The increased availability and affordability of commercial 3D treament planning systems has led to an increasing number of such systems within a variety of institutions. Commmissioning of these systems can be especially burdensome for smaller clinics operating with limited resources and a high patient volume. We have commissioned two 3D treatment planning systems for clinical use. One is a higher-end well-known system, and the other is a less expensive PC-based system. Results of third-level benchmarking tests outlined by Mackie[1] have been performed for photons as a portion of the commissioning procedure for the two systems. The benchmarking tests employed could be implemented by any small clinic with minimal resources within a reasonable period of time, and were sufficient to discover the limitations of the two systems when used in a typical radiation therapy planning situation.

1. Mackie, T.; Reckwerdt, P.; McNutt, T.; Gehring, M.; Sanders, C. Photon beam dose computations. Teletherapy: present and future - proceedings of the AAPM 1996 summer school. Madison, WI: Advanced Medical Publishing; 1996.