

McLeod Pavilion


Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

3Plane Loc FIESTA	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	<i>Feet First</i>	Imaging Mode	<i>2D</i>
	Patient Position	<i>Supine</i>	Pulse Sequence	<i>Fiesta</i>
	Coil Configuration	<i>Body</i>	Imaging Options	<i>Seq, Fast</i>
	Plane	<i>3-PLANE</i>	SCAN RANGE	
	Series Description	<i>3Plane Loc FIESTA</i>	FOV	<i>48.0</i>
	SCAN TIMING		Slice Thickness	<i>10.0</i>
	Flip Angle	<i>45</i>	Slice Spacing	<i>5.0</i>
	TE	<i>Minimum</i>	ACQ TIMING	
	Number of Echoes	<i>1</i>	Freq	<i>160</i>
	Receiver Bandwidth	<i>100.00</i>	Phase	<i>140</i>
	IMAGE ENHANCE		Freq DIR	<i>Unswap</i>
	Filter Choice	<i>None</i>	NEX	<i>1.00</i>
	GATING/TRIGGER		# of Acq. Before Pause	<i>0</i>
	Auto Trigger Type	<i>Off</i>	Phase FOV	<i>1.00</i>
	MULTI-PHASE		Auto Shim	<i>Auto</i>
	Seperate Series	<i>0</i>	Phase Correction	<i>No</i>
	Mask Phase	<i>0</i>	FMRI	
	Mask Pause	<i>0</i>	PSD Trigger	<i>Internal</i>
	DIFFUSION		View Order	<i>Bottom/Up</i>
Recon All Images	<i>On</i>	# of Repetitions REST	<i>0</i>	
CONTRAST		# of Repetitions ACTIVE	<i>0</i>	
Contrast Yes/No	<i>No</i>	SAT		
		Tag Type	<i>None</i>	
		TRICKS		
		Pause On/Off	<i>On</i>	
		Auto Subtract	<i>0</i>	
		Auto SCIC	<i>Off</i>	
		OTHERS		
		Protocol Notes	<i>USE LARGE AA COIL AND USE BODY 36 2</i>	

3Plane Loc FIESTA

McLeod Pavilion

Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

Ax FIESTA BH Loc	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	<i>Feet First</i>	Imaging Mode	<i>2D</i>
	Patient Position	<i>Supine</i>	Pulse Sequence	<i>Fiesta</i>
	Coil Configuration	<i>Body</i>	Imaging Options	<i>Seq, EDR, Fast, ZIP512, Asset</i>
	Plane	<i>AXIAL</i>	SCAN RANGE	
	Series Description	<i>Ax FIESTA BH Loc</i>	FOV	<i>36.0</i>
	SCAN TIMING		Slice Thickness	<i>8.0</i>
	Flip Angle	<i>45</i>	Slice Spacing	<i>0.0</i>
	TE	<i>Min Full</i>	ACQ TIMING	
	Number of Echoes	<i>1</i>	Freq	<i>132</i>
	Receiver Bandwidth	<i>100.00</i>	Phase	<i>132</i>
	IMAGE ENHANCE		Freq DIR	<i>R/L</i>
	Filter Choice	<i>A</i>	NEX	<i>1.00</i>
	GATING/TRIGGER		# of Acq. Before Pause	<i>0</i>
	Auto Trigger Type	<i>Off</i>	Phase FOV	<i>1.00</i>
	FMRI		Auto Shim	<i>Auto</i>
	PSD Trigger	<i>Internal</i>	Phase Correction	<i>No</i>
	View Order	<i>Bottom/Up</i>	USER CVS	
	# of Repetitions REST	<i>0</i>	User CV20	<i>1.00</i>
	# of Repetitions ACTIVE	<i>0</i>	MULTI-PHASE	
SAT		Seperate Series	<i>0</i>	
Tag Type	<i>None</i>	Mask Phase	<i>0</i>	
TRICKS		Mask Pause	<i>0</i>	
Pause On/Off	<i>On</i>	DIFFUSION		
Auto Subtract	<i>0</i>	Optimized TE	<i>Yes</i>	
Auto SCIC	<i>2</i>	Recon All Images	<i>On</i>	
OTHERS		CONTRAST		
Protocol Notes	<i>cover above the arch to below heart</i>	Contrast Yes/No	<i>No</i>	
				
	TAKE OFF AUTO CAL			

Ax FIESTA BH Loc

McLeod Pavilion

Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

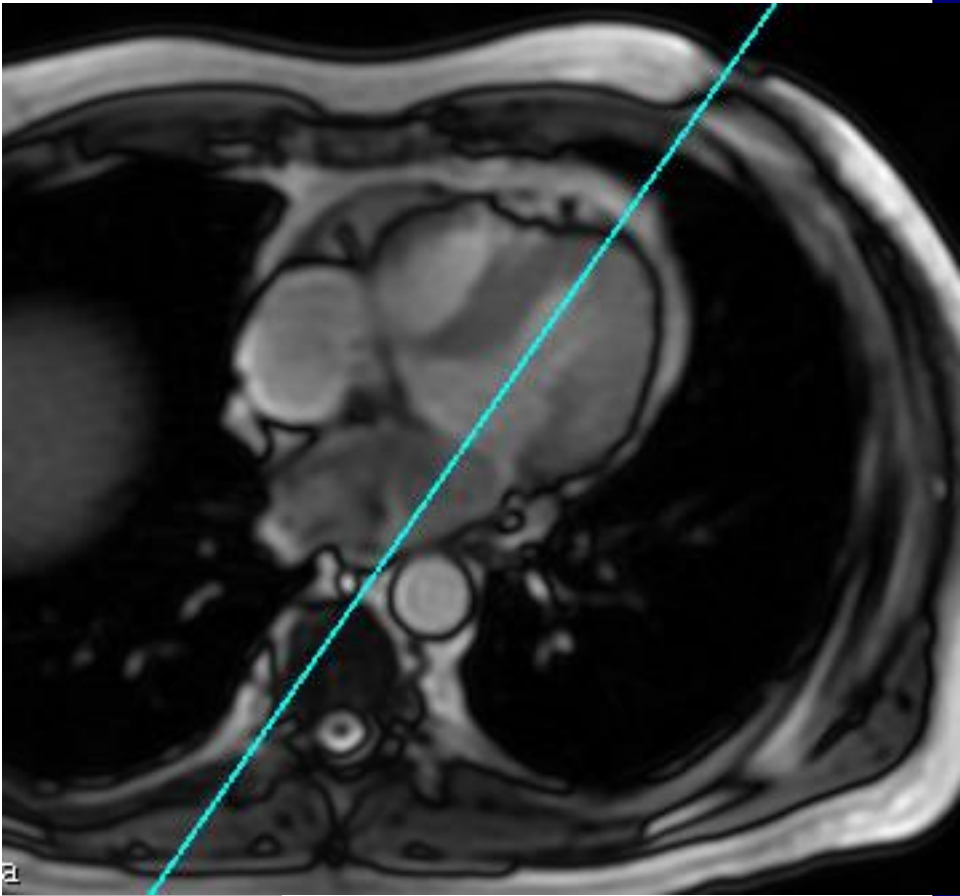
PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	<i>Feet First</i>	Imaging Mode	<i>2D</i>
Patient Position	<i>Supine</i>	Pulse Sequence	<i>Fiesta</i>
Coil Configuration	<i>Body</i>	Imaging Options	<i>Gat, Seq, EDR, Fast, Asset</i>
Plane	<i>OBLIQUE</i>	SCAN RANGE	
Series Description	<i>2Ch LOC BH</i>	FOV	<i>41.0</i>
SCAN TIMING		Slice Thickness	<i>8.0</i>
Flip Angle	<i>50</i>	Slice Spacing	<i>0.0</i>
TE	<i>Minimum</i>	ACQ TIMING	
Number of Echoes	<i>1</i>	Freq	<i>192</i>
Receiver Bandwidth	<i>100.00</i>	Phase	<i>224</i>
IMAGE ENHANCE		Freq DIR	<i>S/I</i>
Filter Choice	<i>None</i>	NEX	<i>1.00</i>
GATING/TRIGGER		Phase FOV	<i>1.00</i>
Auto Trigger Type	<i>Off</i>	Auto Shim	<i>On</i>
Trigger Type	<i>1</i>	Phase Correction	<i>No</i>
Views per Segment	<i>20</i>	FMRI	
MULTI-PHASE		PSD Trigger	<i>Internal</i>
Seperate Series	<i>0</i>	Slice Order	<i>Interleaved</i>
Mask Phase	<i>0</i>	View Order	<i>Bottom/Up</i>
Mask Pause	<i>0</i>	# of Repetitions REST	<i>0</i>
DIFFUSION		# of Repetitions ACTIVE	<i>0</i>
Recon All Images	<i>On</i>	SAT	
CINE		Tag Type	<i>None</i>
# of Cardiac Phases to Reconstruct	<i>20</i>	TRICKS	
		Pause On/Off	<i>On</i>
		Auto Subtract	<i>0</i>
		Auto SCIC	<i>Off</i>
		CONTRAST	
		Contrast Yes/No	<i>No</i>

2Ch LOC BH

2Ch LOC BH

OTHERS

Protocol Notes



2 CHAMBER LOC
PRESCRIPTION

Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

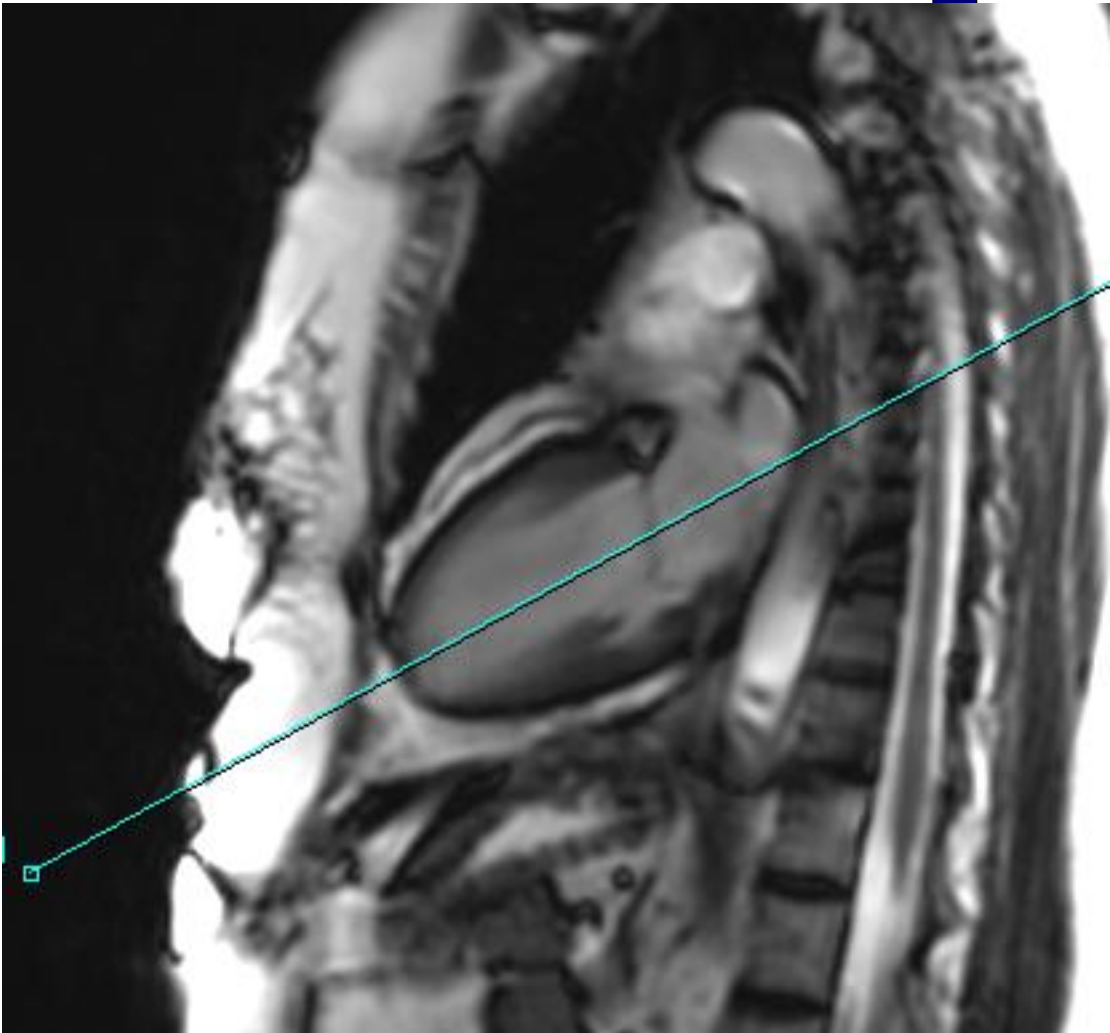
PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	<i>Feet First</i>	Imaging Mode	<i>2D</i>
Patient Position	<i>Supine</i>	Pulse Sequence	<i>Fiesta</i>
Coil Configuration	<i>Body</i>	Imaging Options	<i>Gat, Seq, EDR, Fast, Asset</i>
Plane	<i>OBLIQUE</i>	SCAN RANGE	
Series Description	<i>SEMI 4CH LOC BH</i>	FOV	<i>41.0</i>
SCAN TIMING		Slice Thickness	<i>7.0</i>
Flip Angle	<i>50</i>	Slice Spacing	<i>0.0</i>
TE	<i>Minimum</i>	ACQ TIMING	
Number of Echoes	<i>1</i>	Freq	<i>192</i>
Receiver Bandwidth	<i>100.00</i>	Phase	<i>224</i>
IMAGE ENHANCE		Freq DIR	<i>R/L</i>
Filter Choice	<i>None</i>	NEX	<i>1.00</i>
GATING/TRIGGER		Phase FOV	<i>0.90</i>
Auto Trigger Type	<i>Off</i>	Auto Shim	<i>On</i>
Trigger Type	<i>1</i>	Phase Correction	<i>No</i>
Views per Segment	<i>20</i>	FMRI	
MULTI-PHASE		PSD Trigger	<i>Internal</i>
Seperate Series	<i>0</i>	View Order	<i>Bottom/Up</i>
Mask Phase	<i>0</i>	# of Repetitions REST	<i>0</i>
Mask Pause	<i>0</i>	# of Repetitions ACTIVE	<i>0</i>
DIFFUSION		SAT	
Recon All Images	<i>On</i>	Tag Type	<i>None</i>
CINE		TRICKS	
# of Cardiac Phases to Reconstruct	<i>20</i>	Pause On/Off	<i>On</i>
		Auto Subtract	<i>0</i>
		Auto SCIC	<i>Off</i>
		CONTRAST	
		Contrast Yes/No	<i>No</i>

SEMI 4CH LOC BH

SEMI 4CH LOC BH

OTHERS

Protocol Notes



McLeod Pavilion

Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

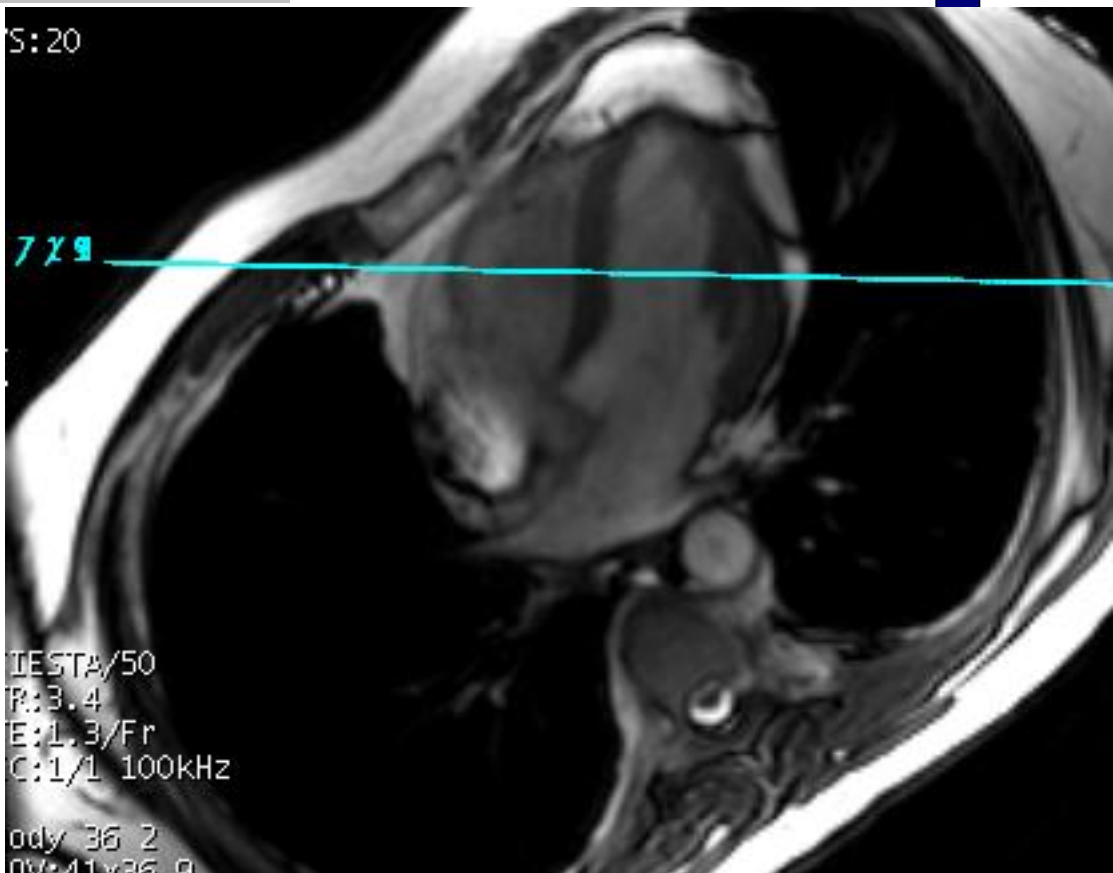
PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	<i>Feet First</i>	Imaging Mode	<i>2D</i>
Patient Position	<i>Supine</i>	Pulse Sequence	<i>Fiesta</i>
Coil Configuration	<i>Body</i>	Imaging Options	<i>Gat, Seq, EDR, Fast, Asset</i>
Plane	<i>OBLIQUE</i>	SCAN RANGE	
Series Description	<i>SA LOC BH</i>	FOV	<i>41.0</i>
SCAN TIMING		Slice Thickness	<i>8.0</i>
Flip Angle	<i>50</i>	Slice Spacing	<i>0.0</i>
TE	<i>Minimum</i>	ACQ TIMING	
Number of Echoes	<i>1</i>	Freq	<i>160</i>
Receiver Bandwidth	<i>100.00</i>	Phase	<i>160</i>
IMAGE ENHANCE		Freq DIR	<i>S/I</i>
Filter Choice	<i>None</i>	NEX	<i>1.00</i>
GATING/TRIGGER		Phase FOV	<i>0.80</i>
Auto Trigger Type	<i>Off</i>	Auto Shim	<i>On</i>
Trigger Type	<i>1</i>	Phase Correction	<i>No</i>
Views per Segment	<i>20</i>	FMRI	
MULTI-PHASE		PSD Trigger	<i>Internal</i>
Seperate Series	<i>0</i>	Slice Order	<i>Interleaved</i>
Mask Phase	<i>0</i>	View Order	<i>Bottom/Up</i>
Mask Pause	<i>0</i>	# of Repetitions REST	<i>0</i>
DIFFUSION		# of Repetitions ACTIVE	<i>0</i>
Recon All Images	<i>On</i>	SAT	
CINE		Tag Type	<i>None</i>
# of Cardiac Phases to Reconstruct	<i>20</i>	TRICKS	
		Pause On/Off	<i>On</i>
		Auto Subtract	<i>0</i>
		Auto SCIC	<i>Off</i>
		CONTRAST	
		Contrast Yes/No	<i>No</i>

SA LOC BH

SA LOC BH

OTHERS

Protocol Notes



RX SLICE OFF OF PEAK
DIASTOLIC

McLeod Pavilion

Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

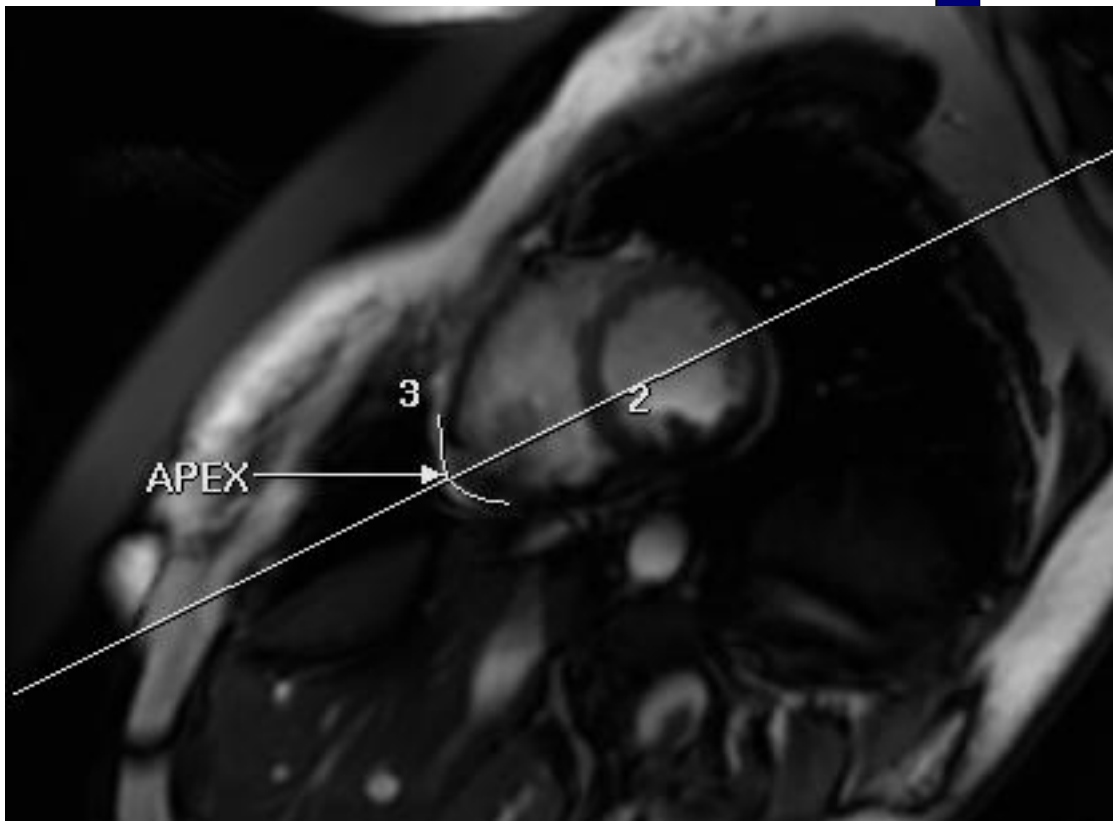
PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	<i>Feet First</i>	Imaging Mode	<i>2D</i>
Patient Position	<i>Supine</i>	Pulse Sequence	<i>Fiesta</i>
Coil Configuration	<i>Body</i>	Imaging Options	<i>Gat, Seq, EDR, Fast, Asset</i>
Plane	<i>OBLIQUE</i>	SCAN RANGE	
Series Description	<i>4CH LOC BH</i>	FOV	<i>41.0</i>
SCAN TIMING		Slice Thickness	<i>7.0</i>
Flip Angle	<i>50</i>	Slice Spacing	<i>0.0</i>
TE	<i>Minimum</i>	ACQ TIMING	
Number of Echoes	<i>1</i>	Freq	<i>192</i>
Receiver Bandwidth	<i>100.00</i>	Phase	<i>224</i>
IMAGE ENHANCE		Freq DIR	<i>R/L</i>
Filter Choice	<i>None</i>	NEX	<i>1.00</i>
GATING/TRIGGER		Phase FOV	<i>0.90</i>
Auto Trigger Type	<i>Off</i>	Auto Shim	<i>On</i>
Trigger Type	<i>1</i>	Phase Correction	<i>No</i>
Views per Segment	<i>20</i>	FMRI	
MULTI-PHASE		PSD Trigger	<i>Internal</i>
Seperate Series	<i>0</i>	View Order	<i>Bottom/Up</i>
Mask Phase	<i>0</i>	# of Repetitions REST	<i>0</i>
Mask Pause	<i>0</i>	# of Repetitions ACTIVE	<i>0</i>
DIFFUSION		SAT	
Recon All Images	<i>On</i>	Tag Type	<i>None</i>
CINE		TRICKS	
# of Cardiac Phases to Reconstruct	<i>20</i>	Pause On/Off	<i>On</i>
		Auto Subtract	<i>0</i>
		Auto SCIC	<i>Off</i>
		CONTRAST	
		Contrast Yes/No	<i>No</i>

4CH LOC BH

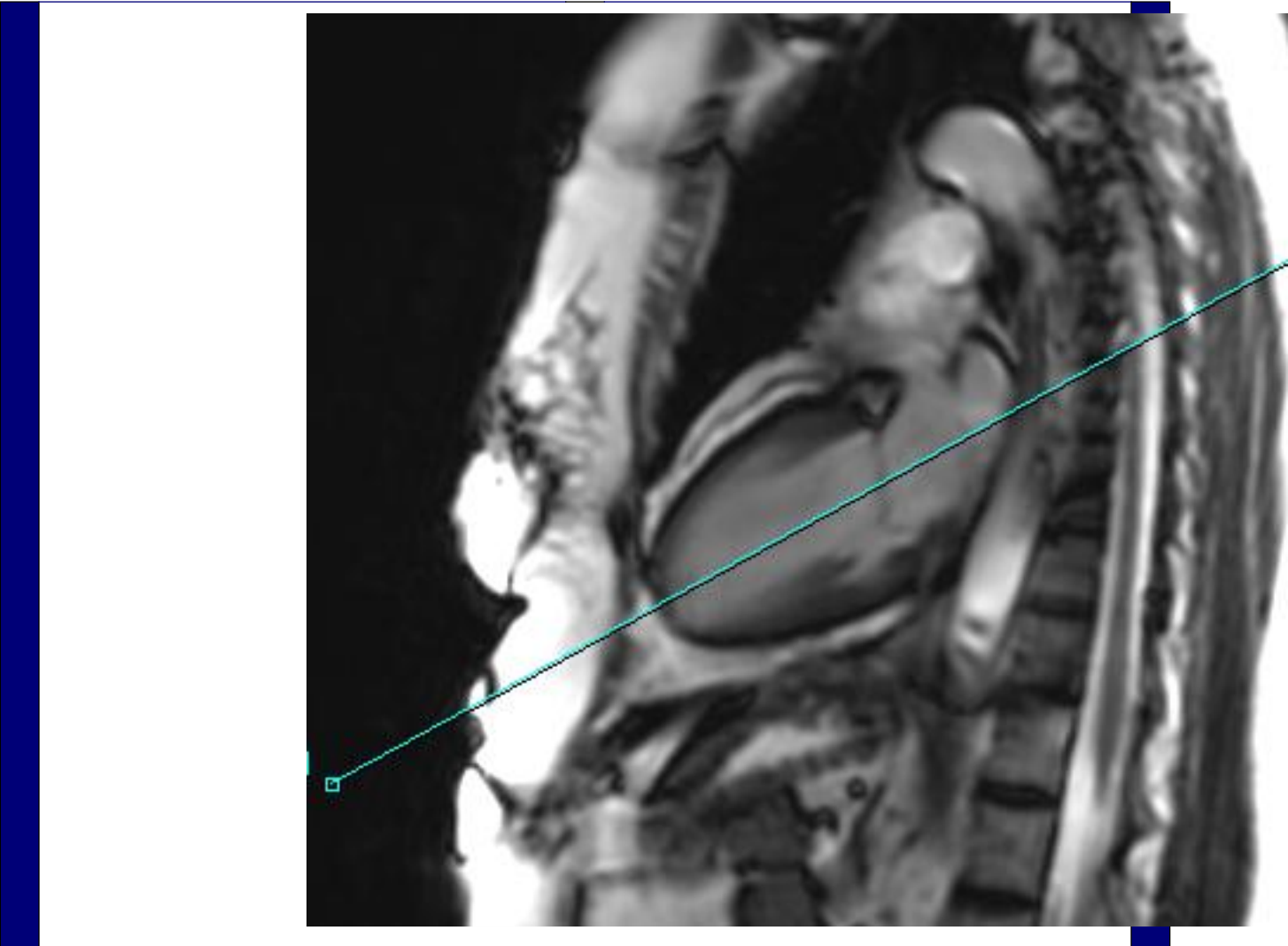
4CH LOC BH

<p>OTHERS</p>	
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Protocol Notes



*4 CHAMBER LOC. ANGLE
THROUGH APEX
SPLITTING THE APEX IN
HALF*



McLeod Pavilion

Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	<i>Feet First</i>	Imaging Mode	<i>2D</i>
Patient Position	<i>Supine</i>	Pulse Sequence	<i>Fiesta</i>
Coil Configuration	<i>Body</i>	Imaging Options	<i>Seq, Fast, Asset</i>
Plane	<i>OBLIQUE</i>	SCAN RANGE	
Series Description	<i>SA LOC FREE BREATH</i>	FOV	<i>41.0</i>
SCAN TIMING		Slice Thickness	<i>8.0</i>
Flip Angle	<i>50</i>	Slice Spacing	<i>0.0</i>
TE	<i>Minimum</i>	ACQ TIMING	
Number of Echoes	<i>1</i>	Freq	<i>160</i>
Receiver Bandwidth	<i>100.00</i>	Phase	<i>160</i>
IMAGE ENHANCE		Freq DIR	<i>S/I</i>
Filter Choice	<i>None</i>	NEX	<i>1.00</i>
GATING/TRIGGER		# of Acq. Before Pause	<i>0</i>
Auto Trigger Type	<i>Off</i>	Phase FOV	<i>0.80</i>
MULTI-PHASE		Auto Shim	<i>On</i>
Seperate Series	<i>0</i>	Phase Correction	<i>No</i>
Mask Phase	<i>0</i>	FMRI	
Mask Pause	<i>0</i>	PSD Trigger	<i>Internal</i>
DIFFUSION		View Order	<i>Bottom/Up</i>
Recon All Images	<i>On</i>	# of Repetitions REST	<i>0</i>
CONTRAST		# of Repetitions ACTIVE	<i>0</i>
Contrast Yes/No	<i>No</i>	SAT	
		Tag Type	<i>None</i>
		TRICKS	
		Pause On/Off	<i>On</i>
		Auto Subtract	<i>0</i>
		Auto SCIC	<i>Off</i>

SA LOC FREE BREATH

SA LOC FREE BREATH

OTHERS

Protocol Notes

h: 2/20

S: 20

/ 1 5

/ 1 3

/ 1 1

9 / 9

9 / 7

9 / 5

9 / 3

9 / 1

IESTA/50

R: 3.5

E: 1.3/Fr

C: 1/1 100kHz

*RX OFF 4 CH
This is done so we can
angle our FOV box*

McLeod Pavilion

Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	<i>Feet First</i>	Imaging Mode	<i>2D</i>
Patient Position	<i>Supine</i>	Pulse Sequence	<i>Fiesta</i>
Coil Configuration	<i>Body</i>	Imaging Options	<i>Gat, Seq, EDR, Fast, Asset</i>
Plane	<i>OBLIQUE</i>	SCAN RANGE	
Series Description	<i>SA FIESTA CINE BH</i>	FOV	<i>44.0</i>
SCAN TIMING		Slice Thickness	<i>8.0</i>
Flip Angle	<i>45</i>	Slice Spacing	<i>1.0</i>
TE	<i>Minimum</i>	ACQ TIMING	
Number of Echoes	<i>1</i>	Freq	<i>192</i>
Receiver Bandwidth	<i>142.86</i>	Phase	<i>256</i>
IMAGE ENHANCE		Freq DIR	<i>S/I</i>
Filter Choice	<i>None</i>	NEX	<i>1.00</i>
GATING/TRIGGER		# of Acq. Before Pause	<i>1</i>
Auto Trigger Type	<i>On</i>	Phase FOV	<i>0.80</i>
Trigger Type	<i>0</i>	Auto Shim	<i>On</i>
Views per Segment	<i>20</i>	Phase Correction	<i>No</i>
MULTI-PHASE		FMRI	
Seperate Series	<i>0</i>	PSD Trigger	<i>Internal</i>
Mask Phase	<i>0</i>	View Order	<i>Bottom/Up</i>
Mask Pause	<i>0</i>	# of Repetitions REST	<i>0</i>
DIFFUSION		# of Repetitions ACTIVE	<i>0</i>
Recon All Images	<i>On</i>	SAT	
CINE		Tag Type	<i>None</i>
# of Cardiac Phases to Reconstruct	<i>20</i>	TRICKS	
		Pause On/Off	<i>On</i>
		Auto Subtract	<i>0</i>
		Auto SCIC	<i>Off</i>
		CONTRAST	
		Contrast Yes/No	<i>No</i>

SA FIESTA CINE BH

SA FIESTA CINE BH

<p>OTHERS</p>	
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Protocol Notes

scan from base to apex RX
OFF 4 CH

Im: 2
QA: 59.6
67 bpm
TD: 54
Ph: 2/20

VS: 20

9 / 15
9 / 13
9 / 11
9 / 9
I
R 9 / 7
A 9 / 5
9 / 3
9 / 1

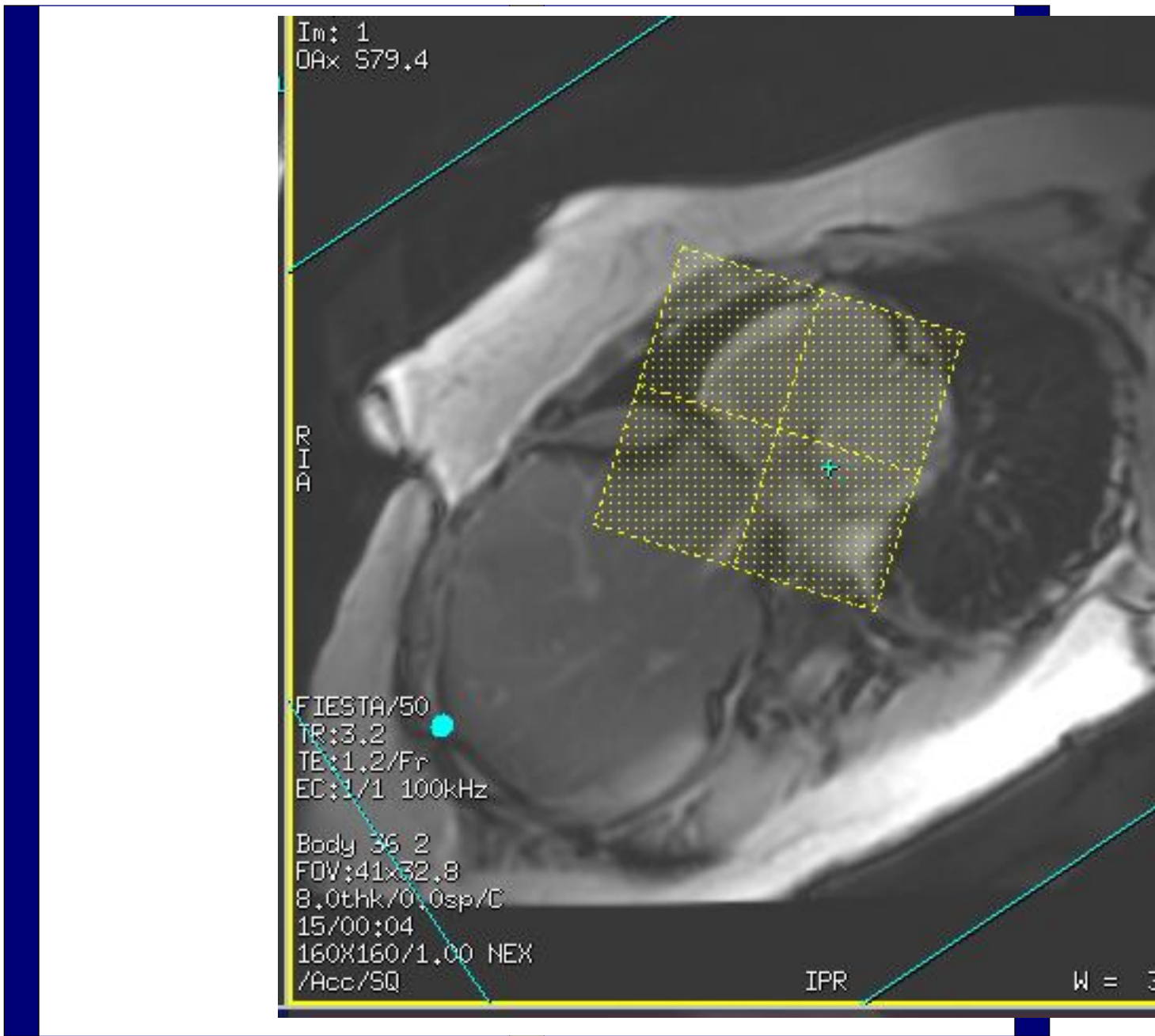
FIESTA/50
TR: 3.5
TE: 1.3/Fr
EC: 1/1 100kHz

Body 36 2
FOV: 45x40.5
7.0thk/0.0sp/C
20/00:12
192X224/1.00 NEX
EG/ACC/ED/SQ

SPR

W =

*rx 2-3 slices posterior to
mitral valve. extend 3-4
slices beyond apex of heart.
Stop scan when you are
through the heart.*



Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

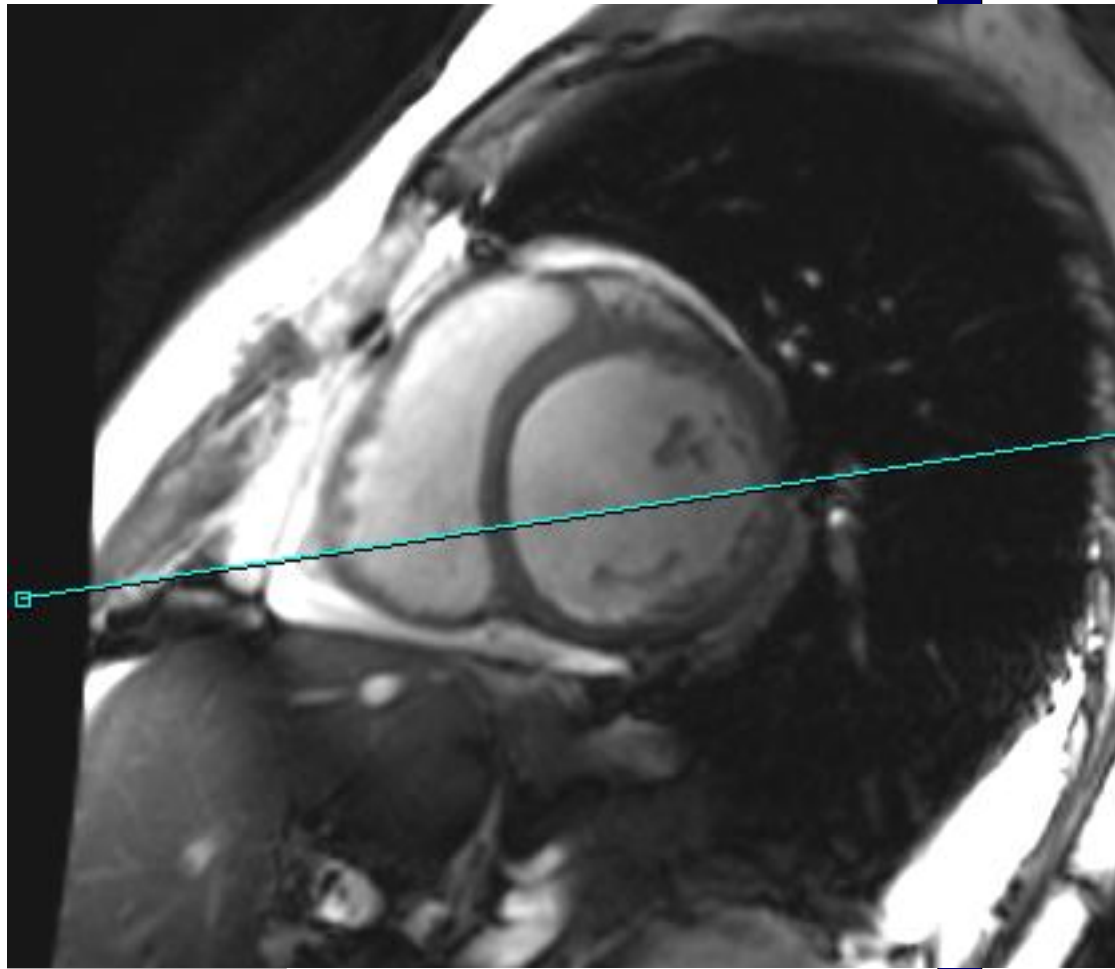
PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	<i>Feet First</i>	Imaging Mode	<i>2D</i>
Patient Position	<i>Supine</i>	Pulse Sequence	<i>Fiesta</i>
Coil Configuration	<i>Body</i>	Imaging Options	<i>Gat, Seq, EDR, Fast, Asset</i>
Plane	<i>OBLIQUE</i>	SCAN RANGE	
Series Description	<i>4CH FIESTA BH</i>	FOV	<i>42.0</i>
SCAN TIMING		Slice Thickness	<i>8.0</i>
Flip Angle	<i>45</i>	Slice Spacing	<i>0.0</i>
TE	<i>Minimum</i>	ACQ TIMING	
Number of Echoes	<i>1</i>	Freq	<i>192</i>
Receiver Bandwidth	<i>142.86</i>	Phase	<i>192</i>
IMAGE ENHANCE		Freq DIR	<i>R/L</i>
Filter Choice	<i>None</i>	NEX	<i>1.00</i>
GATING/TRIGGER		# of Acq. Before Pause	<i>1</i>
Auto Trigger Type	<i>On</i>	Phase FOV	<i>0.90</i>
Trigger Type	<i>0</i>	Auto Shim	<i>On</i>
Views per Segment	<i>20</i>	Phase Correction	<i>No</i>
MULTI-PHASE		FMRI	
Seperate Series	<i>0</i>	PSD Trigger	<i>Internal</i>
Mask Phase	<i>0</i>	View Order	<i>Bottom/Up</i>
Mask Pause	<i>0</i>	# of Repetitions REST	<i>0</i>
DIFFUSION		# of Repetitions ACTIVE	<i>0</i>
Recon All Images	<i>On</i>	SAT	
CINE		Tag Type	<i>None</i>
# of Cardiac Phases to Reconstruct	<i>20</i>	TRICKS	
		Pause On/Off	<i>On</i>
		Auto Subtract	<i>0</i>
		Auto SCIC	<i>Off</i>
		CONTRAST	
		Contrast Yes/No	<i>No</i>

4CH FIESTA BH

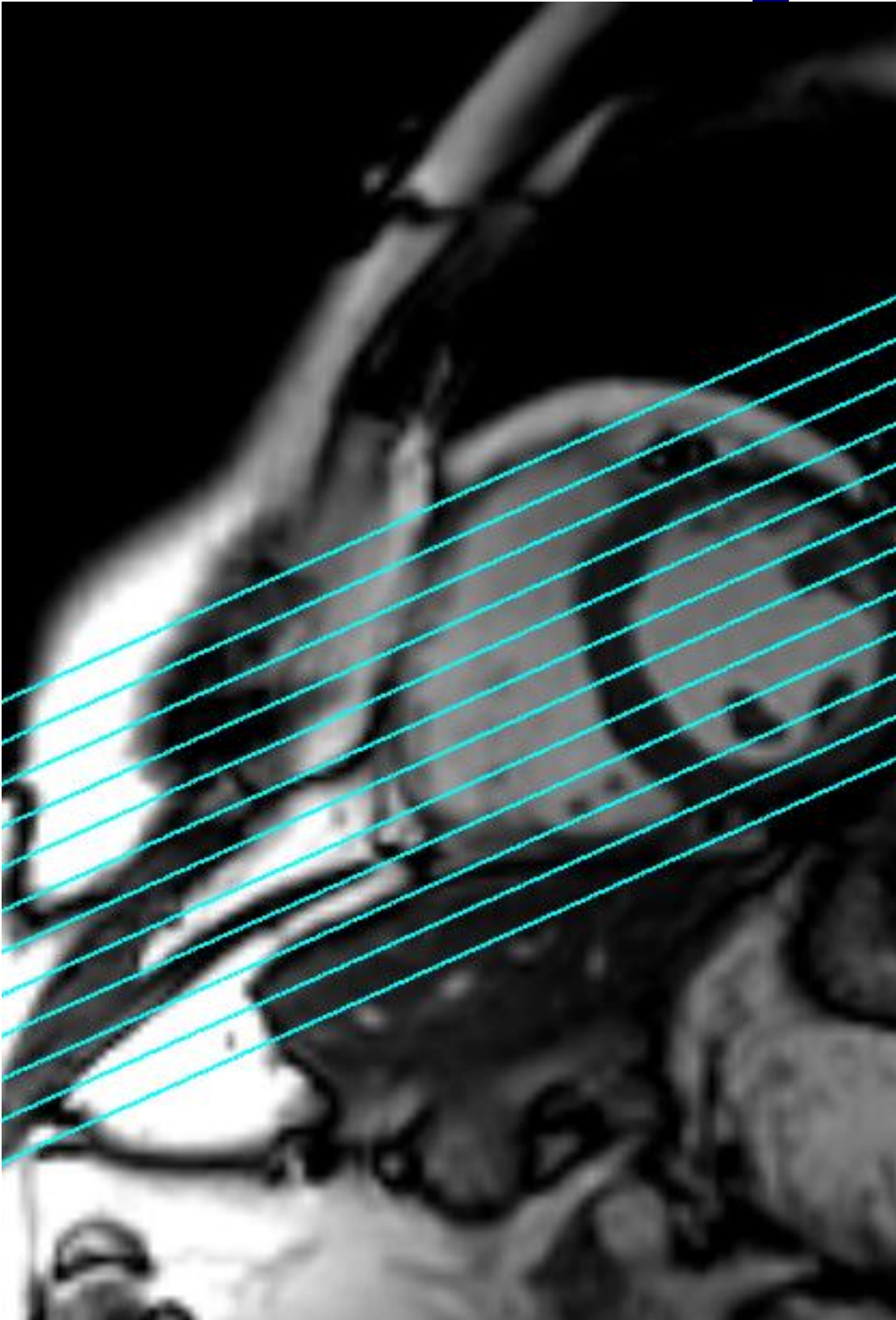
4CH FIESTA BH

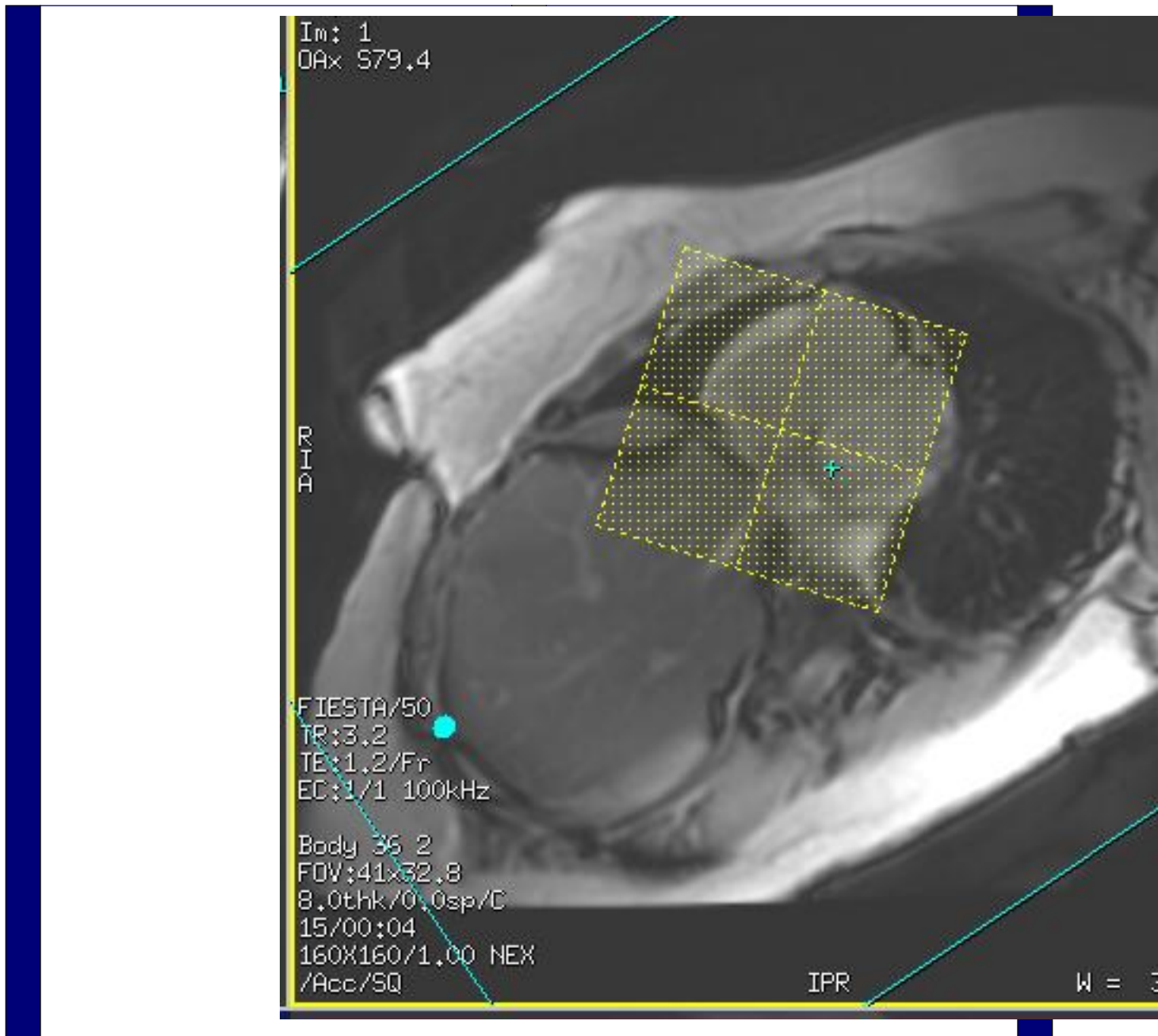
<p>OTHERS</p>	
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Protocol Notes



*Scan through entire heart
RX OFF SA FIESTA*





Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	<i>Feet First</i>	Imaging Mode	<i>2D</i>
Patient Position	<i>Supine</i>	Pulse Sequence	<i>Fiesta</i>
Coil Configuration	<i>Body</i>	Imaging Options	<i>Gat, Seq, EDR, Fast, Asset</i>
Plane	<i>OBLIQUE</i>	SCAN RANGE	
Series Description	<i>3CH FIESTA BH</i>	FOV	<i>38.0</i>
SCAN TIMING		Slice Thickness	<i>8.0</i>
Flip Angle	<i>45</i>	Slice Spacing	<i>0.0</i>
TE	<i>Minimum</i>	ACQ TIMING	
Number of Echoes	<i>1</i>	Freq	<i>192</i>
Receiver Bandwidth	<i>142.86</i>	Phase	<i>192</i>
IMAGE ENHANCE		Freq DIR	<i>R/L</i>
Filter Choice	<i>None</i>	NEX	<i>1.00</i>
GATING/TRIGGER		# of Acq. Before Pause	<i>1</i>
Auto Trigger Type	<i>On</i>	Phase FOV	<i>1.00</i>
Trigger Type	<i>0</i>	Auto Shim	<i>On</i>
Views per Segment	<i>30</i>	Phase Correction	<i>No</i>
MULTI-PHASE		FMRI	
Seperate Series	<i>0</i>	PSD Trigger	<i>Internal</i>
Mask Phase	<i>0</i>	View Order	<i>Bottom/Up</i>
Mask Pause	<i>0</i>	# of Repetitions REST	<i>0</i>
DIFFUSION		# of Repetitions ACTIVE	<i>0</i>
Recon All Images	<i>On</i>	SAT	
CINE		Tag Type	<i>None</i>
# of Cardiac Phases to Reconstruct	<i>20</i>	TRICKS	
		Pause On/Off	<i>On</i>
		Auto Subtract	<i>0</i>
		Auto SCIC	<i>Off</i>
		CONTRAST	
		Contrast Yes/No	<i>No</i>

3CH FIESTA BH

3CH FIESTA BH

OTHERS

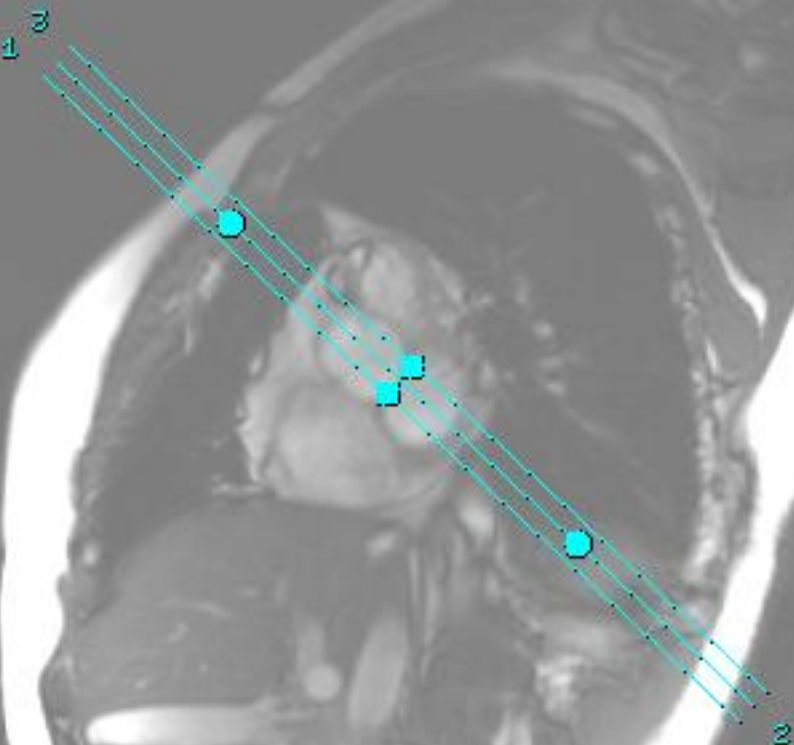
Protocol Notes

314
7/20

20

BTA/45
3.3
1.3/Fr
1/1 100kHz

38 2
:44x35.2
thk/1.0sp
07-01-10-17



RX 1 SLICE THROUGH
SNOWMAN USING
SHORT AXIS VIEW, THEN
ENTER 3 IN THE # OF
SLICES BOX

McLeod Pavilion

Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	<i>Feet First</i>	Imaging Mode	<i>2D</i>
Patient Position	<i>Supine</i>	Pulse Sequence	<i>Fiesta</i>
Coil Configuration	<i>Body</i>	Imaging Options	<i>Gat, Seq, EDR, Fast, Asset</i>
Plane	<i>OBLIQUE</i>	SCAN RANGE	
Series Description	<i>2CH LA FIESTA BH</i>	FOV	<i>42.0</i>
SCAN TIMING		Slice Thickness	<i>8.0</i>
Flip Angle	<i>45</i>	Slice Spacing	<i>0.0</i>
TE	<i>Minimum</i>	ACQ TIMING	
Number of Echoes	<i>1</i>	Freq	<i>192</i>
Receiver Bandwidth	<i>142.86</i>	Phase	<i>192</i>
IMAGE ENHANCE		Freq DIR	<i>S/I</i>
Filter Choice	<i>None</i>	NEX	<i>1.00</i>
GATING/TRIGGER		# of Acq. Before Pause	<i>1</i>
Auto Trigger Type	<i>On</i>	Phase FOV	<i>0.90</i>
Trigger Type	<i>0</i>	Auto Shim	<i>On</i>
Views per Segment	<i>30</i>	Phase Correction	<i>No</i>
MULTI-PHASE		FMRI	
Seperate Series	<i>0</i>	PSD Trigger	<i>Internal</i>
Mask Phase	<i>0</i>	View Order	<i>Bottom/Up</i>
Mask Pause	<i>0</i>	# of Repetitions REST	<i>0</i>
DIFFUSION		# of Repetitions ACTIVE	<i>0</i>
Recon All Images	<i>On</i>	SAT	
CINE		Tag Type	<i>None</i>
# of Cardiac Phases to Reconstruct	<i>20</i>	TRICKS	
		Pause On/Off	<i>On</i>
		Auto Subtract	<i>0</i>
		Auto SCIC	<i>Off</i>
		CONTRAST	
		Contrast Yes/No	<i>No</i>

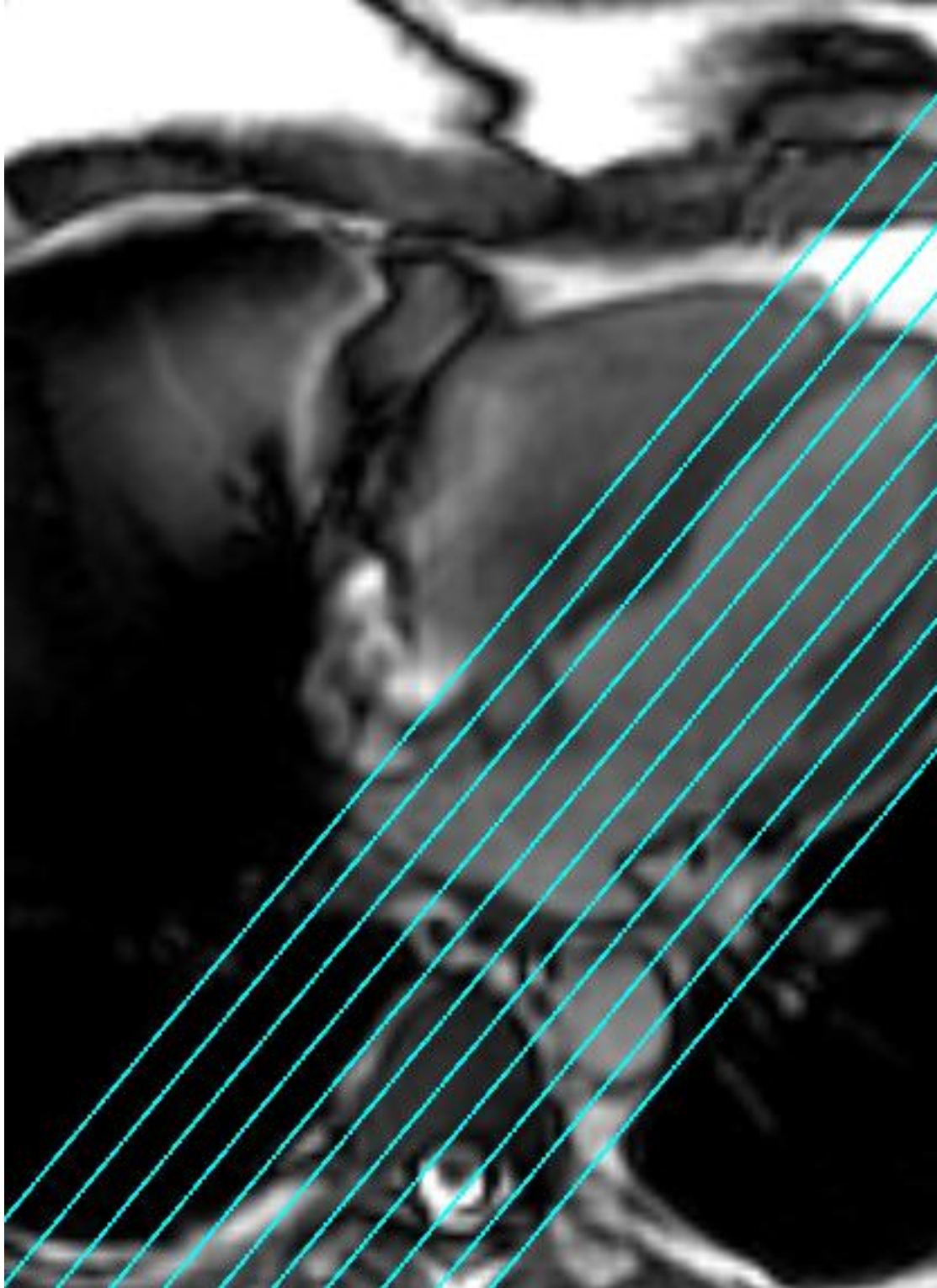
2CH LA FIESTA BH

2CH LA FIESTA BH

OTHERS

Protocol Notes

RX OFF 4 CH VIEW



McLeod Pavilion

Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

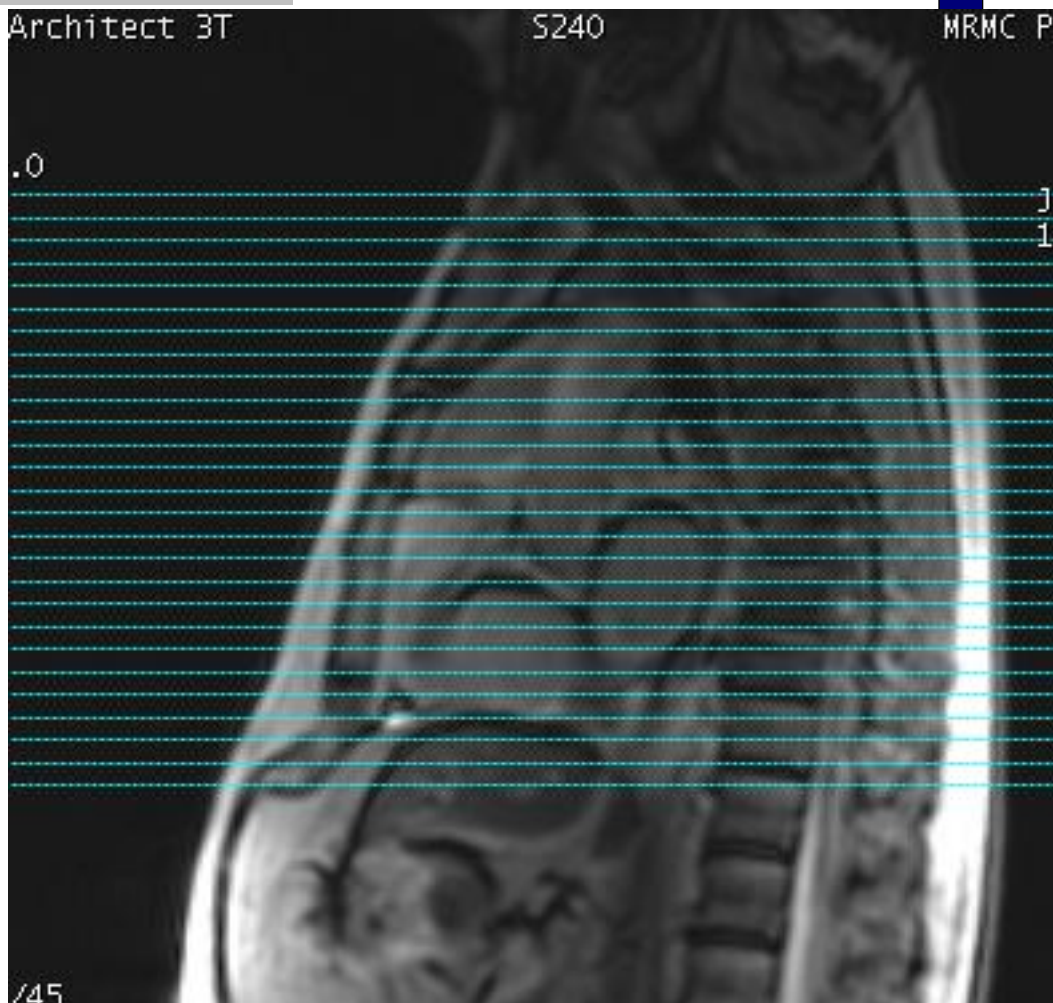
PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	<i>Feet First</i>	Imaging Mode	<i>2D</i>
Patient Position	<i>Supine</i>	Pulse Sequence	<i>Spin Echo</i>
Coil Configuration	<i>Body</i>	Imaging Options	<i>Gat, Seq, EDR, Fast, ZIP512, SS, BSP, Asset</i>
Plane	<i>AXIAL</i>	SCAN RANGE	
Series Description	<i>AX T2 FB BLACK BLOOD SSFSE</i>	FOV	<i>36.0</i>
SCAN TIMING		Slice Thickness	<i>8.0</i>
TE	<i>50.0</i>	Slice Spacing	<i>0.0</i>
Number of Echoes	<i>1</i>	ACQ TIMING	
Blood Suppression TI	<i>737</i>	Freq	<i>212</i>
Receiver Bandwidth	<i>83.33</i>	Phase	<i>150</i>
IMAGE ENHANCE		Freq DIR	<i>R/L</i>
Filter Choice	<i>A</i>	# of Acq. Before Pause	<i>0</i>
GATING/TRIGGER		Phase FOV	<i>0.90</i>
Auto Trigger Type	<i>Off</i>	Auto Shim	<i>Auto</i>
Trigger Type	<i>1</i>	Phase Correction	<i>No</i>
Minimum Trigger Delay	<i>2</i>	USER CVS	
Cardiac Phase	<i>1</i>	User CV2	<i>240.00</i>
Cardiac Slices	<i>1</i>	User CV13	<i>1.00</i>
FMRI		MULTI-PHASE	
PSD Trigger	<i>Internal</i>	Seperate Series	<i>0</i>
View Order	<i>Bottom/Up</i>	Mask Phase	<i>0</i>
# of Repetitions REST	<i>0</i>	Mask Pause	<i>0</i>
# of Repetitions ACTIVE	<i>0</i>	DIFFUSION	
SAT		Recon All Images	<i>On</i>
Tag Type	<i>None</i>	CONTRAST	
TRICKS		Contrast Yes/No	<i>No</i>
# of RR Intervals	<i>2</i>		
Trigger Delay	<i>748</i>		
Pause On/Off	<i>On</i>		
Auto Subtract	<i>0</i>		
Auto SCIC	<i>2</i>		

AX T2 FB BLACK BLOOD SSFSE

AX T2 FB BLACK BLOOD SSFSE

OTHERS

Protocol Notes



RX OFF SAG 3 PLANE
LOC.
SCAN FROM ABOVE
ARCH TO BELOW HEART

McLeod Pavilion

Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

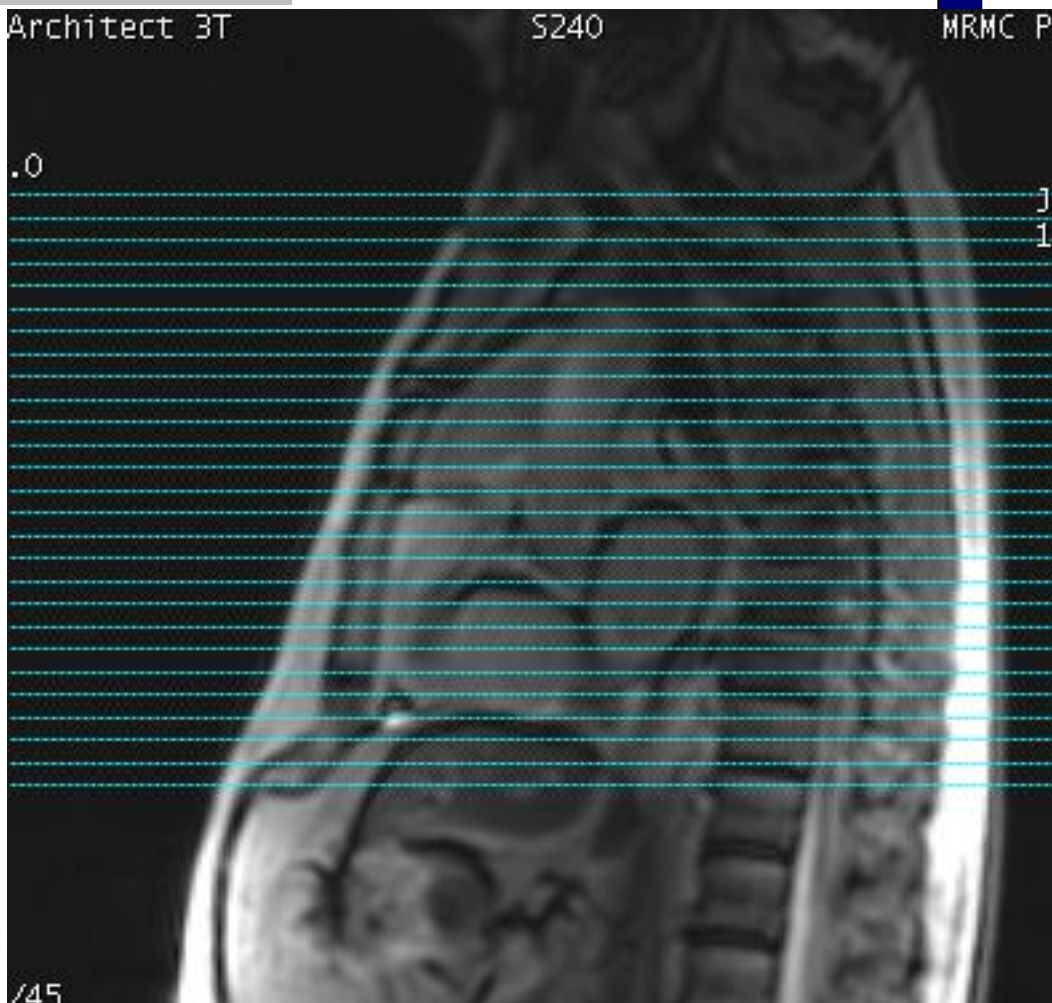
PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	<i>Feet First</i>	Imaging Mode	<i>2D</i>
Patient Position	<i>Supine</i>	Pulse Sequence	<i>FSE-XL</i>
Coil Configuration	<i>Body</i>	Imaging Options	<i>Gat, Seq, EDR, Fast, ZIP512, BSP, Asset, IrP</i>
Plane	<i>AXIAL</i>	PSD Name	<i>FSE-XL</i>
Series Description	<i>AX Triple IR FB BLACK BLOOD</i>		
SCAN TIMING		SCAN RANGE	
Flip Angle	<i>107</i>	FOV	<i>36.0</i>
TE	<i>65.0</i>	Slice Thickness	<i>8.0</i>
Number of Echoes	<i>1</i>	Slice Spacing	<i>0.0</i>
TI	<i>220</i>	ACQ TIMING	
Echo Train Length	<i>23</i>	Freq	<i>224</i>
Blood Suppression TI	<i>1053</i>	Phase	<i>192</i>
Receiver Bandwidth	<i>50.00</i>	Freq DIR	<i>R/L</i>
IMAGE ENHANCE		Fat Shift DIR	<i>Normal (L)</i>
Filter Choice	<i>A</i>	NEX	<i>1.00</i>
GATING/TRIGGER		# of Acq. Before Pause	<i>0</i>
Auto Trigger Type	<i>On</i>	Phase FOV	<i>1.00</i>
Trigger Type	<i>0</i>	Auto Shim	<i>Auto</i>
Minimum Trigger Delay	<i>2</i>	Phase Correction	<i>No</i>
Cardiac Phase	<i>1</i>	USER CVS	
Cardiac Slices	<i>1</i>	User CV14	<i>3.33</i>
FMRI		User CV22	<i>1.00</i>
PSD Trigger	<i>Internal</i>	MULTI-PHASE	
View Order	<i>Bottom/Up</i>	Seperate Series	<i>0</i>
# of Repetitions REST	<i>0</i>	Mask Phase	<i>0</i>
# of Repetitions ACTIVE	<i>0</i>	Mask Pause	<i>0</i>
SAT		DIFFUSION	
Tag Type	<i>None</i>	Recon All Images	<i>On</i>
TRICKS		CONTRAST	
# of RR Intervals	<i>2</i>	Contrast Yes/No	<i>No</i>
Trigger Delay	<i>1065</i>		
Pause On/Off	<i>On</i>		
Auto Subtract	<i>0</i>		
Auto SCIC	<i>2</i>		

AX Triple IR FB BLACK BLOOD

AX Triple IR FB BLACK BLOOD

OTHERS

Protocol Notes



RX OFF SAG 3 PLANE
LOC.
SCAN FROM ABOVE
ARCH TO BELOW HEART

McLeod Pavilion

Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	<i>Feet First</i>	Imaging Mode	<i>2D</i>
Patient Position	<i>Supine</i>	Pulse Sequence	<i>Fiesta</i>
Coil Configuration	<i>Body</i>	Imaging Options	<i>Seq, Fast</i>
Plane	<i>3-PLANE</i>	SCAN RANGE	
Series Description	***INJECT***	FOV	<i>48.0</i>
SCAN TIMING		Slice Thickness	<i>10.0</i>
Flip Angle	<i>45</i>	Slice Spacing	<i>5.0</i>
TE	<i>Minimum</i>	ACQ TIMING	
Number of Echoes	<i>1</i>	Freq	<i>160</i>
Receiver Bandwidth	<i>100.00</i>	Phase	<i>140</i>
IMAGE ENHANCE		Freq DIR	<i>Unswap</i>
Filter Choice	<i>None</i>	NEX	<i>1.00</i>
GATING/TRIGGER		# of Acq. Before Pause	<i>0</i>
Auto Trigger Type	<i>Off</i>	Phase FOV	<i>1.00</i>
MULTI-PHASE		Auto Shim	<i>Auto</i>
Seperate Series	<i>0</i>	Phase Correction	<i>No</i>
Mask Phase	<i>0</i>	FMRI	
Mask Pause	<i>0</i>	PSD Trigger	<i>Internal</i>
DIFFUSION		View Order	<i>Bottom/Up</i>
Recon All Images	<i>On</i>	# of Repetitions REST	<i>0</i>
CONTRAST		# of Repetitions ACTIVE	<i>0</i>
Contrast Yes/No	<i>No</i>	SAT	
		Tag Type	<i>None</i>
		TRICKS	
		Pause On/Off	<i>On</i>
		Auto Subtract	<i>0</i>
		Auto SCIC	<i>Off</i>
		OTHERS	
		Protocol Notes	<i>USE LARGE AA COIL AND USE BODY 36 2</i>

INJECT

INJECT

McLeod Pavilion

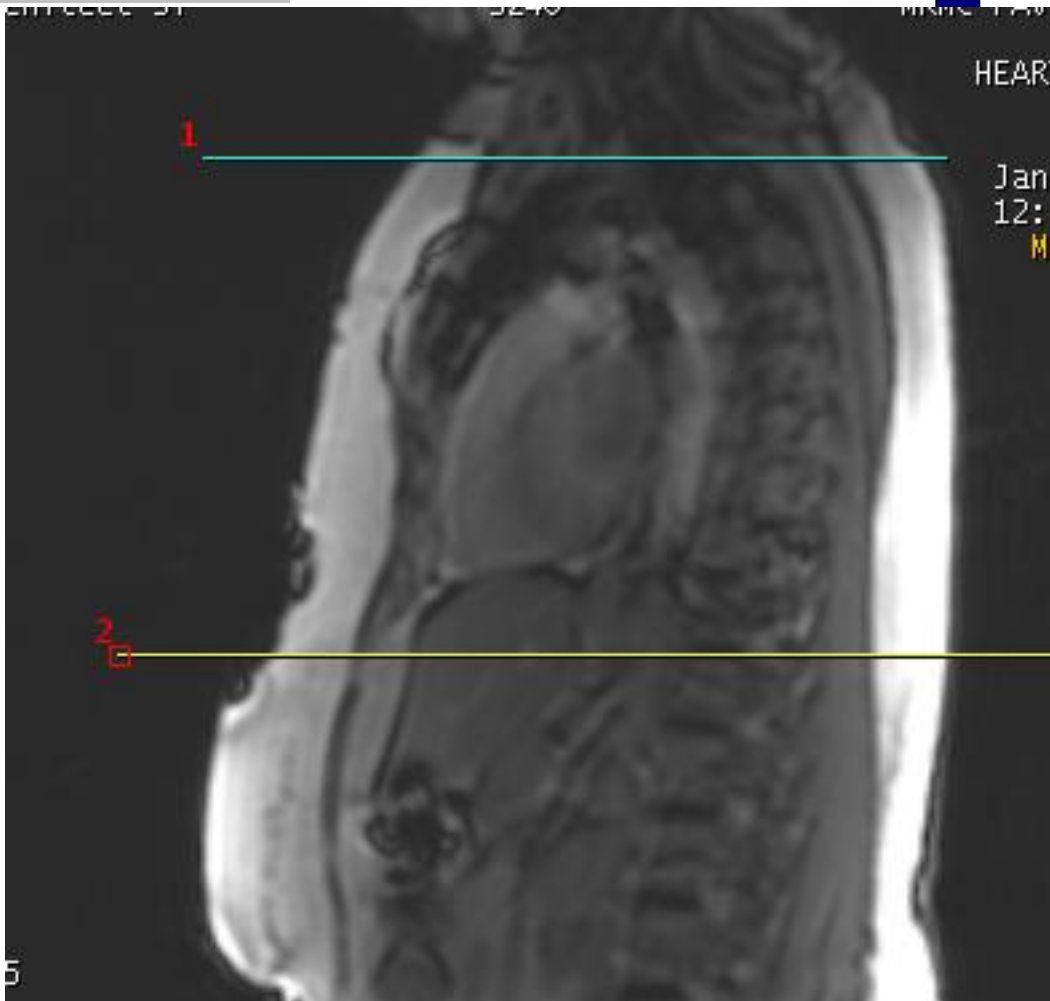
Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

Ax 4DFLOW postCE FB TRY	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	<i>Feet First</i>	Imaging Mode	<i>3D</i>
	Patient Position	<i>Supine</i>	Pulse Sequence	<i>4DFLOW</i>
	Coil Configuration	<i>Body</i>	Imaging Options	<i>Gat, EDR, Fast, ZIP2, ARC</i>
	Plane	<i>AXIAL</i>	SCAN RANGE	
	Series Description	<i>Ax 4DFLOW postCE FB TRY</i>	FOV	<i>44.0</i>
	SCAN TIMING		Slice Thickness	<i>2.8</i>
	Flip Angle	<i>15</i>	Location per Slab	<i>72</i>
	TE	<i>Min Full</i>	Overlap Locations	<i>0</i>
	Number of Echoes	<i>1</i>	ACQ TIMING	
	Receiver Bandwidth	<i>62.50</i>	Freq	<i>200</i>
	IMAGE ENHANCE		Phase	<i>200</i>
	Filter Choice	<i>None</i>	Freq DIR	<i>R/L</i>
	GATING/TRIGGER		NEX	<i>4.00</i>
	Auto Trigger Type	<i>On</i>	Phase FOV	<i>0.75</i>
	Trigger Type	<i>0</i>	Auto Shim	<i>Auto</i>
	Views per Segment	<i>4</i>	Phase Correction	<i>No</i>
	# of Acq Phases	<i>16</i>	USER CVS	
	FMRI		User CV3	<i>1.00</i>
	PSD Trigger	<i>Internal</i>	User CV5	<i>65.00</i>
View Order	<i>Bottom/Up</i>	User CV6	<i>2.00</i>	
# of Repetitions REST	<i>0</i>	User CV16	<i>10.00</i>	
# of Repetitions ACTIVE	<i>0</i>	MULTI-PHASE		
VASCULAR		Seperate Series	<i>0</i>	
Flow Analysis	<i>All</i>	Mask Phase	<i>0</i>	
Velocity Encoding	<i>300.0</i>	Mask Pause	<i>0</i>	
ASSET		DIFFUSION		
Hyperkat Value	<i>8</i>	Recon All Images	<i>On</i>	
CINE		TRICKS		
# of Cardiac Phases to Reconstruct	<i>20</i>	Pause On/Off	<i>On</i>	
		Auto Subtract	<i>0</i>	
		Auto SCIC	<i>Off</i>	
		CONTRAST		
		Contrast Yes/No	<i>No</i>	

Ax 4DFLOW postCE FB TRY

OTHERS

Protocol Notes



3D SLAB SCAN FROM
ABOVE ARCH TO BELOW
HEART.
KEEP SCAN TIME
AROUND 10 MINUTES.
TO REDUCE SCAN TIME
REDUCE PHASE FOV.
YOU MAY HAVE TO
INCREASE FREQUENCY
FOV IF REDUCING PHASE
FOV CUTS OFF
ANATOMY

Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

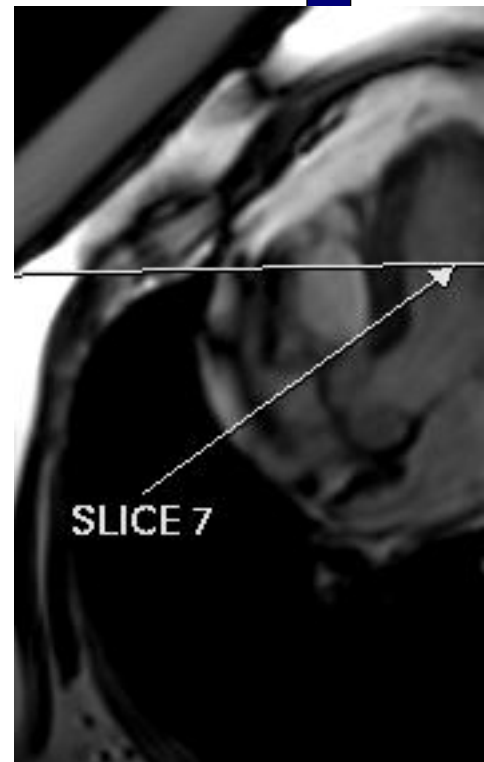
PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	<i>Feet First</i>	Imaging Mode	<i>2D</i>
Patient Position	<i>Supine</i>	Pulse Sequence	<i>CINE IR</i>
Coil Configuration	<i>Body</i>	Imaging Options	<i>Gat, Seq, Fast, IrP</i>
Plane	<i>OBLIQUE</i>	SCAN RANGE	
Series Description	<i>CINE IR 2RR BH</i>	FOV	<i>40.0</i>
SCAN TIMING		Slice Thickness	<i>8.0</i>
Flip Angle	<i>5</i>	Slice Spacing	<i>0.0</i>
TE	<i>Min Full</i>	ACQ TIMING	
Number of Echoes	<i>1</i>	Freq	<i>128</i>
Receiver Bandwidth	<i>50.00</i>	Phase	<i>128</i>
IMAGE ENHANCE		Freq DIR	<i>Unswap</i>
Filter Choice	<i>None</i>	NEX	<i>1.00</i>
GATING/TRIGGER		Phase FOV	<i>0.80</i>
Auto Trigger Type	<i>On</i>	Auto Shim	<i>Auto</i>
Trigger Type	<i>0</i>	Phase Correction	<i>No</i>
Cardiac Phase	<i>1</i>	FMRI	
Cardiac Slices	<i>1</i>	PSD Trigger	<i>Internal</i>
Views per Segment	<i>14</i>	View Order	<i>Bottom/Up</i>
MULTI-PHASE		# of Repetitions REST	<i>0</i>
Seperate Series	<i>0</i>	# of Repetitions ACTIVE	<i>0</i>
Mask Phase	<i>0</i>	DIFFUSION	
Mask Pause	<i>0</i>	Recon All Images	<i>On</i>
TRICKS		CINE	
# of RR Intervals	<i>2</i>	# of Cardiac Phases to Reconstruct	<i>30</i>
Pause On/Off	<i>On</i>		
Auto Subtract	<i>0</i>		
Auto SCIC	<i>Off</i>		
CONTRAST			
Contrast Yes/No	<i>Yes</i>		

CINE IR 2RR BH

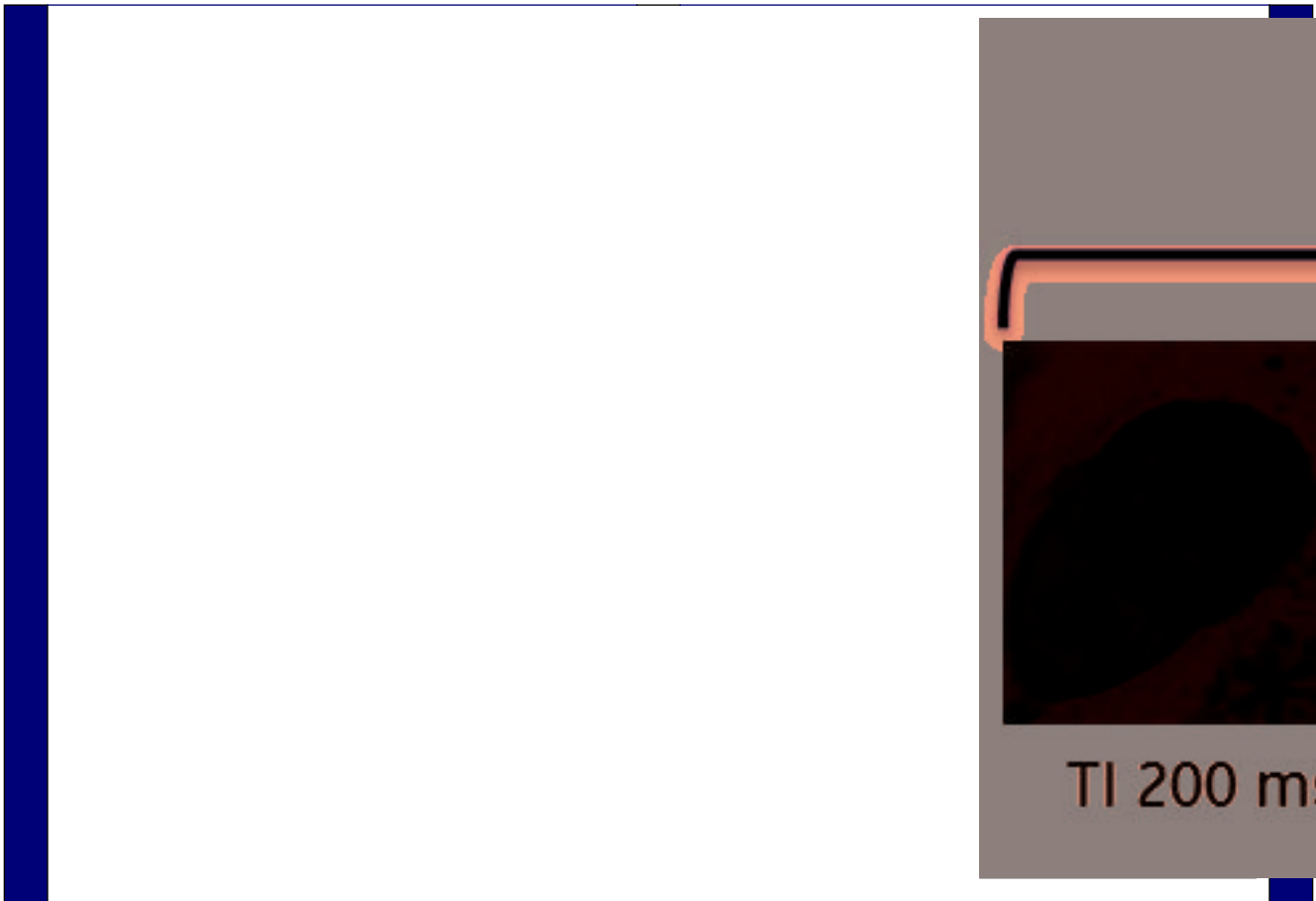
CINE IR 2RR BH

OTHERS

Protocol Notes



RX 1 SLICE OFF 4 CH TO DETERMINE PROPER PREP TIME. CHOOSE THE BEST T1 TIME OFF THE VIEWER(LOOKING FOR DARKEST MYOCARDIUM)



McLeod Pavilion

Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	<i>Feet First</i>	Imaging Mode	<i>2D</i>
Patient Position	<i>Supine</i>	Pulse Sequence	<i>SPGR</i>
Coil Configuration	<i>Body</i>	Imaging Options	<i>Gat, EDR, Fast, PS, Asset, IrP</i>
Plane	<i>OBLIQUE</i>	SCAN RANGE	
Series Description	<i>SA SS PS MDE BH</i>	FOV	<i>40.0</i>
SCAN TIMING		Slice Thickness	<i>8.0</i>
Flip Angle	<i>20</i>	Slice Spacing	<i>0.0</i>
Number of Echoes	<i>1</i>	ACQ TIMING	
Receiver Bandwidth	<i>62.50</i>	Freq	<i>200</i>
IMAGE ENHANCE		Phase	<i>200</i>
Filter Choice	<i>A</i>	Freq DIR	<i>Unswap</i>
GATING/TRIGGER		NEX	<i>1.00</i>
Auto Trigger Type	<i>On</i>	Phase FOV	<i>0.80</i>
Trigger Type	<i>0</i>	Auto Shim	<i>Auto</i>
Minimum Trigger Delay	<i>2</i>	Phase Correction	<i>No</i>
Cardiac Phase	<i>1</i>	FMRI	
Cardiac Slices	<i>1</i>	PSD Trigger	<i>Internal</i>
MULTI-PHASE		View Order	<i>Bottom/Up</i>
Seperate Series	<i>0</i>	# of Repetitions REST	<i>0</i>
Mask Phase	<i>0</i>	# of Repetitions ACTIVE	<i>0</i>
Mask Pause	<i>0</i>	SAT	
DIFFUSION		Tag Type	<i>None</i>
Recon All Images	<i>On</i>	TRICKS	
CINE		# of RR Intervals	<i>2</i>
# of Cardiac Phases to Reconstruct	<i>20</i>	Trigger Delay	<i>10</i>
OTHERS		Pause On/Off	<i>On</i>
Protocol Notes	<i>SCAN IS LINKED TO SHORT AXIS. REMOVE SLICES FROM THE BASE OF HEART. ONLY NEED TO INCLUDE MYOCARDIUM. START FIRST SLICE AT MITRAL VALVE</i>	Auto Subtract	<i>0</i>
		Auto SCIC	<i>Off</i>
		CONTRAST	
		Contrast Yes/No	<i>No</i>

SA SS PS MDE BH

SA SS PS MDE BH

Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

2 CH SS PS MDE SPGR	PATIENT POSITION		IMAGING PARAMETERS		2 CH SS PS MDE SPGR
	Patient Entry	<i>Feet First</i>	Imaging Mode	<i>2D</i>	
	Patient Position	<i>Supine</i>	Pulse Sequence	<i>SPGR</i>	
	Coil Configuration	<i>Body</i>	Imaging Options	<i>Gat, EDR, Fast, PS, Asset, IrP</i>	
	Plane	<i>OBLIQUE</i>	SCAN RANGE		
	Series Description	<i>2 CH SS PS MDE SPGR</i>	FOV	<i>36.0</i>	
	SCAN TIMING		Slice Thickness	<i>8.0</i>	
	Flip Angle	<i>20</i>	Slice Spacing	<i>0.0</i>	
	Number of Echoes	<i>1</i>	ACQ TIMING		
	Receiver Bandwidth	<i>62.50</i>	Freq	<i>156</i>	
	IMAGE ENHANCE		Phase	<i>140</i>	
	Filter Choice	<i>A</i>	Freq DIR	<i>Unswap</i>	
	GATING/TRIGGER		NEX	<i>1.00</i>	
	Auto Trigger Type	<i>On</i>	Phase FOV	<i>0.80</i>	
	Trigger Type	<i>0</i>	Auto Shim	<i>Auto</i>	
	Minimum Trigger Delay	<i>2</i>	Phase Correction	<i>No</i>	
	Cardiac Phase	<i>1</i>	FMRI		
	Cardiac Slices	<i>1</i>	PSD Trigger	<i>Internal</i>	
	MULTI-PHASE		View Order	<i>Bottom/Up</i>	
	Seperate Series	<i>0</i>	# of Repetitions REST	<i>0</i>	
Mask Phase	<i>0</i>	# of Repetitions ACTIVE	<i>0</i>		
Mask Pause	<i>0</i>	SAT			
DIFFUSION		Tag Type	<i>None</i>		
Recon All Images	<i>On</i>	TRICKS			
CINE		# of RR Intervals	<i>2</i>		
# of Cardiac Phases to Reconstruct	<i>20</i>	Trigger Delay	<i>10</i>		
		Pause On/Off	<i>On</i>		
		Auto Subtract	<i>0</i>		
		Auto SCIC	<i>Off</i>		
		CONTRAST			
		Contrast Yes/No	<i>No</i>		

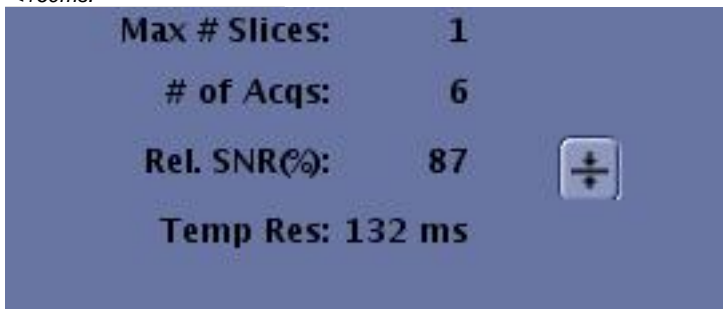
OTHERS

Protocol Notes

IMPORTANT TIPS:
- When scanning PSMDE, # RR interval for CINE IR must match #RR interval for PSMDE.
- For optimal image quality, set the Trigger Delay to Diastolic or type in a value manually.



- Increase T1 by 20-25ms after every 5min to account for wash-out over time.
- Ensure Temp Res is <200ms. For HR>100BPM, Temp Res should be <160ms.



Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	<i>Feet First</i>	Imaging Mode	<i>2D</i>
Patient Position	<i>Supine</i>	Pulse Sequence	<i>SPGR</i>
Coil Configuration	<i>Body</i>	Imaging Options	<i>Gat, EDR, Fast, PS, Asset, IrP</i>
Plane	<i>OBLIQUE</i>	SCAN RANGE	
Series Description	<i>4CH SS PS MDE SPGR</i>	FOV	<i>36.0</i>
SCAN TIMING		Slice Thickness	<i>8.0</i>
Flip Angle	<i>20</i>	Slice Spacing	<i>0.0</i>
Number of Echoes	<i>1</i>	ACQ TIMING	
Receiver Bandwidth	<i>62.50</i>	Freq	<i>156</i>
IMAGE ENHANCE		Phase	<i>140</i>
Filter Choice	<i>A</i>	Freq DIR	<i>Unswap</i>
GATING/TRIGGER		NEX	<i>1.00</i>
Auto Trigger Type	<i>On</i>	Phase FOV	<i>0.80</i>
Trigger Type	<i>0</i>	Auto Shim	<i>Auto</i>
Minimum Trigger Delay	<i>2</i>	Phase Correction	<i>No</i>
Cardiac Phase	<i>1</i>	FMRI	
Cardiac Slices	<i>1</i>	PSD Trigger	<i>Internal</i>
MULTI-PHASE		View Order	<i>Bottom/Up</i>
Seperate Series	<i>0</i>	# of Repetitions REST	<i>0</i>
Mask Phase	<i>0</i>	# of Repetitions ACTIVE	<i>0</i>
Mask Pause	<i>0</i>	DIFFUSION	
TRICKS		Recon All Images	<i>On</i>
# of RR Intervals	<i>2</i>	CINE	
Trigger Delay	<i>10</i>	# of Cardiac Phases to Reconstruct	<i>20</i>
Pause On/Off	<i>On</i>		
Auto Subtract	<i>0</i>		
Auto SCIC	<i>Off</i>		
CONTRAST			
Contrast Yes/No	<i>No</i>		

4CH SS PS MDE SPGR

4CH SS PS MDE SPGR

Protocol: adult_chest_CARDIAC VIABILITY W/ 4D FLOW

OTHERS

Protocol Notes

IMPORTANT TIPS:
- When scanning PSMDE, # RR interval for CINE IR must match #RR interval for PSMDE.
- For optimal image quality, set the Trigger Delay to Diastolic or type in a value manually.

Trigger Delay: Diastoli

Inter-Seq. Delay:

- Increase TI by 20-25ms after every 5min to account for wash-out over time.
- Ensure Temp Res is <200ms. For HR>100BPM, Temp Res should be <160ms.

Max # Slices: 1

of Acqs: 6

Rel. SNR(%): 87

Temp Res: 132 ms