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| Milliampereseconds (mAs) | quantitative measure of the x-ray beam. The product of milliamperere setting and scan time. | (ROI): | |
| Nonuniform arrays | Detector rows that have variable widths and sizes. Also called adaptive or hybrid arrays. | Scan parameters | Factors that can be controlled by the operator and affect the quality of the image produced. These factors include milliamperes, scan time, slice thickness, field of view, reconstruction algorithm, and kilovolt-peak. When using helical scan methods, the operator also has a choice of pitch. |
| Organ dose | The estimated radiation dose to radio sensitive organs from CT procedures. These averages are used to calculate effective dose. | Scan time | Time the x-ray beam is on for the collection of data for each slice. Most often it is the time required for the gantry to make a 360° rotation, although with over scanning and partial scanning options there may be some mild variation. |
| Pitch | Relation of table speed to slice thickness. It is most commonly defined as the travel distance of the CT scan table per 360° rotation of the x-ray tube, divided by the x-ray beam collimation width. | Slice thickness | On a single-detector row system this is controlled by the width of the collimator opening. On a multidetector row system it is controlled by a combination of collimation and detector configuration. |
| Radiation profile | Variations along the length, or z axis, of the patient; also referred to as the z-axis dose distribution. | Spatial resolution | Ability of a system to resolve, as separate forms, small objects that are very close together. Also call high contrast resolution or detail resolution. |
| Raw data | All measurements obtained from the detector array and sitting in the computer waiting to be made into an image. Also called scan data. | Threshold CT values | A predetermined CT value limit set by the operator in some types of 3D reformation techniques. The software will include or exclude the voxel depending on whether its CT number is above or below the threshold. |
| Ray | The path that the x-ray beam takes from the tube to the detector. | Tube current | Measured in thousandths of an ampere, or milliamperes, it controls the quantity of electrons propelled from cathode to anode. |
| Ray sum | The detector senses each arriving ray and senses how much of the beam was attenuated. | Uniform array | Detector rows that are parallel and of equal size. |
| Reconstruction algorithm | Determines how the data are filtered in the reconstruction process. The appropriate reconstruction algorithm selection depends on which parts of the data should be enhanced or suppressed to optimize the image for diagnosis. | View | A complete set of ray sums. |
| Reference dose values | Values published by the ACR regarding the radiation dose that is acceptable for a variety of CT scans. | Voxel | Volume element. Three-dimensional cube of data acquired in CT. |
| Reference image | Displays the slice lines in corresponding locations on the scout image. | Z axis | Plane that correlates to the slice thickness, or depth, of the CT slice. |
| Region of interest | An area on the image defined by the operator. | | |