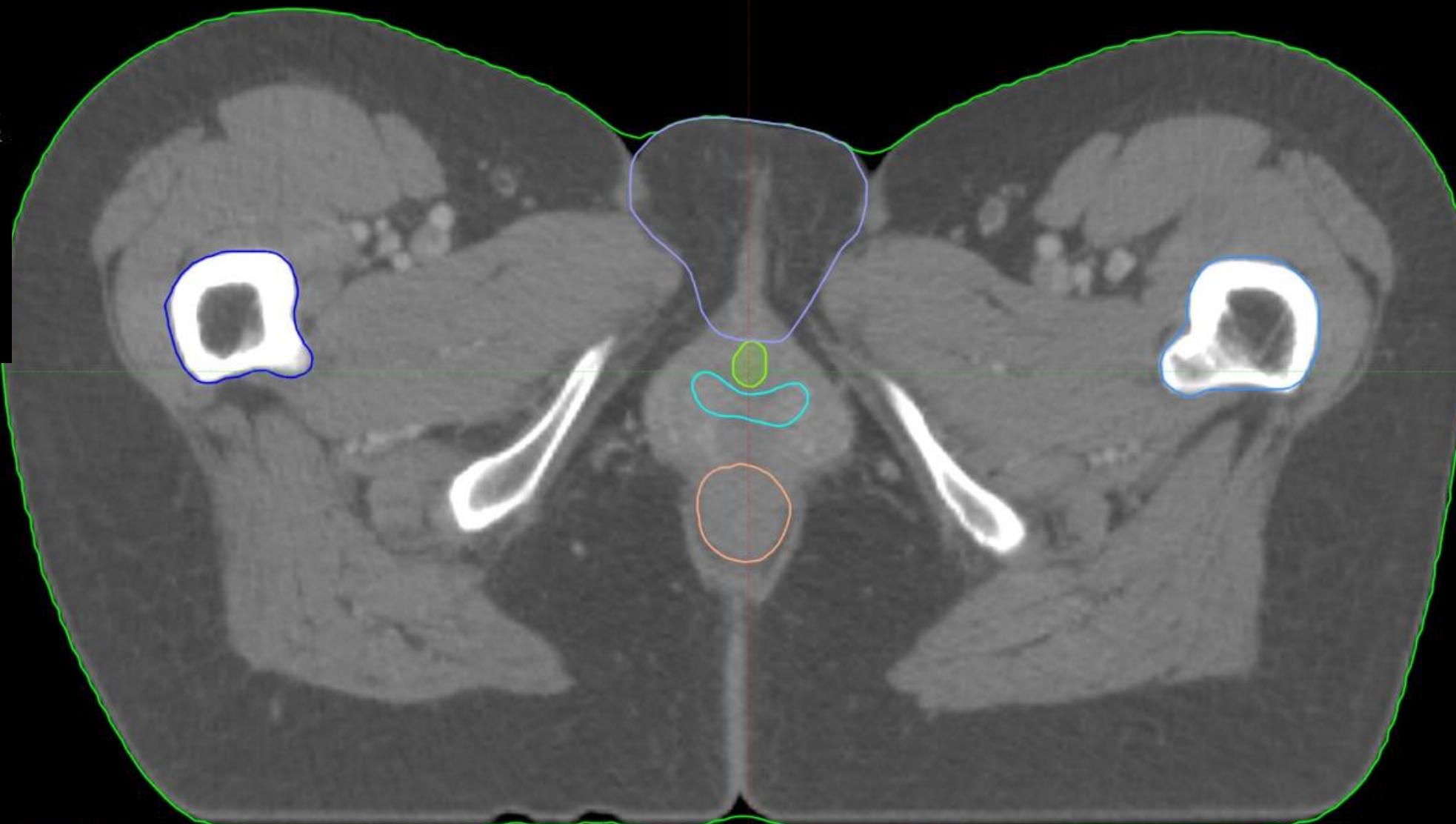
10:30



Standard, IIPS
Z: -40.40 cm

- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
- Urethra
- Uterus
- Vagina
- Vulva

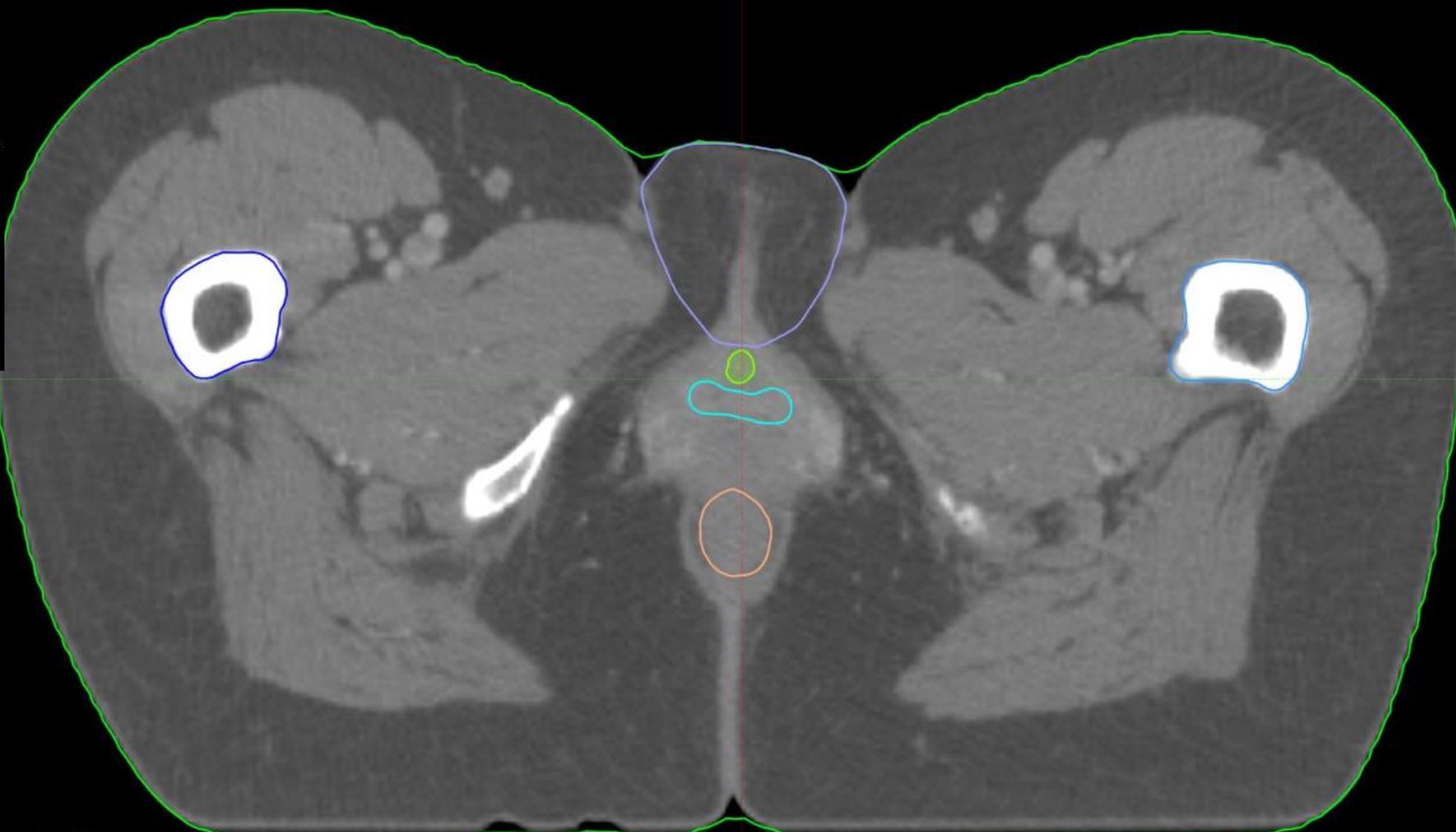
10:30



Standard, IIPS
Z: -40.00 cm

- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
- Urethra
- Uterus
- Vagina
- Vulva

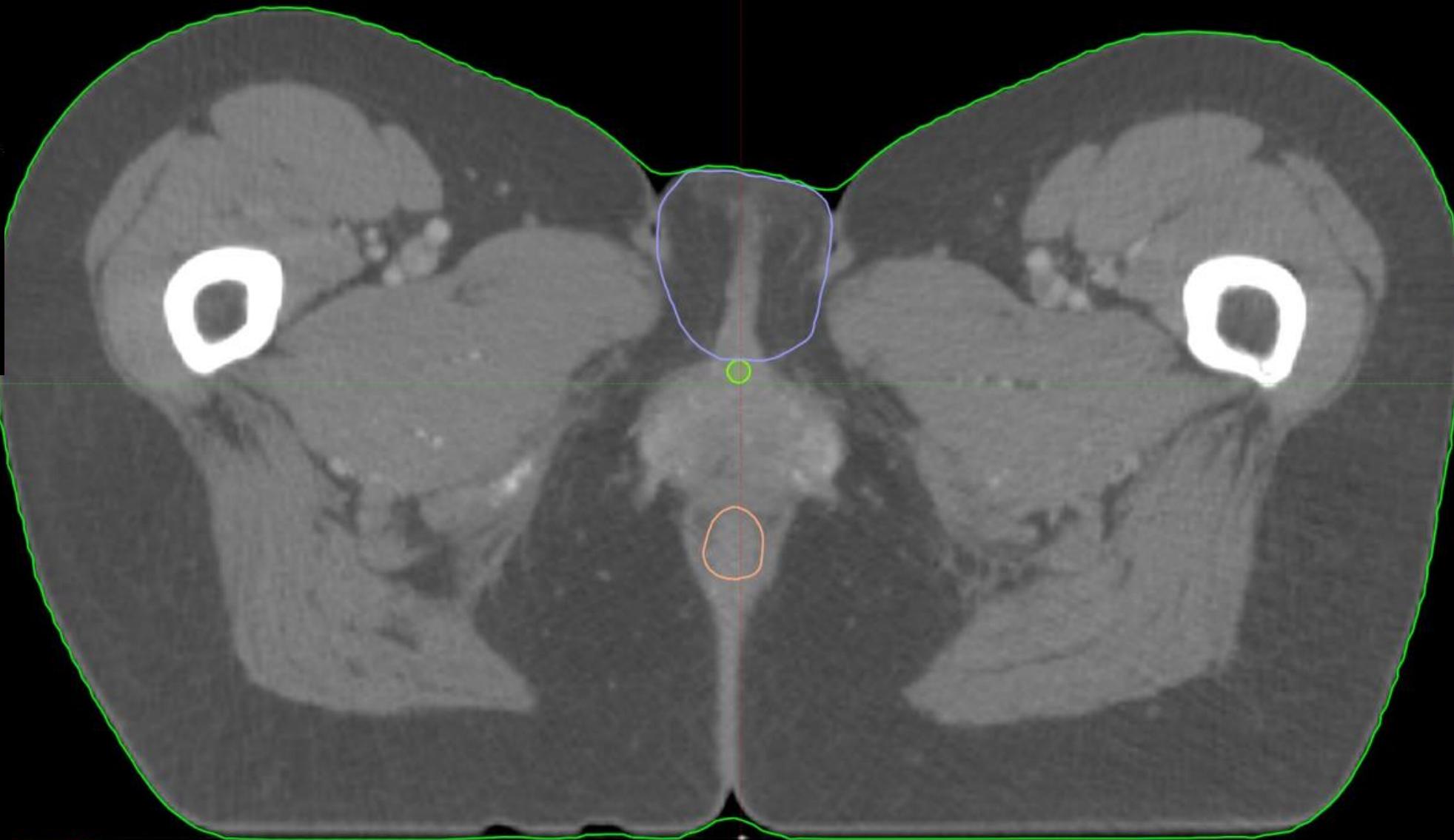
10:30



Standard, IWS
Z: -41,20 cm

- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
- Urethra
- Uterus
- Vagina
- Vulva

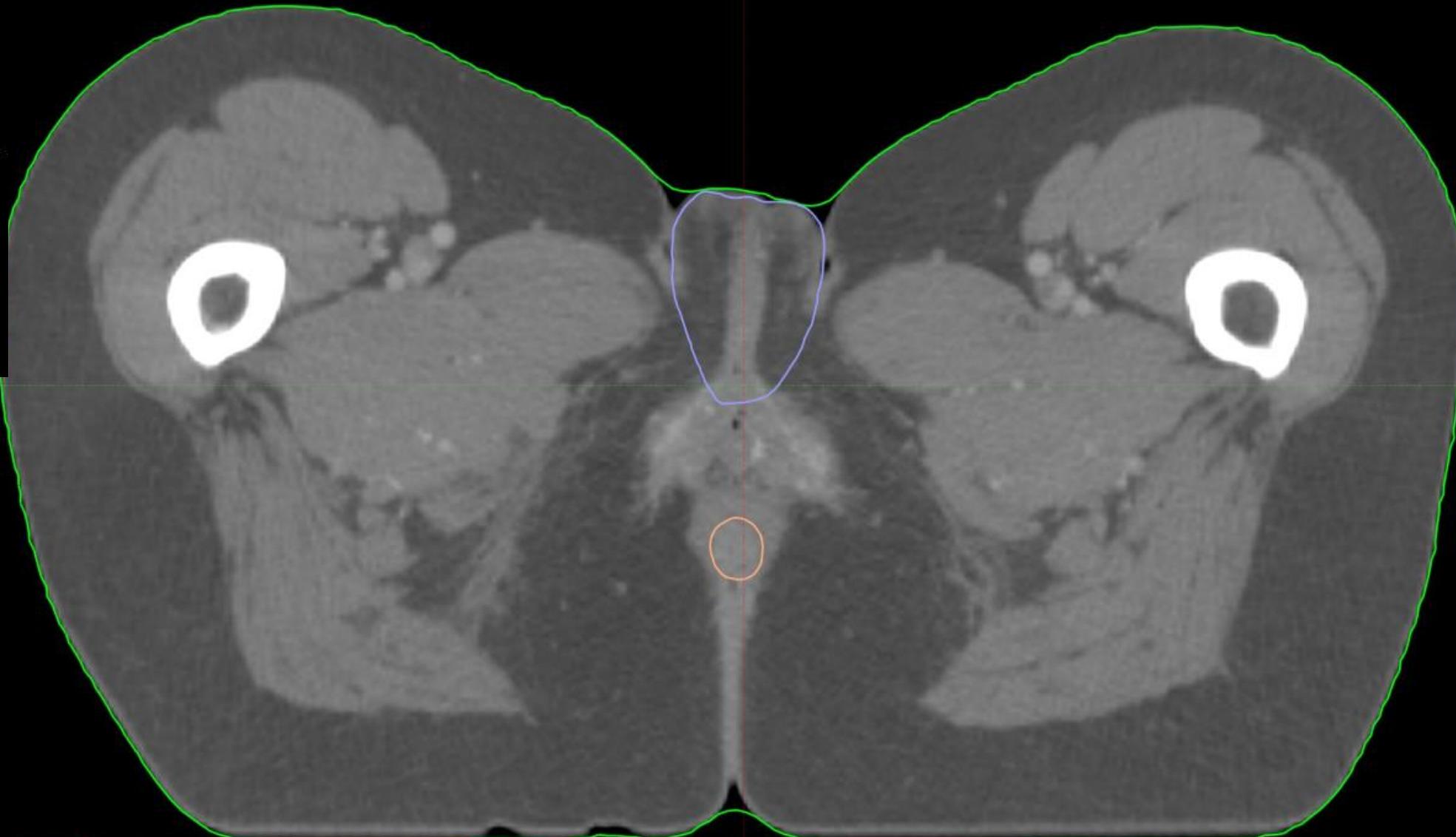
10:30



Standard, iWFS
Z: -41.00 cm

- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
- Urethra
- Uterus
- Vagina
- Vulva

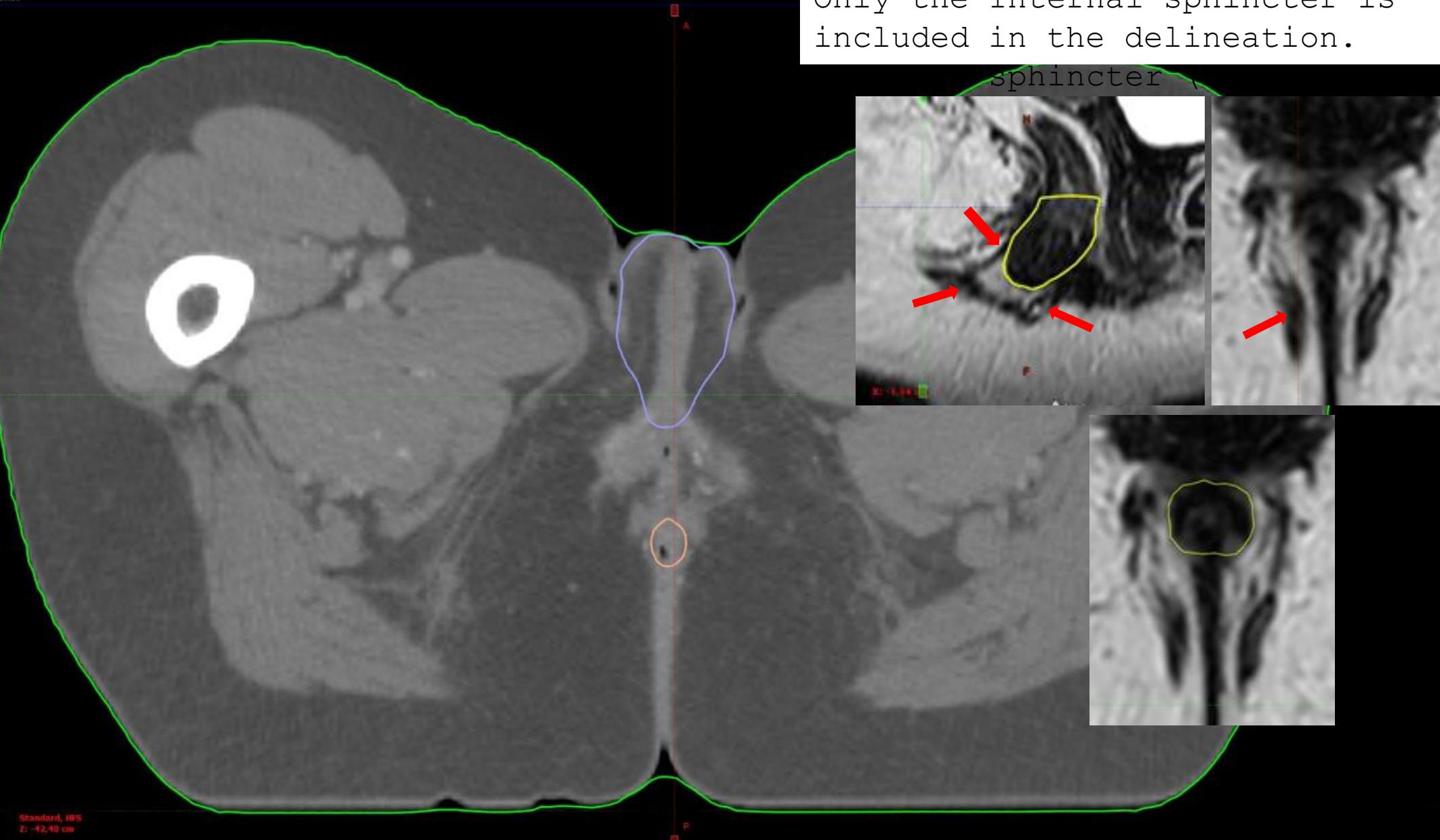
10:30



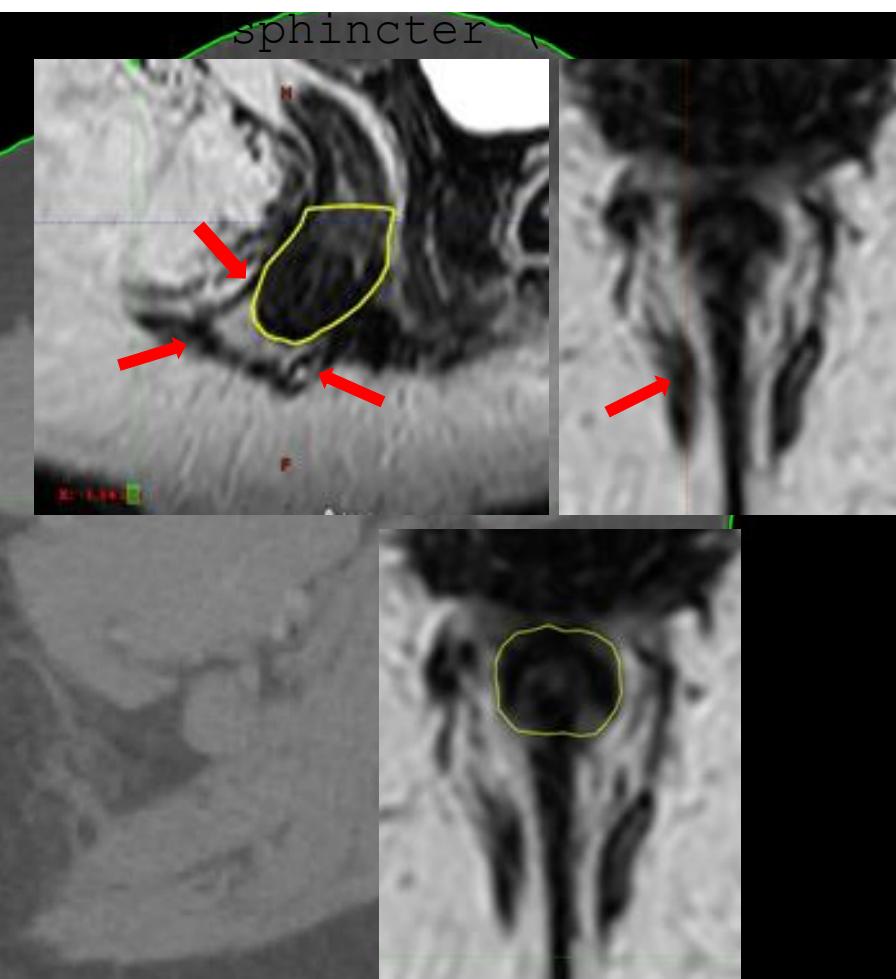
Standard, IWS
Z: -42.00 cm

- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
- Urethra
- Uterus
- Vagina
- Vulva

10:30

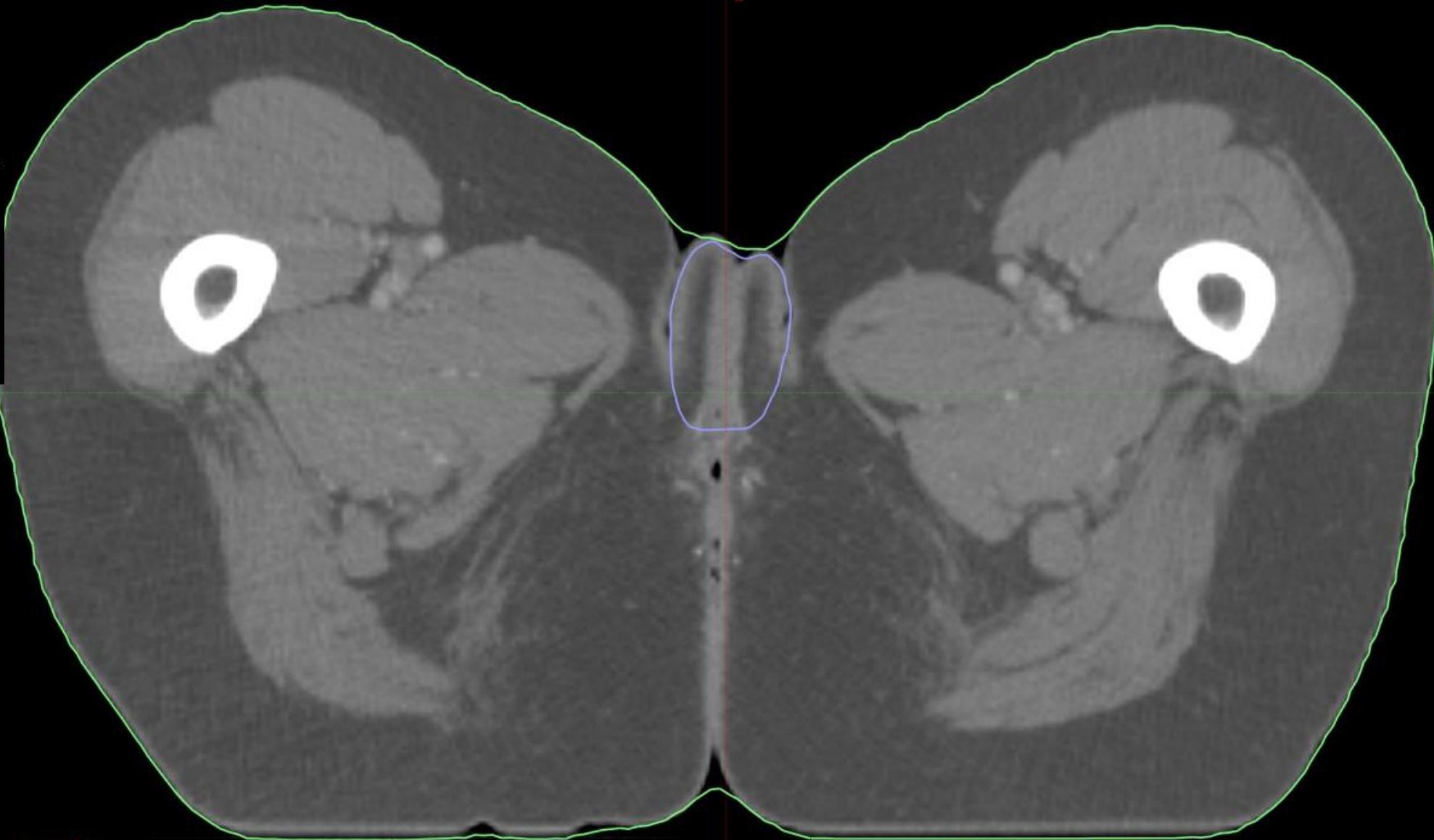


Tip: Anal Canal caudal part
Only the Internal sphincter is included in the delineation.



- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
- Urethra
- Uterus
- Vagina
- Vulva

10:30

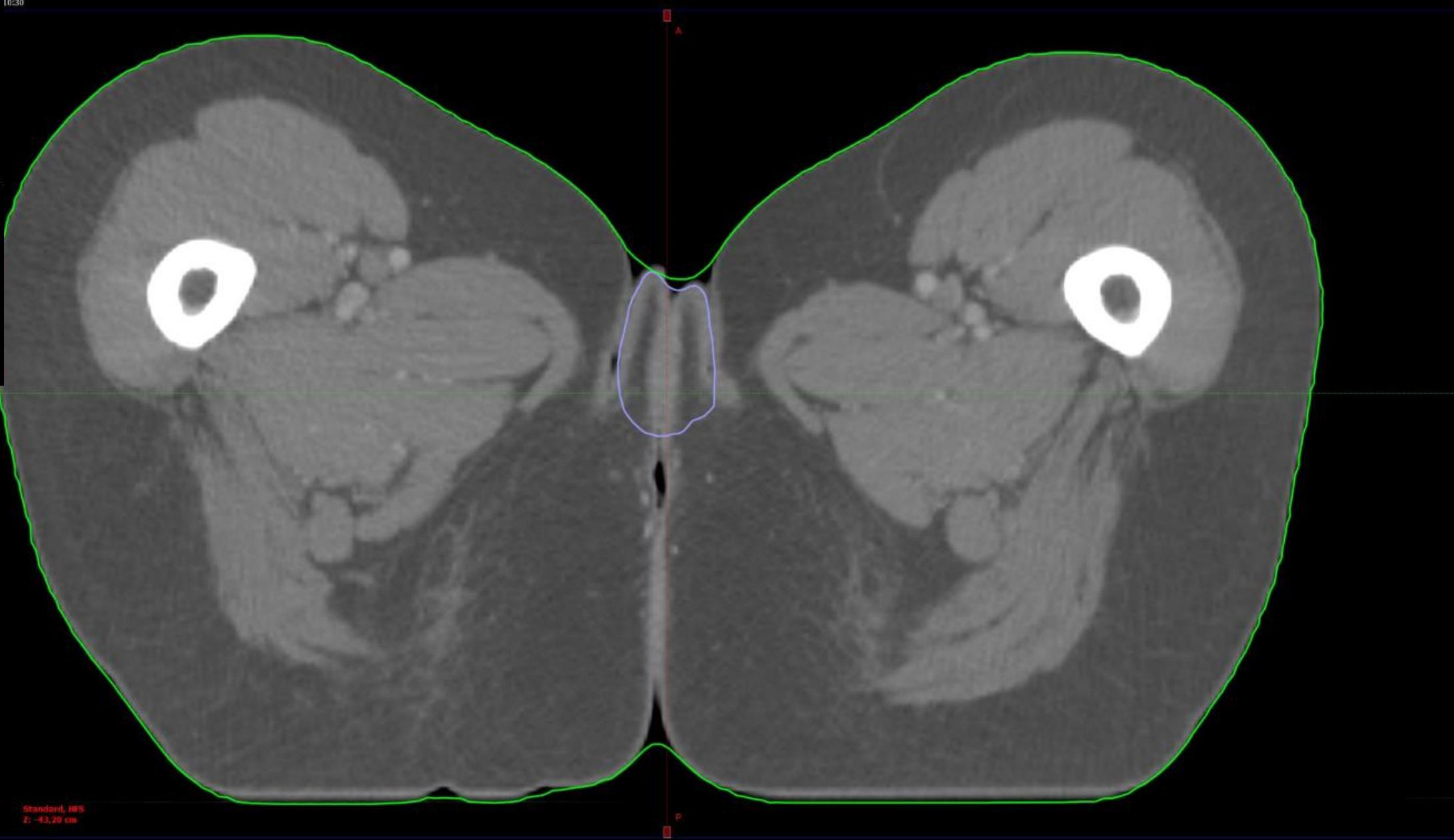


Standard, IWS
Z: -42.00 cm

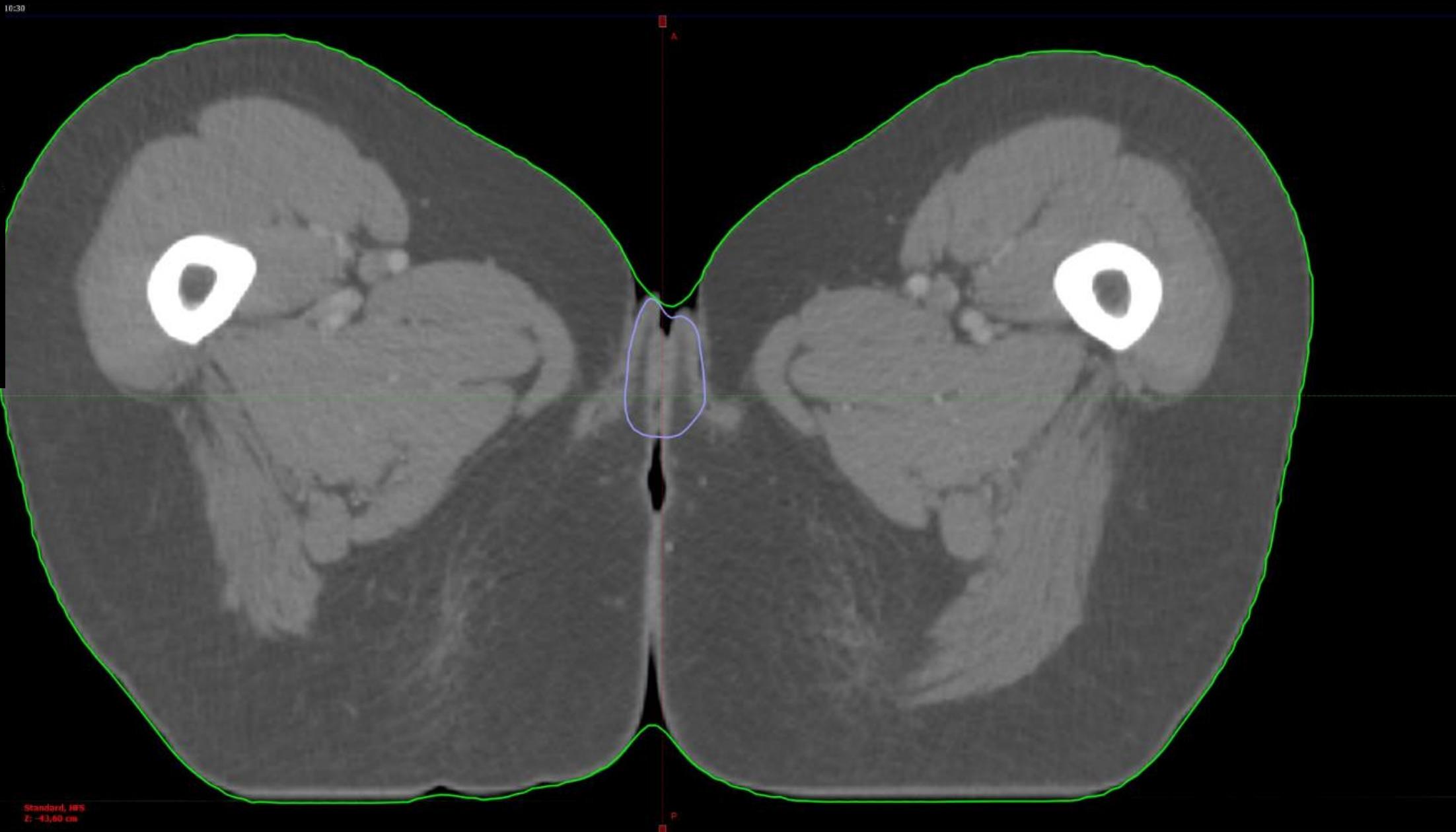


- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
- SacroiliacJoint
- Sacrum
- Sigmoid
- Urethra
- Uterus
- Vagina
- Vulva

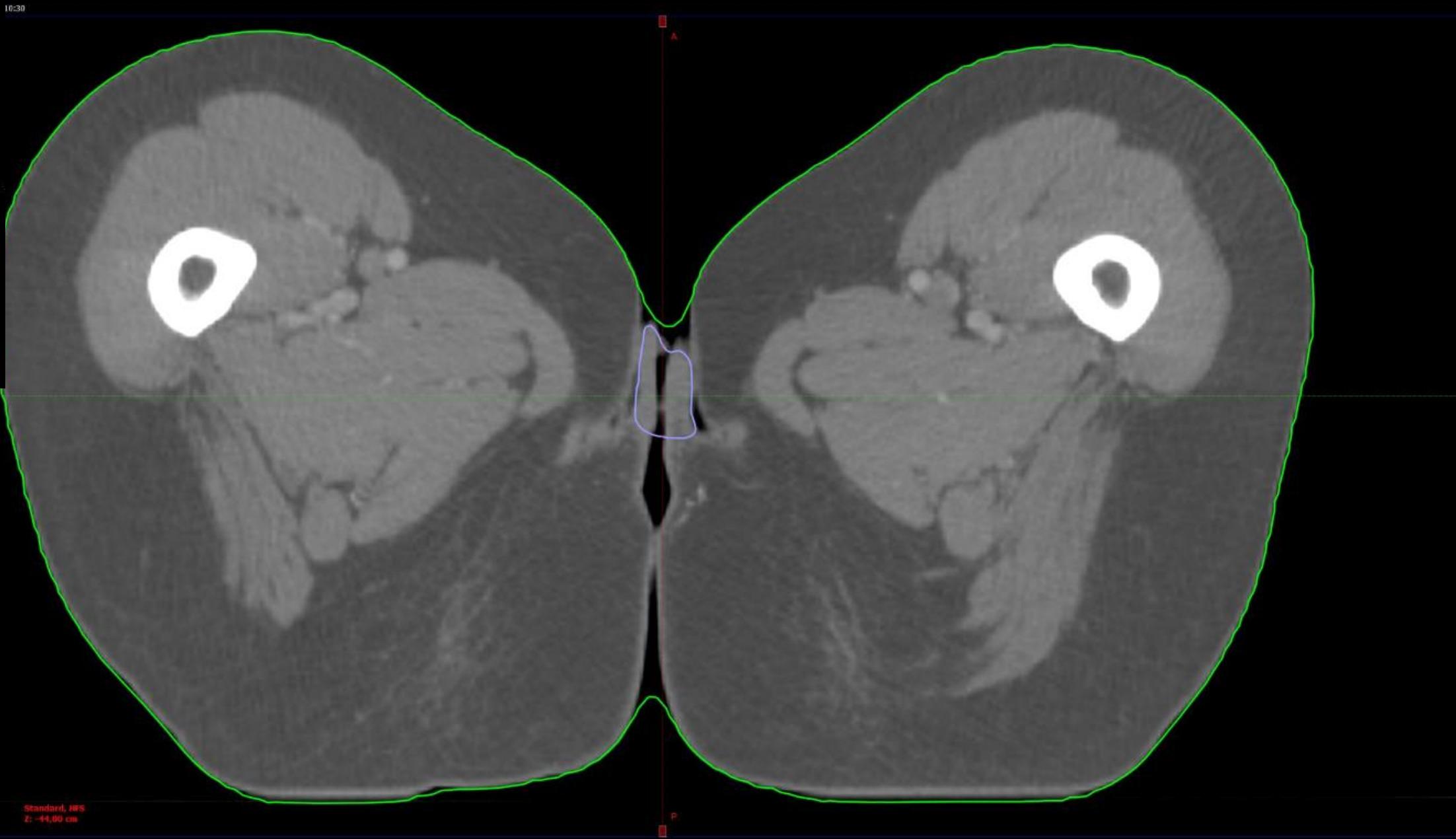
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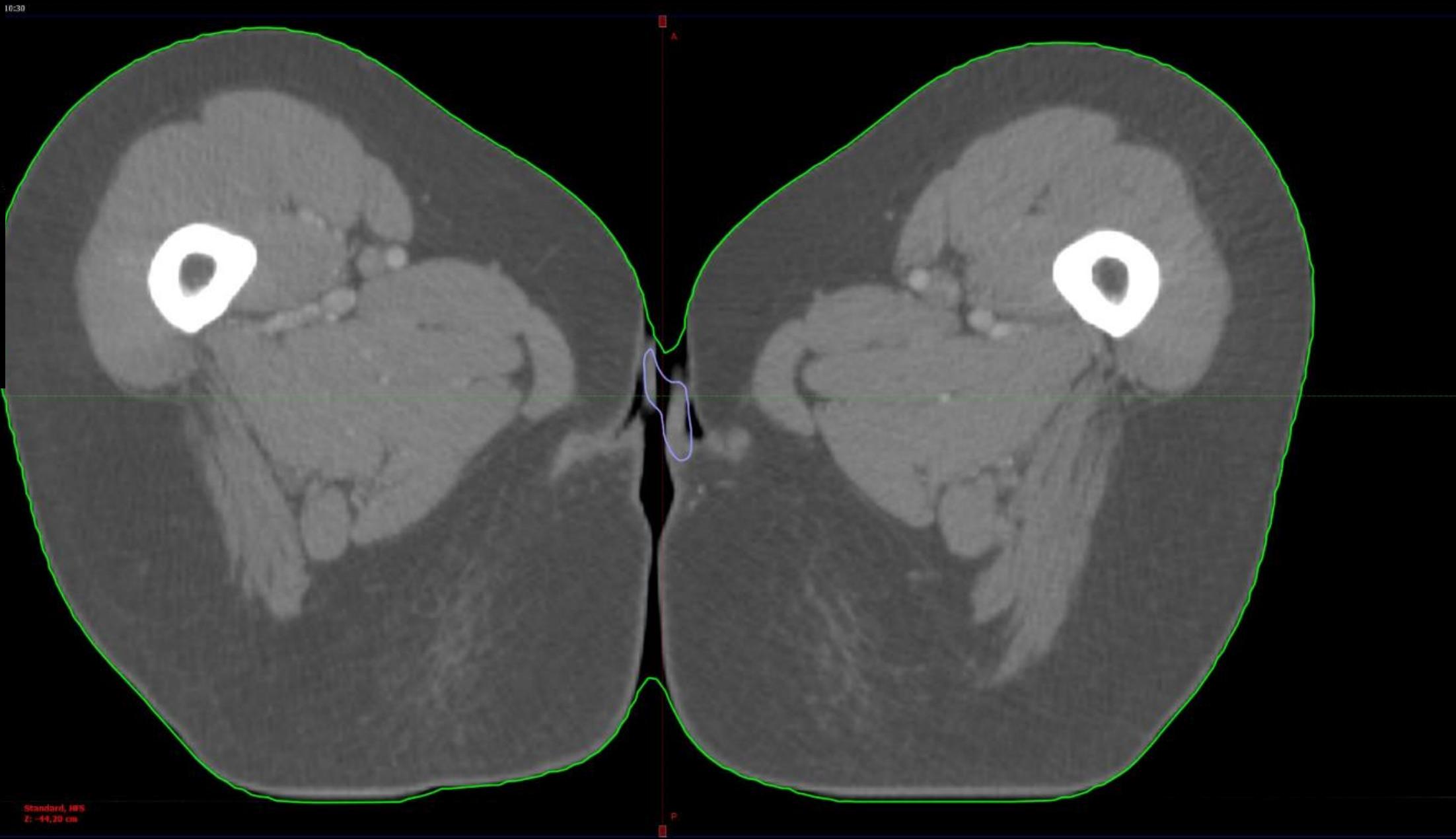
- AnalCanal
- AnoRectum
- BODY
- Bladder
- BowelBag
- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
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- AnalCanal
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- AnalCanal
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- AnalCanal
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- CaudaEquina
- FemoralHead_L
- FemoralHead_R
- Rectum
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- Sacrum
- Sigmoid
- Urethra
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- Vagina
- Vulva

10:30



Standard, IIPS
Z: -44.40 cm



