Blog for Infinx

Friend or Foe: The Future of Artificial Intelligence in Radiology

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During our recent successful appearance at the RBMA PaRADigm conference in Chicago, we observed two of the more popular presentations offered perspective on a simmering controversy in the radiology world: the emerging impact of artificial intelligence (AI) technology upon everyday medical diagnoses. Specifically, will computers eventually render human radiologists obsolete?

In the wake of the astounding milestone performances of their AI supercomputers—from dominance over chess grandmasters to competing against live contestants on 'Jeopardy'—IBM is touting the potential of its Watson AI engine to scan and evaluate the results of medical imaging procedures – with product teams from the other tech giants and assorted other vendors in fast pursuit. The key is *deep learning*, or a series of algorithms designed to mimic human cognitive decision-making, analyzing visual patterns to detect abnormalities in x-ray, CT and MRI scans, such as clots in pulmonary arteries.

Radiologists: An Endangered Species?

Will these technological "advancements" force radiologists to look for new lines of work? Not so fast. AI still has multiple hurdles to clear before it sends human radiologists the way of the dodo bird:

- As a first-of-its-kind application, as of now there is approval process in place to evaluate imaging AI products for compliance with FDA 510 (k) safety regulations.
- In the case of radiology, the smart learning necessary to get an AI application fine-tuned and fully up-to-speed involves scanning and analyzing vast multitudes of sample images (IBM's Watson, for example, is still catching up on an estimated backlog of 30 *billion* images before it may be considered "ready for prime time").
- Even if AI applications someday boast a 99 percent accuracy rate, that one percent of misread automated diagnoses may trigger a slew of potentially landscape-altering lawsuits.
- Referring physicians will likely be slow to adopt computer-generated imaging diagnoses without the human element from a seasoned radiologist – communication, image optimization, quality assessment and more.

Don't Fear the Future

Over the foreseeable years, AI and human radiologists won't become an either/or proposition. AI applications will continue to become a primary tool of computer-aided detection (CAD), a symbiosis where AI automation empowers radiologists to focus on tasks which require the human-centric intelligence computers still won't deliver - a relationship greater than the sum of its parts.

With the future of AI in radiology still largely undefined, Infinx is already consulting with AI specialists about incorporating this new technology into our advanced RCM solutions. In the meantime, as one chief of radiology was quoted in a 2016 Medscape article, "Any radiologist who can be replaced by a computer should be".