AbstractID: 9704 Title: Comprehensive Evaluation of Radiation Oncology Information Systems (ROIS)

Radiation Oncology Information Systems (ROIS) have become the bridge between the management of information, technological innovations, patient treatment and high quality patient care. There has been considerable interest from the radiation oncology community in identifying what ROIS best fits a given clinical practice (specific needs and goals). An objective tool to analyze site-specific clinical information flow and infrastructure, and measure its level of integration with a given ROIS is presented. The proposed methodology is based on identifying and understanding the components of a modern radiation oncology practice. These component objects were classified into: Clinical Processes, Information Management and Technological Innovations Integration. Comprehensive IS/IT infrastructure and clinical process maps were generated by a team of experts, representing clinical constituents. These maps served as the basis for evaluating connectivity and process flow and to guide the development of a quantitative survey with user's feedback-based qualitative information to assess the performance of a given ROIS. Clinical tasks and processes were: 1) ranked according to importance for patient care and 2) scored by the team members for performance. The combination of experiential feedback with survey data provided both global and detailed suggestions to improve ROIS integration and site-specific processes. The hierarchy and importance of various characteristics are customizable to a given clinical practice and thus allow the tool's broad applicability. Proper assessment of information flow and matching of an ROIS will provide a more efficient and more effective care delivery setting.

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