Lantheus Presentations at the European Association of Nuclear Medicine Annual Meeting Showcased Artificial Intelligence Data

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NORTH BILLERICA, Mass., Oct. 17, 2022 (GLOBE NEWSWIRE) -- Lantheus Holdings, Inc. (the Company) (NASDAQ: LNTH), a company committed to improving patient outcomes through diagnostics, radiotherapeutics and artificial intelligence solutions that enable clinicians to Find, Fight and Follow disease, showcased artificial intelligence (AI) data at the 2022 European Association of Nuclear Medicine (EANM) Annual Meeting in Barcelona, Spain.

“PYLARIFY AI has the potential to contribute meaningful insights to inform treatment selection and monitoring in prostate cancer. Our presentations at EANM highlight new data on the clinical utility of our artificial intelligence solution to assess response to prostate cancer therapy,” said Etienne Montagut, Chief Business Officer, Lantheus. “Lantheus continues to be a leader in harnessing the power of AI and machine learning to inform clinical decisions, and support our mission to Find, Fight and Follow disease to deliver better patient outcomes.”

A summary of the data presented is included below.

- In an oral presentation, the Company reviewed the results from a retrospective analysis using aPROMISE to evaluate PSMA PET/CT scans, pre- and post-androgen deprivation therapy, of men with treatment naïve castration sensitive prostate cancer. The results demonstrated that a change in automated PSMA scores in bone and lymph nodes is strongly associated with PSA response. The analysis also indicated that a quantitative automated PSMA-score may assess treatment response in bone, which is not feasible with conventional imaging.[1] This presentation was chosen as a top-rated oral presentation within the scientific program at EANM.
- In a poster presentation, the Company shared the results from an evaluation of the volumetric expression of PSMA in prostate tumor in PET/CT against MRI PIRAD-Index 4 and 5, in patients who underwent radical prostatectomy. The volumetric expression of PSMA was quantified into an automated PSMA score, which PSMA score was calculated using the PROMISE criteria. The automated PSMA score was observed to be significantly lower in patients with PIRAD score-4 (Median=21.40; 95% CI 10.76 - 40.65), compared to that observed in PIRAD score-5 (Median=37.00; 95% CI 24.68 - 56.05), p=0.014.[2]
- In a second poster presentation, the Company highlighted the results from a study evaluating a novel methodology for adaptive lesion segmentation in PSMA PET/CT that employs a threshold based on a decreasing percentage of maximum Standard Uptake Value (SUVmax), with the percentage dependent on SUVmax and blood-pool uptake of PSMA PET/CT imaging. The study concluded that the adaptive threshold can be applied to improve reproducibility and robustness when quantifying tumor burden in PSMA PET/CT images. The proposed adaptive thresholding for automatic lesion segmentation demonstrated significantly more accurate segmentations than the conventional method, achieving an improved precision for all lesion types and a similar recall, as compared to the conventional method.[3]

About PYLARIFY AI™
PYLARIFY AI™ employs deep learning algorithms that allow healthcare professionals and researchers to perform standardized quantitative assessment of PSMA PET/CT images in prostate cancer. Through rigorous analytical and clinical studies, PYLARIFY AI has demonstrated improved consistency, accuracy and efficiency in quantitative assessment of PSMA PET/CT. An FDA-cleared medical device software, PYLARIFY AI is commercially available in the United States.

PYLARIFY AI™ Indications for Use
PYLARIFY AI is intended to be used by healthcare professionals and researchers for acceptance, transfer, storage, image display, manipulation, quantification and reporting of digital medical images. The system is intended to be used with images acquired using nuclear medicine imaging using PSMA PET/CT. The device provides general picture Archiving and Communications System (PACS) tools as well as a clinical application for oncology including marking of regions of interest and quantitative analysis.

PYLARIFY AI Warnings and Precautions
The user must ensure that the patient’s name, ID, and study date displayed in the patient section correspond to the patient case. The user must ensure the review of the image quality and quantification analysis results before signing the report. User must review the images and quantification results in the report to ensure that the information saved and exported is correct. The quantification analysis results provided by PYLARIFY AI are intended to be used as complementary information together with other patient information. The user shall not rely solely on the information provided by PYLARIFY AI for diagnostic or treatment decisions. Quantitative indexes (aPSMA Score) are only appropriate for PSMA PET/CT images. User should not select hotspots for studies with images that do not fulfill the Quality Control requirements. In such cases, user can create and sign a report indicating that the review cannot be done due to image quality deficiencies.

About Lantheus
With more than 60 years of experience in delivering life-changing science, Lantheus is committed to improving patient outcomes through diagnostics, radiotherapeutics and artificial intelligence solutions that enable clinicians to Find, Fight and Follow disease. Lantheus is headquartered in

Massachusetts and has offices in New Jersey, Canada and Sweden. For more information, visit www.lantheus.com.

Safe Harbor for Forward-Looking and Cautionary Statements

This press release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, that are subject to risks and uncertainties and are made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements may be identified by their use of terms such as "can," "continue," "may," "potential" and other similar terms. Such forward-looking statements are based upon current plans, estimates and expectations that are subject to risks and uncertainties that could cause actual results to materially differ from those described in the forward-looking statements. The inclusion of forward-looking statements should not be regarded as a representation that such plans, estimates and expectations will be achieved. Readers are cautioned not to place undue reliance on the forward-looking statements contained herein, which speak only as of the date hereof. The Company undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future developments or otherwise, except as may be required by law. Risks and uncertainties that could cause our actual results to materially differ from those described in the forward-looking statements include (i) our ability to successfully launch PYLARIFY AI as a commercial product; (ii) the market receptivity to PYLARIFY AI as a new digital application for quantitative assessment of PSMA PET/CT images in prostate cancer; (iii) the intellectual property protection of PYLARIFY AI; (iv) interruptions or performance problems associated with our digital application, including a service outage; (v) a network or data security incident that allows unauthorized access to our network or data or our customers' data; and (vi) the risks and uncertainties discussed in our filings with the Securities and Exchange Commission (including those described in the Risk Factors section in our Annual Reports on Form 10-K and our Quarterly Reports on Form 10-Q).

[1]Anand A, et.al. PROMISE-criteria inspired quantitative response in PSMA PET to androgen deprivation in patients with treatment naïve castration sensitive prostate cancer. 35th Annual Congress of the European Association of Nuclear Medicine Scientific Program, OP-060, p. 34 (Eur J Nucl Med Mol Imaging (2022) 49 (Suppl 1): S495).

[2]Wang W. et.al. Evaluation of PROMISE criteria inspired intraprostatic PSMA-score against PIRAD-Index in patients undergoing radical prostatectomy. Eur J Nucl Med Mol Imaging (2022) 49 (Suppl 1): S489.

[3]Brynolfsson J, et.al. A Novel Adaptive Approach to Automatic Segmentation of PSMA-positive Lesions in Positron Emission Tomography (PET) of Prostate Cancer. Eur J Nucl Med Mol Imaging (2022) 49 (Suppl 1): S596.

Contacts:
Mark Kinarney
Vice President, Investor Relations
978-671-8842
ir@lantheus.com

Melissa Downs
Senior Director, Corporate Communications
646-975-2533
media@lantheus.com

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