

cross sectional anatomy of neck

Cross Sectional Anatomy of Neck: A Detailed Exploration

cross sectional anatomy of neck offers a fascinating glimpse into the complex arrangement of structures that support vital functions such as breathing, swallowing, and circulation. Understanding this anatomy is crucial not only for medical professionals interpreting imaging studies like CT scans and MRIs but also for anyone interested in the intricate design of the human body. The neck may appear simple on the surface, but a cross-sectional view reveals a sophisticated network of muscles, vessels, nerves, and organs packed into a relatively small space.

Why Study Cross Sectional Anatomy of Neck?

When we talk about cross sectional anatomy, we refer to the horizontal slices of the body viewed from above or below, showing internal structures as they lie in relation to each other. For the neck, this perspective is invaluable because it helps clinicians pinpoint the location of abnormalities, guide surgical interventions, and understand the spread of infections or tumors.

Moreover, advancements in imaging technologies have made cross-sectional views routine in diagnostic processes. Familiarity with the neck's layered anatomy can make interpreting these images more intuitive and accurate. Let's dive deeper into the main components visible in cross sections of the neck.

Fundamental Layers and Compartments in the Neck

The neck is organized into multiple layers and compartments, each housing specific tissues and structures. Recognizing these layers helps clarify what appears on cross-sectional imaging.

1. Skin and Superficial Fascia

The outermost layer consists of skin followed by the superficial fascia. This layer contains the platysma muscle, a thin sheet of muscle fibers that plays a role in facial expression. The superficial veins, such as the external jugular vein, are also embedded here.

2. Deep Cervical Fascia and Its Divisions

Beneath the superficial fascia lies the deep cervical fascia, which subdivides the neck into

compartments:

- **Investing layer:** Surrounds the entire neck, enclosing the trapezius and sternocleidomastoid muscles.
- **Pretracheal layer:** Encloses the thyroid gland, trachea, and esophagus.
- **Prevertebral layer:** Covers the cervical vertebrae and associated deep muscles.
- **Carotid sheath:** A tubular fascial structure containing the common carotid artery, internal jugular vein, and vagus nerve.

These fascial layers not only compartmentalize but also guide infections or fluid collections in specific patterns.

Key Structures Visible in Cross Sections

A transverse section through the neck will reveal a range of vital anatomical landmarks. Let's explore these in detail.

Muscular Anatomy

Muscles are arranged in anterior, lateral, and posterior groups:

- **Sternocleidomastoid (SCM):** Prominent on either side, the SCM divides the neck into anterior and posterior triangles and is often visible as a thick, rounded structure.
- **Infrahyoid muscles:** Located anteriorly beneath the hyoid bone, these muscles assist in swallowing and voice modulation.
- **Scalene muscles:** Situated laterally, these muscles are important landmarks for the brachial plexus and subclavian vessels.
- **Deep muscles:** Including longus colli and longus capitis, which lie adjacent to the vertebral column.

Vascular Structures

Cross-sectional images prominently display two major vascular bundles:

- **Carotid artery:** Typically medial and deep within the carotid sheath, the common carotid artery bifurcates into internal and external carotid arteries at higher levels.
- **Internal jugular vein:** Located lateral to the carotid artery, this vein drains blood from the brain and face.
- **Vertebral artery:** Runs through the transverse foramina of cervical vertebrae, usually seen more posteriorly.

Understanding the relative positions of these vessels is vital in procedures like central line placement or carotid surgery.

Nervous System Components

Several important nerves are visible in cross section:

- **Vagus nerve (cranial nerve X):** Travels within the carotid sheath between the carotid artery and internal jugular vein.
- **Brachial plexus roots:** Found between the anterior and middle scalene muscles, these nerves supply the upper limb.
- **Sympathetic chain:** Lies posterior to the carotid sheath along the vertebral column.

These nerves control a variety of motor and sensory functions, so their identification is crucial during imaging or surgical planning.

Airway and Digestive Structures

The neck houses the upper airway and parts of the digestive tract:

- **Trachea:** A rigid, air-filled tube anteriorly located, easily distinguished by its cartilaginous rings on imaging.
- **Esophagus:** Lies posterior to the trachea, typically collapsed but identifiable by its muscular walls.
- **Pharynx and larynx:** Depending on the level, parts of these structures appear and are essential for breathing and swallowing.

Endocrine Glands

The thyroid gland is a key endocrine organ located anterior and lateral to the trachea. It wraps around the trachea and cricoid cartilage, often seen as a butterfly-shaped structure on cross sections. The parathyroid glands, though small, are situated on the posterior surface of the thyroid lobes.

Levels of the Neck and Their Cross Sectional Features

The anatomy varies significantly depending on the level of the cross section. Let's briefly highlight typical features at different cervical levels:

At the Level of C3-C4

- Common carotid artery prior to bifurcation
- Internal jugular vein
- Vagus nerve within carotid sheath
- Pharynx posteriorly
- Thyroid gland inferiorly (depending on exact level)
- Sternocleidomastoid muscles laterally

At the Level of C5-C6

- Carotid artery bifurcates into internal and external carotid arteries
- Larynx with thyroid cartilage visible
- Trachea begins to appear
- Esophagus posterior to trachea
- Thyroid gland prominent bilaterally

At the Level of C7 and Below

- Vertebral artery within transverse foramina of cervical vertebrae
- Subclavian artery and vein lateral to scalenes
- Brachial plexus roots between scalene muscles
- Esophagus descends posteriorly
- Trachea continues inferiorly

Understanding these levels helps radiologists and surgeons localize abnormalities and plan interventions precisely.

Tips for Interpreting Cross Sectional Neck Anatomy

Interpreting cross-sectional images of the neck can be challenging due to the density of structures, but a systematic approach makes it manageable:

- **Start from the outside in:** Identify the skin, muscles, and bones first to orient yourself.
- **Locate major landmarks:** The carotid artery, internal jugular vein, and vertebral bodies are reliable reference points.
- **Remember fascial compartments:** They help predict pathways of infection or tumor spread.
- **Use symmetry:** Compare left and right sides for abnormalities.
- **Consider clinical context:** Patient symptoms can guide focus on specific structures.

Clinical Relevance of Cross Sectional Neck Anatomy

Knowledge of the cross sectional anatomy of neck is indispensable in various clinical scenarios:

- **Trauma:** Identifying vascular injuries or airway compromise.
- **Oncology:** Mapping tumor extent and lymph node involvement.
- **Surgery:** Avoiding nerve damage during thyroidectomy or carotid endarterectomy.
- **Infections:** Tracking abscesses within fascial planes.
- **Radiology:** Accurate interpretation of CT and MRI scans for diagnosis.

The layered complexity of the neck is what makes its cross-sectional anatomy so vital and intriguing.

Exploring the cross sectional anatomy of neck opens the door to appreciating how densely packed and functionally critical this body region is. Whether you're a student, healthcare professional, or anatomy enthusiast, understanding these intricate relationships enriches

your appreciation of human biology and sharpens diagnostic skills in clinical settings.

Frequently Asked Questions

What are the key anatomical structures visible in a cross-sectional view of the neck at the level of the thyroid cartilage?

At the level of the thyroid cartilage, key structures visible in a cross-sectional neck anatomy include the thyroid gland, trachea, esophagus, carotid arteries, internal jugular veins, sternocleidomastoid muscles, and cervical vertebrae.

How is the carotid sheath identified in cross-sectional neck anatomy?

In cross-sectional neck anatomy, the carotid sheath appears as a fascial layer enclosing the common carotid artery, internal jugular vein, and vagus nerve, located lateral to the thyroid gland and medial to the sternocleidomastoid muscle.

What are the major muscles seen in a transverse section of the neck?

Major muscles seen in a transverse section of the neck include the sternocleidomastoid, trapezius, scalenes (anterior, middle, posterior), infrahyoid muscles, and strap muscles surrounding the larynx and trachea.

Which vascular structures are commonly identified in cross-sectional imaging of the neck?

Common vascular structures identified include the common carotid artery, internal and external carotid arteries, internal jugular vein, vertebral artery, and anterior jugular veins.

How can the esophagus be distinguished from the trachea in cross-sectional anatomy of the neck?

In cross-sectional anatomy, the trachea is anterior and has cartilaginous rings making it rigid and round, whereas the esophagus is posterior to the trachea, more collapsible, and has a muscular wall without cartilage.

What is the significance of the fascial layers in the cross-sectional anatomy of the neck?

Fascial layers compartmentalize the neck into different spaces, limiting the spread of infections and guiding the path of neurovascular structures. Important fascial layers

include the superficial cervical fascia and deep cervical fascia (investing, pretracheal, and prevertebral layers).

At what vertebral level is the cross-sectional anatomy of the neck typically studied for thyroid gland assessment?

The cross-sectional anatomy for thyroid gland assessment is typically studied around the C5 to C7 vertebral levels, where the thyroid lobes are most prominent adjacent to the trachea.

How is the vertebral artery visualized in a cross-sectional neck anatomy image?

The vertebral artery is usually seen within the transverse foramina of the cervical vertebrae, posterior and lateral to the carotid artery, and is smaller in caliber compared to the carotid arteries.

What anatomical landmarks help identify the level of the hyoid bone in cross-section of the neck?

The hyoid bone appears as a horseshoe-shaped bony structure at the C3 vertebral level, situated above the thyroid cartilage and anterior to the pharynx and larynx.

Why is understanding cross-sectional anatomy of the neck important in clinical practice?

Understanding cross-sectional anatomy of the neck is essential for accurate interpretation of imaging studies (CT, MRI, ultrasound), guiding surgical procedures, administering regional anesthesia, and diagnosing pathologies such as tumors, infections, and vascular abnormalities.

Additional Resources

Cross Sectional Anatomy of Neck: A Detailed Professional Review

Cross sectional anatomy of neck serves as a foundational aspect for clinicians, radiologists, and surgeons alike in understanding the complex structures that coexist within this vital region. This anatomical perspective, often visualized through imaging techniques such as CT scans, MRI, and ultrasonography, provides a layered insight into the neck's intricate arrangement of muscles, vessels, nerves, glands, and airway structures. A precise comprehension of these cross-sectional views is essential not only for diagnostic accuracy but also for guiding surgical interventions and evaluating pathological conditions.

Understanding the Layers: A Comprehensive Overview

The neck, anatomically bridging the head and thorax, encompasses multiple compartments and vital anatomical landmarks. When examined in cross section, the neck reveals concentric layers that include skin, subcutaneous tissue, musculature, vascular structures, the airway, digestive tract, and neurovascular bundles. Each layer plays a distinct role in function and clinical significance.

Superficial to Deep: The Muscular Framework

Muscles of the neck are arranged in superficial and deep layers, providing both mobility and structural support. The sternocleidomastoid muscle, easily identifiable in cross-sectional imaging due to its size and position, serves as a critical landmark dividing the anterior and posterior triangles of the neck.

Immediately deep to the sternocleidomastoid lie the strap muscles (infrahyoid muscles), including the sternohyoid, sternothyroid, thyrohyoid, and omohyoid muscles. These muscles are pivotal in swallowing and speech mechanisms. Posteriorly, the deep cervical muscles such as the scalenes and levator scapulae contribute to neck extension and lateral flexion.

In cross-sectional imaging, the differentiation between these muscle groups facilitates the identification of abnormal masses or inflammation, which may displace or invade these muscular planes.

Vascular Structures and Their Significance

One of the most clinically pertinent features visible in the cross sectional anatomy of neck is the arrangement of major blood vessels. The common carotid artery and internal jugular vein run in close proximity within the carotid sheath, a connective tissue compartment that also houses the vagus nerve.

The carotid artery's position medial to the sternocleidomastoid muscle and lateral to the trachea is a critical landmark during catheterization or neck surgery. The internal jugular vein, typically larger and more superficial, is often targeted for central venous access.

Additionally, smaller arteries such as the vertebral artery, which ascend through the transverse foramina of cervical vertebrae, are identifiable in certain cross-sectional planes. Recognizing these vessels and their spatial relationships helps in avoiding inadvertent vascular injury during procedures.

Critical Neurovascular Bundles in Cross Section

The neck's neurovascular anatomy is complex, with multiple cranial nerves and cervical plexus branches traversing this region. In cross section, nerves such as the vagus nerve, hypoglossal nerve, and accessory nerve may be discerned based on their anatomical course relative to muscles and vessels.

The vagus nerve, housed within the carotid sheath, lies between the carotid artery and internal jugular vein. Its identification is crucial during surgeries involving the carotid bifurcation or thyroid gland to prevent nerve damage that could lead to voice changes or autonomic dysfunctions.

The spinal accessory nerve courses posteriorly over the levator scapulae and trapezius muscles; knowledge of its position is essential for head and neck surgeries. Similarly, the cervical sympathetic trunk runs posteriorly near the prevertebral muscles and can be visualized in high-resolution imaging.

Airway and Digestive Tract Structures

Central to the cross sectional anatomy of the neck is the airway, comprising the larynx and trachea, and the adjacent esophagus. The larynx, identifiable by the thyroid cartilage and vocal cords, occupies an anterior position, with the trachea extending inferiorly.

Posterior to the trachea lies the esophagus, which in cross-sectional views appears as a flattened muscular tube that can distend with swallowed contents. Understanding the relative positions of these hollow structures is vital in trauma cases and tumor assessments.

The thyroid gland, enveloping the trachea on either side, has a characteristic appearance in cross section with its two lobes connected by the isthmus. Its vascular supply from the superior and inferior thyroid arteries, as well as its relationship to the recurrent laryngeal nerve, is of paramount importance during thyroid surgeries.

Imaging Modalities and Their Role in Visualizing Neck Anatomy

Cross sectional anatomy of neck is extensively studied using imaging modalities that provide detailed resolution of soft tissues and bony structures.

Computed Tomography (CT)

CT imaging offers excellent spatial resolution and is particularly useful in evaluating bony anatomy, calcifications, and acute hemorrhage. It delineates the fascial planes and

vascular structures with the aid of contrast agents, making it invaluable in trauma assessment and oncological staging.

Magnetic Resonance Imaging (MRI)

MRI excels in soft tissue contrast differentiation, facilitating detailed visualization of muscles, nerves, and glandular tissue without radiation exposure. It is the preferred modality for assessing tumors, inflammatory conditions, and congenital anomalies in the neck region.

Ultrasonography

While not providing a cross section in the traditional axial sense, ultrasonography remains a first-line tool for evaluating superficial neck structures, such as the thyroid gland and lymph nodes. It complements cross-sectional imaging by allowing dynamic assessment and guided interventions.

Clinical Implications and Applications

An in-depth knowledge of cross sectional anatomy of neck is indispensable in diverse clinical scenarios. For instance, in head and neck oncology, precise delineation of tumor margins and involvement of adjacent structures relies heavily on understanding these anatomical relationships.

Similarly, in vascular surgery, accurate identification of carotid arteries and jugular veins guides interventions such as carotid endarterectomy or central line placements. Neurologists and neurosurgeons benefit from this knowledge when addressing nerve compressions or tumors affecting cranial nerves.

Furthermore, emergency medicine practitioners utilize cross-sectional anatomy for rapid assessment of trauma patients to identify airway compromise, hematomas, or vascular injuries.

- **Advantages:** Enhanced diagnostic accuracy, improved surgical planning, and reduced risk of iatrogenic injury.
- **Challenges:** Variability in anatomy among individuals, overlapping structures, and limitations of imaging resolution in certain conditions.

The integration of cross sectional anatomical knowledge with advanced imaging techniques continues to elevate patient care standards in head and neck medicine.

Exploring the neck's cross-sectional anatomy reveals a landscape of intricate and interdependent structures that demand a high level of expertise to navigate. This understanding not only enhances diagnostic precision but also informs therapeutic decision-making, ultimately contributing to better clinical outcomes.

Cross Sectional Anatomy Of Neck

cross sectional anatomy of neck: *Neck and Internal Organs - Latin Nomencl.* (THIEME Atlas of Anatomy) Michael Schuenke, Erik Schulte, Udo Schumacher, 2011-01-01 Neck and Internal Organs, the second book in the THIEME Atlas of Anatomy series, presents a stunning visual guide to the anatomy of the neck and internal organs. Neck and Internal Organs integrates clinical information into a beautifully illustrated exposition of anatomy. Each chapter of the book presents anatomical information step-by-step, layer-by-layer, moving from spaces, to organs, to blood vessels, the lymphatic system, and autonomous innervation, with unprecedented clarity. Clear schematics with easy-to-follow labeling highlight specific structures. Color-coded summary tables organize key information on the principles of function, dysfunction, and malformation. The atlas features a unique section on the neurovascular supply for each organ, detailing arteries, veins, lymph nodes, and innervation. Special features of this landmark atlas series: An innovative format in which each two-page spread presents a self-contained guide to the specific topic More than 3,000 brilliant images created exclusively for the series Hundreds of clinical applications incorporated into basic science information that emphasize the vital link between structure and function Clearly labeled images that aid the identification of each structure Summary tables throughout which are ideal for reference and review Please visit our THIEME Atlas of Anatomy website for additional information.

cross sectional anatomy of neck: The Sectional Anatomy Learning System - E-Book Edith Applegate, 2009-02-25 Designed to provide a thorough understanding of sectional anatomy, this unique, two-volume set is a complete, easy-to-use learning package. Volume 1, "Concepts, presents detailed, readable descriptions of sectional anatomy of the entire body broken down into body systems. It focuses on how different structures within a system are related, so you can form a clear picture of how everything fits together. The text is highlighted with many new labeled diagnostic images, including radiographs, CT, MR, and sonograms. Volume 2, "Applications, is an interactive workbook with coloring, labeling, and other exercises designed to help you identify the structures most commonly encountered in various imaging techniques. Helpful features include: chapter outlines, chapter objectives, pathology boxes, summary tables of anatomical information, review questions, chapter quizzes, and a glossary. Interactive exercises include labeling, anatomical coloring, short answer questions, and "Chapter Recall tests. Many more labeled, high-quality images, including MRI, CT and sonography help you learn anatomy using real-life images you'll see in clinics and in practice. Quick Check Questions test your understanding of the material as you progress through the chapters. Important Anatomical Relationships section describes relationships between anatomical structures and refers you to relevant images. Working with Images sections in each body system chapter provide additional discussion and diagnostic images, helping you learn to identify anatomical structures with a variety of imaging modalities. List of Key Terms at the beginning of each chapter alert you to the terms you need to watch for before you read. More exercises with diagnostic images in the Applications volume, giving additional opportunities to identify and label anatomic structures on actual images. Answers to all Quick Check questions are given in the back of the book, allowing for immediate feedback; answers to the other questions and exercises are available online on Evolve. Evolve Online Resources contains images of cadaver sections, allowing you to see anatomy related to the line drawings in the book.

cross sectional anatomy of neck: ,

cross sectional anatomy of neck: Head and Neck Imaging Taranjit Singh Tatla, Joseph Manjaly, Raekha Kumar, Alex Weller, 2021-11-22 This book provides a practically applicable guide to all the different imaging modalities used in the diagnosis and management of ENT & Head and Neck patients. It bridges the gap in understanding between surgeons treating ENT & Head and Neck conditions and radiologists who oversee the process of scan requests, interpretation and delivering reports that best inform the subsequent management. Chapters cover a variety of sub-specialist areas including plain films, ultrasound, computed tomography (CT), magnetic resonance imaging (MRI), auditory implantation, paediatrics, head and neck cancer, trauma, three dimensional (3D) reconstruction and rehabilitation including swallow. This book facilitates surgeons and radiologists to further develop their understanding of each other's perspectives on clinical decision-making and appropriately interpreting the outputs from a range of imaging modalities. *Head and Neck Imaging: A Multi-Disciplinary Team Approach* is a resource well-suited to all trainees, residents, consultants who use these techniques to treat patients with head and neck symptoms. Furthermore, it is vital for those individuals preparing for exams in disciplines such as ear nose and throat, maxillofacial surgery and radiology.

cross sectional anatomy of neck: Atlas of Sectional Anatomy Luciano Alves Favorito, Natasha T. Logsdon, 2022-01-07 Sectional anatomy is a valuable resource for understanding and interpreting imaging exams, specially computed tomography (CT) and magnetic resonance imaging (MRI). Thus, health professionals should have a solid anatomical knowledge to properly evaluate such exams during clinical assessments of cardiac, thoracic, abdominal, proctologic, gynecological and urological diseases. The chapters in this book describe the thoracic anatomy, the abdominal wall, retroperitoneal space, and the male and female pelvis. Sectional images of cadaveric material illustrate the thoracic and the abdominal cavities, kidney, ureter, prostate, penis and other male and female organs. The images and descriptions build familiarity with the anatomical traits and can be applied in the fields of urology, gynecology, proctology, radiology and surgery. This work appeals to a wide range of readers, from health professionals to residents and students of different medical specialties.

cross sectional anatomy of neck: Sectional Anatomy of the Head and Neck John H. Lillie, Brent A. Bauer, 1994 This superb atlas of the sectional anatomy of the head and neck (exclusive of the CNS) is presented in two complementary planes, coronal and horizontal. Sixty-four exceptional pen-and-ink illustrations accurately capture the fine detail of 3mm thick sections through the region. Every detail was exactly transferred from photographs of the section and its identification was confirmed by microdissection of the exposed surface. These pen-and-ink images have been reproduced at natural size in labeled and unlabeled pairs, an approach that allows the complete identification of structures without masking critical anatomical detail. The captions that accompany each set of illustrations provide brief, authoritative information about the section and how it relates to adjacent tissues. Difficult concepts such as regional compartments and facial spaces are clearly explained, reflecting the broad experience of the senior author in teaching the basic as well as the applied clinical anatomy of the head and neck. Twenty-two sections have been selected for radiographic imaging. These high-resolution radiographs portray planar detail at a level which closely simulates that revealed by high-quality CT images of the region. Introductory chapters review the history of sectional anatomy and provide a unique overview of the fundamental organization of the head and neck. They enhance the value of an atlas that will guide the student and clinician through a sequential study of this anatomically intricate region and will aid radiologists in interpreting bony images and relating them to the soft tissues which surround them.

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knowledge is critical to reducing both overdiagnosis and misdiagnosis in neuroimaging. This issue is part two of a two-part series on neuroimaging anatomy that focuses on the head, neck, and spine. Each article addresses a specific area such as the orbits, sinonasal cavity, temporal bone, pharynx, larynx, and spinal cord. - Contains 14 relevant, practice-oriented topics including anatomy of the orbits; maxillofacial skeleton and facial anatomy; temporal bone anatomy; craniocervical junction and cervical spine anatomy; anatomy of the spinal cord, coverings, and nerves; and more. - Provides in-depth clinical reviews on neuroimaging anatomy of the head, neck, and spine, offering actionable insights for clinical practice. - Presents the latest information on this timely, focused topic under the leadership of experienced editors in the field. Authors synthesize and distill the latest research and practice guidelines to create clinically significant, topic-based reviews.

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cross sectional anatomy of neck: Surgical Techniques in Otolaryngology - Head & Neck Surgery: Sinonasal Surgery Spencer C Payne, Ameet Singh, Bradford A Woodworth, 2015-03-31 Sinonasal Surgery is part of the popular series *Surgical Techniques in Otolaryngology - Head & Neck Surgery*. This volume is a practical guide for otolaryngologists providing an overview of the most common, and some of the more advanced procedures performed in nose and sinus surgery. Edited by a team of recognised US based otolaryngologists, this authoritative atlas is unique in its scope. The book first outlines the basic principles of rhinologic practice, followed by sections on Inflammatory Sinus Disease, Adjunctive Surgical Procedures, Nasal Tumours and Endoscopic Skull Base Surgery. Each chapter presents an evidence-based approach to the development of each surgical procedure, and a description of the techniques, with intraoperative photographs and discussion on the benefits and pitfalls of each one. Additional descriptions of newer surgical methods such as balloon dilation of the sinuses, endoscopic transodontoid approaches, and nasopharyngectomy, make Sinonasal Surgery an up-to-date, essential text for the practising otolaryngologist. Key points Edited by US-based team of ENT specialists Part of an authoritative series *Surgical Techniques in Otolaryngology-Head & Neck Surgery* Other topics in this comprehensive series include: Head and Neck Surgery, Otologic and Neurotologic Surgery, Laryngeal Surgery, Pediatric Otolaryngologic Surgery and Facial Plastic and Reconstructive Surgery

cross sectional anatomy of neck: Fetal Anomalies Max Maizels, Bettina F. Cuneo, Rudy E. Sabbagha, 2004-03-24 **FETAL ANOMALIES** Advances in ultrasound technology are reshaping the field of health care for obstetricians and pediatric specialists. Detailed fetal imaging has enabled medical professionals to detect fetal structural anomalies and research practical guidelines for prenatal diagnosis and postnatal management. *Fetal Anomalies: Ultrasound Diagnosis and Postnatal Management* is a practical sourcebook with images of structural fetal malformations on a continuum that begins at the stage of ultrasonographic identification, progressing to characterization in the newborn period, and culminating in repair and postoperative follow up. This comprehensive text correlates pre- and post-natal images with the type of treatment appropriate to structural anomalies

of the different organ systems. Numerous examples from each organ system are included and the material is clinically oriented. Fetal Anomalies: Ultrasound Diagnosis and Postnatal Management reviews such topics as: Externally visible defects Skeletal dysplasia Central nervous, gastrointestinal, urinary, and genital systems Umbilical cord anomalies Abnormalities specific to multiple pregnancies Abnormalities of amniotic fluid volume Abnormalities that elude prenatal detection Incorporating the pictorial strengths of an atlas with the didactic utility of a reference work, Fetal Anomalies: Ultrasound Diagnosis and Postnatal Management is a unique book bridging various specialties that comprise maternal-fetal medicine, such as obstetrics, diagnostic imaging, neonatology, perinatology, surgery, and urology.

cross sectional anatomy of neck: *Imaging of Head and Neck Spaces for Diagnosis and Treatment, An Issue of Otolaryngologic Clinics* Sangam Kanekar, Kyle Mannion, 2012-12-28 For Otolaryngologists-Head and Neck Surgeons, the spaces in the neck are the sites of pathologies, from laryngeal cancers to skull base tumors and parotid cysts. This issue takes an in-depth look at these neck spaces through CT and MRI images, looking at normal anatomy and at disease. Beginning with complete anatomical description of the neck spaces, then working through the entire head and neck region with coverage of pharyngeal, masticator, carotid, parotid spaces, retropharyngeal and prevertebral space, larynx, nasopharynx and hypopharynx, base of skull, lymph node evaluation, all emphasizing diagnosis of diseases in these areas, and discussion of imaging in terms of interventional neuroradiology, along with changes in the head and neck post radiation treatment. Guest Editors Sangam Kanekar and Kyle Mannion create a focused presentation for daily clinical use for otolaryngologists and for residents.

cross sectional anatomy of neck: *Head and Neck Imaging, An Issue of Radiologic Clinics of North America* Richard H. Wiggins, 2014-12-27 Head and neck imaging is covered extensively in this issue of Radiologic Clinics. Articles will include: Imaging of the skull base, Imaging of the temporal bone, Orbital imaging, Imaging of the oral cavity, Upper aerodigestive tract imaging (SCCa), Suprahyoid neck imaging, Infrahyoid neck imaging, Imaging of the head and neck lymph nodes, Pediatric head and neck imaging, Emergency head and neck imaging, Imaging of head and neck vascular lesions, Imaging of the paravertebral space, Sinonasal imaging, and more.

cross sectional anatomy of neck: Sataloff's Comprehensive Textbook of Otolaryngology: Head & Neck Surgery Robert T Sataloff, 2015-11-30 Sataloff's Comprehensive Textbook of Otolaryngology: Head & Neck Surgery - Head & Neck Surgery is part of a multi-volume textbook covering basic and clinical science across the entire field of otolaryngology. Volumes in the set include; otology, neurotology and skull-based surgery; rhinology, allergy and immunology; facial plastic and reconstructive surgery; laryngology and paediatric otolaryngology. The full set is enhanced by over 5000 full colour images and illustrations, spanning nearly 6000 pages, complete with a comprehensive index on DVD. Edited by Robert T Sataloff from Drexel University College of Medicine, Philadelphia, this volume includes contributions from internationally recognised experts in otolaryngology, ensuring authoritative content throughout. Sataloff's Comprehensive Textbook of Otolaryngology: Head & Neck Surgery - Head & Neck Surgery is an indispensable, in-depth guide to the field for all otolaryngology practitioners. Key Points Textbook of head and neck surgery, part of six-volume set covering the entire field of otolaryngology Volumes include otology/neurotology, rhinology, plastic surgery, laryngology, and paediatric otolaryngology Over 5000 full colour images and illustrations across six volumes Edited by Robert T Sataloff, with contributions from internationally recognised otolaryngology experts

cross sectional anatomy of neck: *Otolaryngology-Head and Neck Surgery* Raza Pasha, Justin S. Golub, 2021-09-08 The now classic Pocket Pasha—Otolaryngology-Head and Neck Surgery: Clinical Reference Guide—returns for its sixth edition. This universally standard guidebook concisely reviews all aspects of otolaryngology including rhinology, laryngology, otology, plastic surgery, sleep medicine, and more. All chapters focus on the key basic science and clinical information to quickly digest the essentials. This high-yield book retains a by residents, for residents feel while also including expert content useful not only for students and residents but also allied health

professionals, primary care providers, and other health providers. The concise, outline format is useful for rapid reading during urgent clinical situations as well as a last-minute refresher before rounds. The guide has proven essential for board review and maintenance of certification exams. The sixth edition of this bestselling reference features numerous improvements, including: * Line-by-line refresh and update of all relevant material * Additional images, figures, and charts * Expanded focus on evidence-based practice * Addition of latest treatment modalities (including investigative medications) * A host of new contributing authors and subspecialized leading authorities * A new appendix for common otolaryngology—head and surgery consults

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