Study: 1 in 552 CXR Studies Feature Clinically Significant Diagnostic Errors

At ECR2022 Oxipit will present a retrospective validation study from internal ChestEye Quality performance data at more than 10 pilot deployment institutions.

VILNIUS, LITHUANIA, July 12, 2022 /EINPresswire.com/ -- For the annual European Congress of Radiology meeting in Vienna, [Oxipit](link) has conducted a retrospective validation study from internal [ChestEye Quality](link) performance

ChestEye Quality Workflow

data at more than 10 pilot deployment institutions. The study concludes that 1 in 552 (0.18%) chest X-ray studies reported by a radiologist include clinically significant diagnostic mistakes. The vast majority - 78.46% - of the errors are missed findings of pulmonary nodules and lymphadenopathy.
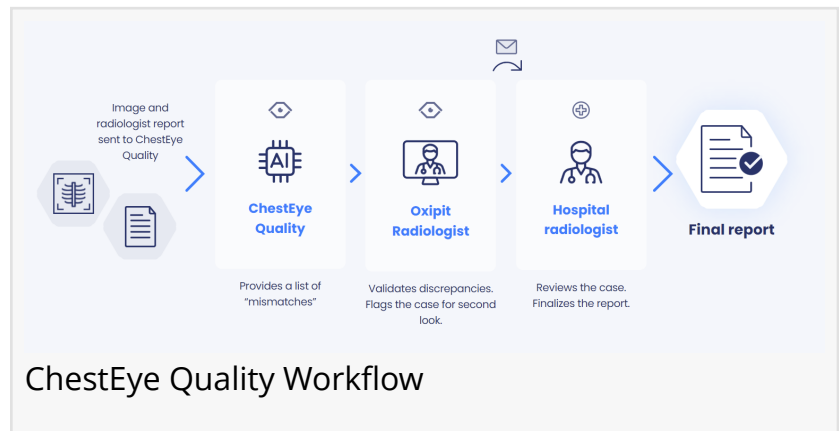
> While the rate of missed findings varies between medical institutions, the wide geographic span and multiple types of medical institutions provide a real-world benchmark for radiologist performance."
>
> *Chief Medical Officer Dr Naglis Ramanauskas*

More than 186.000 CXR reports were analyzed in the scope of the study. The studies originate from multiple geographic regions, spanning institutions from Western, Eastern and Southern Europe, as well as Latin America. The study scope includes primary care clinics, teleradiology service providers and tertiary hospitals.

The study highlights only clinically significant diagnostic errors, focusing on the missed findings which could have a direct impact on the patient outcomes over the treatment course.

In the study, the rate of clinically significant missed findings ranges from 1 in 1305 (0.08%) to 1 in 109 (0.92%) depending on the type of the institution, as well as the general aspects of the population served.

The missed findings - indicated by Chesteye Quality - were later validated by the radiologists at

the medical institution.

"While the rate of missed findings varies between medical institutions, the wide geographic span and multiple types of medical institutions provide a real-world benchmark for radiologist performance. With ChestEye Quality serving as a safety net, such errors can be eliminated with nearly no impact on the radiologist workflow" - says Chief Medical Officer at Oxipit Dr Naglis Ramanauskas.

The study was performed by analyzing ChestEye Quality data at the software deployment sites. ChestEye Quality analyzes chest X-ray images and corresponding radiologist reports. If the software detects a mismatch, it notifies the radiologist to take a second look at the study.

A keynote on ChestEye Quality performance by Oxipit Chief Medical Officer Dr Naglis Ramanauskas will be presented in the Evaluation of artificial intelligence (AI) systems session at the ECR 2022 meeting on July 16, 08:00 - 09:00 CEST.

Chief Medical Officer Naglis Ramanauskas

The Oxipit study also indicated that an average of 30% of all studies were identified as normal with high confidence, meaning that they could be autonomously reported on by the [ChestLink](#) AI software. The range of high-confidence normal studies varied from 17% to 47% depending on the type of the medical institution. The study further solidifies ChestLink performance with up to 99.8% sensitivity.

ChestLink is the first CE-marked autonomous AI application, which can produce final healthy patient reports without any involvement from a human radiologist. The platform only reports on studies, where it is highly confident that the CXR image features no abnormalities. The study highlights that ChestLink can autonomously report on up to a half of the radiologist's work scope depending on the type of the medical institution.

At ECR 2022 an independent third-party validation study on ChestLink performance on Finnish

healthcare patient data will be presented by Prof Osmo Tervonnen from Oulu University Hospital in the Artificial intelligence (AI) in chest imaging: Part 1 session on July 13, 2022, 13:00 - 14:30 CEST.

During the ECR annual meeting Oxipit will showcase ChestEye Quality and ChestLink products at booth AI-02.

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