

**Purpose:**To quantify conceptus doses to patients identified as being pregnant and subsequently undergoing abdominal/pelvic CT examinations at an Academic Medical Center.

**Method:**Data in our Radiology Information Service (Image Cast) were reviewed to select all patients in 2010 who had been identified by the referring clinician as being pregnant, and who also underwent a single abdominal/pelvic CT scan. Images on each patient were reviewed on our PACS system to obtain information on the radiation used to perform the scan (CTDIvol and DLP), patient size (AP dimension), as well as the scanned anatomical region and scan length. Conceptus doses were obtained taking into account the amount of radiation used to perform the exam (CTDIvol), the scan length relative to the uterus, and patient size (AP dimension).

**Results:**A total of 37 patients were identified who had a mean age of  $28 \pm 9$  and a mean AP dimension of  $27 \pm 5$  cm. The CTDIvol used to perform these scans increased with increasing patient size ( $r^{2} = 0.26$ ), from an average of 16 mGy in patients with an AP of 21 cm to 29 mGy in patients with an AP of 34 cm. The average scan length was  $44 \pm 8$  cm, and compared to an infinitely long scan resulted in an average uterus/conceptus dose reduction of 4%. The median conceptus dose was 22 mGy, with a 10th percentile value of 11 mGy and a 90th percentile value of 32 mGy. There was negligible correlation ( $r^{2} = 0.02$ ) of conceptus dose with patient AP dimension, showing that the increased CTDIvol used with larger patients was balanced by a corresponding dose reduction in larger patients.

**Conclusions:**The average conceptus dose to identified pregnant patients undergoing abdominal/pelvic CT scans was  $22 \pm 9$  mGy.