Supplementary Material

# Supplementary Tables

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|  | **Augmentations** | **Postprocessing steps** | **Matrix** | **Number of filters** | **Epochs** | **Pool depth** | **Patience** **for early stopping** |
| **offline** | **online** |
| **head-and-neck body** | gradual darkening | 2D shift, gauss | 2D hole fill, largest CC | [512, 512] | 4 | 30 | 6 | 10 |
| **whole brain** | doubling brainstem slices, gradual darkening | 2D shift, 2D zoom | 2D hole fill, largest CC | [512, 512] | 4 | 75 | 6 | 30 |
| **pelvis body** | L/R flip, deharmonization |  | 2D hole fill, largest CC, 2D closing | [320, 320] | 4 | 30 | 6 | 10 |
| **bowel bag** | deharmonization, L/R flip |  | 2D hole fill, largest CC | [512, 512] | 16 | 30 | 6 | 10 |

Table S: Parameters of the 2D segmentation models

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Augmentations** | **Matrix** | **Number of filters** | **Epochs** | **Pool depth** | **Patience for early stopping** |
| **offline** | **online** |
| **bladder** | deharmonization |  | [128, 128] | 16 | 75 | 4 | 30 |
| **femoral head**  | L/R flip | bias | [128, 128] | 16 | 75 | 4 | 30 |
| **prostate + seminal vesicles, rectum** | deharmonization, L/R flip | bias | [128, 128] | 16 | 75 | 4 | 30 |
| **prostate + urethra + penile bulb** | deharmonization | bias | [128, 128] | 16 | 75 | 4 | 30 |
| **brainstem, spinal cord** | organ elongation | gauss | [128, 128] | 16 | 75 | 4 | 30 |
| **chiasma, inner ear** | L/R flip |  | [256, 256] | 16 | 75 | 5 | 30 |
| **eye, lacrimal gl., lens, mandible, parotid gl., submandibular gl.** | L/R flip | gauss | [128, 128] | 16 | 75 | 4 | 30 |
| **Larynx SG., Larynx G.** | L/R flip |  | [128, 128] | 16 | 75 | 4 | 30 |
| **optic nerve** | L/R flip, organ elongation |  | [256, 256] | 16 | 75 | 5 | 30 |
| **oral cavity** |  | gauss | [128, 128] | 16 | 75 | 4 | 30 |
| **PCM (Sup., Mid., Inf.)** | L/R flip, organ elongation |  | [256, 256] | 16 | 75 | 5 | 30 |
| **pituitary** |  |  | [256, 256] | 16 | 75 | 5 | 30 |

Table S: Parameters of the 2D localizer models – abbreviations: gl. – gland, G. – glottic, SG. – supraglottic, PCM – pharyngeal constrictor muscle, Sup. – superior, Mid. – middle, Inf. – inferior

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Augmentations** | **Postprocessing step** | **Matrix****(Z, Y, X)** | **Bounding box(Z, Y, X)** |
| **offline** | **online** |
| **bladder** | deharmonization |  | 2D closing | [256, 256, 256] | [88, 112, 104] |
| **femoral head** | L/R flip | bias | 2D closing | [256, 256, 256] | [136, 88, 96] |
| **prostate** | deharmonization, L/R flip | bias | 2D closing | [256, 256, 256] | [56, 64, 72] |
| **rectum** | deharmonization, L/R flip | bias | 2D closing | [256, 256, 256] | [136, 80, 72] |
| **prostate + urethra + penile bulb** | deharmonization | bias | 2D closing | [256, 256, 256] | [80, 64, 72] |
| **brainstem** |  | gauss, brighten consecutive slices | 2D closing | [256, 256, 256] | [96, 64, 72] |
| **chiasma** | L/R flip | 3D zoom | 2D dilation | [256, 512, 512] | [32, 64, 72] |
| **eye** | L/R flip | gauss | 2D closing | [256, 256, 256] | [48, 48, 48] |
| **inner ear** | L/R flip |  |  | [256, 512, 512] | [40, 56, 56] |
| **lacrimal gl.** | L/R flip | gauss |  | [256, 512, 512] | [56, 80, 88] |
| **Larynx SG.** | L/R flip |  | 2D closing | [256, 256, 256] | [80, 80, 72] |
| **Larynx G.** | L/R flip |  |  | [256, 512, 512] | [48, 88, 96] |
| **lens**  | L/R flip | gauss |  | [256, 512, 512] | [48, 80, 80] |
| **mandible** | L/R flip | gauss | 2D closing | [256, 256, 256] | [144, 136, 96] |
| **optic nerve** | L/R flip | 3D shift | 2D dilation | [256, 512, 512] | [40, 120, 104] |
| **oral cavity** |  | gauss | 2D closing | [256, 256, 256] | [128, 120, 88] |
| **parotid gl.** | L/R flip | gauss | 2D closing | [256, 256, 256] | [112, 104, 80] |
| **Sup. PCM** | L/R flip |  | 2D closing | [256, 256, 256] | [80, 56, 88] |
| **Mid. PCM** | L/R flip |  | 2D closing | [256, 256, 256] | [88, 56, 80] |
| **Inf. PCM** | L/R flip |  | 2D closing | [256, 256, 256] | [80, 48, 72] |
| **pituitary** |  | gauss |  | [256, 512, 512] | [32, 56, 56] |
| **superior spinal cord** |  | gauss, 3D zoom, 3D shift | 2D closing | [256, 256, 256] | [160, 104, 40] |
| **submandibular gl.**  | L/R flip | gauss |  | [256, 512, 512] | [80, 104, 96] |

Table S: Parameters of the 3D segmentation models - abbreviations: gl. – gland, G. – glottic, SG. – supraglottic, PCM – pharyngeal constrictor muscle, Sup. – superior, Mid. – middle, Inf. - inferior