# DEVELOPMENT OF A CROSS-SECTIONAL ANATOMY WEBSITE WITH ZOOM CAPABILITIES, CORRELATIVE CLINICAL INFORMATION, AND TWO-DIMENSIONAL IMAGERY

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by

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The University of Texas Southwestern Medical Center at Dallas, 2005

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The intention of this thesis is to document and describe the development of a cross-sectional anatomy website with zoom capabilities, correlative clinical information, and two-dimensional imagery. The cross-sectional anatomy website was created to help first year medical students transfer the spatial relations of surface morphology and human organ systems information to the reading of two-dimensional cross-sectional images, primarily those images generated from computer tomography (CT). The website was posted online by the author for evaluation by the MS1 students at UT Southwestern. The website is a prototype that focuses on the thorax using eight images from the Visible Human Project dataset. The website's interface allows the user to explore each cross section, taking advantage of the labeling overlays, zoom capabilities, information tables, and correlated diagnostic images. The website contains a search feature, allowing users to perform searches for specific anatomical structures and view all images that correlate to the user's search criteria. This thesis explores the need for a comprehensive cross-sectional image website,

discusses current cross-sectional image resources available to first year medical students, and documents the research, creative process, and development of the website.

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#### LIST OF DEFINITIONS

- HTML Hyper Text markup Language A hypertext document format used in basic programming code for web pages. HTML is built on top of a webpage's standard markup language. HTML uses tags embedded in the code to demarcate text which is to appear in a special place or style. A tag consists of a "<", a "directive" (case insensitive), zero or more parameters and a ">". Matched pairs of directives are required to complete the HTML code.
- JPEG Joint Photographic Experts Group The original name of the committee that designed the standard image compression algorithm, JPEG is designed for compressing either full-color or grey-scale digital images. JPEGs have a better picture quality than GIFs making them ideal for use in website design.
- CSS Cascading Style Sheets An extension to HTML to allow styles (e.g. color, font, size) to be specified for certain elements of a hypertext document. Style information can be included in the HTML file or in a separate CSS file, which can be shared by multiple HTML files. Multiple levels of CSS can be used to allow selective overriding of styles.

# **CHAPTER ONE Introduction**

### **Thesis Question**

In recent years the use of computerized tomography (CT) and magnetic resonance imaging (MRI) techniques have greatly aided physicians in the diagnosis and treatment of disease. Both techniques produce scans that resemble transverse or anatomical cross sections of the body. To assist in the interpretation of CT or MRI images, students are often asked to study labeled cross-sections of the body. This project was designed to see if the use of digital cross-sectional images, allowing students to interactively manipulate the images and their labels, would improve their understanding of these two-dimensional diagnostic images and enhance their understanding of the three-dimensional relationships of human organ systems.

### **Background Information**

During my second year internship in the Department of Cell Biology (Division of Anatomy) at the University of Texas Southwestern Medical Center at Dallas, I worked with Dr. Barry Botterman, Associate Professor of Cell Biology. During that summer and after completing the Human Anatomy course, I identified a need for a more effective and comprehensive cross-sectional anatomy reference. A current trend in medical education is to link basic science education with clinical situations. Currently, cross-sectional anatomy resources

available to first year medical students are inadequate and superficial. Most references contain static images, many of which have limited if any zooming capability. Almost all lack any type of correlative imagery and information to aid the student in relating surface morphology and organ systems to the two-dimensional cross-sectional imagery. Some of the better references are confined to a particular region of anatomy, and most are not readily accessible or user friendly.

### The Project

The project involved the creation of a cross-sectional anatomy website containing crosssectional images from the National Library of Medicine's TM Visible Human Project<sup>®</sup>. The website was created to help first year medical students transfer the spatial relations of surface morphology and human organ systems information to the reading of two-dimensional crosssectional images, primarily those images generated from computerized tomography. The project is a prototype that focuses on the thorax using eight images from the Visible Human Project® dataset. The website interface allows users to explore each cross section, taking advantage of the labeling overlays, zoom capabilities, information tables, and correlated diagnostic images. The website is searchable, allowing users to perform searches for specific anatomical structures or regions and view all images that correlate to the users search criteria. The primary software programs used in the project were Adobe<sup>®</sup> Photoshop, Adobe<sup>®</sup> Illustrator, and Macromedia<sup>®</sup> Dreamweaver. Digital image manipulation was handled using

<sup>&</sup>lt;sup>1</sup> National Library of Medicine Visible Human Project. 11 Sep 2003. Online. Internet.

<sup>&</sup>lt;a href="http://www.nlm.nih.gov/research/visible/visible">http://www.nlm.nih.gov/research/visible/visible</a> human.html>

Photoshop and Illustrator. The website's interface and functional components were created using Dreamweaver.

Although the specific audience for the website is first year medical students, it may also be of interest to other medical students, medical professionals, and college anatomy professors and students. Radiologists and surgeons may find the database useful in their medical practices. To gain feedback from the target audience an evaluation plan was developed and implemented. A survey and product assessment was completed by the target audience to obtain individual opinions regarding the ease of use and navigation and whether the website is a suitable resource for first-year medical students.

### **Goals and Objectives**

The goal of this thesis was to design a cross-sectional anatomy website which could be utilized by first year medical students to help transfer the spatial relations of surface morphology and human organ systems information to the reading of two-dimensional cross-sectional images. Objectives included meeting the needs of the target audience, developing an HTML-based interface that allows users to explore each cross section, taking advantage of the labeling overlays, zoom capabilities, information tables and correlated diagnostic images, and evaluation of the website.

# **Significance of Project**

Many students do not learn to interpret two-dimensional tomographic and radiological images until their third-year radiology rotations. In addition, unless they specialize in radiology, students encounter only a specialized subset of clinical films related to their mentor's radiological training. By providing first year medical students with this cross-sectional anatomy resource, students will be able to learn and identify anatomical structures in two-dimensional images during their first year gross anatomy course.

# CHAPTER TWO Review of the Literature

Current trends show the study of cross-sectional anatomy and its clinical implications is becoming more prevalent in the anatomy course curriculum in many medical schools. To assist in the interpretation of CT or MRI images, students are often asked to study labeled cross-sections of the body. The purpose of the literature review is to examine current cross-sectional anatomy resources available to first year medical students.

# Visible Human Project®

The Visible Human Project® originated in 1986 as part of a long-range planning effort of the National Library of Medicine<sup>TM</sup> (NLM). It was believed that a time would come where libraries of digital images, distributed over high-speed computer networks and by high capacity physical media, would complement NLM's bibliographic and factual database services. This planning effort encouraged the NLM to consider building and disseminating medical image libraries much the same way it acquires, indexes, and provides access to the biomedical literature. Early in 1989 under the direction of the Board of Regents, a planning panel was convened and made the following recommendation: "NLM should undertake a first project building a digital image library of volumetric data representing a complete, normal adult male and female. This Visible Human Project® will include digitized photographic images for cryosectioning, digital images derived from computerized

tomography and digital magnetic resonance images of cadavers."<sup>2</sup>

The initial aim of the Visible Human Project® was to acquire transverse CT, MRI, and cryosection images of a representative male and female cadaver at an average of one-millimeter intervals. A strict screening process was established by the Visible Human Selection Panel to examine potential cadavers for evidence of infectious or metastatic disease, surgery, or any anomalies in their medical records. After all candidates were reviewed a male and female cadaver were selected for the project. Even though the female cadaver showed some minor pathology, the results of this effort are two complete, anatomically detailed, cross-sectional image datasets.

Although the radiological images are crude compared to present day standards, the Visible Human Male dataset consists of MRI, CT, and cryosection images. Axial MRI images of the head and neck and longitudinal sections of the rest of the body were obtained at 4 mm intervals. The CT data consists of axial CT scans of the entire body taken at 1 mm intervals at a resolution of 512 pixels by 512 pixels. The axial anatomical images are 2048 pixels by 1216 pixels and are at 1 mm intervals to coincide with the CT axial images.<sup>3</sup> A total of roughly 5600 cross-sectional images were obtained through these three modes.

<sup>&</sup>lt;sup>2</sup> Patrias, Karen. Visible Human Project [bibliography]. Bethesda (MD): National Library of Medicine (US); 2000 Sep. (Current bibliographies in medicine; 2000-5). 425 citations from January 1987 through August 2000. 
<sup>3</sup> Michael J. Ackerman, Ph.D. "The Visible Human Project: Getting the Data." 3 May 2004. Online. Internet. 
<a href="http://www.nlm.nih.gov/research/visible/visible">http://www.nlm.nih.gov/research/visible/visible</a> human.html>

### **Currently Available Resources**

There are several resources available to medical students studying cross-sectional anatomy. However, many of these resources contain static images, many of which have limited if any zooming capabilities, and almost all lack any type of correlative imagery and information to aid the student in relating surface morphology and organ systems to the two-dimensional cross-sectional imagery.

### *NetAnatomy*

NetAnatomy was created to teach gross human anatomy to students of the health professions, including undergraduate medical, health sciences, and nursing students. In addition NetAnatomy's goal is to serve as a place to review anatomy after one's initial exposure to the subject, such as students beginning a clinical rotation or USMLE (National Board) preparation.<sup>4</sup> Although the content on the website includes a wide range of imagery and provides a test feature where the user can test their knowledge of the images presented and receive immediate feedback, NetAnatomy has some considerable limitations.

The limited number of cross sections in their dataset limits the amount of information the user can access. Most images on the site are static and provide no zoom capabilities. The images that do have zoom capabilities are limited to one zoom view covering only a small portion of the entire cross-section. NetAnatomy lacks a consistent legend throughout the site

<sup>&</sup>lt;sup>4</sup> Walsh, Raymond J., Ph.D. <u>NetAnatomy: Cross-Sectional Anatomy</u>. 12 Oct. 2004. Online. Internet. <a href="http://www.netanatomy.com/CSA/csa">http://www.netanatomy.com/CSA/csa</a> frame.htm>

that shows where each image originates, and has no search feature. This forces the user to navigate through the entire site to find a particular structure or image of interest. Although the website has many opportunities to view correlative information, it is vague and only focuses on spatial relationships rather than orientation and function. In addition, MRI and CT imagery is not taken from the same level as the cross-sectional or gross anatomy images, making correlation difficult to understand.

#### Visible Human Cross Section

The "Visible Human Cross Section" website was created by a physician at Loyola University. The intent was to provide specifically selected cross-sectional images, MRI and CT images from the Visible Human Project®, for integration into the Structure of the Human Body curriculum at the Stritch School of Medicine. The lessons on the website emphasize the relationships of important structures in each region studied and are designed for use during lectures, small group discussions, labs and self-study. The "Visible Human Cross Section" website provides CT and MRI images at the same level as the Visible Human cross-sectional images and even provides small QuickTime movies intended to facilitate the transition from either MRI or CT scans to the tissue sections provided. However, a limited dataset, static CT and low-resolution tissue images make it hard to view smaller anatomical structure and there is a lack of correlative information. These factors limit the quantity and quality of information available to the viewer using the "Visible Human Cross Section."

Although labels are present on some of the cross-sectional images, large leader lines clutter

<sup>&</sup>lt;sup>5</sup> McNulty, John A. Ph. D. <u>LUMEN Dissector</u>. 1 Mar. 1995. Online. Internet. 30 Aug. 2004. <a href="http://www.meddean.luc.edu/lumen/meded/grossanatomy/dissector/index.html">http://www.meddean.luc.edu/lumen/meded/grossanatomy/dissector/index.html</a>>

the image, are difficult to follow, and obstruct some of the anatomical features they are meant to highlight.

Cross-Sectional Anatomy by Gold Standard Media

"Cross-Sectional Anatomy," a CD-ROM program designed by Gold Standard Media, integrates search capabilities and image rollovers into an image viewer that contains a complete dataset from the Visible Human Project. The images in this program have every pixel tagged and identified, allowing the viewer to roll the mouse over even the smallest structure to reveal the structure's name.

Although Gold Standard Media's product is the most complete set of cross-sectional images currently available, no correlative information or CT and MRI imagery is available to the user, making this dataset's primary focus anatomical identification. In addition, due to all of the images being static, most of the smallest structures are indiscernible.

Cross-Sectional Human Anatomy by Dean and Herbener

"Cross-Sectional Human Anatomy," written by Dr. David Dean and Dr. Thomas E.

Herbener, utilizes a selected set of images from the Visible Human Project<sup>®</sup> and was written to assist first-year medical students in transferring spatial relations of human organ systems to the reading of tomographic and radiological images. Each cross-sectional image is constrained to a two-page layout that contains the image, labeling key, correlative information/images, and legend that shows location of cross section. The text contains nice

diagrammatic illustrations of each cross-section that allow the reader to view a simplified image of the cross-section.

Although many structures are identified in each cross-section in this text, the number labeling is very confusing and difficult to see due to the use of white numbers and the variation in cross section tissue color. The numbers also cover many of the structure and make most of the smaller features difficult to see. Even though MRI and CT images are utilized, they are oftentimes are too small and are not taken from the same level as the tissue cross-section, making correlation difficult.

Interactive Anatomy 4 by A.D.A.M.®

A.D.A.M.'s<sup>®</sup> Interactive Anatomy 4 is a computer based, comprehensive database of detailed anatomical images that allows users to point, click and identify anatomical structures within fully dissectible male and female bodies in anterior, lateral, medial and posterior views. The user is able to dissect the body layer by layer or use a scroll bar to navigate deeper. This dissection application offers an interactive approach to discovering the human body.

Although this interactive program contains highly rendered illustrations that combine with QuickTime<sup>TM</sup> animations to cover topics related to physiology, disease, and surgery, no cross-sectional imagery is included. The database does not include any two-dimensional cross-sections or radiological anatomy.

Cross-Sectional Image website

The Cross-Sectional Image website, developed by Dr. Barry Botterman at the University of Texas Southwestern Medical Center, utilizes eleven formaldehyde-preserved, band-sawed, cadaver slices in an interactive website that contains structure identification, zoom views, and additional structure information. It also allows the user to search a structure by name or keyword, accessing a database for the search results.

Although this website provides access to correlative information about each highlighted structure, only a few of the anatomical structures have complete and comprehensive information available. The limited dataset lacks radiological imagery and is constrained to the thorax and abdomen, with considerable amounts of anatomy excluded due to the thickness and infrequency of the slices. Structure identification is clear due to a feature that highlights a given structure as the user rolls over the structure name. However, some of the structures of most interest have been altered or destroyed by the thick saw blade used to cut the 2" slabs.

The review of literature clearly indicates a need for more comprehensive cross-sectional anatomy resources. Current resources available to first year medical students are inadequate and superficial. Almost all lack any type of correlative imagery and information to aid the student in understanding two-dimensional diagnostic images and enhance their understanding of the three-dimensional relationships of human organ systems.

# CHAPTER THREE Methodology

### **Purpose and Target Audience**

In order to establish some basic parameters for the cross-sectional anatomy website, it was necessary to define the purpose and target audience of the project.

### Purpose

The purpose of the cross-sectional anatomy website was to provide a resource for first year medical students in learning anatomy, and relating two-dimensional tomographic, radiologic anatomy to that of surface morphology and human organ systems learned in the anatomy course and laboratory. Many students do not learn to interpret two-dimensional tomographic and radiological images until their third-year radiology rotations. In addition, unless they specialize in radiology, third-year medical students encounter only a specialized subset of clinical films related to their mentor's radiological training. By providing first year medical students with this cross-sectional anatomy resource, students will be able to learn and identify anatomical structures in two-dimensional images during their first year gross anatomy course.

### Target Audience

The cross-sectional anatomy website was created for first year medical students currently taking the gross human anatomy course at the University of Texas Southwestern Medical Center at Dallas. Although the primary audience for the project is first year medical students, it may also be of interest to other medical students, medical professionals, and college anatomy professors.

### **Project Design**

Developing a concise concept, design and developmental plan was essential to the successful completion of the project. Research was obtained to clarify what resources are currently available to first year medical students. Meetings with my thesis advisory committee were held to discuss and identify the goals of the project and to layout a list of features that needed to be included in the design of the website to effectively present two-dimensional cross-sectional anatomy.

## Project Concept

The concept of the project was to create a website prototype that contained a relevant set of cadaveric cross-sections and radiographic images from the male cadaver of the Visible Human Project<sup>®</sup>. The Visible Male dataset was selected because it lacked the pathology that was present in the female dataset. These images were restricted to a specific anatomical section, the thorax, and further focused on the anatomical contents of the mediastinum. In

addition, magnification views of the tissue cross-sections and translucent overlays showing particular anatomical structures were to be included. Correlative and clinical information pertaining to cross-sectional anatomy was to be included, as was a search component, allowing the user to search for images containing specific structures.

While designing the website, it was felt that the quantity of images and pieces of correlative information were manageable and the whole website could be best handled as a static site.

Utilizing a database application would have been required on websites of larger scope and scale, but was unnecessary for this project. The site map for the Visible Man website can be found in Appendix C.

### Visible Man webpage design

Before I could begin designing the layouts for the pages of the website, I had to consider what size the website was going to be in order to maximize viewing. After discussing this issue with my advisory committee and based on my past experience, I decided on a website design that is, 955px wide by 600px tall, which would be maximized for screen resolutions of 1024px by 768px. Current PC and Mac computers being used on the UT Southwestern campus accommodate this screen resolution, making it possible for users to view the website without having to scroll horizontally or vertically.

Once I had decided upon the best size for the website to be view, I began designing the top

Visible Man banner and menu bar that would be a consistent element throughout each page

of the website. Although I had not finalized each page's menu items, I was still able to develop a consistent theme and design that I would be able to use to create the specific menu items for each page. When designing the banner and menus in Adobe® Photoshop, the color scheme and overall look of the site were given great consideration as a clean and modern appearance were desired. In my initial designs, the banner consisted of a color bar that faded from a solid color to white with the text, "Visible Man Cross-Sectional Anatomy," placed on the left hand side of color bar. The menu bar was designed to have individual image rollovers that change background color as the user rolls his/her cursor over each item. The menu bar was placed directly underneath and flush with the left edge of the banner. Although these banners had a simple, clean look, I felt as if they did not tie the contents of the entire site together. Keeping the menu bar design and position, additional banner designs were considered that placed a small cross-sectional image into the layout. The final banner and menu bar design involved a color bar fading from green to blue to white. The Visible Man text is positioned on the left side of the banner with a faded cross-section cropped in the center. The menu bar consists of multiple menu buttons with black text contained within a lime green outlined box. The boxes change to a solid lime green with white text once the user rolls over with the cursor (Figure 3-1).



Figure 3-1. Visible Man banner and menu bar showing an image rollover of a menu item.

After designing the Visible Man banner and general menu navigation, I turned my attention to exploring possible layouts for the pages in the site. Initially, there were four major components that I felt needed to be on the main page of the site. The main page needed to have a list of the eight anatomical regions of the body with lists of cross-sectional images contained within each region. Cross-sectional image previews that correspond to the images in each list, and a search feature where the user could search for a specific structures also needed to be included.

As with the banner, I used Adobe® Photoshop to create the layout design of the main page. In the original designs, I experimented with the list of anatomical regions on the right side of the page, the outline drawing of a male figure immediately to the left, a small preview of each cross-section at the bottom of the page, and a search component located just above the lists of anatomical sections. Although these layouts included each feature and minimized the page's unused space, it was later decided that having the search component on its own page would be best. As a result, the search component now had a link on the main page's menu and the resultant layout design became the final main page design (Figure 3-2). The banner and menu items were placed at the top of the page. The outline drawing of the male figure was placed on the left-hand side of the page with the cross-sectional previews immediately to the right. Both lists of anatomical regions and subsequent cryosections were placed on the right-hand side of the page. This design required a unique type of functionality. Not only were multiple lists of cryosections to be displayed once an anatomical region was selected,

but the items within each list needed to be linked to image-swaps within the main page. The use of iFrames would prove to serve this functionality and is discussed later in "Website Special Features."

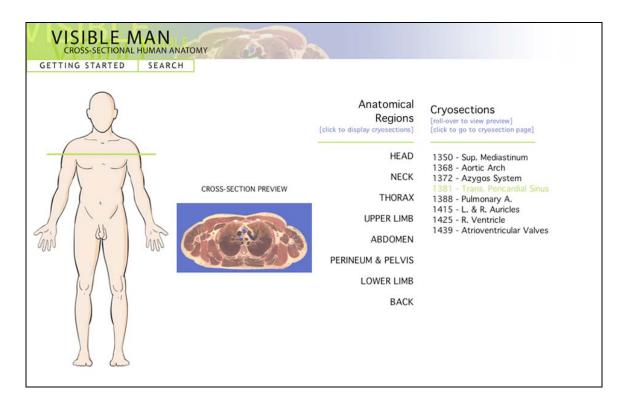


Figure 3-2. Final main page design showing layout.

Cross-section, Magnification, and correlative CT page designs

In order to meet the goals of the project, I needed to optimize the space available on the secondary and tertiary level web pages. To accomplish this I focused on making the cross-sectional images as large as possible while keeping the "white-space", the empty spaces on the page, to a minimum. When developing the design for the secondary and tertiary level pages, I focused my efforts on creating one design for main cross-section page and creating

derivatives of that design for the magnification and correlative CT pages. I felt that this approach would tie the look and feel of the secondary and tertiary pages together into a cohesive site. Using the banner and menu bar from the main page, I modified the menu bar options and explored layouts that incorporated the cross-sectional image, an interactive list of anatomical structures, and links to correlative CT images and magnification. In addition, it was important to include navigation between cross-section pages in the design.

Preliminary designs included an outline drawing of the male figure placed to the right of the cross-sectional image, illustrating where in the body the cross-section was taken. In this design the list of anatomical structures and links to correlative CT images were placed below the cross-section. However, because of the interactivity of the structure list, its location became a primary concern in the design. In order to accommodate the structure list and keep the entire page visible at one time, a smaller figure drawing was placed below the cross-sectional image and a list of anatomical structures was positioned in its place. Positioning the structure list to the right of the cross-section enabled the list to grow in length to accommodate more structures without the need to scroll horizontally or vertically.

The final design for the cross-section pages consists of a large cross-sectional image flanked on the right by an interactive list of anatomical structures and links to the magnification views and correlative CT images below (Figure 3-3). The cross-section page menu bar consists of buttons that link to the main and search pages, a back button, and a go to button that links the user to any of the 72 cross-sections in the site. Navigational buttons are located

above the cross-section and take the user to the next or previous cross-section in the current anatomical region.

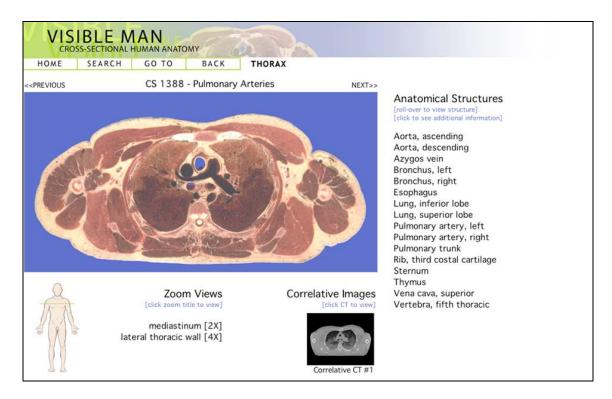


Figure 3-3. Final cross-section page design showing layout.

In order to achieve a cohesive appearance, derivatives of the cross-section page design were created for the magnification and correlative CT pages. The design of magnification page consisted of the same basic components. An identical Visible Man banner and menu bar was positioned at the top of the magnification page. The magnification view of the cross-section was placed on the left-hand side of the page with a similar interactive list of anatomical structures on the right. Navigational buttons were placed above the magnification image and a description of the magnification view lines the bottom of the image (Figure 3-4).

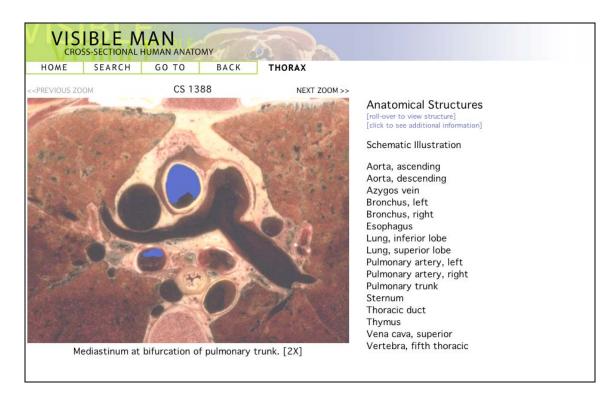


Figure 3-4. Final magnification page design showing layout.

In designing the layout for the correlative CT pages, a derivative of the cross-section page design was once again used. The banner and a modified menu bar were positioned at the top of the page. Since the correlative CT page was designed to open in a new browser window when accessed through the cross-section page, the menu bar on the correlative CT page was minimized to only contain a close button. The opening of an additional browser window was designed to allow the user to compare and contrast the color cross-sectional image with the correlative CT image of the same level. An interactive anatomical structure list was placed to the right of the CT image, and navigational buttons that direct the user between correlative CT images within the same anatomical region were placed above (Figure 3-5).

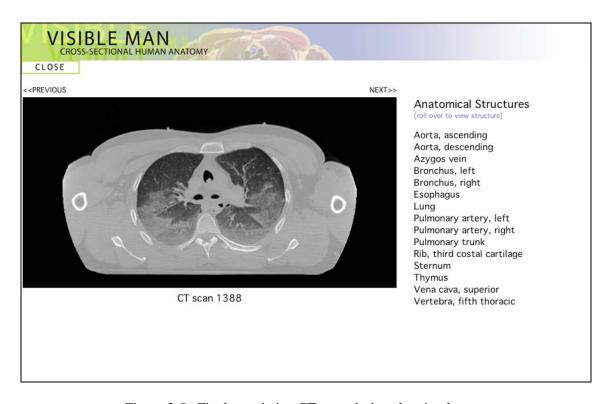


Figure 3-5. Final correlative CT page design showing layout.

### Search and Search Results page design

Another important feature of the website design was the development of the search and search results pages. As with the other pages in the site, a Visible Man banner and menu bar was positioned at the top of the page. Initial search page designs incorporated the search results within the same page layout. These designs included a search menu that contains a quantified number of search topics, centered on the page, with the search results displayed in a list within a frame on the bottom left-hand side of the page. In addition, after the results were displayed the design also incorporated a cross-section preview to the right of the search results that would appear as the user rolled over each search result in the list. Although these

designs efficiently utilized the space available, it was later decided that the search results should appear on their own page. After removing the search results from the main search page, the final design was achieved. The design featured the Visible Man banner and a modified menu bar, to include a home and getting started button, and a jump menu that contains all of the possible search topics (Figure 3-6).

VISIBLE MAN CROSS-SECTIONAL HUMAN ANATOMY
HOME GETTING STARTED
Select a structure by name:
[use the pull-down menu to select an anatomical structure to search] [click on the next and previous buttons at the top of the cross-sections to navigate through the search results]

Figure 3-6. Final search page design showing jump menu with search topics.

After finishing the design of the main search page, I began developing a cohesive design for the search results page. Along with a preview of the found image, it was determined that the design needed to incorporate the search topic, the number of images found for that search topic and the number of the search result currently displayed. In addition, a link to the main

cross-section page where the found image is located, and a preview of where the cross-section was taken from, needed to be included. I felt that a design that closely resembled the cross-section page would best integrate the search result page into the theme and appearance of the entire site. Using the standard Visible Man banner and menu bar from the cross-section page, I positioned the cross-section just below with navigational buttons allowing the user to navigate through the search results. The search topic, number of images found, and the number of the search result currently displayed were placed to the right of the cross-section. The link to the main cross-section page where the image is located and preview of where the cross-section was taken from the body were also positioned to the right of the image just below the number of search results found (Figure 3-7).

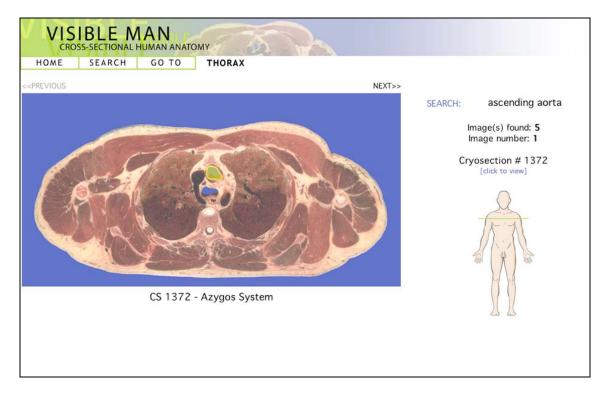


Figure 3-7. Final search result page design showing layout for the first image found for the search topic, ascending aorta.

### Getting Started page design

Although care was taken to include instructions in the design of the pages in the website, it was felt that a getting started page would serve to familiarize the user with the website and provide step-by-step instruction on how to navigate and fully utilize all components in the site. Just in case there were technical difficulties that might cause minor changes in the website's design along the way, the design of this page was delayed until the site was built.

As with the other pages in the site, the Visible Man banner was used at the top of the page. Although care was taken to eliminate the need for scrolling throughout the website, it was determined that minimal vertical scrolling would be acceptable for the Getting Started page. With this in mind, the design was developed to fill but not exceed the width of the page and fill downward as much as needed. The initial design of the Getting Started page incorporated textual information with references to figures that were contained throughout the layout. Although this design minimized the need for a lot of vertical scrolling, it was thought that the layout of the text and images was hard to follow. Abandoning this initial design, I developed a new design that displayed the textual information in a column on the left-hand side of the page and the referenced images to the right. The text was broken up so that each text block referred to only one image.

#### Anatomical structure overlay design

To identify anatomical structures throughout the website and provide additional correlative and clinical information, interactive lists were designed into the page layouts of the main cross-section, magnification, and correlative CT pages. In order to display these structures in a non-obtrusive yet effective manner, image overlays needed to be designed. Many different labeling schemes were explored, including placing numbers within the boundaries of each structures, using leader lines and arrows to point at structures, and semi-transparent color overlays. After considering the possibilities for labeling the structures, it was decided that the semi-transparent color overlays would be the best option. Using Adobe Photoshop, the colored overlays were designed and implemented into the design of the website's pages.

### Correlative information table design

In addition to identifying the structures within the cross-sectional image, the interactive list also served as a way to access the correlative and clinical information tables. Before I was able to design these tables, with the advice of Dr. Botterman, ten anatomical categories were developed into which each structure identified in the site would fit. Each anatomical category contained different amounts and types of information (Table 3-1). After developing a method to categorize the anatomical structures, I adhered to a simple table format for the presentation of the information that contained the structure's name and any pertinent correlative information.

ANATOMICAL GROUP	TYPE OF INFORMATION	
Muscle	Origin, Insertion, Nerve innervation, Main action, Secondary actions, Joints,	
	Synergists, Test function, and Blood Supply	
Vein	Receives blood from, Course, Drains to, and Regional drainage	
Visceral Structures	Description and Location	
Nerve – Cranial	Origin, Main course, Branches, Motor components, Sensory components,	
	Associated ganglia, Associated nuclei, Test function and Nerve damage	
Nerve – Spinal	Origin, Spinal level, Course, Branches and Nerve damage	
Bone	Description and Articulation	
Lymphatics	Location, Afferent, Efferent and Regional drainage	
Artery	Origin, Course, Branches and Distribution	
Structure Space	Description	
Viscera	Description, Location, Blood supply, Venous drainage, Other drainage,	
	Nerve innervation and Referred site/Clinical sign	

Table 3-1. Anatomical categories for the anatomical structures contain within the site.

### **Image Preparation**

Once an overall design was chosen for each part of the website, based on identified goals and desired features, I collected the cross-sectional imagery from the Visible Human Project<sup>®</sup>, developed the website's interface and templates, and completed the thorax anatomical section of the website.

Collection and Manipulation of Visible Human Project® cryosection and CT images

The initial aim of the Visible Human Project® was to create a digital image dataset of complete human male and female cadavers in MRI, CT and anatomical modes, that would be available to anyone who wanted to access the dataset and sought permission. To obtain access to the dataset, Dr. Botterman completed a no-cost license agreement and the University of Texas Southwestern Medical Center was given permission to access and use the dataset from the Visible Human Project® FTP site (Appendix A). Using the username

and password, I was able to access the color cross-section and CT images from the Visible Human Male dataset. The cross-sections obtained through the FTP site were in a Raw file format and compressed in a ZIP format. Upon unzipping the files, using the Macintosh program StuffIt Expander, I was able to recover the Raw file, which I opened in Adobe<sup>®</sup> Photoshop. The Photoshop Raw Options needed to open the Raw file were obtained through the README.txt document that accompanied the files on the FTP site (Figure 3-8).

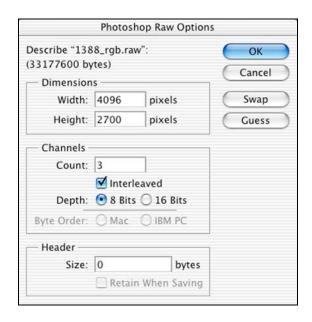


Figure 3-8. Photoshop Raw Options used to open Raw RGB files obtained through VHP<sup>®</sup> FTP site.

Once the file was opened, I changed the image resolution to 300 pixels/inch without resampling the image. In order to use the radiographic convention of always looking at the slide information from below, the canvas was flipped vertically, reversing the right and left. This was done because the Visible Man was actually sliced and photographed from the top down. Fortunately, the thin slices and surrounding blue color leave almost no impression

that the slice faces inferiorly rather than superiorly. After the canvas was flipped and I had experimented with the alignment of multiple cross-sections, I cropped the left side of the canvas by 112px, the right by 168px, the top by 652px, and the bottom by 104px. These croppings were performed independently to ensure the final cross-sectional image was centered within the canvas borders. I purposely left the image size at 3816px by 1944px at 300 pixels/inch until after I completed the image overlays. I wanted the definition and clarity of the structures to remain at a high quality if I needed to zoom in when creating the overlays.

After the previous steps were outlined, I utilized Photoshop's Automated Batch feature to open, resize, and crop all of the cross-sections that were going to be included in the site. This was accomplished by creating a new action in Photoshop that records all steps from file open to file close. Once the new action was recorded, under the File menu I chose *Automate Batch* and the prerecorded action was performed on each Raw file. The finished files were saved in a designated folder and the gel backgrounds were deleted and replaced with a flat blue color, #4D5CC1. The color blue was chosen to emulate the common convention in displaying cross-sectional imagery.

The correlative CT images were obtained, opened, and manipulated in a similar manner using the Photoshop Raw Options were obtained through the VHP FTP site (Figure 3-9).

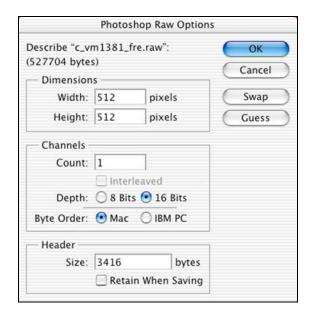


Figure 3-9. Photoshop Raw Options used to open Raw CT files obtained through VHP FTP site.

Once the file was opened, I changed the image resolution to 300 pixels/inch without resampling the image. Since these radiographic images were displayed with the patient's left and right reversed from that of the viewer, the canvas did not need to be flipped. Therefore, I continued by increasing the canvas' width to 651px, expanding in both horizontal directions. Next, the top was cropped by 99px, and the bottom by 82px. Since the original image resolution was of lower quality than the color cross-sections, I converted the image to its final size, 631px by 321px at 300 pixels/inch, as dictated by the original CT page design, before I created the structure overlays. Finally, I used the *Automated Batch* feature once again to prepare the other CT images.

Creation of anatomical structure overlays and schematic illustrations

Using the resized and cropped color cross-section and CT images, I began creating the anatomical structure overlays and schematic illustrations. Using Photoshop's pen tool, I created paths outlining each anatomical structure by opening the Paths window and creating new paths for each structure outlined. After a rough path was placed around each structure, the handle-bars at each path point were used to manipulate the bézier curves to achieve the best possible fit. Care was taken in aligning each path to its structure, as these paths were later used to create the schematic illustrations.

The *Make Selection* feature in the Path window was used to change each path into its own selection with a feather radius of 0px. New layers were created and labeled for each anatomical structure, and each selection was filled with a yellow color, #FFFC00, by using the paint bucket on each corresponding layer. Each layer's opacity was then decreased to 50%, allowing the structure to be visible through the overlay. After all structure selections were filled, each layer was saved as its own JPEG in a folder named "anat\_struc\_orig." The same procedure was then used for the correlative CT images, creating the anatomical structure overlays for each CT image. I used a file naming protocol that included the cross-section number, type of image, and structure name abbreviation. Using this protocol a color cross-section and CT image for cross-section number 1388 that identifies the superior vena cava would be labeled 1388\_venacava\_sup.jpg and 1388ct\_venacava\_sup.jpg respectively. Locating the folder named "anat\_struc\_orig," I used the *Automated Batch* feature to decrease

the size of all the images to 631px by 321px at 300 pixels/inch. I placed these final images into a folder labeled "anat\_struc\_final" for use in the website.

The magnification images with the identified structures were created next using the high-resolution images in the folder named "anat\_struc\_orig." Once I determined suitable magnification views, I cropped all images to the desired canvas size. Since all zoom views adhered to the same proportions, I was able to once again use the *Automated Batch* to decrease the image size to 539px by 410px at 300pixels/inch, as dictated by my original magnification page design. The magnification images were named using the same protocol as before, adding an additional identification for each cross-section's magnification view. The second of three magnification images for cross-section number 1388 that identifies the superior vena cava would appear as 1388Bmag\_venacava\_sup.jpg, where the B notates the second magnification image.

The final image manipulations were preformed on the original image overlays in the folder "anat\_struc\_orig." As dictated by the original cross-section page design, all images were decreased from 3816px by 1944px to 631px by 321px at 300pixels/inch. This last manipulation was achieved using the *Automated Batch* feature.

Schematic illustration overlays comprise one of the structure-identifying features on the magnification pages of the site. These schematic illustrations allow the user to see all the structures in a cross-section at one time by rolling over the designated HTML text. Using the

paths already created for the development of the semi-transparent color overlays, the schematic illustration overlays were created by first combining all paths onto one path layer. After creating a new Photoshop layer, the *Stroke Path* option was selected in the "Paths" window and a 1px black brush was applied to the path. Once the paths were stroked, a white layer of 35% opacity was created under the stroked path layer. With all structures visible by a thin outline, text layers were added for identification. Drop shadows were used whenever the white text was difficult to see due to differences in cross-section color.

#### **Website Production**

CSS usage for webpage HTML text

Before creating the pages of the website, I focused my attention on how I wanted text to appear in the site. Discussions with my advisory committee revealed that the more I could control how text would appear on the site, the more consistent the site would look and the easier it would be to prevent the viewer's browser from determining how the text was going to appear. Although complete control of a font appearance cannot be obtained, it was possible using Cascading Style Sheets (CSS) to control the majority of a font's features. CSS specify the appearance of Hyper Text Markup Language (HTML) and other elements in a website. CSS was developed for use with HTML in web pages and is typically used to provide a single "library" of styles that are used over and over throughout a large number of related documents. CSS cascade multiple style definitions into one and enable the look of a

<sup>&</sup>lt;sup>6</sup> <u>United Yellow Pages: Internet Terminology</u>. 2005. Online. Internet.

large number of documents to be easily changed. Specific CSS used in the creation of the site are listed in Appendix B.

#### Creation of Visible Man site folder nomenclature

Before I advanced any further in the creation of the website, I needed to establish the main site folder and nomenclature. To do this I created blank HTML pages in Macromedia<sup>®</sup>

Dreamweaver to serve as place holders in my nomenclature, a template folder for the Dreamweaver templates, and any image folders needed for the HTML pages (Figure 3-10).

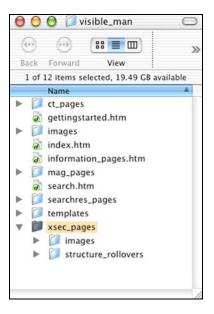


Figure 3-10. Site folder showing nomenclature and projected content of cross-section page folder.

Also, a working folder was created to hold all other files that were used in the creation of the site (i.e. Photoshop, Illustrator, trial HTML pages, etc.). Although additions to the

<sup>&</sup>lt;a href="http://www.unitedyellowpages.com/internet/terminology.html#C">http://www.unitedyellowpages.com/internet/terminology.html#C></a>

nomenclature might occur in the creation of the site, I felt that a solid foundation was needed before I could really begin to create the site's pages. The time and effort spent in the development of a solid design for the Visible Man homepage made the creation of the page quite easy. After designing the layout in Adobe® Photoshop, I saved each component as its own JPEG and placed them in an image folder located in the main site folder. In addition, I created all the menu items and their rollover images needed for the entire site.

#### Creation of Visible Man main page

Using Macromedia® Dreamweaver and the images created earlier, I constructed the main page based on the design I had developed. The Visible Man banner and appropriate menu items were inserted into a blank page. The banner and menu were aligned at the top of the page and a three-column table was inserted on the line below. In the left-most column I inserted the outline drawing of the male body and named it "body\_drawing" for future reference when attaching the image-swap code. The HTML text, "CROSS-SECTION PREVIEW" was inserted in the middle column and a CSS was applied. A three-column, three-row table was inserted into the right-most column. The top row of this table was filled with the "Anatomical Regions" and "Cryosections" headings, while the middle row was filled with a green line image that served as an aesthetic piece and spacer. The bottom, left cell of the table was filled with the eight anatomical regions inserted as HTML text that would be used to show the cryosections in the bottom, right cell when the region of interest is selected.

#### Creation of web pages

After the main page was created I began creating the cross-section pages. While developing the design for the cross-section page I incorporated a plan to create and use a web page template. Dreamweaver templates help create web pages with a consistent design and layout. Templates also make it easy to update and maintain the site. By simply revising a template the web pages based on that template automatically update. To create the cross-section page template, I began by constructing a page similar to that of the main page. As before, the Visible Man banner and menu items were inserted into a blank page. Links were added to each menu item except the "GO TO" button. The "GO TO" button was designed to provide access, through a popup menu, to any of the 72 cross-sections in the site.

### Webpage templates

After the Visible Man banner and menu bar was created, I began creating the remainder of the template page. Following the design that was developed, I inserted a one-cell table below the menu bar. I divided and joined cells until I had created a table that would be able to contain all of the components the cross-section page required. Once the table was divided into the correct number and orientation of cells, I began converting the page into a template that could be used to create a series of pages with the same style and design.

Editable regions were defined and inserted into the code for all cells that would eventually contain information or links that were unique to their own page. The cells that were identified as editable regions contained the Next and Previous navigation buttons, cross-

sectional image, body preview, magnification views, correlative CT images, and anatomical structure list. To insert the editable region, the code <!-- TemplateBeginEditable name="anatomical structures" --> and <!-- TemplateEndEditable -->, was inserted before and after the cell's tags. The remaining cells not tagged as editable regions were filled with the appropriate HTML text and CSS attributes (Figure 3-11). The page was saved as a template, "xsec.dwt," and put into the templates folder in the site folder.

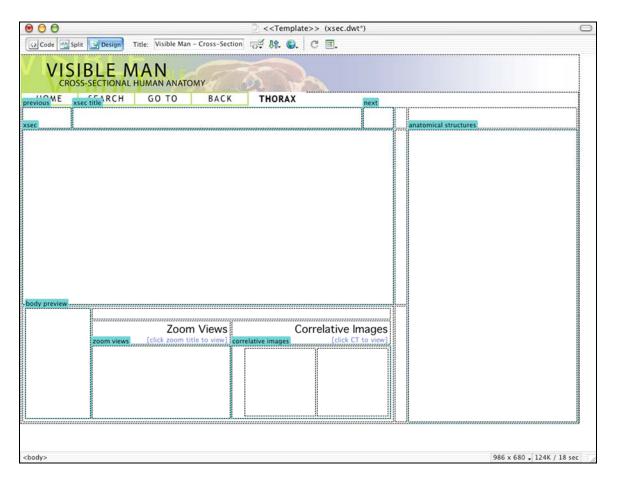


Figure 3-11. Dreamweaver design window showing page layout with editable regions.

After the cross-section page template was created the templates for the magnification, correlative CT and search results pages were created by modifying the table's cells to accommodate the requirements of each page's design. The CT page template was unique in that the only element in its menu bar was a "CLOSE" button. The JavaScript, Javascript:self.close();, was applied to the "CLOSE" button which enabled the user to close the entire window by clicking on this button. Since these pages were to open in their own windows, there was no need for the additional menu items. Once the appropriate editable regions and menu items were added or subtracted, each template was saved under a unique name and I began creating the subsequent pages based on these templates.

Having already defined my site folder's nomenclature, I had an organized method to insert the necessary images and create entire sets of pages based on each template. I utilized the CSS to format the HTML text that was inserted into the cells. The necessary image swap behaviors for the anatomical lists and zoom views were applied, page links were established, and navigation between the cross-section, CT, and magnification pages was achieved by linking the Next and Previous navigational buttons to their appropriate pages. Before completing the pages, links needed to be established between the structures in the anatomical lists and the correlative information tables that sill needed to be created.

#### Correlative information tables

The correlative information tables were created by making ten individual templates, each adhering to the content of the ten anatomical groupings derived earlier (Table 3-1). There

were seventy separate pages created for all the anatomical structures listed in the site. Each page was derived from the appropriate template and the correlative and clinical information was inserted into the editable regions and CSS were applied (Figure 3-12).

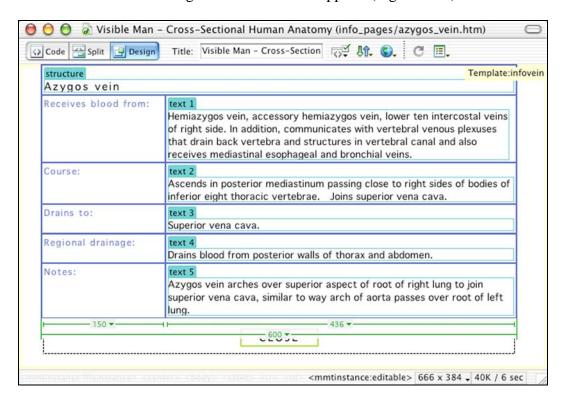


Figure 3-12. Dreamweaver design window showing azygos vein information table with filled in editable regions.

Once the tables were created, an "Open Browser Window" behavior was applied to all structures in the anatomical lists on each cross-section and magnification page. This behavior allowed the window size, attributes, and content for each information table to be controlled (Figure 3-13).

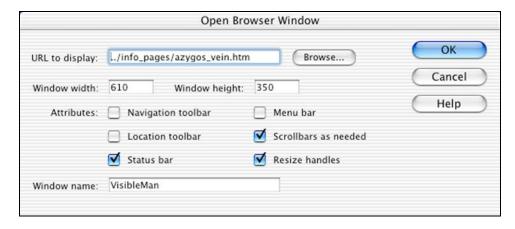


Figure 3-13. "Open Browser Window" options window showing options chosen for the azygos vein information table.

#### Creation of Getting Started page

Once the site's pages were completed, I began the creation of the Getting Started page. The purpose of this page was to describe how to navigate the site. Certain images and features of the site were referenced, and screen grabs were taken, manipulated in Adobe® Photoshop, and saved as JPEGs to create the text's referenced images. After the text and images were created, a page consisting of the Visible Man banner and menu bar and a multi-celled table was developed. After review it was felt by some members on the advisory committee that the Getting Started page layout was difficult to follow, and they suggested replacing the multi-celled table with a two-columned table, keeping the narrative on the left and the referenced images on the right. After the new layout was created utilizing the two-columned table, CSS were applied to the HTML text and the Getting Started page was complete.

#### Creation of Search page

The creation of the search page was very similar to the other pages in the site. The Visible Man banner and a menu bar which included "HOME" and "GETTING STARTED" buttons were used. To meet the requirements of the search component, I decided to use a feature in Dreamweaver called a jump menu. This type of menu was very appealing as it allowed multiple search options to be inserted and displayed that could easily be accessed by the user when the dropdown tab was clicked. A quantified list of search options was chosen for the list and the jump menu was inserted into the page's code. First, the jump menu's JavaScript was inserted into the page's code between the <script> tags (Figure 3-14).

```
function P7_JumpMenu(targ,selObj,restore){ //v3.0
   eval(targ+".location='"+selObj.options[selObj.selectedIndex].value+"'");
   if (restore) selObj.selectedIndex=0;}
```

Figure 3-14. Jump menu JavaScript inserted into Search page code.

After the script had been inserted, the actual jump menu was inserted, centered in a cell just below the menu bar. This was accomplished by inserting the code for the jump menu's <select> tag between the tags of the designated cell. When inserting the code for the jump menu, I also included the link coding for each structure in the list (Figure 3-15).

```
<h3>Select
  a structure by name:

«select name="searchmenu" id="searchmenu" onChange="P7_JumpMenu('parent',this,0)">
    <option value="#" selected>&nbsp;</option>
    <option value="search_results/ascaorta/ascaorta_xsec1372.htm">Ascending aorta
    <option value="search_results/azygosvein/azygosvein_xsec1368.htm">Azygos vein</option>
    coption value="search_results/esoph/esophagus_xsec1350.htm">Esophagus
    coption value="search_results/lunginf/lunginferior_xsec1368.htm">Lung, inferior lobe
    coption value="search_results/ribcostcart/ribcostcart_xsec1350.htm">Rib, costal cartilage/option>
    coption value="search_results/sternum/sternum_xsec1368.htm">Sternum
    <option value="search_results/thymus/thymus_xsec1368.htm">Thymus</option</pre>
    <aption value="search_results/vaguslt/vaguslt_xsec1350mag.htm">Vagus nerve, left</aption>
    <option value="search_results/venacavasup/venacavasup_xsec1368.htm">Vena cava, superior
    doption value="search_results/ventrt/ventrt_xsec1415.htm">Ventricle, right/option>
```

Figure 3-15. JumpMenu <Select> tag with page links, inserted between cell's tags.

#### **Website Special Features**

iFrames within Visible Man main page

Upon reviewing HTML references and viewing multiple websites I found a solution to the cross-section menu functionality using an inline frame (iFrame), a frame that can be placed anywhere within an existing page and set to any height and width. The iFrame could act as a target for cryosection lists, the contents of which would then be linked to the iFrame's parent page. This feature was important as I wanted the HTML text within the iFrame to effect links and image swaps in the site's main page. In addition, loading new iFrame would not cause the reloading of the entire main page.

Before inserting the iFrame into the main page, I created separate web pages that contained only the cryosection lists. A single column, single row table was inserted into a blank page

and the cryosection lists were typed in HTML text with associated CSS. After saving each list as a separate web page and creating a new folder in the site nomenclature named iFrames, I inserted the code, <iframe src="iframes/iframes\_blank\_list.htm" name="floater" width=333 height=400 align="left" frameborder="0"></iframe>, within the identified cell of the main page to establish the iFrame. After inserting this code, any HTML text could be linked to the iFrame by reference to the desired iFrame and "floater" target (Figure 3-16).

Figure 3-16. Main page code showing each anatomical region HTML text reference to its corresponding iFrame.

Once the iFrame code was inserted into the main page, the HTML text in each cryosection list needed to reference the main page in order accomplish the image swaps and page links. This was achieved by opening each iFrame in Dreamweaver and applying the appropriate image swap behavior and link features. When creating the link, I set the target for *parent*. Once the image swap behavior was established, I simply added the code, parent., just before the behavior's code of the iFrame page (Figure 3-17).

```
</a>a href="../xsec_pages/xsec1368.htm" target="_parent" class="structures"
onMouseOver="parent.MM_swapImage('body_drawing','','images/.../line_1368.jpg','preview','','images/.../preview_1368.jpg',1)"
onMouseOut="parent.MM_swapImgRestore()">1368 - Aortic Arch-dor>
```

Figure 3-17. iFrame page code showing image swap behavior with parent target for cryosection 1368-Aortic Arch.

#### PVII Popup Menu within web pages

The Studio VII extension was discovered while searching for a solution to solve the incompatibility problems with Dreamweaver's built-in popup menus. These popup menus were going to be used for the "GO TO" buttons on all cross-section pages. However, the standard popup menus built-in to the Dreamweaver program are very easy to construct and use but do not have cross platform, cross browser functionality. One of the major requirements of the site was its compatibility across both PC and Mac platforms and with multiple internet browsers, namely Internet<sup>®</sup> Explorer, Netscape<sup>®</sup>, Firefox<sup>TM</sup>, and Safari<sup>TM</sup>. These built-in menus worked very well in the Mac versions of Internet<sup>®</sup> Explorer and Netscape<sup>®</sup> but did not function well in all other platforms and browsers. After visiting and posting on many HTML and web design forums, I came across a solution to the popup menu problem. A website called "project seven.com" had a tutorial on how to make simple popup menus using CSS and JavaScript, with cross platform and cross browser functionality, using a Dreamweaver extension called Studio VII.<sup>7</sup>

After working through the tutorial, I was able apply the necessary code and CSS to fit the need in the Visible Man site. The popup menu for my site required one main menu, labeled "dropmenu," and eight sub-menus, labeled "dropsubmenu1-8," for the eight anatomical sections in the site. Similar to any HTML text the CSS for these menus controlled the font styles, sizes, and rollover features. However, by choosing the appropriate settings in the

<sup>&</sup>lt;sup>7</sup> PVII Development. <u>simple vii popup menus</u>. 2004. Online. Internet.

<sup>&</sup>lt;a href="http://www.projectseven.com/tutorials/navigation/auto">http://www.projectseven.com/tutorials/navigation/auto</a> hide/index.htm>

CSS, I was also able to format the style, size and position of the actual menu tables (Appendix B). Once I had generated the CSS for the nine menus, I inserted the code for each menu using the <DIV> tag (Figure 3-18). This tag allows formatting of large blocks of text, images, and any other element that has an HTML tag associated with it.

```
<div id="dropsubmenu3" class="sublowermenus">

      <a href="#" class="p7submenus">1368 - Aortic Arch</a>

    align="left">
    href="#" class="p7submenus">1372 - Azygos System</a>
    /p>

¬p align="left">¬a href="#" class="p7submenus">1381 - Trans. Pericardial Sinus</a>
√p>

      <a href="#" class="p7submenus">1388 - Pulmonary A.</a>

    align="left">a href="#" class="p7submenus">1415 - L. & R. Auricles</a>/p>

¬p align="left">¬a href="#" class="p7submenus">1439 - Atrioventricular Valves</a>
√p>
</div>
<div id="dropmenu" class="submenus">

align="left">
<a href="#" class="p7submenus">HEAD</a>

align="left">

a href="#" class="p7submenus">NECK</a>

    align="left"> a href="#" class="p7submenus">THORAX</a>
      <a href="#" class="p7submenus">UPPER LIMB</a>

      align="left">>a href="#" class="p7submenus">PERINEUM & PELVIS</a>

align="left">

a href="#" class="p7submenus">LOWER LIMB</a>

      align="left"><a href="#" class="p7submenus">BACK</a>
</div>
```

Figure 3-18. Popup menu code in cross-section page showing the use of <DIV> tag in the creation of two of the nine menus created.

Each menu was labeled by a unique "id" and "class," which allowed the HTML text within each menu to reference the CSS established. After inserting the menu's code and CSS, I linked each element within thorax submenu to its respective cross-section pages. The final step in the creation of these popup menus was to program each menu with the appropriate hide or reveal behavior using the Studio VII Dreamweaver extension. After the extension was downloaded from the PVII website, unzipped, and Dreamweaver restarted, the new Studio VII extension was accessible under the behaviors menu.

To program the main popup menu, "dropmenu," to appear on OnClick of the "GO TO" button, the "Auto Layers by PVII" selection was chosen under the Studio VII behavior. In the window that appeared, I selected the layer "dropmenu" and clicked on "Show Layer" (Figure 3-19).

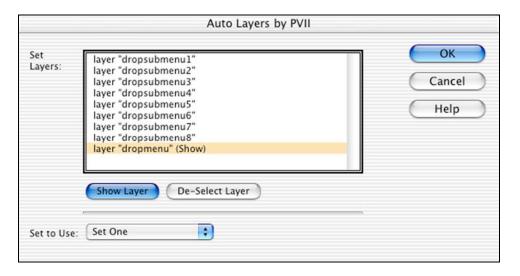


Figure 3-19. Auto Layers by PVII effects window showing the selection of layer "dropmenu" to show layer.

After the main popup menu was programmed to appear OnClick of the "GO TO" button, I performed the same procedure on each item within that menu to show their respective submenus OnClick. Finally, each menu had to have a hide behavior programmed so the menu would hide once the user either rolled off with the mouse or clicked on a different anatomical region within the main menu. This effect was accomplished by selecting the <br/>
<br/>
<br/>
<br/>
dody> tag in the left-hand corner of the Dreamweaver window and applying the "autoHide" PVII" behavior to the main popup menu. This behavior made the popup menu disappear

once the mouse was rolled off and onto the body of the page. In addition, the same behavior was applied to the other menu items and the Visible Man banner to ensure that if the mouse was rolled upward and off, the popup menu would disappear.

# CHAPTER FOUR Results

#### **Survey Development**

After the completion of the Visible Man website, the site was posted online for evaluation by the target audience, first-year medical students at the University of Texas Southwestern Medical Center. To evaluate the effectiveness of the website and my ability to meet the goals and objectives set forth at the beginning of the thesis, a survey was developed and distributed. The survey contained three questions to provide background on the user's computer and internet settings and nine statements pertaining to the goals of the project. All statements in the survey were accompanied by a five-point Likert scale, ranging from "Strongly Agree" to "Strongly Disagree" (Appendix D). The two-page survey was created as a word document and form fields were used to restrict the participant's comments to the designated spaces so that the layout of the survey would not be accidentally altered.

#### **Survey Distribution and Collection**

To distribute the surveys to the target audience, I enlisted the help of one of my committee members. I provided Dr. Botterman with the survey and he emailed it along with the site's url to the MS1 class. Dr. Botterman also made an announcement about the project during an

anatomy lecture. Those who chose to participate in the survey were to fill out the survey and email it back to me as an attachment.

#### **Survey Results**

Twenty-three first-year medical students and two first-year biomedical communications graduate student participated in the Visible Man survey (Appendix E and Chart 4-1).

Nineteen participants viewed the website on a PC, four on a Macintosh, and two participants did not indicate the type of computer they used. Of the four Macintosh users, three used Safari as their internet browser, and one used Internet® Explorer. The twenty-one other participants used either Firefox<sup>TM</sup> or Internet® Explorer as their internet browser, with Internet® Explorer being the most popular. Interestingly, one participant also viewed the website on his Palm® Treo650 using Blazer 4.0 and commented, "Though a bit tight at 320 x 320, the site works very well on my Treo650." All twenty-five participants either agreed or strongly agreed that the Visible Man website was both simple to navigate and easy to use.

Effectiveness of the "Getting Started" webpage

Given the statement, "The Getting Started page provides adequate background for navigating the website," twenty participants either agreed or strongly agreed, while four were neutral and one disagreed. One participant who strongly agreed with the statement added, "The Getting Started page is good, but spread out and too long. Students want to read as little as possible." The one participant who disagreed with the statement gave no insight into his

disagreement. A few participants who felt neutral about the Getting Started page felt that the site was simple enough to navigate that such a page wasn't necessary. Conversely, one participant suggested that the Getting Started page should be the home page because, "...it's easy to miss features that you don't notice if you dive right in."

#### Comprehensiveness of website

Several participants felt that the information presented on the Visible Man website is comprehensive. While twenty participants either agreed or strongly agreed, the one who disagreed, in referring to the structures identified in the Thorax stated, "The mediastinum is very well done. However, muscles on chest wall would be helpful." Of the four neutral responses, three felt that many more structures could have been identified in the Thorax and one stated, "Our course requires much more." This participant did not indicate whether he felt that the quality of information was insufficient, or whether he shared the view of the other participants who felt the quantity of information was insufficient.

Twenty-two participants either agreed or strongly agreed with the statement, "The additional information tables for each anatomical structure presented in the website were comprehensive." Of the remaining three who were neutral on this statement, one felt that although the information was comprehensive, she probably wouldn't click on all the structures to access the additional information. She did not give any suggestions as to how to better display the correlative information. Also, one neutral participant suggested that a few non-cross-sectional images should be added to the correlative information to allow for

comparison with the two-dimensional cross-sections. He explained, "...as a beginning student, it can become confusing since we are after all still learning the anatomy. It can be difficult to grasp the cross section without comparing it to more conventional images from a source such as Netter's, Grant's, or Rohen's."

Provided with the statement, "I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site," sixteen participants either agreed or strongly agreed, eight were neutral, and one disagreed. Most participants who agreed and strongly agreed with the statement, felt that the more radiological images available, the more effective the site would be. However, a few stated that the addition of more radiological images would be undesirable if they cluttered the site and increased image load times.

### Usefulness of website

The responses to the last two statements on the survey were very similar. When given the statement, "This website would be a useful resource for me in my 1<sup>st</sup> year medical school curriculum," twenty participants either agreed or strongly agreed. Similarly, provided the statement, "If it were available, I would use the website as a resource for the anatomy course," twenty-one participants either agreed or strongly agreed. Two participants, one who strongly agreed to each statement and one who disagreed with each statement, indicated that they would only use this site as a resource if the images and identified structures were part of the course curriculum stating, "I think the website is great. But unless the anatomy instructors indicate that cross-sectional anatomy is important (i.e., put the material on an

exam) it's unlikely that I would use the site." This type of response was anticipated. After distribution and review of these two survey statements, I concluded that it would have been good to include the preface, "If cross-sectional anatomy was integrated into the curriculum..."

#### Suggestions and additional comments

Several participants provided comments when asked to provide any suggestions that would make the site clearer, easier to navigate, or more comprehensive. A few participants suggested that information on the disease processes and other medical issues involving specific structures could add to the site's correlative information quality. Others suggested that additional schematic illustrations, like those on the magnification pages, would be nice to have on the main cross-section pages. One participant suggested to "...place some directional markers around the cross-section to indicate anterior/posterior positions."

Directional markers could possibly help orient the user with the standard convention of reading radiographs where the patient's left and right are reversed from that of the viewer.

Finally, a common suggestion on many of the completed surveys was to include a test feature on the website. One participant suggested, "...any testing function to make the structure identification more like a lab practical, where the structure has to be named versus locating the name structure, would greatly increase the usefulness of the site."

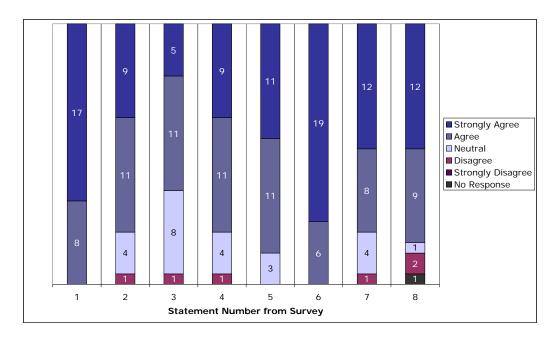


Chart 4-1. Summary of survey responses.

# CHAPTER FIVE Conclusions and Recommendations

#### **Project Summation**

This project was designed to see if the use of digital cross-sectional images, allowing students to interactively manipulate the images and their labels, would improve their understanding of these two-dimensional diagnostic images and enhance their understanding of the three-dimensional relationships of human organ systems.

A target audience and their needs were identified, a project design was developed through research and correspondence with my advisory committee, the design was implemented in the creation of a cross-sectional website, and the completed project was posted online for evaluation by the target audience.

A cross-sectional anatomy website was created that contained eight cross-sections from the thorax region, which were taken from the National Library of Medicine's<sup>TM</sup> Visible Human Project<sup>®</sup> dataset. The website provided structure identification for the structures in and around the thorax allowing the user to access magnification views, correlative CT images, and additional clinical information about the structures identified. Schematic illustrations were also available to the user on the magnification pages of the site. The website also

contained a search feature that allowed the user to search for images containing specific anatomical structures.

The website was created using Macromedia<sup>®</sup> Dreamweaver and Adobe<sup>®</sup> Illustrator and Photoshop. Image manipulation and identification, as well as schematic overlays, were created in Adobe<sup>®</sup> Photoshop. Adobe<sup>®</sup> Illustrator was used to create the outline drawing of the body that served as a legend showing where each cross-section was taken. Many of Macromedia<sup>®</sup> Dreamweaver's standard behaviors and components were used in the creation of the web pages. However, additional HTML and JavaScript elements such as iFrames, PVII Popup Menus, and JumpMenus were also incorporated into the creation of the website.

Microsoft<sup>®</sup> Word was used to produce the survey, which was distributed to the first-year medical students UT Southwestern. The two-page survey contained text and check box form fields that restricted the participant's comments to the designated spaces. Twenty-five surveys were completed and the overall response to the cross-sectional website was positive.

#### Conclusion

In conclusion, the response to the Visible Man Cross-Sectional Anatomy website was positive. Many evaluators expressed a desire to see more cross-sections be added and the site be filled out to contain cross-sections from all anatomical regions. All aspects of the Visible Man website were produced successfully and translate well cross-platform and cross-

browser. The evaluators perceived the website's navigation and ease of use positively. The correlative clinical images and information was received well and although more radiological imagery and pathological information could be included, many evaluators felt that the information provided on the site was thorough and comprehensive. Evaluators overwhelmingly felt that the Visible Man website would be a useful resource for 1<sup>st</sup> year medical students.

#### **Recommendations for Future Research**

Current trends show the study of cross-sectional anatomy and its clinical implications is becoming more prevalent in the anatomy course curriculum in many medical schools. This will require more comprehensive resources to be available to medical students, creating a need for future research and development of the Visible Man Cross-Sectional Anatomy website. An obvious avenue for future development would be the addition of more cross-sections to complete the seven other anatomical regions. With these additions, more correlative radiological imagery, specifically MR and X-ray images, and pathological information could be added to the site's content.

Furthermore, the exclusion of female cross-sections from this website also creates an area for development. Images from the Visible Female were excluded because of the pathology present in the dataset. However, the addition of these images with the abnormal anatomy and

pathology identified, specifically the coronary artery disease that caused the female's death, could be an interesting and informative addition to the website.

Based on the twenty-five surveys obtained from the target audience, future areas of development could include the addition of anatomic directional arrows to establish the cross-section's orientation. To help with spatial relationships, including anatomical images or illustrations like those of Grant's, Netter's, or Rohen's, could also be pursued. The creation of live dissection videos or 3D animations could also help to relate the surface morphology and human organ systems to the reading of two-dimensional cross-sectional and radiological images.

Many evaluators expressed an interest in having a test feature incorporated into the site. The development and implementation of this type of feature in the website's design could serve as an area for future research and development. A potential useful testing feature might require the user to identify a structure by typing in its name instead of selecting the structure name from a predetermined list. This would create an environment similar to the anatomy lab practical and test the user's ability to recall information. This demands the production of responses from memory rather than recognition from a list of structures.

The increase in scope and scale of the Visible Man website would necessitate future research into the use of a database program such as FileMaker Pro to organize and recall all cross-sectional images within the website. The implementation of a database would enable the

search feature to incorporate more search fields allowing the user to provide a unique search query in addition to the list of search topics. The use of a database and a subsequent template page containing formatted database fields would also eliminate the need for additional secondary and tertiary pages as more cross-sections are added to the website.

Finally, the most important avenue for future research would be the implementation of comprehension testing. Although the overall response to the website was positive and many first-year medical students felt that the cross-sectional anatomy website would be a useful resource, it would be beneficial to test the target audience for comprehension. A comprehension test would evaluate the effectiveness of the Visible Man site verses conventional methods of learning cross-sectional anatomy and would provide evidence for whether the website was meeting the needs of the students and curriculum.

## APPENDIX A License Agreement

#### AGREEMENT FOR

#### USE OF IMAGES FROM VISIBLE HUMAN DATA SET

Made this 27th day of June, 2000 by and between the National Library of Medicine, Department of Health and Human Services (hereinafter referred to as "NLM") and The University of Texas Southwestern Medical Center (hereinafter referred to as "RECIPIENT").

WHEREAS, the NLM was established by statute in order to assist the advancement of medical and related sciences, and to aid the dissemination and exchange of scientific and other information important to the progress of medicine and to the public health, (section 465 of the Public Health Service Act, as amended (42 U.S.C. section 286) and to carry out this purpose has been authorized to develop the Visible Human Data Set (VHD) as a first project in establishing a digital medical image archive at NLM;

WHEREAS, the NLM's Visible Human Project<sup>™</sup> has produced new digital image data sets (VHD products) that are now ready to be used in a variety of settings to determine their current utility and obtain feedback on useful enhancements:

WHEREAS, RECIPIENT desires to use the VHD products at its sole risk and at no expense to NLM,

NOW THEREFORE, it is mutually agreed as follows:

- 1. The NLM hereby grants a nonexclusive right to RECIPIENT to use the VHD products and incorporate them in computer applications or systems designed to improve access to those images or to biomedical information of any type. A description of the proposed applications or systems is attached.
- 2. RECIPIENT may distribute computer applications containing the VHD products to other institutions and individuals free of charge or at such reasonable prices as RECIPIENT determines provided, however, that the RECIPIENT obtains agreement from such institutions and individuals that they will be bound by the terms of this Agreement. No charges, usage fees or royalties will be paid to NLM. RECIPIENT shall acknowledge NLM and the Visible Human Project™ as its source of the VHD data™ in a suitable and customary manner, but may not in any way indicate that NLM has endorsed RECIPIENT or its products.
- 3. RECIPIENT shall not distribute VHD products or subsets of these products except as an integral part of computer applications developed by RECIPIENT.
- 4. RECIPIENT agrees to demonstrate to NLM any applications in which it is using the VHD products prior to distributing the application(s). RECIPIENT agrees to provide specific information to NLM regarding how VHD products are used in its application(s), the users and usage of any application containing the VHD products, any difficulties encountered in using the VHD products, and changes or enhancements to the VHD products that would make them more useful to RECIPIENT and its user

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<sup>&</sup>lt;sup>9</sup> An anatomical data set developed under a contract from the NLM by the Departments of Cellular and Structural Biology, and Radiology, University of Colorado School of Medicine.

- groups. RECIPIENT shall provide NLM with a copy of any applications incorporating the VHD products and agrees that NLM shall have an irrevocable, paid up, non-exclusive license under the U.S. patent and copyright laws, as the case may be, to use, reproduce, prepare derivative works, and perform the applications, for Government purposes.
- 5. RECIPIENT and/or its users shall be solely responsible for compliance with any third party copyright restrictions; neither NLM nor its Mirror Sites assume any responsibility or liability associated with the RECIPIENT (or any of the RECIPIENT's users) use and/or reproduction of copyrighted material.
- 6. RECIPIENT must inform its users that VHD products are provided on an interim basis and may be modified substantially by NLM in subsequent versions.
- 7. NLM makes no claim that the VHD products encompass all data collected during or associated with this project.
- 8. The presence in VHD application of data developed by organizations other than NLM does not imply any endorsement by NLM of the data from these organizations.
- 9. NLM represents that the data comprising the VHD products provided hereunder were formatted with a reasonable standard of care, but makes no warranties express or implied, including no warranty of merchantability or fitness for particular purpose, regarding the accuracy or completeness of the data or that the machine-readable copy is error free. Therefore, RECIPIENT agrees to waive any and all claims against NLM, its Mirror Sites, the Government, and any organizations contributing data to VHD products for liability resulting from errors in data or on the machine-readable copy. NLM reserves the right to change the type and format of its machine-readable data.
- 10. RECIPIENT understands that there may be substantial changes in the content or format of the subsequent versions of VHD products and that there may be a charge for subsequent versions of VHD products.
- 11. NLM may offer VHD products to other commercial and noncommercial organizations without accounting to RECIPIENT.
- 12. This Agreement shall be effective until terminated by either party with 30 days written notice to the other.
- 13. In the event of termination of this Agreement:
- (a) RECIPIENT must enter into a license agreement with NLM for continued use of updated VHD data OR promptly destroy and erase all data in machine-readable form obtained under this Agreement as well as any such data now contained in any derivative files under the RECIPIENT's control.
- (b) Neither the Government nor its employees shall be liable or responsible to RECIPIENT in any manner whatsoever for damages of any nature whatsoever arising from the termination of this Agreement or from the use of VHD products.

## APPENDIX B Webpage HTML Code

## CASCADING STYLE SHEETS (CSS)

VISIBLE MAN WEBSITE CSS		
Cross-Section Pages	Search Result, Magnification, CT Pages	
Zooms link	Menu link	
a.zooms:link {color: #000000;	font-size: 12px;} a.menu:visited {color: #000000; font-family: Geneva, Arial, Helvetica, sans-serif; font-size: 12px;} a.menu:hover {color: #A4D42A;}  Structures link  a.structures:link {color: #000000; font-family: Geneva, Arial, Helvetica, sans-serif; font-size: 15px;} a.structures:active {color: #000000; font-family: Geneva, Arial, Helvetica, sans-serif; font-size: 15px;} a.structures:visited {color: #000000; font-family: Geneva, Arial, Helvetica, sans-serif; font-size: 15px;} a.structures:visited {color: #000000; font-family: Geneva, Arial, Helvetica, sans-serif;	
font-size: 14px;}	font-size: 15px;}	
a.menu:hover {color: #B3DC5D;}	a.structures:hover {color: #A4D42A;}	
Structures link	Formats	
a.structures:link {color: #000000; font-family: Geneva, Arial, Helvetica, sans-serif; font-size: 15px;} a.structures:active {color: #000000; font-family: Geneva, Arial, Helvetica, sans-serif font-size: 15px;} a.structures:visited {color: #000000; font-family: Geneva, Arial, Helvetica, sans-serif font-size: 15px;}	h2 { font-family: Geneva, Arial, Helvetica, sans-serif; font-size: 14.5px; color: #000000;} h4 { font-family: Geneva, Arial, Helvetica, sans-serif; font-size: 16px; color: #000000;} h5 { font-family: Geneva, Arial, Helvetica, sans-serif; font-size: 11px; color: #3E47B1;}	
a.structures:hover {color: # A4D42A;}	h6 { font-family: Geneva, Arial, Helvetica, sans-serif;	
h2 { font-family: Geneva, Arial, Helvetica, sans-serif; font-size: 18px; color: #000000;} h3 { font-family: Geneva, Arial, Helvetica, sans-serif; font-size: 13px;	font-size: 12px; color: #999999;}	
color: #000000;} h4 { font-family: Geneva, Arial, Helvetica, sans-serif; font-size: 16px; color: #000000;}		
h5 { font-family: Geneva, Arial, Helvetica, sans-serif; font-size: 11px; color: #505EBF;}		
h6 { font-family: Geneva, Arial, Helvetica, sans-serif; font-size: 12px; color: #999999;}		

VISIBLE MAN WEBSITE CSS		
IFrames	Correlative Information Tables	
Structures link	Formats	
a.structures:link {color: #000000;	h3 { font-family: Geneva, Arial, Helvetica, sans-serif;	
font-family: Geneva, Arial, Helvetica, sans-serif;	font-size: 13px;	
font-size: 10.5pt;}	color: #000000;	
a.structures:active {color: #000000;	letter-spacing: 2px;}	
font-family: Geneva, Arial, Helvetica, sans-serif;	h5 { font-family: Geneva, Arial, Helvetica, sans-serif;	
font-size: 10.5pt;}	font-size: 11px;	
a.structures:visited {color: #000000;	color: #505EBF;	
font-family: Geneva, Arial, Helvetica, sans-serif;	letter-spacing: 1px;}	
font-size: 10.5pt;}	h6 { font-family: Geneva, Arial, Helvetica, sans-serif;	
a.structures:hover {color: #B3DA59;}	font-size: 12px;	
	color: #000000;}	
PVII Popup Menus	PVII Popup Menus	
Dropmenu	Dropsubmenu 1	
#dropmenu {position: absolute;	#dropsubmenu1 {position: absolute;	
width: 177px;	width: 230px;	
top: 87px;	top: 87px;	
font-size: 13px;	font-size: 11px;	
background-color: #B4DD59;	background-color: #B4DD59;	
height: 133px;	height: 133px;	
font-family: Geneva, Arial, Helvetica, sans-serif;	font-family: Geneva, Arial, Helvetica, sans-serif;	
border-top-color: #B4DB5A;	border-top-color: #B4DB5A;	
border-right-color: #B4DB5A;	border-right-color: #B4DB5A;	
border-bottom-color: #B4DB5A;	border-bottom-color: #B4DB5A;	
border-left-color: #B4DB5A;	border-left-color: #B4DB5A;	
border-color: #B4DB5A;	border-color: #B4DB5A;	
z-index: 1;	z-index: 1;	
visibility: hidden;}	visibility: hidden;}	
#dropmenu {left: 195px;	#dropsubmenu1 {left: 372px;	
color: #B3DC5A;}	color: #B3DC5A;}	
Dropsubmenu 2	Dropsubmenu 3	
#dropsubmenu2 {position: absolute; width: 240px;	#dropsubmenu3 {position: absolute;	
*	width: 190px;	
top: 110px; font-size: 11px;	top: 133px; font-size: 11px;	
background-color: #B4DD59;	background-color: #B4DD59;	
•		
height: 1px; font-family: Geneva, Arial, Helvetica, sans-serif;	height: 133px; font-family: Geneva, Arial, Helvetica, sans-serif;	
border-top-color: #B4DB5A;	border-top-color: #B4DB5A;	
border-right-color: #B4DB5A;	border-right-color: #B4DB5A;	
border-bottom-color: #B4DB5A;	border-bottom-color: #B4DB5A;	
border-left-color: #B4DB5A;	border-left-color: #B4DB5A;	
border-color: #B4DB5A;	border-color: #B4DB5A;	
z-index: 1;	z-index: 1;	
visibility: hidden;}	visibility: hidden;}	
#dropsubmenu2 {left: 372px;	#dropsubmenu3 {left: 372px;	
color: #B3DC5A;}	color: #B3DC5A;}	

VISIBLE MAN WEBSITE CSS	
PVII Popup Menus	PVII Popup Menus
Dropsubmenu 4	Dropsubmenu 5
#dropsubmenu4 {position: absolute;	#dropsubmenu5 {position: absolute;
width: 225px;	width: 215px;
top: 156px;	top: 179px;
font-size: 11px;	font-size: 11px;
background-color: #B4DD59;	background-color: #B4DD59;
height: 133px;	height: 133px;
font-family: Geneva, Arial, Helvetica, sans-serif;	font-family: Geneva, Arial, Helvetica, sans-serif;
border-top-color: #B4DB5A;	border-top-color: #B4DB5A;
border-right-color: #B4DB5A;	border-right-color: #B4DB5A;
border-bottom-color: #B4DB5A;	border-bottom-color: #B4DB5A;
border-left-color: #B4DB5A;	border-left-color: #B4DB5A;
border-color: #B4DB5A;	border-color: #B4DB5A;
z-index: 1;	z-index: 1;
visibility: hidden;}	visibility: hidden;}
#dropsubmenu4 {left: 372px;	#dropsubmenu5 {left: 372px;
color: #B3DC5A;}	color: #B3DC5A;}
Dropsubmenu 6	Dropsubmenu 7
#dropsubmenu6 {position: absolute;	#dropsubmenu7 {position: absolute;
width: 235px;	width: 265px;
top: 202px;	top: 225px;
font-size: 11px;	font-size: 11px;
background-color: #B4DD59;	background-color: #B4DD59;
height: 133px;	height: 133px;
font-family: Geneva, Arial, Helvetica, sans-serif;	font-family: Geneva, Arial, Helvetica, sans-serif;
border-top-color: #B4DB5A;	border-top-color: #B4DB5A;
border-right-color: #B4DB5A;	border-right-color: #B4DB5A;
border-bottom-color: #B4DB5A;	border-bottom-color: #B4DB5A;
border-left-color: #B4DB5A;	border-left-color: #B4DB5A;
border-color: #B4DB5A;	border-color: #B4DB5A;
z-index: 1;	z-index: 1;
visibility: hidden;}	visibility: hidden;}
#dropsubmenu6 {left: 372px;	#dropsubmenu7 {left: 372px;
color: #B3DC5A;}	color: #B3DC5A;}
Dropsubmenu 8	Submenus
	.submenus a, .submenus a:visited {
#dropsubmenu8 {position: absolute;	
width: 245px;	display: block;
top: 248px;	padding: 2px 0px 2px 22px;
font-size: 11px;	border: 1px solid;
background-color: #B4DD59;	border-color: #B5DC5B;
height: 1px;	background-color: #FFFFFF;
font-family: Geneva, Arial, Helvetica, sans-serif;	color: #000000;
border-top-color: #B4DB5A;	font-family: Geneva, Arial, Helvetica, sans-serif;
border-right-color: #B4DB5A;	font-weight: normal;
border-bottom-color: #B4DB5A;	border-top-color: #B5DC5B;
border-left-color: #B4DB5A;	border-right-color: #B5DC5B;
border-color: #B4DB5A;	border-bottom-color: #B5DC5B;
z-index: 1;	border-left-color: #B5DC5B;
visibility: hidden;}	text-decoration: none;}
#dropsubmenu8 {left: 372px;	.submenus a:hover, .submenus a:active, .submenus a:focus {
color: #B3DC5A;}	background-color: #B3DC58;
	color: #FFFFFF;
	font-family: Geneva, Arial, Helvetica, sans-serif;
	font-weight: normal;}

# VISIBLE MAN WEBSITE CSS

# **PVII Popup Menus**

# Sublowermenus

.sublowermenus a, .sublowermenus a:visited {
 display: block;
 padding: 2px 0px 2px 10px;
 border: 1px solid;
 border-color: #B5DC5B; background-color: #FFFFFF;

color: #000000;

font-family: Geneva, Arial, Helvetica, sans-serif; border-top-color: #B5DC5B; border-right-color: #B5DC5B; border-bottom-color: #B5DC5B; border-left-color: #B5DC5B;}

.sublowermenus a:hover, .sublowermenus a:active, .sublowermenus a:focus {

background-color: #B3DC58;

color: #FFFFFF;

font-family: Geneva, Arial, Helvetica, sans-serif;}

### MAIN PAGE CODE

```
<html>
<head>
<title>Visible Man - Cross-Sectional Human Anatomy</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<!--Fireworks MX 2004 Dreamweaver MX 2004 target. Created Wed Aug 10 12:20:35 GMT-
0500 (Central Standard Time) 2005-->
 <script language="JavaScript">
<!--
function mmLoadMenus() {
 if (window.mm menu 0816231826 0) return;
                  window.mm_menu_0816231826_0 = new Menu("root",246,25,"Geneva,
Arial. Helvetica, sans-
serif",15,"#000000","#A3D22A","#FFFFFF","#FFFFFF","left","middle",5,0,0,-
5,7,true,false,true,18,true,true);
 mm_menu_0816231826_0.addMenuItem("1321");
 mm menu 0816231826 0.addMenuItem("1338");
 mm_menu_0816231826_0.addMenuItem("1350 - Superior Mediastinum");
 mm_menu_0816231826_0.addMenuItem("1368 - Aortic Arch");
 mm_menu_0816231826_0.addMenuItem("1372 - Azygous System");
 mm menu 0816231826 0.addMenuItem("1381 -
 Transverse Pericardial Sinus");
 mm menu 0816231826 0.addMenuItem("1388 -
 Pulmonary Arteries","location='xsec_pages/xsec1388.htm"");
 mm_menu_0816231826_0.addMenuItem("1415 -
 Left & Right Auricles");
 mm_menu_0816231826_0.addMenuItem("1425 - Right Ventricle");
 mm_menu_0816231826_0.addMenuItem("1439 -
  Atrioventricular   Valves");
 mm_menu_0816231826_0.addMenuItem("1449 -
 Sup. Diaphragmatic Surface");
 mm_menu_0816231826_0.hideOnMouseOut=true;
 mm menu 0816231826 0.bgColor='#555555';
 mm_menu_0816231826_0.menuBorder=0;
 mm menu 0816231826 0.menuLiteBgColor='#FFFFFF';
 mm_menu_0816231826_0.menuBorderBgColor='#777777';
mm_menu_0816231826_0.writeMenus();
} // mmLoadMenus()
function MM preloadImages() { //v3.0
 var d=document; if(d.images){ if(!d.MM_p) d.MM_p=new Array();
  var i,j=d.MM p.length,a=MM preloadImages.arguments; for(i=0; i<a.length; i++)
 if (a[i].indexOf("#")!=0){ d.MM_p[i]=new Image; d.MM_p[i++].src=a[i];}}
}
```

```
function MM_swapImgRestore() { //v3.0
 var\ i,x,a=document.MM\_sr;\ for\ (i=0;a\&\&i<a.length\&\&(x=a[i])\&\&x.oSrc;i++)\ x.src=x.oSrc;
function MM findObj(n, d) { //v4.01
 var p,i,x; if(!d) d=document; if((p=n.indexOf("?"))>0&&parent.frames.length) {
  d=parent.frames[n.substring(p+1)].document; n=n.substring(0,p);}
 if(!(x=d[n])\&\&d.all) x=d.all[n]; for (i=0;!x\&\&i<d.forms.length;i++) x=d.forms[i][n];
 for(i=0;!x&&d.layers&&i<d.layers.length;i++) x=MM_findObj(n,d.layers[i].document);
 if(!x && d.getElementById) x=d.getElementById(n); return x;
function MM_swapImage() { //v3.0
 var i,j=0,x,a=MM swapImage.arguments; document.MM sr=new Array; for(i=0;i<(a.length-
2);i+=3)
 if ((x=MM findObj(a[i]))!=null){document.MM sr[j++]=x; if(!x.oSrc) x.oSrc=x.src;
x.src=a[i+2];
//-->
</script>
<script language="JavaScript" src="mm_menu.js"></script>
<style type="text/css">
<!--
@import url("CSS/mainpage css.css");
-->
</style>
</head>
 <body bgcolor="#ffffff"
onLoad="MM_preloadImages('images/index_r6_c6.jpg','../../working_files/pics/body_outline.jp
g','images/preview_bodylocation/line_1350.jpg','images/preview_bodylocation/preview_1350.jp
g','images/gettingstarted_left_roll.gif','images/search_right_roll.gif')">
<!-- fwtable fwsrc="homepage.png" fwbase="index.jpg" fwstyle="Dreamweaver" fwdocid =
"1376654032" fwnested="0" -->
 <img src="images/spacer.gif" width="164" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="90" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="6" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="229" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="13" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="157" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="25" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="186" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="85" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="1" height="1" border="0" alt="">
```

```
<img src="images/index_r1_c1.jpg" alt="" name="index_r1_c1"
width="955" height="63" border="0" align="top">
 <img src="images/spacer.gif" width="1" height="63" border="0" alt="">
<a
href="gettingstarted.htm"><img src="images/gettingstarted left.gif" name="Image1"
width="195" height="23" border="0" align="top" id="Image1"
onMouseOver="MM_swapImage('Image1',",'images/gettingstarted_left_roll.gif',1)"
onMouseOut="MM swapImgRestore()"></a><a href="search.htm"><img
src="images/search_right.gif" name="Image2" width="98" height="23" border="0" align="top"
id="Image2" onMouseOver="MM swapImage('Image2',",'images/search right roll.gif',1)"
onMouseOut="MM_swapImgRestore()"></a>
                                 <img src="images/body_image.jpg"
name="body drawing" width="254" height="515" id="body drawing">
    <h4>CROSS-SECTION PREVIEW</h4>
    <img src="images/white_fill.jpg" name="preview" width="235" height="120"</p>
border="0" id="preview">
    <h2>Anatomical
Regions</h2>
      <h5>[click to display cryosections]<br>
     </h5>
      
     <h2>Cryosections</h2>
      <h5>[roll-over to view preview]<br>
       [click to go to cryosection page] </h5>
    <img src="images/left green bar.jpg" width="168"
height="12">
     <img src="images/white_filer.jpg" width="20" height="20">
     <img src="images/right_green_bar.jpg" width="183"
height="12">
    <a href="iframes/iframes head list.htm" target="floater"</p>
class="structures">HEAD</a>
```

```
<a href="iframes/iframes_neck_list.htm" target="floater"</p>
class="structures">NECK</a> 
       <a href="iframes/iframes_thorax_list.htm" target="floater"</p>
class="structures">THORAX</a> 
       <a href="iframes/iframes_upperlimb_list.htm" target="floater"</p>
class="structures">UPPER LIMB</a>
       <a href="iframes/iframes_abdomen_list.htm" target="floater"</p>
class="structures">ABDOMEN</a> 
       <a href="iframes/iframes_perineum_list.htm" target="floater"</p>
class="structures">PERINEUM & PELVIS</a>
       <a href="iframes/iframes_lowerlimb_list.htm" target="floater"</p>
class="structures">LOWER LIMB</a>
       <a href="iframes/iframes_back_list.htm" target="floater"</p>
class="structures">BACK</a>
        
      <iframe src="iframes/iframes_blank_list.htm"
name="floater"
width=333 height=400 align="left" frameborder="0"></iframe>
     <h1>
                                      <img src="images/left_green_bar.jpg"</pre>
width="157" height="12"><img src="images/right green bar.jpg" width="183"
height="12"><br>
     </h1>
    width="530" align="right" valign="top"><h1>The Visible Human Data Set was
provided<br>
by the National Library of Medicine<br>
and the Visible Human Project™.</h1>
   <img src="images/Vhplogo.jpg"
width="75" height="45">
  <img src="images/spacer.gif" width="1" height="22" border="0" alt="">
 <img src="images/spacer.gif" width="1" height="57" border="0" alt="">
```

### **CROSS-SECTION PAGE CODE**

Example for page: CS 1388

```
<a href="https://en.wished-updates/xsec.dwt" codeOutsideHTMLIsLocked="false" codeOutsideHTMLIslocked="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="false="fal
-->
<head>
<!-- InstanceBeginEditable name="doctitle" -->
<title>Visible Man - Cross-Sectional Human Anatomy</title>
<!-- InstanceEndEditable -->
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<!--Fireworks MX 2004 Dreamweaver MX 2004 target. Created Wed Aug 10 12:21:38 GMT-
0500 (Central Standard Time) 2005-->
<script language="JavaScript" type="text/JavaScript">
<!--
function mmLoadMenus() {
 if (window.mm_menu_0823145932_0) return;
  window.mm_menu_0823145932_0 = new Menu("root",181,21,"Geneva, Arial, Helvetica, sans-
serif",15,"#000000","#A3D22A","#FFFFFF","#FFFFFF","left","middle",3,0,0,-
5,7,true,false,true,18,true,true);
  mm_menu_0823145932_0.addMenuItem("HEAD");
  mm menu 0823145932 0.addMenuItem("NECK");
  mm_menu_0823145932_0.addMenuItem("THORAX");
  mm menu 0823145932 0.addMenuItem("UPPER LIMB");
  mm_menu_0823145932_0.addMenuItem("ABDOMEN");
  mm_menu_0823145932_0.addMenuItem("PELVIS & PERINEUM");
   mm menu 0823145932 0.hideOnMouseOut=true;
   mm_menu_0823145932_0.bgColor='#555555';
   mm_menu_0823145932_0.menuBorder=0;
   mm menu 0823145932 0.menuLiteBgColor='#FFFFFF';
   mm_menu_0823145932_0.menuBorderBgColor='#777777';
  mm menu 0823145932 0.writeMenus();
} // mmLoadMenus()
function MM preloadImages() { //v3.0
  var d=document; if(d.images){ if(!d.MM_p) d.MM_p=new Array();
    var i,j=d.MM_p.length,a=MM_preloadImages.arguments; for(i=0; i<a.length; i++)
    if (a[i].indexOf("#")!=0){ d.MM_p[j]=new Image; d.MM_p[j++].src=a[i];}}
function MM_swapImgRestore() { //v3.0
  var i, x, a = document.MM sr; for(i=0; a \& \& i < a.length \& \& (x=a[i]) \& \& x.oSrc; i++) x.src=x.oSrc;
function MM findObj(n, d) { //v4.01
  var p,i,x; if(!d) d=document; if((p=n.indexOf("?"))>0&&parent.frames.length) {
    d=parent.frames[n.substring(p+1)].document; n=n.substring(0,p);}
```

```
if(!(x=d[n])\&\&d.all) x=d.all[n]; for (i=0;!x\&\&i<d.forms.length;i++) x=d.forms[i][n];
 for(i=0;!x&&d.layers&&i<d.layers.length;i++) x=MM findObj(n,d.layers[i].document);
 if(!x && d.getElementById) x=d.getElementById(n); return x;
function MM_swapImage() { //v3.0
 var i,j=0,x,a=MM_swapImage.arguments; document.MM_sr=new Array; for(i=0;i<(a.length-
2);i+=3)
 if ((x=MM_findObj(a[i]))!=null){document.MM_sr[i++]=x; if(!x.oSrc) x.oSrc=x.src;
x.src=a[i+2];
function P7_autoLayers() { //v1.5 by PVII
var\ g,b,k,f,u,k,j,args=P7\_autoLayers.arguments,a=parseInt(args[0]);if(isNaN(a))a=0;
if(!document.p7setc){p7c=new Array();document.p7setc=true;for(u=0;u<10;u++){
p7c[u]=new Array();} for(k=0;k<p7c[a].length;k++){if((g=MM findObj(p7c[a][k]))!=null)}{
b=(document.layers)?g:g.style;b.visibility="hidden";}}for(k=1;k<args.length;k++){
if((g=MM_findObj(args[k]))!=null){b=(document.layers)?g:g.style;b.visibility="visible";f=false;
for(j=0;j<p7c[a].length;j++)\{if(args[k]==p7c[a][j]) \{f=true;\}\}
if(!f){p7c[a][p7c[a].length++]=args[k];}}
function P7_hideEl(evt) { //v1.5 by PVII-www.projectseven.com
var b,r,m=false;if(document.layers){b=evt.target;if(b.p7aHide){
b.visibility="hidden";}else{routeEvent(evt);}
}else if(document.all&&!window.opera){b=event.srcElement;while(b){
if(b.p7aHide){break;}b=b.parentElement;}if(!b.contains(event.toElement)){
b.style.visibility="hidden";}}else if(document.getElementById){
b=evt.currentTarget;r=evt.relatedTarget;while(r){if(b==r){m=true;
break;}r=r.parentNode;}if(!m){b.style.visibility="hidden";}}
function P7_autoHide() { //v1.5 by PVII-www.projectseven.com
var i,g;for(i=0;i<arguments.length;i++){
if((g=MM_findObj(arguments[i]))!=null){g.p7aHide=true;if(document.layers){
g.captureEvents(Event.MOUSEOUT);}g.onmouseout=P7_hideEl;}}
}
//-->
</script>
<script language="JavaScript" src="mm_menu.js"></script>
<!-- InstanceBeginEditable name="head" -->
<script language="JavaScript" type="text/JavaScript">
<!--
function MM_openBrWindow(theURL,winName,features) { //v2.0
 window.open(theURL,winName,features);
//-->
```

```
</script>
<!-- InstanceEndEditable -->
<style type="text/css">
<!--@import url("../CSS/xsec css.css");-->
</style>
</head>
<body bgcolor="#ffffff"
onLoad="MM_preloadImages('images/home_left_Roll.gif', 'images/search_middle_roll.gif',
'images/goto_right_roll.gif', 'images/back_right_roll.gif', 'structure_rollovers/1388/1388_aorta_asc
.jpg',
'structure_rollovers/1388/1388_aorta_desc.jpg','structure_rollovers/1388/1388_azygos_vein.jpg',
'structure_rollovers/1388/1388_bronchus_left.jpg', 'structure_rollovers/1388/1388_bronchus_righ
t.jpg',
'structure rollovers/1388/1388 esoph.jpg', 'structure rollovers/1388/1388 lung inf.jpg',
'structure_rollovers/1388/1388_lung_sup.jpg', 'structure_rollovers/1388/1388_pulm_artery_left.jp
g',
'structure_rollovers/1388/1388_pulm_artery_right.jpg','structure_rollovers/1388/1388_pulm_trun
k.ipg',
'structure_rollovers/1388/1388_costal_cart_third.jpg','structure_rollovers/1388/1388_sternum.jp
'structure_rollovers/1388/1388_thymus.jpg', 'structure_rollovers/1388/1388_venacava_sup.jpg',
'structure rollovers/1388/1388 vert fifth.jpg', 'structure rollovers/1388/1388 2x box.jpg',
'structure_rollovers/1388/1388_4x_box.jpg');P7_autoHide('dropmenu');P7_autoLayers(0)">
<!-- fwtable fwsrc="slidepage.png" fwbase="xsec1388.jpg" fwstyle="Dreamweaver" fwdocid =
"1207713811" fwnested="0" -->
 <img src="images/spacer.gif" alt="" name="Image1" width="49" height="1"
border="0" id="Image1">
<img src="images/spacer.gif" width="27" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="22" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="60" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="36" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="97" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="96" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="13" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="140" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="140" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="20" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="255" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="1" height="1" border="0" alt="">
```

```
<img src="images/xsec1388_r1_c1.jpg" alt=""
name="xsec1388_r1_c1" width="955" height="63" border="0" align="top"
onMouseOver="P7_autoLayers(0)">
 <img src="images/spacer.gif" width="1" height="63" border="0" alt="">
colspan="12" rowspan="9" align="left" valign="top"><a
href="../index.htm"><img src="images/home left.gif" name="Image2" width="98" height="23"
border="0" align="top" id="Image2"
onMouseOver="MM_swapImage('Image2',",'images/home_left_Roll.gif',1);P7_autoLayers(0)"
onMouseOut="MM swapImgRestore()"></a><a href="../search.htm"><img
src="images/search_middle.gif" name="Image3" width="97" height="23" border="0"
align="top" id="Image3"
onMouseOver="MM_swapImage('Image3',",'images/search_middle_roll.gif',1);P7_autoLayers(0
")" onMouseOut="MM_swapImgRestore()"></a><a href="javascript:;"
onClick="P7 autoLayers(0,'dropmenu')"><img src="images/goto_right.gif" name="Image4"
width="97" height="23" border="0" align="top" id="Image4"
onMouseOver="MM_swapImage('Image4',",'images/goto_right_roll.gif',1)"
onMouseOut="MM_swapImgRestore()">
</a><a href="iavascript:history.go(-1)"
onMouseOver="MM_swapImage('back',",'images/back_right_roll.gif',1);P7_autoLayers(0)"
onMouseOut="MM_swapImgRestore()"><img src="images/back_right.gif" name="back"
width="98" height="23" border="0" align="top" id="back"></a><a href="javascript:;"
onMouseOver="P7 autoLayers(0)"><img src="images/thorax.jpg" width="98" height="23"
border="0" align="top"></a>
    <!-- InstanceBeginEditable name="previous" --> <td width="83" align="left"
valign="bottom"><h6>
<a href="xsec1381.htm" class="menu"><br>
</a><a href="xsec1381.htm" class="menu">&lt;&lt;PREVIOUS</a></h6>
     <!-- InstanceEndEditable --> <!-- InstanceBeginEditable name="xsec title" --> <td
width="490" align="center" valign="bottom"> <h4>CS 1388 - Pulmonary Arteries<br>
     </h4>
     <!-- InstanceEndEditable --> <!-- InstanceBeginEditable name="next" --> <td width="51"
align="right" valign="bottom"><a href="xsec1415.htm" class="menu"><br>
    NEXT>></a>
    <!-- InstanceEndEditable --> &nbsp;
      
    <!-- InstanceBeginEditable name="xsec" -->
     <img
src="structure_rollovers/1388/1388_plain.jpg
" name="xsec" width="631" height="321" id="xsec">
    <!-- InstanceEndEditable -->
```

```
<!-- InstanceBeginEditable name="anatomical structures" --> 
rowspan="2" align="left" valign="top"><h2>Anatomical Structures</h2>
      <h5>[roll-over to view structure]<br>
 [click to see additional information] < br>
 <br/>br></h5>
        <a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/aorta_asc.htm','VisibleMan','status=yes,scrollbars
=yes,
resizable=yes,width=610,height=250')"
onMouseOver="MM_swapImage('xsec',",'structure_rollovers/1388/1388_aorta_asc.jpg',1)"
onMouseOut="MM_swapImgRestore()">Aorta, ascending</a><br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/aorta_desc.htm', 'VisibleMan', 'status=yes, scrollbar
s=yes,
resizable=yes,width=610,height=250')"
onMouseOver="MM_swapImage('xsec',",'structure_rollovers/1388/1388_aorta_desc.jpg',1)"
onMouseOut="MM_swapImgRestore()">Aorta, descending</a><br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/azygos_vein.htm','VisibleMan','status=yes,scrollb
ars=ves.
resizable=yes,width=610,height=350')"
onMouseOver="MM swapImage('xsec',",'structure rollovers/1388/1388 azygos vein.jpg',1)"
onMouseOut="MM_swapImgRestore()">Azygos vein</a><br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/bronch_left.htm','VisibleMan','status=yes,scrollba
rs=yes,
resizable=yes,width=610,height=250')"
onMouseOver="MM_swapImage('xsec',",'structure_rollovers/1388/1388_bronchus_left.jpg',1)"
onMouseOut="MM_swapImgRestore()">Bronchus, left</a><br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/bronch_right.htm','VisibleMan','status=yes,scrollb
ars=yes,
resizable=yes,width=610,height=250')"
onMouseOver="MM_swapImage('xsec',",'structure_rollovers/1388/1388_bronchus_right.jpg',1)"
onMouseOut="MM_swapImgRestore()">Bronchus, right</a><br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/esophagus.htm','VisibleMan','status=yes,scrollbars
=yes,
resizable=yes,width=610,height=500')"
onMouseOver="MM swapImage('xsec','','structure rollovers/1388/1388 esoph.jpg',1)"
onMouseOut="MM_swapImgRestore()">Esophagus</a><br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/lung_inflobe.htm','VisibleMan','status=yes,scrollb
ars=yes,
```

```
resizable=yes,width=610,height=250')"
onMouseOver="MM_swapImage('xsec',",'structure_rollovers/1388/1388_lung_inf.jpg',1)"
onMouseOut="MM_swapImgRestore()">Lung, inferior lobe</a><br/>br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/lung_suplobe.htm','VisibleMan','status=yes,scroll
bars=ves,
resizable=yes,width=610,height=250')"
onMouseOver="MM_swapImage('xsec',",'structure_rollovers/1388/1388_lung_sup.jpg',1)"
onMouseOut="MM_swapImgRestore()">Lung, superior lobe</a><br/>br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/pulm_art_left.htm','VisibleMan','status=yes,scroll
bars=ves.
resizable=yes,width=610,height=350')"
onMouseOver="MM swapImage('xsec',",'structure rollovers/1388/1388 pulm artery left.jpg',1
)" onMouseOut="MM_swapImgRestore()">Pulmonary artery, left</a><br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/pulm_art_right.htm','VisibleMan','status=yes,scrol
lbars=yes,
resizable=yes,width=610,height=350')"
onMouseOver="MM_swapImage('xsec',",'structure_rollovers/1388/1388_pulm_artery_right.jpg',
1)" onMouseOut="MM_swapImgRestore()">Pulmonary artery, right</a><br/>br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/pulm_trunk.htm', 'VisibleMan', 'status=yes, scrollba
rs=yes,
resizable=yes,width=610,height=250')"
onMouseOver="MM_swapImage('xsec',",'structure_rollovers/1388/1388_pulm_trunk.jpg',1)"
onMouseOut="MM_swapImgRestore()">Pulmonary trunk</a><br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/costcart_rib.htm','VisibleMan','status=yes,scrollba
resizable=yes,width=610,height=250')"
onMouseOver="MM swapImage('xsec',",'structure rollovers/1388/1388 costal cart third.jpg',1
)" onMouseOut="MM_swapImgRestore()">Rib, third costal cartilage</a><br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/sternum.htm','VisibleMan','status=yes,
resizable=yes,width=610,height=250')"
onMouseOver="MM_swapImage('xsec',",'structure_rollovers/1388/1388_sternum.jpg',1)"
onMouseOut="MM_swapImgRestore()">Sternum</a><br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/thymus.htm','VisibleMan','status=yes,scrollbars=y
resizable=yes,width=610,height=500')"
onMouseOver="MM_swapImage('xsec',",'structure_rollovers/1388/1388_thymus.jpg',1)"
onMouseOut="MM swapImgRestore()">Thymus</a><br>
```

```
<a href="#" class="structures"
onClick="MM openBrWindow('../info pages/venacava sup.htm','VisibleMan','status=yes,scroll
bars=yes,
resizable=yes,width=610,height=350')"
onMouseOver="MM_swapImage('xsec',",'structure_rollovers/1388/1388_venacava_sup.jpg',1)"
onMouseOut="MM_swapImgRestore()">Vena cava, superior</a><br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/vert_fifth.htm','VisibleMan','status=yes,scrollbars
=yes,resizable=yes,width=610,height=250')"
onMouseOver="MM_swapImage('xsec',",'structure_rollovers/1388/1388_vert_fifth.jpg',1)"
onMouseOut="MM_swapImgRestore()">Vertebra, fifth thoracic</a>
<!-- InstanceEndEditable -->
    <!-- InstanceBeginEditable name="body preview" --> <td rowspan="3"
align="center"><img src="images/body_preview/line_1388.jpg" width="84" height="171"
align="top">
<!-- InstanceEndEditable --> &nbsp;
      <h2>Zoom Views</h2>
        <h5> [click zoom title to view]</h5>
       <h2>Correlative Images</h2>
        <h5>[click CT to view]</h5>
       <!-- InstanceBeginEditable name="zoom views" --><td align="right"
valign="top">
<br/><br/><a href="../mag_pages/mag1388A.htm" class="zooms"
onMouseOver="MM_swapImage('xsec',",'structure_rollovers/1388/1388_2x_box.jpg',1)"
onMouseOut="MM_swapImgRestore()">mediastinum [2X]</a><br>
           <a href="../mag_pages/mag1388B.htm" class="zooms"
onMouseOver="MM_swapImage('xsec',",'structure_rollovers/1388/1388_4x_box.jpg',1)"
onMouseOut="MM_swapImgRestore()">lateral thoracic wall [4X]</a></span>
       <!-- InstanceEndEditable --> <!-- InstanceBeginEditable name="correlative images" --
> 
         vidth="120" height="116" align="right"
valign="top"><h3>&nbsp;</h3>
          <h3><a
href="../ctmr_pages/ctmr1388.htm" target="_blank"><img
src="images/preview_cts/ct_1388.jpg" width="120" height="93" border="0"></a> </h3>
          <h3>Correlative CT #1</h3>
        <!-- InstanceEndEditable -->
```

```
<img src="images/spacer.gif" width="1" height="22" border="0" alt="">
      <img src="images/spacer.gif" width="1" height="22" border="0"
alt="">
  <timg src="images/spacer.gif" width="1" height="20" border="0"
alt="">
  <img src="images/spacer.gif" width="1" height="30" border="0"
alt="">
  <tiy width="1" height="272" border="0"</td>
alt="">
  <img src="images/spacer.gif" width="1" height="33" border="0"
alt="">
 <tmg src="images/spacer.gif" width="1" height="41" border="0"
alt="">
  <img src="images/spacer.gif" width="1" height="52" border="0"
alt="">
      <img src="images/spacer.gif" width="1" height="45" border="0"
alt="">
<div id="dropsubmenu1" class="sublowermenus">
<a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1097 - Superiormost Orbit</a>
<a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1099 - Superior Orbit</a>
<a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1107 - Mid-Orbit</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1118 - Inferior Orbit</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1134 - Middle & Internal Ear</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1168 - Palate, C1, & C2</a>
<a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1215 - Lower Mandible, C2, & C3</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu1','dropmenu')">
1232 - Inf. Mental Symphyseal Border</a>
</div>
```

```
<div id="dropsubmenu2" class="sublowermenus">
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu2','dropmenu')">
1248 - Supraglottic Structures</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu2','dropmenu')">
1257 - Rima Glottidus</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu2','dropmenu')">
1281 - Base Cricoid Cartilage</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu2','dropmenu')">
1321 - Thoracic Inlet & Jugular Notch</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu2','dropmenu')">
1338 - Lowest Manubrioclavicular Joint</a>
</div>
<div id="dropsubmenu3" class="sublowermenus">
 <a href="xsec1350.htm" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu3','dropmenu')">1350 - Sup.
Mediastinum</a>
 <a href="xsec1368.htm" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu3','dropmenu')">1368 - Aortic Arch</a>
 <a href="xsec1372.htm" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu3','dropmenu')">1372 - Azygos System</a>
 <a href="xsec1381.htm" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu3','dropmenu')">1381 - Trans. Pericardial
Sinus</a>
 <a href="xsec1388.htm" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu3','dropmenu')">1388 - Pulmonary A.</a>
 <a href="xsec1415.htm" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu3','dropmenu')">1415 - L. & R.
Auricles</a>
 <a href="xsec1425.htm" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu3','dropmenu')">1425 - R. Ventricle</a>
 <a href="xsec1439.htm" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu3','dropmenu')">1439 - Atrioventricular
Valves</a>
</div>
<div id="dropsubmenu4" class="sublowermenus">
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1321 - Proximal Humerus & Shoulder</a>
```

```
<a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu4','dropmenu')">
1480 - Mid-Diaphysis Humerus</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1602 - Elbow</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1663 - Proximal Antebrachium</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1700 - Mid-Left Antebrachium</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu4','dropmenu')">
1758 - Distalmost Antebrachium</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1772 - Midcarpal Joints</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1776 - Carpometacarpal Joints</a>
</div>
<div id="dropsubmenu5" class="sublowermenus">
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1499 - Cardiac Region: Stomach</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1508 - Esophageal Sphinctor</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1553 - Inferiormost Diaphragm</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu5','dropmenu')">
1562 - Pyloric Sphincter</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1570 - Suprarenal Glands</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1579 - Formation of Portal V.</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1582 - Celiac A.</a>
```

```
<a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu5','dropmenu')">
1590 - Sup. Kidneys</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1601 - Sup. Mesenteric</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1610 - Hilus of Kidney: Renal V.</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1615 - Hilus of Kidney: Renal A.</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu5','dropmenu')">
1625 - Hilus of Kidney: L. Ureter</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1634 - Duodenojejunal Junction</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1700 - Oblique Muscles</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1715 - 4th Lumbar Vertebral Level</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1733 - Iliac Crests</a>
</div>
<div id="dropsubmenu6" class="sublowermenus">
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1749 - Superior Iliac Crests</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1805 - Sacroiliac Joint</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1880 - Superior Bladder & Acetabulum</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1895 - Obturator Canal</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1903 - Superior Pelvic Outlet</a>
```

```
<a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu6','dropmenu')">
1921 - Deep Perineal Pouch</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1940 - Bulb of the Penis</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1958 - External Penis</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1990 - Testicle</a>
</div>
<div id="dropsubmenu7" class="sublowermenus">
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
1880 - Femoral Head</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2105 - Mid-Diaphysis Femur</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2273 - Superior Knee</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2325 - Midknee</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2330 - Lower Knee</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2373 - Upper Diaphysis Tibia & Fibula</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu7','dropmenu')">
2551 - Lower Diaphysis Tibia & Fibula</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2715 - Tibiofibular Joint</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2731 - Upper Ankle Joint</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2755 - Lower (Subtalar) Ankle Joint</a>
```

```
<a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu7','dropmenu')">Replanarized Foot 1 - Middistal
Tarsal Bones</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">Replanarized Foot 2 -
Midmetatarsals</a>
</div>
<div id="dropsubmenu8" class="sublowermenus">
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu8','dropmenu')">
1168 - Sup. Nuchal & Suboccipital Musc.</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu8','dropmenu')">
1248 - Lower Nuchal Musculature</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu8','dropmenu')">
1372 - Midthoracic Back</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu8','dropmenu')">
1430 - Lower Thoracic Back </a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu8','dropmenu')">
1715 - Midlumbar Back</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu8','dropmenu')">
1805 - Midsacral Back</a>
</div>
<div id="dropmenu" class="submenus"> <a href="#" class="p7submenus"</pre>
onClick="P7 autoLayers(0,'dropsubmenu1','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu2','dropsubmenu3','dropsubmenu4','dropsubmenu5','
dropsubmenu6',
'dropsubmenu7','dropsubmenu8')">HEAD</a>
 <a href="#" class="p7submenus"</pre>
onClick="P7 autoLayers(0,'dropsubmenu2','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu1','dropsubmenu3','dropsubmenu4','dropsubmenu5','
dropsubmenu6',
'dropsubmenu7','dropsubmenu8')">NECK</a>
 <a href="#" class="p7submenus"</pre>
onClick="P7_autoLayers(0,'dropsubmenu3','dropmenu')"
onMouseOver="P7 autoHide('dropsubmenu1','dropsubmenu2','dropsubmenu4','dropsubmenu5','
dropsubmenu6',
'dropsubmenu7', 'dropsubmenu8')">THORAX</a>
```

```
<a href="#" class="p7submenus"</pre>
onClick="P7 autoLayers(0,'dropsubmenu4','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu1','dropsubmenu2','dropsubmenu3','dropsubmenu5','
dropsubmenu6',
'dropsubmenu7', 'dropsubmenu8')">UPPER LIMB</a>
 <a href="#" class="p7submenus"</pre>
onClick="P7_autoLayers(0,'dropsubmenu5','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu1','dropsubmenu2','dropsubmenu3','dropsubmenu4','
dropsubmenu6',
'dropsubmenu7', 'dropsubmenu8')">ABDOMEN</a>
 <a href="#" class="p7submenus"</pre>
onClick="P7 autoLayers(0,'dropsubmenu6','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu1','dropsubmenu2','dropsubmenu3','dropsubmenu4','
dropsubmenu5',
'dropsubmenu7', 'dropsubmenu8')">PERINEUM & amp; PELVIS</a>
 <a href="#" class="p7submenus"</pre>
onClick="P7_autoLayers(0,'dropsubmenu7','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu1','dropsubmenu2','dropsubmenu3','dropsubmenu4','
dropsubmenu5',
'dropsubmenu6', 'dropsubmenu8')">LOWER LIMB</a>
 <a href="#" class="p7submenus"</pre>
onClick="P7 autoLayers(0,'dropsubmenu8','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu1','dropsubmenu2','dropsubmenu3','dropsubmenu4','
dropsubmenu5'.
'dropsubmenu6', 'dropsubmenu7')">BACK</a>
</div>
</body>
<!-- InstanceEnd --></html>
```

### MAGNIFICATION PAGE CODE

Example for page: CS 1388 – Mediastinum (2X)

```
<a href="https://en.com/stanceBegin template="/Templates/mag.dwt" codeOutsideHTMLIsLocked="false" <a href="https://en.codeOutsideHTMLIsLocked="false" templates/mag.dwt" codeOutsideHTMLIsLocked="false" templates/mag.dwt" codeOutsideHTMLIsLocked="false" templates/mag.dwt" codeOutsideHTMLIsLocked="false" templates/mag.dwt" templates/mag.dwt templates/mag.dwt" templates/mag.dwt temp
-->
<head>
<!-- InstanceBeginEditable name="doctitle" -->
<title>Visible Man - Cross-Sectional Human Anatomy</title>
<!-- InstanceEndEditable -->
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<!--Fireworks MX 2004 Dreamweaver MX 2004 target. Created Wed Aug 10 12:22:23 GMT-
0500 (Central Standard Time) 2005-->
<script language="JavaScript" type="text/JavaScript">
<!--
function mmLoadMenus() {
 if (window.mm_menu_0823145932_0) return;
  window.mm_menu_0823145932_0 = new Menu("root",181,21,"Geneva, Arial, Helvetica, sans-
serif",15,"#000000","#A3D22A","#FFFFFF","#FFFFFF","left","middle",3,0,0,-
5,7,true,false,true,18,true,true);
  mm_menu_0823145932_0.addMenuItem("HEAD");
  mm menu 0823145932 0.addMenuItem("NECK");
  mm_menu_0823145932_0.addMenuItem("THORAX");
  mm menu 0823145932 0.addMenuItem("UPPER LIMB");
  mm_menu_0823145932_0.addMenuItem("ABDOMEN");
  mm_menu_0823145932_0.addMenuItem("PELVIS & PERINEUM");
   mm menu 0823145932 0.hideOnMouseOut=true;
   mm_menu_0823145932_0.bgColor='#555555';
   mm_menu_0823145932_0.menuBorder=0;
   mm menu 0823145932 0.menuLiteBgColor='#FFFFFF';
   mm_menu_0823145932_0.menuBorderBgColor='#777777';
  mm menu 0823145932 0.writeMenus();
} // mmLoadMenus()
function MM preloadImages() { //v3.0
  var d=document; if(d.images){ if(!d.MM_p) d.MM_p=new Array();
    var i,j=d.MM_p.length,a=MM_preloadImages.arguments; for(i=0; i<a.length; i++)
    if (a[i].indexOf("#")!=0){ d.MM_p[j]=new Image; d.MM_p[j++].src=a[i];}}
function MM_swapImgRestore() { //v3.0
  var i, x, a = document.MM sr; for(i=0; a \& \& i < a.length \& \& (x=a[i]) \& \& x.oSrc; i++) x.src=x.oSrc;
function MM findObj(n, d) { //v4.01
  var p,i,x; if(!d) d=document; if((p=n.indexOf("?"))>0&&parent.frames.length) {
    d=parent.frames[n.substring(p+1)].document; n=n.substring(0,p);}
```

```
if(!(x=d[n])\&\&d.all) x=d.all[n]; for (i=0;!x\&\&i<d.forms.length;i++) x=d.forms[i][n];
 for(i=0;!x&&d.layers&&i<d.layers.length;i++) x=MM findObj(n,d.layers[i].document);
 if(!x && d.getElementById) x=d.getElementById(n); return x;
function MM_swapImage() { //v3.0
 var i,j=0,x,a=MM_swapImage.arguments; document.MM_sr=new Array; for(i=0;i<(a.length-
2);i+=3)
 if ((x=MM_findObj(a[i]))!=null){document.MM_sr[i++]=x; if(!x.oSrc) x.oSrc=x.src;
x.src=a[i+2];
function P7_autoLayers() { //v1.5 by PVII
var\ g,b,k,f,u,k,j,args=P7\_autoLayers.arguments,a=parseInt(args[0]);if(isNaN(a))a=0;
if(!document.p7setc){p7c=new Array();document.p7setc=true;for(u=0;u<10;u++){
p7c[u]=new Array();} for(k=0;k<p7c[a].length;k++){if((g=MM findObj(p7c[a][k]))!=null)}{
b=(document.layers)?g:g.style;b.visibility="hidden";}}for(k=1;k<args.length;k++){
if((g=MM_findObj(args[k]))!=null){b=(document.layers)?g:g.style;b.visibility="visible";f=false;
for(j=0;j<p7c[a].length;j++)\{if(args[k]==p7c[a][j]) \{f=true;\}\}
if(!f){p7c[a][p7c[a].length++]=args[k];}}
function P7_hideEl(evt) { //v1.5 by PVII-www.projectseven.com
var b,r,m=false;if(document.layers){b=evt.target;if(b.p7aHide){
b.visibility="hidden";}else{routeEvent(evt);}
}else if(document.all&&!window.opera){b=event.srcElement;while(b){
if(b.p7aHide){break;}b=b.parentElement;}if(!b.contains(event.toElement)){
b.style.visibility="hidden";}}else if(document.getElementById){
b=evt.currentTarget;r=evt.relatedTarget;while(r){if(b==r){m=true;
break; \r=r.parentNode; \right\{if(!m)\{b.style.visibility="hidden"; \right\}}
function P7_autoHide() { //v1.5 by PVII-www.projectseven.com
var i,g;for(i=0;i<arguments.length;i++){
if((g=MM_findObj(arguments[i]))!=null){g.p7aHide=true;if(document.layers){
g.captureEvents(Event.MOUSEOUT);}g.onmouseout=P7_hideEl;}}
}
//-->
</script>
<!-- InstanceBeginEditable name="head" -->
<script language="JavaScript" type="text/JavaScript">
<!--
function MM openBrWindow(theURL,winName,features) { //v2.0
 window.open(theURL,winName,features);
//-->
</script>
```

```
<!-- InstanceEndEditable -->
<style type="text/css">
@import url("../CSS/mag css.css");
-->
</style>
</head>
 <body bgcolor="#ffffff" leftmargin="0" topmargin="0"
onLoad="MM_preloadImages('images/search_middle_roll.gif', 'images/home_left_Roll.gif',
'../xsec_pages/images/goto_right_roll.gif', 'structure_rollovers/1388/1388mag_schematic.jpg',
'structure_rollovers/1388/1388mag_aorta_asc.jpg','structure_rollovers/1388/1388mag_aorta_des
c.jpg',
'structure_rollovers/1388/1388mag_azygos_vein.jpg','structure_rollovers/1388/1388mag_bronch
us left.jpg',
'structure_rollovers/1388/1388mag_bronchus_right.jpg','structure_rollovers/1388/1388mag_esop
hagus.jpg',
'structure_rollovers/1388/1388mag_lung_inf.jpg','structure_rollovers/1388/1388mag_lung_sup.j
'structure_rollovers/1388/1388mag_pulm_art_left.jpg','structure_rollovers/1388/1388mag_pulm_
art_right.jpg',
'structure_rollovers/1388/1388mag_pulm_trunk.jpg','structure_rollovers/1388/1388mag_sternum
'structure_rollovers/1388/1388mag_thoracic_duct.jpg', 'structure_rollovers/1388/1388mag_thymu
s.jpg',
'structure_rollovers/1388/1388mag_venacava_sup.jpg','structure_rollovers/1388/1388mag_vert_f
ifth.jpg');
P7 autoLayers(0);P7 autoHide('dropmenu')">
<!-- fwtable fwsrc="magpage.png" fwbase="mag1388A.jpg" fwstyle="Dreamweaver" fwdocid =
"2070642247" fwnested="0" -->
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alt="">
 <img src="images/spacer.gif" width="96" height="1" border="0"
alt="">
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alt="">
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alt="">
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alt="">
 <img src="images/spacer.gif" width="19" height="1" border="0"
alt="">
```

```
<img src="images/spacer.gif" width="299" height="1" border="0"
alt="">
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 <a href="javascript:;" onMouseOver="P7_autoLayers(0)">
<img src="images/mag1388A_r1_c1.jpg" alt="" name="mag1388A_r1_c1" width="955"</pre>
height="63" border="0" align="top"></a>
 <img src="images/spacer.gif" width="1" height="63" border="0" alt="">
 <a href="../index.htm"><img
src="../xsec pages/images/home left.gif" name="Image2" width="98" height="23" border="0"
align="top"
id="Image2"
onMouseOver="MM_swapImage('Image2',",'../xsec_pages/images/home_left_Roll.gif',1);
P7_autoLayers(0)" onMouseOut="MM_swapImgRestore()"></a><a href="../search.htm"><img
src="../xsec pages/images/search middle.gif" name="Image3" width="97" height="23"
border="0" align="top" id="Image3"
onMouseOver="MM_swapImage('Image3',",'../xsec_pages/images/search_middle_roll.gif',1);P7
autoLayers(0)" onMouseOut="MM swapImgRestore()"></a><a href="javascript:;"
onClick="P7_autoLayers(0,'dropmenu')"><img src="../xsec_pages/images/goto_right.gif"
name="Image4" width="97" height="23" border="0" align="top"
id="Image4"
onMouseOver="MM_swapImage('Image4',",'../xsec_pages/images/goto_right_roll.gif',1)"
onMouseOut="MM_swapImgRestore()"></a><!-- InstanceBeginEditable name="back" --><a
href="../xsec_pages/xsec1388.htm"><img src="../xsec_pages/images/back_right.gif"
name="back" width="98" height="23" border="0" align="top" id="back"></a><!--
InstanceEndEditable --><a href="javascript:;" onMouseOver="P7_autoLayers(0)"><img
src="../xsec_pages/images/thorax.jpg" width="98" height="23"
border="0" align="top"></a>
 <!-- InstanceBeginEditable name="previous" --><td width="116" height="21" align="left"
valign="bottom"><h6><br>
<&lt;PREVIOUS ZOOM</h6>
<!-- InstanceEndEditable --> <!-- InstanceBeginEditable name="zoom title" --> <td width="317"
align="center" valign="bottom"><h4>CS 1388 </h4>
<!-- InstanceEndEditable --> <!-- InstanceBeginEditable name="next" --><td width="100"
align="right" valign="bottom"><h6><a href="mag1388B.htm" class="menu"><br/>br>
NEXT ZOOM >></a></h6>
<!-- InstanceEndEditable --> &nbsp;
<h2>&nbsp;</h2>
 <!-- InstanceBeginEditable name="zoom" -->
```

```
<img src="structure_rollovers/1388/
1388mag_plain.jpg" name="magview" width="539" height="410" id="magview">
<!-- InstanceEndEditable --><!-- InstanceBeginEditable name="anatomical structures" --><td
width="301"
rowspan="2" align="left" valign="top"><h2>Anatomical Structures</h2>
<h5> [roll-over to view structure]<br>
[click to see additional information] < br>
<br>
</h5>
<h5><a href="#" class="structures"
onMouseOver="MM_swapImage('magview',",'structure_rollovers/1388/1388mag_schematic.jpg'
,1)" onMouseOut="MM_swapImgRestore()">Schematic Illustration</a></h5>
<a href="#" class="structures"
onClick="MM openBrWindow('../info pages/aorta asc.htm', 'VisibleMan', 'status=yes, scrollbars
resizable=yes,width=601,height=250')"
onMouseOver="MM_swapImage('magview',",'structure_rollovers/1388/1388mag_aorta_asc.jpg',
1)" onMouseOut="MM_swapImgRestore()">Aorta, ascending</a><br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/aorta_desc.htm','VisibleMan','status=yes,scrollbar
s=yes,
resizable=yes,width=601,height=250')"
onMouseOver="MM_swapImage('magview',",'structure_rollovers/1388/1388mag_aorta_desc.jp
g',1)" onMouseOut="MM swapImgRestore()">Aorta, descending</a><br
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/azygos_vein.htm','VisibleMan','status=yes,scrollb
ars=ves.
resizable=yes,width=601,height=350')"
onMouseOver="MM_swapImage('magview',",'structure_rollovers/1388/1388mag_azygos_vein.j
pg',1)" onMouseOut="MM_swapImgRestore()">Azygos vein</a><br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/bronch_left.htm','VisibleMan','status=yes,scrollba
rs=yes,
resizable=yes,width=601,height=250')"
onMouseOver="MM_swapImage('magview',",'structure_rollovers/1388/1388mag_bronchus_left
.jpg',1)" onMouseOut="MM swapImgRestore()">Bronchus, left</a><br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/bronch_right.htm','VisibleMan','status=yes,scrollb
ars=yes,
resizable=yes,width=601,height=250')"
onMouseOver="MM_swapImage('magview',",'structure_rollovers/1388/1388mag_bronchus_rig
ht.jpg',1)" onMouseOut="MM_swapImgRestore()">Bronchus, right</a><br>
```

<a href="#" class="structures" onClick="MM openBrWindow('../info pages/esophagus.htm','VisibleMan','status=yes,scrollbars =yes, resizable=yes,width=601,height=500')" onMouseOver="MM\_swapImage('magview',",'structure\_rollovers/1388/1388mag\_esophagus.jpg ',1)" onMouseOut="MM swapImgRestore()">Esophagus</a><br> <a href="#" class="structures" onClick="MM\_openBrWindow('../info\_pages/lung\_inflobe.htm','VisibleMan','status=yes,scrollb resizable=yes,width=601,height=250')" onMouseOver="MM\_swapImage('magview',",'structure\_rollovers/1388/1388mag\_lung\_inf.jpg', 1)" onMouseOut="MM\_swapImgRestore()">Lung, inferior lobe</a><br/>br> <a href="#" class="structures" onClick="MM openBrWindow('../info pages/lung suplobe.htm', 'VisibleMan', 'status=yes, scroll resizable=yes,width=601,height=250')" onMouseOver="MM\_swapImage('magview',",'structure\_rollovers/1388/1388mag\_lung\_sup.jpg', 1)" onMouseOut="MM\_swapImgRestore()">Lung, superior lobe</a><br/>br> <a href="#" class="structures" onClick="MM\_openBrWindow('../info\_pages/pulm\_art\_left.htm','VisibleMan','status=yes,scroll bars=yes, resizable=yes,width=601,height=350')"  $on Mouse Over = "MM\_swapImage ('magview', '', 'structure\_rollovers/1388/1388 mag\_pulm\_art\_left.$ jpg',1)" onMouseOut="MM swapImgRestore()">Pulmonary artery, left</a><br/>br> <a href="#" class="structures" onClick="MM\_openBrWindow('../info\_pages/pulm\_art\_right.htm','VisibleMan','status=yes,scrol lbars=yes, resizable=yes,width=601,height=350')" onMouseOver="MM\_swapImage('magview',",'structure\_rollovers/1388/1388mag\_pulm\_art\_righ t.jpg',1)" onMouseOut="MM\_swapImgRestore()">Pulmonary artery, right</a><br/>br> <a href="#" class="structures" onClick="MM\_openBrWindow('../info\_pages/pulm\_trunk.htm','VisibleMan','status=yes,scrollba rs=yes, resizable=yes,width=601,height=250')" onMouseOver="MM\_swapImage('magview',",'structure\_rollovers/1388/1388mag\_pulm\_trunk.jp g',1)" onMouseOut="MM swapImgRestore()">Pulmonary trunk</a><br> <a href="#" class="structures" onClick="MM\_openBrWindow('../info\_pages/sternum.htm','VisibleMan','status=yes,scrollbars= yes, resizable=yes,width=601,height=250')" onMouseOver="MM\_swapImage('magview',",'structure\_rollovers/1388/1388mag\_sternum.jpg',1

)" onMouseOut="MM\_swapImgRestore()">Sternum</a><br>

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<a href="#" class="structures"
onClick="MM openBrWindow('../info pages/thor duct.htm', 'VisibleMan', 'status=yes, scrollbars
=yes,
resizable=yes,width=601,height=400')"
on Mouse Over = "MM\_swap Image ('mag view', '', 'structure\_rollovers/1388/1388 mag\_thoracic\_duct.
ipg',1)" onMouseOut="MM swapImgRestore()">Thoracic duct</a><br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/thymus.htm','VisibleMan','status=yes,scrollbars=y
resizable=yes,width=601,height=500')"
onMouseOver="MM_swapImage('magview',",'structure_rollovers/1388/1388mag_thymus.jpg',1)
" onMouseOut="MM swapImgRestore()">Thymus</a><br>
<a href="#" class="structures"
onClick="MM openBrWindow('../info pages/venacava sup.htm','VisibleMan','width=501,heigh
MM_openBrWindow('../info_pages/venacava_sup.htm', 'VisibleMan', 'status=yes, scrollbars=yes,
resizable=yes,width=601,height=350')"
onMouseOver="MM_swapImage('magview',",'structure_rollovers/1388/1388mag_venacava_sup
.jpg',1)" onMouseOut="MM swapImgRestore()">Vena cava, superior</a><br/>br>
<a href="#" class="structures"
onClick="MM_openBrWindow('../info_pages/vert_fifth.htm','VisibleMan','status=yes,scrollbars
=yes,
resizable=yes,width=601,height=250')"
onMouseOver="MM_swapImage('magview',",'structure_rollovers/1388/1388mag_vert_fifth.jpg',
1)" onMouseOut="MM_swapImgRestore()">Vertebra, fifth thoracic</a>
<!-- InstanceEndEditable -->
<!-- InstanceBeginEditable name="xsec title" -->
                                                     <td height="125" colspan="3"
align="center" valign="top"><h4>Mediastinum at bifurcation of pulmonary trunk.
[2X]</h4>
<!-- InstanceEndEditable -->
    
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 >
 <img src="images/spacer.gif" width="1" height="31" border="0" alt="">
  <img src="images/spacer.gif" width="1" height="21" border="0" alt="">
 <img src="images/spacer.gif" width="1" height="20" border="0" alt="">
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  <img src="images/spacer.gif" width="1" height="360" border="0" alt="">
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alt="">
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onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1097 - Superiormost Orbit</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1099 - Superior Orbit</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu1','dropmenu')">
1107 - Mid-Orbit</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1118 - Inferior Orbit</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1134 - Middle & Internal Ear</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1168 - Palate, C1, & C2</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1215 - Lower Mandible, C2, & C3</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1232 - Inf. Mental Symphyseal Border</a>
</div>
<div id="dropsubmenu2" class="sublowermenus">
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu2','dropmenu')">
1248 - Supraglottic Structures</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu2','dropmenu')">
1257 - Rima Glottidus</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu2','dropmenu')">
1281 - Base Cricoid Cartilage</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu2','dropmenu')">
1321 - Thoracic Inlet & Jugular Notch</a>
```

```
<a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu2','dropmenu')">
1338 - Lowest Manubrioclavicular Joint</a>
</div>
<div id="dropsubmenu3" class="sublowermenus">
 <a href="../xsec pages/xsec1350.htm" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu3','dropmenu')">1350 - Sup.
Mediastinum</a>
 <a href="../xsec pages/xsec1368.htm" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu3','dropmenu')">1368 - Aortic Arch</a>
 <a href="../xsec_pages/xsec1372.htm" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu3','dropmenu')">1372 - Azygos System</a>
 <a href="../xsec_pages/xsec1381.htm" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu3','dropmenu')">1381 - Trans. Pericardial
Sinus</a>
 <a href="../xsec_pages/xsec1388.htm" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu3','dropmenu')">1388 - Pulmonary A.</a>
 <a href="../xsec_pages/xsec1415.htm" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu3','dropmenu')">1415 - L. & R.
Auricles</a>
 <a href="../xsec_pages/xsec1425.htm" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu3','dropmenu')">1425 - R. Ventricle</a>
 <a href="../xsec_pages/xsec1439.htm" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu3','dropmenu')">1439 - Atrioventricular
Valves</a>
</div>
<div id="dropsubmenu4" class="sublowermenus">
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1321 - Proximal Humerus & Shoulder</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu4','dropmenu')">
1480 - Mid-Diaphysis Humerus</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1602 - Elbow</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1663 - Proximal Antebrachium</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1700 - Mid-Left Antebrachium</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu4','dropmenu')">
```

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1758 - Distalmost Antebrachium</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1772 - Midcarpal Joints</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1776 - Carpometacarpal Joints</a>
</div>
<div id="dropsubmenu5" class="sublowermenus">
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1499 - Cardiac Region: Stomach</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu5','dropmenu')">
1508 - Esophageal Sphinctor</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1553 - Inferiormost Diaphragm</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1562 - Pyloric Sphincter</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1570 - Suprarenal Glands</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1579 - Formation of Portal V.</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1582 - Celiac A.</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu5','dropmenu')">
1590 - Sup. Kidneys</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1601 - Sup. Mesenteric</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1610 - Hilus of Kidney: Renal V.</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1615 - Hilus of Kidney: Renal A.</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu5','dropmenu')">
```

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1625 - Hilus of Kidney: L. Ureter</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1634 - Duodenojejunal Junction</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1700 - Oblique Muscles</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1715 - 4th Lumbar Vertebral Level</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu5','dropmenu')">
1733 - Iliac Crests</a>
</div>
<div id="dropsubmenu6" class="sublowermenus">
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1749 - Superior Iliac Crests</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1805 - Sacroiliac Joint</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1880 - Superior Bladder & Acetabulum</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1895 - Obturator Canal</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1903 - Superior Pelvic Outlet</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1921 - Deep Perineal Pouch</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1940 - Bulb of the Penis</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1958 - External Penis</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1990 - Testicle</a>
</div>
<div id="dropsubmenu7" class="sublowermenus">
```

```
<a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu7','dropmenu')">
1880 - Femoral Head</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2105 - Mid-Diaphysis Femur</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2273 - Superior Knee</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2325 - Midknee</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu7','dropmenu')">
2330 - Lower Knee</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2373 - Upper Diaphysis Tibia & Fibula</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2551 - Lower Diaphysis Tibia & Fibula</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2715 - Tibiofibular Joint</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2731 - Upper Ankle Joint</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2755 - Lower (Subtalar) Ankle Joint</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">Replanarized Foot 1 - Middistal
Tarsal Bones</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">Replanarized Foot 2 -
Midmetatarsals</a>
</div>
<div id="dropsubmenu8" class="sublowermenus">
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu8','dropmenu')">
1168 - Sup. Nuchal & Suboccipital Musc.</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu8','dropmenu')">
1248 - Lower Nuchal Musculature</a>
```

```
<a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu8','dropmenu')">
1372 - Midthoracic Back</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu8','dropmenu')">
1430 - Lower Thoracic Back </a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu8','dropmenu')">
1715 - Midlumbar Back</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu8','dropmenu')">
1805 - Midsacral Back</a>
</div>
<div id="dropmenu" class="submenus"> <a href="#" class="p7submenus"</pre>
onClick="P7_autoLayers(0,'dropsubmenu1','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu2','dropsubmenu3','dropsubmenu4','dropsubmenu5','
dropsubmenu6',
'dropsubmenu7','dropsubmenu8')">HEAD</a>
 <a href="#" class="p7submenus"</pre>
onClick="P7_autoLayers(0,'dropsubmenu2','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu1','dropsubmenu3','dropsubmenu4','dropsubmenu5','
dropsubmenu6',
'dropsubmenu7', 'dropsubmenu8')">NECK</a>
 <a href="#" class="p7submenus"</pre>
onClick="P7_autoLayers(0,'dropsubmenu3','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu1','dropsubmenu2','dropsubmenu4','dropsubmenu5','
dropsubmenu6',
'dropsubmenu7', 'dropsubmenu8')">THORAX</a>
 <a href="#" class="p7submenus"</pre>
onClick="P7 autoLayers(0,'dropsubmenu4','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu1','dropsubmenu2','dropsubmenu3','dropsubmenu5','
dropsubmenu6',
'dropsubmenu7','dropsubmenu8')">UPPER LIMB</a>
 <a href="#" class="p7submenus"</pre>
onClick="P7_autoLayers(0,'dropsubmenu5','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu1','dropsubmenu2','dropsubmenu3','dropsubmenu4','
dropsubmenu6',
'dropsubmenu7','dropsubmenu8')">ABDOMEN</a>
 <a href="#" class="p7submenus"</pre>
onClick="P7 autoLayers(0,'dropsubmenu6','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu1','dropsubmenu2','dropsubmenu3','dropsubmenu4','
dropsubmenu5',
'dropsubmenu7', 'dropsubmenu8')">PERINEUM & amp; PELVIS</a>
```

```
\label{eq:continuous} $$\operatorname{sing}=\operatorname{left}^*< \operatorname{ahref}=\#\operatorname{leas}=\operatorname{p7submenus}^*$ on $\operatorname{Click}=\operatorname{P7}_{\operatorname{autoLayers}}(0,\operatorname{dropsubmenu7}',\operatorname{dropmenu'})^*$ on $\operatorname{MouseOver}=\operatorname{P7}_{\operatorname{autoHide}}(\operatorname{dropsubmenu1}',\operatorname{dropsubmenu2}',\operatorname{dropsubmenu3}',\operatorname{dropsubmenu3}',\operatorname{dropsubmenu4}',\operatorname{dropsubmenu5}', '\operatorname{dropsubmenu6}',\operatorname{dropsubmenu8}')^*>LOWER LIMB</a> <math display="block">\label{eq:continuous} $\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB}=\operatorname{LIMB
```

### CT PAGE CODE

Example for page: CT 1388

```
<a href="https://chml><!-- InstanceBegin template="/Templates/ctmr.dwt" codeOutsideHTMLIsLocked="false" | co
-->
<head>
<!-- InstanceBeginEditable name="doctitle" -->
<title>Visible Man - Cross-Sectional Human Anatomy</title>
<!-- InstanceEndEditable -->
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<!--Fireworks MX 2004 Dreamweaver MX 2004 target. Created Wed Aug 10 12:21:38 GMT-
0500 (Central Standard Time) 2005-->
<script language="JavaScript" type="text/JavaScript">
<!--function mmLoadMenus() {
  if (window.mm_menu_0823145932_0) return;
  window.mm_menu_0823145932_0 = new Menu("root",181,21,"Geneva, Arial, Helvetica, sans-
serif",15,"#000000","#A3D22A","#FFFFFF","#FFFFFF","left","middle",3,0,0,-
5,7,true,false,true,18,true,true);
  mm_menu_0823145932_0.addMenuItem("HEAD");
  mm_menu_0823145932_0.addMenuItem("NECK");
  mm menu 0823145932 0.addMenuItem("THORAX");
  mm_menu_0823145932_0.addMenuItem("UPPER LIMB");
  mm menu 0823145932 0.addMenuItem("ABDOMEN");
  mm_menu_0823145932_0.addMenuItem("PELVIS & PERINEUM");
   mm_menu_0823145932_0.hideOnMouseOut=true;
   mm menu 0823145932 0.bgColor='#555555';
   mm menu 0823145932 0.menuBorder=0;
   mm_menu_0823145932_0.menuLiteBgColor='#FFFFFF';
   mm menu 0823145932 0.menuBorderBgColor='#777777';
  mm_menu_0823145932_0.writeMenus();
} // mmLoadMenus()
function MM_preloadImages() { //v3.0
  var d=document; if(d.images){ if(!d.MM_p) d.MM_p=new Array();
    var i,j=d.MM_p.length,a=MM_preloadImages.arguments; for(i=0; i<a.length; i++)
    if (a[i].indexOf("#")!=0){ d.MM_p[i]=new Image; d.MM_p[i++].src=a[i];}}
function MM_swapImgRestore() { //v3.0
  var i,x,a=document.MM\_sr; for(i=0;a\&\&i<a.length\&\&(x=a[i])\&\&x.oSrc;i++) x.src=x.oSrc;
function MM_findObj(n, d) { //v4.01
  var p,i,x; if(!d) d=document; if((p=n.indexOf("?"))>0&&parent.frames.length) {
    d=parent.frames[n.substring(p+1)].document; n=n.substring(0,p);}
  if(!(x=d[n])\&\&d.all) x=d.all[n]; for (i=0;!x\&\&i<d.forms.length;i++) x=d.forms[i][n];
```

```
for(i=0;!x&&d.layers&&i<d.layers.length;i++) x=MM_findObj(n,d.layers[i].document);
 if(!x && d.getElementById) x=d.getElementById(n); return x;
function MM swapImage() { //v3.0
 var i,j=0,x,a=MM_swapImage.arguments; document.MM_sr=new Array; for(i=0;i<(a.length-
2);i+=3)
 if ((x=MM_findObj(a[i]))!=null){document.MM_sr[j++]=x; if(!x.oSrc) x.oSrc=x.src;
x.src=a[i+2];
function P7_autoLayers() { //v1.5 by PVII
var g,b,k,f,u,k,j,args=P7_autoLayers.arguments,a=parseInt(args[0]);if(isNaN(a))a=0;
if(!document.p7setc){p7c=new Array();document.p7setc=true;for(u=0;u<10;u++){
p7c[u]=new Array();} for(k=0;k<p7c[a].length;k++){if((g=MM\_findObj(p7c[a][k]))!=null)}
b=(document.layers)?g:g.style;b.visibility="hidden";}}for(k=1;k<args.length;k++){
if((g=MM_findObj(args[k]))!=null){b=(document.layers)?g:g.style;b.visibility="visible";f=false;
for(j=0;j<p7c[a].length;j++)\{if(args[k]==p7c[a][j]) \{f=true;\}\}
if(!f){p7c[a][p7c[a].length++]=args[k];}}
function P7_hideEl(evt) { //v1.5 by PVII-www.projectseven.com
var b,r,m=false;if(document.layers){b=evt.target;if(b.p7aHide){
b.visibility="hidden";}else{routeEvent(evt);}
}else if(document.all&&!window.opera){b=event.srcElement;while(b){
if(b.p7aHide){break;}b=b.parentElement;}if(!b.contains(event.toElement)){
b.style.visibility="hidden";}}else if(document.getElementById){
b=evt.currentTarget;r=evt.relatedTarget;while(r){if(b==r){m=true;
break; \r=r.parentNode; \right\{if(!m)\{b.style.visibility="hidden"; \right\}\}
function P7_autoHide() { //v1.5 by PVII-www.projectseven.com
var i,g;for(i=0;i<arguments.length;i++){
if((g=MM_findObj(arguments[i]))!=null){g.p7aHide=true;if(document.layers){
g.captureEvents(Event.MOUSEOUT);}g.onmouseout=P7 hideEl;}}
//-->
</script>
<script language="JavaScript" src="../xsec_pages/mm_menu.js"></script>
<!-- InstanceBeginEditable name="head" --><!-- InstanceEndEditable -->
<style type="text/css">
<!--@import url("../CSS/ctmr_css.css");-->
</style>
</head>
<body bgcolor="#ffffff"
onLoad="MM_preloadImages('images/close_roll.gif', 'structure_rollovers/1388/1388ct_aorta_asc
.jpg',
```

```
'structure_rollovers/1388/1388ct_aorta_desc.jpg','structure_rollovers/1388/1388ct_azygos_vein.j
pg',
'structure_rollovers/1388/1388ct_bronchus_left.jpg','structure_rollovers/1388/1388ct_bronchus_r
ight.ipg'.
'structure_rollovers/1388/1388ct_esoph.jpg', 'structure_rollovers/1388/1388ct_lung.jpg',
'structure_rollovers/1388/1388ct_pulm_art_left.jpg','structure_rollovers/1388/1388ct_pulm_art_r
ight.jpg',
'structure_rollovers/1388/1388ct_pulm_trunk.jpg','structure_rollovers/1388/1388ct_costal_cart_t
hird.jpg',
'structure_rollovers/1388/1388ct_sternum.jpg','structure_rollovers/1388/1388ct_thymus.jpg',
'structure_rollovers/1388/1388ct_venacava_sup.jpg','structure_rollovers/1388/1388ct_vert_fifth.j
P7_autoHide('dropmenu');P7_autoHide('dropsubmenu')">
<!-- fwtable fwsrc="slidepage.png" fwbase="xsec1388.jpg" fwstyle="Dreamweaver" fwdocid =
"1207713811" fwnested="0" -->
       <img src="../xsec_pages/images/spacer.gif" alt="" name="Image1" width="49"
height="1" border="0" id="Image1">
  <img src="../xsec_pages/images/spacer.gif" width="27" height="1" border="0"
alt="">
  <img src="../xsec_pages/images/spacer.gif" width="22" height="1" border="0"
alt="">
  <img src="../xsec_pages/images/spacer.gif" width="60" height="1" border="0"
alt="">
  <img src="../xsec_pages/images/spacer.gif" width="36" height="1" border="0"
alt="">
  <img src="../xsec_pages/images/spacer.gif" width="97" height="1" border="0"
alt="">
  <img src="../xsec_pages/images/spacer.gif" width="96" height="1" border="0"
alt="">
  <img src="../xsec_pages/images/spacer.gif" width="13" height="1" border="0"
alt="">
  <img src="../xsec_pages/images/spacer.gif" width="140" height="1" border="0"
alt="">
  <img src="../xsec_pages/images/spacer.gif" width="140" height="1" border="0"
alt="">
  <img src="../xsec_pages/images/spacer.gif" width="20" height="1" border="0"
alt="">
  <img src="../xsec_pages/images/spacer.gif" width="255" height="1" border="0"
alt="">
  <img src="../xsec_pages/images/spacer.gif" width="1" height="1" border="0"
alt="">
```

```
<img src="images/ctmr1388A_r1_c1.jpg" alt=""
name="xsec1388_r1_c1" width="955" height="63" border="0" align="top"
onMouseOver="P7_autoLayers(0)">
  <img src="../xsec pages/images/spacer.gif" width="1" height="63" border="0"
alt="">
 <a
href="Javascript:self.close();"><img src="images/close.gif" name="Image2" width="99"
height="23" border="0" align="top" id="Image2"
onMouseOver="MM_swapImage('Image2',",'images/close_roll.gif',1)"
onMouseOut="MM_swapImgRestore()"></a>
    <!-- InstanceBeginEditable name="previous" --><td width="83" align="left"
valign="bottom"><a href="ctmr1381.htm" class="menu"><br>
    <&lt;PREVIOUS</a>
    <!-- InstanceEndEditable --> <!-- InstanceBeginEditable name="ct title" --><td
width="490" align="center" valign="bottom"><h4>&nbsp;</h4>
    <!-- InstanceEndEditable --> <!-- InstanceBeginEditable name="next" --><td width="51"
align="right" valign="bottom"><a href="ctmr1415.htm" class="menu"><br>
    NEXT>></a>
    <!-- InstanceEndEditable -->&nbsp;
     
     <!-- InstanceBeginEditable name="ct" -->
    <img
src="structure rollovers/1388/1388ct plain.jpg
" name="ct" width="631" height="321" id="ct">
    <!-- InstanceEndEditable -->
     
      <!-- InstanceBeginEditable name="anatomical structures" --><td width="285"
rowspan="2" align="left" valign="top"><h2>Anatomical Structures</h2>
     <h5>[roll-over to view structure]<br>
 <br/>br></h5>
     <a href="#" class="structures"
onMouseOver="MM_swapImage('ct',",'structure_rollovers/1388/1388ct_aorta_asc.jpg',1)"
onMouseOut="MM_swapImgRestore()">Aorta, ascending</a><br>
     <a href="#" class="structures"
onMouseOver="MM_swapImage('ct',",'structure_rollovers/1388/1388ct_aorta_desc.jpg',1)"
onMouseOut="MM_swapImgRestore()">Aorta, descending</a><br>
```

```
<a href="#" class="structures"
onMouseOver="MM_swapImage('ct',",'structure_rollovers/1388/1388ct_azygos_vein.jpg',1)"
onMouseOut="MM_swapImgRestore()">Azygos vein</a><br>
      <a href="#" class="structures"
onMouseOver="MM_swapImage('ct',",'structure_rollovers/1388/1388ct_bronchus_left.jpg',1)"
onMouseOut="MM_swapImgRestore()">Bronchus, left</a><br>
      <a href="#" class="structures"
onMouseOver="MM_swapImage('ct',",'structure_rollovers/1388/1388ct_bronchus_right.jpg',1)"
onMouseOut="MM swapImgRestore()">Bronchus, right</a><br/>br>
      <a href="#" class="structures"
onMouseOver="MM_swapImage('ct',",'structure_rollovers/1388/1388ct_esoph.jpg',1)"
onMouseOut="MM swapImgRestore()">Esophagus</a><br
      <a href="#" class="structures"
onMouseOver="MM swapImage('ct',",'structure rollovers/1388/1388ct lung.jpg',1)"
onMouseOut="MM_swapImgRestore()">Lung</a><br
      <a href="#" class="structures"
onMouseOver="MM_swapImage('ct',",'structure_rollovers/1388/1388ct_pulm_art_left.jpg',1)"
onMouseOut="MM_swapImgRestore()">Pulmonary artery, left</a><br>
      <a href="#" class="structures"
onMouseOver="MM_swapImage('ct',",'structure_rollovers/1388/1388ct_pulm_art_right.jpg',1)"
onMouseOut="MM_swapImgRestore()">Pulmonary artery, right</a><br/>br>
      <a href="#" class="structures"
onMouseOver="MM_swapImage('ct',",'structure_rollovers/1388/1388ct_pulm_trunk.jpg',1)"
onMouseOut="MM swapImgRestore()">Pulmonary trunk</a><br>
      <a href="#" class="structures"
onMouseOver="MM_swapImage('ct',",'structure_rollovers/1388/1388ct_costal_cart_third.jpg',1)
" onMouseOut="MM_swapImgRestore()">Rib, third costal cartilage</a><br>
      <a href="#" class="structures"
onMouseOver="MM_swapImage('ct',",'structure_rollovers/1388/1388ct_sternum.jpg',1)"
onMouseOut="MM swapImgRestore()">Sternum</a><br/>br>
      <a href="#" class="structures"
onMouseOver="MM swapImage('ct',",'structure rollovers/1388/1388ct thymus.jpg',1)"
onMouseOut="MM_swapImgRestore()">Thymus</a><br>
      <a href="#" class="structures"
onMouseOver="MM_swapImage('ct',",'structure_rollovers/1388/1388ct_venacava_sup.jpg',1)"
onMouseOut="MM_swapImgRestore()">Vena cava, superior</a><br>
      <a href="#" class="structures"
onMouseOver="MM_swapImage('ct',",'structure_rollovers/1388/1388ct_vert_fifth.jpg',1)"
onMouseOut="MM_swapImgRestore()">Vertebra, fifth thoracic</a>
     <!-- InstanceEndEditable -->
    <!-- InstanceBeginEditable name="bottom text" -->
```

```
<h4>CT scan 1388</h4>
       
     <!-- InstanceEndEditable -->
       
   <img src="../xsec_pages/images/spacer.gif" width="1" height="22" border="0"
alt="">
<img src="../xsec pages/images/spacer.gif" width="1" height="22" border="0"
alt="">
<img src="../xsec_pages/images/spacer.gif" width="1" height="20" border="0"
alt="">
<img src="../xsec_pages/images/spacer.gif" width="1" height="30" border="0"
alt="">
<img src="../xsec_pages/images/spacer.gif" width="1" height="272" border="0"
alt="">
<img src="../xsec_pages/images/spacer.gif" width="1" height="33" border="0"
alt="">
>
<img src="../xsec_pages/images/spacer.gif" width="1" height="41" border="0"
alt="">
<img src="../xsec_pages/images/spacer.gif" width="1" height="52" border="0"
alt="">
<img src="../xsec_pages/images/spacer.gif" width="1" height="45" border="0"
alt="">
</body>
<!-- InstanceEnd --></html>
```

### SEARCH PAGE CODE

```
<html>
<head>
<title>Visible Man - Cross-Sectional Human Anatomy</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<!--Fireworks MX 2004 Dreamweaver MX 2004 target. Created Wed Aug 10 12:20:35 GMT-
0500 (Central Standard Time) 2005-->
 <script language="JavaScript">
<!--
function P7_JumpMenu(targ,selObj,restore){ //v3.0
 eval(targ+".location=""+selObj.options[selObj.selectedIndex].value+""");
if (restore) selObj.selectedIndex=0;
function mmLoadMenus() {
 if (window.mm_menu_0816231826_0) return;
                  window.mm_menu_0816231826_0 = new Menu("root",246,25,"Geneva,
Arial, Helvetica, sans-
serif",15,"#000000","#A3D22A","#FFFFFF","#FFFFFF","left","middle",5,0,0,-
5,7,true,false,true,18,true,true);
 mm_menu_0816231826_0.addMenuItem("1321");
 mm menu 0816231826 0.addMenuItem("1338");
 mm_menu_0816231826_0.addMenuItem("1350 - Superior Mediastinum");
 mm menu 0816231826 0.addMenuItem("1368 - Aortic Arch");
 mm_menu_0816231826_0.addMenuItem("1372 - Azygous System");
 mm_menu_0816231826_0.addMenuItem("1381 -
 Transverse Pericardial Sinus");
 mm_menu_0816231826_0.addMenuItem("1388 -
 Pulmonary Arteries","location='xsec_pages/xsec1388.htm");
 mm menu 0816231826 0.addMenuItem("1415 -
 Left & Right Auricles");
 mm menu 0816231826 0.addMenuItem("1425 - Right Ventricle");
 mm_menu_0816231826_0.addMenuItem("1439 -
 Atrioventricular Valves");
 mm_menu_0816231826_0.addMenuItem("1449 -
 Sup. Diaphragmatic Surface");
 mm menu 0816231826 0.hideOnMouseOut=true;
 mm_menu_0816231826_0.bgColor='#555555';
 mm menu 0816231826 0.menuBorder=0;
 mm menu 0816231826 0.menuLiteBgColor='#FFFFFF';
 mm_menu_0816231826_0.menuBorderBgColor='#777777';
mm menu 0816231826 0.writeMenus();
} // mmLoadMenus()
function MM preloadImages() { //v3.0
```

```
var d=document; if(d.images){ if(!d.MM_p) d.MM_p=new Array();
  var i,j=d.MM p.length,a=MM preloadImages.arguments; for(i=0; i<a.length; i++)
  if (a[i].indexOf("#")!=0){ d.MM_p[i]=new Image; d.MM_p[i++].src=a[i];}}
function MM_swapImgRestore() { //v3.0
 var i, x, a = document.MM_sr; for(i=0; a \& \& i < a.length \& \& (x=a[i]) \& \& x.oSrc; i++) x.src=x.oSrc;
function MM_findObj(n, d) { //v4.01
 var p,i,x; if(!d) d=document; if((p=n.indexOf("?"))>0&&parent.frames.length) {
  d=parent.frames[n.substring(p+1)].document; n=n.substring(0,p);}
 if(!(x=d[n])\&\&d.all) x=d.all[n]; for (i=0;!x\&\&i<d.forms.length;i++) x=d.forms[i][n];
 for(i=0;!x&&d.layers&&i<d.layers.length;i++) x=MM findObj(n,d.layers[i].document);
 if(!x && d.getElementById) x=d.getElementById(n); return x;
function MM_swapImage() { //v3.0
 var i,j=0,x,a=MM_swapImage.arguments; document.MM_sr=new Array; for(i=0;i<(a.length-
2);i+=3)
 if ((x=MM_findObj(a[i]))!=null){document.MM_sr[j++]=x; if(!x.oSrc) x.oSrc=x.src;
x.src=a[i+2];
}
//-->
</script>
<script language="JavaScript" src="mm_menu.js"></script>
link href="CSS/search css.css" rel="stylesheet" type="text/css">
</head>
 <body bgcolor="#ffffff" leftmargin="0" topmargin="0"
onLoad="MM_preloadImages('images/index_r6_c6.jpg','../../working_files/pics/body_outline.jp
g','images/preview_bodylocation/line_1350.jpg','images/preview_bodylocation/preview_1350.jp
g','images/home_left_Roll.gif','images/gettingstarted_right_roll.gif','images/search_preview/xsec
1350.jpg')">
<!-- fwtable fwsrc="homepage.png" fwbase="index.jpg" fwstyle="Dreamweaver" fwdocid =
"1376654032" fwnested="0" -->
 <img src="images/spacer.gif" alt="" name="Image2" width="164" height="1"
border="0" id="Image2">
  <img src="images/spacer.gif" width="90" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="6" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="229" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="13" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="157" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="25" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="186" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="85" height="1" border="0" alt="">
```

```
<img src="images/spacer.gif" width="1" height="1" border="0" alt="">
 <img src="images/index_r1_c1.jpg" alt="" name="index_r1_c1"
width="955" height="63" border="0" align="top">
  <img src="images/spacer.gif" width="1" height="63" border="0" alt="">
 <a href="index.htm"
onMouseOver="MM_swapImage('Image3',",'images/home_left_Roll.gif',1)"
onMouseOut="MM_swapImgRestore()"><img src="images/home_left.gif" name="Image3"
width="98" height="23" border="0" id="Image3"></a><a href="gettingstarted.htm"><img
src="images/gettingstarted_right.gif" name="Image1" width="195" height="23" border="0"
align="top" id="Image1"
onMouseOver="MM_swapImage('Image1',",'images/gettingstarted_right_roll.gif',1)"
onMouseOut="MM_swapImgRestore()"></a>
       <h3>Select
       a structure by name:
       <select name="searchmenu" id="searchmenu"</pre>
onChange="P7_JumpMenu('parent',this,0)">
        <option value="#" selected>&nbsp;</option>
        <option value="search_results/ascaorta/ascaorta_xsec1372.htm">Ascending
aorta</option>
        <option value="search_results/azygosvein/azygosvein_xsec1368.htm">Azygos
vein</option>
        <option value="search_results/bronchrt/bronchusrt_xsec1381.htm">Bronchus,
right</option>
        <option value="search_results/esoph/esophagus_xsec1350.htm">Esophagus</option>
        <option value="search_results/lunginf/lunginferior_xsec1368.htm">Lung, inferior
lobe</option>
        <option value="search results/pericardsinus/pericardsinus xsec1368.htm">Pericardial
sinus, transverse</option>
        <option value="search results/ribcostcart/ribcostcart xsec1350.htm">Rib, costal
cartilage</option>
        <option value="search_results/sternum/sternum_xsec1368.htm">Sternum</option>
        <option value="search_results/thymus/thymus_xsec1368.htm">Thymus</option>
        <option value="search_results/vaguslt/vaguslt_xsec1350mag.htm">Vagus nerve,
left</option>
        <option value="search results/venacavasup/venacavasup xsec1368.htm">Vena cava,
superior</option>
        <option value="search results/ventrt/ventrt xsec1415.htm">Ventricle, right/option>
       </select>
       <br>
```

```
</h3>
    
          <h6>[use the
   pull-down menu to select an anatomical structure to search] < br>
    [click on the next and previous buttons at the top of the cross-sections to navigate
through the search results]<br/>
     <br>
    </h6>
   <iframe
   src="iframes/search_query/iframes_blank.htm" name="floater" width=340 height=325
                               align="center" frameborder="0"></iframe>
     
   <img src="images/spacer.gif" width="1" height="22" border="0" alt="">
 <img src="images/spacer.gif" width="1" height="57" border="0" alt="">
<img src="images/spacer.gif" width="1" height="39" border="0" alt="">
 <img src="images/spacer.gif" width="1" height="29" border="0" alt="">
<img src="images/spacer.gif" width="1" height="46" border="0" alt="">
<img src="images/spacer.gif" width="1" height="22" border="0" alt="">
<img src="images/spacer.gif" width="1" height="120" border="0" alt="">
<img src="images/spacer.gif" width="1" height="202" border="0"
alt="">
</body>
</html>
```

### SEARCH RESULTS PAGE CODE

Example for page: 1<sup>st</sup> search result for 'aorta, ascending'

```
<a href="https://www.energia.com/learnings/search.com/">https://www.energia.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/search.com/learnings/sea
codeOutsideHTMLIsLocked="false" -->
<head>
<!-- InstanceBeginEditable name="doctitle" -->
<title>Visible Man - Cross-Sectional Human Anatomy</title>
<!-- InstanceEndEditable -->
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<!--Fireworks MX 2004 Dreamweaver MX 2004 target.
Created Wed Aug 10 12:21:38 GMT-0500 (Central Standard Time) 2005-->
<script language="JavaScript" type="text/JavaScript">
<!--
function mmLoadMenus() {
  if (window.mm_menu_0823145932_0) return;
  window.mm menu 0823145932 0 = new Menu("root",181,21,"Geneva, Arial, Helvetica, sans-
serif",15,"#000000","#A3D22A","#FFFFFF","#FFFFFF","left","middle",3,0,0,-
5,7,true,false,true,
18,true,true);
  mm_menu_0823145932_0.addMenuItem("HEAD");
  mm menu 0823145932 0.addMenuItem("NECK");
  mm_menu_0823145932_0.addMenuItem("THORAX");
  mm_menu_0823145932_0.addMenuItem("UPPER LIMB");
  mm menu 0823145932 0.addMenuItem("ABDOMEN");
  mm menu 0823145932 0.addMenuItem("PELVIS & PERINEUM");
   mm menu 0823145932 0.hideOnMouseOut=true;
   mm menu 0823145932 0.bgColor='#555555';
   mm_menu_0823145932_0.menuBorder=0;
   mm menu 0823145932 0.menuLiteBgColor='#FFFFFF';
   mm_menu_0823145932_0.menuBorderBgColor='#777777';
  mm menu 0823145932 0.writeMenus();
} // mmLoadMenus()
function MM_preloadImages() { //v3.0
  var d=document; if(d.images){ if(!d.MM_p) d.MM_p=new Array();
    var i,j=d.MM_p.length,a=MM_preloadImages.arguments; for(i=0; i<a.length; i++)
    if (a[i].indexOf("#")!=0){ d.MM_p[j]=new Image; d.MM_p[j++].src=a[i];}}
function MM_swapImgRestore() { //v3.0
  var i, x, a = document.MM sr; for (i=0; a & & i < a.length & & (x=a[i]) & & x.oSrc; i++) x.src=x.oSrc;
function MM findObj(n, d) { //v4.01
```

```
var p,i,x; if(!d) d=document; if((p=n.indexOf("?"))>0&&parent.frames.length) {
  d=parent.frames[n.substring(p+1)].document; n=n.substring(0,p);}
 if(!(x=d[n])\&\&d.all) x=d.all[n]; for (i=0;!x\&\&i<d.forms.length;i++) x=d.forms[i][n];
 for(i=0;!x&&d.layers&&i<d.layers.length;i++) x=MM findObj(n,d.layers[i].document);
 if(!x && d.getElementById) x=d.getElementById(n); return x;
function MM swapImage() { //v3.0
 var i,j=0,x,a=MM swapImage.arguments; document.MM sr=new Array; for(i=0;i<(a.length-
2):i+=3)
 if ((x=MM \text{ findObj}(a[i]))!=\text{null})\{\text{document.MM sr}[i++]=x; \text{ if}(!x.oSrc) x.oSrc=x.src;\}
x.src=a[i+2];
function P7_autoLayers() { //v1.5 by PVII
var g,b,k,f,u,k,j,args=P7 autoLayers.arguments,a=parseInt(args[0]);if(isNaN(a))a=0;
if(!document.p7setc){p7c=new Array();document.p7setc=true;for(u=0;u<10;u++){
p7c[u]=new Array();} for(k=0;k<p7c[a].length;k++){if((g=MM\_findObj(p7c[a][k]))!=null)}
b=(document.layers)?g:g.style;b.visibility="hidden";}}for(k=1;k<args.length;k++){
if((g=MM_findObj(args[k]))!=null){b=(document.layers)?g:g.style;b.visibility="visible";f=false;
for(j=0;j<p7c[a].length;j++)\{if(args[k]==p7c[a][j]) \{f=true;\}\}
if(!f){p7c[a][p7c[a].length++]=args[k];}}
function P7_hideEl(evt) { //v1.5 by PVII-www.projectseven.com
var b,r,m=false;if(document.layers){b=evt.target;if(b.p7aHide){
b.visibility="hidden";}else{routeEvent(evt);}
}else if(document.all&&!window.opera){b=event.srcElement;while(b){
if(b.p7aHide){break;}b=b.parentElement;}if(!b.contains(event.toElement)){
b.style.visibility="hidden";}}else if(document.getElementById){
b=evt.currentTarget;r=evt.relatedTarget;while(r){if(b==r){m=true:
break;}r=r.parentNode;}if(!m){b.style.visibility="hidden";}}
function P7_autoHide() { //v1.5 by PVII-www.projectseven.com
var i,g;for(i=0;i<arguments.length;i++){
if((g=MM\_findObj(arguments[i]))!=null)\{g.p7aHide=true;if(document.layers)\{g.p7aHide=true;if(document.layers)\}\}
g.captureEvents(Event.MOUSEOUT);}g.onmouseout=P7_hideEl;}}
//-->
</script>
<script language="JavaScript" src="../../xsec_pages/mm_menu.js"></script>
<!-- InstanceBeginEditable name="head" --><!-- InstanceEndEditable -->
<style type="text/css">
<!--@import url("../../CSS/searchxsec css.css");-->
</style>
</head>
```

```
<body bgcolor="#ffffff"
onLoad="MM preloadImages('../../xsec pages/images/home left Roll.gif','../../xsec pages/imag
search middle roll.gif','../.xsec pages/images/back right roll.gif','../images/goto right roll.gif'
);
P7 autoHide('dropmenu'):P7 autoLayers(0)">
<!-- fwtable fwsrc="slidepage.png" fwbase="xsec1388.jpg" fwstyle="Dreamweaver" fwdocid =
"1207713811" fwnested="0" -->
       <img src="../../xsec_pages/images/spacer.gif" alt="" name="Image1" width="49"
height="1"
border="0" id="Image1">
  <img src="../../xsec_pages/images/spacer.gif" width="27" height="1" border="0"
alt="">
  <img src="../../xsec_pages/images/spacer.gif" width="22" height="1" border="0"
alt="">
  <img src="../../xsec_pages/images/spacer.gif" width="60" height="1" border="0"
alt="">
  <img src="../../xsec_pages/images/spacer.gif" width="36" height="1" border="0"
alt="">
  <img src="../../xsec_pages/images/spacer.gif" width="97" height="1" border="0"
alt="">
  <img src="../../xsec_pages/images/spacer.gif" width="96" height="1" border="0"
alt="">
  <img src="../../xsec_pages/images/spacer.gif" width="13" height="1" border="0"
alt="">
  <img src="../../xsec_pages/images/spacer.gif" width="140" height="1" border="0"
alt="">
  <img src="../../xsec_pages/images/spacer.gif" width="140" height="1" border="0"
alt="">
  <img src="../../xsec_pages/images/spacer.gif" width="20" height="1" border="0"
alt="">
  <img src="../../xsec_pages/images/spacer.gif" width="255" height="1" border="0"
alt="">
  <img src="../../xsec_pages/images/spacer.gif" width="1" height="1" border="0"
alt="">
 <img src="../../xsec_pages/images/xsec1388_r1_c1.jpg" alt=""
 name="
xsec1388 r1 c1" width="955" height="63" border="0" align="top"
onMouseOver="P7_autoLayers(0)">
  <img src="../../xsec pages/images/spacer.gif" width="1" height="63" border="0"
alt="">
```

```
<a href="../../index.htm"><img src="../../xsec pages/images/home left.gif"
name="Image2" width="98" height="23" border="0" align="top" id="Image2"
onMouseOver="MM_swapImage('Image2',",'../../xsec_pages/images/home_left_Roll.gif',1);P7_a
utoLayers(0)" onMouseOut="MM_swapImgRestore()"></a><a href="../../search.htm"><img
src="../../xsec pages/images/search middle.gif" name="Image3" width="97" height="23"
border="0" align="top" id="Image3"
onMouseOver="MM_swapImage('Image3',",'../../xsec_pages/images/search_middle_roll.gif',1);
P7 autoLayers(0)" onMouseOut="MM swapImgRestore()"></a><a href="javascript:;"
onClick="P7_autoLayers(0,'dropmenu')"><img src="../images/goto_right.gif" name="Image4"
width="98" height="23" border="0" align="top" id="Image4"
onMouseOver="MM_swapImage('Image4',",'../images/goto_right_roll.gif',1)"
onMouseOut="MM_swapImgRestore()"></a><img src="../../xsec_pages/images/thorax.jpg"
width="98"
height="23" border="0" align="top">
      <!-- InstanceBeginEditable name="previous" -->
   <h6><br>
<&lt;PREVIOUS</h6>
   <!-- InstanceEndEditable --> <!-- InstanceBeginEditable name="xsec title" -->
    
   <!-- InstanceEndEditable --> <!-- InstanceBeginEditable name="next" -->
   <a href="ascaorta_xsec1381.htm"
class="menu"><br>
  NEXT>></a> 
   <!-- InstanceEndEditable -->
    
    
   <!-- InstanceBeginEditable name="xsec" -->
   <img
src="../images/ascaorta/xsec 1372 ascaorta.jpg"
width="631" height="321">
   <!-- InstanceEndEditable -->
     
    <h1>SEARCH:</h1>
      <!-- InstanceBeginEditable name="search topic" -->
                <td width="205" height="25" align="center"
valign="bottom"><h4>ascending aorta</h4>
      <!-- InstanceEndEditable -->
     <!-- InstanceBeginEditable name="search result" -->
```

```
<h2>&nbsp;</h2>
                 <h2>Image(s) found: <strong>5</strong></h2>
                 <h2>Image number: <strong>1<br>
         <br>
       </strong></h2>
<h5><a href="../../xsec_pages/xsec1372.htm" class="structures">Cryosection # 1372</a><br>
[click to view]</h5>
       <img src="../images/line_1372_search.jpg" width="111" height="225">
      <!-- InstanceEndEditable -->
    <table width="631"
height="70">
      <!-- InstanceBeginEditable name="xsec_title" -->
      <h4> CS 1372 - Azygos
System</h4>
     <!-- InstanceEndEditable --> 
       
      
  <img src="../../xsec_pages/images/spacer.gif" width="1" height="22" border="0"
alt="">
<img src="../../xsec_pages/images/spacer.gif" width="1" height="22" border="0"
alt="">
<img src="../../xsec_pages/images/spacer.gif" width="1" height="20" border="0"
alt="">
<img src="../../xsec_pages/images/spacer.gif" width="1" height="30" border="0"
alt="">
<img src="../../xsec_pages/images/spacer.gif" width="1" height="272" border="0"
alt="">
<img src="../../xsec_pages/images/spacer.gif" width="1" height="33" border="0"
alt="">
<img src="../../xsec_pages/images/spacer.gif" width="1" height="41" border="0"
alt="">
<img src="../../xsec_pages/images/spacer.gif" width="1" height="52" border="0"
alt="">
     <img src="../../xsec_pages/images/spacer.gif" width="1" height="45"
border="0" alt="">
<div id="dropsubmenu1" class="sublowermenus">
```

```
<a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu1','dropmenu')">
1097 - Superiormost Orbit</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1099 - Superior Orbit</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1107 - Mid-Orbit</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1118 - Inferior Orbit</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1134 - Middle & Internal Ear</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1168 - Palate, C1, & C2</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1215 - Lower Mandible, C2, & C3</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu1','dropmenu')">
1232 - Inf. Mental Symphyseal Border</a>
</div>
<div id="dropsubmenu2" class="sublowermenus">
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu2','dropmenu')">
1248 - Supraglottic Structures</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu2','dropmenu')">
1257 - Rima Glottidus</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu2','dropmenu')">
1281 - Base Cricoid Cartilage</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu2','dropmenu')">
1321 - Thoracic Inlet & Jugular Notch</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu2','dropmenu')">
1338 - Lowest Manubrioclavicular Joint</a>
</div>
<div id="dropsubmenu3" class="sublowermenus">
```

```
<a href="../../xsec_pages/xsec1350.htm" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu3','dropmenu')">1350 - Sup.
Mediastinum</a>
 <a href="../../xsec pages/xsec1368.htm" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu3','dropmenu')">1368 - Aortic Arch</a>
 <a href="../../xsec_pages/xsec1372.htm" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu3','dropmenu')">1372 - Azygos System</a>
 <a href="../../xsec_pages/xsec1381.htm" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu3','dropmenu')">1381 - Trans. Pericardial
Sinus</a>
 <a href="../../xsec_pages/xsec1388.htm" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu3','dropmenu')">1388 - Pulmonary A.</a>
 <a href="../../xsec_pages/xsec1415.htm" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu3','dropmenu')">1415 - L. & R.
Auricles</a>
 <a href="../../xsec_pages/xsec1425.htm" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu3','dropmenu')">1425 - R. Ventricle</a>
 <a href="../../xsec_pages/xsec1439.htm" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu3','dropmenu')">1439 - Atrioventricular
Valves</a>
</div>
<div id="dropsubmenu4" class="sublowermenus">
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1321 - Proximal Humerus & Shoulder</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1480 - Mid-Diaphysis Humerus</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1602 - Elbow</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1663 - Proximal Antebrachium</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1700 - Mid-Left Antebrachium</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1758 - Distalmost Antebrachium</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu4','dropmenu')">
1772 - Midcarpal Joints</a>
```

```
<a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu4','dropmenu')">
1776 - Carpometacarpal Joints</a>
</div>
<div id="dropsubmenu5" class="sublowermenus">
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1499 - Cardiac Region: Stomach</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1508 - Esophageal Sphinctor</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1553 - Inferiormost Diaphragm</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1562 - Pyloric Sphincter</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1570 - Suprarenal Glands</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1579 - Formation of Portal V.</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1582 - Celiac A.</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1590 - Sup. Kidneys</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1601 - Sup. Mesenteric</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu5','dropmenu')">
1610 - Hilus of Kidney: Renal V.</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1615 - Hilus of Kidney: Renal A.</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1625 - Hilus of Kidney: L. Ureter</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1634 - Duodenojejunal Junction</a>
```

```
<a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu5','dropmenu')">
1700 - Oblique Muscles</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1715 - 4th Lumbar Vertebral Level</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu5','dropmenu')">
1733 - Iliac Crests</a>
</div>
<div id="dropsubmenu6" class="sublowermenus">
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1749 - Superior Iliac Crests</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1805 - Sacroiliac Joint</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1880 - Superior Bladder & Acetabulum</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1895 - Obturator Canal</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1903 - Superior Pelvic Outlet</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1921 - Deep Perineal Pouch</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1940 - Bulb of the Penis</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1958 - External Penis</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu6','dropmenu')">
1990 - Testicle</a>
</div>
<div id="dropsubmenu7" class="sublowermenus">
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
1880 - Femoral Head</a>
```

```
<a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu7','dropmenu')">
2105 - Mid-Diaphysis Femur</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2273 - Superior Knee</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2325 - Midknee</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2330 - Lower Knee</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu7','dropmenu')">
2373 - Upper Diaphysis Tibia & Fibula</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2551 - Lower Diaphysis Tibia & Fibula</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2715 - Tibiofibular Joint</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2731 - Upper Ankle Joint</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">
2755 - Lower (Subtalar) Ankle Joint</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">Replanarized Foot 1 - Middistal
Tarsal Bones</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu7','dropmenu')">Replanarized Foot 2 -
Midmetatarsals</a>
</div>
<div id="dropsubmenu8" class="sublowermenus">
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu8','dropmenu')">
1168 - Sup. Nuchal & Suboccipital Musc.</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu8','dropmenu')">
1248 - Lower Nuchal Musculature</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu8','dropmenu')">
1372 - Midthoracic Back</a>
```

```
<a href="#" class="p7submenus"</pre>
onMouseOver="P7 autoLayers(0,'dropsubmenu8','dropmenu')">
1430 - Lower Thoracic Back </a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu8','dropmenu')">
1715 - Midlumbar Back</a>
 <a href="#" class="p7submenus"</pre>
onMouseOver="P7_autoLayers(0,'dropsubmenu8','dropmenu')">
1805 - Midsacral Back</a>
</div>
<div id="dropmenu" class="submenus"> <a href="#" class="p7submenus"</pre>
onClick="P7 autoLayers(0,'dropsubmenu1','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu2','dropsubmenu3','dropsubmenu4','dropsubmenu5','
dropsubmenu6',
'dropsubmenu7','dropsubmenu8')">HEAD</a>
 <a href="#" class="p7submenus"</pre>
onClick="P7 autoLayers(0,'dropsubmenu2','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu1','dropsubmenu3','dropsubmenu4','dropsubmenu5','
dropsubmenu6',
'dropsubmenu7','dropsubmenu8')">NECK</a>
 <a href="#" class="p7submenus"</pre>
onClick="P7 autoLayers(0,'dropsubmenu3','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu1','dropsubmenu2','dropsubmenu4','dropsubmenu5','
dropsubmenu6',
'dropsubmenu7', 'dropsubmenu8')">THORAX</a>
 <a href="#" class="p7submenus"</pre>
onClick="P7 autoLayers(0,'dropsubmenu4','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu1','dropsubmenu2','dropsubmenu3','dropsubmenu5','
dropsubmenu6',
'dropsubmenu7', 'dropsubmenu8')">UPPER LIMB</a>
 <a href="#" class="p7submenus"</pre>
onClick="P7 autoLayers(0,'dropsubmenu5','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu1','dropsubmenu2','dropsubmenu3','dropsubmenu4','
dropsubmenu6',
'dropsubmenu7', 'dropsubmenu8')">ABDOMEN</a>
 <a href="#" class="p7submenus"</pre>
onClick="P7_autoLayers(0,'dropsubmenu6','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu1','dropsubmenu2','dropsubmenu3','dropsubmenu4','
dropsubmenu5',
'dropsubmenu7', 'dropsubmenu8')">PERINEUM & amp; PELVIS</a>
 <a href="#" class="p7submenus"</pre>
onClick="P7 autoLayers(0,'dropsubmenu7','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu1','dropsubmenu2','dropsubmenu3','dropsubmenu4','
dropsubmenu5',
```

```
'dropsubmenu6','dropsubmenu8')">LOWER LIMB</a>

cp align="left"><a href="#" class="p7submenus"
onClick="P7_autoLayers(0,'dropsubmenu8','dropmenu')"
onMouseOver="P7_autoHide('dropsubmenu1','dropsubmenu2','dropsubmenu3','dropsubmenu4','
dropsubmenu5',
'dropsubmenu6','dropsubmenu7')">BACK</a>
</div>
</div>

--- InstanceEnd --></html>
```

### GETTING STARTED PAGE CODE

```
<html>
<head>
<title>Visible Man - Cross-Sectional Human Anatomy</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<!--Fireworks MX 2004 Dreamweaver MX 2004 target. Created Wed Aug 10 12:20:35 GMT-
0500 (Central Standard Time) 2005-->
 <script language="JavaScript">
<!--
function mmLoadMenus() {
 if (window.mm menu 0816231826 0) return;
                  window.mm_menu_0816231826_0 = new Menu("root",246,25,"Geneva,
Arial, Helvetica, sans-
serif",15,"#000000","#A3D22A","#FFFFFF","#FFFFFF","left","middle",5,0,0,-
5,7,true,false,true,18,true,true);
 mm_menu_0816231826_0.addMenuItem("1321");
 mm menu 0816231826 0.addMenuItem("1338");
 mm_menu_0816231826_0.addMenuItem("1350 - Superior Mediastinum");
 mm_menu_0816231826_0.addMenuItem("1368 - Aortic Arch");
 mm_menu_0816231826_0.addMenuItem("1372 - Azygous System");
 mm menu 0816231826 0.addMenuItem("1381 -
 Transverse Pericardial Sinus");
 mm menu 0816231826 0.addMenuItem("1388 -
 Pulmonary Arteries","location='xsec_pages/xsec1388.htm"");
 mm_menu_0816231826_0.addMenuItem("1415 -
 Left & Right Auricles");
 mm_menu_0816231826_0.addMenuItem("1425 - Right Ventricle");
 mm_menu_0816231826_0.addMenuItem("1439 -
  Atrioventricular   Valves");
 mm_menu_0816231826_0.addMenuItem("1449 -
 Sup. Diaphragmatic Surface");
 mm_menu_0816231826_0.hideOnMouseOut=true;
 mm menu 0816231826 0.bgColor='#555555';
 mm_menu_0816231826_0.menuBorder=0;
 mm menu 0816231826 0.menuLiteBgColor='#FFFFFF';
 mm_menu_0816231826_0.menuBorderBgColor='#777777';
mm_menu_0816231826_0.writeMenus();
} // mmLoadMenus()
function MM preloadImages() { //v3.0
 var d=document; if(d.images){ if(!d.MM_p) d.MM_p=new Array();
  var i,j=d.MM p.length,a=MM preloadImages.arguments; for(i=0; i<a.length; i++)
 if (a[i].indexOf("#")!=0){ d.MM_p[i]=new Image; d.MM_p[i++].src=a[i];}}
}
```

```
function MM_swapImgRestore() { //v3.0
 var\ i,x,a=document.MM\_sr;\ for\ (i=0;a\&\&i<a.length\&\&(x=a[i])\&\&x.oSrc;i++)\ x.src=x.oSrc;
function MM findObj(n, d) { //v4.01
 var p,i,x; if(!d) d=document; if((p=n.indexOf("?"))>0&&parent.frames.length) {
  d=parent.frames[n.substring(p+1)].document; n=n.substring(0,p);}
 if(!(x=d[n])\&\&d.all) x=d.all[n]; for (i=0;!x\&\&i<d.forms.length;i++) x=d.forms[i][n];
 for(i=0;!x&&d.layers&&i<d.layers.length;i++) x=MM_findObj(n,d.layers[i].document);
 if(!x && d.getElementById) x=d.getElementById(n); return x;
function MM_swapImage() { //v3.0
 var i,j=0,x,a=MM swapImage.arguments; document.MM sr=new Array; for(i=0;i<(a.length-
2);i+=3)
 if ((x=MM findObj(a[i]))!=null){document.MM sr[j++]=x; if(!x.oSrc) x.oSrc=x.src;
x.src=a[i+2];
//-->
</script>
<script language="JavaScript" src="mm_menu.js"></script>
<style type="text/css">
<!--
@import url("CSS/gettingstarted css.css");
-->
</style>
</head>
 <body bgcolor="#ffffff"
onLoad="MM_preloadImages('images/index_r6_c6.jpg','../../working_files/pics/body_outline.jp
g','images/preview_bodylocation/line_1350.jpg','images/preview_bodylocation/preview_1350.jp
g','images/search_right_roll.gif','images/home_left_Roll.gif')">
<!-- fwtable fwsrc="homepage.png" fwbase="index.jpg" fwstyle="Dreamweaver" fwdocid =
"1376654032" fwnested="0" -->
 <img src="images/spacer.gif" width="164" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="90" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="6" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="229" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="13" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="157" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="25" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="186" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="85" height="1" border="0" alt="">
  <img src="images/spacer.gif" width="1" height="1" border="0" alt="">
```

```
<img src="images/index_r1_c1.jpg" alt="" name="index_r1_c1"
width="955" height="63" border="0" align="top">
 <img src="images/spacer.gif" width="1" height="63" border="0" alt="">
<a
href="index.htm" onMouseOver="MM_swapImage('Image3',",'images/home_left_Roll.gif',1)"
onMouseOut="MM_swapImgRestore()"><img src="images/home_left.gif" name="Image3"
width="98" height="23" border="0" id="Image3"></a><a href="search.htm"><img
src="images/search_right.gif" name="Image2" width="98" height="23" border="0" align="top"
id="Image2" onMouseOver="MM_swapImage('Image2',",'images/search_right_roll.gif',1)"
onMouseOut="MM swapImgRestore()"></a>
    
     <h4>&nbsp:</h4>
     <h4>Optimal Viewing of Website</h4>
      <h6><br>
      This website is best viewed with the following web browsers (or later versions): Firefox
v1.0.6, Safari v1.0.3, Netscape v7.1, Internet Explorer v6.0.  If possible choose a screen
size of 1024 x 768 pixels. A screen size of 800 x 600 pixels will work, but left-to-right scrolling
will be necessary. Also choose an appropriate font size (under the web browser's View Menu). A
smaller font will keep the structure list in view, reducing the need for left-to-right
scrolling.</h6>
      <h4><br>
       Navigation</h4>
    <h6>
      The 72 cross-sectional images on this site are organized by eight anatomical regions.
After selecting an anatomical region from the Index page, a list of cross-sections in that
anatomical region will be displayed as shown in <span class="style3">Figure 1</span>. As you
roll over the cross-section titles, a preview of the cross-section and location of the cross-section
in the body will appear on the left.</h6>
     <h6>
      <img src="images/gettingstartedfig/fig1.jpg" width="400" height="277"</pre>
border="1"><br>
       <span class="style3">Figure 1</span></h6>
```

```
<h6><br> <br>
```

After selecting a cross-section from the cryosection list, the selected cross-section page will be displayed as shown in <span class="style3">Figure 2</span>. There are many navigational tools scattered throughout this page.</h6>

```
<h6><br>
<br>
<br/>
<img src="images/gettingstartedfig/fig2.jpg" width="400" height="277"
border="1"><br>
<span class="style3">Figure 2</span></h6>

<br>
<br/>
```

The first set of navigational tools are just below the Visible Man banner and above the cross-sectional image <span class="style3">(Figure 2a)</span>. The Home and Search buttons direct you back to the main page and the search page respectively. The Go To button allows you to go directly to any of the 72 cross-sectional pages in the site. The Back button allows you to go back in the site one page at a time. To the right of the Back button is the title of the anatomical section where the current cross-section is located. Just above the cross-sectional image, the Previous and Next buttons allow you to navigate through the cross-sections within the same anatomical section. <span class="style3">(Figure 2a)</span>.</h6>

The final set of navigational tools are just below the cross-sectional image <span class="style3">(Figure 2b)</span>. The first of these, Zoom Views, allows you to select a zoom view of the selected cross-section. The second navigational tool, Correlative Images, allows you to access correlative CT images for each of the tissue cross-sections. </h6> < h6>&nbsp;</h6>

```
<h6><br>
<br>
```

The Zoom Views navigational button opens a specific zoom view in the same window. The zoom pages have the same basic navigation tools as the cross-section page, as shown in <span class="style3">Figure 3</span>. However, the Back button on the zoom view pages directs you back to the cross-section page the zoom view is from.</h6>

The second navigational tool, Correlative Images, allows you to access correlative CT images as shown in <span class="style3">Figure 4</span>. These CT images open in a seperate window and are taken from the same level as the cross-sectional image you are viewing.</hd>

Structures available for viewing are listed in the column to the right of the image on the main cross-section, zoom view, and CT pages <span class="style3">(Figures 2, 3, & amp; 4)</span>. By rolling your mouse over a structure in the list, the cross-sectional image will change to show the selected structure as shown in <span class="style3">Figure 5</span>. Note that the zoom view pages contain schematic illustrations showing all structures in the cross-section.</hd>

In addition, on the cross-section and zoom view pages, if you click on a structure, a separate window will appear displaying information about that structure as shown in <span

class="style3">Figure 6</span>. This window is closed by clicking the close button located below the table of information.</h6>

By clicking on any of the Search buttons you will be direct to the Search page, where images of individual structures can be searched and viewed. Searches can be performed on individual structures as they appear in the structure lists <span class="style3">(Figure 7)</span>.</h6>

```
<br><br><img
src="images/gettingstartedfig/fig7.jpg" width="400" height="257" border="1">
<h6><br><br>align="left" valign="top"><h6><br><br><br><br/><br/><br/><br><br>
```

After selecting a structure from the list, the search results will appear displaying the first cross-section of the found images as shown in <span class="style3">Figure 8</span>. The search result page has the same basic navigation tools as the cross-section page. The Next and Previous buttons will allow you to view the other images found in your search. You can return to search another structure at any time by simply clicking on the Search button.</hd>

To the right of the cross-section image are the search topic, number of images found, the number of the image you are viewing, and a link to the cross-sectional page where the found image is located <span class="style3">(Figure 8a)</span>.</h6>

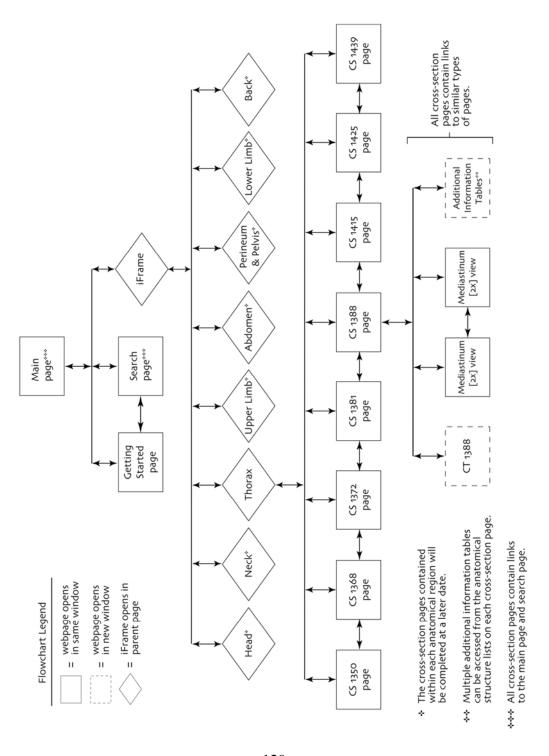
### CORRELATIVE INFORMATION TABLE CODE

Example for page: Vena cava, superior

```
<a href="https://www.energia.com/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/learnings/lea
codeOutsideHTMLIsLocked="false" -->
<center>
<head>
<!-- InstanceBeginEditable name="doctitle" -->
<title>Visible Man - Cross-Sectional Human Anatomy</title>
<!-- InstanceEndEditable -->
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<!--Fireworks MX 2004 Dreamweaver MX 2004 target. Created Wed Aug 10 12:21:38 GMT-
0500 (Central Standard Time) 2005-->
<script language="JavaScript" src="../xsec_pages/mm_menu.js"></script>
<!-- InstanceBeginEditable name="head" --><!-- InstanceEndEditable -->
<script language="JavaScript" type="text/JavaScript">
<!--function MM preloadImages() { //v3.0
  var d=document; if(d.images){ if(!d.MM_p) d.MM_p=new Array();
     var i,j=d.MM_p.length,a=MM_preloadImages.arguments; for(i=0; i<a.length; i++)
     if (a[i].indexOf("#")!=0){ d.MM_p[j]=new Image; d.MM_p[j++].src=a[i];}}
function MM_swapImgRestore() { //v3.0
  var i,x,a=document.MM sr; for(i=0;a&&i<a.length&&(x=a[i])&&x.oSrc;i++) x.src=x.oSrc;
function MM_findObj(n, d) { //v4.01
  var p,i,x; if(!d) d=document; if((p=n.indexOf("?"))>0&&parent.frames.length) {
     d=parent.frames[n.substring(p+1)].document; n=n.substring(0,p);}
  if(!(x=d[n])\&\&d.all) x=d.all[n]; for (i=0;!x\&\&i<d.forms.length;i++) x=d.forms[i][n];
  for(i=0;!x&&d.layers&&i<d.layers.length;i++) x=MM findObj(n,d.layers[i].document);
  if(!x && d.getElementById) x=d.getElementById(n); return x;
function MM_swapImage() { //v3.0
  var i,j=0,x,a=MM swapImage.arguments; document.MM sr=new Array; for(i=0;i<(a.length-
2);i+=3)
   if ((x=MM_findObj(a[i]))!=null){document.MM_sr[j++]=x; if(!x.oSrc) x.oSrc=x.src;
x.src=a[i+2];
}
//-->
</script>
<style type="text/css">
<!--@import url("../CSS/infotables css.css");-->
</style>
</head>
```

```
<body><body<br/>bgcolor="#ffffff" onLoad="MM_preloadImages('images/close_roll.gif')"></body><br/>tologif')"></br/>
<!-- InstanceBeginEditable name="structure" -->
  <h3>Vena cava, superior </h3>
  <!-- InstanceEndEditable -->
<h5>Receives blood from:</h5>
 <!-- InstanceBeginEditable name="text 1" -->
  <h6>Left and right brachiocephalic veins; azygos vein.</h6>
 <!-- InstanceEndEditable -->
<h5>Course:</h5>
 <!-- InstanceBeginEditable name="text 2" -->
  <h6>Commences immediately below the cartilage of the first rib, close to the sternum on the
right side, and descending vertically, enters the pericardium about 1.5 inches above the heart and
terminates in the upper part of the right atrium.</h6>
 <!-- InstanceEndEditable -->
<h5>Drains to:</h5>
 <!-- InstanceBeginEditable name="text 3" -->
  <h6>Right atrium.</h6>
 <!-- InstanceEndEditable -->
<h5>Regional drainage:</h5>
 <!-- InstanceBeginEditable name="text 4" -->
  <h6>Entire upper half of body.</h6>
 <!-- InstanceEndEditable -->
<h5>Notes:</h5>
 <!-- InstanceBeginEditable name="text 5" -->
  <h6> Vena cava varies from 2.5-3 inches in length and has a slight curve, the convexity of
which is turned
to the right side.</h6>
 <!-- InstanceEndEditable -->
```

# APPENDIX C Visible Man Site Map



### APPENDIX D Visible Man Website Survey

### Visible Man

**Cross-Sectional Human Anatomy** 

Please visit the following website: <a href="http://www.ryankconway.com/visibleman">http://www.ryankconway.com/visibleman</a> and click on the Getting Started button to learn about the site. Take some time to navigate through the site and review its content, then complete the survey questions.

NOTE: This website is a prototype and only contains eight cross-sections. The thorax is the only anatomical section that has working links to the images contained within.

Please attach the completed surveys to an email and return to <a href="mailto:conwayryan@gmail.com">conwayryan@gmail.com</a> by <a href="mailto:Tuesday">Tuesday</a>, November 15.

Instructions: Please check the box that corresponds to your level of agreement with the statement to the left. Please feel free to provide additional comments in the spaces provided.

What type of computer did you use to view the website (Mac, PC	C, etc.)?					
What browser (including version if known) did you use to view th  Internet Explorer v. Firefo  Safari v.  Netscape v.						
What type of internet connection did you use to view this website (If you're using a UTSW computer you are using a T1/LAN internet connection.)?    Modem						
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
The website is simple to navigate.  Comments:						
The information presented on the site is comprehensive.  Comments:						
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:						
The Getting Started page provides adequate background for navigating the website.     Comments:						
The additional information tables for each anatomical structure presented in the website were comprehensive.  Comments:						
6. The website is easy to use.  Comments:						
7. This website would be a useful resource for me in my 1 <sup>st</sup> yea medical school curriculum.  Comments:	r 🔲					
If it were available, I would use the website as a resource for the anatomy course.  Comments:						
9. Please share any suggestions you have that would:         - Make the information presented on the website more clear         - Make the website easier to navigate.         - Make the content on this website more comprehensive.						
Comments:						
Additional comments:						

# APPENDIX E Completed Visible Man Website Surveys

# surveyAA

What type of computer did you use to view the website (Mac, F	PC, etc.)? PC					
What browser (including version if known) did you use to view Internet Explorer v. Safari v.  Netscape v.	the website? fox v.1.07  Other					
What type of internet connection did you use to view this website (If you're using a UTSW computer you are using a T1/LAN internet connection.)?    Modem						
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
The website is simple to navigate.  Comments:						
2. The information presented on the site is comprehensive. <i>Comments:</i>			$\boxtimes$			
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:						
The Getting Started page provides adequate background for navigating the website.      Comments:	or					
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>						
6. The website is easy to use.  Comments:						
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:	ar 🗌					
8. If it were available, I would use the website as a resource for the anatomy course.  Comments:	or 🗌					
9. Please share any suggestions you have that would:  - Make the information presented on the website more clear  - Make the website easier to navigate.  - Make the content on this website more comprehensive.	ar.					
Comments:						
Additional comments:						

# surveyAS

What type of computer did you use to view the website (Mac,	PC, etc.)? PC				
What browser (including version if known) did you use to view  ☐ Internet Explorer v. ☐ Fire ☐ Safari v. ☐ Netscape v.	the website? fox v.  Other				
What type of internet connection did you use to view this webs connection.)?  Modem T1/LAN	ite (If you're using  DSL/Cable Don't know	a UTSW o	omputer you a	are using a T1/L	AN internet
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The website is simple to navigate.  Comments:					
2. The information presented on the site is comprehensive. <i>Comments:</i>					
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments: What is there is good. Of course, many examples	and views are be	□ tter than ju	⊠ st a few.		
The Getting Started page provides adequate background for navigating the website.     Comments:	or 🗌				
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>					
6. The website is easy to use.  Comments:Directions aren't even needed. That is very good.					
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:	ear 🗌				
8. If it were available, I would use the website as a resource for the anatomy course.  Comments:	or 🗵				
9. Please share any suggestions you have that would:  - Make the information presented on the website more clear  - Make the website easier to navigate.  - Make the content on this website more comprehensive.	ar.				
Comments:					
Additional comments: I really like the search feature.					

#### *surveyCK*

What type of computer did you use to view the website (Mac, PC, etc.)? PC							
What browser (including version if known) did you use to view  ☐ Internet Explorer v. ☐ Fire ☐ Safari v. ☐ Netscape v.	the website? fox v. Other						
What type of internet connection did you use to view this webs connection.)? ☐ Modem ☐ T1/LAN	ite (If you're using  DSL/Cable Don't know	a UTSW c	omputer you a	are using a T1/L	AN internet		
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree		
The website is simple to navigate.  Comments:							
The information presented on the site is comprehensive.     Comments: Comments: The mediastinum is very well done; m	uscles on chest w	all would be	 e helpful				
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:							
4. The Getting Started page provides adequate background for navigating the website.  Comments:	or 🗵						
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i> These helped a lot in putting information in perspe	ctive						
6. The website is easy to use.  Comments:							
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum. <i>Comments:</i>	ear 🗵						
8. If it were available, I would use the website as a resource for the anatomy course.  Comments:	or 🗵						
<ul> <li>9. Please share any suggestions you have that would:</li> <li>- Make the information presented on the website more clear</li> <li>- Make the website easier to navigate.</li> <li>- Make the content on this website more comprehensive.</li> </ul>	ar.						
Comments:							

Additional comments: The website is extremely easy to use. Obviously having pictures like Rohen's atlas of a normal dissection would help put the cross sections into perspective as far as orienting oneself to the levels of the cross sections. Even more useful (and super advanced!) would be information on the disease processes/medical issues involving specific structures (something like the "blue boxes" in Moore and Dalley's Clinically Oriented Anatomy.) Overall, a great idea – the more comprehensive the better. I like that the structures light up.

# surveyCS

What type of computer did you use to view the website (Mac,	PC, etc.)? PC				
What browser (including version if known) did you use to view  ☐ Internet Explorer v.4.0 ☐ Fire ☐ Safari v. ☐ Netscape v.					
What type of internet connection did you use to view this webs connection.)?  ☐ Modem ☐ T1/LAN	site (If you're using  DSL/Cable Don't know	a UTSW c	omputer you a	are using a T1/L	AN internet
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The website is simple to navigate.  Comments:					
2. The information presented on the site is comprehensive. <i>Comments:</i>					
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:					
The Getting Started page provides adequate background for navigating the website.      Comments:	or 🗆				
The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>					
6. The website is easy to use.  Comments:					
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:Crisp and well delineated structures.	ear 🛛				
8. If it were available, I would use the website as a resource for the anatomy course.  Comments: As far as cross-sectional anatomy is concerned, the section of the sectio	_	edes Nette	r's and Rohen	□ 's.	
9. Please share any suggestions you have that would:         - Make the information presented on the website more clear.         - Make the website easier to navigate.         - Make the content on this website more comprehensive.	ar.				
Comments:					
Additional comments:					

# surveyCW

What type of computer did you use to view the website (Mac, PC, etc.)?							
What browser (including version if known) did you use to view ☐ Internet Explorer v. ☐ Fire ☐ Safari v. ☐ Netscape v.							
What type of internet connection did you use to view this webs connection.)?    Modem	site (If you're using  DSL/Cable Don't know	a UTSW o	omputer you a	are using a T1/L	AN internet		
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree		
The website is simple to navigate.  Comments:							
The information presented on the site is comprehensive.     Comments:							
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:							
The Getting Started page provides adequate background for navigating the website.     Comments:	or 🛚						
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>							
6. The website is easy to use.  Comments:							
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:	ear 🗌						
8. If it were available, I would use the website as a resource for the anatomy course.  Comments:	or 🗌						
9. Please share any suggestions you have that would:  - Make the information presented on the website more clear  - Make the website easier to navigate.  - Make the content on this website more comprehensive.	ar.						
Comments:							
Additional comments:							

# surveyJB

What type of computer $\operatorname{did}$ you use to view the website (Mac, $% \operatorname{dis}$	PC, etc.)? PC				
What browser (including version if known) did you use to view Internet Explorer v.	v the website? efox v.1.0.6 ⊠ Other Blazer	· 4.0			
What type of internet connection did you use to view this web connection.)?    Modem   T1/LAN	site (If you're using  DSL/Cable Don't know	a UTSW c	omputer you a	are using a T1/L	AN internet
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The website is simple to navigate.  Comments:like how the figure shows section position, don't li search, go to, back should be on all pages, minus info pop up		Dlbar disape	ears once i'm	in (getting starte	ed, home,
The information presented on the site is comprehensive.  Comments:many more structures could have been identified,					
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:certainly couldn't hurt, if it doesn't unduly increase	e load times or page	⊠ e clutter			
Commence Containing Containing the C	o load tillloo or pag	o oracio:			
<ol> <li>The Getting Started page provides adequate background f navigating the website. Comments:really helpful</li> </ol>	for 🛚				
5. The additional information tables for each anatomical structure presented in the website were comprehensive. Comments:always more to add and netter gets by with nothin	ng				
6. The website is easy to use.  Comments:it's a bit feature rich but fairly intuitive, might want you don't notice if you dive right in	⊠ to make getting sta	arted the ho	ome page b/c	it's easy to miss	s features that
7. This website would be a useful resource for me in my 1 <sup>st</sup> y medical school curriculum.  Comments:esp. if images and ID'd structures correlated with					
8. If it were available, I would use the website as a resource the anatomy course.  Comments:esp. if images and ID'd structures correlated with					
9. Please share any suggestions you have that would:     Make the information presented on the website more cle     Make the website easier to navigate.     Make the content on this website more comprehensive.					
Comments:mouseover intermittantly stops working (fixed by	waiting for picture t	o fully load	)		
Additional comments: works well on my treo650 also (though	a bit tight at 320x3	320)			

# surveyJD\_1

What type of computer did you use to view the website (Mac,	PC, etc.)? pc				
What browser (including version if known) did you use to view  ☐ Internet Explorer v. ☐ Fire ☐ Safari v. ☐ Netscape v.	the website?  fox v.  Other				
What type of internet connection did you use to view this webs connection.)?  ☐ Modem ☐ T1/LAN	site (If you're using  DSL/Cable Don't know	a UTSW c	omputer you a	are using a T1/L	AN internet
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The website is simple to navigate.  Comments:i don't like how the supplemental images pop up in	n a new window				
The information presented on the site is comprehensive.     Comments:our course requires much more					
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:					
The Getting Started page provides adequate background for navigating the website.     Comments:good, but spread out and too long - students want.		possible			
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>					
6. The website is easy to use.  Comments:					
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:	ear 🗌				
8. If it were available, I would use the website as a resource f the anatomy course.  Comments:its good, but a book atlas is still faster and easier	or 🗌				
9. Please share any suggestions you have that would:  - Make the information presented on the website more clear  - Make the website easier to navigate.  - Make the content on this website more comprehensive.					
Comments:pictures are too small, there should be a way to be	low up the main pid	ctures			
Additional comments:					

#### surveyJD\_2

What type of computer did you use to view the website (Mac, PC, etc.)? pc									
What browser (including version if known) did you use to view the website?  ☐ Internet Explorer v.6 ☐ Firefox v. ☐ Safari v. ☐ Other ☐ Netscape v.									
What type of internet connection did you use to view this website (If you're using a UTSW computer you are using a T1/LAN internet connection.)?    Modem									
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree				
The website is simple to navigate.  Comments:									
2. The information presented on the site is comprehensive. Comments:									
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:									
4. The Getting Started page provides adequate background for navigating the website.  Comments:	r 🛛								
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>									
6. The website is easy to use.  Comments:									
7. This website would be a useful resource for me in my 1 <sup>st</sup> year medical school curriculum.  Comments:	ar 🗵								
8. If it were available, I would use the website as a resource for the anatomy course.  Comments:	r 🛛								
9. Please share any suggestions you have that would:  - Make the information presented on the website more clea  - Make the website easier to navigate.  - Make the content on this website more comprehensive.  Comments:	r.								

Additional comments: I especially liked on the home page how you could preview each image by rolling over the image title, and if you did it fast enough, it will give you an almost continuous view going superior to inferior or vice versa. Extremely user friendly, I did not need to read the directions to be able to navigate the site, and I am not a computer person. I wish we had this available to us this year, b/c cross sectional anatomy is becoming more and more important to learn, and the correlative images would really top it off. The green line on the visible man that shows the level of the cryosection is a great touch. The additional info boxes are good study tools to make the site more useful. An additional feature that would allow the student to better use the site as a study tool, would be to have a few non-cross-sectional regular images of some sort to allow for comparison to the cross sections, since as a beginning student, it can become confusing since we are after all still learning the anatomy. It can be difficult to grasp the cross section without

Strongly	Agree	Neutral	Disagree	Strongly
Agree				Disagree

comparing it to more conventional images a.k.a. Netters or Grants, or even live pictures like in Rohen's. It wouldn't have to be a lot of pictures, just a few images to remind the student what they are looking at from a different viewpoint and so they would not have to get out their textbook while they are using the site. Another nice feature would be some sort of quiz function where if a location was highlighted on the cross section, the user would have to name it, or just have the name covered up and the user could reveal the structure name after quizzing themselves. Any function to make it more like a lab practical where the structure has to be named versus locating the named structure would greatly increase the usefulness of the site. Overall, I wish it was already done. Very easy, very good study tool. Best wishes.

# surveyJL

What type of computer did you use to view the website (Mac, PC, etc.)? mac							
What browser (including version if known) did you use to view ☐ Internet Explorer v. ☐ Fire ☐ Safari v. ☐ Netscape v.							
What type of internet connection did you use to view this webs connection.)?    Modem   T1/LAN	ite (If you're using  DSL/Cable Don't know	a UTSW c	omputer you a	are using a T1/L	AN internet		
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree		
The website is simple to navigate.  Comments:							
The information presented on the site is comprehensive.     Comments:							
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:							
The Getting Started page provides adequate background for navigating the website.     Comments:	or 🗌						
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>							
6. The website is easy to use.  Comments:							
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:	ear 🛚						
8. If it were available, I would use the website as a resource to the anatomy course.  Comments:	or 🗌						
9. Please share any suggestions you have that would:  - Make the information presented on the website more clear  - Make the website easier to navigate.  - Make the content on this website more comprehensive.	ar.						
Comments:							
Additional comments:							

# surveyJP

What type of computer did you use to view the website (Mac, $$	PC, etc.)? PC				
What browser (including version if known) did you use to view  ☐ Internet Explorer v. ☐ Fire ☐ Safari v. ☐ Netscape v.	the website?  ofox v.  Other				
What type of internet connection did you use to view this webs connection.)?  ☐ Modem ☐ T1/LAN	site (If you're using  DSL/Cable Don't know	a UTSW c	omputer you a	are using a T1/L	AN internet
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The website is simple to navigate.  Comments:					
The information presented on the site is comprehensive.     Comments:					
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:					
The Getting Started page provides adequate background for navigating the website.     Comments:it's simple enough that you don't need it	or 🗌				
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>					
6. The website is easy to use.  Comments:					
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:	ear 🛚				
8. If it were available, I would use the website as a resource f the anatomy course.  Comments:	or 🗌				
9. Please share any suggestions you have that would: - Make the information presented on the website more clear Make the website easier to navigate Make the content on this website more comprehensive.	ar.				
Comments:					
Additional comments:					

#### surveyMA

What type of computer did you use to view the website (Mac, PC, etc.)?							
What browser (including version if known) did you use to view t  ☐ Internet Explorer v. ☐ Firef ☐ Safari v. ☐ Netscape v.							
What type of internet connection did you use to view this websi connection.)?  ☐ Modem ☐ T1/LAN	te (If you're using  DSL/Cable Don't know	a UTSW c	omputer you a	are using a T1/L	AN internet		
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree		
The website is simple to navigate.  Comments:							
The information presented on the site is comprehensive.  Comments:							
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:							
The Getting Started page provides adequate background for navigating the website.  Comments:	r 🗵						
5. The additional information tables for each anatomical structure presented in the website were comprehensive.  Comments: Maybe some more info would be nice especially for image and read the info.	r first years. Also	if it were fl	⊠ ash versus a j	pop up so one d	could see the		
6. The website is easy to use.  Comments:							
7. This website would be a useful resource for me in my 1 <sup>st</sup> yes medical school curriculum. Comments:	ar 🛛						
8. If it were available, I would use the website as a resource for the anatomy course.  Comments:	r 🛛						
9. Please share any suggestions you have that would:         - Make the information presented on the website more clea         - Make the website easier to navigate.         - Make the content on this website more comprehensive.  Comments:	r.						

Additional comments: I think all structures in a particular cross section should have a label so you know what you're looking at such as muscles and bones along with vessels in the dislplayed cross-section.

#### *surveyMC*

What type of computer did you use to view the website (Mac, PC, etc.)? mac g4							
What browser (including version if known) did you use to view th  ☐ Internet Explorer v.5.1 ☐ Firefo ☐ Safari v. ☐ ☐ Netscape v.							
What type of internet connection did you use to view this website connection.)?  Modem T1/LAN	e (If you're using  DSL/Cable  Don't know	a UTSW co	omputer you a	are using a T1/L	AN internet		
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree		
The website is simple to navigate.  Comments:looks nice and not intimidating (exept the part where	i have to learn	of course)					
The information presented on the site is comprehensive.     Comments: it seems like it is from what i know							
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:							
The Getting Started page provides adequate background for navigating the website.     Comments:didn't look there until after and navigated fine anywards.	пу						
5. The additional information tables for each anatomical structure presented in the website were comprehensive. Comments:yes, but in real life i don't think i would click on them	⊠ all while studyin	ng					
6. The website is easy to use.  Comments:rollover stuff works, makes sense, is easy to unders	⊠ tand						
7. This website would be a useful resource for me in my 1 <sup>st</sup> yea medical school curriculum.  Comments:	r 🗵						
8. If it were available, I would use the website as a resource for the anatomy course.  Comments:							
9. Please share any suggestions you have that would: - Make the information presented on the website more clear Make the website easier to navigate Make the content on this website more comprehensive.  Comments:it took me a sec to figure out where to click on the zecons.		n though it s	ays)				

Additional comments: what if i could also roll over a structure and its name was highlighted? it might be a good way to quiz myself after i felt comfortable with a slice. i also really love the schematic illustrations and wish they were included on the zoom-out slices; they would have to be simpler but then the student would get oriented very quickly and they would also know that the schematic illustrations were available to look at once they zoomed in.

# *surveyMP*

What type of computer did you use to view the website (Mac, PC, etc.)? PC							
What browser (including version if known) did you use to view  ☐ Internet Explorer v. ☐ Fire ☐ Safari v. ☐ Netscape v.	the website?  ofox v.  Other						
What type of internet connection did you use to view this webs connection.)?  ☐ Modem ☐ T1/LAN	site (If you're using  DSL/Cable Don't know	a UTSW c	omputer you a	are using a T1/L	AN internet		
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree		
The website is simple to navigate.  Comments:							
The information presented on the site is comprehensive.  Comments:	$\boxtimes$						
I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:							
The Getting Started page provides adequate background for navigating the website.     Comments:	or 🗌						
The additional information tables for each anatomical structure presented in the website were comprehensive.      Comments:							
6. The website is easy to use.  Comments:							
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:	ear 🗌						
8. If it were available, I would use the website as a resource f the anatomy course.  Comments:	or 🗌						
9. Please share any suggestions you have that would:     Make the information presented on the website more clear.     Make the website easier to navigate.     Make the content on this website more comprehensive.	ar.						
Comments: There are blue spots in some of the vessels. These spots were distractive, and drew focus from the crossection. When pulling up the CT scans, the crossection was no longer visible, which makes learning how to view the CT scan more difficult. The windows that are pulled up show the thick border of internet explorer which, while not detrimental to clarity, adds nothing to quality and style.							
Additional comments:							

# surveyMS

What type of computer did you use to view the website (Mac,	PC, etc.)? PC				
What browser (including version if known) did you use to view  ☐ Internet Explorer v.6.0 ☐ Fire ☐ Safari v. ☐ Netscape v.	the website? fox v.  Other				
What type of internet connection did you use to view this webs connection.)?    Modem   T1/LAN	site (If you're using  DSL/Cable Don't know	a UTSW c	omputer you a	are using a T1/L	AN internet
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The website is simple to navigate.  Comments:					
2. The information presented on the site is comprehensive. <i>Comments</i> :In the thorax section, even though it is focusing or structure labeled (i.e. muscles of the back, extremities, chest, man with the line through him is wonderful!)					
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:					
4. The Getting Started page provides adequate background for navigating the website.  Comments:	or 🗵				
5. The additional information tables for each anatomical structure presented in the website were comprehensive. Comments:					
6. The website is easy to use.  Comments:					
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:	ear 🛚				
8. If it were available, I would use the website as a resource for the anatomy course.  Comments:	or 🛚				
9. Please share any suggestions you have that would:  - Make the information presented on the website more cleated.  - Make the website easier to navigate.  - Make the content on this website more comprehensive.  Comments:	ar.				

Additional comments: I think this website has a lot of potential. It is definitely something that I would use to study. Especially helpful are the additional information tables.

# surveyRL

What type of computer did you use to view the website (Mac, PC, etc.)? PC							
What browser (including version if known) did you use to view  Internet Explorer v. Fire Safari v. Netscape v.							
What type of internet connection did you use to view this webs connection.)?  Modem T1/LAN	ite (If you're using  DSL/Cable Don't know	a UTSW c	omputer you a	are using a T1/L	AN internet		
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree		
The website is simple to navigate.  Comments:							
2. The information presented on the site is comprehensive. <i>Comments:</i>							
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:							
The Getting Started page provides adequate background for navigating the website.     Comments:	or 🗌						
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>							
6. The website is easy to use.  Comments:							
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:	ear 🗌						
8. If it were available, I would use the website as a resource for the anatomy course.  Comments:	or 🗌						
9. Please share any suggestions you have that would:  - Make the information presented on the website more clear  - Make the website easier to navigate.  - Make the content on this website more comprehensive.							
Comments:You may want to have the colored transectional lin looking further down, or up, or the thorax. Also, Firefox gave that it's most likely my own system and not your site. Great joint to the colored transection of the colored trans	me some problems						
Additional comments:							

# surveyRT

What type of computer did you use to view the website (Mac, PC, etc.)? PC							
What browser (including version if known) did you use to view to including version if known) did you use to view to including version if known) did you use to view to include it includes a line of the including version if known) did you use to view to include it includes a line of the including version if known) did you use to view to including version if known) did you use to view to including version if known) did you use to view to including version if known) did you use to view to include it includes a line of the including version if known) did you use to view to include it includes a line of the includes a	the website? fox v.  Other						
What type of internet connection did you use to view this websiconnection.)? ☐ Modem ☐ T1/LAN	ite (If you're using  DSL/Cable Don't know	a UTSW c	omputer you a	are using a T1/L	AN internet		
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree		
The website is simple to navigate.  Comments:							
2. The information presented on the site is comprehensive. <i>Comments:</i>							
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments: That would be wonderful! What you have, though, comprehensive a site as you can make! Thanks.	is very nice. I thin	nk that ana	tomy students	□ would really ap	ppeciate as		
4. The Getting Started page provides adequate background for navigating the website.  Comments:	or 🗵						
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>							
6. The website is easy to use.  Comments:							
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:	ar 🛚						
8. If it were available, I would use the website as a resource for the anatomy course.  Comments:	or 🗵						
9. Please share any suggestions you have that would:  - Make the information presented on the website more clea  - Make the website easier to navigate.  - Make the content on this website more comprehensive.  Comments:Thanks so much for your help! Your site gave a cl		e different	X-sections of	the thorax and	I wish you		
luck as you continue to develop the site. Compliments on the				and thorax, and	i wisii you		
Additional comments:							

#### surveyRW

What type of computer did you use to view the website (Mac, I	PC, etc.)? PC					
What browser (including version if known) did you use to view  ☐ Internet Explorer v.6.0 ☐ Fire ☐ Safari v. ☐ Netscape v.						
What type of internet connection did you use to view this webs connection.)?  ☐ Modem ☐ T1/LAN	ite (If you're using  DSL/Cable Don't know	a UTSW c	omputer you a	are using a T1/L	AN internet	
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
The website is simple to navigate.  Comments:						
The information presented on the site is comprehensive.  Comments:						
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:						
4. The Getting Started page provides adequate background for navigating the website.  Comments:	or 🗌					
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>						
6. The website is easy to use.  Comments:						
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:	ear 🗌					
8. If it were available, I would use the website as a resource for the anatomy course.  Comments:	or 🗌					
9. Please share any suggestions you have that would:  - Make the information presented on the website more clea  - Make the website easier to navigate.  - Make the content on this website more comprehensive.	ar.					
Comments:						
Additional comments: I think the website is great. But unless the anatomy instructors indicate that cross sectional anatomy is important (ie, put the material on an exam), it's unlike that I would use the site.						

# surveySC

What type of computer did you use to view the website (Mac, PC, etc.)? pc							
What browser (including version if known) did you use to view  ☐ Internet Explorer v.6.02 ☐ Fire ☐ Safari v. ☐ Netscape v.							
What type of internet connection did you use to view this webs connection.)?  Modem T1/LAN	site (If you're using  DSL/Cable Don't know	a UTSW c	omputer you a	are using a T1/L	AN internet		
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree		
The website is simple to navigate.  Comments:							
The information presented on the site is comprehensive.     Comments:							
I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:							
The Getting Started page provides adequate background for navigating the website.  Comments:	or 🗌						
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>							
6. The website is easy to use.  Comments:							
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:	ear 🗌						
If it were available, I would use the website as a resource for the anatomy course.  Comments:	or 🗌						
9. Please share any suggestions you have that would:  - Make the information presented on the website more clear  - Make the website easier to navigate.  - Make the content on this website more comprehensive.							
Comments:make the item description not a popup window, but picture? IF you do do this, perhaps move the controls that you ls it possible to make the main picture clickable?							
Additional comments:							

# surveySL

What type of computer did you use to view the website (Mac, $\mbox{\it F}$	PC, etc.)? PC				
What browser (including version if known) did you use to view  Internet Explorer v. Safari v.  Netscape v.					
What type of internet connection did you use to view this webs connection.)?    Modem	ite (If you're using  DSL/Cable Don't know	a UTSW c	omputer you a	are using a T1/L	AN internet
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The website is simple to navigate.  Comments:					
The information presented on the site is comprehensive.     Comments:					
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:					
The Getting Started page provides adequate background for navigating the website.      Comments:	or 🗌				
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>					
6. The website is easy to use.  Comments:					
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:	ar 🗌				
8. If it were available, I would use the website as a resource for the anatomy course.  Comments:	or 🗌				
9. Please share any suggestions you have that would:  - Make the information presented on the website more clear  - Make the website easier to navigate.  - Make the content on this website more comprehensive.					
Comments:More diagramatic overviews (with labels like the zo	oom in structures)	would be h	elpful		
Additional comments:					

# surveySS

What type of computer did you use to view the website (Mac, PC, etc.)? PC							
What browser (including version if known) did you use to view  ☐ Internet Explorer v. ☐ Fire ☐ Safari v. ☐ Netscape v.	the website?  ofox v.  Other						
What type of internet connection did you use to view this webs connection.)?  Modem T1/LAN	site (If you're using  DSL/Cable Don't know	a UTSW o	omputer you a	are using a T1/L	AN internet		
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree		
The website is simple to navigate.  Comments:							
2. The information presented on the site is comprehensive. <i>Comments:</i>							
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:							
The Getting Started page provides adequate background for navigating the website.     Comments:	or 🔲						
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>							
6. The website is easy to use.  Comments:							
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:	ear 🛛						
8. If it were available, I would use the website as a resource f the anatomy course.  Comments:	or 🛚						
9. Please share any suggestions you have that would:  - Make the information presented on the website more clear  - Make the website easier to navigate.  - Make the content on this website more comprehensive.	ar.						
Comments:very helpful - i would use it if available							
Additional comments:							

# surveyST

What type of computer did you use to view the website (Mac, $\boldsymbol{I}$	PC, etc.)?				
What browser (including version if known) did you use to view  Internet Explorer v. Safari v.  Netscape v.					
What type of internet connection did you use to view this webs connection.)?    Modem	ite (If you're using  DSL/Cable Don't know	a UTSW c	omputer you a	are using a T1/L	AN internet
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The website is simple to navigate.  Comments:					
The information presented on the site is comprehensive.     Comments:					
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:					
The Getting Started page provides adequate background for navigating the website.      Comments:	or 🗵				
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>					
6. The website is easy to use.  Comments:					
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:	ear 🗌				
8. If it were available, I would use the website as a resource for the anatomy course.  Comments:	or 🗌				
9. Please share any suggestions you have that would:  - Make the information presented on the website more clear  - Make the website easier to navigate.  - Make the content on this website more comprehensive.	ar.				
Comments:					
Additional comments:					

# surveyTT

What type of computer did you use to view the website (Mac, F	PC, etc.)? PC						
What browser (including version if known) did you use to view to Safari v.  ☐ Netscape v.	the website? ox v. Other						
What type of internet connection did you use to view this websiconnection.)?	☐ DSL/Cable	a UTSW c	omputer you a	are using a T1/L	AN internet		
☑ T1/LAN	☐ Don't know						
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree		
The website is simple to navigate.  Comments:							
The information presented on the site is comprehensive.     Comments:							
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:							
The Getting Started page provides adequate background for navigating the website.     Comments:	r 📗						
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>							
6. The website is easy to use.  Comments:							
7. This website would be a useful resource for me in my 1 <sup>st</sup> yes medical school curriculum.  Comments:	ar 🗌						
8. If it were available, I would use the website as a resource for the anatomy course.  Comments:	or 📗						
9. Please share any suggestions you have that would: - Make the information presented on the website more clea - Make the website easier to navigate Make the content on this website more comprehensive.	ır.						
Comments: Aesthestics:  1. When rolling cursor over anatomical regions, have the cryosection automatically displayed (instead of requiring to click on it). 2. Have search toolbar displayed on homepage. 3. Have cryosections placed under a neutral background (ie light-gray) instead of a blue background (misconstrued some structures as veins). 4. Place some directional markers to indicate anterior/posterior positions. 5. Have additional information on structures displayed automatically in same window.							

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<ol> <li>Allow for interaction with cryosections - point to structures to h</li> <li>Provide a test mode.</li> </ol>	ighlight structu	ıral name.			
Additional comments:					

# surveyVB

What type of computer did you use to view the website (Mac, PC, etc.)?							
What browser (including version if known) did you use to view  ☐ Internet Explorer v. ☐ Fire ☐ Safari v. ☐ Netscape v.							
What type of internet connection did you use to view this webs connection.)?  ☐ Modem ☐ T1/LAN	site (If you're using  DSL/Cable Don't know	a UTSW o	omputer you a	are using a T1/L	AN internet		
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree		
The website is simple to navigate.  Comments:							
2. The information presented on the site is comprehensive. <i>Comments:</i>							
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:							
The Getting Started page provides adequate background for navigating the website.     Comments:	or 🗌						
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>							
6. The website is easy to use.  Comments:							
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:	ear 🗌						
8. If it were available, I would use the website as a resource f the anatomy course.  Comments:	or 🛚						
9. Please share any suggestions you have that would: - Make the information presented on the website more clear Make the website easier to navigate Make the content on this website more comprehensive.	ar.						
Comments:							
Additional comments:							

# surveyVT

What type of computer did you use to view the website (Mac, PC, etc.)? PC							
What browser (including version if known) did you use to view  ☐ Internet Explorer v. ☐ Fire ☐ Safari v. ☐ Netscape v.							
What type of internet connection did you use to view this webs connection.)?  ☐ Modem ☐ T1/LAN	ite (If you're using  DSL/Cable Don't know	a UTSW o	omputer you a	are using a T1/L	AN internet		
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree		
The website is simple to navigate.  Comments:							
The information presented on the site is comprehensive.  Comments:							
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:							
The Getting Started page provides adequate background for navigating the website.     Comments:	or 🗌						
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>							
6. The website is easy to use.  Comments:							
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:	ear 🛚						
8. If it were available, I would use the website as a resource for the anatomy course.  Comments:	or 🗵						
9. Please share any suggestions you have that would:  - Make the information presented on the website more clear  - Make the website easier to navigate.  - Make the content on this website more comprehensive.							
Comments:I did check out your website and thought it was nicursor on an object, it would identify it. I know you can put you it, but having both ways would be nice.							
The searching feature is good, but again, if I could put my cur help with relating structures to one another.	sor on an object n	ear it and h	ave it identifie	d, it would be a	nother way to		
Additional comments:							

# surveyWM

What type of computer did you use to view the website (Mac, PC, etc.)? Mac					
What browser (including version if known) did you use to view ☐ Internet Explorer v. ☐ Fire ☐ Safari v. ☐ Netscape v.	the website? fox v.  Other				
What type of internet connection did you use to view this webs connection.)?    Modem	site (If you're using  DSL/Cable Don't know	a UTSW c	omputer you a	are using a T1/L	AN internet
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The website is simple to navigate.  Comments:					
The information presented on the site is comprehensive.     Comments:					
3. I would like to see more correlative images (i.e. MR, angiograms, etc.) on this site.  Comments:					
4. The Getting Started page provides adequate background for navigating the website.  Comments:	or 🗆				
5. The additional information tables for each anatomical structure presented in the website were comprehensive. <i>Comments:</i>					
6. The website is easy to use.  Comments:very user friendly!					
7. This website would be a useful resource for me in my 1 <sup>st</sup> ye medical school curriculum.  Comments:	ear 🗌				
8. If it were available, I would use the website as a resource for the anatomy course.  Comments:	or 🗌				
9. Please share any suggestions you have that would:  - Make the information presented on the website more cleater.  - Make the website easier to navigate.  - Make the content on this website more comprehensive.	ar.				
Comments:					
Additional comments:					

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**VITAE** 

A native of Cedar Rapids, Iowa, Ryan K. Conway graduated from Washington High School

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