**Supplemental Table 1.** Comparison of Radiation Dose when using an Anti-Scatter Grid versus the Air Gap Approach in Children < 20kg

|  |  |
| --- | --- |
| **5 Year Old Phantom (19kg)** | **% Change in Effective Dose** |
| **Projection** | **Imaging** | **Standard Imaging PLUS Anti-scatter Grid** | **Air Gap Technique** |
| Mag | KvP | mA (per ms)  | Kerma (mGy/1000 frames) | DAP | Effective Dose, *mSv/1000 frames* (% Error) | Mag | KvP | mA (per ms) | Kerma (mGy/1000 frames) | DAP | Effective Dose, *mSv/1000 frames* (% Error) |
| **AP** | Cine | 8” | 65 | 81.8/ms | 43.28 | 2756.0 | 3.51 (2.1) | 10” | 63 | 61.3/ms | 28.03 | 1770.0 | 2.18 (2.4) | **↓** 38% |
| Fluoro | 8” | 72 | 4 | 3.90 | 297.0 | 0.39 (2.1) | 10” | 69 | 3 | 2.64 | 221.0 | 0.25 (2.3) | **↓** 36% |
| **Lateral** | Cine | 8” | 62 | 53.0/ms | 22.60 | 1188.0 | 1.89 (4.6) | 10” | 61 | 40.25/ms | 15.60 | 1020.0 | 1.31 (4.3) | **↓** 31% |
| Fluoro | 8” | 69 | 3 | 2.70 | 152.0 | 0.26 (4.3) | 10” | 67 | 3 | 1.90 | 114.0 | 0.19 (3.9) | **↓**  27% |

All images acquired at 15 frames per second. Copper filtration constant at 0.4mm Copper/1.0mm Aluminum

KvP = Kilovolt Peak; mA = milliamperes; DAP = dose area product; mGy = milliGray; mSv = milliSieverts; ms= millisecond