Radiologists at the University of Innsbruck rely on SEARCH Lung CT from contextflow

contextflow SEARCH Lung CT detects, visualizes and quantifies lung anomalies

VIENNA, AUSTRIA, February 8, 2022 /EINPresswire.com/ -- Almost every second computed tomography (CT) scan of the lung shows abnormal findings. Most of the time these are pulmonary nodules, one possible indicator of cancer. But which findings are harmless and which need to be checked and treated? Assessing lung CTs is no simple task, but radiologists are increasingly finding support in new

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technologies. contextflow SEARCH Lung CT is a clinical decision support system that detects, visualizes and quantifies lung anomalies and pulmonary nodules. "In detail, it provides location and extent of changes and heat maps for six image patterns, as well as visualizations and measurements of detected pulmonary nodules. In addition, the tool analyzes and classifies 19 image patterns in selected regions of a scan; retrieves visually-similar, expert-verified reference cases; and provides relevant links to literature, guidelines and differential diagnoses," explains Markus Krenn, Chief Product Officer at contextflow.

> " The platform is very clearly structured with references to current literature, including pattern description and a list of possible differential diagnoses."
>
> *Dr. Gerlig Widmann, Radiologist, Medical University of Innsbruck*

A deep learning-based solution to simplify daily work

Since October 2021, a team of radiologists led by PD Mag. Dr. Med. Univ. Gerlig Widmann, Managing Senior Physician at the University Department of Radiology at the Medical University of Innsbruck, has been using SEARCH Lung CT. "We expect significant added value for our work and the patients, particularly on account of the system's ability to quantify lung anomalies. The software provides us with percentages of pathological changes, visualizes the dynamics of these changes over time and suggests reference cases with similar findings and

diagnostic literature for differential diagnosis," says Dr. Widmann. The University Department of Radiology at the Medical University of Innsbruck is one of the largest institutions for radiological diagnostics in Austria and treats the vast majority of lung patients in Tyrol in close cooperation with the departments of oncology, thoracic surgery, pneumology and the lung department of Natters Hospital. The first experiences with SEARCH Lung CT have been thoroughly positive, as the managing senior physician continues: "The segmentation of abnormalities such as shadows, reticular patterns or emphysema works extremely well. The platform is very clearly structured with references to current literature, including pattern description and a list of possible differential diagnoses. You can clearly see that there is a valid reference data set behind the AI."
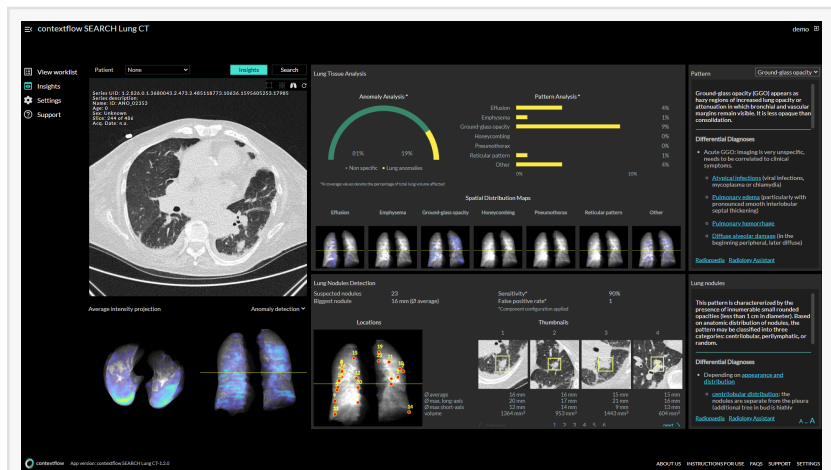
Last but not least, Dr. Widmann also expects to be able to establish a diagnosis more quickly: in a recent study at the Medical University of Vienna, the average report reading time was 31% shorter when SEARCH Lung CT was available for use*. These findings were true for both young and experienced radiologists.
*Publication forthcoming

Integration with Dedalus DeepUnity PACS ensures smooth workflow

contextflow SEARCH Lung CT identifies 19 different patterns in Lung CTs, including those related to COVID-19.

PD Mag. Dr. Med. Univ. Gerlig Widmann, Managing Senior Physician at the University Department of Radiology at the Medical University of Innsbruck

"The implementation of SEARCH Lung CT was simple, quick and straightforward. The cooperation between our IT and contextflow was exemplary," says Dr. Widmann happily.

The clinical decision support software is seamlessly integrated into the hospital's Dedalus DeepUnity PACS. A radiologist wishing to use SEARCH Lung CT only has to click one button to

seamlessly continue working with the tool. The images are then automatically evaluated and transferred to the report. "It's all very simple. So far we are very satisfied with SEARCH Lung CT," concludes Dr. Widmann.

About contextflow

contextflow is a spin-off of the Medical University of Vienna (MUW) and European research project KHRESMOI, supported by the Technical University of Vienna (TU). Founded by a team of AI and engineering experts in July 2016, the company has received numerous awards; most recently, contextflow was named a Born Global Champion 2021 by the Austrian Chamber of Commerce. SEARCH Lung CT is CE Marked and available for clinical use within Europe under the new MDR. Visit contextflow.com for more information.

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