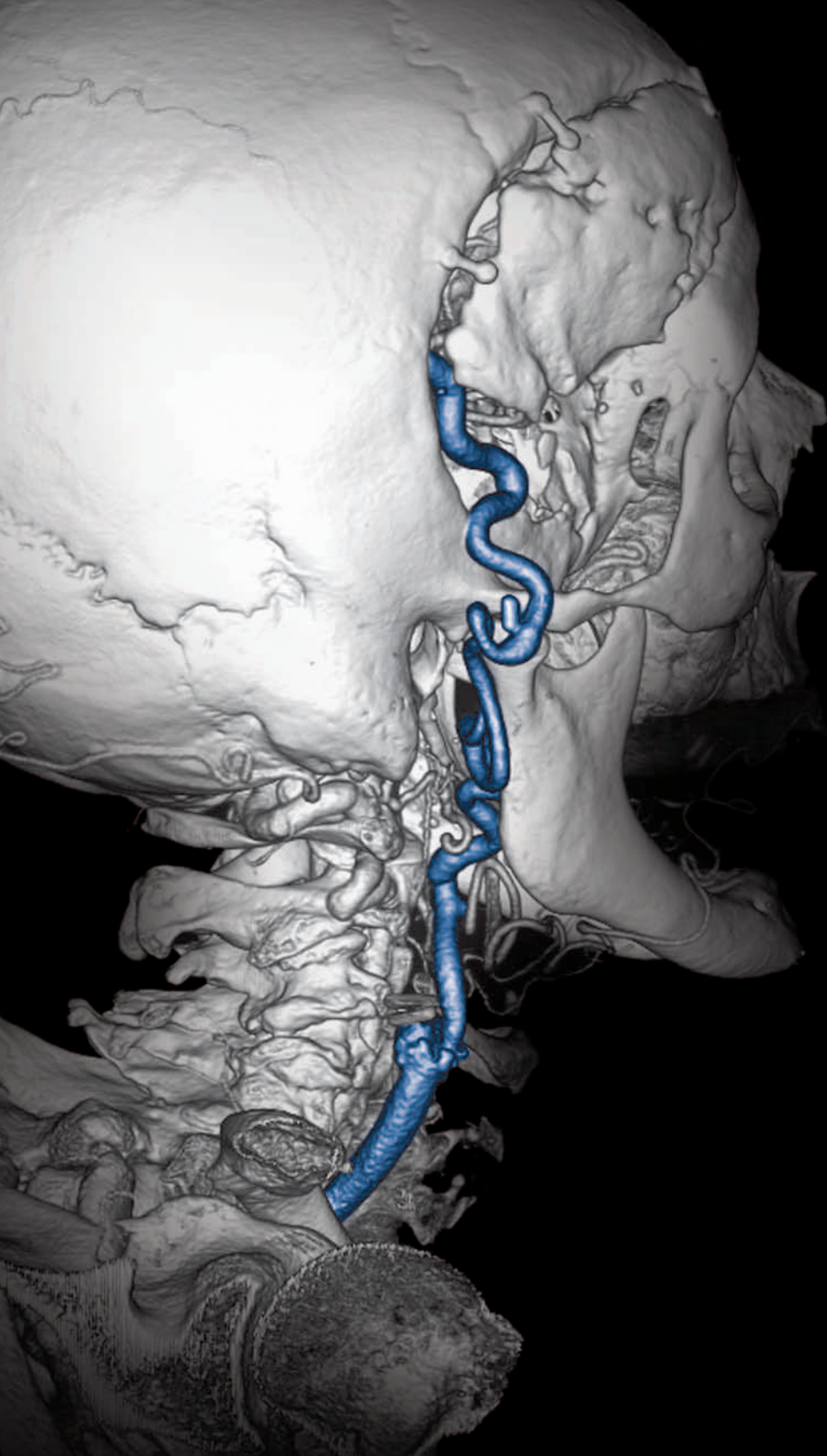




Clinical Applications





## Clinical Applications

## Four Steps to a Clinical Decision

Vital Images' comprehensive, intuitive suite of clinical applications improves efficiency and sets the industry standard for ease of use. Vitrea Enterprise Suite software, with Vitrea Core and Vitrea Advanced, helps make complex data simple and accessible throughout your enterprise and via the Web. Combined with our customized implementation consulting, customer service program and our Vital U® education center, Vital Images offers you a comprehensive advanced imaging solution.

Our clinical applications are designed to automate many of the tasks you do most frequently, helping you expedite your work and reach confident decision-making more quickly. Your entire workflow is recorded as you go so if you need to return to a study, you can start where you left off.

### Within the streamlined workflow, there are four steps to a clinical decision:

1. Choose a case from the study directory or from within your PACS workflow.
2. Confirm the clinical protocol and select the optimal layout.
3. View and quantify case findings using the advanced visualization viewer and tools palette.
4. Complete and distribute your final key images and report them to the PACS/EMR system.

## Anywhere Access

Flexible access is one of the most important factors in assuring timely decision making. Vitrea Enterprise Suite gives your organization the option to customize advanced imaging access for how you use it most—whether you need to access full-powered clinical applications online, use a thin-client solution for basic functions via the Web, or create a powerful onsite workstation. Vital Images solutions integrate with PACS, and are available anytime, anywhere, without compromising speed or power. Flexible access also enables you and other users in the clinical enterprise to interact with visualizations produced by radiology.

“Vital Images offers  
the **easiest to**  
**learn and use**  
**enterprise-wide**  
**tools** for reading  
cardiovascular  
images.”

Tony DeFrance, MD, FACC

Clinical Associate Professor at Stanford Medical  
School, SCCT Board of Directors, National  
Director of SCCT Workgroups

Simplicity.

Speed.

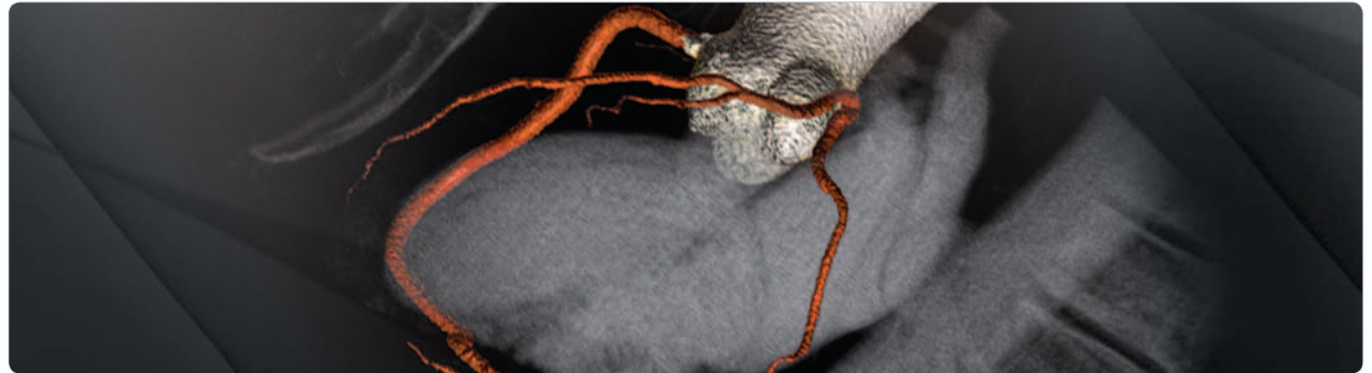
Performance.



## Simplified Tools

Fewer clicks and automated tasks mean shorter reading times. For example, our software distinguishes soft and hard plaque in the arteries by color coding them based on tissue densities, which helps you assess risk levels at a glance and populate reports with findings. You may turn off any automated feature for manual use. Other key tools are:

1. MPR (orthogonal, oblique, curved)
2. MIP and minIP
3. High Quality Volume Rendering
4. Anatomic Segmentation Tools and Editor
5. Vessel Probe
6. Image Capture and Exporting



## Advanced Clinical Solutions

Vitreia Enterprise Suite clinical solutions deliver simplicity, speed and performance.

### Cardiac Imaging Solutions

This specialized set of cardiac CT applications help you assess coronary artery disease, analyze cardiac function, and plan interventional and electro-physiology procedures.

#### ■ Coronary CTA Analysis

The coronary CTA application automates the clinical evaluation of the coronary arteries by probing and labeling the main coronaries, providing SUREPlaque™ plaque characterization and allowing SCCT-compliant reporting of the findings.

#### ■ Calcium Scoring

You can visualize, measure and create a report of coronary calcification, and calculate the calcium score using a non-contrast cardiac CT exam.

- **Cardiac Functional Analysis (CFA)**

Zero-click isolation of the beating heart allows visual assessment of wall motion in short and long axis orientations. Results are quickly generated for ejection fraction, myocardial mass and volume. Full-color polar plots help chart quantitative wall motion and thickening data. With the visual editor tool you can visualize cardiac structures such as valves and chambers

- **Electrophysiology Procedure Planning (EP Planning)**

Segmentation of the left atrium and pulmonary veins enables visualization of the pulmonary and atrial anatomy, which provides information for ablation procedures.

## Vascular Imaging Solutions

This comprehensive suite of specialized tools facilitates quick, confident evaluations of CT and MR angiography studies for identification, characterization and interventional planning for vascular diseases. You can effectively assess vessels, do a comparative review of previous and current studies and communicate results.

- **Peripheral CTA/MRA Analysis**

Visualize vessel structure and calcified/non-calcified plaque with an automated color-coding feature. The SUREPlaque™ application provides values for plaque characterization including plaque burden, volume and remodeling index. This tool quickly assesses and segments vessels, removes bone, measures stenosis and evaluates vessels.

- **Automated Vessel Measurement (AVM)**

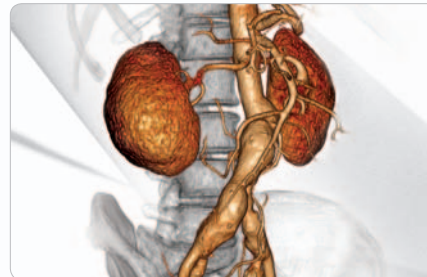
Evaluate vessels for stent placement regardless of size, tortuosity or location.

- **Automated Bone Removal**

Identifies and removes bone structures to easily view anatomy.

- **Endovascular Stent Planning**

Provides automated clinical information specifically for the evaluation of Abdominal Aortic Aneurysms (AAA).



## Neuro Imaging Solutions

Enables rapid visualization, measurement and characterization of neurovascular anatomy and perfusion details in the brain.

- **Cerebral CTA/MRA Analysis**

Visualize and characterize aneurysms, stenosis and other neurological defects in CT and MR.

- **CT Stroke Evaluation**

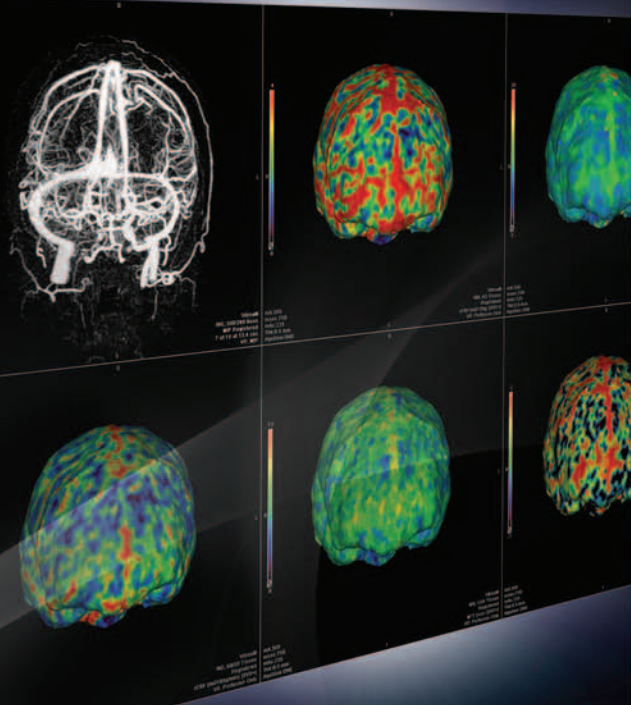
CT brain perfusion automatically identifies the earliest enhancing artery and densest vein and computes perfusion maps for rCBF, rCBV, MTT, time to peak and delay. This application also enables auto-mirroring of template ROIs for the right and left hemispheres of the brain.



“ I have been a Vital Images customer for several years, and we use the Vital solution for both routine and delicate clinical problems. Over our many years together, we have collaborated on innovative clinical applications and forged a dynamic clinical and research partnership. ”

J. Pablo Villablanca, MD

Professor and chief of diagnostic neuroradiology and director, clinical image processing laboratory for UCLA



### Oncology Imaging Solutions

This suite of applications and tools provides advanced capabilities to support analysis and treatment planning decisions.

- **Lung Nodule Analysis**

Helps you analyze nodules through multiple studies to determine growth patterns and make comparative reviews. Workflow automatically segments the lung and thorax and provides clinical information including density, percent growth and doubling rates for nodules.

- **Tumor Segmentation, Measurement and Visualization**

Images help surgeons plan surgical approaches and identify associated risks. Features are supported by tools to help pick and edit contours that identify cancerous regions, including a one-click tool for segmenting tumors and organs.

- **Anatomic Editor/Atlas**

Provides you with the ability to do anatomic mapping and communicate using images to support surgical pre-planning.


### Additional Imaging Solutions

- **CT Virtual Colonoscopy**

Enables both a 2D and 3D evaluation of the colon. The 2D view offers you validation of findings in 3D, while 3D generates fly-through visualization and navigation. Automatic registration of prone and supine series enables an effective colon analysis, including information on the density of lesions and distance from the rectum. You can easily tag and manage potential polyps in the reporting system.

- **Orthopedic Visualization**

View different types of orthopedic anatomy, from metal hardware within the spine to artificial joints.



22 of the top 25 heart hospitals use Vital.

22 of the top 25 neuro hospitals use Vital.

20 of the top 25 oncology hospitals use Vital.

19 of the top 25 ortho hospitals use Vital.

Source: *U.S. News and World Report*, 2008



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[www.vitalimages.com](http://www.vitalimages.com)

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