

# FUTURES OF ARTIFICIAL INTELLIGENCE IN MEDICAL IMAGING

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## **Abstract:**

The introduction of AI in health care has generated speculation on the futures of "deep medicine," including hyperbolic media reports on imminent "algorithmic doctors" or "robot radiologists." Additionally, AI has become a prominent issue in policy discourses, which steer the direction (and funding) of AI developments in medicine. The field of medical imaging (specifically radiology and pathology) is often positioned as an exemplary domain for the advantageous deployment of AI applications in medical diagnosis and prognosis. Recently, STS researchers have started to pay careful attention to the specific contexts and infrastructures in which these emerging technologies are envisioned, developed, justified and used. Yet, more research is urgently needed to better understand the dynamics and effects of (visions of) AI, including machine learning and deep learning, in medical imaging.

We invite contributions that focus on questions regarding AI and automated processes in medical imaging, such as:

- How do medical professionals, policy makers and patients perceive AI and how can we better understand the development of visions of and expectations about AI in medical imaging?
- How does the use of AI in medical imaging impact diagnosis, access to and the provision of care? And how does it reframe, problematize, and visualize disease and disease symptoms?
- What sorts of ethical and political issues are raised by the use of AI in medical imaging? What future promises and imaginaries are inscribed in its applications, and by whom are they designed?
- How does the integration of AI change ways of working and professional relationships between, for example, radiologists, radiology assistants, computer scientists, and hospital managers?
- What sets AI in medical imaging apart from the use of AI in the analysis of other forms of medical data? What does the quantification of visual information mean in terms of medical knowledge generation?
- Computer-aided diagnosis in image-based medicine is not completely new. What can we learn from past efforts to develop and use these technologies?

The range of potential methods to study these questions is vast, and all are welcome in this track. The convenors aim to foster dialogue and potential future collaborations. In addition to the individual presentations, we will identify cross-cutting themes as the basis for discussion during the panels.

**Key words:**

medical imaging, artificial intelligence, algorithmic imaginaries