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J-BHI Special Issue on “Artificial Intelligence in Pre-DICOM”

Artificial intelligence (AI) for medical imaging is applied in three domains: pre-DICOM, pre-processing and clinical applications. Clinical applications mainly cover topics such as disease detection, classification, segmentation, registration. Pre-processing components are mainly designed for facilitating applications using image transformation such as image normalization, noise reduction, bias correction in MR. AI in the pre-DICOM domain is expected to improve imaging workflow, image protocol selection, imaging quality, imaging scanning time before images are converted into DICOM format for radiologists to review. The trends of AI publications in medical imaging have been gradually extended from clinical applications to pre-processing and, to pre-DICOM. In this special issue, we are looking for pre-DICOM innovations driven by AI.

Topics of interest of this special issue include, but are not limited to, the following:

- Pre-imaging: leverage sensor information to guide the positioning of patients for proper imaging/scanning
- Automated protocol selection: based on clinical application and patient characteristics, automatically select appropriate imaging protocols
- Automated fine-imaging: based on low quality scan, identify region of interest for high quality scanning
- Reconstruction: reconstruct image (e.g. MRI, CT and ultrasound) from raw data acquisition
- Quality improvement: improve image quality with better signal-to-noise ratio; enhance the quality of low-cost machine images

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Key Dates

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