

Direct Multi-Planar Reformat (DMPR) Protocols

Introduction:

A Direct Multi-Planar Reformat (DMPR) is a process set up and is executed as part of the scan protocol. It can use the same protocol that might be used in a General Reformat. In DMPR, the user defines the reformat protocols to be executed and sets as an Automated Batch mode or a Manual Batch mode. It is then executed on the ExamRx desktop.

Reformat is available on the Image Works Desktop and requires manual loading of the data once the scan is completed.

DMPR Protocols:

A reformat protocol must be created to be selected for use in protocols with DMPR enabled. For DMPR to work with the UW protocols, reformat protocols will need to be built with the same names as those used in the protocols. To build reformat protocols, you need to select images from an exam already performed to create the initial same-name reformat protocol. Reformat protocols created for use in DMPR must be single-step protocols and can only be created in the axial, sagittal, or coronal viewports. Reformat protocols for use in DMPR need to be saved in the General category if using Volume Viewer. You must create the DMPR reformat protocol on images from the body part that the protocol will be used for (i.e., a Pediatric DMPR protocol must be created on images for a Pediatric case and an Adult DMPR protocol must be created on images for an adult case).

UW-specific DMPR reformat protocol names are identified below with window width and level values for use with UW Protocols:

BODY (use Thin ST) WW/WL 350/50 CO BODY SA BODY 3 X 2	CHEST (use Thin Lung) WW/WL 1500/-700 CO SA 2.5 X 1.25	CARDIOVASCULAR (use Thin ST) WW/WL 450/50 CO CV SA CV 3 X 2
PEDS BODY (use Thin ST) WW/WL 450/50 CO PEDS SA PEDS 4 X 2	PEDS CHEST (use Thin ST) WW/WL 450/50 CO PEDS CHEST SA PEDS CHEST 4 X 2	PEDS CHEST (use Thin Lung) WW/WL 1500/-700 PEDS CO CHEST PEDS SA CHEST 4 X 2
CO MIP (use Thin ST) WW/WL 800/150 CO MIP MIP 10 X 2.5	SA BONE (use Thin Bone) For AIDCO WW/WL 2500/350 SA Bone 1.5 X 0.75	

All slice thickness and intervals can be found in the actual protocols.

Manual Reformats (non DMPR, these are for populating the drop down menu in the image works utility):

Optional pre-built reformats: These need to be built manually under Image works; reformat; batch and then protocol drop down menu. (follow the instruction below)

Label	Slice Thickness (mm)	Spacing/Interval (mm)	WW	WL
Head	3	1.5	180	25
MIPS	10	5	1500	-700
MIPS PE	10	5	920	125
MIPS 2x1	2	1	800	200
CO ST 3X1	3	1.5	450	50
CO BONE 1x1	1.5	0.75	2500	350
CO ST 2x1	2	1	450	50
CO BONE 2x1	2	1	2500	350
CTA Head Neck MIPS	10	2.5	600	200
AX ST HEAD	5	2.5	180	25
AX BONE HEAD	2.5	1.25	2500	350

How to Create a Reformat Protocol for use in a DMPR or manual sessions:

1. Load thin slices (make your reformat 0.625/1.25) into Reformat selected on the Image Works desktop. (You must pick a study that has a wide display field of view and a long scan range, i.e. a run off works well for building these.)
2. Select Batch Reformat.
3. Set the direction (CO/SA) of the batch, slice thickness, interval, FOV, WW/WL and mode to the values for the protocol it will be used with.
4. Define the overage (number of images) for the reformat protocol according to the anatomical area for the protocol.
5. At the bottom of the Batch screen, click ADVANCED.
6. Click SAVE AS PROTOCOL.
7. Enter the Protocol Name* and click OVERWRITE.

*The exact name listed above must be used in the naming of the protocol so DMPR will use the appropriate reformat protocol, which has been predefined in each of the protocols that use DMPR. Once you create these reformat protocols, you will not need to do it again.

Should you decide not to use these suggested reformat protocol names, slice thicknesses, or intervals, you will need to create your own reformat protocols and modify all protocols using DMPR with your selections; otherwise, DMPR will fail to output reformatted series.

To apply Auto DMPR on select recons, click the Auto Apps button. All of your Pre-Set Reformats will then show up in your Batch Protocol List. Click Start New, select the reformats you need for that recon, and click Auto Batch "ON".

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