CONDUCTING THE PROCESS.

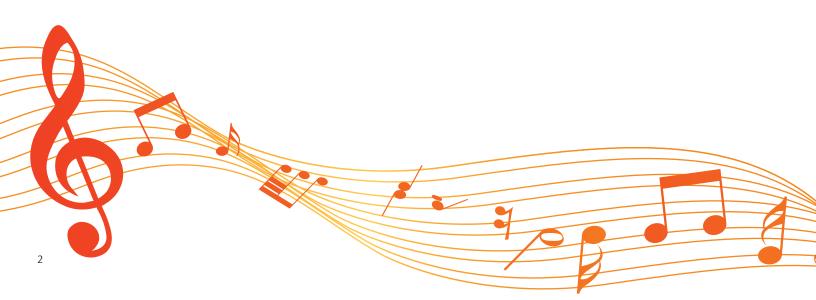## Advanced Solutions.
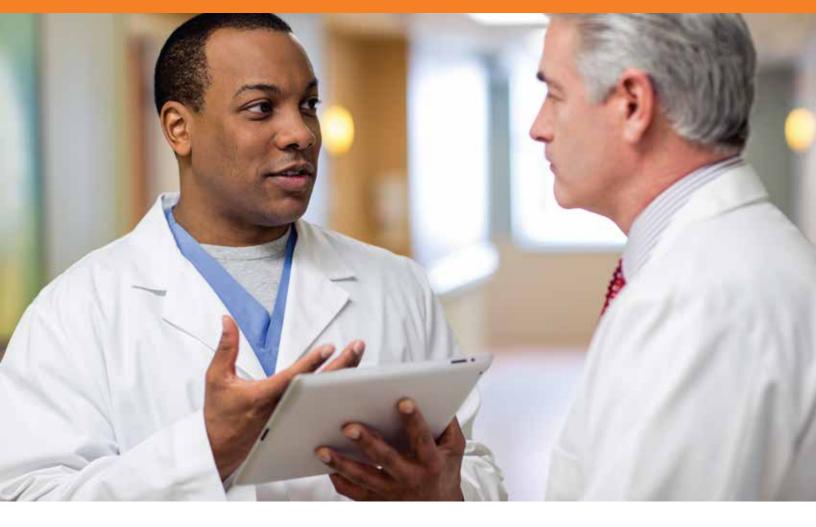## From Reading to Diagnosis.

PUTTING YOU IN COMPLETE CONTROL.

With a few simple gestures, a symphony conductor brings the many instruments in an orchestra into harmony – for a unified, compelling performance.

With Vue PACS, a radiologist experiences much the same feeling. Vue puts you in control of all the advanced solutions you need – right at your fingertips, in a single workstation – to help you turn in a brilliant performance of your own… a fast, accurate and confident diagnosis.

Only Carestream provides such a comprehensive set of tools that function just as native solutions do. Otherwise, accessing them would require moving between dedicated workstations or applications for the various specialties.

Deployed on-site or in a Carestream-hosted Cloud, Vue PACS and its clinical solutions can meet your most stringent demands today – and accommodate future growth and expansion while protecting your investment from technology obsolescence.

ORCHESTRATING A HIGHER LEVEL OF CARE.

Here's another important thought: knowing the current state of radiology matters. Major change is underway, driven by several developing trends:

- The need to strengthen your affiliation with referring physicians and help them enhance their level of patient care, in order to preserve and expand your referrals.
- Plus, the pervasive trend of tying reimbursement to performance – making it essential for you to excel in meeting your targeted performance metrics.
- The ever-growing volume of data and complex clinical conditions.
- The focus on value-based performance to collaborate with other clinicians and design better clinical pathways.
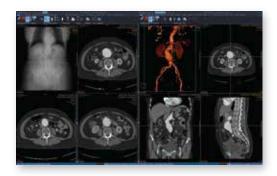
Vue PACS, with its advanced clinical solutions, can support you in responding to these critical challenges. Vue allows you to add value to the services you provide. For example, the optional Vue Reporting Module can help you provide referring doctors with reports offering better data and greater insights – including embedded key images for side-by-side comparison, modality measurements, exam dosage information, tumor trending information in charts and graphs, and quantitative data from advanced post-processing such as vessel analysis.

APPLICATIONS THAT HIT ALL THE RIGHT NOTES.

Vue PACS native applications give you powerful tools to read and diagnose with greater speed and precision than ever before. Many of these apps deliver unprecedented capabilities.

The PowerViewer™

Volumetric comparisons have never been so fast and easy. The Vue PACS volumetric PowerViewer enhances the traditional two-dimensional viewer and creates a single, virtual study with real-time 3D volumetric registration of all relevant studies (current and prior). This is all handled automatically within the viewer. The system also synchronizes views of the region of interest from multiple data sets.

The PowerViewer speeds interpretation and allows multiplanar reconstruction, vascular representation and volume rendering with one click of the mouse. It also ensures that post-processing functionalities are fully integrated into the radiologist's working environment. Time-consuming interim steps such as changing workstations or extensive uploading of extensive imaging data are eliminated.

This all adds up to a faster interpretation process, while enhancing quality by reducing patient position errors between scans when using priors.
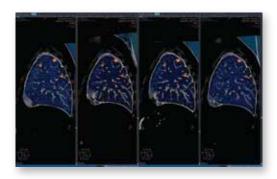
Advanced 3D Imaging

Vue PACS 3D imaging allows more efficient viewing and handling of huge data sets. The speed of our 3D protocols is nothing short of remarkable. So is the ease of use. You can create, modify and view 3D images without leaving the source data. Advanced 3D-processing tools embedded in the diagnostic viewing application leverage display protocols to preprocess studies and set up appropriate comparative environments with relevant priors.
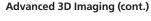
You can display current and prior studies side-by-side, and apply 3D tools to both. Our 3D Analysis option includes maximum intensity projection (MIP), volume rendering and tissue definition. These capabilities and many others help create an optimal working environment for radiologists – and can generate productivity gains and cost savings for the hospital or enterprise.

Robust Vue PACS display protocols allow both 2D- and 3D-rendered images to be automatically displayed when the series is loaded – providing a summary view of the entire anatomy as well as cross-referencing images. You can apply an extensive array of protocols, including predefined MIP, MPR, volume rendered and other protocols as needed. This ability to work simultaneously with 2D and 3D images greatly simplifies comparative viewing.

In addition, a cross-referencing line automatically tracks the 3D rendering as images are scrolled in the 2D view. Automated one-click vessel analysis is available for major vessels. Alternatively, and for other vessels, an intuitive vessel-analysis wizard walks through the placement of seed points on either 2D or 3D images, resulting in the desired anatomical view.

Advanced 3D Imaging (cont.)

Multiplanar Reconstruction (MPR) helps you with clearer visualization of organs, tissues and the relationships between them by reconstructing data in straight or curved cross-sectional planes, inclined to the original slice.

Maximum Intensity Projection (MIP) enhances contrast to let you view vascular structures and other high-density tissue more easily. Tools include swivel, roll, clipping planes, slabs and volume of interest.

Minimum intensity projection (MinIP) enhances contrast for clearer viewing of vascular structures, pulmonary tissue and airways, and other low-density tissue. Tools include swivel, roll, clipping planes, slabs and volume of interest. (This function allows viewing of airways, nasal sinuses, etc.)

Volume Rendering allows you to define color and opacity values to anatomy, creating an image you can view from any angle.

Tissue Definition defines 3D tissues using CT or MR volumetric data, helping enable clearer visualization of specific anatomy. Tissues can be shown or hidden during angio MIP image-viewing for better pathology visualization.

Vessel Tracking supports you in advanced vessel analysis with automatic, 3D, curved-path segmentation for panoramic or crosssection slicing of the aorta, renal arteries, neck vessels and more.

Automatic Bone Removal minimizes bone structures in images to give you a clearer view of soft tissue. You can opt to have it applied automatically or activate it with a simple mouse click. The sophisticated bone-removal algorithm works in the background, so you can continue your review until the process is completed.

Volume Matching builds a single, virtual study with real-time volume matching of all relevant studies, then automatically registers and synchronizes them with a single click.

Oncology Reading Workflow

Vue PACS oncology-reading workflow aids with tumor detection while reducing the time to read and report complex cases.

With the Vue PACS Lesion Management application, you can offer integrated follow-up for high-value exams requiring complex treatment planning – such as oncological exams.
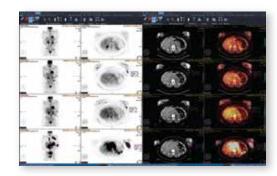
Precise lesion measurement is critical for reliable evaluation of metastatic disease and faster assessment of patient response to cancer treatment. Traditional PACS cannot enable simple quantitative comparisons of historical exams – especially those imported from disparate PACS or modalities.

Vue Lesion Management accepts prior exam results as baseline images from third-party PACS and from numerous modalities. This tool provides the quantitative data that referring oncologists truly value – trending analysis, measurements, advanced anatomical bookmarking and more. It features a built-in reporting mechanism that automatically adds measurements and generates reports in accordance with international standards, such as REC!ST criteria.

With Carestream's unique **bookmarking capabilities,** lesion images and measurements are saved – helping to eliminate the need to repeat work. You can also extract prior bookmarks to help illuminate findings in the current study. Used with our PowerViewer, Vue Lesion Management can simplify the comparison between different data sets.

Image Fusion enables you to localize diagnostic information and assess pathologies such as tumors or neurological disorders. Image Fusion helps you evaluate disease progression and response to therapy. PET, SPECT, CT and MR datasets are automatically fused and volumetrically registered for better visualization of anatomic and metabolic information. Display layouts present dynamic MIPs, original images, and fused images across multiple time points for comparison. Additional tools to aid with assessment include color maps, SUV and measurement tools, synchronized manipulations, and bookmarking to catalog lesions and streamline future access.

PET-CT allows faster, easier rendering and image registration of PET/CT image volumes.

SPECIALTY APPS IN TUNE WITH YOUR NEEDS.

Digital Mammography Reading Workflow

Whether you're reading Digital Mammograms, Breast Ultrasound, Breast MRI, General Radiology or Digital Breast Tomosynthesis (DBT) exams, Vue PACS lets you do it all from a single desktop. Unique tools and workflow optimize the reading of both screening and diagnostic exams without any limitation to the types of procedures that can be compared simultaneously.

Many special capabilities are included. Mammography images are auto-matically same sized and positioned to minimize any manual manipulation. User configurable hanging protocols provide an efficient single click work-flow with the ability to build full resolution image navigation and CAD into the sequence. Priors can be stacked and synchronously scrolled through for comparison.

Digital Breast Tomosynthesis images are read with ease using auto cine mode or self-paced scrolling. Slab mode and thickness presets provide better visualization of micro-calcifications and low-density findings. And you can easily save and catalog your markups and key images.

CT Brain Perfusion

CT Perfusion provides interactive tools for analyzing tissue flow (perfusion) and tissue blood volume. The Artrial Input Function (AIF), Venous Output Function (VOF) and Brain Centerline are automatically detected with the ability for manual correction by the user. Blood perfusion parameters are automatically calculated and displayed as a set of user friendly perfusion maps and perfusion tables summerizing the results.

Cardiovascular Reading Workflow

Cardiac review and analysis tools provide you with cross-sectional views of the heart axis, four chamber views, as well as panoramic and cross-sectional views of blood/cardiac vessels such as the left main artery (LMA), right coronary artery (RCA), left circumflex artery (LCX) and posterior descending artery (PDA). The calcium-scoring module helps you analyze calcified plaque in five main blood vessels of the heart, while the cage-removal function removes anatomy areas around the heart not required for cardiac viewing.

Multiframe Display lets you view NM, US and angiography (XA).

Digital Subtraction of angiography images enhances vascular and cardiovascular reading with improved visibility of blood vessels in a bony or dense tissue environment. It subtracts a pre-contrast image from post-contrast images to visualize the vascular anatomy and pathology.

Native ECG provides native viewing of 12-lead ECG waveforms to assess electrical and muscular functions of the heart. Comparison of current and prior ECGs helps ensure a comprehensive view. Various lead layouts and tools including line measurement, caliper, and gain/speed adjustments support accurate analysis.

Echocardiography Including 2D, Doppler M-Mode, and stress echocardiography offer native cardiology reading. Comprehensive offline measurement tools including distance, volume, velocity, pressure gradient, PR half time, slope, and others help provide additional analysis.

BENEFITS THROUGHOUT THE ENTERPRISE.

Each of the key stakeholders in your facility will discover specific advantages of Vue PACS and its clinical solutions.

RADIOLOGISTS
- Ability to provide data-rich, insightful reports to referring doctors
- Greater productivity due to one point of access
- A more holistic view of patients

REFERRING PHYSICIANS
- Deeper clinical insight
- Simple image/data access and fast turnaround
- Easily comparable images and data

ADMINISTRATORS
- Lower capital costs provided by a reduction in dedicated specialty workstations
- Savings generated by a decreased need for integration and ongoing maintenance
- Reduced spending on 3D labs, since post-processing can be automatic or accomplished quickly by techs or clinicians
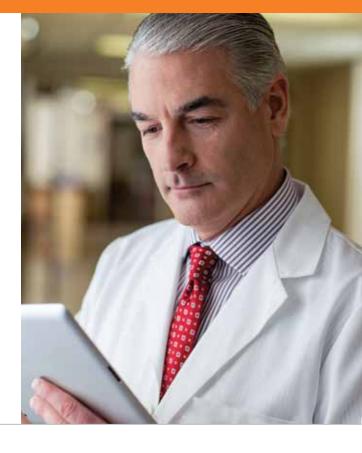
Vue

KNOWING MATTERS.

In the contemporary Radiology Department, knowledge is everything. With Vue, you'll know that the issues crucial to your cussess are being addressed. Vue amplifies the clinical, business and IT value of radiology by:

- Offering greater value and insight as you generate clinically rich reports.
- Increasing patient engagement and satisfaction with an intuitive patient portal.
- Controlling costs and streamlining data flow with modular components within the platform.
- Fostering clinical collaboration without boundaries.

Most important, Vue offers a single, flexible, configurable platform. It lets you make the right investment now – and build on that investment in the future.

A Community of Service and Support

For dependable service, look to our Customer Success Network. We work continuously to improve your imaging performance, help you to innovate as needs change, and make the most of your budget and resources. Carestream's Customer Success Network surrounds you with a dynamic team of experts, with a Single Point of Entry for easy, customized access to the right people in every situation. You and your patients will benefit from the expertise and best practices only Carestream can deliver – based on thousands of customer engagements worldwide and our 100-year heritage in medical-imaging innovation.

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