The Future of the Picture Archiving Communication System

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RESearch and development of picture archiving and communication systems (PACS) began approximately 15 years ago with the promise of the all-digital radiology department. With the rapid, almost explosive, growth in computing and communications technology, the last 5 years have seen more technical advancement than the first 10. While small to medium-sized PACS are being increasingly adopted as departmental solutions and there a few proofs of existence of large clinical PACS, the rate of adoption has not quite been what was predicted 15 years ago. Will the next 15 years be different? This question will be the primary focus of the tutorial. The tutorial will address three aspects that are critical to the widespread adoption of PACS: technology, clinical acceptance, and cost-effectiveness. First, we will review the ad-

vances in computing, communications, storage, and display technology and extrapolate what the future many hold for us. More importantly, we will discuss how these technologies will impact the technical progress of PACS, and discuss the systemic forces that may encourage or discourage future adoption. Finally, we will review the cost-effectiveness of these complex systems and attempt to predict what it will take to get the mass-market to adopt this technology.

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