

#HIMSS23Europe: AI Lung Cancer Diagnosis Transforms Treatment



Vaclav Potesil is the Chief Business Officer and Founder of Optellum, an Oxford-based company dedicated to transforming lung cancer treatment.

Unfortunately, lung cancer is the most common type of cancer and the leading cause of cancer deaths in the world, claiming more lives than breast cancer and prostate cancer combined. However, with the rapid advancements in diagnosis, there is a higher chance of saving more lives. The key lies in detecting the disease at its earliest stage, when it is still confined to a small area.

Optellum has identified a group of 10 million patients worldwide who have suspicious lung lesions detected. The vast majority of these are pre-symptomatic, detected through various scans, including cardiac scans, emergency scans, and even stroke scans.



The challenge is that only half of these patients are ultimately diagnosed with early-stage lung cancer. The problem is that the diagnostic process involves years of multiple follow up imaging scans and procedures, leading to many patients bouncing back and forth, delays in treatment, and unfortunately six out of ten of them slip through the cracks.

Optellum has come up with a solution to address these challenges. Optellum has implemented a patient discovery system employing artificial intelligence and natural language processing. This platform identifies and tracks at-risk patients, ensuring they are followed in time to diagnose the signs of lung cancer early. By providing decision support tools, Optellum helps physicians in making optimal clinical management decisions. Importantly, this software has received FDA approval.

Now, why are Optellum's offerings important to health executives and IT executives?

Firstly, there is a significant return on investment (ROI). Optellum's AI-based patient discovery system applies natural language processing to bring all these suspicious patients to the attention of surgeons. It generates an increased volume of downstream procedures, such as some of the

most profitable procedures in healthcare, which implies more financial benefits for providers.

Secondly, through using Optellum's AI radiomics score physicians are better equipped to make informed management decisions. This is what puts Optellum in the elite with maybe five AI companies reimbursable in the U.S. by the Centers for Medicare and Medicaid Services (CMS). With CMS providing coverage for 100 million Americans, Optellum is helping to drive the right patients into precision treatment.

As the push for early detection increases, a rising number of patients will undergo lung cancer screenings. The most common finding for all these patients is the presence of a nodule, which prompts patients to have a CT scan. Not only is Optellum helping to discover the patients, but also provides predictive insights. For example, the risk of recurrence before surgery helps to guide appropriate neoadjuvant therapies, ensuring patients receive the right treatment plan. To achieve this Optellum has established partnerships with some of the most powerful organisations in the industry.

Optellum has provided a breakthrough AI platform to diagnose and treat early-stage lung cancer; they hope to witness ongoing developments in the field as they move forward.

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