



The Point Source

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Executive message

It was a pleasure to see many of you at the Society of Nuclear Medicine meeting in Salt Lake City. I hope you had the opportunity to view our latest innovations and to speak with a Philips representative about how we can meet your individual clinical needs.

In the PET/CT space, we showcased some very impressive clinical images from our GEMINI TF Big Bore, now in 17 sites worldwide. We also introduced the new GEMINI LXL our latest PET/CT system offering premium technology at a value price.

In SPECT/CT we introduced new enhancements to our BrightView XCT including new full iterative technology (FIT), providing both iterative SPECT and CT reconstruction capabilities. The FIT CT reconstruction technique improves localization through better uniformity and less noise, which enhances soft-tissue image quality. The combination of FIT with the system's Astonish reconstruction algorithm available on our EBW NM Workspace helps enable low patient X-ray dose levels and enhanced image quality. With over 300 installations worldwide, the EBW NM with SPECT, SPECT/CT and PET/CT systems bring state-of-the-art workflow in a fully integrated workspace designed for the NM user. We also hosted a customer event where Dr. Bernd Klaeser from University Hospital in Bern, Switzerland shared impressive clinical results from his BrightView XCT system.

PET/MR Research

In the research area, we showcased clinical studies from the investigational whole-body PET/MR imaging technology. The studies, being performed by the University of Geneva in Switzerland and Mount Sinai Medical Center in New York City, cover both oncological and cardiovascular applications and are designed to take advantage of the soft-tissue contrast capabilities of MRI. Dr. Osman Ratib presented PET/MR images from University Hospital of Geneva and talked about the new technology's promising applications.

I look forward to seeing all of you at upcoming events such as ASTRO and RSNA – where Philips will continue to bring you new solutions to meet your most challenging clinical needs.

Until then, enjoy the rest of your summer.

Jay Mazelsky

Senior Vice President and General Manager, CT/NM

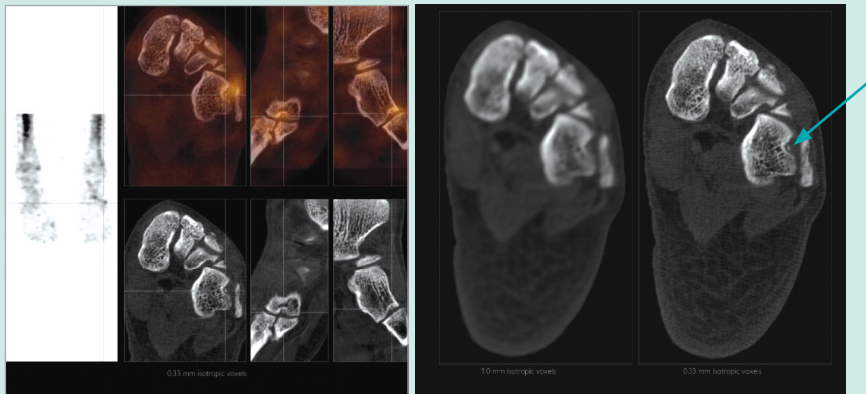


BrightView XCT Image of the Year Contest

Winner

Inselspital Bern University Hospital, Switzerland

Case 6: Bone fragment in foot



“We collected 48 compelling SPECT/CT case studies using XCT as a tool to help make a definitive diagnosis,” said Jody Garrard, product manager for BVXCT. “There were outstanding examples of oncology, cardiology, infection, and orthopedic applications. We then narrowed these down to the best 15 studies for the contest.”

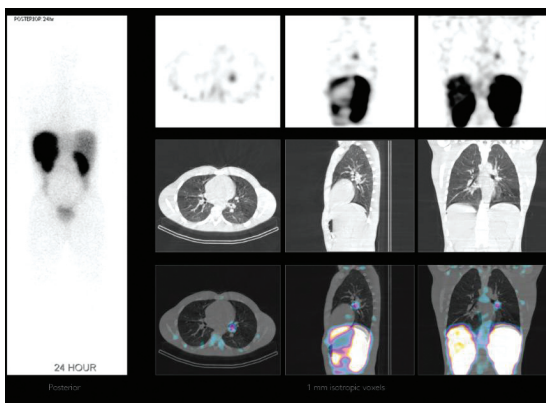
Over 135 sites worldwide are working to keep patient dose low without sacrificing image quality with Philips BrightView XCT system. We put them to the test at this year’s Society of Nuclear Medicine meeting in Salt Lake City where we challenged all users to submit their most interesting case studies achieved on the BrightView XCT.

An eblast was sent to over 1500 customers encouraging them to vote for their favorite image via the internet. Simultaneously, contest images were also displayed on iPads at the Philips SNM booth, where over 100 customers reviewed and voted for their favorite cases. 439 votes in all revealed the following winners that were announced on June 8th at SNM.

Runner up

University Hospital Case Medical Center; Cleveland

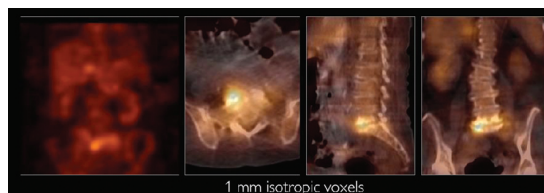
Case 9: Octreotide lung mass



Runner up

North Carolina Baptist Hospital

Case 1: Gallium infection



To view all of the cases visit our website at

www.healthcare.philips.com/main/about/Events/SNM/Contest/index.wpd.

Philips NetForum provides a venue for collaboration with colleagues

Philips NetForum was established for MRI in 2004. One year later the CT NetForum community was added. There are currently over 14,000 CT and MR registered users located in over 200 countries sharing experiences, learning from peers, and optimizing results.

This online virtual community is now available to Philips Nuclear Medicine (NM) users.

Philips NetForum connects you with users from around the globe in a virtual forum where you can:

Share clinical experiences

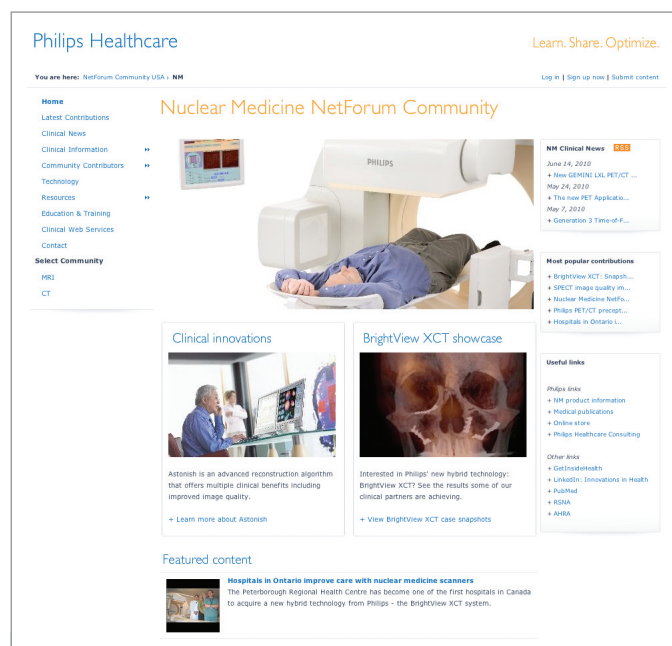
- Review case studies
- Exchange clinical techniques and procedures
- Access product and clinical training opportunities

Access resource material

- Abstracts
- Publications
- White papers
- Presentations
- Application tips and “How to’s”

Maximize your investment

- Extract the most from your exciting technology investment
- Showcase your institution
- Promote yourself, your clinical innovation, and your institution



How to get started on NetForum

Registration is free and open to all. Simply visit our NetForum site at www.philips.com/netforum and click on “Register.” All the privileges of membership in the NetForum Community will then be available to you.

Philips encourages you to contribute to the advancement of clinical excellence in NM imaging by registering as a “Community Contributor” and sharing your experiences and best practices.

How to become a NM NetForum Contributor

1. Go to www.philips.com/netforum
2. If already registered, log on to NM NetForum
3. Select “Community Contributors” in the left-hand menu and click on “Become a Contributor.” Once approved, a Philips NetForum representative will contact you to review the tools you’ll use to generate and post publications.

Note: The NetForum support staff will gladly edit and post contributions on your behalf for any user. Please use the NetForum “contact us” feature for more information.

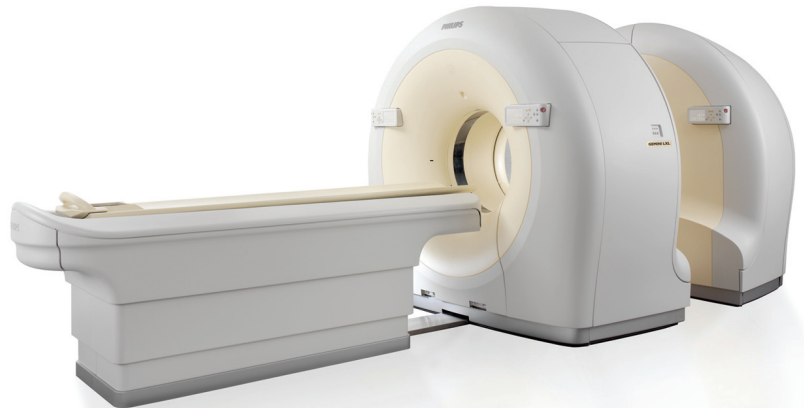
Premium Performance Made Affordable New! GEMINI LXL

Never before has premium imaging performance from Philips been so accessible to such a wide range of health care operations. With the new GEMINI LXL, we have found a way to offer in-demand technologies in a highly cost-efficient system.



Built from the ground-up this new system features state-of-the-art crystal and detector technologies that provide improved image quality and faster scans. It also offers optimized system sensitivity for oncology imaging (diagnosis, staging, and treatment), as well as cardiac and neuro imaging. High-definition PET reconstruction and image processing work to enhance image quality. The system even offers 4D PET/CT imaging to heighten accuracy by managing patient motion. The Philips GEMINI LXL is designed to fit into more places with ease, especially into today's tighter healthcare budgets

The GEMINI LXL was first launched earlier this year at ECR in Vienna, Austria and then globally at the Society of Nuclear Medicine meeting in Salt Lake City in June. The first installation is at Cliniche Gavazzeni Spa in Bergamo, Italy



An update regarding ACR accreditation

Earlier this year, the ACR changed its Nuclear Medicine and PET accreditation process. Forms have changed and the procedure for submitting SPECT phantom images has been modified.

If you are going to apply for Nuclear Medicine or PET accreditation use the links at this site:

www.acr.org/accreditation/nuclear/qc_forms.aspx

Failure to use the correct forms may result in a delay of the accreditation process.

Acquisition protocols based on the updated requirements for Jaszczak phantom imaging are included in Version 2.0 software for BrightView X and BrightView XCT systems. The protocol is called ACR SPECT and can be found under the QA tab.

Technical update

Unexpected motion seen in Cardiac SPECT projection images

Each month, the customer care center receives a number of calls from customers who are seeing unexpected motion in the cine display of cardiac projection data. The unexpected motion is observed on studies performed on dual detector cameras and appears as a shift in the vertical position of the heart between frames 32 and 33 of a 64 frame cardiac SPECT scan (or between frames 16 and 17 of a 32 frame study). This change in position of the heart reflects motion of the patient or motion of the heart without significant motion of the patient.

When a SPECT study is performed with a dual detector system, projections 1 thru 32 (or 16) are acquired from one detector and frames 33 thru 64 (or 17 thru 32) are acquired from the other detector. Hence frame 1 and 33 are acquired at the same point in time, and frames 32 and 64 are acquired at the same time. In a 15 minute acquisition, frame 32 is actually acquired 15 minutes later than frame 33. Any motion that occurs in the course of the acquisition is most apparent between the frames that are temporally separated by the most time.

Patient motion is easily understood, but motion of the heart without obvious patient motion can also occur. The phenomenon of motion of the heart without obvious patient motion is described as cardiac creep and has been documented by a number of authors.

Cardiac creep is a form of gradual internal heart motion. Cardiac creep is most pronounced when post-exercise images are acquired soon (e.g., 5-10 minutes) after exercise. When a patient is exercising the lungs are expanded, which causes a shift downward of the patient's heart. When the patient is at rest, after the lungs are no longer expanded, the patient's heart then ascends to its normal location in the chest.¹

Cardiac creep is more commonly seen in 201 Tl stress studies since imaging usually starts soon after injection to complete the acquisition before redistribution. However, cardiac creep can be seen in any imaging where lung expansion is changing over the course of the acquisition resulting in an internal shift of the heart. For example, if the patient experiences anxiety when first placed under the camera, their breathing may be deep causing the lungs to be expanded; then, as the patient relaxes during the study, their breathing returns to normal, resulting in the gradual upward movement of the heart.¹

To minimize cardiac creep

- Delay the start of acquisition if the patient is still breathing deeply (if possible)
- Encourage the patient to maintain a regular pattern of breathing throughout the entire imaging process

To minimize other types of motion, make the patient as comfortable as possible and emphasize the importance of remaining still during the acquisition.

When motion does occur, the best mitigation is motion correction software, currently available as part of AutoSPECT+ on JETStream Workspace or AutoSPECT Pro on EBW-NM.

References:

1. Burrell, S MD, MacDonald, A Artifacts and Pitfalls in Myocardial Perfusion Imaging. Journal of Nuclear Medicine Technology, 2006 4: 193-211

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If you have a question or concern that you would like to see answered, please write us at pointsource@philips.com

Please note that this method of communication is not a means for service or regular support issues.
Not all questions or concerns will be addressed in the newsletter but all will be answered.

Please visit www.philips.com/nuclearmedicine



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