

## Structure Model Release Notes

Product: <u>AutoContour</u>
Date: <u>04/25/2023</u>

## **New Structure Models**

- CT A\_Pulmonary Model Added
- CT Bladder\_F Model Added
- CT Bone\_Skull Model Added
- CT Bowel Model Added
- CT Bowel\_Large Model Added
- CT Bowel Small Model Added
- CT BuccalMucosa Model Added
- CT Chestwall L Model Added
- CT Chestwall\_R Model Added
- CT Chestwall\_RC\_L Model Added
- CT Chestwall\_RC\_R Model Added
- CT Colon\_Sigmoid Model Added
- CT Duodenum Model Added
- CT Gallbladder Model Added
- CT Genitals\_F Model Added
- CT Genitals\_M Model Added
- CT Hippocampus\_L Model Added
- CT Hippocampus\_R Model Added
- CT Larynx\_Glottic Model Added
- CT Larynx\_NRG Model Added
- CT Larynx\_SG Model Added
- CT LN\_Ax\_L1\_L Model Added
- CT LN\_Ax\_L1\_R Model Added
- CT LN\_Ax\_L2\_L Model Added
- CT LN\_Ax\_L2\_R Model Added
- CT LN\_Ax\_L3\_L Model Added

- CT LN\_Ax\_L3\_R Model Added
- CT LN\_Ax\_L2\_L3\_L Model Added
- CT LN\_Ax\_L2\_L3\_R Model Added
- CT LN\_IMN\_RC\_L Model Added
- CT LN\_IMN\_RC\_R Model Added
- CT LN\_Neck\_II-V\_L Model Added
- CT LN\_Neck\_II-V\_R Model Added
- CT LN\_Neck\_V\_L Model Added
- CT LN\_Neck\_V\_R Model Added
- CT LN\_Paraaortic Model Added
- CT LN\_Sclav\_RC\_L Model Added
- CT LN\_Sclav\_RC\_R Model Added
- CT Lobe\_Temporal\_L Model Added
- CT Lobe\_Temporal\_R Model Added
- CT Pancreas Model Added
- CT Pericardium Model Added
- CT Rectum\_F Model Added
- CT UteroCervix Model Added
- CT V\_Venacava\_I Model Added
- CT VB Model Added
- CT VB\_C1 Model Added
- CT VB\_C2 Model Added
- CT VB\_C3 Model Added
- CT VB\_C4 Model Added
- CT VB\_C5 Model Added
- CT VB\_C6 Model Added
- CT VB\_C7 Model Added
- CT VB\_L1 Model Added
- CT VB\_L2 Model Added
- CT VB\_L3 Model Added
- CT VB\_L4 Model Added
- CT VB\_L5 Model Added
- CT VB\_T01 Model Added
- CT VB\_T02 Model Added
- CT VB\_T03 Model Added
- CT VB\_T04 Model Added
- CT VB\_T05 Model Added
- CT VB\_T06 Model Added
- CT VB\_T07 Model Added

- CT VB\_T08 Model Added
- CT VB\_T09 Model Added
- CT VB\_T10 Model Added
- CT VB\_T11 Model Added
- CT VB\_T12 Model Added
- MR T1 Cerebellum Model Added
- MR T2 Glnd\_Prostate Model Added
- MR T1 Hypothalamus Model Added
- MR T1 Hypo\_True Model Added
- MR T1 OpticTract\_L Model Added
- MR T1 OpticTract\_R Model Added
- MR T1 Pituitary Model Added
- MR T2 Prostate Model Added
- MR T2 SeminalVes Model Added
- MR T1 Eye\_L Model Added
- MR T1 Eye\_R Model Added

## **Updated Structure Models**

- CT Bowel\_Bag Model Updated
- CT CaudaEquina Model Updated
- CT HDR\_Cylinder Model Updated
- CT LN\_Pelvics\_NRG Model Updated
- CT Lung\_L Model Updated
- CT Lung\_R Model Updated
- CT SpinalCord Model Updated
- CT Spleen Model Updated
- CT Stomach Model Updated

## Structure Model Release History

| Structure Model ID | Release Date | Release Comment   |
|--------------------|--------------|---|
| A_Aorta            | 3/8/2021     | - Initial model   |
|                    | 6/9/2021     | - Improved accuracy by combining A_Aorta_Asc and A_Aorta_Dsc as the new A_Aorta. Original A_Aorta model has been retired. |
| A_Aorta_Asc        | 6/9/2021     | - Initial model   |
| A_Aorta_Dsc        | 6/9/2021     | - Initial model   |
| A_LAD              | 11/15/2021   | - Initial Model.  |
|                    | 03/01/2022   | - Updated post-processing to prevent blocky shape when multiple segments on the same slice are found.                     |
| A_Pulmonary        | 04/25/2023   | - Initial model   |
| Bladder            | 2/11/2021    | - Initial model   |
|                    | 10/29/2021   | - Updated model to address instances where Bladder is not found.  |
| Bladder_F          | 04/25/2023   | - Initial model trained on Female Pelvis scans  |
| Bone_Ilium_L       | 12/17/2021   | - Initial model   |
| Bone_Ilium_R       | 12/17/2021   | - Initial model   |
| Bone_Mandible      | 2/11/2021    | - Initial model   |
|                    | 8/6/2021     | - Model updated to improve contour resolution for small segments  |
| Bone_Pelvic        | 05/25/2022   | - Initial model   |
| Bone_Skull         | 04/25/2023   | - Initial model   |
| Bone Sternum       | 03/01/2022   | - Initial model   |
| Bowel              | 04/25/2023   | - Initial model   |

| Bowel_Bag      | 2/11/2021  | - Initial model   |
|----------------|------------|---|
|                | 4/6/2021   | - New segmentation model to address spill out.  |
|                | 11/15/2021 | - Model updated to address contour mislocalization.   |
|                | 04/25/2023 | - Updated model to improve accuracy   |
| Bowel_Large    | 04/25/2023 | - Initial model   |
| Bowel_Small    | 04/25/2023 | - Initial model   |
| BrachialPlex_L | 3/26/2021  | - Initial model   |
|                | 6/9/2021   | - Model updated to extend contours out to Humeral head  |
|                | 12/17/2021 | - Model post-processing updated to address blocky contour shape for rotated patient.                          |
|                | 04/25/2023 | - Updated post-processing to address interpolation issues when multiple segments are found on the same slice. |
| BrachialPlex_R | 3/26/2021  | - Initial model   |
|                | 6/9/2021   | - Model updated to extend contours out to Humeral head  |
|                | 12/17/2021 | - Model post-processing updated to address blocky contour shape for rotated patient.                          |
|                | 04/25/2023 | - Updated post-processing to address interpolation issues when multiple segments are found on the same slice. |
| Brain          | 2/11/2021  | - Initial model   |
| Brainstem      | 2/11/2021  | - Initial model   |
|                | 12/05/2022 | - Added MR T1 model   |
| Breast_L       | 8/6/2021   | - Initial model. Supine model following RTOG consensus guidelines   |
| Breast_R       | 8/6/2021   | - Initial model. Supine model following RTOG consensus guidelines   |
| Bronchus       | 2/11/2021  | - Initial model   |

| BuccalMucosa    | 04/25/2023 | - Initial model  |
|-----------------|------------|--|
| Carina          | 2/11/2021  | - Initial model  |
| CaudaEquina     | 3/8/2021   | - Initial model  |
|                 | 6/9/2021   | -Updated model post processing to reduce false positive localization |
|                 | 04/25/2023 | - Updated model to use VB_L2 model for superior border determination |
| Cavity_Oral     | 2/11/2021  | - Initial model  |
| Cavity_Oral_Ext | 05/25/2022 | - Initial model  |
| Cerebellum      | 04/25/2023 | - Initial MR T1 model  |
| Chestwall_L     | 04/25/2023 | - Initial model following RTOG guidelines                            |
| Chestwall_R     | 04/25/2023 | - Initial model following RTOG guidelines                            |
| Chestwall_OAR   | 03/01/2022 | - Initial model  |
| Chestwall_RC_L  | 04/25/2023 | - Initial model following RADCOMP guidelines                         |
| Chestwall_RC_R  | 04/25/2023 | - Initial model following RADCOMP guidelines                         |
| Cochlea_L       | 2/11/2021  | - Initial model  |
|                 | 3/18/2021  | - New model using brain for localization                             |
| Cochlea_R       | 2/11/2021  | - Initial model  |
|                 | 3/18/2021  | - New model using brain for localization                             |
| Colon_Sigmoid   | 04/25/2023 | - Initial model  |
| Cornea_L        | 05/25/2022 | - Initial model  |
| Cornea_R        | 05/25/2022 | - Initial model  |
| Duodenum        | 04/25/2023 | - Initial model  |
| Ear_Internal_L  | 3/8/2021   | - Initial model  |
| Ear_Internal_R  | 3/8/2021   | - Initial model  |

| Esophagus       | 2/11/2021  | - Initial model  |
|-----------------|------------|--|
|                 | 5/5/2021   | - Updated the model to address missing slices                              |
| External        | 11/15/2021 | - Initial model  |
| Eye_L           | 2/11/2021  | - Initial model  |
|                 | 04/25/2023 | - Added MR T1 model  |
| Eye_R           | 2/11/2021  | - Initial model  |
|                 | 04/25/2023 | - Added MR T1 model  |
| Femur_L         | 2/11/2021  | - Initial model  |
| Femur_R         | 2/11/2021  | - Initial model  |
| Femur_Head_L    | 05/25/2022 | - Initial model  |
| Femur_Head_R    | 05/25/2022 | - Initial model  |
| Femur_RTOG_L    | 07/08/2021 | - Initial model. Inferior border defined by inferior aspect of the Ischium |
| Femur_RTOG_R    | 07/08/2021 | - Initial model. Inferior border defined by inferior aspect of the Ischium |
| Gallbladder     | 04/25/2023 | - Initial model  |
| Genitals_F      | 04/25/2023 | - Initial model  |
| Genitals_M      | 04/25/2023 | - Initial model  |
| Glnd_Lacrimal_L | 2/11/2021  | - Initial model  |
| Glnd_Lacrimal_R | 2/11/2021  | - Initial model  |
| GInd_Prostate   | 04/25/2023 | - Initial MR T2 model  |
| GInd_Submand_L  | 2/11/2021  | - Initial model  |
| GInd_Submand_R  | 2/11/2021  | - Initial model  |
| Glnd_Thyroid    | 3/8/2021   | - Initial model  |
|                 | 6/9/2021   | - Updated model post-processing to crop away from                          |

|                |              | A_Carotid and V_Jugular for contrast scans.                         |
|----------------|--------------|---|
| HDR_Cylinder   | 10/29/2021   | - Initial model   |
| Tibit_Cylinaei | 04/25/2023   | - Updated model to improve results on scans with a                  |
|                | U+/ ZJ/ ZUZ3 | limited FOV.  |
| Heart          | 2/11/2021    | - Initial model   |
|                | 11/15/2021   | - Updated model to address under-contouring when partially scanned. |
| Hippocampus_L  | 12/05/2022   | - Initial MR T1 Model   |
|                | 04/25/2023   | - Added CT model  |
| Hippocampus_R  | 12/05/2022   | - Initial MR T1 Model   |
|                | 04/25/2023   | - Added CT model  |
| Humerus_L      | 10/29/2021   | - Initial model   |
| Humerus_R      | 10/29/2021   | - Initial model   |
| Hypothalamus   | 04/25/2023   | - Initial MR T1 model includes mammillary bodies                    |
| Hypo_True      | 04/25/2023   | - Initial MR T1 model of true hypothalamus                          |
| Kidney_L       | 2/11/2021    | - Initial model   |
| Kidney_R       | 2/11/2021    | - Initial model   |
| Kidney_Outer_L | 11/15/2021   | - Initial model. Hilum removed.                                     |
| Kidney_Outer_R | 11/15/2021   | - Initial model. Hilum removed.                                     |
| Larynx         | 3/12/2021    | - Initial model   |
| Larynx_Glottic | 04/25/2023   | - Initial model   |
| Larynx_SG      | 04/25/2023   | - Initial model   |
| Larynx_NRG     | 04/25/2023   | - Initial model includes glottic and supraglottic larynx            |
| Lens_L         | 2/11/2021    | - Initial model   |
| Lens_R         | 2/11/2021    | - Initial model   |

| 09/17/2021 | - Initial model  |
|------------|--|
| 2/11/2021  | - Initial model  |
| 09/17/2021 | - Updated model to improve resolution and accuracy   |
| 11/15/2021 | - Updated model to address Liver overlap with Heart.   |
| 03/01/2022 | - Updated model to minimize false positive identification.   |
| 03/22/2022 | - Updated to prevent crash on partial scans leading Liver/Kidney models being returned as Not Found.   |
| 8/6/2021   | - Initial model. Level I, II, and III Left Axillary Lymph<br>Nodes following RTOG consensus guidelines.  |
| 8/6/2021   | - Initial model. Level I, II, and III Right Axillary Lymph<br>Nodes following RTOG consensus guidelines.   |
| 04/25/2023 | - Initial model  |
| 04/25/2023 | -Initial model Level II and III Left Axillary Lymph<br>Nodes following RTOG consensus guidelines   |
| 04/25/2023 | - Initial model Level II and III Right Axillary Lymph<br>Nodes following RTOG consensus guidelines   |
| 8/6/2021   | - Initial model. Left Internal Mammary Lymph Nodes following RTOG consensus guidelines   |
| 8/6/2021   | - Initial model. Right Internal Mammary Lymph Nodes following RTOG consensus guidelines  |
| 04/25/2023 | - Initial model following RADCOMP guidelines   |
| 04/25/2023 | - Initial model following RADCOMP guidelines   |
|            | 2/11/2021 09/17/2021 11/15/2021 03/01/2022  03/22/2022  8/6/2021  8/6/2021  04/25/2023  04/25/2023  04/25/2023  04/25/2023  04/25/2023  04/25/2023  04/25/2023  04/25/2023  04/25/2023 |

| 05/25/2022 | - Initial model  |
|------------|--|
| 05/25/2022 | - Initial model  |
| 10/29/2021 | - Initial model  |
| 10/29/2021 | - Initial model  |
| 12/17/2021 | - Initial model  |
| 10/29/2021 | - Initial model  |
| 10/29/2021 | - Initial model  |
| 05/25/2022 | - Initial model  |
| 05/25/2022 | - Initial model  |
| 04/25/2023 | - Initial model  |
| 04/25/2023 | - Initial model  |
| 10/29/2021 | - Initial model  |
| 04/25/2023 | - Initial model  |
|            | 05/25/2022<br>10/29/2021<br>12/17/2021<br>12/17/2021<br>12/17/2021<br>12/17/2021<br>12/17/2021<br>12/17/2021<br>12/17/2021<br>12/17/2021<br>10/29/2021<br>10/29/2021<br>10/25/2022<br>04/25/2023<br>10/29/2021<br>10/29/2021<br>10/29/2021<br>10/29/2021<br>10/29/2021<br>10/29/2021 |

| LN_Pelvics      | 5/15/2021  | - Initial model   |
|-----------------|------------|---|
| LN_Pelvics_NRG  | 05/25/2022 | - Initial model   |
|                 | 04/25/2023 | - Updated post-processing to crop out Bladder   |
| LN_Sclav_L      | 8/6/2021   | - Initial model. Left Supraclavicular Lymph Nodes following RTOG consensus guidelines |
| LN_Sclav_R      | 8/6/2021   | - Initial model. Left Supraclavicular Lymph Nodes following RTOG consensus guidelines |
| LN_Sclav_RC_L   | 04/25/2023 | - Initial model following RADCOMP guidelines  |
| LN_Sclav_RC_R   | 04/25/2023 | - Initial model following RADCOMP guidelines  |
| Lobe_Temporal_L | 04/25/2023 | - Initial model   |
| Lobe_Temporal_R | 04/25/2023 | - Initial model   |
| Lung_L          | 2/11/2021  | - Initial model   |
|                 | 5/5/2021   | - Updated the model to address under-contouring                                       |
|                 | 10/29/2021 | - Updated model to address over-contouring into Ribs, Heart, and Bronchus             |
|                 | 04/25/2023 | - Updated model to prevent false positive results outside the body.                   |
| Lung_R          | 2/11/2021  | - Initial model   |
|                 | 5/5/2021   | - Updated the model to address under-contouring                                       |
|                 | 10/29/2021 | - Updated model to address over-contouring into Ribs, Heart, and Bronchus             |
|                 | 04/24/202  | - Updated model to prevent false positive results outside the body.                   |
| Macula_L        | 05/25/2022 | - Initial model   |
| Macula_R        | 05/25/2022 | - Initial model   |
| Marrow_Ilium_L  | 12/17/2021 | - Initial model   |
| Marrow_Ilium_R  | 12/17/2021 | - Initial model   |
| Musc_Constrict  | 09/17/2021 | - Initial model   |

| Nipple_L     | 05/25/2022 | - Initial model   |
|--------------|------------|---|
| Nipple_R     | 05/25/2022 | - Initial model   |
| OpticChiasm  | 3/8/2021   | - Initial model   |
|              | 3/17/2021  | - Updated the model to address under-contouring                 |
|              | 12/05/2022 | - Added MR T1 model   |
| OpticNrv_L   | 2/11/2021  | - Initial model   |
|              | 12/05/2022 | - Added MR T1 model   |
| OpticNrv_R   | 2/11/2021  | - Initial model   |
|              | 12/05/2022 | - Added MR T1 model   |
| OpticTract_L | 04/25/2023 | - Initial MR T1 model   |
| OpticTract_R | 04/25/2023 | - Initial MR T1 model   |
| Pancreas     | 04/25/2023 | - Initial model   |
| Parotid_L    | 2/11/2021  | - Initial model   |
|              | 10/29/2021 | - Updated model to better include wrap around<br>Mandible       |
| Parotid_R    | 2/11/2021  | - Initial model   |
|              | 10/29/2021 | - Updated model to better include wrap around<br>Mandible       |
| PenileBulb   | 5/15/2021  | - Initial model   |
| Pericardium  | 04/25/2023 | - Initial model   |
| Pituitary    | 09/17/2021 | - Initial model   |
|              | 04/25/2023 | - Added MR T1 model   |
| Prostate     | 2/11/2021  | - Initial model   |
|              | 3/18/2021  | - updated localization model to improve results for short scans |
|              | 04/25/2023 | - Added MR T2 model   |
|              |            |   |

| Rectum      | 2/11/2021  | - Initial model   |
|-------------|------------|---|
|             | 10/29/2021 | - Updated model to remove HDR_Cylinder if found in the scan   |
| Rectum_F    | 04/25/2023 | - Initial model trained on Female Pelvis scans  |
| Retina_L    | 05/25/2022 | - Initial model   |
| Retina_R    | 05/25/2022 | - Initial model   |
| Rib         | 03/01/2022 | - Initial model   |
|             | 03/22/2022 | - Updated to prevent crash on partial scans resulting in contour Not Found.                         |
| Rib_L       | 05/25/2022 | - Initial model   |
| Rib_R       | 05/25/2022 | - Initial model   |
| SeminalVes  | 5/15/2021  | - Initial model   |
|             | 04/25/2023 | - Added MR T2 model   |
| SpinalCanal | 3/8/2021   | - Initial model   |
|             | 12/17/2021 | - Updated post-processing to eliminate inappropriate slice removal after false Brainstem detection. |
|             | 03/22/2022 | - Updated post-processing to minimize contours outside of canal                                     |
| SpinalCord  | 2/11/2021  | - Initial model   |
|             | 6/9/2021   | - Updated model to address possibility of missed detections.  |
|             | 07/08/2021 | - Updated model to reduce over-contouring at the base of the skull.                                 |
|             | 09/17/2021 | - Updated model to prevent partial segments from being contoured.                                   |
|             | 10/29/2021 | - Updated model to minimize slice gaps  |
|             | 12/17/2021 | - Updated post-processing to eliminate inappropriate slice removal after false Brainstem detection. |
|             | 04/25/2023 | - Updated post-processing to match updated  |

|              |            | CaudaEquina result at inferior border.    |
|--------------|------------|---|
| Spleen       | 03/01/2022 | - Initial model                           |
|              | 04/25/2023 | - Updated model to prevent cut-off issue. |
| Stomach      | 2/11/2021  | - Initial model                           |
|              | 04/25/2023 | - Updated model to improve accuracy.      |
| Trachea      | 3/17/2021  | - Initial model                           |
| UteroCervix  | 04/25/2023 | - Initial model                           |
| V_Venacava_I | 04/25/2023 | - Initial model                           |
| V_Venacava_S | 3/8/2021   | - Initial model                           |
| VB           | 04/25/2023 | - Initial model                           |
| VB_C1        | 04/25/2023 | - Initial model                           |
| VB_C2        | 04/25/2023 | - Initial model                           |
| VB_C3        | 04/25/2023 | - Initial model                           |
| VB_C4        | 04/25/2023 | - Initial model                           |
| VB_C5        | 04/25/2023 | - Initial model                           |
| VB_C6        | 04/25/2023 | - Initial model                           |
| VB_C7        | 04/25/2023 | - Initial model                           |
| VB_L1        | 04/25/2023 | - Initial model                           |
| VB_L2        | 04/25/2023 | - Initial model                           |
| VB_L3        | 04/25/2023 | - Initial model                           |
| VB_L4        | 04/25/2023 | - Initial model                           |
| VB_L5        | 04/25/2023 | - Initial model                           |
| VB_T01       | 04/25/2023 | - Initial model                           |
| VB_T02       | 04/25/2023 | - Initial model                           |

| VB_T03 | 04/25/2023 | - Initial model |
|--------|------------|-----------------|
| VB_T04 | 04/25/2023 | - Initial model |
| VB_T05 | 04/25/2023 | - Initial model |
| VB_T06 | 04/25/2023 | - Initial model |
| VB_T07 | 04/25/2023 | - Initial model |
| VB_T08 | 04/25/2023 | - Initial model |
| VB_T09 | 04/25/2023 | - Initial model |
| VB_T10 | 04/25/2023 | - Initial model |
| VB_T11 | 04/25/2023 | - Initial model |
| VB_T12 | 04/25/2023 | - Initial model |