## AbstractID: 10197 Title: Incident Learning in Radiation Therapy: A Tale of Two Cities

**Purpose**: To compare experience with a comprehensive incident learning system implemented in two radiation treatment programs and assess utility in reducing the probability of repeat adverse occurrences and improving patient safety. Method and Materials: An incident learning system specifically tailored to a radiation therapy program and based on published principles was implemented in two large academic cancer centers. In the adopted system, every incident, whether or not there is a resulting direct impact on patient treatments, is recorded, investigated to determine basic causes and strategies developed to correct system weaknesses. The two centers are closely matched in size with both centers being tertiary comprehensive clinical and academic centers and both having the same number of treatment units. Incidents are categorized into one of 5 types: clinical, operational, occupational, environmental and security/other. Four levels of severity are defined - critical, major, serious and minor. **Results**: Our analysis is based on 392 and 658 incidents reported by Centers A and B respectively. The majority of incidents in both centers were classified as clinical as distinct from operational or other categories. Both centers reported more clinical incidents during the treatment planning process than in other work domains. The distribution of incident severity shows remarkable agreement between the centers with 92% of all incidents at both centers classified as minor. Additionally, the distribution of the primary basic causes assigned to each incident also shows similarities between the two centers with 52% and 82% of the incidents reported at Centers A and B respectively assigned the same basic cause, i.e., that standards, procedures or practices were not followed, developed or adequately communicated. Conclusions: Our results indicate that an effective incident learning system implementation will strongly encourage the reporting of potential incidents as a proactive means of enhancing safety and quality.