

A Helax-TMS 3D Treatment Planning System has been newly installed and commissioned at the Northeastern Ontario Regional Cancer Centre. In this presentation, we report on an extensive series of verification tests on this system and the evaluation of results in the context of the criteria of Van Dyk et. al. (Int. J. Rad. Onco. Biol. Phys., vol 26, p261, 1993). We find that calculated photon beam profiles in a homogenous medium agree with measurement to an acceptable level under almost all conditions tested. Simulated clinical treatments delivered to an anthropomorphic phantom containing 75 TLD chips also demonstrated acceptable agreement for most of the seven photon beam configurations tested. The exceptions involved irradiation of the lung where significant discrepancies between calculation and measurement were observed. Finally, monitor unit calculations have been compared with hand calculations to identify any gross errors which may be present. This simple test has identified a clinically significant error with monitor unit calculations for virtually wedged fields in the software version tested.