

Clinical Implementation of a new Electronic Portal Imaging System

Cancer Center for the Southern Interior (CCSI) of the BC Cancer Agency opened its doors for patients on April 6th, 1998. The center is equipped with two Elekta SL-75/5 linacs and two Elekta SL-20 dual energy linacs with MLC, all equipped with iView electronic portal imaging systems. The iView software runs on a PC running Windows NT operating system and uses DBase databases for managing the portal images which are saved as windows bitmap images. Since all the linacs were equipped with EPIDs, a decision was made by the center not to use portal films. This required setting up a process to use digital portal images for routine clinical use from the very beginning.

During installation, the iView stations were configured as stand alone workstations with individual patient databases. For ease of data management, the stations were reconfigured to operate on a single patient database. This enabled review of portal images at any iView station. Insufficient manufacturer recommendations required us to investigate and develop more appropriate site specific imaging parameters. Due to a lack of necessary functionality of iView software for manipulation and analysis of portal images, PIPS software was purchased. An interface was developed to search the iView patient database and display a portal image with its corresponding reference image on any desktop computer. This presentation describes the experience we have gained thus far at the CCSI in implementing this new technology in place of convention port films.