

## Best™ Integrated Radiotherapy Solutions

### Best™ GammaBeam™ 300-100 CM Equinox™ Teletherapy System with Avanza 6D Patient Positioning Table

The **GammaBeam™ 300-100 CM Equinox™** is an evolution of the Theratron line of treatment devices. The advanced design provides freedom in treatment planning and can interface to all of the major record/verify systems to allow for rapid treatment parameter loading, treatment set-up verification and the recording of delivery.



#### Comparative Analysis of <sup>60</sup>Co Intensity-Modulated Radiation Therapy

*Christopher Fox, H Edwin Romeijn, Bart Lynch, Chunhua Men, Dionne M Aleman, and James F Dempsey, Phys Med Biol. 2008 Jun 21;53(12):3175-88.*

**Abstract:** In this study, we perform a scientific comparative analysis of using <sup>60</sup>Co beams in intensity-modulated radiation therapy (IMRT). In particular, we evaluate the treatment plan quality obtained with (i) 6 MV, 18 MV and <sup>60</sup>Co IMRT; (ii) different numbers of static multileaf collimator (MLC) delivered <sup>60</sup>Co beams and (iii) a helical tomotherapy <sup>60</sup>Co beam geometry. ... The results of the investigation demonstrate the potential for IMRT radiotherapy employing commercially available <sup>60</sup>Co sources and a double-focused MLC. Increasing the number of equidistant beams beyond 9 was not observed to significantly improve target coverage or critical organ sparing and static plans were found to produce comparable plans to those obtained using a helical tomotherapy treatment delivery when optimized using the same well-tuned convex FMO model. While previous studies have shown that 18 MV plans are equivalent to 6 MV for prostate IMRT, we found that the 18 MV beams actually required more fluence to provide similar quality target coverage.

#### Cobalt-60: An Old Modality, A Renewed Challenge

*Jake Van Dyk and Jerry J. Battista, Current Oncology, November 1995*

**Abstract:** The discovery of x-rays and radioactivity 100 years ago has led to revolutionary advances in diagnosis and therapy. However, it was not until the middle of the twentieth century that megavoltage photon energies became available through the use of betatrons, cobalt-60 gamma rays and linear accelerators (linacs). The increased photon penetration and skin sparing provided radiation oncologists with new opportunities for optimizing patient treatments. In recent years, several reports have considered various issues which define the "optimum" photon energy for the treatment of malignant disease. In many of these articles, cobalt-60 is mentioned although it is generally not recommended for radiation therapy departments in the western world. Indeed, many now consider cobalt-60 as an old modality that is only useful for palliative treatments in a large department or for developing countries with limited technical resources. ... In this commentary, we ... briefly review the arguments that have been presented both for and against the use of cobalt-60 as well as add some up-to-date insights and perspectives.



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