

AbstractID: 4626 Title: Assessing Patient Radiation Exposure from Fluoro-Guided Procedures based on Direct Dose and Dose-Area Products

Purpose: To assess patient radiation exposure from fluoro-guided procedures based on direct dose and dose-area product.

Method and Materials: Various procedures performed by members of Cardiology and Radiology Departments at SUNY Stony Brook were monitored for radiation exposure to patients' skin. Dose, dose-area product, fluoro-time, and beam parameters were recorded for each fluoro-cine run. Along with clinical data, dosimetry print-out was reviewed after each procedure to identify possible high doses to any given site of the exposed area and to have appropriate medical care provided timely. Accrued data were analyzed and evaluated in detail.

Results: Data from a total of 3040 consecutive cases, 1883 diagnostic and 1157 interventional, performed by 16 and 10 physicians respectively were analyzed. Based on dosimetry print-out, the total skin dose averaged 87 rads for diagnostic procedures, with maximum skin dose **below 100 rads** to any given site found in over 90% of cases, that for interventional procedures respectively were 223 rads, with maximum skin dose **over 300 rads** to any given site found in over 15% of cases.

Conclusions: Our experience demonstrated the value of careful monitoring and thorough assessment of radiation dose and dose distribution in keeping medical staff informed timely of their patients' exposures.