

AI based Rapid on-site cytology solution for EBUS Bronchoscopy

Mumbai/London/Basel, July 30, 2019 – [AIRA MATRIX](#), [HOLMUSK](#) and [CURO-HEALTH](#) are pleased to announce partnership to develop an Artificial Intelligence based image analysis solution for Rapid On Site Evaluation (“ROSE”) of EBUS-TBNA samples in collaboration with Dr. Suman Paul, Specialist Registrar in Respiratory Medicine, Warrington and Halton Hospitals NHS Foundation Trust. First results will be presented at the Intelligent Health AI 2019 conference in Basel, Switzerland on September 11 and 12, 2019. This solution is meant to develop a device to provide rapid on-site cytology for bronchoscopy specimens to aid the tissue diagnosis of lung cancer.

EBUS-TBNA (Endobronchial Ultrasound Guided Transbronchial Needle Aspiration) is an important technique in the diagnosis of respiratory cytology specimens. This is a minimally invasive procedure for diagnosis and staging of mediastinal lymph nodes in lung carcinoma.

Conventionally, the Physician cannot confirm the adequacy of aspirated samples during the procedure. The results on adequacy are available only after 5-7 days once the Pathologist has processed and reported the samples. In case the sample is reported as inadequate, the bronchoscopy needs to be repeated, thus increasing turn-around time for diagnosis, risk of morbidity as well as cost to the patient. ROSE is a technique for rapidly assessing the adequacy of the aspirated samples simultaneously with the bronchoscopy so that if necessary, the procedure can be repeated in the same sitting. However, the availability of a trained pathologist in assessing aspirated samples is a limiting factor for widespread use of this technique.

The developed solution applies Artificial Intelligence techniques to automatically and quickly assess cytology samples on-site for adequacy of the aspirate. In the next phase, the solution is expected to aid physicians in diagnosing lung carcinoma. This solution will increase diagnostic yield of bronchoscopy, benefit patients and care givers by avoiding repetition of the invasive procedures and reduce the turnaround time for lung cancer diagnosis and staging.

“We are excited with this opportunity to develop a patient centric solution for lung cancer patients and we look forward to extending the solution into the diagnostic space,” said Chaith Kondragunta, CEO, AIRA MATRIX. “AIRA Matrix is at the forefront in developing deep learning based solutions for the healthcare and pharmaceutical domains and forums like the Intelligent Health AI 2019 are a great opportunity to showcase our expertise”.

Stefan Suter, founder and CEO of Curo-Health said, “In today’s complex world and sophisticated technologies applied, the best results are produced when rallying different skill sets towards a common goal. This collaboration between industry conglomerate and academic partners is a great example of this; one we should make happen more often.”

“This project is an important first step to support cancer patients at NHS with faster diagnosis and treatment. Our aim in future is further develop this technology to allow decision support for personalized treatment choices.” Said Nawal Roy, Founder and CEO of Holmusk.

The Intelligent Health AI is the world’s leading AI in medicine summit. The event brings together a unique ecosystem of clinicians, technologists and C-Suite executives with a vision of creating a future where AI will revolutionise healthcare. Further information about the summit can be found at <https://intelligenthealth.ai/>.

About AIRA MATRIX

AIRA Matrix provides Artificial Intelligence applications for preclinical and clinical pathology.

The company’s decision support solutions help improve work flow efficiency and increase diagnostic accuracy in research labs, drug discovery studies and clinics.

Offerings from the company’s deep learning platform AIRAVAT include:

- Self-learning tools for routine detection and annotation tasks
- Pre-built deep learning based feature identification Applications
- Workflow efficiency solutions for histomorphometry, tissue triage, grading and inferencing
- Ready networks for easy DIY deep learning for the pathologist

The platform is vendor-neutral, supports collaboration across teams and can be easily integrated with other digital laboratory solutions.

For more information, visit: www.airamatrix.com

About HOLMUSK

Holmusk is a data science and digital health company dedicated to addressing how the world confronts chronic disease. Its mission is to build the world’s largest real-world evidence (RWE) platform for mental health and establish data as a core utility in healthcare. Holmusk’s RWE platform provides the capacity for great changes in the provision of care and research into new treatments through machine learning, deep learning and digital tools. Holmusk’s proprietary modelling platform leverages scientific research and digital healthcare data to inform predictive algorithms and provide actionable insights for personalized medicine. Its innovative, scalable and cost-effective digital behaviour change programs are designed to nudge people towards better health.

Holmusk has been selected as a 2019 Technology Pioneer by the World Economic Forum.

For more information, visit: holmusk.com

About CURO-HEALTH

Curo-Health headquarter is in Basel-area, Switzerland and is the license holder for Holmusk products in Europe. Curo-Health is executing projects to increase efficiency in health care. We focus on delivering patient relevant outcomes based on evidence and data at lower costs. Our goal is to transform today's health system into a value-based care system. Our activities span across Europe and Asia.

For more information, visit: www.curo-health.com

About Dr. Paul – NHS Foundation Trust in North West of England.

Dr Suman Paul, MBBS, MD, MRCP is a specialist registrar in Respiratory medicine currently working in Warrington and Halton Hospitals NHS Foundation Trust in North West of England. He has completed his post graduate training in pulmonary medicine from Kolkata, India and subsequently moved to UK for higher specialist training. His sub-speciality interests includes interventional pulmonology and lung cancer. He is the champion for the Clinect challenge where he worked with the technology partners on the novel concept of using AI for rapid on site cytology in lung cancer diagnosis.