


Radiation Oncology Manual of Policies & Procedures		
	Policy Name	Raystation Free Breathing Import Break Frame of Reference
	Policy Number	Raystation_FB_v1.0
	Date this Version Effective	2024
	Responsible for Content	Brian Anderson

Applies to: Medical Physicists (MP)

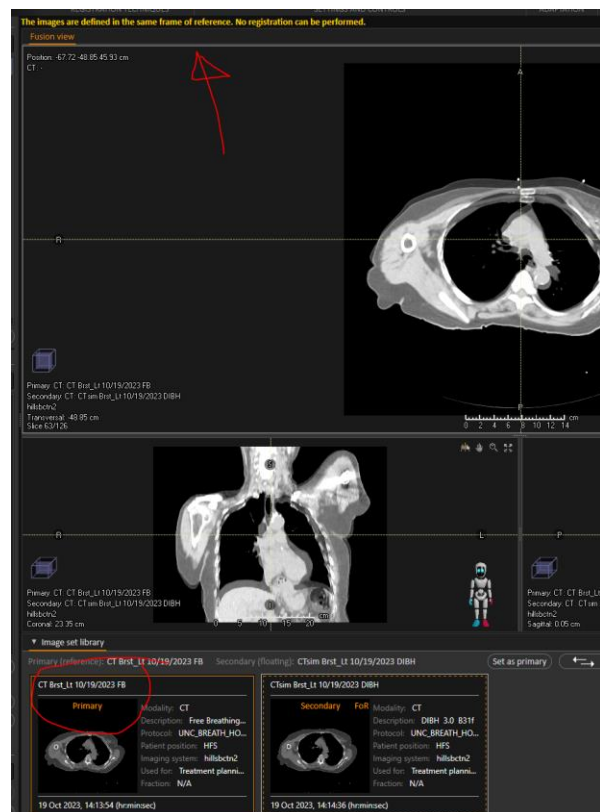
Purpose: To provide clinical guidance on how to break the inherent registration present between the free-breathing scan (FB) and the deep inspiration breath-hold (DIBH) scan.

Justification: Patient motion is possible between the acquisition of the FB and DIBH scan. Because of this we want to be able to perform a correction registration.

NOTE: This does not work if the examination in equation has a plan or iso associated with it!

Policy: All patients with DIBH scans are currently imported in two steps, with dosimetry importing the DIBH scan and physics importing the FB after. This is not required. The procedure presented below is with understanding that the FB scan has been imported into Raystation along with the DIBH scan.

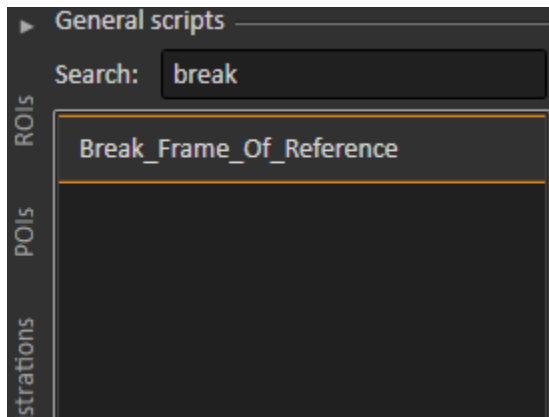
Note that image registration is not possible due to the inherent registration of the images.



Procedure:

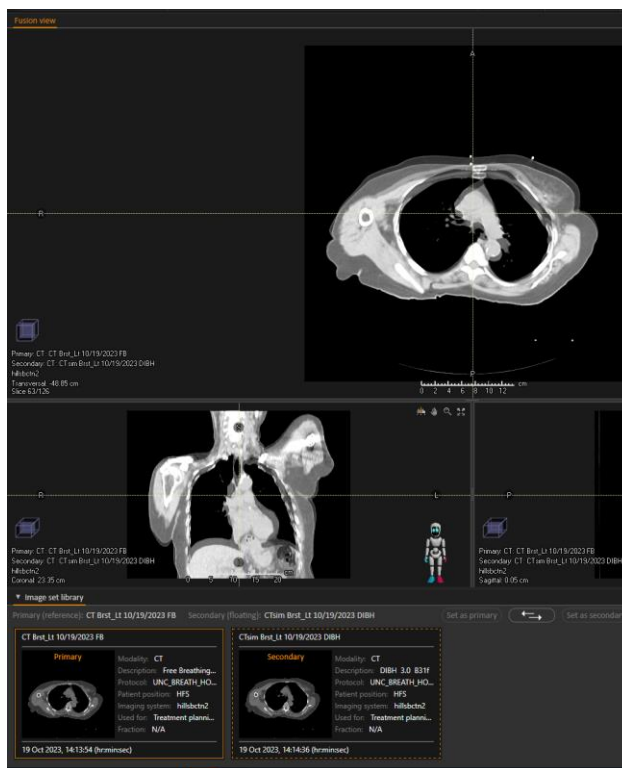
Select the FB scan as the primary examination

Select the scripting tab and choose “Break_Frame_Of_Reference”. This script relies on the built-in ‘AssignToNewFrameOfReference’ function within Raystation. **Additional information about this function is present at the bottom of this report.**



The patient will close and re-open

Select the DIBH as the primary scan and the FB as secondary scan. Registration should now be possible



Focus the registration about the lower C-spine through mid T-spine.

For any questions, please contact Brian Anderson: brian_anderson@med.unc.edu

Approved:

Last Revision: 03/05/2024

Raystation Documentation

AssignToNewFrameOfReference()

Method for assigning a new frame-of-reference to the examination.

Stored dicom data will be updated with the new Frame of Reference UID (0020, 0052), new SOP Instance UIDs (0008, 0018) and a new Series Instance UIDs (0020, 000E).

The modified tags will be used if the examination is exported.

Note that if the method is used on an examination which is in the same frame-of-reference as another examination or is in the same frame-of-reference as the to or from frame-of-reference in a FrameOfReferenceRegistration, methods demanding that examinations are in the same frame-of-reference (or has a frame-of-reference registration defined), such as create deformable registraion or compute dose on additional set,

can not be used until a new frame-of-reference registration between the examinations has been created.

Can only be used if the examination:

- has not been used to create a frame-of-reference registration
- is not referenced in a structure registration (i.e., added rigid transform or deformable registration),
- is not part of an examination group,
- is not referenced by a treatment plan, or
- does not have computed doses

Patient will be closed and reopened in order to initialize views correctly given the new frame-of-reference