

There were about 40,000,000 CT procedures done in the US in 2001. CT procedures grew 16% between 2000 and 2001. While the benefit to risk ratio for an individual needing a CT study is not in question, there are concerns about the overall public health implications of the wide spread and growing use of CT. The responsibility of CT manufacturers is to take any practical steps to reduce the dose and therefore any risk. This paper will discuss the steps being taken by GE Medical Systems to reduce CT dose. These measures will include:

Improving geometric efficiency by using a higher percentage of the dose profile as the number of thin slices goes from 4 to 8 to 16 and beyond.

Reducing technical errors in pediatric CT with dedicated protocols and Color Coding For KI DS

Automatic exposure control that compensates variations in patient size in plane and along the z axis

Image processing improvements including image space noise filters and adaptive projection space filtering

Cardiac gating of the x-ray source to reduce the dose in CT cardiac applications

Dose reducing, image quality optimized 4, 8 and 16 slice helical reconstruction algorithms

Low technique, noise simulation software tools to support ALARA research