

MVISION



Contour+

Guideline-Based AI Segmentation

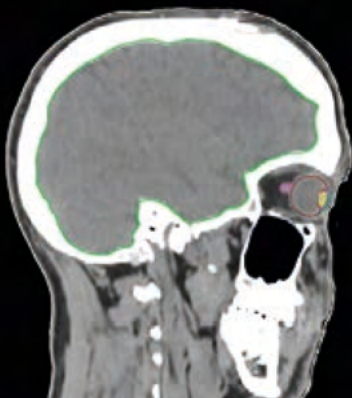
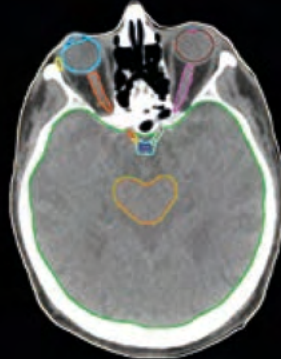
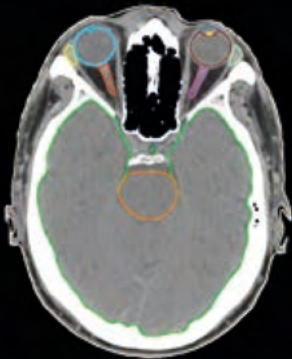
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Brain CT Model

28 OARs

The Brain CT model covers 28 OAR structures used in brain tumor radiotherapy treatment planning.



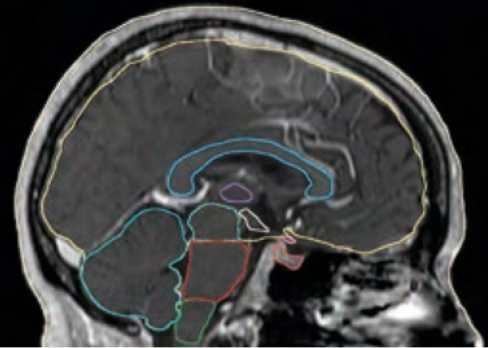
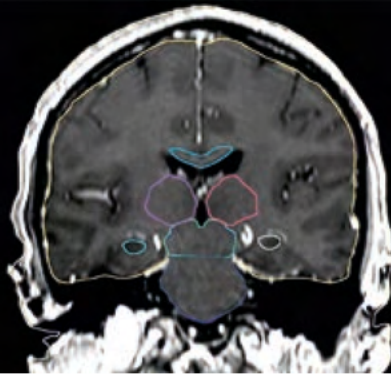
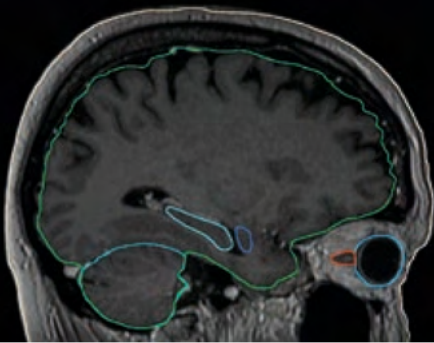
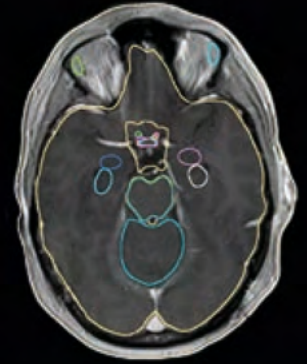
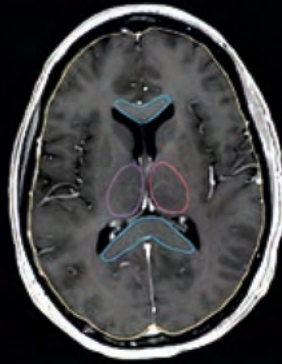
Brain CT Model

2015 Scoccianti et al.:	Brainstem, Eye_L, Eye_R, Lens_L, Lens_R, OpticChiasm_cnv, OpticNrv_cnv_L, OpticNrv_cnv_R
RTOG 2011 Kong et al.:	SpinalCanal
GHG 2020 Mir et al.:	Fossa_Pituitary
2015 Brouwer et al.:	A_Carotid_L, A_Carotid_R, Brain, Cochlea_L, Cochlea_R, Eye_Ant_L, Eye_Ant_R, Eye_Post_L, Eye_Post_R, GlnD_Lacrimal_L, GlnD_Lacrimal_R, OpticChiasm, OpticNrv_L, OpticNrv_R, Parotid_L, Parotid_R, Pituitary, SpinalCord

Brain MR Model

29 OARs

The Brain MR model includes 29 OAR structures. The majority of these are based on the EPTN guidelines published in 2018 and 2021. The model supports high resolution T1 sequences from multiple MRI vendors.



Brain MR Model

**EPTN 2018 & 2021
Eekers et al.:**

Amygdala_L, Amygdala_R, Brain, Brainstem,
Cerebellum, CorpusCallosum,
GlnD_LacrimaL_L, GlnD_LacrimaL_R,
Hippocampus_L, Hippocampus_R,
Hypothalamus, MedullaOblongata, Midbrain,
OpticChiasm_cnv, OpticNrv_cnv_L,
OpticNrv_cnv_R, OpticTract_cnv_L,
OpticTract_cnv_R, Pituitary, Pons,
Thalamus_L, Thalamus_R

2015 Brouwer et al.:

OpticChiasm, OpticNrv_L, OpticNrv_R

2015 Scoccianti et al.:

Eye_L, Eye_R

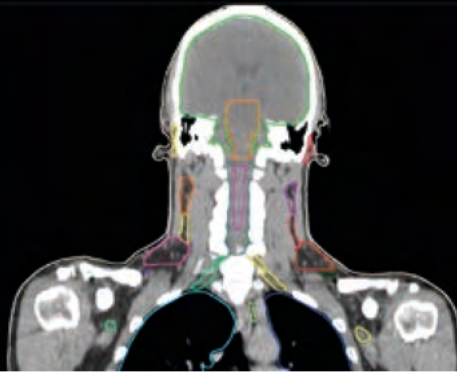
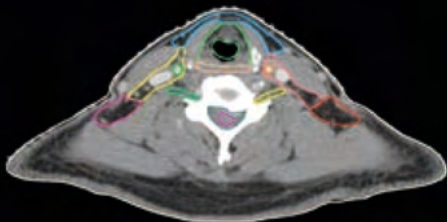
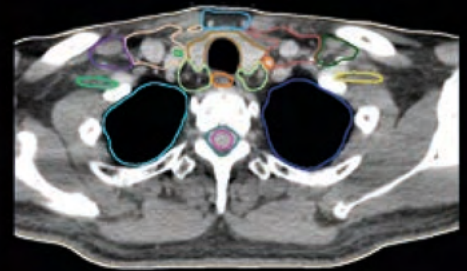
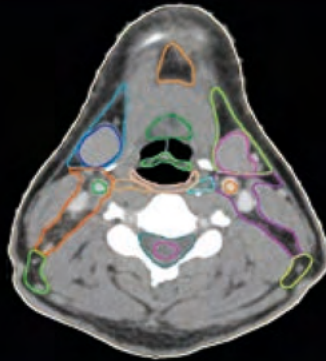
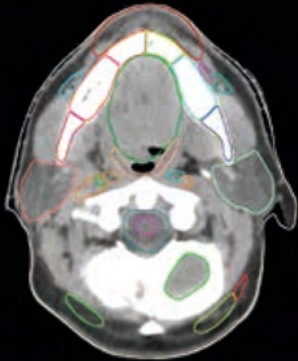
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OpticTract_L, OpticTract_R

Head and Neck CT Model

47 OARs and 27 lymph node levels

This complex and high quality model contains a total of 74 structures, both OARs and Lymph node regions, specific for Head and Neck cancer treatments. The model works with both contrast and non-contrast enhanced scans and handles dental filling artefacts and different anatomies well.



Head & Neck CT Model

2015 Scocciati et al.: Brainstem, Eye_L, Eye_R, Lens_L, Lens_R, OpticChiasm_cnv, OpticNrv_cnv_L, OpticNrv_cnv_R

2015 Brouwer et al.: A_Carotid_L, A_Carotid_R, Arytenoid_L, Arytenoid_R, Bone_Mandible, Brain, Buccal_Mucosa_L, Buccal_Mucosa_R, Cavity_Oral, Cochlea_L, Cochlea_R, Cricophar_inlet, Esophagus_S, Eye_Ant_L, Eye_Ant_R, Eye_Post_L, Eye_Post_R, GlnD_Lacrimal_L, GlnD_Lacrimal_R, GlnD_Submand_L, GlnD_Submand_R, GlnD_Thyroid, Glottis, Larynx_SG, Lips, Musc_Constrict, OpticChiasm, OpticNrv_L, OpticNrv_R, Parotid_L, Parotid_R, Pituitary, SpinalCord, BrachialPlex_L, BrachialPlex_R

RTOG 2011 Kong et al.: Lung_L, Lung_R, SpinalCanal

2013 Grégoire et al.:

LN_Neck_IA, LN_Neck_IB_L, LN_Neck_IB_R,
LN_Neck_II_L, LN_Neck_II_R, LN_Neck_III_L,
LN_Neck_III_R, LN_Neck_IVA_L,
LN_Neck_IVA_R, LN_Neck_IVB_L,
LN_Neck_IVB_R, LN_, LN_Neck_VC_L,
Neck_V_L, LN_Neck_V_R, LN_Neck_VC_R,
LN_Neck_VIA, LN_Neck_VIB, LN_Neck_XB_R,
LN_Neck_VIIA_L, LN_Neck_VIIA_R, LN_
Neck_VIIB_L, LN_Neck_VIIB_R, LN_Neck_IX_L,
LN_Neck_IX_R, LN_Neck_XA_L,
LN_Neck_XA_R, LN_Neck_XB_L,
N_Neck_XB_R

Custom:

Trachea

Combination with Jaw Model

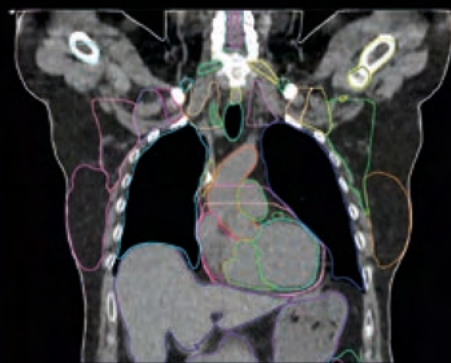
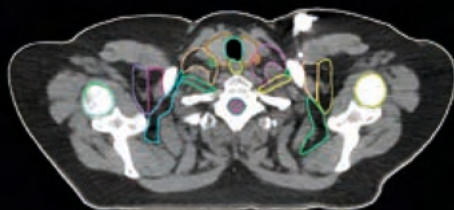
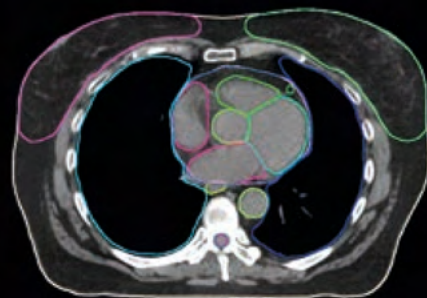
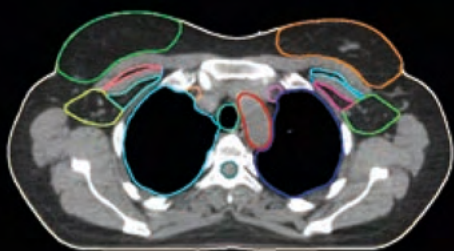
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LJ_Front_L/R, LJ_Molar_L/R, LJ_Ramus_L/R,
LJ_Condyle_L/R, UJ_Front_L/R,
UJ_Molar_L/R

Breast CT Model

25+ OARs and 30 lymph node levels

The breast CT model comprises over 55 ROIs. The breast radiotherapy-specific structures are based on the ESTRO, RTOG, and RADCOMP guidelines. In addition to the standardized structures, ready-made combinations of the target volumes are included. Heart chambers are also provided according to the Milo et al. 2020 guideline.



Breast CT Model

RTOG 2011 Kong et al.: A_Aorta, A_Pulm, Esophagus, Heart, Lung_L, Lung_R, SpinalCanal, V_Venacava_I, V_Venacava_S,

RTOG 2014 Jabbour et al.: Liver, Stomach

RTOG 2012 Gay et al.: Bag_Bowel

RTOG 2009 White et al.: Breast_RT OG_L, Breast_RT OG_R

**RADCOMP 2016
MacDonald et al.:** BrTW_RT OG_L, BrTW_RT OG_R,
LN_B_RT OG_L1_L, LN_B_RT OG_L1_R,
LN_B_RT OG_L2_L, LN_B_RT OG_L2_R,
LN_B_RT OG_L3_L, LN_B_RT OG_L3_R,
LN_B_RT OG_L4_L, LN_B_RT OG_L4_R,
LN_B_RT OG_L5_L, LN_B_RT OG_L5_R,
LN_RT OG_IMN_L, LN_RT OG_IMN_R

2020 Milo et al.: Atrium_L, Atrium_R, Ventricle_L, Ventricle_R

2015 Brouwer et al.: A_Carotid_L, A_Carotid_R, BrachialPlex_L,
BrachialPlex_R, GInd_Thyroid, SpinalCord

**ESTRO 2015 & 2016
Offersen et al.:**

Breast_L, Breast_R, LN_Breast_L1_L,
LN_Breast_L1_R, LN_Breast_L2_L,
LN_Breast_L2_R, LN_Breast_L3_L,
LN_Breast_L3_R, LN_Breast_L4_L,
LN_Breast_L4_R, LN_IMN_IC4_L,
LN_IMN_IC4_R, LN_IMN_L, LN_IMN_R,
LN_Intpect_L, LN_Intpect_R

2017 Duane et al.:

A_LAD

Custom:

Humerus_L, Humerus_R, Humerus_Head_L,
Humerus_Head_R, Trachea, LN_Axillary_L,
LN_Axillary_R, LN_Axilla_RT OG_L,
LN_Axilla_RT OG_R

In the realm of radiotherapy, the MVision AI Autocontouring solution presents a remarkable opportunity to swiftly and efficiently contour organs, while adhering closely to international guidelines, thereby optimizing the protection of organs during radiotherapy. This lays the groundwork for potential future advancements in adaptive planning (plan of the day) with the aid of an intelligent contouring tool.

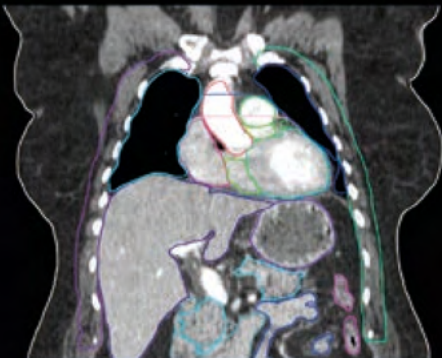
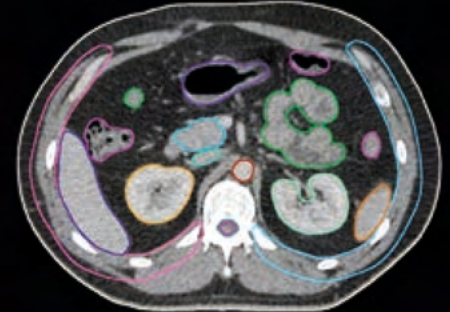
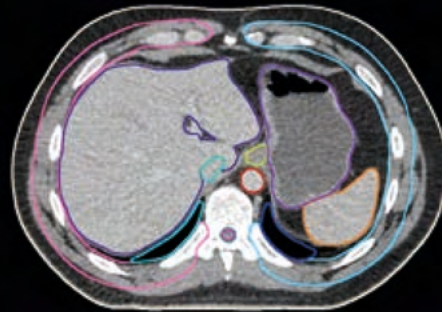
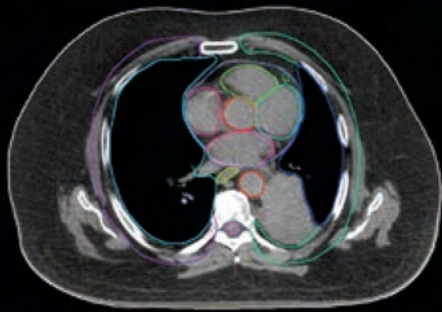
Simone Marnitz, Prof. Dr. med.

Head of the private practice for radiation oncology in the Voßpalais, Berlin

Abdomen & Lung CT Model

35+ ROIs including SABR protocol structures

The Abdomen and Lung CT model has 35+ OAR structures to aid in standardized treatment planning for both conventional EBRT and SBRT. Heart chambers are also available in this model according to the Milo et al. 2020 guideline.



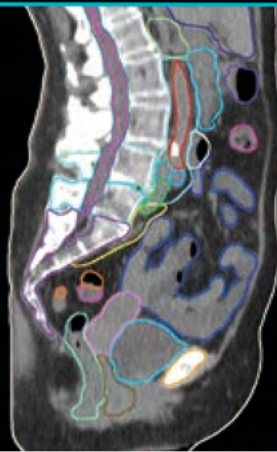
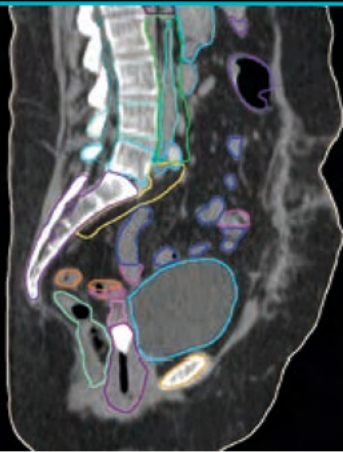
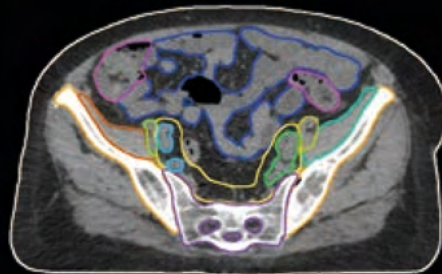
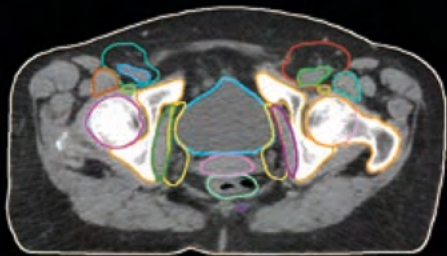
Abdomen and Lung CT Model

RTOG 2014 Jabbour et al.:	Esophagus, Liver, Kidney_L, Kidney_R, Pancreas, Spleen, Stomach
RTOG 2012 Gay et al.:	Bag_Bowel, Bowel_Large, Bowel_Small
RTOG 2011 Kong et al.:	A_Aorta, A_Pulm, Heart, Lung_L, Lung_R, SpinalCanal, V_Venacava_I, V_Venacava_S
2015 Brouwer et al.:	SpinalCord, BrachialPlex_L, BrachialPlex_R
SABR UK Consortium 2019.:	Bronchus_Prox, Chestwall_L, Chestwall_R, Heart+A_Pulm, Trachea_Prox
2020 Milo et al.:	Atrium_L, Atrium_R, Ventricle_L, Ventricle_R
2017 Duane et al.:	A_LAD
Custom:	Humerus_L, Humerus_R, Humerus_Head_L, Humerus_Head_R, Trachea

Female Pelvis CT Model

40+ ROIs including anatomical landmarks and several lymph node regions

The Female Pelvis CT model comes with a collection of more than 40 structures. It includes lymph nodes for the pelvic region and also provides para-aortic lymph nodes and abdominal OARs for more extensive treatments.



Female Pelvis CT Model

RTOG 2012 Gay et al.:	Bag_Bowel, Bladder, Femur_L, Femur_R, RectoSigmoid, UteroCervix, Bowel_Large, Bowel_Small
RTOG 2014 Jabbour et al.:	Duodenum, Kidney_R, Kidney_L, Liver, Pancreas, Spleen, Stomach
ESTRO ACROP 2018 Salembier et al.:	Rectum
RTOG 2011 Kong et al.:	A_Aorta, SpinalCanal, V_Venacava_I
SABR UK Consortium 2019.:	Femur_Head_L, Femur_Head_R
RTOG 2008 Small et al.:	CTV_Pelvis, LN_Gyn_RTGO
NRG 2021 Small et al.:	LN_PAN, LN_PAN_Long
2016 Valentini et al:	LN_Inguinal_L, LN_Inguinal_R

RTOG 2011 Lim et al.:

CTV_Param

PIVOTAL 2015 Harris et al. :

Vessels_Long_R, Vessels_Long_L
Vessels_R, Vessels_L

2015 Brouwer et al.:

SpinalCord

**Gray's Anatomy
2020 Standring S.:**

Bone_Pelvic, L4_VB, L5_VB,
Musc_Coccygeus_L, Musc_Coccygeus_R,
Musc_Iliacus_L, Musc_Iliacus_R,
Musc_Obt_Int_L, Musc_Obt_Int_R,
Musc_Pirifor_L, Musc_Pirifor_R,
Musc_Psoas_Maj_L, Musc_Psoas_Maj_R,
Sacrum,

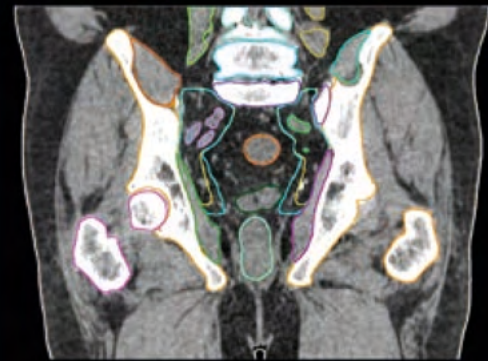
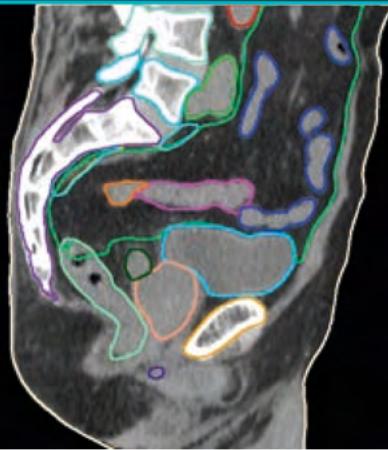
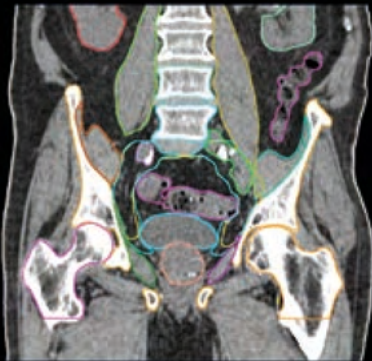
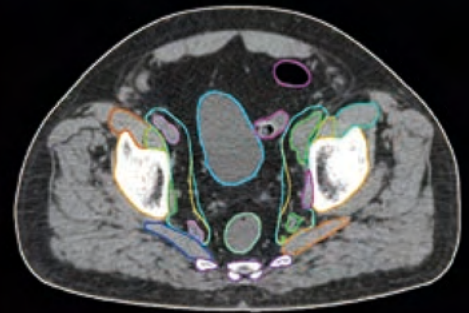
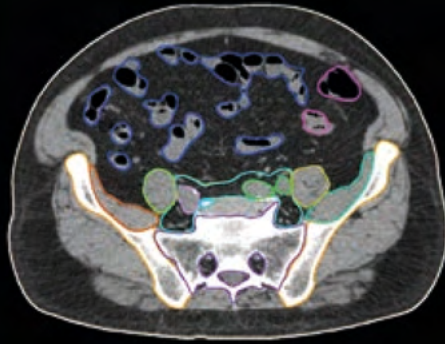
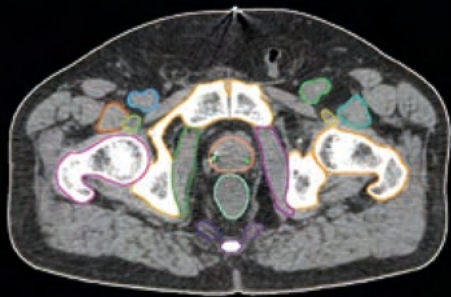
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Vagina

Male Pelvis CT Model

36 ROIs including 15 anatomical landmarks and 2 different lymph node styles

The CT model offers a vast collection of structures including 2 different lymph node volumes as recommended by the RTOG and PIVOTAL guidelines.



Male Pelvis CT Model

**RTOG 2012 Gay
et al.:**

Bag_Bowel, Bladder, Bowel_Large,
Bowel_Small, Femur_R, Femur_L,
PenileBulb, RectoSigmoid

**ESTRO ACROP 2018
Salembier et al.:**

Prostate, Rectum

**RTOG 2014
Jabbour et al.:**

Kidney_L, Kidney_R

**PIVOTAL 2015 Harris
et al.:**

LN_Pivotal, Vessels_L, Vessels_R,
Vessels_Long_L, Vessels_Long_R

**RTOG 2009 Lawton
et al.:**

LN_RTOG, SeminalVes

RTOG 2011 Kong et al.:

A_Aorta, V_Venacava_I

**Gray's Anatomy
2020 Standring S.:**

Bone_Pelvic, L5_VB, L4_VB, Sacrum,
Musc_Coccygeus_L, Musc_Coccygeus_R,
Musc_Psoas_Maj_L, Musc_Psoas_Maj_R,
Musc_Iliacus_L, Musc_Iliacus_R,
Musc_Pirifor_L, Musc_Pirifor_R,
Musc_Obt_Int_L, Musc_Obt_Int_R

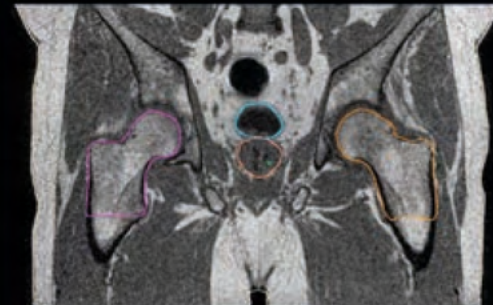
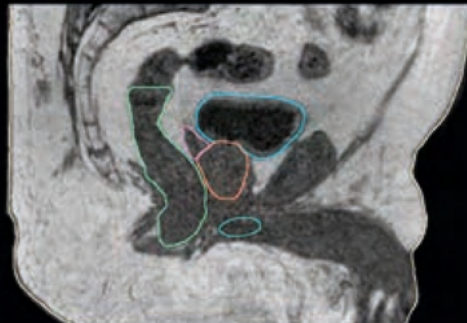
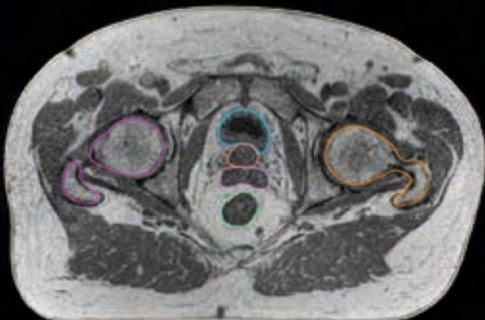
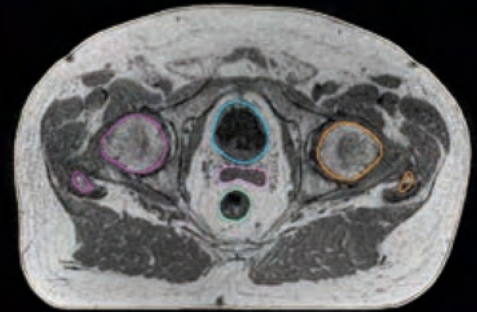
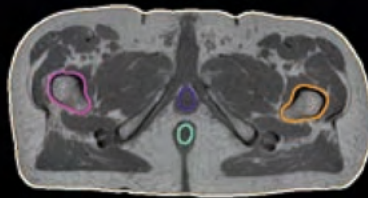
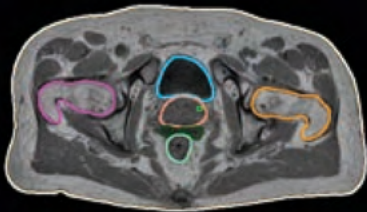
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Markers

Male Pelvis MR Dixon Model

8 OARs

This MRI model for male pelvis radiotherapy covers T1-Dixon sequences and provides contours for 8 ROIs. In addition to these, Body is also included for MR-only workflow.



Male Pelvis MR Dixon Model

RTOG 2012 Gay et al.:

Bladder, Femur_L, Femur_R, SeminalVes,
PenileBulb

**ESTRO ACROP 2018
Salembier et al.:**

Prostate, Rectum

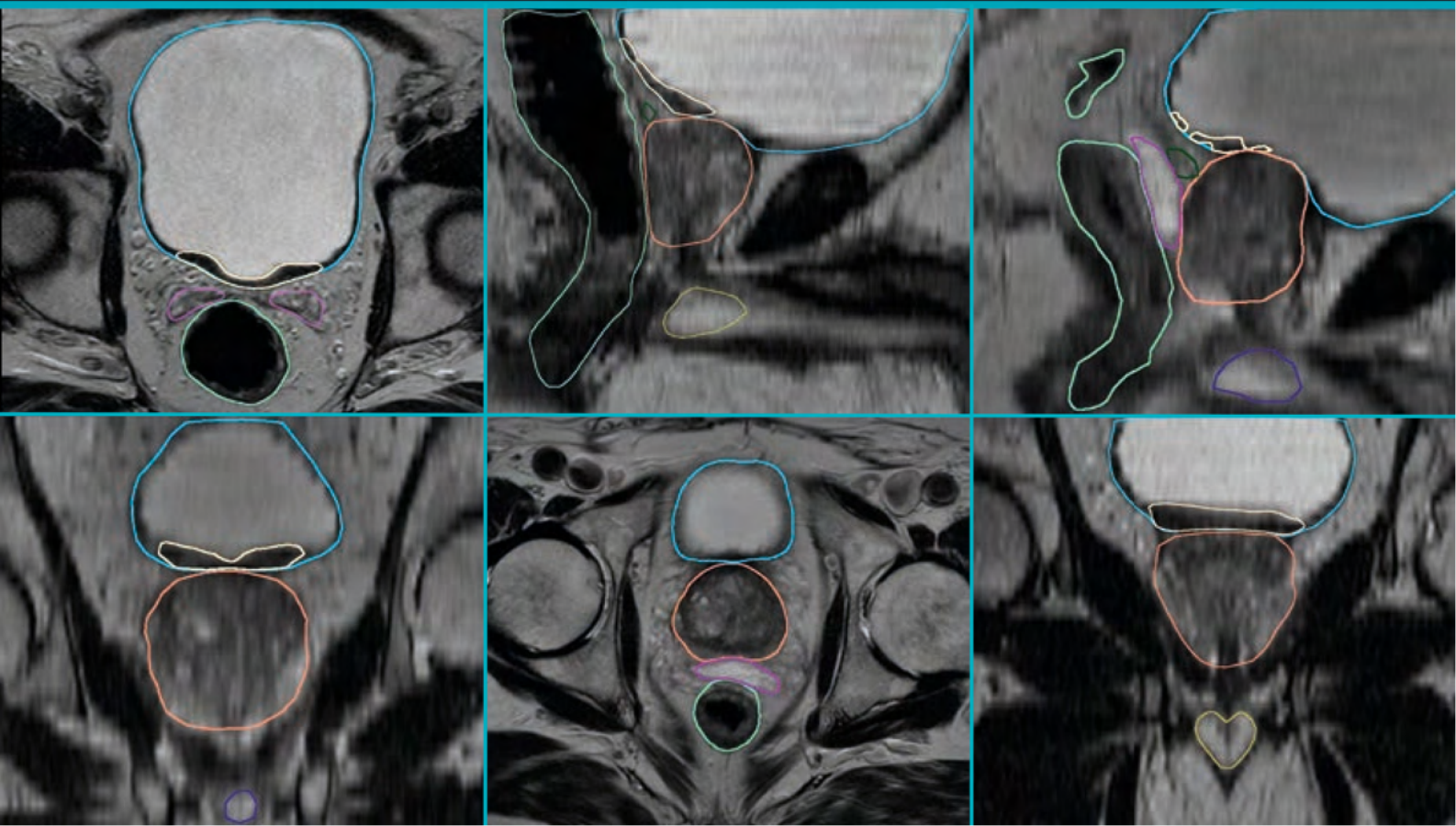
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Markers

Male Pelvis MR T2 Model

7 OARs

This MRI model for male pelvis radiotherapy covers T2 weighted sequences and provides contours for 7 ROIs, allowing enhanced accuracy over CT-based contouring.



Male Pelvis MR T2 Model

RTOG 2012 Gay et al.:

Bladder, PenileBulb, SeminalVes

**ESTRO ACROP 2018
Salembier et al.:**

Prostate, Rectum

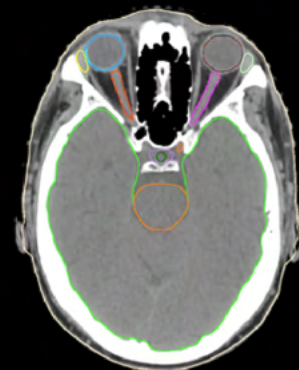
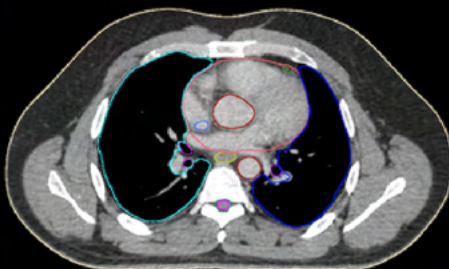
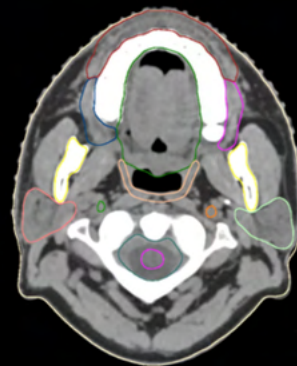
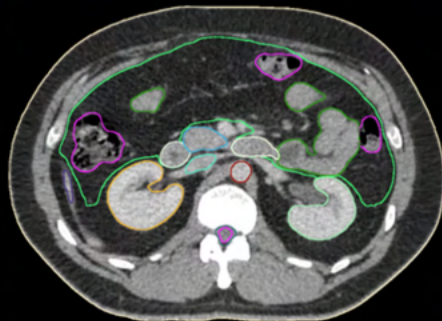
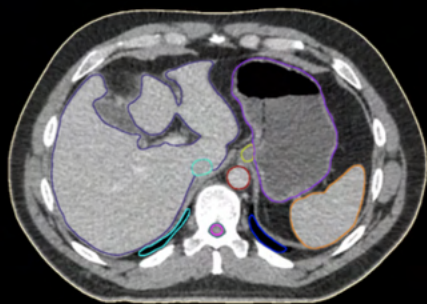
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BladderTrigone, Spacer

Whole Body CT Model

79 OARs

The Whole Body CT model has 79 OARs, being suitable for the irradiation of multiple sites, large volumes or long structures. It offers a fast solution for the time-consuming task of delineating multiple structures.



Whole Body CT Model

2015 Brouwer et al.:

A_Carotid_L, A_Carotid_R, Bone_Mandible, BrachialPlex_L, BrachialPlex_R, Brain, Brainstem, Buccal_Mucosa_L, Buccal_Mucosa_R, Cavity_Oral, Cricophar_inlet, Esophagus_S, Eye_L, Eye_R, Eye_Ant_L, Eye_Ant_R, Eye_Post_L, Eye_Post_R, GlnD_Lacrimal_L, GlnD_Lacrimal_R, GlnD_Submand_L, GlnD_Submand_R, GlnD_Thyroid, Glottis, Larynx_SG, Lips, Musc_Constrict, Lens_L, Lens_R, OpticChiasm, OpticNrv_L, OpticNrv_R, OpticChiasm_cnv, OpticNrv_cnv_L, OpticNrv_cnv_R, Parotid_L, Parotid_R, Pituitary, SpinalCord

2017 Duane et al.:

A_LAD

ESTRO ACROP 2018 Salembier et al.:

Prostate, Rectum

RTOG 2011 Kong et al.:

A_Aorta, Heart, Lung_L, Lung_R, V_Venacava_I, V_Venacava_S, SpinalCanal

RTOG 2012 Gay et al.:

Bag_Bowel, Bladder, Bowel_Large,
Bowel_Small, Femur_L, Femur_R,
PenileBulb, RectoSigmoid, SeminalVes,
UteroCervix

**RTOG 2014 Jabbour
et al.:**

Duodenum, Esophagus, Kidney_L,
Kidney_R, Liver, Pancreas, Spleen,
Stomach

**SABR UK
Consortium 2019.:**

Bronchus_Prox, Heart+A_Pulm,
Trachea_Prox

**Gray's Anatomy 2020
Standing S.:**

Bone_Pelvic, L4_VB, L5_VB, Sacrum

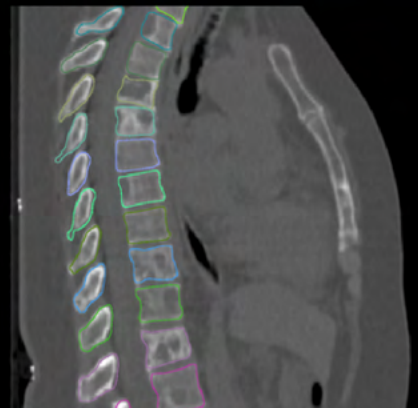
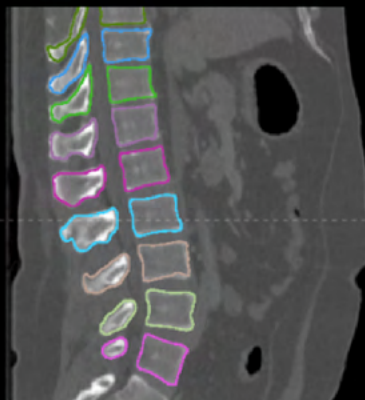
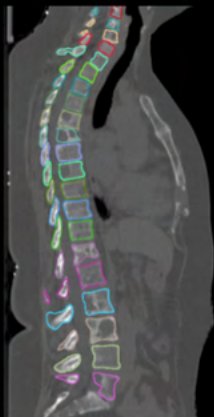
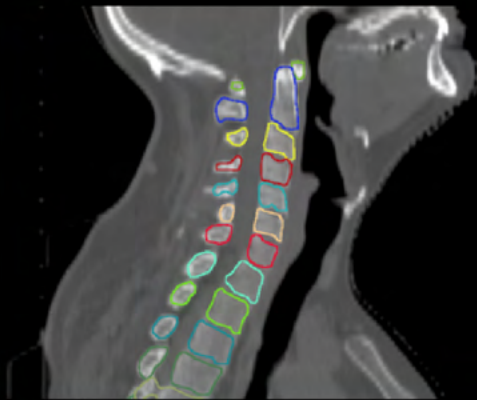
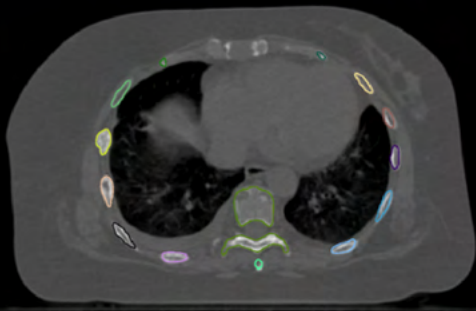
Custom:

Humerus_L, Humerus_R, Trachea,
Vagina

Bone CT Model

48 ROIs

Individual vertebrae and ribs are supported within the Bone CT model, making up a total of 48 structures that can be used either as OARs or CTVs for SBRT or palliative treatments.



Bone CT Model

**Gray's Anatomy
2020 Standing S.:**

C1, C2, C3, C4, C5, C6, C7, T1, T2, T3, T4, T5,
T6, T7, T8, T9, T10, T11, T12, L1, L2, L3, L4, L5

Custom:

Rib01_L, Rib01_R, Rib02_L, Rib02_R, Rib03_L,
Rib03_R, Rib04_L, Rib04_R, Rib05_L,
Rib05_R, Rib06_L, Rib06_R, Rib07_L,
Rib07_R, Rib08_L, Rib08_R, Rib09_L,
Rib09_R, Rib10_L, Rib10_R, Rib11_L, Rib11_R,
Rib12_L, Rib12_R



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