

Acceptance Testing and Comparison of Flat Panel Cardiac Systems

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Modern cardiac catheterizations laboratories are beginning to utilize flat panel detectors instead of the combination of image intensifiers coupled to television cameras. The technology is significantly different and requires modifications to the evaluation of the system performance. For example, the dynamic range of the detectors is significantly greater allowing the systems to operate over an extended range of radiation settings with any image saturation. Moreover, these systems have various strategies for regulation of exposure settings and filters. Testing approaches to assess radiation dose settings, bad pixels, low contrast discrimination, image persistence, uniformity and other key features for flat panel systems will be reviewed. Comparison data for two different cardiac flat panel systems are utilized to illustrate the testing procedures and expected performance.