Radiology residents benefit from education in AI

By Erik L. Ridley, AuntMinnie staff writer

November 6, 2020 -- Fourth-year radiology residents benefitted from a pilot program that included formal instruction in artificial intelligence (AI) and machine learning (ML) as well as collaboration with data scientists on developing models, according to a special report published online November 4 in *Radiology: Artificial Intelligence*.

Under a data science pathway, three senior radiology residents from Brigham and Women's Hospital (BWH) had the opportunity to immerse themselves in AI/ML via a flexible schedule of educational, experiential, and research activities at the Massachusetts General Hospital & BWH Center for Clinical Data Science.

During the program, co-first authors Dr. Walters Wiggins, PhD, and Dr. M. Travis Caton were exposed, along with Dr. Kirti Magudia, PhD, to all aspects of AI/ML application development, including data curation, model design, quality control, and clinical testing, according to the authors.

The residents contributed at multiple stages to the development of AI models and tools over the course of the program, resulting in 12 abstracts that were accepted for presentations at national meetings. Furthermore, a formal AI/machine-learning curriculum has been developed for future residents based on their feedback, according to the authors.

"An important component of a curriculum like this is to learn the language the data scientists speak and teach them a little bit about the language that we as radiologists speak so that we can have better, more effective collaborations," Wiggins said in a statement from the RSNA. "Going through that process over several different projects was where I think I gained the best experience throughout all of this."

Wiggins also acknowledged the guidance and feedback of project mentors Katherine Andriole, PhD, and Dr. Michael Rosenthal, PhD. After accepting a position earlier this year as clinical director of AI at Duke Radiology in Durham, NC, Wiggins said he hopes to utilize some of the lessons he learned from the pathway development process.

"I also hope that people from other institutions might read this manuscript and find something useful for integrating into their residency curricula or for developing specialized pathways for informatics and/or data science," Wiggins said.