Meetings International
SciTechnol

Hashim Ahmed, J Diagn Tech Biomed Anal 2018, Volume: 7
DOI: 10.4172/2469-5653-C1-011

International Conference on

NUCLEAR MEDICINE AND RADIATION THERAPY

July 16-17, 2018 | Madrid, Spain

The role of deep learning in future of nuclear medicine and molecular imaging

Hashim Ahmed
SudRad Consulting, UK

Recent developments in deep learning machine, a subfield of artificial intelligence, which is based on experience and learning, has shown promising perspective and potential due its accuracy and efficiency in addressing challenges faced in real life. It exploits the available big data in other sectors as well as nuclear medicine and molecular imaging with a valuable and robust outcome. Despite significant advances following the introduction of deep learning in radiology and drug delivery, nuclear medicine has been slow in adapting the revolutionary technology. This has affected the possibility of improving dose reduction, automated image analysis and quantification, dosimetry and integrating other clinical data to enhance personalized and precise medicine and image reporting. Emerging technologies have provided nuclear medicine with immense clinical data that remains under-utilized. Introducing deep learning into nuclear medicine, molecular imaging and dosimetry can improve clinical outcomes; which allow for cost effective care services and better patient quality of life. This paper aims to highlight the significant role that the learning machine could play in improving the quality of nuclear medicine and molecular imaging services and it addresses the challenges facing nuclear medicine and the expanding molecular imaging field. It also reviews the current state of art of deep learning and its applications in nuclear medicine and molecular imaging. In addition the article highlights the importance of the future role of this technology in enhancing clinical knowledge and decision making. Finally, the issues of data ownership and security will be discussed.

Biography

Hashim Ahmed is a Medical Physicist and the Co-founder of SudRad Consulting Ltd, UK. In the past, he has worked as a Medical Physicist at Hammersmith Hospital, London Mount Vernon Hospital, St Thomas & Guy's Hospital at UK. He is a member of the Institute of Physics, Graduate Member of Institute of Physics and Engineering in Medicine, Former secretary of Sudanese Medical Physicist Association (SMPA). His research interests are in are in multimodality imaging, image quantification, image registration, quality control and dosimetry as well machine learning in medical imaging.

h.a.ahmed@talk21.com