SIEMENS Healthineers

Press

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FDA Clears AIDAN Artificial Intelligence for Siemens Healthineers Biograph PET/CT Portfolio

- **New AI-powered features include FlowMotion AI, OncoFreeze AI, PET FAST Workflow AI, and Multiparametric PET Suite AI**

Siemens Healthineers has received clearance from the Food and Drug Administration (FDA) for its AIDAN artificial intelligence technologies on the Biograph family of positron emission tomography/computed tomography (PET/CT) systems, which includes the Biograph Horizon, Biograph mCT, and Biograph Vision. AIDAN is built on a foundation of patient-focused bed design and proprietary AI deep-learning technology to enable four new features – FlowMotion AI, OncoFreeze AI, PET FAST Workflow AI, and Multiparametric PET Suite AI. Siemens Healthineers PET/CT systems with AIDAN offer enhanced protection against cyber threats via *syngo* Security – a security package for general regulatory security rules that enables compliance with the Health Insurance and Accountability Act (HIPAA).

FlowMotion AI

Because each patient's body habitus and presentation of disease is different, tailoring PET/CT protocols to produce the highest-quality diagnostic imaging information possible for each patient can be difficult and time-consuming. The standard one-size-fits-all protocol lacks personalization and is often of suboptimal quality. FlowMotion AI uses continuous bed motion with ALPHA proprietary AI technology, which automatically detects anatomical structures, to recognize patient anatomy and automatically apply disease-specific protocol parameters based on individual requirements. FlowMotion AI eliminates the need for manual protocol entry and alignment. The result is standardized protocols based on indication and personalized exams based on individual patient anatomy, to help enable fast, tailored, and reproducible PET/CT exams. In this manner, FlowMotion AI expands precision medicine.

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PET FAST WorkFlow AI

Following a PET/CT scan, the technologist must sacrifice time with the patient to manually create additional data ranges beyond the system's axial images. AIDAN's PET FAST WorkFlow AI automates and simplifies post-scan tasks. It automatically performs fast image transfer and auto data export, and creates picture archive and communication system (PACS)-ready data ranges. PET FAST Workflow AI saves valuable technologist time, reduces the possibility for errors, and provides physicians with information more quickly to permit faster interpretation of the exam.

OncoFreeze AI

Patient respiratory motion during a PET/CT exam compromises image quality and could negatively impact patient outcomes. The standard solution for respiratory motion management is not performed during every PET/CT exam because it requires a longer scan time as well as a respiratory belt – which is awkward, time-consuming, and unpopular with patients. OncoFreeze AI uses ALPHA technology and algorithms to allow acquisition of PET/CT images that are virtually free of respiratory motion utilizing 100 percent of the acquired PET counts, with no additional time added to the exam and no respiratory belt.

Multiparametric PET Suite AI

In PET/CT, standard uptake values (SUVs) alone may not be ideal for determining disease status, as patient diet and weight fluctuations result in variable SUV values. Multiparametric PET provides those coveted absolute numbers, but the exam can be cumbersome, and the requirement of arterial blood sampling can cause pain and put patients at risk. Multiparametric PET Suite AI offers a fully automated workflow that extracts the arterial input function automatically from acquired PET/CT images, eliminating the unnecessary pain and risk associated with arterial lines and sampling. In addition to the standard SUV image, Multiparametric PET Suite AI provides clinical information for the patient report in the form of metabolic rate and distribution volume, further expanding precision medicine.

"The addition of AIDAN to the Siemens Healthineers Biograph PET/CT portfolio represents a significant advancement in AI application at the scanner level," said John Khoury, Vice President of the Molecular Imaging business at Siemens Healthineers North America. "With

AIDAN, we use robust learning technology to accelerate and improve the planning, acquisition, and interpretation of PET/CT."

For further information on the AIDAN artificial intelligence technologies, please see siemens-healthineers.us/aidan

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Siemens Healthineers AG (listed in Frankfurt, Germany: SHL) is shaping the future of Healthcare. As a leading medical technology company headquartered in Erlangen, Germany, Siemens Healthineers enables healthcare providers' worldwide through its regional companies to increase value by empowering them on their journey towards expanding precision medicine, transforming care delivery, improving the patient experience, and digitalizing healthcare. Siemens Healthineers is continuously developing its product and service portfolio, with AI-supported applications and digital offerings that play an increasingly important role in the next generation of medical technology. These new applications will enhance the company's foundation in in-vitro diagnostic, image-guided therapy, and in-vivo diagnostics. Siemens Healthineers also provides a range of services and solutions to enhance the healthcare provider's ability to provide high-quality, efficient care to patients. In fiscal 2019, which ended on September 30, 2019, Siemens Healthineers, which has approximately 52,000 employees worldwide, generated revenue of €14.5 billion and adjusted profit of €2.5 billion.
Further information is available at www.siemens-healthineers.com.