Interactive Atlas of CT-Based Human Anatomy

Editors

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Interactive Atlas of CT-Based Human Anatomy

Chapter 1 The Head & Neck

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Introduction

The Interactive Atlas of CT-Based Human Anatomy is designed to assist students, physicians and other clinical professionals to learn or review the interpretation of computed tomography (CT) images and therefore, cross-sectional anatomy. The atlas also provides a strong anatomical reference for clinical practitioners.

Most of the images are axial and include the major anatomical structures of the musculoskeletal, cardiovascular, respiratory, digestive, genitourinary, reproductive, nervous, endocrine, and lymphatic systems. These images are supplemented by synchronized frontal, sagittal, and three dimensional images. The images are organized into two sets. One set contains all body systems except the lymphatic system. The other set includes the cardiovascular system and lymph node regions. Each labeled CT image is preceded by an unlabeled version of the same image. This format allows the reader to continuously test or review his or her knowledge.

An understanding of cross-sectional anatomy and the ability to properly interpret CT images is essential in nearly all fields of medicine. This atlas utilizes an intuitive format that encourages learning and review as well as serves as a basic anatomy reference. The PDF format of this atlas enables download to minimize internet requirement, stores and travels easily with user-friendly note taking and self-assessment capabilities.

The images were generated using the Varian Eclipse radiation therapy treatment program* in the University of Massachusetts Medical School Radiation Oncology Department. Physicians, an anatomist, and other multi-disciplinary medical professionals reviewed the content of each slide before the final images were generated.

Disclaimer

The anatomical content of each image was reviewed by practicing medical professionals prior to the creation of each image. Each image was ultimately created by Ronald N. Bogdasarian and thus any error that might be present should not be attributed to any of the reviewers. The author and reviewers are not responsible for any use of this atlas by third parties.

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*Eclipse, Varian Corp., Palo Alto, California. <http://www.varian.com/>. 12/22/2010.

Preface

Interactive Learning

The Interactive Atlas of CT-Based Human Anatomy is designed to engage users at multiple levels of learning. Through the continuous mental review of the labeled images with comparison to the unlabeled images, the user can improve his or her ability to identify anatomical structures and interpret the computer tomography (CT) images. Active participation by the user in these exercises with real life data, the opportunity to reflect on the information and self-assessment of the knowledge acquired provides active learning.

Active Segmentation

Another option for interactive learning is through the personal use of segmentation software. Segmentation is the active outlining of anatomical structures using computer software. Radiation therapy treatment planning systems, such as the one used for creation of this atlas, are not always available to students. The conception of segmentation and three dimensional rendering modules in free programs such as ITK-SNAP* has made this system of learning accessible to all who are interested. This Atlas can serve as a virtual prosection for comparison with the user's own work. Learning is greatest when students draw themselves. Students at the University of Massachusetts Medical School have reported that this tool is the most effective way to learn to read CT scans they have found, and comparison of their drawings to these labeled images allows for testing of accuracy.

Interactive learning is vital to the success of the medical student or any other medical professional. It is essential to use efficient, engaging learning methods with constant testing of knowledge. The Interactive Atlas of CT-Based Human Anatomy provides such a resource.

*ITK-SNAP download: <http://www.itksnap.org/pmwiki/pmwiki.php?n=Main.Downloads>.

Future Versions of this Atlas

This Atlas was designed to offer full web-based interactivity. However, resources are not yet available to execute this plan. This version uses a pseudo-activation format. Each unlabeled image is followed by a labeled image which allows the user to continuously test his or her knowledge. Users may create comment boxes on each page to record personal answers and notes. To create a comment box, right click within the atlas image and select “add sticky note”.

Future versions of this Atlas will permit greater levels of interactivity. We plan to build links on the anatomical structures in order to view their names. We hope to offer users the ability to type and save their own notes directly on slides. Dedicated areas for notes will be integrated into each page. We have found that this level of interactivity improves recall and retention.

Another level of interactivity would allow the user to outline anatomical structures him or herself and compare them to these images as pro-sections. As indicated on the previous page, this can be accomplished now by downloading a segmentation tool and obtaining a CT image set of the relevant body part, or by using a radiation therapy treatment planning system. We have found this active learning process is the best way students at all levels - allied health professionals, medical students and residents - can learn normal CT anatomy and more efficiently recognize the abnormal.

This current pseudo-activated version of the atlas could easily be converted to print and has practical utility for students and medical professionals. The next iteration would encompass full web based activation with more integrated learning opportunities. We are currently seeking funding to achieve these goals.

Acknowledgements

**I would like to thank the University of
Massachusetts Medical School Radiation Oncology
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for providing me with the opportunity, advice,
support, and resources to complete this project.**

Chapter 1

The Head & Neck

Ronald N. Bogdasarian, Andrew Chen, Richard S. Pieters,
TJ FitzGerald

Contents

Three Dimensional

Skeletal System

Muscular System

Vascular System

Digestive and Respiratory Systems

Nervous System

Lymphatic System

Two Dimensional

Frontal

Sagittal

Axial (All Structures)

Axial (Lymphatic System)

References

Age of Subject: 17

Reviewed By:

Richard Gacek, MD

David Goff, MD

Alan Stark, MD

Of the University of Massachusetts Medical
School

Ozan Toy, BA

Skeletal System Anterior View

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- 21.
- 22.
- 23.
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- 25.
- 26.
- 27.

R

L

Skeletal System Anterior View

1. 7th Cervical Vertebra (Body)
2. 7th Cervical Vertebra (Transverse Process)
3. Clavicle (Acromial End)
4. Clavicle (Sternal End)
5. Cricoid Cartilage
6. Ethmoid Bone (Nasal Septum)
7. Ethmoid Bone (Orbital Plate)
8. Frontal Bone
9. Humerus (Head)
10. Inferior Nasal Concha Bone
11. Lacrimal Bone
12. Mandible (Body)
13. Mandible (Ramus)
14. Maxilla Bone
15. Nasal Bone
16. Parietal Bone
17. 1st Rib
18. Scapula (Acromion)
19. Scapula (Coracoid Process)

20. Sphenoid Bone (Greater Wing)
21. Sphenoid Bone (Lesser Wing)
22. Sternum (Manubrium)
23. Temporal Bone (Mastoid Process)
24. Temporal Bone (Squamous Part)
25. 1st Thoracic Vertebra (Body)
26. Thyroid Cartilage
27. Zygomatic Bone

Skeletal System Posterior View

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.

Skeletal System Posterior View

1. 1st Cervical Vertebra (Posterior Arch)
2. 2nd Cervical Vertebra (Odontoid Process)
3. Clavicle (Acromial End)
4. Humerus (Head)
5. Mandible (Ramus)
6. Occipital Bone (External Occipital Protuberance)
7. Parietal Bone
8. 1st Rib
9. Scapula (Spine)
10. Temporal Bone (Mastoid Process)
11. 1st Thoracic Vertebra (Lamina)

**Muscular System Anterior
View**

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.

**Muscular System Anterior
View**

1. Deltoid Muscle
2. Inferior Rectus Muscle
3. Lateral Rectus Muscle
4. Masseter Muscle
5. Medial Rectus Muscle
6. Pectoralis Major Muscle
7. Platysma Muscle
8. Sternocleidomastoid Muscle
9. Sternohyoid Muscle
10. Sternothyroid Muscle
11. Superior Oblique Muscle
12. Superior Rectus Muscle
13. Temporalis Muscle
14. Trapezius Muscle

Deep Muscular System **Anterior View**

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.

R

L

Removed Structures Relative to Slide 6: The Deltoid, Pectoralis Major, Platysma, Sternocleidomastoid, and Sternohyoid Muscles.

Deep Muscular System

Anterior View

1. Biceps Brachii Short Head Tendon
2. Levator Scapulae Muscle
3. Omohyoid Muscle
4. Pectoralis Minor Muscle
5. Scalene Anterior Muscle
6. Scalene Middle and Posterior Muscles
7. Sternothyroid Muscle
8. Subclavius Muscle
9. Subscapularis Muscle
10. Supraspinatus Muscle
11. Serratus Anterior Muscle
12. Trapezius Muscle

Removed Structures Relative to Slide 6: The Deltoid, Pectoralis Major, Platysma, Sternocleidomastoid, and Sternohyoid Muscles.

Musculoskeletal System
Posterior View

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.

Musculoskeletal System

Posterior View

1. Deltoid Muscle
2. Infraspinatus Muscle
3. Levator Scapulae Muscle
4. Nuchal Ligament
5. Rhomboid Muscle
6. Splenius Capitis Muscle
7. Splenius Cervicis Muscle
8. Sternocleidomastoid Muscle
9. Supraspinous Ligament
10. Teres Major Muscle
11. Trapezius Muscle

Deep Muscular System
Posterior View

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.

Removed Structures Relative to Slide 10: The Nuchal and Supraspinatus Ligaments. The Deltoid, Platysma, Rhomboid, Semispinalis Capitis, Splenius Capitis, Sternocleidomastoid, and Trapezius Muscles.

Deep Muscular System

Posterior View

1. Digastric Muscle
2. Inferior Obliquus Capitis Muscle
3. Infraspinatus Muscle
4. Levator Scapulae Muscle
5. Longissimus Capitis Muscle
6. Rectus Capitis Posterior Major Muscle
7. Rectus Capitis Posterior Minor Muscle
8. Splenius Cervicis Muscle
9. Superior Obliquus Capitis Muscle
10. Supraspinatus Muscle
11. Teres Major Muscle
12. Transversospinalis Muscles

Removed Structures Relative to Slide 10: The Nuchal and Supraspinatus Ligaments. The Deltoid, Platysma, Rhomboid, Semispinalis Capitis, Splenius Capitis, Sternocleidomastoid, and Trapezius Muscles.

Vascular System Anterior View

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.

R

L

Vascular System Anterior View

1. Anterior Jugular Vein
2. Brachiocephalic Trunk
3. Brachiocephalic Vein
4. Common Carotid Artery
5. External Jugular Vein
6. External Carotid Artery
7. Facial Vein
8. Internal Carotid Artery
9. Internal Jugular Vein
10. Subclavian Artery
11. Subclavian Vein
12. Transverse Cervical Vein
13. Vertebral Artery

**Vascular System Posterior
View**

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
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- 10.
- 11.
- 12.
- 13.

L

R

Vascular System Posterior View

1. Aortic Arch
2. Brachiocephalic Trunk
3. Brachiocephalic Vein
4. Common Carotid Artery
5. External Jugular Vein
6. External Carotid Artery
7. Facial Vein
8. Internal Carotid Artery
9. Internal Jugular Vein
10. Subclavian Artery
11. Subclavian Vein
12. Transverse Cervical Vein
13. Vertebral Artery

**Digestive and Respiratory
Systems Anterior View**

Digestive System

- 1.
- 2.
- 3.
- 4.

Musculoskeletal System

- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Respiratory System

- 11.
- 12.
- 13.
- 14.

Note: The Digestive and Respiratory Systems are shown together in the Head and Neck because of their overlapping and closely related structures. The muscles of the tongue and the tonsils are also included.

**Digestive and Respiratory
Systems Posterior View**
Digestive System

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Immune System

- 7.

Musculoskeletal System

- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.

Respiratory System

- 15.
- 16.
- 17.
- 18.
- 19.
- 20.

Note: The Digestive and Respiratory Systems are shown together in the Head and Neck because of their overlapping and closely related structures. The muscles of the tongue and the tonsils are also included.

Digestive and Respiratory Systems Posterior View

Digestive System

1. Epiglottis (Behind Laryngopharynx)
2. Esophagus
3. Parotid Gland
4. Soft Palate (Behind Nasopharynx)
5. Submandibular Gland
6. Uvula (Behind Oropharynx)

Immune System

7. Palatine Tonsil

Musculoskeletal System

8. Arytenoid Cartilage
9. Corniculate Cartilage
10. Cricoid Cartilage
11. Thyroid Cartilage
12. Hyoglossus Muscle
13. Mylohyoid Muscle
14. Tongue Dorsum

Respiratory System

15. Laryngopharynx
16. Lung
17. Nasopharynx
18. Oropharynx
19. Piriform Fossa
20. Trachea

Note: The Digestive and Respiratory Systems are shown together in the Head and Neck because of their overlapping and closely related structures. The muscles of the tongue and the tonsils are also included.

Nervous System Anterior View

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.

R

L

Nervous System Anterior View

1. Cerebellum
2. Cerebrum
3. Cochlea
4. Eye Globe
5. Lens
6. Medulla Oblongata
7. Optic Chiasm
8. Optic Nerve
9. Pituitary Gland
10. Pons
11. Retina
12. Spinal Cord

R

L

Deep Nervous System Anterior View

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.

Removed Structures Relative to Slide 22: The Eye, Cerebrum, and Cochlea Structures.

Deep Nervous System Anterior View

1. Cerebellum
2. Corpus Callosum
3. Hypothalamus
4. Lateral Ventricle
5. Medulla Oblongata
6. Midbrain
7. Optic Chiasm
8. Optic Nerve
9. Pituitary Gland
10. Pons
11. Thalamus
12. Spinal Cord

Removed Structures Relative to Slide 22: The Eye, Cerebrum, and Cochlea Structures.

Nervous System Posterior View

- 1.
- 2.
- 3.

Nervous System Posterior View

1. Cerebellum
2. Cerebrum
3. Spinal Cord

Deep Nervous System **Posterior View**

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.

Removed Structures Relative to Slide 26: The Cerebellum, Cerebrum, and Cochlea Structures.

Deep Nervous System

Posterior View

1. Corpus Callosum
2. Eye Globe
3. Lateral Ventricle
4. Medulla Oblongata
5. Midbrain
6. Optic Nerve
7. Pineal Body
8. Pons
9. Retina
10. Spinal Cord
11. Thalamus
12. 3rd Ventricle
13. 4th Ventricle

Removed Structures Relative to Slide 26: The Cerebellum, Cerebrum, and Cochlea Structures.

Lymphatic System Anterior View

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.

Note: Only the head and neck lymph node levels are included in this three-dimensional image. Use the two dimensional axial images to view descriptive names of lymph node regions. The major arteries and veins of the head and neck are included in this image to show their spatial relationship with the Lymph Node Regions. <http://www.ajronline.org/doi/pdf/10.2214/ajr.174.3.1740837> is an excellent resource to understand better the lymphatic drainage of the head and neck.

Lymphatic System Anterior View

1. Head & Neck Level 1A
2. Head & Neck Level 1B
3. Head & Neck Level 2A
4. Head & Neck Level 2B
5. Head & Neck Level 3
6. Head & Neck Level 4
7. Head & Neck Level 5
8. Head & Neck Level 6
9. Retropharyngeal

Note: Only the head and neck lymph node levels are included in this three-dimensional image. Use the two dimensional axial images to view descriptive names of lymph node regions. The major arteries and veins of the head and neck are included in this image to show their spatial relationship with the Lymph Node Regions. <http://www.ajronline.org/doi/pdf/10.2214/ajr.174.3.1740837> is an excellent resource to understand better the lymphatic drainage of the head and neck.

Lymphatic System Posterior View

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

Note: Only the head and neck lymph node levels are included in this three-dimensional image. Use the two dimensional axial images to view descriptive names of lymph node regions. The major arteries and veins of the head and neck are included in this image to show their spatial relationship with the Lymph Node Regions. <http://www.ajronline.org/doi/pdf/10.2214/ajr.174.3.1740837> is an excellent resource to understand better the lymphatic drainage of the head and neck.

Lymphatic System Posterior View

1. Head & Neck Level 1B
2. Head & Neck Level 2A
3. Head & Neck Level 2B
4. Head & Neck Level 3
5. Head & Neck Level 4
6. Head & Neck Level 5
7. Head & Neck Level 6
8. Retropharyngeal

Note: Only the head and neck lymph node levels are included in this three-dimensional image. Use the two dimensional axial images to view descriptive names of lymph node regions. The major arteries and veins of the head and neck are included in this image to show their spatial relationship with the Lymph Node Regions. <http://www.ajronline.org/doi/pdf/10.2214/ajr.174.3.1740837> is an excellent resource to understand better the lymphatic drainage of the head and neck.

Digestive System

- 1.
- 2.

Musculoskeletal System

- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.

Nervous System

- 13.
- 14.
- 15.

Respiratory System

- 16.

R

L

Digestive System

1. First Molar

2. Sublingual Gland

Musculoskeletal System

3. Ethmoid Sinus (Air Cells)

4. Frontal Bone (Orbital Surface)

5. Mandible (Body)

6. Maxillary Sinus

7. Zygomatic Bone (Orbital Surface)

8. Digastric Muscle

9. Genioglossus Muscle

10. Geniohyoid Muscle

11. Mylohyoid Muscle

12. Tongue Muscle

Nervous System

13. Cerebrum (Frontal Lobe)

14. Eye Globe

15. Retina

Respiratory System

16. Inferior Nasal Concha
(Turbinate)

R

L

Cardiovascular System

- 1.
- 2.

Musculoskeletal System

- 3.
- 4.
- 5.
- 6.
- 7.

Nervous System

- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.

R

L

Cardiovascular System

1. Common Carotid Artery
2. Internal Jugular Vein

Musculoskeletal System

3. 1st Cervical Vertebra (Transverse Process)
4. 2nd Cervical Vertebra (Odontoid Process)
5. Occipital Bone (Foramen Magnum)

6. Parietal Bone
7. Temporal Bone (Squamous Part)

Nervous System

8. Cerebrum (Temporal Lobe)
9. Cochlea
10. Corpus Collosum
11. Lateral Ventricle (Body)
12. Midbrain
13. Pons
14. Thalamus
15. 3rd Ventricle

R

L

Digestive System

1.

Musculoskeletal System

2.

3.

4.

5.

Nervous System

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

Digestive System

1. Esophagus

Musculoskeletal System

2. 5th Cervical Vertebra (Body)

3. Temporal Sinus (Mastoid Air Cells)

4. Scalene Middle and Posterior Muscles

5. Sternocleidomastoid Muscle

Nervous System

6. Cerebellum

7. Cerebrum

8. Corpus Collosum (Splenum)

9. Lateral Ventricle (Body and temporal horn)

10. Medulla Oblongata

11. Midbrain

12. Pineal Body

13. Spinal Cord

14. Thalamus

15. 4th Ventricle

Cardiovascular System

1.

Digestive System

2.

Musculoskeletal System

3.

4.

5.

6.

7.

8.

9.

10.

11.

Nervous System

12.

13.

13.

P

A

Cardiovascular System

1. Internal Jugular Vein

Digestive System

2. 3rd Molar

Musculoskeletal System

3. Clavicle (Body)

4. Frontal Sinus

5. Maxillary Sinus

6. Parietal Bone

7. Sphenoid Bone (Greater Wing)

8. Lateral Pterygoid Muscle

9. Medial Pterygoid Muscle

10. Platysma Muscle

Nervous System

11. Cochlea

12. Eye Lens

13. Retina

P

A

Cardiovascular System

- 1.
- 3.

Musculoskeletal System

- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.

Nervous System

- 12.
- 13.

P

A

Cardiovascular System

1. Common Carotid Artery
2. External Carotid Artery
3. Internal Carotid Artery

Musculoskeletal System

4. 7th Cervical Vertebra (Transverse Process)
5. Sphenoid Bone (Pterygoid Process – Lateral Plate)
6. Parietal Bone
7. Inferior Rectus Muscle
8. Mylohyoid Muscle
9. Semispinalis Capitis Muscle
10. Splenius Capitis Muscle
11. Trapezius Muscle

Nervous System

12. Optic Nerve
13. Retina

P

A

Musculoskeletal System

1.

Nervous System

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

Respiratory System

16.

17.

18.

P

A

Musculoskeletal System

1. Sphenoid Bone (Sella Turcica)

Nervous System

2. Cerebellum

3. Cerebrum (Frontal Lobe)

4. Corpus Collosum (Genu)

5. Falx Cerebri (Dura Mater)

6. Hypothalamus

7. Lateral Ventrical (Anterior Horn)

8. Medulla Oblongata

9. Midbrain

10. Optic Chiasm

11. Pons

12. Spinal Cord

13. Thalamus

14. 4th Ventricle

Respiratory System

15. Laryngopharynx

16. Nasopharynx

17. Oropharynx

18. Trachea

P

A

Musculoskeletal System

- 1.
- 2.
- 3.
- 4.

R

L

Musculoskeletal System

1. Coronal Suture
2. Frontal Bone
3. Parietal Bone
4. Sagittal Suture

R

L

<u>Cardiovascular System</u>	8.
1.	9.
<u>Musculoskeletal System</u>	
2.	
3.	
4.	
5.	
<u>Nervous System</u>	
6.	
7.	

R

L

Cardiovascular System

1. Superior Sagittal Sinus

Musculoskeletal System

2. Falx Cerebri

3. Frontal Bone

4. Parietal Bone

5. Temporalis Muscle

Nervous System

6. Cerebral Cortex

(Frontal Lobe)

7. Central Sulcus

8. Precentral Gyrus

9. Postcentral Gyrus

R

L

Cardiovascular System

- 1.
- 2.

Musculoskeletal System

- 3.
- 4.
- 5.
- 6.

Nervous System

- 7.
- 8.

Cardiovascular System

1. Lateral Ventricle (Body)
2. Superior Sagittal Sinus

Musculoskeletal System

3. Frontal Bone
4. Frontal Sinus
5. Parietal Bone
6. Temporalis Muscle

Nervous System

7. Cerebral Cortex (Frontal Lobe)
8. Corpus Callosum (Body)

The sinuses of the head, including the Frontal, Sphenoid, Maxillary, Ethmoid and Mastoid sinuses, are included in the musculoskeletal lists of this atlas due to their bony walls. They also function as parts of the respiratory system. Sinuses act to filter and warm inspired air, modulate the voice and reduce the weight of the head.

Cardiovascular System

1.

Musculoskeletal System

2.

3.

4.

Nervous System

5.

6.

Cardiovascular System

1. Lateral Ventricle (Body)

Musculoskeletal System

2. Frontal Bone (Temporal Fossa)

3. Parietal Bone (Temporal Fossa)

4. Temporalis Muscle

Nervous System

5. Cerebral Cortex (Frontal Lobe)

6. Corpus Callosum (Genu)

R

L

Cardiovascular System

1.

Musculoskeletal System

2.

3.

4.

5.

Nervous System

6.

7.

R

L

Cardiovascular System

1. Lateral Ventricle
(Choroid Plexus)

Musculoskeletal System

2. Falx Cerebri
3. Frontal Bone (Crest,
Posterior Shelf)
4. Occipital Bone
5. Parietal Bone

Nervous System

6. Cerebral Cortex (Parietal
Lobe)
7. Corpus Callosum
(Splenum)

R

L

Cardiovascular System

1.
2.

Musculoskeletal System

3.
4.
5.

Nervous System

6.

7.

8.

R

L

Cardiovascular System

- 1. Lateral Ventricle
- 2. 3rd Ventricle

Musculoskeletal System

- 3. Frontal Bone
- 4. Occipital Bone
- 5. Parietal Bone

Nervous System

- 6. Cerebral Cortex (Frontal Lobe)

7. Corpus Callosum

8. Thalamus

R

L

Cardiovascular System

- 1.
- 2.

Musculoskeletal System

- 3.
- 4.
- 5.
- 6.
- 7.

Nervous System

- 8.
- 9.

R

L

Cardiovascular System

- 1. Lateral Ventricle
- 2. 3rd Ventricle

Musculoskeletal System

- 3. Frontal Bone
- 4. Frontal Sinus
- 5. Occipital Bone
- 6. Parietal Bone
- 7. Temporal Bone (Squamous Part)

Nervous System

- 8. Cerebral Cortex (Frontal Lobe)
- 9. Thalamus

R

L

Cardiovascular System

- 1.
- 2.

Endocrine System

- 3.
- 4.

Musculoskeletal System

- 5.
- 6.

7.

8.

9.

10.

11.

Nervous System

12.

13.

14.

R

L

Cardiovascular System

1. Lateral Ventricle (Posterior Horn)

2. 3rd Ventricle

Endocrine System

3. Hypothalamus

4. Pineal Gland

Musculoskeletal System

5. Ethmoid Bone (Crista Galli)

6. Frontal Bone (Orbital Surface)

7. Occipital Bone

8. Parietal Bone

9. Squamous Suture

10. Sphenoid Bone (Greater Wing)

11. Temporal Bone (Squamous Part)

Nervous System

12. Cerebral Cortex (Frontal Lobe)

13. Corpus Callosum

14. Thalamus

R

L

Cardiovascular System

1.

2.

Endocrine System

3.

Immune System

4.

Musculoskeletal System

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

Nervous System

15.

16.

17.

18.

19.

20.

R

L

Cardiovascular System

- 1. Cerebral Aqueduct
- 2. Superior Sagittal Sinus

Endocrine System

- 3. Hypothalamus

Immune System

- 4. Lacrimal Gland

Musculoskeletal System

- 5. Ethmoid Bone (Crista Galli)
- 6. Frontal Bone
- 7. Lambdoid Suture
- 8. Occipital Bone
- 9. Parietal Bone
- 10. Sphenoid Bone (Greater Wing)
- 11. Temporal Bone (Squamous Part)
- 12. Superior Oblique Muscle
- 13. Superior Rectus Muscle
- 14. Temporalis Muscle

Nervous System

- 15. Cerebellum
- 16. Cerebral Cortex (Parietal Lobe)
- 17. Eye Globe
- 18. Midbrain
- 19. Retina
- 20. Thalamus

R

L

Cardiovascular System

1.

2.

Endocrine System

3.

Immune System

4.

Musculoskeletal System

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

Nervous System

17.

18.

19.

20.

21.

22.

23.

R

L

Cardiovascular System

- 1. Lateral Ventricle
- 2. 3rd Ventricle

Endocrine System

- 3. Hypothalamus

Immune System

- 4. Lacrimal Gland

Musculoskeletal System

- 5. Ethmoid Bone (Cribriform Plate)

- 6. Ethmoid Bone (Orbital plate)

- 7. Frontal Bone

- 8. Lacrimal Bone

- 9. Nasal Bone

- 10. Occipital Bone

- 11. Parietal Bone

- 12. Sphenoid Bone (Greater Wing)

- 13. Sphenoid Bone (Lesser Wing)

- 14. Temporal Bone (Squamous Part)

- 15. Superior Rectus Muscle

- 16. Superior Oblique Muscle

Nervous System

- 17. Cerebellum

- 18. Cerebral Cortex (Frontal Lobe)

- 19. Eye Globe

- 20. Midbrain

- 21. Retina

- 22. Cerebral Cortex (Temporal Lobe)

- 23. Thalamus

R

L

Cardiovascular System

- 1.
- 2.

Endocrine System

- 3.
- 4.

Musculoskeletal System

- 5.
- 6.

- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.

Nervous System

- 15.
- 16.
- 17.
- 18.

Cardiovascular System

1. Cerebral Aqueduct
2. Lateral Ventricular (Inferior Horn)

Endocrine System

3. Hypothalamus
4. Pituitary Stalk (Infundibulum)

Musculoskeletal System

5. Ethmoid Bone (Cribriform Plate)
6. Ethmoid Sinus (Air Cells)

7. Frontal Bone

8. Lacrimal Bone

9. Nasal Bone

10. Occipital Bone

11. Parietal Bone

12. Sphenoid Bone (Greater Wing)

13. Sphenoid Bone (Dorsum Sellae)

14. Temporal Bone (Squamous Part)

Nervous System

15. Cerebellum

16. Cerebral Cortex (Occipital Lobe)

17. Midbrain

18. Optic Nerve

Endocrine System

1.

Musculoskeletal System

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

Nervous System

15.

16.

17.

18.

Endocrine System

- ### 1. Pituitary Stalk (Infundibulum)

Musculoskeletal System

2. Ethmoid Bone (Septum)
3. Frontal Bone
4. Lacrimal Bone
5. Maxilla Bone (Frontal Process)
6. Nasal Bone

7. Occipital Bone (Crest)
8. Parietal Bone
9. Sphenoid Bone (Optic Canal)
10. Sphenoid Bone (Tuberculum Sellae)
11. Temporal Bone (Squamous Part)
12. Zygomatic Bone (Frontal process)

- ### 13. Lateral Rectus Muscle

- ## 14. Medial Rectus Muscle

Nervous System

15. Cerebellum
16. Cerebral Cortex (Temporal Lobe)
17. Lens
18. Optic Nerve

Endocrine System

1.

Musculoskeletal System

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

Nervous System

13.

14.

15.

16.

17.

R

L

Endocrine System

- ## 1. Pituitary Gland

Musculoskeletal System

- ## 2. Ethmoid Sinus (Air Cells)

- ### 3. Lacrimal Bone

- #### 4. Maxilla Bone (Frontal Process)

- ## 5. Nasal Bone

- ## 6. Occipital Bone (Crest)

- ## 7. Parietal Bone

- ## 8. Sphenoid Bone (Sella Turcica)

- ## 9. Sphenoid Sinus

- 10. Zygomatic Bone (Frontal process)**

- ## 11. Lateral Rectus Muscle

- ## 12. Medial Rectus Muscle

Nervous System

- ### 13. Cerebellum

- ## 14. Cerebral Cortex (Occipital Lobe)

- ## 15. Lens

- ## 16. Pons

- ## 17. Retina

Endocrine System

1.

Musculoskeletal System

2.

3.

4.

5.

6.

7.

8.

9.

10.

Nervous System

11.

12.

13.

Endocrine System

1. Pituitary Gland

Musculoskeletal System

2. Ethmoid Bone (Orbital Plate)

3. Lacrimal Bone

4. Maxilla Bone (Frontal Process)

5. Nasal Bone

6. Occipital Bone (Crest)

7. Parietal Bone at the Pterion

8. Sphenoid Bone (Sella Turcica)

9. Zygomatic Bone (Frontal process)

10. Temporalis Muscle

Nervous System

11. Cerebellum

12. Cerebral Cortex (Temporal Lobe)

13. Optic Nerve

<u>Cardiovascular System</u>		<u>Respiratory System</u>	
1.	9.	17.	
2.	10.		
3.	11.		
<u>Musculoskeletal System</u>	<u>Nervous System</u>		
4.	13.		
5.	14.		
6.	15.		
7.	16.		
8.

R

L

Cardiovascular System

1. Cerebral Aqueduct
2. Internal Carotid Artery
3. Superior Sagittal Sinus

Musculoskeletal System

4. Ethmoid Bone (Middle Nasal Concha or Turbinate)
5. Lacrimal Bone
6. Maxilla Bone (Frontal Process)

7. Occipital Bone (Crest)

8. Parietal Bone

9. Sphenoid Bone (Greater Wing)

10. Temporal Bone (Petrous Part)

11. Zygomatic Bone (Orbital Surface)

12. Inferior Rectus Muscle

Nervous System

13. Cerebellum

14. Cerebral Cortex

- (Temporal Lobe)

15. Eye Globe

16. Pons

Respiratory System

17. Middle Nasal Concha

R

L

Musculoskeletal System

- 1.
- 2.
- 3.

The dotted white line around the face is a mask. Masks are used to ensure consistent position during radiation therapy treatment.

Musculoskeletal System

1. Ethmoid Sinus (Ethmoid Air Cells)
2. Sphenoid Sinus
3. Temporal Sinus (Mastoid Air Cells)

Note: By altering the contrast to a brighter level we are able to see the thin bones of the Ethmoid Air Cells. Changing the grey scale is an important diagnostic tool. Bone, soft tissue, and lung windows are important variations.

The dotted white line around the face is a mask. Masks are used to ensure consistent position during radiation therapy treatment.

Cardiovascular System

- 1.
- 2.
- 3.

Musculoskeletal System

- 4.
- 5.
- 6.
- 7.
- 8.

- 9.
- 10.
- 11.
- 12.
- 13.
- 14.

Nervous System

- 15.
- 16.
- 17.
- 18.
- 19.

Respiratory System

- 20.

R

L

1. Basilar Artery
2. Internal Carotid Artery
3. 4th Ventricle

4. Ethmoid Bone (Middle Nasal Concha or Turbinate)
5. Lacrimal Bone
6. Maxillary Sinus
7. Nasal Bone

8. Occipital Bone
(External Protuberance)
9. Palatine Bone
(Perpendicular Plate)
10. Parietal Bone
11. Sphenoid Bone (Body)
12. Temporal Sinus
(Mastoid Air Cells)
13. Zygomatic Bone
14. Temporalis Muscle

15. Cerebellum
16. Cerebral Cortex
(Occipital Lobe)
17. Inner Ear

18. Pons
19. Retina
Respiratory System
20. Middle Nasal Concha
or Turbinate

Musculoskeletal System

1.

Nervous System

2.

R

L

Note: By altering the grey scale to increase visibility through bone, we are able to see the Cochlea and other bony structures.

Musculoskeletal System

1. Internal Acoustic Meatus
(Contains Cranial Nerves 7 and 8)

Nervous System

2. Cochlea

R

L

Note: By altering the grey scale to increase visibility through bone, we are able to see the Cochlea and other bony structures.

Cardiovascular System

1.

Musculoskeletal System

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

17.

18.

19.

Nervous System

20.

21.

22.

23.

Respiratory System

24.

R

L

Cardiovascular System

1. Internal Carotid Artery

Musculoskeletal System

2. Ethmoid Bone (Septum)

3. Lacrimal Bone

4. Mandible (Condylar Head)

5. Mandible (Coronoid Process)

6. Maxilla Bone (Orbital Surface)

7. Nasal Bone

8. Occipital Bone (Clivus)

9. Palatine Bone (Perpendicular Plate)

10. Parietal Bone

11. Sphenoid Bone (Clivus)

12. Temporal Bone (External Acoustic Meatus)

13. Temporal Bone (Mandibular Fossa)

14. Temporal Bone (Middle Ear)

15. Temporal Bone (Eustachian Tube)

16. Zygomatic Bone (Temporal Process)

17. Lateral Pterygoid Muscle

18. Masseter Muscle

19. Trapezius Muscle

Nervous System

20. Cerebellum

21. Cerebral Cortex (Occipital Lobe)

22. Inner Ear

23. Pons

Respiratory System

24. Nostril

Cardiovascular System

1.

Nervous System

2.

R

L

Note: By altering the grey scale to increase visibility through bone, we are able to better visualize components of the temporal bone.

Cardiovascular System

1. Internal Carotid Artery

Nervous System

2. Inner Ear

Note: By altering the grey scale to increase visibility through bone, we are able to better visualize components of the temporal bone.

Musculoskeletal System

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.

- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

Nervous System

- 17.
- 18.
- 19.

Respiratory System

- 20.
- 21.

R

L

Musculoskeletal System

1. Ethmoid Bone (Septum)
2. Inferior Nasal Concha Bone
3. Lacrimal Bone
4. Mandible (Condylar Process)
5. Mandible (Coronoid Process)
6. Maxillary Sinus
7. Occipital Bone (Basilar

8. Palatine Bone (Perpendicular Plate)
9. Sphenoid Bone (Pterygoid Process)
10. Temporal Bone (Zygomatic Arch)
11. Vomer Bone (Ala)
12. Zygomatic Bone (Zygomatic Arch)

13. Semispinalis Capitis Muscle
 14. Splenius Capitis Muscle
 15. Sternocleidomastoid Muscle
 16. Trapezius Muscle
- ### Nervous System
17. Cerebellum
 18. Cerebral Cortex
 19. Medulla Oblongata

Respiratory System

20. Inferior Nasal Concha
21. Nostril

R

L

Musculoskeletal System

1.

2.

Respiratory System

3.

Note: By altering the grey scale to a brighter level we are able to see the soft tissue within the Maxillary Sinus.

Musculoskeletal System

1. Maxillary Sinus
2. Temporal Sinus (Mastoid Air Cells)

Respiratory System

3. Nostril

Note: By altering the grey scale to a brighter level we are able to see the soft tissue within the Maxillary Sinus.

Cardiovascular System

- 1.
- 2.

Musculoskeletal System

- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.

Nervous System

- 19.
- 20.
- 21.

Respiratory System

- 22.

Cardiovascular System

1. Basilar Artery
2. Internal Carotid Artery

Musculoskeletal System

3. Ethmoid Bone (Septum)
4. Inferior Nasal Concha Bone
5. Mandible (Condylar Process)
6. Mandible (Coronoid Process)

7. Maxilla Bone

8. Nuchal Ligament
9. Occipital Bone (Basilar Part)
10. Palatine Bone (Perpendicular Plate)
11. Sphenoid Bone (Pterygoid Process)
12. Temporal Bone (Zygomatic Arch)

13. Vomer Bone (Septum)

14. Zygomatic Bone (Zygomatic Arch)
15. Lateral Pterygoid Muscle
16. Longus Capitis Muscle
17. Masseter Muscle
18. Temporalis Muscle

Nervous System

19. Cerebellum
20. Inner Ear
21. Medulla Oblongata

Respiratory System

22. Nasopharynx

Cardiovascular System

- 1.
- 2.

Digestive System

- 3.

Musculoskeletal System

- 4.
- 5.
- 6.
- 7.

- 8.
- 9.
- 10.
- 11.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.

Nervous System

- 19.
- 20.

Respiratory System

- 21.

Cardiovascular System

- 1. Facial Vein
- 2. Vertebral Artery

Digestive System

- 3. Parotid Gland

Musculoskeletal System

- 4. Ethmoid Bone (Septum)
- 5. Inferior Nasal Concha Bone
- 6. Mandible (Notch)
- 7. Maxillary Sinus

- 8. Occipital Bone

- 9. Palatine Bone
(Perpendicular Plate)

- 10. Sphenoid Bone
(Pterygoid Process)

- 11. Temporal Sinus
(Mastoid Air Cells)

- 12. Vomer Bone (Septum)

- 13. Zygomatic Bone

- 14. Longus Capitis Muscle

- 15. Semispinalis Capitis

- 16. Splenius Capitis Muscle

- 17. Sternocleidomastoid
Muscle

- 18. Trapezius Muscle

Nervous System

- 19. Cerebellum

- 20. Medulla Oblongata

Respiratory System

- 21. Nasopharynx

R

L

Digestive System

1.

Musculoskeletal System

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

17.

18.

19.

Respiratory System

18.

R

L

Digestive System

1. Parotid Gland

Musculoskeletal System

2. Ethmoid Bone (Septum)

3. Inferior Nasal Concha Bone

4. Mandible (Ramus)

5. Maxilla Bone

6. Occipital Bone

7. Palatine Bone (Perpendicular Plate)

8. Sphenoid Bone (Pterygoid Process)

9. Temporal Bone (Mastoid Process)

10. Vomer Bone (Septum)

11. Zygomatic Bone

12. Digastric Muscle (Posterior Belly)

13. Longissimus Capitis Muscle

14. Rectus Capitis Posterior Minor Muscle

15. Superior Oblique Capitis Muscle

Nervous System

16. Cerebellum

17. Medulla Oblongata

Respiratory System

18. Nasopharynx

R

L

Cardiovascular System

- 1.
- 2.

Digestive System

- 3.

Musculoskeletal System

- 4.
- 5.
- 6.
- 7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

17.

18.

19.

20.

Nervous System

21.

22.

R

L

Cardiovascular System

- 1. Facial Vein
- 2. Internal Carotid Artery

Digestive System

- 3. Upper Second Molar (Root)

Musculoskeletal System

- 4. 1st Cervical Vertebra (Atlas)

- 5. 2nd Cervical Vertebra (Odontoid Process)

- 6. Mandible (Ramus)

- 7. Maxilla Bone (Anterior Nasal Spine)

- 8. Maxilla Bone (Palatine Process)

- 9. Occipital Bone (Condyle)

- 10. Occipital Bone (Foramen Magnum)

- 11. Palatine Bone (Horizontal Plate)

- 12. Sphenoid Bone (Pterygoid Process)

- 13. Temporal Bone (Styloid Process)

- 14. Zygomatic Bone

- 15. Lateral Pterygoid Muscle

- 16. Longus Capitis Muscle

- 17. Masseter Muscle

- 18. Medial Pterygoid Muscle

- 19. Rectus Capitis Posterior Major Muscle

- 20. Temporalis Muscle

Nervous System

- 21. Cerebellum (Tonsil)

- 22. Medulla Oblongata

R

L

<u>Digestive System</u>	9.	19.
1.	10.	20.
2.	11.	21.
<u>Musculoskeletal System</u>	12.	<u>Nervous System</u>
3.	13.	22.
4.	14.	23.
5.	15.	
6.	16.	
7.	17.	
8.	18.

R

L

Digestive System

1. Hard Palate

2. Soft Palate

Musculoskeletal System

3. 1st Cervical Vertebra or Atlas

4. 2nd Cervical Vertebra (Odontoid Process)

5. Mandible (Ramus)

6. Maxilla Bone (Anterior Nasal Spine)

7. Occipital Bone (Condyle)

8. Occipital Bone (Foramen Magnum)

9. Palatine Bone (Horizontal Plate)

10. Sphenoid Bone (Pterygoid Process)

11. Temporal Bone (Mastoid Process)

12. Digastric Muscle

13. Longissimus Capitis Muscle

14. Longus Capitis Muscle

15. Rectus Capitis Posterior Major Muscle

16. Rectus Capitis Posterior Minor Muscle

17. Semispinalis Capitis Muscle

18. Splenius Capitis Muscle

19. Sternocleidomastoid Muscle

20. Superior Obliquus Capitis Muscle

21. Trapezius Muscle

Nervous System

22. Medulla Oblongata

23. Spinal Cord

R

L

<u>Cardiovascular System</u>	<u>Musculoskeletal System</u>	<u>Nervous System</u>
1.	8.	17.
2.	9.	
3.	10.	
<u>Digestive System</u>	11.	
4.	12.	
5.	13.	
6.	14.	
7.	15.	
	16.

R

L

Cardiovascular System

1. Facial Vein
2. Internal Carotid Artery
3. Vertebral Artery

Digestive System

4. Hard Palate
5. Parotid Gland
6. Soft Palate
7. Upper Canine (Root)

Musculoskeletal System

8. 1st Cervical Vertebra (Articular Facet)
9. 1st Cervical Vertebra (Transverse Foramen)
10. 1st Cervical Vertebra (Transverse Process)
11. 2nd Cervical Vertebra (Odontoid Process)
12. Mandible (Ramus)

13. Maxilla Bone (Alveolar Process)
14. Sphenoid Bone (Pterygoid Process)
15. Temporal Bone (Styloid Process)
16. Tongue Dorsum

Nervous System

17. Spinal Cord

R

L

Cardiovascular System

- 1.
- 2.
- 3.

Musculoskeletal System

- 4.
- 5.
- 6.
- 7.
- 8.

9.

10.

11.

12.

13.

14.

Respiratory System

15.

R

L

Cardiovascular System

1. Facial Vein
2. Internal Carotid Artery
3. Vertebral Artery

Musculoskeletal System

4. 1st Cervical Vertebra (Inferior Articular Process)
5. 1st Cervical Vertebra (Transverse Foramen)
6. 2nd Cervical Vertebra (Odontoid Process)
7. Mandible (Mandibular Foramen)
8. Maxilla Bone (Alveolar Process)
9. Sphenoid Bone (Pterygoid Process)
10. Inferior Oblique Capitis Muscle

Respiratory System

11. Longus Colli Muscle
12. Masseter Muscle
13. Medial Pterygoid Muscle
14. Tongue Dorsum
15. Nasopharynx

R

L

Digestive System

- 1.
- 2.

Musculoskeletal System

- 3.
 - 4.
 - 5.
 - 6.
 - 7.
 - 8.
- 9.
 - 10.
 - 11.
 - 12.
 - 13.
 - 14.
 - 15.
 - 16.
 - 17.
 - 18.

R

L

Digestive System

1. Soft Palate
2. Teeth (See Note)

Musculoskeletal System

3. 1st Cervical Vertebra (Transverse Process)
4. 2nd Cervical Vertebra (Body)
5. 2nd Cervical Vertebra (Superior Articular Facet)
6. Mandible (Ramus)
7. Nuchal Ligament
8. Digastic Muscle
9. Inferior Obliquus Capitis Muscle
10. Levator Scapulae Muscle
11. Longissimus Capitis Muscle
12. Platysma Muscle

13. Rectus Capitis Posterior Major Muscle
14. Semispinalis Capitis Muscle
15. Splenius Capitis Muscle
16. Splenius Cervicis Muscle
17. Sternocleidomastoid Muscle
18. Trapezius Muscle

Note: Moving clockwise, starting with the selected tooth: Upper Teeth: Central Incisor, Lateral Incisor, Canine, First Premolar, Second Premolar, First Molar, Second Molar. Bottom Tooth: Third Molar (near Mandibular Ramus).

The Soft Palate appears distorted, likely due to a swallow or other movement during the scanning process.

<u>Cardiovascular System</u>	<u>Musculoskeletal System</u>	<u>Respiratory System</u>
1.	8.	17.
2.	9.	18.
3.	10.	
4.	11.	
<u>Digestive System</u>	12.	
5.	13.	
6.	14.	
7.	15.	
	16.

R

L

Cardiovascular System

1. Facial Vein
2. Internal Carotid Artery
3. Internal Jugular Vein
4. Vertebral Artery

Digestive System

5. Parotid Gland
6. Soft Palate
7. Uvula

Musculoskeletal System

8. 2nd Cervical Vertebra (Lamina)
9. Mandible (Ramus)
10. Genioglossus Muscle
11. Longus Capitis Muscle
12. Longus Colli Muscle
13. Masseter Muscle
14. Medial Pterygoid Muscle
15. Platysma Muscle
16. Tongue Dorsum

Respiratory System

17. Nasopharynx
18. Oropharynx

R

L

Digestive System

- 1.
- 2.

Lymphatic System

- 3.

Musculoskeletal System

- 4.
- 5.
- 6.
- 7.

- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.

Respiratory System

- 18.

Digestive System

1. Soft Palate
2. Uvula

Lymphatic System

3. Palatine Tonsil

Musculoskeletal System

4. 2nd Cervical Vertebra (Spinous Process)
5. Mandible (Ramus)
6. Nuchal Ligament
7. Digastic Muscle
8. Inferior Obliquus Capitis Muscle
9. Levator Scapulae Muscle
10. Longissimus Capitis Muscle
11. Rectus Capitis Posterior Major Muscle
12. Scalene Anterior Muscle

13. Semispinalis Capitis Muscle

14. Splenius Capitis Muscle

15. Splenius Cervicis Muscle

16. Sternocleidomastoid Muscle

17. Trapezius Muscle

Respiratory System

18. Oropharynx

R **L**

Cardiovascular System

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

Digestive System**Lymphatic System**

- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.

Musculoskeletal System

- 16.
- 17.
- 18.
- 19.

Nervous System

- 20.

R **L**

Cardiovascular System

1. External Carotid Artery
2. External Jugular Vein
3. Facial Vein
4. Internal Carotid Artery
5. Internal Jugular Vein
6. Vertebral Artery

Digestive System

7. Teeth (See Note)

Lymphatic System

8. Lingual Tonsil
9. Palatine Tonsil

Musculoskeletal System

10. 2nd Cervical Vertebra (Body)
11. 2nd Cervical Vertebra (Spinous Process)
12. 3rd Cervical Vertebra (Superior Articular Process)

Nervous System

13. Mandible (Ramus)
14. Genioglossus Muscle
15. Hyoglossus Muscle
16. Masseter Muscle
17. Medial Pterygoid Muscle
18. Mylohyoid Muscle
19. Tongue Dorsum
20. Spinal Cord

R **L**

Note: Moving clockwise, starting with the selected tooth: Bottom Teeth: Central Incisor, Lateral Incisor, Canine, First Premolar, Second Premolar, First Molar, Second Molar, Third Molar (Roots).

Cardiovascular System

1.
2.
3.

Digestive System

4.
5.

Musculoskeletal System

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29.
20.
21.
22.

Respiratory System

R

L

Cardiovascular System

1. Common Carotid Artery
2. External Carotid Artery
3. Internal Carotid Artery

Digestive System

4. Epiglottis
5. Submandibular Gland

Musculoskeletal System

6. 2nd Cervical Vertebra (Body)

7. 2nd Cervical Vertebra (Spinous Process)

8. 3rd Cervical Vertebra (Body)

9. Mandible (Body)

10. Digastric Muscle

11. Levator Scapulae Muscle

12. Longissimus Capitis Muscle

13. Scalene Anterior Muscle

14. Semispinalis Capitis Muscle

15. Splenius Capitis Muscle

16. Splenius Cervicis Muscle

17. Sternocleidomastoid Muscle

18. Transversospinalis Muscles

19. Trapezius Muscle

Respiratory System

20. Laryngopharynx

21. Oropharynx

22. Vallecula

R**L**

Note: The Transversospinalis Muscles Include the Semispinalis Capitis, Cervicis, and Thoracis Muscles, the Multifidus Muscles, and the Rotatores Cervicis, and Thoracis Muscles.

The Laryngopharynx is also considered part of the Digestive System.

Digestive System

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

Respiratory System

- 17.
- 18.

Digestive System

- 1. Canine Tooth Root
- 2. Epiglottis
- 3. Sublingual Gland
- 4. Submandibular Gland

Lymphatic System

- 5. Lingual Tonsil

Musculoskeletal System

- 6. 3rd Cervical Vertebra (Body)
- 7. 3rd Cervical Vertebra (Lamina)
- 8. Hyoid Bone
- 9. Mandible (Body)
- 10. Digastric Muscle
- 11. Genioglossus Muscle
- 12. Hyoglossus Muscle
- 13. Longus Capitis Muscle
- 14. Longus Colli Muscle
- 15. Mylohyoid Muscle
- 16. Platysma Muscle
- 17. Laryngopharynx
- 18. Vallecula

Respiratory System

- 17. Laryngopharynx
- 18. Vallecula

Cardiovascular System

- 1.
- 2.
- 3.
- 4.
- 5.

Digestive System

- 6.

Musculoskeletal System

- 7.

- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

Nervous System

- 17.

Respiratory System

- 18.

Cardiovascular System

1. Common Carotid Artery
2. External Jugular Vein
3. Facial Vein
4. Internal Jugular Vein
5. Vertebral Artery

Digestive System

6. Sublingual Gland

Musculoskeletal System

7. 3rd Cervical Vertebra (Body)

8. 4th Cervical Vertebra (Transverse Foramen)

9. Hyoid Bone

10. Mandible (Body)

11. Digastric Muscle

12. Genioglossus Muscle

13. Geniohyoid Muscle

14. Hyoglossus Muscle

15. Mylohyoid Muscle

16. Platysma Muscle

Nervous System

17. Spinal Cord

Respiratory System

18. Piriform Fossa

Musculoskeletal System

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.

10.

11.

12.

13.

14.

15.

Respiratory System

16.

17.

Musculoskeletal System

1. 4th Cervical Vertebra (Body)
2. Mandible (Mental Protuberance)
3. Nuchal Ligament
4. Thyroid Cartilage (Superior Horn)
5. Levator Scapulae Muscle
6. Longissimus Capitis Muscle
7. Omohyoid Muscle

8. Scalene Anterior Muscle
9. Semispinalis Capitis Muscle
10. Splenius Capitis Muscle
11. Splenius Cervicis Muscle
12. Sternocleidomastoid Muscle
13. Thyrohyoid Muscle
14. Transversospinalis Muscles
15. Trapezius Muscle

Respiratory System

16. Laryngopharynx
17. Piriform Fossa

<u>Cardiovascular System</u>	8.	18.
1.	9.	19.
2.	10.	
3.	11.	
4.	12.	
<u>Digestive System</u>	13.	
5.	14.	
<u>Musculoskeletal System</u>	15.	
6.	16.	
7.	17.

R

L

Cardiovascular System

1. Common Carotid Artery
2. External Jugular Vein
3. Internal Jugular Vein
4. Vertebral Artery

Digestive System

5. Esophagus

Musculoskeletal System

6. 4th Cervical Vertebra (Body)

7. 4th Cervical Vertebra (Spinous Process)
8. 5th Cervical Vertebra (Superior Articular Process)
9. Hyoid Bone
10. Thyroid Cartilage
11. Mandible (Mental Protuberance)
12. Digastric Muscle
13. Mylohyoid Muscle

14. Omohyoid Muscle
15. Platysma Muscle
16. Scalene Anterior Muscle
17. Scalene Middle and Posterior Muscles
18. Sternohyoid Muscle
19. Thyrohyoid Muscle

R

L

Digestive System

1.

Musculoskeletal System

2.

3.

4

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5.

6.

7.

8.

9.

10.

11.

12.

13.

14

15

Respiratory System

16.

Digestive System

1. Esophagus

Musculoskeletal System

2. 4th Cervical Vertebra

(Body)

3. 5th Cervical Vertebra

(Transverse Process)

4. Corniculate Cartilage

5. Nuchal Ligament

6. Thyroid Cartilage

7. Mandible (Mental
Protuberance)

8. Levator Scapulae Muscle

9. Longissimus Capitis
Muscle

10. Semispinalis Capitis

Muscle

11. Splenius Capitis Muscle

12. Splenius Cervicis Muscle

13. Sternocleidomastoid
Muscle

14. Transversospinalis
Muscles

15. Trapezius Muscle

Respiratory System

16. Laryngopharynx

Endocrine System

1.

Musculoskeletal System

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

Respiratory System

14.

R

L

Endocrine System

1. Thyroid Gland

Musculoskeletal System

2. Arytenoid Cartilage

3. 4th Cervical Vertebra
(Body)

4. 5th Cervical Vertebra
(Lamina)

5. Corniculate Cartilage

6. Thyroid Cartilage

7. Mandible (Mental
Protuberance)

8. Longus Capitis Muscle

9. Longus Colli Muscle

10. Omohyoid Muscle

11. Sternohyoid Muscle

12. Sternothyroid Muscle

13. Thyrohyoid Muscle

Respiratory System

14. Laryngopharynx

Cardiovascular System

- 1.
- 2.
- 3.
- 4.

Digestive System

- 5.

Endocrine System

- 6.

Musculoskeletal System

- 7.
- 8.
- 9.
- 10.

R

L

Cardiovascular System

1. Common Carotid Artery
2. External Jugular Vein
3. Internal Jugular Vein
4. Vertebral Artery

Digestive System

5. Esophagus

Endocrine System

6. Thyroid Gland

Musculoskeletal System

7. Arytenoid Cartilage
8. 5th Cervical Vertebra (Body)
9. Scalene Anterior Muscle
10. Scalene Middle and Posterior Muscles

R

L

Musculoskeletal System

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.

10.

11.

12.

13.

14.

Respiratory System

15.

R

L

Musculoskeletal System

1. Arytenoid Cartilage
2. 5th Cervical Vertebra (Body)
3. 6th Cervical Vertebra (Superior Articular Process)
4. Cricoid Cartilage
5. Nuchal Ligament
6. Thyroid Cartilage (Laryngeal Prominence)
7. Levator Scapulae Muscle

8. Longissimus Capitis Muscle
9. Semispinalis Capitis Muscle
10. Splenius Capitis Muscle
11. Splenius Cervicis Muscle
12. Sternocleidomastoid Muscle
13. Transversospinalis Muscles
14. Trapezius Muscle

Respiratory System

15. Laryngopharynx

R

L

Cardiovascular System

1.

Endocrine System

2.

Musculoskeletal System

3.

4.

5.

6.

7.

8.

9.

10.

Nervous System

11.

R

L

Cardiovascular System

1. Anterior Jugular Vein

Endocrine System

2. Thyroid Gland

Musculoskeletal System

3. 6th Cervical Vertebra

(Transverse Foramen)

4. Cricoid Cartilage

5. Thyroid Cartilage

(Inferior Horn)

6. Longus Colli Muscle

7. Omohyoid Muscle

8. Sternohyoid Muscle

9. Sternothyroid Muscle

10. Thyrohyoid Muscle

Nervous System

11. Spinal Cord

Cardiovascular System

- 1.
- 2.
- 3.
- 4.
- 5.

Digestive System

- 6.

Endocrine System

- 7.

Musculoskeletal System

- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.

R

L

Cardiovascular System

1. Anterior Jugular Vein
2. Common Carotid Artery
3. External Jugular Vein
4. Internal Jugular Vein
5. Vertebral Artery

Digestive System

6. Esophagus

Endocrine System

7. Thyroid Gland

Musculoskeletal System

8. 6th Cervical Vertebra (Body)
9. 6th Cervical Vertebra (Spinous Process)
10. 7th Cervical Vertebra (Transverse Process)
11. Platysma Muscle
12. Rhomboid Muscle
13. Scalene Anterior Muscle

14. Scalene Middle and Posterior Muscles **R** **L**

Musculoskeletal System

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.

10.

11.

12.

13.

Respiratory System

14.

R

L

Musculoskeletal System

1. 6th Cervical Vertebra (Body)
2. 7th Cervical Vertebra (Lamina)
3. Cricoid Cartilage
4. Nuchal Ligament
5. Levator Scapulae Muscle
6. Longissimus Capitis Muscle
7. Rhomboid Muscle
8. Semispinalis Capitis Muscle

9. Splenius Capitis Muscle
10. Splenius Cervicis Muscle
11. Sternocleidomastoid Muscle
12. Transversospinalis Muscles
13. Trapezius Muscle

Respiratory System

14. Laryngopharynx

Musculoskeletal System

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.

10.

Nervous System

11.

Respiratory System

12.

Musculoskeletal System

1. 6th Cervical Vertebra (Body)
2. 7th Cervical Vertebra (Body)
3. Clavicle (Acromial End)
4. Cricoid Cartilage
5. Scapula (Acromion)
6. 1st Thoracic Vertebra (Transverse Process)
7. Longus Colli Muscle
8. Omohyoid Muscle

9. Sternohyoid Muscle

10. Sternothyroid Muscle

Nervous System

11. Spinal Cord

Respiratory System

12. Laryngopharynx

Cardiovascular System

- 1.
- 2.
- 3.
- 4.
- 5.

Digestive System

- 6.

Endocrine System

- 7.

Musculoskeletal System

- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

17.

Respiratory System

- 18.

Cardiovascular System

1. Anterior Jugular Vein
2. Common Carotid Artery
3. External Jugular Vein
4. Internal Jugular Vein
5. Vertebral Artery

Digestive System

6. Esophagus

Endocrine System

7. Thyroid Gland

Musculoskeletal System

8. 7th Cervical Vertebra (Body)
9. 7th Cervical Vertebra (Spinous Process)
10. 1st Thoracic Vertebra (Superior Articular Facet)
11. Clavicle (Acromial End)
12. Cricoid Cartilage
13. Scapula (Acromion)

15. Platysma Muscle**16. Scalene Anterior Muscle****17. Scalene Middle and Posterior Muscles****Respiratory System**

18. Trachea

Cardiovascular System

1.

Musculoskeletal System

2.

3.

4.

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19.

Cardiovascular System

1. Transverse Cervical Vein
Musculoskeletal System

2. 7th Cervical Vertebra

(Body)

3. Clavical (Shaft Body)

4. Humerus (Head)

5. 1st Rib

6. Scapula (Acromion)

7. Supraspinous Ligament

8. 1st Thoracic Vertebra
(Lamina)

9. Supraspinatus Muscle

10. Levator Scapulae Muscle

11. Longissimus Capitis Muscle

12. Rhomboid Muscle

13. Semispinalis Capitis Muscle

14. Splenius Capitis Muscle

15. Splenius Cervicis Muscle

16. Sternocleidomastoid Muscle

17. Surratus Anterior Muscle

18. Transversospinalis
Muscles

19. Trapezius Muscle

Cardiovascular System

1.	9.	18.
2.	10.	19.
3.	11.	20.
4.	12.	21.
5.	13.	<u>Respiratory System</u>
6.	14.	22.
7.	15.	
<u>Musculoskeletal System</u>	16.	
8.	17.	
	18.	

Cardiovascular System

1. Anterior Jugular Vein
2. Common Carotid Artery
3. External Jugular Vein
4. Internal Jugular Vein
5. Subclavian Artery
6. Transverse Cervical Vein
7. Vertebral Artery

Musculoskeletal System

8. Clavicle (Shaft Body)
9. Humerus (Head)
10. 2nd Rib
11. Scapula (Acromion)
12. Scapula (Superior Angle)
13. 1st Thoracic Vertebra (Body)
14. 1st Thoracic Vertebra (Spinous Process)
15. 2nd Thoracic Vertebra (Transverse Process)

16. Longus Colli Muscle
17. Omohyoid Muscle
18. Sternohyoid Muscle
19. Sternothyroid Muscle
20. Subclavius Muscle
21. Subscapularis Muscle

22. Left Lung Upper Lobe

Digestive System

1.

Musculoskeletal System

2.

3.

4.

5.

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12.

13.

14.

15.

16.

17.

18.

19.

20.

Nervous System

21.

Respiratory System

22.

23.

Digestive System

1. Esophagus

Musculoskeletal System

2. Clavicle (Shaft Body)

3. Humerus (Head)

4. 2nd Rib

5. Scapula (Neck)

6. Scapula (Spine)

7. Scapula (Superior Angle)

8. 1st Thoracic Vertebra (Body)

9. 1st Thoracic Vertebra (Spinous Process)

10. 2nd Thoracic Vertebra (Transverse Costal Facet)

11. Deltoid Muscle

12. Infraspinatus Muscle

13. Platysma Muscle

14. Scalene Anterior Muscle

15. Scalene Middle and Posterior Muscles

16. Sternocleidomastoid Muscle (Clavicular Head)

17. Sternocleidomastoid Muscle (Sternal Head)

18. Subscapularis Muscle

19. Supraspinatus Muscle

20. Serratus Anterior Muscle

Nervous System

21. Spinal Cord

Respiratory System

22. Right Lung Upper Lobe

23. Trachea

<u>Cardiovascular System</u>	<u>Musculoskeletal System</u>	
1.	10.	19.
2.	11.	20.
3.	12.	21.
4.	13.	22.
5.	14.	23.
6.	15.	24.
7.	16.	25.
8.	17.	
9.	18.

Cardiovascular System

1. Anterior Jugular Vein
2. Brachiocephalic Trunk
3. Brachiocephalic Vein
4. Common Carotid Artery
5. Internal Jugular Vein
6. Subclavian Artery
7. Subclavian Vein
8. Transverse Cervical Vein
9. Vertebral Artery

Musculoskeletal System

10. Clavicle (Shaft Body)
11. Humerus (Head)
12. 2nd Rib
13. Scapula (Glenoid Cavity)
14. Supraspinous Ligament
15. 1st Thoracic Vertebra (Body)
16. 2nd Thoracic Vertebra (Body)
17. Levator Scapulae Muscle
18. Longissimus Capitis Muscle
19. Pectoralis Major Muscle
20. Pectoralis Minor Muscle
21. Rhomboid Muscle
22. Splenius Capitis Muscle
23. Splenius Cervicis Muscle
24. Transversospinalis Muscles
25. Trapezius Muscle

Cardiovascular System

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.

Musculoskeletal System

- 6.
- 7.
- 8.

Cardiovascular System

- 1. Brachiocephalic Trunk
- 2. Brachiocephalic Vein
- 3. Internal Jugular Vein
- 4. Subclavian Artery (Right)
- 5. Subclavian Vein

Musculoskeletal System

- 6. Clavicle (Sternal End)
- 7. Humerus (Head)
- 8. 3rd Rib

- 9. Scapula (Notch)
- 10. 2nd Thoracic Vertebra (Body)
- 11. 2nd Thoracic Vertebra (Spinous Process)
- 12. 3rd Thoracic Vertebra (Superior Articular Process)
- 13. 3rd Thoracic Vertebra (Transverse Process)

- 14. Coracobrachialis Muscle and Biceps Brachii Short Head Muscle Tendons at Coracoid Process Origin
- 15. Longus Colli Muscle
- 16. Sternohyoid Muscle
- 17. Sternothyroid Muscle
- 18. Subclavius Muscle

1. Esophagus

- ## Musculoskeletal System

3. Humerus (Head)

- ### 5. Scapula (Medial Border)

- ## 6. 2nd Thoracic Vertebra

- (Body)**

- _____

- (Spinous Process)**

- ### 8. 3rd Thoracic Vertebra

- (Transverse Process)**

- ## 9. Infraspinatus Muscle

- ## 10. Platysma Muscle

- ### 11. Sternocleidomastoid

- ### Tendon (Sternal Head)

- ## 12. Subscapularis Muscle

- ### 13. Supraspinatus Musc

- ## 15. Teres Major Muscle

- ## Nervous System

- ## 16. Spinal Cord

Respiratory System

- ## 17. Left Lung Upper Lobe

- ## 18. Right Lung Upper Lobe

- ## 19. Trachea

Note: The radiopaque object penetrating the left Pectoralis Major Muscle and entering the left Brachiocephalic Vein is a Central IV line. These are often used to deliver medications or nutrition into the bloodstream.

<u>Cardiovascular System</u>	<u>Musculoskeletal System</u>	
1.	8.	17.
2.	9.	18.
3.	10.	19.
4.	11.	20.
5.	12.	21.
6.	13.	22.
7.	14.	23.
	15.	24.
	16.	25.
		26.

Cardiovascular System

1. Aortic Arch
2. Brachiocephalic Trunk
3. Brachiocephalic Veins
4. Common Carotid Artery (Left)
5. Subclavian Artery (Left)
6. Subclavian Vein
7. Vertebral Artery (Left)

Musculoskeletal System

8. Clavicle (Sternal End)
9. Costal Cartilage
10. Humerus (Anatomical Neck)
11. 1st Rib
12. 3rd Rib
13. Scapula (Medial Border)
14. Sternum (Manubrium)
15. Supraspinous Ligament

16. 2nd Thoracic Vertebra (Body)
17. 3rd Thoracic Vertebra (Body)
18. Levator Scapulae Muscle
19. Longissimus Capitis Muscle
20. Pectoralis Major Muscle
21. Pectoralis Minor Muscle
22. Rhomboid Muscle

23. Splenius Capitis Muscle
24. Splenius Cervicis Muscle
25. Transversospinalis Muscles
26. Trapezius Muscle

Cardiovascular System

- 1.
- 2.
- 3.
- 4.

Musculoskeletal System

- 5.
- 6.
- 7.
- 8.

- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.

Cardiovascular System

1. Aortic Arch
2. Brachiocephalic Veins
3. Subclavian Artery
4. Subclavian Vein

Musculoskeletal System

5. Clavicle (Sternal End)
6. Humerus (Anatomical Neck)
7. 4th Rib
8. Scapula (Lateral Border)

9. Sternum (Manubrium)
10. 3rd Thoracic Vertebra (Body)
11. 3rd Thoracic Vertebra (Spinous Process)
12. 4th Thoracic Vertebra (Superior Articular Facet)
13. 4th Thoracic Vertebra (Transverse Process)

14. Coracobrachialis Muscle and Biceps Brachii Muscle
15. Sternohyoid Muscle
16. Sternothyroid Muscle
17. Teres Major Muscle
18. Teres Minor Muscle

Cardiovascular System

1.

2.

Lymphatic System

3.

Cardiovascular System

1. Basilar Artery

2. Internal Carotid Artery

Lymphatic System

3. Anterior Auricular

R

L

Cardiovascular System

- 1.
- 2.

Lymphatic System

- 3.
- 4.
- 5.

Cardiovascular System

1. Basilar Artery
2. Internal Carotid Artery

Lymphatic System

3. Anterior Auricular
4. Facial
5. Retropharyngeal

Cardiovascular System

- 1.
- 2.
- 3.

Lymphatic System

- 4.
- 5.
- 6.
- 7.
- 8.

R

L

Cardiovascular System

1. Facial Vein
2. Internal Carotid Artery
3. Vertebral Artery

Lymphatic System

4. Anterior Auricular
5. Deep Facial
6. Occipital
7. Parotid
8. Retropharyngeal

R

L

Cardiovascular System

- 1.
- 2.
- 3.

Lymphatic System

- 4.
- 5.
- 6.
- 7.
- 8.

R

L

Cardiovascular System

1. Facial Vein
2. Internal Carotid Artery
3. Vertebral Artery

Lymphatic System

4. Deep Facial
5. Facial
6. Occipital
7. Posterior Auricular
8. Retropharyngeal

R

L

Cardiovascular System

- 1.
- 2.
- 3.

Lymphatic System

- 4.
- 5.
- 6.

R

L

Cardiovascular System

1. Facial Vein
2. Internal Carotid Artery
3. Vertebral Artery

Lymphatic System

4. Deep Facial
5. Facial
6. Retropharyngeal

R

L

Cardiovascular System

- 1.
- 2.
- 3.

Lymphatic System

- 4.

Cardiovascular System

1. Facial Vein
2. Internal Carotid Artery
3. Vertebral Artery

Lymphatic System

4. Retropharyngeal

R

L

Cardiovascular System

- 1.
- 2.
- 3.

Lymphatic System

- 4.
- 5.
- 6.

R

L

Cardiovascular System

1. Facial Vein
2. Internal Carotid Artery
3. Vertebral Artery

Lymphatic System

4. Deep Facial
5. Retropharyngeal
6. Retropharyngeal
(Individual Nodes)

R

L

Cardiovascular System

9.

- 1.
- 2.
- 3.

Lymphatic System

- 4.
- 5.
- 6.
- 7.
- 8.

R

L

Cardiovascular System

1. Facial Vein
2. Internal Carotid Artery
3. Vertebral Artery

Lymphatic System

4. Deep Facial
5. Facial
6. Head & Neck Level 2B
7. Parotid
8. Posterior Auricular

9. Retropharyngeal

R

L

Cardiovascular System

- 1.
- 2.
- 3.

Lymphatic System

- 4.
- 5.
- 6.
- 7.

R

L

Cardiovascular System

1. Facial Vein
2. Internal Carotid Artery
3. Vertebral Artery

Lymphatic System

4. Deep Cervical
5. Head & Neck Level 2A
6. Head & Neck Level 2B
7. Retropharyngeal

R

L

Cardiovascular System

- 1.
- 2.
- 3.
- 4.

Lymphatic System

- 5.
- 6.
- 7.
- 8.

R

L

Cardiovascular System

1. Facial Vein
2. Internal Carotid Artery
3. Internal Jugular Vein
4. Vertebral Artery

Lymphatic System

5. Deep Cervical
6. Head & Neck Level 2A
7. Head & Neck Level 2B
8. Retropharyngeal

R

L

Cardiovascular System

- 1.
- 2.
- 3.
- 4.

Lymphatic System

- 5.
- 6.
- 7.
- 8.

9.

10.

R

L

Cardiovascular System

1. Facial Vein
2. Internal Carotid Artery
3. Internal Jugular Vein
4. Vertebral Artery

Lymphatic System

5. Deep Cervical
6. Facial
7. Head & Neck Level 2A
8. Head & Neck Level 2B

9. Retropharyngeal

10. Subparotid

Cardiovascular System

1.	9.
2.	10.
3.	11.
4.	12.
5.	13.
6.	14.

Lymphatic System

7.
8.

R

L

Cardiovascular System

1. External Carotid Artery
2. External Jugular Vein
3. Facial Vein
4. Internal Carotid Artery
5. Internal Jugular Vein
6. Vertebral Artery

Lymphatic System

7. Deep Cervical
8. Facial

9. Head & Neck Level 1B

10. Head & Neck Level 2A

11. Head & Neck Level 2B

12. Jugulodigastric

13. Retropharyngeal

14. Subparotid

R

L

Cardiovascular System

1.	9.
2.	10.
3.	11.
4.	12.
5.	13.
6.	14.
7.	15.
	16.

Lymphatic System

8.

R

L

Cardiovascular System

1. Common Carotid Artery
2. External Carotid Artery
3. External Jugular Vein
4. Facial Vein
5. Internal Carotid Artery
6. Internal Jugular Vein
7. Vertebral Artery

Lymphatic System

8. Deep Cervical

9. Facial

10. Head & Neck Level 1B
11. Head & Neck Level 2A
12. Head & Neck Level 2B
13. Jugulodigastric
14. Lingual
15. Retropharyngeal
16. Superficial Cervical

R

L

Cardiovascular System

1.	9.
2.	10.
3.	11.
4.	12.
5.	13.
6.	14.
7.	15.

Lymphatic System

8.

R

L

Cardiovascular System

1. Common Carotid Artery
2. External Carotid Artery
3. External Jugular Vein
4. Facial Vein
5. Internal Carotid Artery
6. Internal Jugular Vein
7. Vertebral Artery

Lymphatic System

8. Deep Cervical

Head & Neck Level 1B

9. Head & Neck Level 2A
10. Head & Neck Level 2B
11. Head & Neck Level 2B
12. Head & Neck Level 5
13. Jugulodigastric
14. Submandibular
15. Superficial Cervical

R

L

Cardiovascular System

1.	9.
2.	10.
3.	11.
4.	12.
5.	

Lymphatic System

6.
7.
8.

R

L

Cardiovascular System

1. Common Carotid Artery
2. External Jugular Vein
3. Facial Vein
4. Internal Jugular Vein
5. Vertebral Artery

Lymphatic System

6. Deep Cervical
7. Head & Neck Level 1B
8. Head & Neck Level 2A

9. Head & Neck Level 2B

10. Head & Neck Level 5

11. Submandibular

12. Superficial Cervical

R

L

Cardiovascular System

- 1.
- 2.
- 3.
- 4.

Lymphatic System

- 5.
- 6.
- 7.
- 8.

9.

10.

R

L

Cardiovascular System

1. Common Carotid Artery
2. External Jugular Vein
3. Internal Jugular Vein
4. Vertebral Artery

Lymphatic System

5. Deep Cervical
6. Head & Neck Level 1B
7. Head & Neck Level 2A
8. Head & Neck Level 2B

9. Head & Neck Level 5

10. Submandibular

R

L

Cardiovascular System

- 1.
- 2.
- 3.
- 4.

Lymphatic System

- 5.
- 6.
- 7.
- 8.

R

L

Cardiovascular System

1. Common Carotid Artery
2. External Jugular Vein
3. Internal Jugular Vein
4. Vertebral Artery

Lymphatic System

5. Deep Cervical
6. Head & Neck Level 1B
7. Head & Neck Level 3
8. Head & Neck Level 5

R

L

Cardiovascular System

- 1.
- 2.
- 3.
- 4.

Lymphatic System

- 5.
- 6.
- 7.
- 8.

9.

10.

R

L

Cardiovascular System

1. Common Carotid Artery
2. External Jugular Vein
3. Internal Jugular Vein
4. Vertebral Artery

Lymphatic System

- 5. Deep Cervical
- 6. Head & Neck Level 1A
- 7. Head & Neck Level 1B
- 8. Head & Neck Level 3

- ## 9. Head & Neck Level 5

- ## 10. Submental

Cardiovascular System

- 1.
- 2.
- 3.
- 4.

Lymphatic System

- 5.
- 6.
- 7.
- 8.

9.

10.

R

L

Cardiovascular System

1. Common Carotid Artery
2. External Jugular Vein
3. Internal Jugular Vein
4. Vertebral Artery

Lymphatic System

5. Deep Cervical
6. Head & Neck Level 1A
7. Head & Neck Level 1B
8. Head & Neck Level 3

9. Head & Neck Level 5

10. Submental

R

L

Cardiovascular System

- 1.
- 2.
- 3.
- 4.

Lymphatic System

- 5.
- 6.
- 7.

R

L

Cardiovascular System

1. Common Carotid Artery
2. External Jugular Vein
3. Internal Jugular Vein
4. Vertebral Artery

Lymphatic System

5. Deep Cervical
6. Head & Neck Level 3
7. Head & Neck Level 5

R

L

Cardiovascular System

- 1.
- 2.
- 3.
- 4.

Lymphatic System

- 5.
- 6.
- 7.

R

L

Cardiovascular System

1. Common Carotid Artery
2. External Jugular Vein
3. Internal Jugular Vein
4. Vertebral Artery

Lymphatic System

5. Deep Cervical
6. Head & Neck Level 3
7. Head & Neck Level 5

R

L

Cardiovascular System

- 1.
- 2.
- 3.
- 4.
- 5.

Lymphatic System

- 6.
- 7.
- 8.

R

L

Cardiovascular System

1. Anterior Jugular Vein
2. Common Carotid Artery
3. External Jugular Vein
4. Internal Jugular Vein
5. Vertebral Artery

Lymphatic System

6. Deep Cervical
7. Head & Neck Level 3
8. Head & Neck Level 5

Cardiovascular System

- 1.
- 2.
- 3.
- 4.
- 5.

Lymphatic System

- 6.
- 7.
- 8.

9.

10.

R

L

Cardiovascular System

1. Anterior Jugular Vein
2. Common Carotid Artery
3. External Jugular Vein
4. Internal Jugular Vein
5. Vertebral Artery

Lymphatic System

6. Anterior Superficial Cervical
7. Deep Cervical
8. Head & Neck Level 3

9. Head & Neck Level 5

10. Head & Neck Level 6

R

L

Cardiovascular System

- 1.
- 2.
- 3.
- 4.
- 5.

Lymphatic System

- 6.
- 7.
- 8.

9.

10.

R

L

Cardiovascular System

1. Anterior Jugular Vein
2. Common Carotid Artery
3. External Jugular Vein
4. Internal Jugular Vein
5. Vertebral Artery

Lymphatic System

6. Anterior Superficial Cervical
7. Deep Cervical
8. Head & Neck Level 3

9. Head & Neck Level 5
10. Head & Neck Level 6

Cardiovascular System

- 1.
- 2.
- 3.
- 4.
- 5.

Lymphatic System

- 6.
- 7.
- 8.

- 9.
- 10.

Cardiovascular System

- 1. Anterior Jugular Vein
- 2. Common Carotid Artery
- 3. External Jugular Vein
- 4. Internal Jugular Vein
- 5. Vertebral Artery

Lymphatic System

- 6. Anterior Superficial Cervical
- 7. Deep Cervical
- 8. Head & Neck Level 3

9. Head & Neck Level 5

10. Head & Neck Level 6

Cardiovascular System 9.

- 1.
- 2.
- 3.
- 4.
- 5.

Lymphatic System

- 6.
- 7.
- 8.

Cardiovascular System

1. Anterior Jugular Vein
2. Common Carotid Artery
3. External Jugular Vein
4. Internal Jugular Vein
5. Vertebral Artery

Lymphatic System

6. Deep Cervical
7. Head & Neck Level 4
8. Head & Neck Level 5

9. Head & Neck Level 6

Cardiovascular System

9.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Lymphatic System

- 7.
- 8.

Cardiovascular System

1. Anterior Jugular Vein
2. Common Carotid Artery
3. External Jugular Vein
4. Internal Jugular Vein
5. Transverse Cervical Vein
6. Vertebral Artery

Lymphatic System

7. Deep Cervical
8. Head & Neck Level 4

9. Head & Neck Level 6

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

8.

9.
10.
11.

Cardiovascular System

1. Anterior Jugular Vein
2. Common Carotid Artery
3. External Jugular Vein
4. Internal Jugular Vein
5. Subclavian Artery
6. Transverse Cervical Vein
7. Vertebral Artery

Lymphatic System

8. Anterior Superficial Cervical

9. Deep Cervical

10. Head & Neck Level 4
11. Head & Neck Level 6

Cardiovascular System

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

Lymphatic System

- 8.

9.

10.

11.

R

L

Cardiovascular System

1. Anterior Jugular Vein
2. Common Carotid Artery
3. External Jugular Vein
4. Internal Jugular Vein
5. Subclavian Artery
6. Transverse Cervical Vein
7. Vertebral Artery

Lymphatic System

8. Anterior Superficial Cervical

9. Deep Cervical

10. Head & Neck Level 4
11. Head & Neck Level 6
(Visceral Lymph Node
Region)

Cardiovascular System

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.

Lymphatic System

- 10.
- 11.

Cardiovascular System

1. Anterior Jugular Vein
2. Brachiocephalic Trunk
3. Brachiocephalic Vein
4. Common Carotid Artery
5. Internal Jugular Vein
6. Subclavian Artery
7. Subclavian Vein
8. Transverse Cervical Vein
9. Vertebral Artery

Lymphatic System

10. Deep Cervical
11. Head & Neck Level 6

Cardiovascular System Lymphatic System

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

9.

Cardiovascular System

1. Anterior Jugular Vein
2. Brachiocephalic Trunk
3. Brachiocephalic Vein
4. Common Carotid Artery
5. Internal Jugular Vein
6. Subclavian Artery
7. Subclavian Vein
8. Vertebral Artery

Lymphatic System

9. Head & Neck Level 6

Cardiovascular System

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Lymphatic System

- 7.

Cardiovascular System

1. Brachiocephalic Trunk
2. Brachiocephalic Vein
3. Common Carotid Artery
4. Subclavian Artery
5. Subclavian Vein
6. Vertebral Artery

Lymphatic System

7. Head & Neck Level 6

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