

## AbstractID: 5639 Title: PPlanUNC as an open-source radiotherapy planning system for research and education

**Purpose:** PPlanUNC is a radiotherapy planning software package that has been under development and clinical use at the University of North Carolina for approximately 20 years. Under a joint grant from the NCRR and NCI (R01 RR 018615), PPlanUNC has been documented, commented, and prepared for distribution as a freely available open-source treatment planning tool for use as an adaptable and common platform for radiotherapy research.

**Method and Materials:** The software and source code have been made available to qualifying users through a web portal located at <http://planunc.radonc.unc.edu>. Licenses for PPlanUNC are available without fee to institutions, departments, and other facilities engaged in research and education involving radiation therapy.

**Results:** Recent research milestones demonstrating the extensibility and increasing utility of PPlanUNC include tools for 4D planning, interfaces with ITK segmentation and registration tools, daily correction of patient positioning, and interfaces with a variety of Monte Carlo dose engines. PPlanUNC is currently supported for Linux and Windows operating systems, but has been successfully compiled on Alpha, Macintosh, Solaris, and other platforms.

**Conclusion:** Licensed users will have access to PPlanUNC source code, user and development documentation, annual training workshops, and limited support from UNC and the PPlanUNC research community. PPlanUNC is distributed as source code, making it customizable and extensible to meet the needs of a diverse range of research applications.