

ECR 2014: Agfa HealthCare Releases Next Generation of MUSICA



Latest improvements provide even more detail in images and confident, comfortable reading

Fully automatic and exam-independent, MUSICA provides consistently high image quality across CR and DR solutions. Enhancements include no need to adjust window level and a balanced presentation of different tissue structures for comfortable reading. MUSICA is a key element of Agfa HealthCare's commitment to helping healthcare providers manage and reduce patient dose.

Agfa HealthCare is launching the next generation of its gold-standard MUSICA (Multi-Scale Image Contrast Amplification) image processing software in Europe at ECR 2014. New technology improvements such as Fractional Multiscale Processing enhance both image quality and workflow for radiographers and radiologists. The improvements will support radiologists to get the most out of images at a lower dose.

New features and benefits for radiologists

The next generation MUSICA offers all the benefits of previous generations, including consistently high image quality across all of Agfa HealthCare's digital radiography solutions and robustness against variations including patient size, tube quality and exposure settings.

Workflow improvements include the elimination of the need for window level adjustment, for even easier and faster image reading. Radiologists also get more diagnostic information from their images, with a high level of detail in the mediastinum, sharp trabecular and cortical bone, a balanced presentation of both soft tissue and overlapping bone structures, visualisation of subtle details in the abdomen, and a true representation of implants with clear bone interfaces.

Fractional Multiscale Processing (FMP) makes it easier to see and distinguish the subtle details in images, meaning "the diagnosis is in the details". The balanced presentation of all tissue structures, from bone to soft tissue, results in images that are very comfortable to read.

Body-part independent, automatic optimisation of image quality

MUSICA enhances productivity for both radiologists and radiographers, offering a streamlined workflow. First launched in the 1990s, the second-generation MUSICA version was the first medical image processing algorithm requiring no interaction with the user to produce optimised output images. It requires no input on which body part has been imaged, radiographic projection, patient position, the presence of contrast material or anything else. All of the parameters needed are derived or calculated by MUSICA from the input image itself. This automatic analysis of the characteristics of each image and optimisation of the processing parameters saves time and effort.

Supporting dose control

To support optimal image quality while protecting people in X-ray environments, Agfa HealthCare integrates the ALARA (As Low As Reasonably Achievable) principle in its product design. A key goal is to provide users with consistently high image quality across all exams and all patients at all hospitals, with a minimal radiation dose. Along with the development of high DQE (Detective Quantum Efficiency) DX-D Cesium detectors, the NX Exposure Index to avoid dose creep, and IMPAX REM for an overall dose radiation exposure management, this new version of MUSICA is an important step in Agfa HealthCare's continuing efforts to further increase image quality while giving hospitals tools to manage patient dose.

Taking the best and making it better

"It is not often that you get to improve something that is already world-class, but that's what we've done with the next generation of MUSICA," says Louis Kuitenbrouwer, Vice President Imaging at Agfa HealthCare. "For decades, radiologists have appreciated the consistency and excellent contrast detail provided by MUSICA. It still provides the features radiologists need: fully automatic, very easy to use image processing that gets maximum information from an image, independent of whether the patient is obese or slim, etc. But now we've used new technology to enhance the advantages, and keep MUSICA ahead of the pack."

Source: [Agfa Healthcare](#)

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