

AbstractID: 10740 Title: Comparison of Vendor Estimated CTDI<sub>vol</sub> and Physicist Calculated CTDI<sub>vol</sub>

**Purpose:** To determine if CT unit's estimated CTDI<sub>vol</sub> is statistically similar to values obtained using conventional medical physics testing and instrumentation. The ACR calculation spreadsheet was used to calculate the CTDI<sub>vol</sub> for each unit tested. **Method and Materials:** Exposure measurements were obtained from the center and 12 o'clock position for both a 32 cm diameter abdominal and 16 cm diameter acrylic head phantom. The measurements were made using axial scans for typical patient abdominal and head protocols. Five CT units were evaluated. **Results:** Examination of the results indicate good statistical agreement between the CT unit CTDI<sub>vol</sub> estimates and the ACR dose spreadsheet calculated CTDI<sub>vol</sub>. **Conclusion:** This work indicates that estimating patient dose (i.e., CTDI<sub>vol</sub>) using CT unit values may be an accepted alternative to performing traditional measurements using acrylic phantoms. **Conflict of Interest (only if applicable):**