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## **AI algorithm can triage routine abdominal CT exams**

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A Swiss team will describe how an artificial intelligence (AI) algorithm can identify acute findings on routine abdominal CT scans, enabling radiologists to prioritize reading of these urgent exams.

There is, without question, ongoing hype over the use of AI and machine learning in radiology, said presenter Dr. David Winkel from University Hospital Basel.

"With our project, we wanted to overcome this hype and showcase a practical use of artificial intelligence in a clinical setting, demonstrating that this technology has true benefits for patients," Winkel told *AuntMinnie.com*.

Currently, identification of truly urgent abdominal CT cases in the radiological worklist is suboptimal. While approximately 40% of all inpatient imaging exams are designated by referring physicians as needing immediate attention, only a fraction of these studies wind up needing prompt communication and therapeutic workup, according to the researchers. The time from patient admission to initiation of surgery is a major determining factor for survival in patients with gastrointestinal perforations, however, so it's critical to recognize these cases as early as possible.

The researchers evaluated a deep learning-based triage software application -- version 1.4 of the Aidoc Acute-Abdomen Package (Aidoc Medical) -- for identifying free gas, free fluid, and mesenteric fat stranding on abdominal CT scans. The algorithm demonstrated a high diagnostic accuracy for autonomous detection of pathological abdominal findings, according to Winkel.

"In future applications, the algorithm could be able to support the radiology workflow by flagging suspicious cases in the worklist," he said. "This approach may be expanded to other critical findings, and detected findings can be relayed to clinical departments immediately, thus potentially reducing time to therapy and time to report completion."

Sit in on this Thursday presentation to learn more.



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