Dose Sums

**Purpose:** The following steps are for summing two or more plan doses in a RayStation case. (This is typically not done unless the MD requests it.) The referenced section numbers are from the RayStation 11A User Manual.

1. If any of the old plans are on a different exam from the new plan, deform the old plan dose to the new planning exam.
   1. Register the exams.
      1. Rigidly register each old planning exam (secondary; target) to the new planning exam (primary; reference). Perform a gray level-based registration with a focus on bone structure (5.2.2). Evaluate and tweak the rigid registration (5.2.5).
      2. Create a deformable registration from the old planning exams to the new planning exam. Perform a hybrid registration with default settings (5.4.4).
   2. Use the deformable registration to deform each old plan dose to the new planning exam (8.1.8).
2. Sum the old plan and new plan doses.
   1. Use the MOSAIQ Tx Calendar to determine the number of treated fractions of each old plan.
   2. Sum dose from the delivered number of fractions for each old dose, and planned dose from the new plan. If you deformed dose, use the deformed dose, not the dose on the old planning exam (8.1.9).
3. Evaluate the summed dose: compare to new dose, etc.