New products

Motiva: a TV-based platform for remote patient management

Launched earlier this year in the USA, Motiva is a TV-based platform for remote patient management. It uses the familiar home TV to actively engage chronic disease patients with personalized healthcare content as part of their daily routine.

The Motiva interactive healthcare platform uses broadband television, along with home vital sign measurement devices, to connect patients to their healthcare providers and medical support system.

Designed around patient needs, Motiva is designed as an easy-to-use consumer product, consistent with the overall Philips commitment to “Sense and Simplicity”. Patients can access their personalized content via a simplified user interface, a secure broadband connection and a standard set-top box. A nurse care manager, using the Motiva clinical information system, monitors the patient’s condition and is alerted if follow-up is necessary.

In addition to vital sign monitoring, Motiva engages patients daily with personalized interactive content helping care managers reach more patients, influence long-term behavior and lower healthcare costs. Equally important, Motiva lets clinicians continuously track each patient's level of knowledge, motivation and confidence to achieve specific health goals related to his or her chronic condition.

Recent studies have revealed positive results showing broad acceptance of the Motiva platform by congestive heart failure patients. In the US, 30 chronic heart failure patients were enrolled in a pilot study by the Cardiovascular Associates of the Delaware Valley (CADV), while in the Netherlands Philips and the Dutch healthcare insurer Achmea are conducting a study on a randomized population of 630 chronic heart failure patients. The study is designed to evaluate both clinical and financial outcomes: hospitalizations, quality of life, mortality and utilization rates.

Winner of a Medical Design Excellence Award and named “One of the Top 5 Disease Management Ideas of 2005, Motiva reflects Philips’ investment in developing innovative technology solutions for home healthcare.

New software for Image-Guided Radiation Therapy

Royal Philips Electronics has recently announced the release of new Model Based Segmentation (MBS) software for Image Guided Radiation Therapy (IGRT) workflow enhancement. The MBS software is an upgrade available on the Pinnacle Radiation Therapy Planning system, combining AcQSim simulation, Syntegra image fusion and PIMRT modules to provide a powerful oncology toolbox capable of sculpting radiation doses to tumors.

The new MBS software offers a revolutionary advancement in reducing the time it takes to contour tumors and anatomical structures and is a crucial step toward the future of IGRT and the ability to quickly adapt patients’ treatment plans based on their response to daily treatment.

The MBS software includes an anatomical library of 3D patient organ structure models. Users can simply drag and drop the models onto patient image data and the software automatically adapts to each patient's anatomy. The library of anatomical models grows as new patient data are added, providing a unique ability to build a library based on regional demographic or clinical practice specialties.
IGRT workflow is enhanced by allowing clinicians to quickly contour the tumors and organs at risk in three dimensions. These can then be propagated to 4D datasets to help determine the extent of tumor movement within the patient, making it possible to adapt the daily treatment plan “on the fly.”

In addition to MBS, Philips has introduced a series of other workflow enhancements, such as PPC for remote planning which allows Philips clinical customers to remotely access their patient data at more than 1,600 installed Pinnacle® sites around the world.

While remote patient contouring and treatment planning offer workflow efficiencies today, future adaptive IGRT planning will depend on these remote collaboration tools in order for oncologists to review and interact with their patients’ 4D data and daily response to treatment.

**Brilliance CT Big Bore oncology configuration.**

Building on Philips legacy of innovation in CT simulation, the Brilliance CT Big Bore oncology configuration has been designed specifically for use in radiation oncology, and is already in place at more than 100 clinical sites, including some of the most prominent healthcare facilities worldwide.

New 4D tools have been added to the Philips-exclusive Tumor LOC application, allowing the user to assess the motion of respiratory correlated studies. The ability to review patients’ breathing patterns and easily draw contours encompassing the range of motion over the entire respiratory cycle simplifies this complex procedure. Advanced 4D tools such as dynamic digitally reconstructed radiographs (DRR) and digitally composited radiographs (DCR) allow visualization of respiratory motion from a “beam’s eye” view. The interconnected Brilliance Workspace allows users to easily evaluate multi-phantom volumetric datasets. With new evaluation tools such as intensity projections over time, dynamic slab viewing and user-defined phase selections, novel treatment options are now possible. These new views assist physicians in determining tumor movement over time, giving them flexibility in choosing treatment-planning options.

Philips new Brilliance CT Big Bore enhances clinical insight through tighter integration with the LAP laser system. Direct connection between the scanner and the laser system reduces the chance of error and makes the absolute marking procedure more automated and easier to use than ever before. In addition, the Brilliance CT Big Bore includes, as standard, a therapy tabletop that meets requirements of the AAPM Task Group 66.

Another new enhancement is Extended Display Field of View. Provided at the request of clinicians, Extended Display Field of View allows users to visualize areas outside the standard true 60 cm field of view to avoid untargeted areas during treatment planning.

With the largest installed base of oncology scanners in North America and systems installed in seven of the top 10 cancer treatment centers in the United States, as ranked by US News & World Report Best Hospitals, Philips offers one of the most complete and advanced lines of integrated radiation oncology solutions in imaging, simulation and planning.
New clinical data on time-of-flight PET/CT system

The latest addition to the GEMINI product family, the GEMINI TF PET/CT, combines PET myocardial perfusion and viability data with CT coronary artery angiography in a single integrated environment. GEMINI TF with TruFlight time-of-flight technology delivers improved spatial resolution and high sensitivity, resulting in improved image quality when imaging the short-lived radiopharmaceuticals associated with cardiac PET.

The system is available in two configurations: 16-slice and 64-channel Brilliance CT. The Brilliance 64-channel CT is well-suited to cardiac imaging with its wide-coverage submillimeter imaging, ultra-fast acquisition times and Rate Responsive image acquisition technology that adapts to the patient’s heart rate and rhythm.

GEMINI TF 16-slice is available in the market today, while full commercial release of the GEMINI TF 64-channel is expected in late 2006.

Enhanced version of JETStream Workspace

JETStream Workspace is an integrated, personalized workflow management solution for nuclear medicine. The system is designed for fast, simple workflow for technologists and physicians – helping them to process with speed, diagnose with confidence, convey results to referring physicians quickly and conveniently, and run a practice more effectively.

JETStream Workspace version 3.0 offers new workflow and image display enhancements and upgraded clinical applications for cardiac, bone, renal, salivary and brain imaging.

IDL, the language for data visualization and analysis developed by RSI, is now available for JETStream Workspace version 3.0. The IDL programming language allows customers to develop and customize their own applications. The IDL custom development platform allows for the development of user-friendly applications and offers a combination of visualization, image processing and data analysis routines.

JETStream Workspace version 3.0 is an easy-to-install software-only upgrade for current users of the product. Philips legacy workstation customers can also upgrade to a new platform with JETStream Workspace version 3.0, enabling them to reap the benefits of new applications.

Ultrasound systems

Philips’ new HD 3 and HD11 XE ultrasound systems bring advanced imaging capabilities to smaller Ob-Gyn practices and clinics, while iSLICE uses volumetric imaging to facilitate the selection and sharing of ultrasound images. The new Philips HD 3 is the company’s first compact
PET/CT Viewer for Extended Brilliance Workspace

The new PET/CT Viewer provides PET users with a truly integrated, powerful, yet simple image review and analysis environment for routine clinical evaluation of PET/CT examinations.

The PET/CT viewer is adaptable to the workflow needs of individual users and substantially improves workflow and efficiency for routine clinical review.

This new technology allows the physician to view the rapidly beating fetal heart from multiple angles in three dimensions in order to assess cardiac structure. The advanced ergonomic design of the HD11 XE also helps alleviate many of the stresses that lead to workplace injuries among sonographers.

The iU22 intelligent ultrasound system has been upgraded to include new fourth-generation 3D/4D imaging and the 2D image clarity required for perinatology and women’s health applications.

ultrasound system since the introduction of the Ultramark 4 that became the standard for many Ob-Gyn practices. The HD3 features high definition digital imaging with optional color Doppler and freehand 3D imaging. Its compact profile and simple operation makes it an ideal system for small to mid-sized practices, while its affordability makes it ideal for physicians focusing on under-served populations.

STIC (Spatio-Temporal Image Correlation) technology is now available on the new HD11 XE.

Philips HD3 and HD11XE ultrasound systems.
The prototype of the new imaging system.

Since November 2005 there has been a close cooperation between Philips and Schering, aimed at developing a new optical imaging technique for breast cancer diagnosis. The cooperation is focused on some of the limitations of present-day breast cancer diagnosis. Currently, the breast is examined by X-ray mammography in order to detect the presence of tumors. The X-ray image shows calcium deposits and other structures.

Clinical evaluation
Schering has developed a new contrast agent, known as SF-64, for use with Philips’ new optical mammography scanner, currently undergoing clinical evaluation. The contrast agent is being evaluated for the visualization of strongly vascularized regions, such as tumors.

MEDICAMUNDI is available online at: www.medical.philips.com/medicamundi