

Dose verification in HDR cases is a routine activity typically for one or two points of interest using an independent method. This is normally performed as a gross hand calculation check and is acceptable to within an accuracy of 10-20%. At the Medical College of Ohio (MCO), a software was developed to import the HDR spatial data directly from the Varisource CadPlan BT and compute the dose to all points of interest entered at the time of planning. This software uses only the x, y, z, coordinates from the Varisource patient file data, and calculates the dose using independent software developed for 3-D brachytherapy dose calculations. Using this technique, the need for measurement of each point's coordinates for hand calculation as well as the error associated with the manual measurement on simulation film is eliminated. The accuracy of Cadplan BT in registering the digitized points on film has been checked during the acceptance testing of the Varisource. A dose variation of about $\pm 5\%$ is observed which is within the present guidelines of TG-53. Other features of this software include: combining the HDR brachytherapy and external beam doses, ability to view the combined surface dose using a 3-D geometry, and incorporation of the shielding effect on cadplan data which is currently not available. This technique is reliable, easy to implement and provides a table of dose columns calculated by the Varisource and the independent method as well as the percent difference. Detail of this development and related software will be presented.