atlas of cardiac anatomy

atlas of cardiac anatomy is an essential resource for understanding the complex structures and functions of the heart. This comprehensive guide provides a detailed overview of the anatomical components of the heart, including their locations, relationships, and functions. It is particularly valuable for medical students, healthcare professionals, and anyone interested in cardiovascular health. The atlas serves not only as a visual reference but also as an educational tool that enhances the understanding of cardiac anatomy. In this article, we will explore the various sections of the atlas, including the heart's chambers, valves, blood vessels, and associated structures, as well as the significance of understanding cardiac anatomy in clinical practice.

Overview of Cardiac Anatomy

The atlas of cardiac anatomy begins with an overview of the heart's structure, highlighting its role as the central organ of the circulatory system. The heart is a muscular organ located in the thoracic cavity, between the lungs, and is roughly the size of a fist. It functions to pump blood throughout the body, ensuring the delivery of oxygen and nutrients to tissues while facilitating the removal of carbon dioxide and metabolic waste.

The heart is divided into four primary chambers: the right atrium, right ventricle, left atrium, and left ventricle. Each chamber plays a distinct role in the cardiac cycle, which consists of systole (contraction) and diastole (relaxation). Understanding the anatomy of these chambers is crucial for grasping how the heart operates as a pump.

The heart is also equipped with valves that regulate blood flow, preventing backflow and ensuring unidirectional movement. The major valves include the tricuspid valve, pulmonary valve, mitral valve, and aortic valve. The atlas provides detailed illustrations and descriptions of these components, facilitating a deeper understanding of their functions and anatomical relationships.

Heart Chambers and Valves

The heart's chambers and valves form the core of its anatomy. Each chamber has a specific function and is structured to optimize blood flow. The right atrium receives deoxygenated blood from the body via the superior and inferior vena cavae, while the left atrium receives oxygenated blood from the lungs through the pulmonary veins.

The chambers are separated by valves that control blood flow. The tricuspid valve, located between the right atrium and right ventricle, prevents backflow into the atrium when the ventricle contracts. The pulmonary valve regulates blood flow from the right ventricle into the pulmonary artery, directing it to the lungs for oxygenation.

In the left heart, the mitral valve separates the left atrium from the left ventricle, while the aortic valve manages blood flow from the left ventricle into the aorta, which distributes oxygenated blood to the entire body. Understanding these valves is crucial for recognizing conditions such as valvular heart disease, which can significantly impact cardiac function.

Detailed Anatomy of Heart Chambers

Each chamber of the heart is uniquely structured to perform its specific function effectively. The right atrium contains the sinoatrial (SA) node, known as the heart's natural pacemaker, which initiates the cardiac cycle. The right ventricle has a thinner wall compared to the left ventricle, as it only needs to pump blood to the lungs, whereas the left ventricle must generate enough pressure to send blood throughout the entire body.

The left atrium has a muscular structure that assists in pushing blood into the left ventricle, and the left ventricle's thick muscular wall allows it to contract powerfully. Understanding these anatomical differences is vital for diagnosing and treating various cardiac conditions.

Function of Cardiac Valves

The cardiac valves play a pivotal role in maintaining efficient blood flow. These valves are made of fibrous tissue and are structured to open and close in response to pressure changes within the heart. The proper functioning of these valves is essential for preventing conditions such as regurgitation and stenosis, which can lead to heart failure.

Each valve opens and closes in synchronization with the heart's contractions, allowing for smooth and efficient blood circulation. The atlas provides illustrations that detail the anatomy of these valves, enhancing the understanding of their mechanisms and clinical significance.

Major Blood Vessels

The heart is connected to a network of major blood vessels that are integral to its function. These vessels include arteries, veins, and capillaries, each serving a specific purpose within the circulatory system. The largest artery is the aorta, which branches off from the left ventricle and distributes oxygenated blood to the body.

The pulmonary arteries carry deoxygenated blood from the right ventricle to the lungs, while the pulmonary veins return oxygenated blood to the left atrium. The systemic

circulation consists of various arteries and veins that transport blood throughout the body, ensuring that tissues receive the oxygen and nutrients they require.

The atlas provides detailed representations of these major vessels, illustrating their routes and connections to the heart, which is essential for understanding cardiovascular physiology.

Arteries and Veins

Arteries are muscular vessels that carry blood away from the heart, while veins return blood to the heart. The structure of these vessels is adapted to their functions; arteries have thicker walls to withstand high pressure, whereas veins have valves to prevent backflow. Key arteries include the coronary arteries, which supply blood to the heart muscle itself, and the carotid arteries, which supply blood to the brain.

Veins such as the jugular veins drain blood from the head and neck, while the inferior and superior vena cavae return deoxygenated blood to the right atrium. Understanding these vessels' anatomy is crucial for diagnosing and managing various vascular conditions.

Coronary Circulation

Coronary circulation refers to the flow of blood to and from the tissues of the heart. The heart requires a continuous supply of oxygenated blood to function effectively, which is provided by the coronary arteries. These arteries branch off from the aorta and encircle the heart, ensuring that all areas receive adequate blood supply.

The major coronary arteries include the left coronary artery, which further divides into the left anterior descending artery and the circumflex artery, and the right coronary artery. Understanding the coronary circulation is critical, as blockages in these arteries can lead to conditions such as angina and myocardial infarction.

The atlas offers detailed diagrams of the coronary circulation, highlighting the importance of these vessels in maintaining cardiac health.

Clinical Implications of Coronary Circulation

Coronary artery disease (CAD) is a leading cause of morbidity and mortality worldwide, making understanding coronary circulation crucial. CAD occurs when the coronary arteries become narrowed or blocked, leading to reduced blood flow to the heart muscle.

Recognizing risk factors such as hypertension, hyperlipidemia, and smoking can help in the prevention and early detection of CAD. Various diagnostic tools and imaging techniques, which are discussed in the atlas, can help visualize coronary circulation and assess heart health.

Associated Structures

Beyond the heart itself, several associated structures play a significant role in cardiac

function. These include the pericardium, which encloses the heart, and the cardiac conduction system, responsible for regulating the heart's rhythm. The pericardium consists of fibrous and serous layers that provide protection and support to the heart.

The cardiac conduction system includes the SA node, atrioventricular (AV) node, bundle of His, and Purkinje fibers. This system ensures that electrical impulses are transmitted efficiently, coordinating heartbeats and maintaining a regular rhythm. Understanding these associated structures is vital for diagnosing arrhythmias and other electrical conduction disorders.

The Role of the Pericardium

The pericardium serves multiple functions, including anchoring the heart to surrounding structures, preventing overexpansion, and providing a lubricated environment to reduce friction as the heart beats. Pathologies affecting the pericardium, such as pericarditis, can lead to significant clinical consequences, emphasizing the need for a thorough understanding of this structure.

Clinical Significance of Cardiac Anatomy

Understanding cardiac anatomy is not just an academic exercise; it has profound implications for clinical practice. Accurate knowledge of the heart's structure aids healthcare professionals in diagnosing and treating cardiovascular diseases. Whether performing surgical interventions, interpreting imaging studies, or developing treatment plans, a solid grasp of cardiac anatomy is essential.

Conditions such as heart failure, valvular heart disease, and congenital heart defects require a comprehensive understanding of the heart's anatomy for effective management. Furthermore, advancements in medical technology, including minimally invasive surgical techniques, rely heavily on detailed anatomical knowledge.

Importance of Imaging Techniques

Modern imaging techniques, such as echocardiography, MRI, and CT scans, have revolutionized the way cardiac anatomy is visualized. These modalities provide detailed images of the heart and surrounding structures, allowing for accurate assessments of cardiac function and pathology. Familiarity with these imaging techniques enhances the ability to diagnose and treat heart conditions effectively.

Resources for Further Learning

For those interested in deepening their understanding of cardiac anatomy, various resources are available. Textbooks on cardiac anatomy and physiology provide in-depth information and are often used in medical education. Online platforms also offer interactive atlases and 3D models, allowing for a more immersive learning experience.

Additionally, professional organizations and medical schools often provide continuing

education courses focused on cardiovascular anatomy and related topics. Engaging with these resources can enhance both theoretical knowledge and practical skills in the field of cardiology.

Recommended Textbooks and Online Resources

- “Cardiac Anatomy and Physiology” by Michael E. DeBakey
- “Atlas of Human Cardiac Anatomy” by Peter J. M. Van Bockstaele
- Online platforms like Visible Body and TeachMeAnatomy for 3D visualizations
- Continuing education courses offered by the American College of Cardiology

FAQs

Q: What is the purpose of an atlas of cardiac anatomy?

A: An atlas of cardiac anatomy serves as a visual and educational resource that provides detailed illustrations and descriptions of the heart's structures, including chambers, valves, and blood vessels, facilitating a better understanding of cardiac physiology and pathology.

Q: How does coronary circulation differ from systemic circulation?

A: Coronary circulation is the flow of blood specifically to and from the heart muscle, ensuring it receives oxygenated blood, while systemic circulation refers to the flow of blood throughout the rest of the body, delivering oxygen and nutrients to tissues and organs.

Q: Why is understanding cardiac anatomy important for healthcare professionals?

A: Understanding cardiac anatomy is critical for healthcare professionals as it informs diagnosis, treatment planning, and surgical interventions related to cardiovascular diseases, ensuring effective patient care.

Q: What are common diseases related to cardiac anatomy?

A: Common diseases related to cardiac anatomy include coronary artery disease, valvular heart disease, congenital heart defects, and heart failure, all of which require a thorough

understanding of heart structures for effective management.

Q: What imaging techniques are used to study cardiac anatomy?

A: Imaging techniques used to study cardiac anatomy include echocardiography, magnetic resonance imaging (MRI), computed tomography (CT) scans, and angiography, which provide detailed visualizations of heart structures and functions.

Q: How can I access resources for learning more about cardiac anatomy?

A: Resources for learning about cardiac anatomy can be accessed through textbooks, online platforms that offer interactive 3D models, and continuing education courses provided by medical organizations and academic institutions.

Q: What are the main components of the cardiac conduction system?

A: The main components of the cardiac conduction system include the sinoatrial (SA) node, atrioventricular (AV) node, bundle of His, and Purkinje fibers, which work together to regulate the heart's rhythm and coordinate contractions.

Q: How does the structure of the heart support its function?

A: The structure of the heart, including its chambers, valves, and muscular walls, is specialized to support its function as a pump, enabling efficient blood circulation throughout the body while maintaining proper pressure and flow dynamics.

Q: What role do the coronary arteries play in heart health?

A: The coronary arteries are crucial for heart health as they supply oxygenated blood to the heart muscle itself; blockages in these arteries can lead to serious conditions such as heart attacks and ischemia.

Q: What is the significance of the pericardium in cardiac anatomy?

A: The pericardium protects the heart, anchors it in place, and prevents overexpansion, providing a lubricated environment that reduces friction as the heart beats, thus playing a vital role in maintaining cardiac health.

Atlas Of Cardiac Anatomy

atlas of cardiac anatomy: Atlas of Cardiac Anatomy Shumpei Mori, MD, PhD, Kalyanam Shivkumar, MD, PhD, 2022-10-15 Atlas of Cardiac Anatomy represents a new standard for the study of the human heart. Drs. Shumpei Mori and Kalyanam Shivkumar have created a visually stunning presentation of more than 200 full-color photographs of the human heart and its adjacent structures. Atlas of Cardiac Anatomy includes unpublished and restored iconic photographs from the Wallace A. McAlpine Collection at UCLA and new images from the UCLA Cardiac Arrhythmia Center based on the methods and photographic techniques for the study of cardiac anatomy pioneered by Dr. McAlpine. This first volume serves as a core foundational study of cardiac anatomy and provides a basis for planned atlases edited by Dr. Shivkumar in the series, Anatomical Basis of Cardiac Interventions. Electrophysiology, structural heart disease, imaging, and cardiac surgery are the focus of future atlases. The authors' goals are to offer an exceptionally comprehensive resource on cardiac anatomy. It aims to inspire new solutions and provide additional perspectives for skilled interventional and surgical operators. More broadly, it is likely to be useful for anyone caring for patients with cardiac disease. Includes access to 25 anaglyphs (3D images). 3D glasses required for viewing and are not included.* The authors are at the UCLA Cardiac Arrhythmia Center, Los Angeles, California. Foreword by Francis E. Marchlinski, MD, and William G. Stevenson, MD. * Open access edition available from Cardiotext Publishing.

atlas of cardiac anatomy: Atlas of Cardiac Anatomy Shumpei Mori, Kalyanam Shivkumar, 2022-09-15 Atlas of Cardiac Anatomy represents a new standard for the study of the human heart. Drs. Shumpei Mori and Kalyanam Shivkumar have created a visually stunning presentation of more than 200 full-color photographs of the human heart and its adjacent structures. Atlas of Cardiac Anatomy includes unpublished and restored iconic photographs from the Wallace A. McAlpine Collection at UCLA and new images from the UCLA Cardiac Arrhythmia Center based on the methods and photographic techniques for the study of cardiac anatomy pioneered by Dr. McAlpine.This first volume serves as a core foundational study of cardiac anatomy and provides a basis for planned atlases edited by Dr. Shivkumar in the series, Anatomical Basis of Cardiac Interventions. Electrophysiology, structural heart disease, imaging, and cardiac surgery are the focus of future atlases.The authors' goals are to offer an exceptionally comprehensive resource on cardiac anatomy. It aims to inspire new solutions and provide additional perspectives for skilled interventional and surgical operators. More broadly, it is likely to be useful for anyone caring for patients with cardiac disease.Includes access to 25 anaglyphs (3D images). 3D glasses required for viewing and are not included.The authors are at the UCLA Cardiac Arrhythmia Center, Los Angeles, California.Foreword by Francis E. Marchlinski, MD, and William G. Stevenson, MD.

atlas of cardiac anatomy: Atlas of Heart Anatomy and Development Florin Mihail Filipoiu, 2013-11-29 This heart anatomy book describes the cardiac development and cardiac anatomy in the development of the adult heart, and is illustrated by numerous images and examples. It contains 550 images of dissected embryo and adult hearts, obtained through the dissection and photography of 235 hearts. It has been designed to allow the rapid understanding of the key concepts and that everything should be clearly and graphically explained in one book. This is an atlas of cardiac development and anatomy of the human heart which distinguishes itself with the use of 550 images

of embryonic, fetal and adult hearts and using text that is logical and concise. All the mentioned anatomical structures are shown with the use of suggestive dissection images to emphasize the details and the overall location. All the images have detailed comments, while clinical implications are suggested. The dissections of different hearts exemplify the variability of the cardiac structures. The electron and optical microscopy images are sharp and provide great fidelity. The arterial molds obtained using methyl methacrylate are illustrative and the pictures use suggestive angles. The dissections were made on human normal and pathological hearts of different ages, increasing the clinical utility of the material contained within.

atlas of cardiac anatomy: *Revisiting Cardiac Anatomy* , 2010

atlas of cardiac anatomy: *Surgical Atlas of Cardiac Anatomy* Xiaodong Zhu, 2014-11-29 This Atlas is illustrated with rich pictures of cardiac surgical specimens. It not only contains normal heart specimens but also dissects those specimens, taking pictures from various angles to create a three-dimensional representation. It also includes reviews of the specimens' pathological reviews. Chapter 1 through 10 introduce the normal anatomy of the cardiac chambers and surgical approaches to the heart, while chapter 11 through 28 describe 18 kinds of congenital heart defects. There are a total of over 1,000 images and illustrations in this book, which will be of great interest not only to the surgeons, but also to the cardiologists, anaesthesiologists and surgical pathologists.

atlas of cardiac anatomy: *Slide Atlas of Cardiac Anatomy [slide].* , 1985

atlas of cardiac anatomy: Handbook of Cardiac Anatomy, Physiology, and Devices Paul A. Iaizzo, 2010-03-11 A revolution began in my professional career and education in 1997. In that year, I visited the University of Minnesota to discuss collaborative opportunities in cardiac anatomy, physiology, and medical device testing. The meeting was with a faculty member of the Department of Anesthesiology, Professor Paul Iaizzo. I didn't know what to expect but, as always, I remained open minded and optimistic. Little did I know that my life would never be the same. . . . During the mid to late 1990s, Paul Iaizzo and his team were performing anesthesia research on isolated guinea pig hearts. We found the work appealing, but it was unclear how this research might apply to our interest in tools to aid in the design of implantable devices for the cardiovascular system. As discussions progressed, we noted that we would be far more interested in reanimation of large mammalian hearts, in particular, human hearts. Paul was confident this could be accomplished on large hearts, but thought that it would be unlikely that we would ever have access to human hearts for this application. We shook hands and the collaboration was born in 1997. In the same year, Paul and the research team at the University of Minnesota (including Bill Gallagher and Charles Soule) reanimated several swine hearts. Unlike the previous work on guinea pig hearts which were reanimated in Langendorff mode, the intention of this research was to produce a fully functional working heart model for device testing and cardiac research.

atlas of cardiac anatomy: Revisiting Cardiac Anatomy Farhood Saremi, 2011-07-12 This new atlas represents a fresh fresh approach to cardiac anatomy, providing images of unparalleled quality, along with explanatory text, to show in vivo heart anatomy and explain the clinically relevant underlying anatomic concepts. In spite of amazing proliferation of information on the Internet and multiple websites filled with up-to-date information, there is no similarly detailed and systematic compilation of morphological imaging with CT. Organized for both systematic learning and to serve as a quick, yet detailed reference for specific clinical questions, this book is an invaluable resource for medical students and residents, cardiologists, and especially surgeons, interventionalists and electrophysiologists, who depend on ever more detailed imaging support in order to successfully perform increasingly complex coronary and noncoronary structural interventions and other procedures.

atlas of cardiac anatomy: *Cardiac Anatomy* Robert Henry Anderson, 1985

atlas of cardiac anatomy: *Atlas of Non-Invasive Imaging in Cardiac Anatomy* Francesco F. Faletra, Jagat Narula, Siew Yen Ho, 2020-01-30 This atlas provides a detailed visual resource of how sophisticated non-invasive imaging relates to the anatomy observed in a variety of cardiovascular pathologies. It includes investigation of a wide range of defects in numerous cardiac structures.

Mitral valve commissures, atrioventricular septal junction and right ventricular outflow tract plus a wealth of other structures are covered, offering readers a comprehensive integrative experience to understand how anatomic subtleties are revealed by modern imaging modalities. Atlas of Non-Invasive Imaging in Cardiac Anatomy provides a detailed set of visual instructions that is of use to any cardiovascular professional needing to understand the orientation of a patient's imaging. Therefore this is an essential guide for all trainee and practicing cardiologists, cardiac imagers, cardiac surgeons and interventionists.

atlas of cardiac anatomy: Cardiac Anatomy Robert Henry Anderson, Anton E. Becker, Sally P. Allwork, 1980-01-01

atlas of cardiac anatomy: *National Library of Medicine Audiovisuals Catalog* National Library of Medicine (U.S.),

atlas of cardiac anatomy: Atlas of Non-invasive Imaging in Cardiac Anatomy , 2020 This atlas provides a detailed visual resource of how sophisticated non-invasive imaging relates to the anatomy observed in a variety of cardiovascular pathologies. It includes investigation of a wide range of defects in numerous cardiac structures. Mitral valve commissures, atrioventricular septal junction and right ventricular outflow tract plus a wealth of other structures are covered, offering readers a comprehensive integrative experience to understand how anatomic subtleties are revealed by modern imaging modalities. Atlas of Non-Invasive Imaging in Cardiac Anatomy provides a detailed set of visual instructions that is of use to any cardiovascular professional needing to understand the orientation of a patient's imaging. Therefore this is an essential guide for all trainee and practicing cardiologists, cardiac imagers, cardiac surgeons and interventionists.

atlas of cardiac anatomy: Heart of the Matter Cesare Terracciano, Samuel Guymer, 2019-11-01 This textbook introduces readers to the scientific basics of cardiovascular medicine and biology. It covers not only developmental but also cellular and molecular aspects of normally functioning vasculature and the heart; importantly, it also addresses the mechanisms leading to and involved in specific cardiovascular diseases. Though the main emphasis is on novel therapies and potential therapeutic targets, specific controversial topics like cardiac remodeling and regenerative capacities are also addressed. All chapters were written by lecturers from the Imperial College London, in collaboration with their students from the College's BSc Programme in Medical Sciences with Cardiovascular Science. Bridging the gap between clinics and basic biology, the book offers a valuable guide for medical students, and for Master and PhD students in Cardiovascular Biomedicine.

atlas of cardiac anatomy: Statistical Atlases and Computational Models of the Heart. ACDC and MMWHS Challenges Mihaela Pop, Maxime Sermesant, Pierre-Marc Jodoin, Alain Lalande, Xiahai Zhuang, Guang Yang, Alistair Young, Olivier Bernard, 2018-03-14 This book constitutes the thoroughly refereed post-workshop proceedings of the 8th International Workshop on Statistical Atlases and Computational Models of the Heart: ACDC and MMWHS Challenges 2017, held in conjunction with MICCAI 2017, in Quebec, Canada, in September 2017. The 27 revised full workshop papers were carefully reviewed and selected from 35 submissions. The papers cover a wide range of topics computational imaging and modelling of the heart, as well as statistical cardiac atlases. The topics of the workshop included: cardiac imaging and image processing, atlas construction, statistical modelling of cardiac function across different patient populations, cardiac computational physiology, model customization, atlas based functional analysis, ontological schemata for data and results, integrated functional and structural analyses, as well as the pre-clinical and clinical applicability of these methods. Besides regular contributing papers, additional efforts of STACOM workshop were also focused on two challenges: ACDC and MM-WHS.

atlas of cardiac anatomy: *Statistical Atlases and Computational Models of the Heart* Oscar Camara, Mihaela Pop, Kawal Rhode, Maxime Sermesant, Nic Smith, Alistair Young, 2010-09-03 This book constitutes the refereed proceedings of the First Joint International Workshop on Statistical Atlases and Computational Models of the Heart and Cardiac Electrophysiological Simulation Challenge, STACOM-CESC 2010, held in conjunction with MICCAI 2010, in Beijing, China, in

September 2010. The 27 revised full papers presented together with 3 keynote presentations were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on methods and infrastructure for atlas construction, structure and flow, mechanics and motion, electrophysiology and electrical activation, and computational electrophysiological simulation challenge.

atlas of cardiac anatomy: Catheter Ablation of Cardiac Arrhythmias E-Book Shoei K. Stephen Huang, Jason S. Bradfield, Kalyanam Shivkumar, 2024-04-17 **Selected for 2025 Doody's Core Titles® in Cardiology**Written and edited by world-renowned experts in the field, including Dr. Shoei K. Stephen Huang, a pioneer of radiofrequency catheter ablation procedures, Huang's Catheter Ablation of Cardiac Arrhythmias, 5th Edition, provides authoritative, comprehensive information on these increasingly used electrophysiology procedures. This outstanding resource is packed with cutting-edge content in every area of this fast-changing field, including anatomy, diagnostic criteria, differential diagnosis, mapping, and ablation. Ideal for practitioners who need a definitive, user-friendly ablation text for the electrophysiology lab or office setting, it offers quick access to practical content, using detailed tables and high-quality images to help you apply what you learn in your practice. - Reflects all the latest technology, including the new pulse field ablation (PFA) procedure, new balloon technologies (RF, laser, and PFA) for pulmonary vein isolation, and high-resolution 3D mapping systems - Offers expert guidance on atrial tachycardia and flutter, atrial fibrillation, atrioventricular nodal reentrant tachycardia, tachycardias related to accessory atrioventricular connections, ventricular tachycardia, transseptal catheterization techniques, ablation for pediatric patients, and patient safety and complications - Contains new chapters covering Biophysics and Clinical Applications of Laser Ablation, Biophysics and Clinical Applications of Pulse Field Ablation, Multiple Strategic Approach to Ablate Atrial Fibrillation, Ablation of Challenging/Difficult Accessory Pathways, Ablation of Ventricular Tachycardia in Arrhythmogenic Ventricular Cardiomyopathy, and more - Contains 450 figures, including ECGs, intracardiac recordings, 3D mapping, ultrasound, fluoroscope, and ablation images - Includes numerous tables and boxes that provide quick access to key points, arrhythmia mechanisms, diagnostic criteria, target sites for ablation, use of special equipment, complications, and troubleshooting problems and their solutions - Provides access to 20 video clips, including transseptal access to the left atrium, intracardiac ultrasound, and techniques of pericardial access

atlas of cardiac anatomy: Statistical Atlases and Computational Models of the Heart. Imaging and Modelling Challenges Oscar Camara, Tommaso Mansi, Mihaela Pop, Kawal Rhode, Maxime Sermesant, Alistair Young, 2016-01-08 This book constitutes the thoroughly refereed post-workshop proceedings of the 6th International Workshop on Statistical Atlases and Computational Models of the Heart: Imaging and Modelling Challenges, STACOM 2015, held in conjunction with MICCAI 2015, in Munich, Germany, in October 2015. The 23 revised full workshop papers were carefully reviewed and selected from 34 submissions. The papers cover a wide range of topics such cardiac image processing, atlas construction, statistical modeling of cardiac function across different patient populations, cardiac mapping, cardiac computational physiology, model customization, image-based modelling and image-guided interventional procedures, atlas based functional analysis, ontological schemata for data and results, integrated functional and structural analysis.

atlas of cardiac anatomy: Current and Future Role of Artificial Intelligence in Cardiac Imaging Steffen Erhard Petersen, Karim Lekadir, Alistair A. Young, Tim Leiner, 2020-10-09 This eBook is a collection of articles from a Frontiers Research Topic. Frontiers Research Topics are very popular trademarks of the Frontiers Journals Series: they are collections of at least ten articles, all centered on a particular subject. With their unique mix of varied contributions from Original Research to Review Articles, Frontiers Research Topics unify the most influential researchers, the latest key findings and historical advances in a hot research area! Find out more on how to host your own Frontiers Research Topic or contribute to one as an author by contacting the Frontiers Editorial Office: frontiersin.org/about/contact.

atlas of cardiac anatomy: Reconstruction, Segmentation, and Analysis of Medical Images Maria A. Zuluaga, Kanwal Bhatia, Bernhard Kainz, Mehdi H. Moghari, Danielle F. Pace, 2017-01-18 This book constitutes the refereed proceedings of two workshops held at the 19th International Conference on Medical Image Computing and Computer-Assisted Intervention, MICCAI 2016, in Athens, Greece, in October 2016: the First International Workshop on Reconstruction and Analysis of Moving Body Organs, RAMBO 2016, and the First International Workshop on Whole-Heart and Great Vessel Segmentation from 3D Cardiovascular MRI in Congenital Heart Disease, HVSMR 2016. The 17 revised regular papers presented in this book were carefully reviewed and selected from a total of 21 submissions. The papers cover following topics: Registration; Reconstruction; Deep learning for heart segmentation; Discrete optimization and probabilistic intensity modeling; Atlas-based strategies; Random forests.

Related to atlas of cardiac anatomy

U.S. General Discussion - Talk Elections U.S. General DiscussionLogin with username, password and session length

The Atlas - Talk Elections The AtlasLogin with username, password and session lengthThe Atlas

Talk Elections - Index Talk Elections - Index Login with username, password and session length

2028 U.S. Presidential Election Discussion forum about the 2028 U.S. Presidential Election, including candidates, campaigns, and election-related topics

Presidential Election Trends Presidential Election TrendsLogin with username, password and session length

Congressional Elections Congressional ElectionsLogin with username, password and session lengthCongressional Elections

2024 U.S. Presidential Election 2024 U.S. Presidential ElectionLogin with username, password and session length

Which adjectives can be built from the word "atlas"? [closed] We are interested in things that are like an atlas. What are the possible adjectives that can describe such things. Four choices that came to mind are: 1) atlantic 2) atlantian 2)

Election What-ifs? Election What-ifs?Login with username, password and session length

VA-GOV (Co/efficient-R): Spanberger +7 News: Election Calculator 3.0 with county/house maps is now live. For more info, click here

U.S. General Discussion - Talk Elections U.S. General DiscussionLogin with username, password and session length

The Atlas - Talk Elections The AtlasLogin with username, password and session lengthThe Atlas

Talk Elections - Index Talk Elections - Index Login with username, password and session length

2028 U.S. Presidential Election Discussion forum about the 2028 U.S. Presidential Election, including candidates, campaigns, and election-related topics

Presidential Election Trends Presidential Election TrendsLogin with username, password and session length

Congressional Elections Congressional ElectionsLogin with username, password and session lengthCongressional Elections

2024 U.S. Presidential Election 2024 U.S. Presidential ElectionLogin with username, password and session length

Which adjectives can be built from the word "atlas"? [closed] We are interested in things that are like an atlas. What are the possible adjectives that can describe such things. Four choices that came to mind are: 1) atlantic 2) atlantian 2)

Election What-ifs? Election What-ifs?Login with username, password and session length

VA-GOV (Co/efficient-R): Spanberger +7 News: Election Calculator 3.0 with county/house maps is now live. For more info, click here

U.S. General Discussion - Talk Elections U.S. General DiscussionLogin with username, password

and session length
The Atlas - Talk Elections The AtlasLogin with username, password and session lengthThe Atlas
Talk Elections - Index Talk Elections - Index Login with username, password and session length
2028 U.S. Presidential Election Discussion forum about the 2028 U.S. Presidential Election, including candidates, campaigns, and election-related topics
Presidential Election Trends Presidential Election TrendsLogin with username, password and session length
Congressional Elections Congressional ElectionsLogin with username, password and session lengthCongressional Elections
2024 U.S. Presidential Election 2024 U.S. Presidential ElectionLogin with username, password and session length
Which adjectives can be built from the word "atlas"? [closed] We are interested in things that are like an atlas. What are the possible adjectives that can describe such things. Four choices that came to mind are: 1) atlantic 2) atlantian 2)
Election What-ifs? Election What-ifs?Login with username, password and session length
VA-GOV (Co/efficient-R): Spanberger +7 News: Election Calculator 3.0 with county/house maps is now live. For more info, click here
U.S. General Discussion - Talk Elections U.S. General DiscussionLogin with username, password and session length
The Atlas - Talk Elections The AtlasLogin with username, password and session lengthThe Atlas
Talk Elections - Index Talk Elections - Index Login with username, password and session length
2028 U.S. Presidential Election Discussion forum about the 2028 U.S. Presidential Election, including candidates, campaigns, and election-related topics
Presidential Election Trends Presidential Election TrendsLogin with username, password and session length
Congressional Elections Congressional ElectionsLogin with username, password and session lengthCongressional Elections
2024 U.S. Presidential Election 2024 U.S. Presidential ElectionLogin with username, password and session length
Which adjectives can be built from the word "atlas"? [closed] We are interested in things that are like an atlas. What are the possible adjectives that can describe such things. Four choices that came to mind are: 1) atlantic 2) atlantian 2)
Election What-ifs? Election What-ifs?Login with username, password and session length
VA-GOV (Co/efficient-R): Spanberger +7 News: Election Calculator 3.0 with county/house maps is now live. For more info, click here

Related to atlas of cardiac anatomy

Atlas of congenital cardiac disease / Maude E. Abbott ; with an introduction by Richard Fraser (insider.si.edu15d) Plates I-III in first grouping of color plates also paginated xiv-xvi; second grouping of plates numbered I-XXV also assigned page numbers within main sequence of volume pagination. "Published in
Atlas of congenital cardiac disease / Maude E. Abbott ; with an introduction by Richard Fraser (insider.si.edu15d) Plates I-III in first grouping of color plates also paginated xiv-xvi; second grouping of plates numbered I-XXV also assigned page numbers within main sequence of volume pagination. "Published in
Review of this week's No. 1 app: Human Anatomy Atlas 2018 (Yahoo Finance7y) This week, the No. 1 bestselling app on the iPhone app store, and the No. 2 app on the Google Play store, is Human Anatomy Atlas 2018. Like most apps that hit No. 1, HAA is all about visuals; it gives
Review of this week's No. 1 app: Human Anatomy Atlas 2018 (Yahoo Finance7y) This week, the No. 1 bestselling app on the iPhone app store, and the No. 2 app on the Google Play store, is Human

Anatomy Atlas 2018. Like most apps that hit No. 1, HAA is all about visuals; it gives

VOKA's 3D Anatomy Atlas Reaches 100,000 Active Monthly Users (Business Wire1mon) SAINT PETERSBURG, Fla.--(BUSINESS WIRE)--Remember when anatomy meant dusty textbooks and formaldehyde-soaked cadavers? VOKA is changing that experience. VOKA's 3D Anatomy & Pathology atlas just

VOKA's 3D Anatomy Atlas Reaches 100,000 Active Monthly Users (Business Wire1mon) SAINT PETERSBURG, Fla.--(BUSINESS WIRE)--Remember when anatomy meant dusty textbooks and formaldehyde-soaked cadavers? VOKA is changing that experience. VOKA's 3D Anatomy & Pathology atlas just

Stents or bypass surgery more effective for stable patients with high-risk cardiac anatomy (EurekAlert!4y) A recent study by University of Alberta cardiologists at the Canadian VIGOUR Centre shows that a particular group of patients with stable ischemic heart disease have better outcomes with percutaneous

Stents or bypass surgery more effective for stable patients with high-risk cardiac anatomy (EurekAlert!4y) A recent study by University of Alberta cardiologists at the Canadian VIGOUR Centre shows that a particular group of patients with stable ischemic heart disease have better outcomes with percutaneous

Back to Home: https://explore.gcts.edu