

Patient Name: _____

RT#: _____

MR Linac Reference Plan Checklist

	DOS	PHY	MD
MIM			
Patient is candidate for MRL (see Table 1)			
Contours perfect and named correctly (used for Synthetic CT ED assignment)			
Contour stents, clips, calcifications, implants, etc			
Select structure for motion monitoring			
Workflow Decision: ATP vs ATS (see Table 2)			
If Liver SBRT: Run "FH Post Liver SBRT Contours" workflow			
Run "FH Post Forced Density <Abdomen, Pelvis>" workflow			
Run "FH MRL Post Reference Plan Contours" workflow			
Optional: Adjust contour order according to layers in Table 3 before exporting			
Offline Monaco			
Import patient to 0-clinic folder in Offline Monaco			
Confirm Monaco Patient ID matches Mosaiq RT Number (eg, no dashes)			
Multiple prescriptions: Import each unique PTV and RTstruct onto different CTs			
Lock Scan Reference point at 3PT BB or SIM ISO			
Import MRL couch, set index position: ceil((Index-1)*3.5-1.0) to BBs (min 5)			
Confirm couch at correct z position (immobilization device or patient)			
Create ISO interest point at PTV COM			
Confirm all Interest Point descriptions are 6 characters or less			
Confirm layers appropriate for synthetic CT before starting plan (see Table 3)			
Import MRL Coil; confirm centered at ISO y coordinate			
Adjust coil height (2cm above patient; lower if high skin dose but may result in collisions)			
Use default dose grid of 0.3 cm (even if SBRT)			
Override GI contrast density, not rectum, colon, bowel, etc densities			
Confirm air contour accurate within GI structures			
Adapt Setup: Set Rigid transfer for ALL structures			
Adapt Setup: Force mean ED for structures in Table 3			
Try to avoid gantry angles 110-135 and 230-255 degrees			
Confirm cryostat pipe clearance in BEV (gantry angles between 5 and 25 deg)			
Confirm no setup beams in plan			
If Plan Library: Same prescriptions, field IDs, names and number of beams			
Confirm no manual weights in IMRT constraints			
If ATP: Set Auto-Flash of 0.3 cm on PTVs or change Target Margin to Tight or Very Tight			
If ATS: Avoid additional, non-standard optimization structures (e.g. rings, avoids)			
If ATS: Try to avoid volume-based cost functions for OARs (e.g., Overdose DVH)			
Need enough segments for optimizer in ATP (125 is max for one AFS group)			
Complicated plan (dose gradients) impacts optimizer (time for adaptation)			
Set Dose Reference Point to PTVCOM			
Generate dosimetric critria; If ATS: use volume-based for OARs (avoid %-based)			
Verify electron-air stream out-of-field protruding structure skin dose (chin, arms)			
Run "MRL Delivery Time Estimator" program (reduce with Seg Area>2.5 or Seg Width>1)			
Determine patient ED by recalculating plan with same MUs and ATS densities forced			
If ATS: Test reference plan constraints on contoured MRL images			
Approve plan (no frozen dose, max 10 characters for Plan ID)			
If Plan Library: Approve all plans			
Export T total Plan to Mosaiq (no Composite Field Sequencing)			
Optional: Add QA plan with orthogonal fields using patient studysset			
Optional: Export orthogonal field QA plan to Mosaiq			
Export CT, Structures, Plan, Dose, and DRRs to MIM Clinical			
ArtQA			
Generate ArtQA secondary dose report for plan document			
Mosaiq			
Confirm "MR/RT" promoted in RadRx (check if not enabled by CT sim)			
Confirm Rx Site in RadRx matches Rx Site in Monaco (include "SBRT" in Rx if SBRT)			
Optional: Promote orthogonal fields and site setup into difference course			
If Plan Library: Promote one plan to use as reference plan			
Configure MR-gRT Directives eScribe document (specify PTV, PRV margins)			
Configure Plan of Care (set Mask contour for Motion Monitoring)			
MIM			
If ATS: Run "FH MRL Generate ATS Sub-Structure Sets" workflow			
Date/Initials:			

Table 1: Candidates for MRL Treatments

Length of PTV in S/I direction < 18 cm
No metallic implants within 10 cm of target region
Patient fits within MRL bore+ coil template
Target region not close to bore (B0, GNL distortions)

Table 2: Selection Criteria for ATS Treatments

Rotating or deforming structures in high dose region
Potential for daily target motion changes
Potential for moving air cavities
Close proximity of critical structures in high dose region
Potential changes in radiological depth (patient contour)
Potential for AP shift > +/- 1 cm
Other: Fractionation, treatment time (if contrast used)

Table 3: Layers (abd(L), pel(R))

Air (ED=0.01)	Air (ED=0.01)
Implants, etc	Implants, etc
SpinalCord	Bladder
Cord+0.5	Rectum
Bone	Cauda Equina
Lung_<L,R>	Femur_<L,R>
Kidney_<L,R>	PubicBone
Liver	Bone
patient	patient