

Abstract: Our record and verify system captures the machine settings each time a patient receives treatment on our linear accelerators. The captured data have been examined for 3D planned brain patients and reveal occasional, though perhaps significant inconsistencies in the placement of the radiation fields. Such analysis is possible on this subset of patients because they are rigidly immobilized using a commercial thermoplastic mask and baseplate system, modified to rigidly index to the treatment couch top. Variations in the table digital readouts are equated with changes in field position. These variations were observed in multi-field isocentric treatments during single sessions, from session to session, and over a patient's entire course. Data presented will be of interest to physicians and physicists concerned with establishing treatment margins and setting R&V tolerances.