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Launch A Voyage of Academic-Discovery in Radiology Innovation

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In the past 100 years, radiology has been gained tremendous breakthrough achievements. The milestones of radiology started from the detection of X-rays, the invention of Positron Emission Tomography (PET, 1950s, David Kuhl),[1] the introduction of image-guided intervention (1964, Charles Totter),[2] to the invention of computed tomography (CT) scanners (1970s, Godfrey Hounsfield & Allan Cormack),[3] and the first building of commercial Magnetic Resonance Imaging (MRI) scanner (1977, Raymond Vahan Damadian).[4] The series of epochal creative research and technology boom prompted radiology in recent decades, especially imaging, which is the most crucial component of radiology and plays an irreplaceable role in modern clinical medicine. The microscopy and electron microscopy reveal the mysterious micro-world of cell and molecule. The detection of X-rays provides the prerequisite of non-invasive observation of bone radiography. Ultrasound imaging and MRI demonstrate the function and structure of organs and tissues. The radionuclide visualizes the dynamic spatial distribution of metabolic molecules in an organ or lesion. Furthermore, the research of the next generation of radiology has

stimulated further exploitation with the emergence and expansion of a high-throughput method and the appearance of a branches of novel imaging technologies. With the improvement in availability and efficiency of big data, human open-up their dimensions for observing and exploring the world and expanding the life's cognition. The 21st century, led by the grand Genome Project and artificial intelligence (AI) technology, is a new era of rapid evolution in science, health and medicine.

From 2009 to 2018, nearly 4.2 billion radiological examinations, 6.2 million courses of radiation therapy, and 1.4 million radionuclide treatments were performed worldwide every year. Medical radiation is still the most prominent exposure of human-made source radiation.[5] With the massive and extensive application of medical radiation, radiologists never stop their steps of studying and exploring to mitigate the risk and eliminate the doses of medical radiation exposure with their relentless effort putting on improving the quality and efficacy of radiation examination and therapy treatment.[6–8] In the meantime, radiologists have been committed to building comprehensive models which integrate detailed data with phenomic imaging with radiomics.[9] It will narrow the gap between phenomic results and clinical problems, motivating the exploration of "digitalization" and "visualization" of the human body and a deeper understanding of life science and health. During the COVID-19 pandemic, chest CT also plays an essential role in screening and diagnosing the disease with its characteristics and advantages.[10] Radiology is an interdisciplinary science integrating modern physics, chemistry, biology, information engineering, medicine and many other sciences. With increasing breakthroughs in clinical and technical perspectives, radiologists continuously cooperating with the multidisciplinary scholars to combat and face the challenges of moving into the new innovative times with booming growth.

In the more than one century of history of radiology, innovation has always been the spirit both in research and application of scientific problems and clinical diagnosis and treatment in radiology. Hence, Radiology Innovation (RI) is officially launched echoing to the proper

time and conditions. RI insists on advancing internalization and profession and is recommended by top international scholars on Editorial Board. Led by cutting-edge and multidisciplinary groups and rigorous scholarship, RI aims to establish an open and professional platform for scholarly communication while providing a broad, well-balanced, and innovative view. RI will cover all the latest innovative and pioneer topics and discussions based on radiation and radiology diagnosis and therapy. The journal publishes peer-reviewed original research, review articles, clinical guidelines and consensus, case reports, radiological congresses and information on society matters, novel methods and technological progress notes, and editorials on medical imaging and radiology. The mission of RI is to provide a comprehensive, multi-dimensional and profound communication platform for innovative and frontier information in radiology field, and accordingly boost the realization of "a community of shared future for mankind" and facilitate the development of radiology and global public health. In the new era of radiology burgeoning, RI will strive to continuously pursue the leading international journals, strictly implement the reviewing process, comply with the publication standards, and maintain the magazine's high quality and improve efficiency. We welcome our peers and scholars who are interested in radiology to browse our journal and communicate with more readers through RI.

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