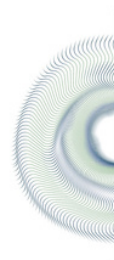


USER REPORT



RADIOLOGIE
Limburg | Weilburg

A DECISIVE STEP INTO THE FUTURE

*With ADVANCE Chest CT,
Radiologie Limburg-Weilburg
optimizes its diagnostics and
ensures greater precision and
efficiency*

Radiologie Limburg-Weilburg is a group practice with three locations in Limburg, Weilburg and Weilmünster. With a young, innovative team of ten radiologists, around 50,000 X-rays and 10,000 CT examinations are performed each year. The practice relies not only on modern equipment technologies, but also on software-supported optimization - in particular through artificial intelligence (AI). Since August 2024, the radiologists have been using ADVANCE Chest CT from contextflow, an AI-supported software for analyzing chest CTs.

Dr. Boris Schulz, specialist in radiology and Managing Director of Radiologie Limburg-Weilburg, describes the challenges his team faces: "The number of examinations and their complexity have increased massively in recent years. We have to do more and more in less and less time - while maintaining a high level of quality."

This is particularly essential in chest CT diagnostics. The images make it possible to detect the smallest changes at an early stage - whether in high-risk patients with suspected lung cancer or in patients who have already been diagnosed with the disease. "Precision is particularly important when monitoring progress. Changes can be observed over longer periods of time, and often it is not just individual lesions that need to be analyzed, but several," explains Dr. Schulz. This is exactly where AI comes in.

CONTEXTFLOW.COM



Dr. Boris Schulz, Managing Director Radiologie Limburg-Weilburg

AI AS A SECOND LOOK - MORE SAFETY AND LESS EFFORT

The Limburg-Weilburg radiology department uses ADVANCE Chest CT as a second reader. "We look at the CT study, form our opinion and compare it with the AI result - practically like a double diagnosis, which increases safety," says the radiologist.

He sees the quantitative analysis as a particular advantage of the software: volume measurements of nodules or changes in the lungs can be recorded precisely and longitudinally - i.e. over time. "AI relieves us of the tedious work of manual measurement. Our task is to classify structures correctly and recommend therapeutic management. The AI measurements are of very high quality because they represent a real volume - this is more precise than the usual measurement in two or three axes," emphasizes Dr. Schulz.

Another crucial point in practice is the low rate of false positives. "A common problem with AI solutions is that they generate too many unnecessary suspicions. This costs time and is frustrating. Initially, we also had this concern with ADVANCE Chest CT. But the rate of false positives is so low that it doesn't bother us on a day-to-day basis," praises the radiologist.

SEAMLESS INTEGRATION AND HIGH ACCEPTANCE

The implementation of the AI software went smoothly. "The exchange between our IT and contextflow was straightforward. We defined our workflows, and contextflow integrated the solution directly into the PACS. The training required was minimal, and the interface and diagnostic reports are self-explanatory," says Dr. Schulz.

Acceptance among colleagues and medical staff is also high. "Many are enthusiastic because it simply takes work off our hands. Even patients are now asking whether we use AI. When we then tell them that it is an integral part of our diagnostics, they are often pleasantly surprised."

An example from practice shows the potential of AI: a patient came for a lung CT scan because she had been diagnosed with lymph node disease. Dr. Schulz noticed a six-millimeter nodule. According to the guidelines, this should be checked again after six months. Four weeks later, however, the patient received a PET-CT scan, which showed a worrying change. The decision was made to remove the lump - the result: an adenocarcinoma, an early form of lung cancer.

Three months later, the practice introduced ADVANCE Chest CT, and Dr. Schulz had the old data set analyzed. The software recognized the nodule correctly, measured it precisely and assigned it a high degree of malignancy based on a comparison with a comparative

database from contextflow. "If I had already had the AI solution back then, I would probably have advised the patient to undergo invasive clarification immediately. The lump had already formed a small metastasis. Cases like this show how valuable this technology can be," concludes Dr. Schulz.

RELIABILITY IN EVERYDAY WORK

The collaboration with contextflow runs smoothly. "The software runs silently in the background, updates come regularly, and we haven't had any failures or errors so far," says the radiologist. The AI also copes well with complex and heterogeneous data sets - for example, when examinations from CTs from different manufacturers or with different radiation doses are available.

Another aspect is the automation of the workflow. The CT images are automatically transmitted to contextflow, analyzed and fed directly back into the PACS so that the radiologists can start reporting immediately. "There is no automatic text transfer in our written reports because we use digital speech recognition. However, the quantitative data from the AI analysis is a valuable addition that we can simply transfer to the dictation," says Dr. Schulz.

CLEAR ADDED VALUE FOR RADIOLOGISTS AND PATIENTS

The integration of AI into radiological diagnostics makes everyday work considerably easier. ADVANCE Chest CT supports radiologists efficiently, ensures a consistently high quality of findings and can help to make an earlier diagnosis in crucial cases. AI-supported analysis offers considerable relief and additional certainty, particularly in the case of complex chest CT findings. "I am convinced that AI will become an integral part of modern radiology - not as a replacement for the doctor, but as a valuable addition," summarizes Dr. Schulz. The positive feedback from the team and patients confirms that the decision to use ADVANCE Chest CT was an important step towards future-proof radiology.