

## What We Built, What Worked, and What Didn't

### 影像、細胞、臨床：胸腔科能不能智慧醫療

Artificial intelligence in chest CT interpretation significantly improves efficiency, with studies showing a reduction in interpretation times for radiologists, largely by automating nodule detection, segmentation, and quantification. AI tools detect, quantify, and track lung nodules, analyze pulmonary embolism, and assess interstitial lung disease, serving as a second reader to improve accuracy. Key applications and benefits of AI in chest CT include: 1). Efficiency & Productivity: AI automations such as GE HealthCare's True Fidelity or similar cloud-based systems can significantly reduce routine reading times, allowing radiologists to focus on complex cases; 2). Nodule Detection & Management: AI-based solutions help in identifying, measuring, and classifying lung nodules, with some AI-multidisciplinary team (MDT) collaborations reducing misdiagnosis rates to below 5%; 3). Rapid Triage: Algorithms can flag urgent findings like pneumothorax or pulmonary embolism in real-time for urgent review; and 4). Quantification. Despite high sensitivity in many applications, AI remains a tool to assist rather than replace, with final interpretation required by a qualified medical professional.