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## ARTIFICIAL INTELLIGENCE AND COMPUTATIONAL PATHOLOGY: ARE THEY FUTURE FRENEMIES OF A PATHOLOGIST?

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**A**rtificial intelligence (AI) is the science of making intelligent machines, especially intelligent computer programs. It is related to the similar task of using computers to understand human intelligence. For the past hundreds of years, pathologists have made diagnoses by looking at tissue specimens under a microscope. Today, digital world and artificial intelligence allows the capture and visualization of the entire tissue on a slide. Distance no longer matters. Sending slides between institutions on different sides of the world have become much easier. No longer does a consultation have to wait on physical tissue, with all the expense and regulation involved in sending pathological materials. Computational pathology brings precision capabilities to anatomic pathology. The application of image analysis algorithms plays a profound role in reducing inter observer variability, and drive faster, more-precise quantification of existing pathology workflows. The application of machine learning and artificial intelligence to digital pathology promises to reshape the capabilities and practices of modern pathology laboratories. From a broad perspective, artificial intelligence offers an opportunity to address many of the biggest challenges facing pathology laboratory today. Computational pathology is a term that's starting to become more common in the pathology

field as computer processing power is being applied to managing, analyzing and interpreting slide images. There are three main elements that make up computational pathology: automation, augmentation, and prediction. Once a slide image is in the digital realm, it becomes possible to apply machine learning and artificial intelligence techniques to the digital pathology images. It is vastly easier to move and manipulate bits of information than it is the atoms and molecules of physical tissue.

### Biography

Anshoo Agarwal is working as a Professor and In-charge of Pathology Department (female campus), Northern Border University, Kingdom of Saudi Arabia. She has completed her M.B.B.S. from King George's Medical College. She had been the Discipline Coordinator (Pathology Deptt) in University Technology MARA, Malaysia. She is a Member of many associations like Indian Association of Pathology and Microbiology, International Academy Pathology, Indian Society of Hematology and Transfusion Medicine, Emirates Medical Association Pathology Society, International Economics Development Research Center etc. She has more than 100 publications. She is the Editorial Board Member of three journals and Reviewer of many journals. She had organized many national and international CME's, workshops and conferences.

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