



Practicum Team Project Report

Team Name: LATAM

Summary:

This CMR protocol was created with a medical radiologist at the Red Salud Vitacura Clinic, Chile. Its purpose to provide a library of sequences for imaging a large number of cardiac pathologies and allow the technologist to perform the exam when a radiologist is unavailable. This protocol was created as part of the MRI training of the SWiM program and allowed optimization of parameters and knowledge sharing with technologist at other institutions for better understanding of the technique.

Table 1: List of Scanners used by team members at their sites

Scanner	Make	Model	Current Software Version	RF coil
3.0 T	General Electric	Architect	DV29.1	MP Coil Medium 21 ch

Secuence	Slice Thkicness	Spacing	N° slices	Ph matrix	Freq matrix	Freq FoV	Phase FoV	BW
3 plane								
pl FIESTA 2C	8 mm	0	1	200	200	40 cm	1	111
pl FIESTA 4C	8 mm	0	1	200	200	40 cm	1	111
pl FIESTA S.A	8 mm	0	1	200	200	40 cm	1	111
AX FIESTA ANATOMIC	8 mm	0	20	200	200	42 cm	0,85	111
SA T2 TIR	8 mm	0	3	224	160	40 cm	1	62,5
SA FIESTA CINE	8 mm	0	12	200	200	40 cm	0,9	111
SA T2 MAP	8 mm	0	3	144	144	42	1	83,3
SA T1 MAP NATIVE	8 mm	0	3	160	132	38	1	90
PERFUSION (MoCo)	8 mm	0	3	132	132	44	1	62,5
FIESTA 2Ch CINE	8 mm	0	3	200	200	40	1	111
FIESTA 4Ch CINE	8 mm	0	3	200	200	40	1	111
FIESTA 3Ch TSVI CINE	8 mm	0	3	200	200	40	1	111
SA CINE IR 6 min	8 mm	0	1	96	64	44	1	111
SA PSMDE 8 min	8 mm	0	12	220	220	44	0.9	111
4Ch PSMDE	8 mm	0	3	220	220	44	0.9	35,71

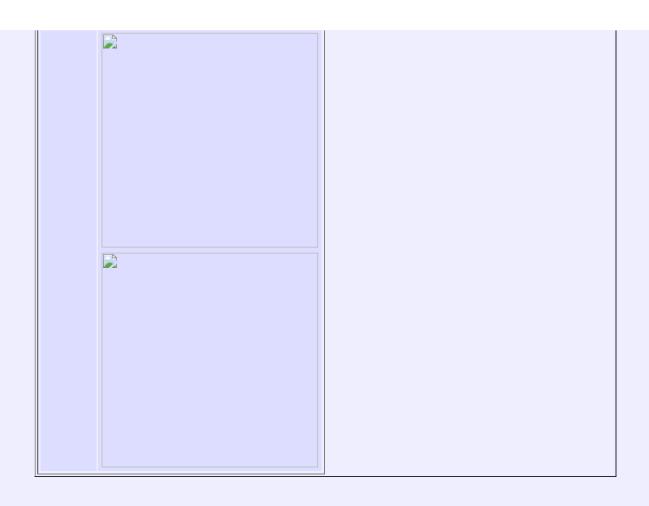
2Ch PSMDE	8 mm	0	3	220	220	44	0,9	35,71
3Ch PSMDE	8 mm	0	3	220	220	44	1	35,71
SA T1 MAP Gd	8 mm	0	3	160	132	38	1	90
Phase Contrast Aortic Flow	8 mm	0	3	188	188	36	0,75	62,50

Protocol: adult_chest_1.- RM CARDIO ESTANDAR 2022

	3-Plane	Localizer		
PATIENT POSITI	ION	IMAGING PARAMET	ERS	
Patient Entry	Feet First	Imaging Mode	2D	
Patient Position	Supine	Pulse Sequence	Spin Echo	
Coil Configuration	GE21chFlexL;GE40chGEMPA	Imaging Options	Seq, EDR, Fast, SS, FR, ARC	
Plane	3-PLANE	Phase	2.00	
Series Description	3-Plane Localizer			
SCAN TIMING		SCAN RANGE		
TE	80.0	FOV	48.0	
Number of Echoes	s 1	Slice Thickness	8.00	
TR	Minimum	Slice Spacing	5.0	
Receiver Bandwid	lth 83.33	Overlap Locations	0	
IMAGE ENHANC	CE	ACQ TIMING		
Filter Choice	None	Freq	384	
		Phase	160	
		Freq DIR	Unswap	
		# of Acq. Before Pause	0	
		Phase FOV	1.00	
		Auto Shim	Auto	
		Phase Correction	No	
		RF Drive Mode	Preset	
		Excitation Mode	Selective	
USER CVS		FMRI		
User CV1	1.00	PSD Trigger	Internal	
User CV2	240.00	View Order	Bottom/Up	
User CV13	1.00	# of Repetitions REST	0	
User CV Mask2	0	# of Repetitions ACTIVE	0	
MULTI-PHASE		SAT		
Seperate Series	0	Tag Type	None	
Mask Phase	0			
Mask Pause	0			
Preserve	0			
DIFFUSION		TRICKS		
Recon All Images	On	Pause On/Off	On	
# Synthetic b-valu	es 1	Auto Subtract	0	
Synthetic b-value	1000.0;	Auto SCIC	Off	
CONTRAST				
Contrast Yes/No	No			

Ax FIESTA ANATOMICO				
PATIENT POSITION	IMAGING PARAMETERS			

Patient Entry	Feet First	Imaging Mada	2D
Patient Position	Supine	Imaging Mode Pulse Sequence	Fiesta
Coil	-	Imaging Options	Seq, EDR, Fast, Asset
Configuration	GE21chFlexL;GE40chGEMPA	Phase	2.00
Plane	OBLIQUE	1 nasc	2.00
Series			
Description	Ax FIESTA ANATOMICO		
SCAN TIMING		SCAN RANGE	
Flip Angle	45	FOV	42.0
TE	Min Full	Slice Thickness	8.00
Number of Echoes	s 1	Slice Spacing	0.0
Receiver Bandwid	lth 111.11	Overlap Locations	0
		Number of Slices	23
IMAGE ENHANG	ាត្ត	ACQ TIMING	
Filter Choice	None	Freq	152
Ther choice	110110	Phase	152
		Freq DIR	R/L
		NEX	1.00
		# of Acq. Before Pause	0
		Phase FOV	0.85
		Auto Shim	Auto
		Phase Correction	No
		RF Drive Mode	Quadrature (CP)
		Excitation Mode	Selective
GATING/TRIGG	ER	USER CVS	
Pause After Navig	ratau	User CV20	1.00
Prescan	0	User CV Mask2	512
EMDI			
FMRI	Internal	MULTI-PHASE	0
PSD Trigger View Order	Bottom/Up	Seperate Series Mask Phase	0
# of Repetitions R	•	Mask Pause	0
# of Repetitions R		Preserve	0
ACTIVE	0	1 reserve	V
SAT		DIFFUSION	
Tag Type	None	Recon All Images	On
ing Type	110110	# Synthetic b-values	1
		Synthetic b-value	1000.0;
TDICKS			
TRICKS Pause On/Off	On	CONTRAST Contrast Yes/No	No
Auto Subtract	On 0	Contrast res/10	INU
Auto SCIC	2		
OTHERS	anatamia Anial Estable and		
	anatomico Axial Estricto: sobre ortico cubriendo todo el		
	dejando un corte bajo el apex.		
TR men	os a 3.5ms, modificable a travez		
	y Bandwidth (BW) Uso de BW		
	Ito posible Siempre corregir ra disminuir artefacto Banding y		
	Localizer TG SIEMPRE ABRIR		
	NA CARDIAC		



3pl FIESTA 2C Cine BH					
PATIENT POSIT	ION	IMAGING PARAMET	ERS		
Patient Entry	Feet First	Imaging Mode	2D		
Patient Position	Supine	Pulse Sequence	Fiesta		
Coil Configuration	GE21chFlexL;GE40chGEMPA	Imaging Options	Gat, Seq, EDR, Fast, ZIP512, Asset		
Plane	OBLIQUE	Phase	2.00		
Series Description	3pl FIESTA 2C Cine BH				
SCAN TIMING		SCAN RANGE			
Flip Angle	49	FOV	40.0		
TE	Minimum	Slice Thickness	8.00		
Number of Echoes	s 1	Slice Spacing	0.0		
Receiver Bandwid	lth 111.11	Overlap Locations	0		
		Number of Slices	4		
IMAGE ENHANG	CE	ACQ TIMING			
Filter Choice	В	Freq	200		
		Phase	200		
		Freq DIR	S/I		
		NEX	1.00		
		# of Acq. Before Pause	0		
		Phase FOV	1.00		
		Auto Shim	Auto		
		Phase Correction	No		
		RF Drive Mode	Quadrature (CP)		
		Excitation Mode	Selective		

CATINIC/TDICCED		LICED C	V.C	
GATING/TRIGGER	5	USER C		1.00
Trigger Type Views per Segment	5 14	User CV User CV		1.00 1.00
• •	14	User CV		512
Pause After Navigator Prescan	0	User Cv	Maskz	312
FMRI		MULTI-	PHASE	
PSD Trigger	Internal	Seperate	Series	0
View Order	Bottom/Up	Mask Ph	ase	0
# of Repetitions REST	0	Mask Pa	use	0
# of Repetitions ACTIVE	0	Preserve		0
SAT		DIFFUS	ION	
Tag Type	None		ll Images	On
rag Type	110110		tic b-values	1
		-	c b-value	1000.0;
TRICKS		CINE		
Pause On/Off	On		diac Phases to	30
Auto Subtract	0	Reconstr	uct	30
Auto SCIC	2			
CONTRAST		OTHER	S	
Contrast Yes/No	No	-11		TIPS: -Make sure that
			accordingly. Deficiency arrhythm Time FIESTA case the image Duplicate & Sthe series from to bring up the zoom out to virotate the FOV orient the box	Temp Res, change VPS Decreasing VPS will of Res In case of SIESTA CINE scan due to ic heartbeat, use Real ungated sequence In ecomes out rotated, etup the series, then select in the Graphic Rx Toolbar image you just scanned, isualize the full FOV, and box as shown below to parallel to the chest wall. IV rotation



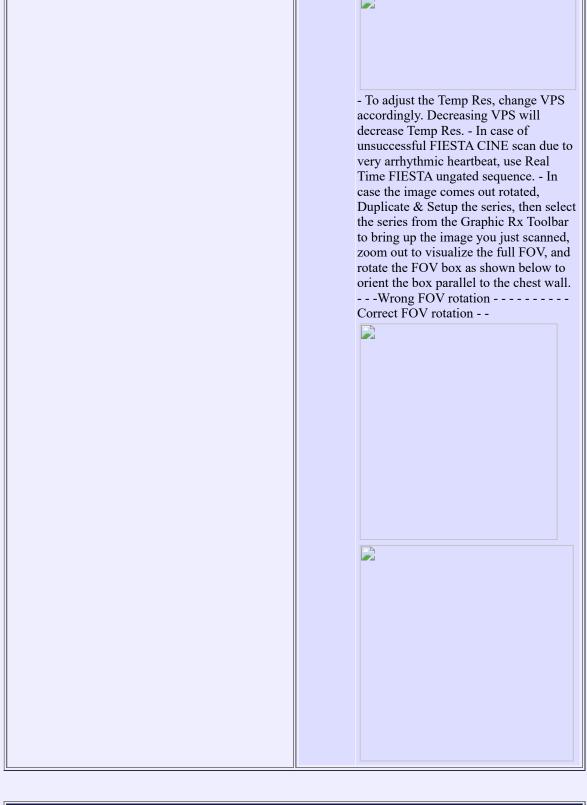
3pl FIESTA 4C Cine BH				
PATIENT POSIT	ION	IMAGING PARAMETERS		
Patient Entry	Feet First	Imaging Mode	2D	
Patient Position	Supine	Pulse Sequence	Fiesta	
Coil Configuration	GE21chFlexL;GE40chGEMPA	Imaging Options	Gat, Seq, EDR, Fast, ZIP512, Asset	
Plane	OBLIQUE	Phase	2.00	
Series Description	3pl FIESTA 4C Cine BH			
SCAN TIMING		SCAN RANGE		
Flip Angle	49	FOV	40.0	
TE	Minimum	Slice Thickness	8.00	
Number of Echoe	es 1	Slice Spacing	0.0	
Receiver Bandwi	dth 111.11	Overlap Locations	0	
		Number of Slices	1	
IMAGE ENHAN	CE	ACQ TIMING		
Filter Choice	В	Freq	200	
		Phase	200	
		Freq DIR	R/L	
		NEX	1.00	
		Phase FOV	1.00	
		Auto Shim	Auto	
		Phase Correction	No	
		RF Drive Mode	Quadrature (CP)	
		Excitation Mode	Selective	

CATING/TDICCED		HCED C	VC	
GATING/TRIGGER Trigger Type	5	USER C User CV		1.00
Views per Segment	14	User CV		1.00
Pause After Navigator		User CV		512
Prescan	0			
FMRI		MULTI-		
PSD Trigger	Internal	Seperate		0
View Order	Bottom/Up	Mask Ph		0
# of Repetitions REST	0	Mask Pa		0
# of Repetitions ACTIVE	0	Preserve		0
SAT		DIFFUS	ION	
Tag Type	None	_11	ll Images	On
8 -11-			tic b-values	1
			c b-value	1000.0;
TRICKS		CINE		
Pause On/Off	On		diac Phases to	30
Auto Subtract	0	Reconstr	uct	30
Auto SCIC	2			
CONTRAST		OTHER	S	
Contrast Yes/No	No			TIPS: -Make sure that
			accordingly. Description of the series from to bring up the	Temp Res, change VPS Decreasing VPS will Decre
			rotate the FOV orient the box	box as shown below to parallel to the chest wall V rotation



	3pl FIESTA EC Cine BH					
PATIENT POSIT	ION	IMAGING PARAME	ETERS			
Patient Entry	Feet First	Imaging Mode	2D			
Patient Position	Supine	Pulse Sequence	Fiesta			
Coil Configuration	GE21chFlexL;GE40chGEMPA	Imaging Options	Gat, Seq, EDR, Fast, ZIP512, Asset			
Plane	OBLIQUE	Phase	2.00			
Series Description	3pl FIESTA EC Cine BH					
SCAN TIMING		SCAN RANGE				
Flip Angle	49	FOV	44.0			
TE	Minimum	Slice Thickness	8.00			
Number of Echoe	s 1	Slice Spacing	0.0			
Receiver Bandwic	dth 111.11	Overlap Locations	0			
		Number of Slices	1			
IMAGE ENHAN	CE	ACQ TIMING				
Filter Choice	В	Freq	200			
		Phase	200			
		Freq DIR	S/I			
		NEX	1.00			
		Phase FOV	1.00			
		Auto Shim	Auto			
		Phase Correction	No			
		RF Drive Mode	Quadrature (CP)			
		Excitation Mode	Selective			

GATING/TRIGGER		USER CVS		
Trigger Type	5	User CV0	1.00	
Views per Segment	14	User CV20	1.00	
Pause After Navigator	0	User CV Mask2	512	
Prescan	U			
FMRI		MULTI-PHASE		
PSD Trigger	Internal	Seperate Series	0	
View Order	Bottom/Up	Mask Phase	0	
# of Repetitions REST	0	Mask Pause	0	
# of Repetitions ACTIVE	0	Preserve	0	
SAT Tag Type	None	DIFFUSION Recon All Images	On	
rag Type	None	# Synthetic b-values	1	
		Synthetic b-value	1000.0;	
TRICKS		CINE		
Pause On/Off	On	# of Cardiac Phases t	0 20	
Auto Subtract	0	Reconstruct	30	
Auto SCIC	2			
CONTRAST		OTHERS		
Contrast Yes/No	No	11	NT TIPS: - EJE CORTO,	
		se encuentre	e que la resolución temporal e cercana a 50 ms . The HR, the lower the value of hould be.	



3 pl FIESTA 3C TSVI Cine BH				
PATIENT POSITION		IMAGING PARAMETERS		
Patient Entry	Feet First	Imaging Mode	2D	
Patient Position	Supine	Pulse Sequence	Fiesta	
Coil Configuration	GE21chFlexL;GE40chGEMPA	Imaging Options	Gat, Seq, EDR, Fast, ZIP512, Asset	
Plane	OBLIQUE	Phase	2.00	
Series Description	3 pl FIESTA 3C TSVI Cine BH			

SCAN TIMING		SCAN RANGE	
Flip Angle	49	FOV	44.0
TE	Minimum	Slice Thickness	8.00
Number of Echoes	1	Slice Spacing	0.0
Receiver Bandwidth	111.11	Overlap Locations	0
		Number of Slices	4
IMAGE ENHANCE		ACQ TIMING	
Filter Choice	В	Freq	200
The Choice	Б	Phase	200
		Freq DIR	S/I
		NEX	1.00
		# of Acq. Before Pause	0
		Phase FOV	1.00
		Auto Shim	Auto
		Phase Correction	No
		RF Drive Mode	
			Quadrature (CP)
		Excitation Mode	Selective
GATING/TRIGGER		USER CVS	
Trigger Type	5	User CV0	1.00
Views per Segment	14	User CV20	1.00
Pause After Navigator	0	User CV Mask2	512
Prescan	ŭ		
FMRI		MULTI-PHASE	
PSD Trigger	Internal	Seperate Series	0
View Order	Bottom/Up	Mask Phase	0
# of Repetitions REST	0	Mask Pause	0
# of Repetitions	0	Preserve	0
ACTIVE	O		
SAT		DIFFUSION	
Tag Type	None	Recon All Images	On
		Multi b-values	1000.0;
		Multi NEX Values	1.0;
		# Synthetic b-values	1
		Synthetic b-value	1000.0;
TRICKS		CINE	
Pause On/Off	On	# of Cardiac Phases to	
Auto Subtract	0	Reconstruct	30
Auto SCIC	2		
	_	OTHER C	
CONTRAST) I	OTHERS	TIPC M.1
Contrast Yes/No	No	Protocol IMPORTANT Notes Temp Res is an	
		1	round 50ms. The higher wer the value of Temp Res
		should be.	wer the value of remp res
		T ₂ . 1:	Town Dog shows VDC
			Temp Res, change VPS becreasing VPS will
			Res In case of
		1	

unsuccessful FIESTA CINE scan due to very arrhythmic heartbeat, use Real Time FIESTA ungated sequence. - In case the image comes out rotated, Duplicate & Setup the series, then select the series from the Graphic Rx Toolbar to bring up the image you just scanned, zoom out to visualize the full FOV, and rotate the FOV box as shown below to orient the box parallel to the chest wall. ---Wrong FOV rotation -----Correct FOV rotation - -

EC T2 TIR BH				
PATIENT POSIT	ION	IMAGING PARAMETERS		
Patient Entry	Feet First	Imaging Mode	2D	
Patient Position	Supine	Pulse Sequence	FSE-XL	
Coil Configuration	GE21chFlexL;GE40chGEMPA	Imaging Options	Gat, Seq, EDR, Fast, BSP, ARC, IrP	
Plane	OBLIQUE	PSD Name	FSE-XL	
Series Description	EC T2 TIR BH	Phase	2.00	
SCAN TIMING		SCAN RANGE		
Flip Angle	140	FOV	40.0	
TE	70.0	Slice Thickness	8.00	
Number of Echoe	s 1	Slice Spacing	10.0	
TI	210	Overlap Locations	0	
Echo Train Lengt	t h 18	Number of Slices	3	
Blood Suppression	Blood Suppression TI 1036			

	andwidth	62.50		
IMAGE E	NHANCE		ACQ TIMING	
Filter Choi	ice	None	Freq	224
			Phase	160
			Freq DIR	S/I
			Fat Shift DIR	Normal (S)
			NEX	1.00
			# of Acq. Before Pause	1
			Phase FOV	1.00
			Auto Shim	Auto
			Phase Correction	No
			RF Drive Mode	Quadrature (CP)
			Excitation Mode	Selective
				Sciective
GATING/T			USER CVS	
Trigger Ty	=	5	User CV14	2.50
Minimum	Trigger	4	User CV Mask2	512
Delay				
Cardiac Pl		1		
Cardiac Sl	ices	1		
FMRI			MULTI-PHASE	
PSD Trigg	er	Internal	Seperate Series	0
View Orde		Bottom/Up	Mask Phase	0
# of Repeti	tions REST	0	Mask Pause	0
# of Repeti		0	Preserve	0
ACTIVE		0		
SAT			DIFFUSION	
Tag Type		None	Recon All Images	On
_			# Synthetic b-values	1
			Synthetic b-value	1000.0;
TRICKS			CONTRAST	
# of RR In	tervals	2	Contrast Yes/No	No
# 01 KK III Trigger De		1500	Contrast 165/110	1.0
Pause On/	•	On		
Auto Subti		0		
Auto Subti Auto SCIC		2		
		<u></u>		
Notes C	EN CASOS D	TIPS: EJE CORTO, 5 ORTES BASALES 3 AL AMARA. 10 mm/10mm E ARTEFACTO EN LA ILIZAR DIR EN		

CINE EJE CORTO POST GADO.
IMAGEN DE ADQUISICION TIR. TIPS: -use Diastolic Trigger Delay - change CV14 from 2.0 to 1.25-1.5 if blood signal is not properly nulled.

	MAPAS				
PATIENT POSITION		IMAGING PARAMET	TERS		
Patient Entry	Feet First	Imaging Mode	2D		
Patient Position	Supine	Pulse Sequence	Fiesta		
Coil Configuration	32Ch Body by GE	Imaging Options	Seq, Fast, RealTime		
Plane	AXIAL				
Series Description	MAPAS				
SCAN TIMING		SCAN RANGE			
Flip Angle	45	FOV	40.0		
TE	Min Full	Slice Thickness	8.0		
Receiver Bandwidth	62.50	Slice Spacing	0.0		
		Number of Slices	1		
IMAGE ENHANCE		ACQ TIMING			
Filter Choice	None	Freq	128		
		Phase	96		
		Freq DIR	R/L		
		NEX	1.00		
		Phase FOV	0.80		
		Auto Shim	Auto		
		Phase Correction	No		
		RF Drive Mode	Quadrature		
		Excitation Mode	Selective		
GATING/TRIGGER		USER CVS			
Auto Trigger Type	Off	User CV20	1.00		
Pause After Navigator Prescan	0	User CV Mask2	0		
FMRI		MULTI-PHASE			
PSD Trigger	Internal	Seperate Series	0		
Slice Order	Interleaved	Mask Phase	0		
View Order	Bottom/Up	Mask Pause	0		
# of Repetitions REST	0				
# of Repetitions ACTIVE	0				
SAT		DIFFUSION			
Tag Type	None	Recon All Images	On		

		Multi b-values	1000.0;
		Multi NEX Values	1;
TRICKS		CONTRAST	
Pause On/Off	On	Contrast Yes/No	No
Auto Subtract	0		
Auto SCIC	Off		

	FC T2N	Map BH	
PATIENT POSITION		IMAGING PARAMET	FDS
	Feet First	Imaging Mode	2D
	Supine	Pulse Sequence	T2MAP
Coil	GE21chFlexL;GE40chGEMPA	Imaging Options	Gat, Seq, EDR, Fast, ZIP512, BSP, ARC
_	OBLIQUE	Phase	2.50
Series	ЕС Т2Мар ВН		
SCAN TIMING		SCAN RANGE	
Number of Echoes	4	FOV	42.0
Echo Train Length	20	Slice Thickness	8.00
Blood Suppression	ΓΙ 418	Slice Spacing	15.0
Receiver Bandwidtl	h 83.33	Overlap Locations	0
		Number of Slices	4
IMAGE ENHANCI	${\mathbb E}$	ACQ TIMING	
Filter Choice	None	Freq	144
		Phase	144
		Freq DIR	S/I
		Fat Shift DIR	Normal (I)
		NEX	1.00
		# of Acq. Before Pause	1
		Phase FOV	1.00
		Auto Shim	Auto
		Phase Correction	No
		RF Drive Mode	Quadrature (CP)
		Excitation Mode	Selective
GATING/TRIGGE	R	USER CVS	
Trigger Type	5	User CV1	110.00
Minimum Trigger	4	User CV14	2.50
Delay	·	User CV Mask2	0
Cardiac Phase	1		
Cardiac Slices	1		
FMRI		MULTI-PHASE	
PSD Trigger	Internal	Seperate Series	0
View Order	Bottom/Up	Mask Phase	0
# of Repetitions RE	ST 0	Mask Pause	0
# of Repetitions ACTIVE	0	Preserve	0
SAT		DIFFUSION	
Tag Type	None	Recon All Images	On
		# Synthetic b-values	1

		Synthetic b-value	1000.0;
TRICKS		CONTRAST	
# of RR Intervals	1	Contrast Yes/No	No
Trigger Delay	500		
Pause On/Off	On		
Auto Subtract	0		
Auto SCIC	Off		
OTHERS			
Protocol Notes	IMPORTANT TIPS: - NO REALIZAR CON GADOLINIO - EJE CORTO, 3 CORTES PUNTA, MEDIO Y BASE DEL CORAZON se prefiere trigger delay en diastole - El numero d eintervalos RR es tipicamente 1, pero puede ser necesario "2" en casos de frecuencias altasEn casos de presentarse error en trigger delay tenemos 2 opciones: 1 Fijar frecuencia cardiaca en Project HR con el valor promedio de la frecuencia del paciente. 2 Escribir en Trigger Delay el numero recomendado por el equipo Advanced tab: CV1> valor recomendado es aproximadamente 100- 110ms CV14> valor recomendado para eje corto es 2.5 para eje corto.		

EC MOLLI NATIVO				
PATIENT POSIT	ION	IMAGING PARAMETERS		
Patient Entry	Feet First	Imaging Mode	2D	
Patient Position	Supine	Pulse Sequence	T1MAP-FIESTA	
Coil Configuration	GE21chFlexL;GE40chGEMPA	Imaging Options	Gat, Seq, EDR, Fast, ZIP512, ARC, IrP, MOCO	
Plane	OBLIQUE	DI		
Series Description	EC MOLLI NATIVO	Phase	2.50	
SCAN TIMING		SCAN RANGE		
Flip Angle	35	FOV	38.0	
Number of Echoe	s 1	Slice Thickness	8.00	
TI	142	Slice Spacing	15.0	
Receiver Bandwic	lth 90.91	Overlap Locations	0	
		Number of Slices	4	

IMAGE ENHANCE		ACQ TIN	MING	
Filter Choice	D	Freq	Allivo	160
The Choice	Б	Phase		132
		Freq DIR	•	S/I
		NEX	_	1.00
			Dafana Danas	1.00
		_	Before Pause	
		Phase FO		1.00
		Auto Shi		Auto
		Phase Co		No (GP)
		RF Drive		Quadrature (CP)
		Excitation	n Mode	Selective
GATING/TRIGGER		USER C	VS	
Trigger Type	5	User CV2	20	1.50
Minimum Trigger	4	User CV2	23	80.00
Delay	7	User CV2	24	53.00
Cardiac Phase	1	User CV2	25	3.00
Cardiac Slices	1	User CV	Mask2	0
Pause After Navigator	0			
Prescan	Ů			
FMRI		MULTI-I	PHASE	
PSD Trigger	Internal	Seperate	Series	0
View Order	Bottom/Up	Mask Ph	ase	0
# of Repetitions REST	0	Mask Par	use	0
# of Repetitions	0	Preserve		0
ACTIVE	U			
DIFFUSION		TRICKS		
Recon All Images	On	# of RR I	ntervals	1
# Synthetic b-values	1	Trigger D	Delay	1000
Synthetic b-value	1000.0;	Pause On	•	On
V	,	Auto Sub	tract	0
		Auto SCI	\mathbf{C}	Off
CONTRACT		OTHERS	7	
CONTRAST Contrast Yes/No	No	OTHER		TIPS: EJE CORTO, 3
Contrast 165/110	INO			SE, MEDIO, PUNTA.
				N PRE CONTRASTE
				ALUAR FIBROSIS
				MENTO ESPACIO
				LAR Y EDEMA.
		Protocol	Configuración	advance:
		Notes		
			CV 24 > 52	.00 CV 25> 3.00 EN
				RRITMIA: CV 24>
			51.00 CV 25	

GADO				
PATIENT POSITIO	N	IMAGING PAR	AMETERS	
Patient Entry	Feet First	Imaging Mode	2D	
Patient Position	Supine	Pulse Sequence	Fiesta	

Coil Configuration	32Ch Body by GE	Imaging Options	Seq, Fast, RealTime
Plane	AXIAL		
Series Description	GADO		
SCAN TIMING		SCAN RANGE	
Flip Angle	45	FOV	40.0
TE	Min Full	Slice Thickness	8.0
Receiver Bandwidth	62.50	Slice Spacing	0.0
		Number of Slices	1
IMAGE ENHANCE		ACQ TIMING	
Filter Choice	None	Freq	128
		Phase	96
		Freq DIR	R/L
		NEX	1.00
		Phase FOV	0.80
		Auto Shim	Auto
		Phase Correction	No
		RF Drive Mode	Quadrature
		Excitation Mode	Selective
GATING/TRIGGER		USER CVS	
Auto Trigger Type	Off	User CV20	1.00
Pause After Navigator	0	User CV Mask2	0
Prescan	U		
FMRI		MULTI-PHASE	
PSD Trigger	Internal	Seperate Series	0
Slice Order	Interleaved	Mask Phase	0
View Order	Bottom/Up	Mask Pause	0
# of Repetitions REST	0		
# of Repetitions	0		
ACTIVE	Ŭ		
SAT		DIFFUSION	
Tag Type	None	Recon All Images	On
		Multi b-values	1000.0;
		Multi NEX Values	1;
TRICKS		CONTRAST	
Pause On/Off	On	Contrast Yes/No	No
Auto Subtract	0		
Auto SCIC	Off		

PERFUSION (MoCo)			
PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Feet First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	SPGR
Coil Configuration	GE21chFlexL;GE40chGEMPA		Gat, EDR, Fast,
Plane	OBLIQUE	Imaging Options	MPh, Asset, SrP,
Series Description	PERFUSION (MoCo)	D.	MOCO
		Phase	2.00
SCAN TIMING		SCAN RANGE	
Flip Angle	20	FOV	44.0
TE	Min Full	Slice Thickness	10.00

Name Land CE day		C1: C :	15.0
Number of Echoes	1	Slice Spacing	15.0
TI D. : D. I.:W	227	Overlap Locations	
Receiver Bandwidth	62.50	Number of Slices	3
IMAGE ENHANCE		ACQ TIMING	
Filter Choice	None	Freq	132
		Phase	132
		Freq DIR	S/I
		NEX	0.75
		Phase FOV	1.00
		Auto Shim	Auto
		Phase Correction	No
		RF Drive Mode	Quadrature (CP)
		Excitation Mode	Selective
GATING/TRIGGER		USER CVS	
Trigger Type	5	User CV16	1.00
Cardiac Phase	1	User CV20	1.00
Cardiac Slices	1	User CV Mask2	512
Pause After Navigator	0		
Prescan	0		
FMRI		MULTI-PHASE	
PSD Trigger	Internal	Slice per Location	70
View Order	Bottom/Up	Seperate Series	0
# of Repetitions REST	0	Mask Phase	0
# of Repetitions ACTIVE	0	Mask Pause	0
SAT		DIFFUSION	
Tag Type	None	Recon All Images	On
		# Synthetic b-	
		values	1
		Synthetic b-value	1000.0;
TRICKS		CONTRAST	
# of RR Intervals	1	Contrast Yes/No	No
Pause On/Off	On		
Auto Subtract	0		
Auto SCIC	2		
OTHERS]	
Protocol IMPORTANT TII Notes when UserCV 16 slices in different deposit the desire shown on the screen	PS: -Multi-plane is supported , Prep Pulse , is set to 1. To add planes, use [Shift] + click to d slices, up to the Max # Slices een. - If the		

	FIESTA E	C Cine BH	
PATIENT POSITI		IMAGING PARAMET	ERS
	Feet First	Imaging Mode	2D
v	Supine	Pulse Sequence	Fiesta
Coil	GE21chFlexL;GE40chGEMPA	Imaging Options	Gat, Seq, EDR, Fast,
Configuration			ZIP512, Asset
Plane Series	OBLIQUE	Phase	2.00
Description	FIESTA EC Cine BH		
SCAN TIMING		SCAN RANGE	
Flip Angle	49	FOV	44.0
TE	Minimum	Slice Thickness	8.00
Number of Echoes	1	Slice Spacing	0.0
Receiver Bandwidt	t h 111.11	Overlap Locations	0
		Number of Slices	15
IMAGE ENHANC	'E	ACQ TIMING	
Filter Choice	В	Freq	200
		Phase	200
		Freq DIR	S/I
		NEX	1.00
		# of Acq. Before Pause	1
		Phase FOV	1.00
		Auto Shim	Auto
		Phase Correction	No
		RF Drive Mode	Quadrature (CP)
		Excitation Mode	Selective
GATING/TRIGGE	ER	USER CVS	
Trigger Type	5	User CV0	1.00
Views per Segment		User CV20	1.00
Pause After Naviga Prescan	ntor 0	User CV Mask2	512
FMRI		MULTI-PHASE	
PSD Trigger	Internal	Seperate Series	0
View Order	Bottom/Up	Mask Phase	0
# of Repetitions RI	EST 0	Mask Pause	0
# of Repetitions	0	Preserve	0
ACTIVE	U		
SAT		DIFFUSION	
Tag Type	None	Recon All Images	On
		# Synthetic b-values	1
		Synthetic b-value	1000.0;
TRICKS		CINE	
Pause On/Off	On	# of Cardiac Phases to	30
Auto Subtract	0	Reconstruct	50

Auto SCIC	2		
CONTRAST		OTHERS	
Contrast Yes/No	No		IMPORTANT TIPS: - EJE CORTO, PLANIFICAR EN DOS CAMARAS Y CUATRO CAMARAS ABARCAR DESDE SOBRE EL PLANO VALVULAR HASTA EL APEX. 10mm/0mm
			- Asegurarse que la resolución temporal se encuentre cercana a 50 ms. The higher the HR, the lower the value of Temp Res should be.
			- To adjust the Temp Res, change VPS accordingly. Decreasing VPS will decrease Temp Res In case of unsuccessful FIESTA CINE scan due to very arrhythmic heartbeat, use Real Time FIESTA ungated sequence In case the image comes out rotated, Duplicate & Setup the series, then select the series from the Graphic Rx Toolbar to bring up the image you just scanned, zoom out to visualize the full FOV, and rotate the FOV box as shown below to orient the box parallel to the chest wall Wrong FOV rotation Correct FOV rotation



CineIR 6 MINUTOS			
PATIENT POS	PATIENT POSITION IMAGING PARAMETERS		
Patient Entry	Feet First	Imaging Mode	2D
Patient	Supine	Pulse Sequence	CINE IR
Position	Supme	Imaging Options	Gat, Seq, EDR, Fast, ZIP512, Asset, IrP
Coil	GE21chFlexL;GE40chGEMPA	Phase	1.25
Configuration			
Plane	OBLIQUE		
Series Description	CineIR 6 MINUTOS		
-			
SCAN TIMIN		SCAN RANGE	
Flip Angle	5	FOV	40.0
TE	Min Full	Slice Thickness	10.00
Number of Ec		Slice Spacing	0.0
Receiver Band	lwidth 35.71	Overlap Locations	0
		Number of Slices	1
IMAGE ENH	ANCE	ACQ TIMING	
Filter Choice	None	Freq	96
		Phase	64
		Freq DIR	Unswap
		NEX	1.00
		Phase FOV	0.95
		Auto Shim	Auto
		Phase Correction	No
		RF Drive Mode	Quadrature (CP)
		Excitation Mode	Selective

GATING/TRIGGER		USER CVS	
Trigger Type	5	User CV0	1.00
Cardiac Phase	1	User CV20	1.00
Cardiac Slices	1	User CV Mask2	0
Views per Segment	12		
Pause After	0		
Navigator Prescan	O		
FMRI		MULTI-PHASE	
PSD Trigger	Internal	Seperate Series	0
View Order	Bottom/Up	Mask Phase	0
# of Repetitions	0	Mask Pause	0
REST	V	Preserve	0
# of Repetitions ACTIVE	0		
SAT		DIFFUSION	
Tag Type	None	Recon All Images	On
		# Synthetic b-values	1
		Synthetic b-value	1000.0;
TRICKS		CINE	
# of RR Intervals	2	# of Cardiac Phases to Reconstruct	30
Pause On/Off	On		
Auto Subtract	0		
Auto SCIC	Off		
CONTRAST		OTHERS	
Contrast Yes/No	No	both the CINE IR and the 2D M #RR = 1 for CINE IR and MDE nulled (=dark) normal myocard indicating that TI is too short. along the endo/epicardial borde Protocol Notes	
		- now Cine IR supports # RR in	itervar up to 4.

EC PSMDE 8 MIN				
PATIENT POSIT	ION	IMAGING PARAMI	ETERS	
Patient Entry	Feet First	Imaging Mode	2D	
Patient Position	Supine	Pulse Sequence	Gradient Echo	
Coil Configuration	GE21chFlexL;GE40chGEMPA	Imaging Options	Gat, EDR, Fast, PS, Asset, IrP	
Plane	OBLIQUE	Phase	2.00	
Series Description	EC PSMDE 8 MIN			
SCAN TIMING	SCAN TIMING			
Flip Angle	20	FOV	44.0	
TI	391	Slice Thickness	8.00	

Receiver Bandwidth	35.71	Slice Spacing	0.0
Receiver Danuwium	33./1	Overlap Locations	0.0
		Number of Slices	4
			т
IMAGE ENHANCE		ACQ TIMING	
Filter Choice	None	Freq	220
		Phase	218
		Freq DIR	S/I
		NEX	1.00
		# of Acq. Before Pause	0
		Phase FOV	0.90
		Auto Shim	Auto
		Phase Correction	No
		RF Drive Mode	Preset
		Excitation Mode	Selective
GATING/TRIGGER		USER CVS	
Trigger Type	5	User CV Mask2	0
Minimum Trigger			
Delay	4		
Cardiac Phase	1		
Cardiac Slices	1		
Views per Segment	24		
Pause After Navigator	0		
Prescan	U		
FMRI		MULTI-PHASE	
PSD Trigger	Internal	Seperate Series	0
View Order	Bottom/Up	Mask Phase	0
# of Repetitions REST	0	Mask Pause	0
# of Repetitions		Preserve	0
ACTIVE	0	110501 (0	
SAT		DIFFUSION	
Tag Type	None	Recon All Images	On
-ug -yp-		# Synthetic b-values	1
		Synthetic b-value	1000.0;
TDICKS			,
TRICKS # of RR Intervals	2	CONTRAST Contrast Yes/No	No
Trigger Delay	1000	Contrast 168/190	INU
Pause On/Off			
	On		
Auto Subtract Auto SCIC	0 Off		
	OII		
OTHERS			
Protocol IMPORTANT			
	interval for CINE IR RR interval for PSMDE		
	nage quality, set the		
Trigger Delay	to Diastolic or type in a		
value manually			
- Increase TI b	y 20-25ms after every		
	nt for wash-out over time.		

- Ensure Temp Res is <200ms. For HR>100BPM, Temp Res should be <160ms.

T1 MOLLI GD 10 MIN EC			
PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Feet First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	T1MAP-FIESTA
Coil Configuration Plane	GE21chFlexL;GE40chGEMPA OBLIQUE	Imaging Options	Gat, Seq, EDR, Fast, ZIP512, ARC, IrP, MOCO
Series Description	T1 MOLLI GD 10 MIN EC	Phase	2.50
SCAN TIMING		SCAN RANGE	
Flip Angle	50	FOV	44.0
Number of Echoes		Slice Thickness	10.00
TI	156	Slice Spacing	15.0
Receiver Bandwid		Overlap Locations	0
Treceiver Buildwin	50.51	Number of Slices	3
IMAGE ENHANG	CE	ACQ TIMING	
Filter Choice	D	Freq	160
		Phase	132
		Freq DIR	S/I
		NEX	1.00
		# of Acq. Before Pause	1
		Phase FOV	1.00
		Auto Shim	Auto
		Phase Correction	No
		RF Drive Mode	Quadrature (CP)
		Excitation Mode	Selective
GATING/TRIGG	ER	USER CVS	
Trigger Type	5	User CV20	1.50
Minimum Trigger	. 4	User CV23	80.00
Delay	7	User CV24	432.00
Cardiac Phase	1	User CV25	1.00
Cardiac Slices	1	User CV Mask2	0
Pause After Navig Prescan	gator 0		
FMRI		MULTI-PHASE	
PSD Trigger	Internal	Seperate Series	0
View Order	Bottom/Up	Mask Phase	0
# of Repetitions R	EST 0	Mask Pause	0
# of Repetitions ACTIVE	0	Preserve	0
DIFFUSION		TRICKS	

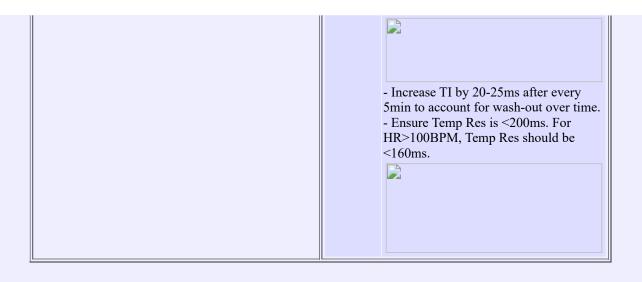
Recon All Images	On	# of RR Intervals	1
			-
Multi b-values	1000.0;	Trigger Delay	1000
Multi NEX Values	1.0;	Pause On/Off	On
# Synthetic b-values	1	Auto Subtract	0
Synthetic b-value	1000.0;	Auto SCIC	Off
CONTRAST		OTHERS	
Contrast Yes/No	No	Protocol Notes	IMPORTANT TIPS: EJE CORTO, 3 CORTES BASE, MEDIO, PUNTA. ADQUISICION POST CONTRASTE 10 MINUTOS Use the Heartbeat Pattern (CV24) set to 432 when performing MOLLI post contrast. 4(1s)3(1s)2 will acquire 9 images in 11 heartbeats with 3 inversions. This sampling strategy may improve the accuracy for the lower range of T1s associated with the use of gadolinium contrast agents (200-600ms), as well as improve the measuremnt precision for short T1.

4C PSMDE				
PATIENT POSIT	ION	IMAGING PARAMETERS		
Patient Entry	Feet First	Imaging Mode	2D	
Patient Position	Supine	Pulse Sequence	Gradient Echo	
Coil Configuration	GE21chFlexL;GE40chGEMPA	Imaging Options	Gat, EDR, Fast, PS, Asset, IrP	
Plane	OBLIQUE	Phase	2.00	
Series Description	4C PSMDE			
SCAN TIMING		SCAN RANGE		
Flip Angle	20	FOV	44.0	
Number of Echoes	s 1	Slice Thickness	8.00	
TI	391	Slice Spacing	0.0	
Receiver Bandwid	1th 35.71	Overlap Locations	0	
		Number of Slices	3	
IMAGE ENHANC	CE	ACQ TIMING		
Filter Choice	None	Freq	220	
		Phase	218	
		Freq DIR	R/L	
		NEX	1.00	
		# of Acq. Before Pause	1	
		Phase FOV	0.90	
		Auto Shim	Auto	
		Phase Correction	No	

			RF Drive Mode	Preset
			Excitation Mode	Selective
C. TINIC			1	Scientive
	TRIGGER	5	USER CVS	0
Trigger T	* -	5	User CV Mask2	0
Delay	n Trigger	4		
Cardiac 1		1		
Cardiac S		1		
-	r Segment	24		
Pause Af Prescan	ter Navigator	0		
FMRI			MULTI-PHASE	
PSD Trig	ger	Internal	Seperate Series	0
View Ord	der	Bottom/Up	Mask Phase	0
# of Repe	etitions REST	0	Mask Pause	0
# of Repe		0	Preserve	0
ACTIVE		Ů		
SAT			DIFFUSION	
Tag Type	:	None	Recon All Images	On
			# Synthetic b-values	1
			Synthetic b-value	1000.0;
TRICKS			CONTRAST	
# of RR I	ntervals	2	Contrast Yes/No	No
Trigger I	Delay	1000		
Pause Or	n/Off	On		
Auto Sub	otract	0		
Auto SCl	IC	Off		
OTHERS	S			
Protocol Notes	PSMDE, # RR must match #F For optimal in Trigger Delay value manually - Increase TI b 5min to accourage to accourage the sure Temporary for the sure Temporary	TIPS: - When scanning R interval for CINE IR RR interval for PSMDE nage quality, set the to Diastolic or type in a y. by 20-25ms after every nt for wash-out over time. Res is <200ms. For Temp Res should be		

2C PSMDE				
PATIENT POSITION IMAGING			ETERS	
Patient Entry	Feet First	Imaging Mode	2D	

Patient Position	Supine	Pulse Sequence	Gradient Echo
Coil	GE21chFlexL;GE40chGEMP	1	Gat, EDR, Fast, PS,
Configuration	GEZICHFIEXL;GE40CHGEIVIP		Asset, IrP
Plane	OBLIQUE	Phase	2.00
Series Description	2C PSMDE		
-			
SCAN TIMING	20	SCAN RANGE	44.0
Flip Angle	20	FOV	44.0
Number of Echoes		Slice Thickness	8.00
TI	391	Slice Spacing	0.0
Receiver Bandwid	1th 35.71	Overlap Locations	0
		Number of Slices	4
IMAGE ENHAN		ACQ TIMING	
Filter Choice	None	Freq	220
		Phase	218
		Freq DIR	S/I
		NEX	1.00
		# of Acq. Before Pause	0
		Phase FOV	0.90
		Auto Shim	Auto
		Phase Correction	No
		RF Drive Mode	Preset
		Excitation Mode	Selective
GATING/TRIGG		USER CVS	
Trigger Type	5	User CV Mask2	0
Minimum Trigger Delay	4		
Cardiac Phase	1		
Cardiac Slices	1		
Views per Segmen	nt 24		
Pause After Navig	gator 0		
Prescan			
FMRI		MULTI-PHASE	
PSD Trigger	Internal	Seperate Series	0
View Order	Bottom/Up	Mask Phase	0
# of Repetitions R	REST 0	Mask Pause	0
# of Repetitions ACTIVE	0	Preserve	0
DIFFUSION		TRICKS	
Recon All Images	On	# of RR Intervals	2
# Synthetic b-valu		Trigger Delay	1000
Synthetic b-value	1000.0;	Pause On/Off	On
		Auto Subtract	0
		Auto SCIC	Off
CONTRAST		OTHERS	
Contrast Yes/No	No	Notes PSMDE, # RI must match # For optimal in	TTIPS: - When scanning R interval for CINE IR RR interval for PSMDE mage quality, set the to Diastolic or type in a ly.



3C PSMDE				
PATIENT POSITI	ION	IMAGING PARAMETERS		
Patient Entry	Feet First	Imaging Mode	2D	
Patient Position	Supine	Pulse Sequence	Gradient Echo	
Coil Configuration	GE21chFlexL;GE40chGEMPA	Imaging Options	Gat, EDR, Fast, PS, Asset, IrP	
Plane	OBLIQUE	Phase	2.00	
Series Description	3C PSMDE			
SCAN TIMING		SCAN RANGE		
Flip Angle	20	FOV	44.0	
Number of Echoes	1	Slice Thickness	8.00	
TI	420	Slice Spacing	0.0	
Receiver Bandwid	th 35.71	Overlap Locations	0	
		Number of Slices	4	
IMAGE ENHANC	CE	ACQ TIMING		
Filter Choice	None	Freq	220	
		Phase	218	
		Freq DIR	S/I	
		NEX	1.00	
		# of Acq. Before Pause	1	
		Phase FOV	1.00	
		Auto Shim	Auto	
		Phase Correction	No	
		RF Drive Mode	Preset	
		Excitation Mode	Selective	
GATING/TRIGG	ER	USER CVS		
Trigger Type	5	User CV Mask2	0	
Minimum Trigger Delay	4			
Cardiac Phase	1			
Cardiac Slices	1			
Views per Segmen	t 24			
Pause After Navig Prescan	ator ₀			
FMRI		MULTI-PHASE		

PSD Trigger	Internal	Seperate	Series	0
View Order	Bottom/Up	Mask Pha	ase	0
# of Repetitions REST	0	Mask Pau	ıse	0
# of Repetitions ACTIVE	0	Preserve		0
DIFFUSION		TRICKS		
Recon All Images	On	# of RR I	ntervals	2
# Synthetic b-values	1	Trigger D	elay	1000
Synthetic b-value	1000.0;	Pause On	/Off	On
		Auto Sub	tract	0
		Auto SCI	C	Off
CONTRAST		OTHERS	S	
Contrast Yes/No	No	Protocol Notes	PSMDE, # RR must match #R For optimal im Trigger Delay value manually - Increase TI b 5min to account - Ensure Temp	TIPS: - When scanning interval for CINE IR IR interval for PSMDE lage quality, set the to Diastolic or type in a y. y 20-25ms after every the for wash-out over time. Res is <200ms. For Temp Res should be

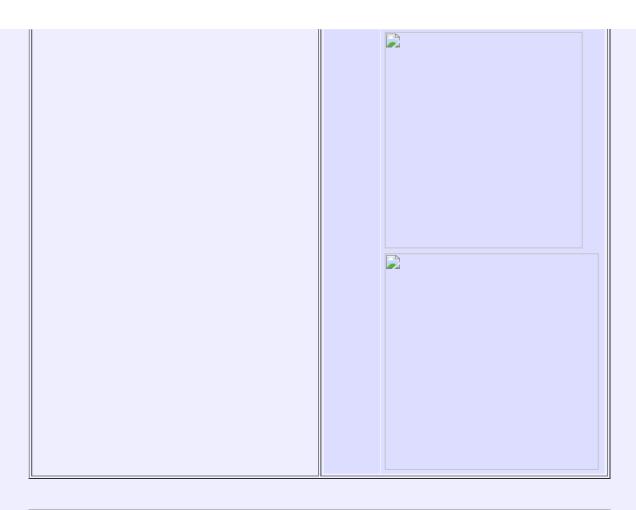
FIESTA 2C Cine BH					
PATIENT POSIT	ION	IMAGING PARAMETERS			
Patient Entry	Feet First	Imaging Mode	2D		
Patient Position	Supine	Pulse Sequence	Fiesta		
Coil Configuration	GE21chFlexL;GE40chGEMPA	Imaging Options	Gat, Seq, EDR, Fast, ZIP512, Asset		
Plane	OBLIQUE	Phase	2.00		
Series Description	FIESTA 2C Cine BH				
SCAN TIMING		SCAN RANGE			
Flip Angle	49	FOV	40.0		
TE	Minimum	Slice Thickness	8.00		
Number of Echoe	s 1	Slice Spacing	0.0		
Receiver Bandwic	lth 111.11	Overlap Locations	0		
		Number of Slices	4		
IMAGE ENHAN	CE	ACQ TIMING			
Filter Choice	В	Freq	200		
		Phase	200		
		Freq DIR	S/I		

		11		
		NEX	D 4 - 5	1.00
		_	Before Pause	1
		Phase FC		1.00
		Auto Shi		Auto
		Phase Co		No
		RF Drive	Mode	Quadrature (CP)
		Excitatio	n Mode	Selective
GATING/TRIGGER		USER C	VS	
Trigger Type	5	User CV		1.00
Views per Segment	14	User CV2		1.00
Pause After Navigator		User CV		512
Prescan	0	USELCY	Mask2	312
FMRI		MULTI-I		
PSD Trigger	Internal	Seperate		0
View Order	Bottom/Up	Mask Ph		0
# of Repetitions REST	0	Mask Pa		0
# of Repetitions	0	Preserve		0
ACTIVE				
SAT		DIFFUSI	ION _	
Tag Type	None	Recon Al	l Images	On
		# Synthet	tic b-values	1
		Synthetic	b-value	1000.0;
TRICKS		CINE		
Pause On/Off	On		liac Phases to	
Auto Subtract	0	Reconstr		30
	-	Itaconsti		
Auto SCIC	2			
CONTRAST		OTHERS		
Contrast Yes/No	No	Protocol Notes	Temp Res is at the HR, the low should be. To adjust the accordingly. During the accordingly because Tempunsuccessful Fivery arrhythm. Time FIESTA case the image Duplicate & State series from to bring up the zoom out to virotate the FOV	TIPS: -Make sure that round 50ms. The higher wer the value of Temp Res wer the value of Temp Res Temp Res, change VPS recreasing VPS will Res In case of TESTA CINE scan due to ic heartbeat, use Real recomes out rotated, etup the series, then select the Graphic Rx Toolbar rimage you just scanned, sualize the full FOV, and box as shown below to parallel to the chest wall.



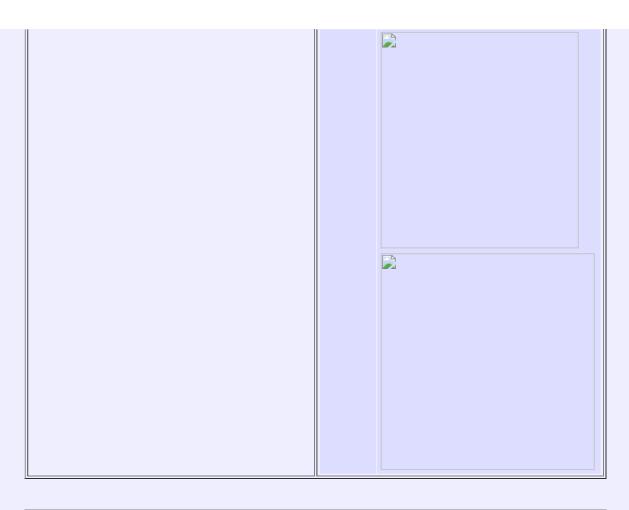
FIESTA 4C Cine BH				
PATIENT POSIT	ION	IMAGING PARAMETERS		
Patient Entry	Feet First	Imaging Mode	2D	
Patient Position	Supine	Pulse Sequence	Fiesta	
Coil Configuration	GE21chFlexL;GE40chGEMPA	Imaging Options	Gat, Seq, EDR, Fast, ZIP512, Asset	
Plane	OBLIQUE	Phase	2.00	
Series Description	FIESTA 4C Cine BH			
SCAN TIMING		SCAN RANGE		
Flip Angle	49	FOV	40.0	
TE	Minimum	Slice Thickness	8.00	
Number of Echoes	s 1	Slice Spacing	0.0	
Receiver Bandwid	lth 111.11	Overlap Locations	0	
		Number of Slices	3	
IMAGE ENHANC	CE	ACQ TIMING		
Filter Choice	В	Freq	200	
		Phase	200	
		Freq DIR	R/L	
		NEX	1.00	
		# of Acq. Before Pause	1	
		Phase FOV	1.00	
		Auto Shim	Auto	
		Phase Correction	No	
		RF Drive Mode	Quadrature (CP)	
		Excitation Mode	Selective	

CATING/TDICCED		HCED C	T/C	
GATING/TRIGGER	5	USER C		1.00
Trigger Type Views per Segment	5 14	User CV User CV		1.00 1.00
• •	14	User CV		512
Pause After Navigator Prescan	0	User Cv	Maskz	312
FMRI		MULTI-	PHASE	
PSD Trigger	Internal	Seperate	Series	0
View Order	Bottom/Up	Mask Ph	nase	0
# of Repetitions REST	0	Mask Pa	iuse	0
# of Repetitions ACTIVE	0	Preserve		0
SAT		DIFFUS	ION	
Tag Type	None		ll Images	On
rag Type	None		etic b-values	1
			c b-value	1000.0;
TRICKS		CINE		
Pause On/Off	On		diac Phases to	20
Auto Subtract	0	Reconsti		30
Auto SCIC	2			
CONTRAST		OTHER	S	
Contrast Yes/No	No			TIPS: -Make sure that
			accordingly. It decrease Tempunsuccessful It very arrhythm Time FIESTA case the image Duplicate & Sthe series from to bring up the zoom out to verotate the FOV orient the box	Temp Res, change VPS Decreasing VPS will of Res In case of FIESTA CINE scan due to ic heartbeat, use Real ungated sequence In the comes out rotated, betup the series, then select in the Graphic Rx Toolbar is image you just scanned, is unalize the full FOV, and V box as shown below to parallel to the chest wall. It is to the chest wall.



FIESTA 3C TSVI Cine BH					
PATIENT POSIT	PATIENT POSITION			ERS	
Patient Entry	Feet l	First	Imaging Mode	2D	
Patient Position	Supir	ie	Pulse Sequence	Fiesta	
Coil Configuration	GE21	chFlexL;GE40chGEMPA	Imaging Options	Gat, Seq, EDR, Fast, ZIP512, Asset	
Plane	OBL	QUE	Phase	2.00	
Series Description	FIES	TA 3C TSVI Cine BH			
SCAN TIMING			SCAN RANGE		
Flip Angle		49	FOV	44.0	
TE		Minimum	Slice Thickness	8.00	
Number of Echoes	S	1	Slice Spacing	0.0	
Receiver Bandwid	lth	111.11	Overlap Locations	0	
			Number of Slices	4	
IMAGE ENHANG	CE		ACQ TIMING		
Filter Choice		В	Freq	200	
			Phase	200	
			Freq DIR	S/I	
			NEX	1.00	
			# of Acq. Before Pause	1	
			Phase FOV	1.00	
			Auto Shim	Auto	
			Phase Correction	No	
			RF Drive Mode	Quadrature (CP)	
			Excitation Mode	Selective	

	LICED C	WC	
5	USER C		1.00
			1.00
			512
0	CSCI CV	17145112	312
Internal			0
•			0
0			0
0	Preserve	2	0
	DIFFUS	ION	
None			On
			1
			1000.0;
	CINE		
On			30
0	Reconstr	ruct	
2			
	OTHER	.S	
No			
		accordingly. In decrease Tempunsuccessful Inverse arrhythm Time FIESTA case the image Duplicate & Sthe series from to bring up the zoom out to various the FOV orient the boxWrong FC	Temp Res, change VPS Decreasing VPS will be Res In case of FIESTA CINE scan due to ic heartbeat, use Real ungated sequence In the comes out rotated, etup the series, then select in the Graphic Rx Toolbar to image you just scanned, isualize the full FOV, and box as shown below to parallel to the chest wall. IV rotation
		Correct FOV	rotation
	Bottom/Up 0 0 None On 0 2	Seperate Sustantial Suser CV User CV	Solution User CV0 User CV20 User CV Mask2

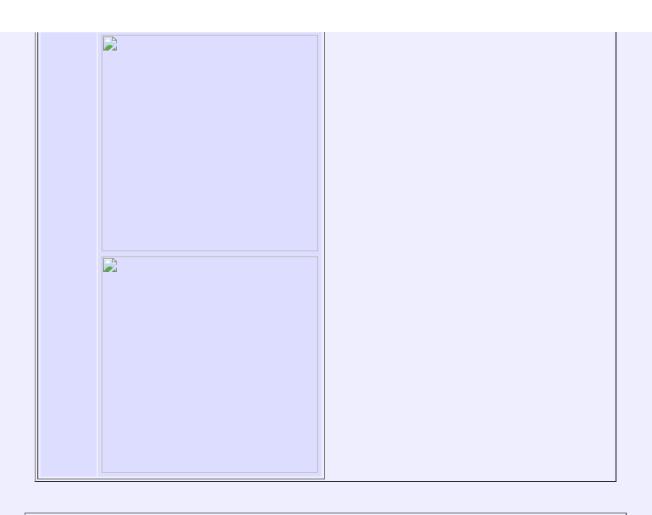


FLUJO				
PATIENT POSITION		IMAGING PARAMETERS		
Patient Entry	Feet First	Imaging Mode	2D	
Patient Position	Supine	Pulse Sequence	Fiesta	
Coil Configuration	32Ch Body by GE	Imaging Options	Seq, Fast, RealTime	
Plane	AXIAL			
Series Description	FLUJO			
SCAN TIMING		SCAN RANGE		
Flip Angle	45	FOV	40.0	
TE	Min Full	Slice Thickness	8.0	
Receiver Bandwidth	62.50	Slice Spacing	0.0	
		Number of Slices	1	
IMAGE ENHANCE		ACQ TIMING		
Filter Choice	None	Freq	128	
		Phase	96	
		Freq DIR	R/L	
		NEX	1.00	
		Phase FOV	0.80	
		Auto Shim	Auto	
		Phase Correction	No	
		RF Drive Mode	Quadrature	
		Excitation Mode	Selective	
GATING/TRIGGER		USER CVS		
Auto Trigger Type	Off	User CV20	1.00	
		User CV Mask2	0	

Pause After Navigator Prescan	0		
FMRI		MULTI-PHASE	
PSD Trigger	Internal	Seperate Series	0
Slice Order	Interleaved	Mask Phase	0
View Order	Bottom/Up	Mask Pause	0
# of Repetitions REST	0		
# of Repetitions ACTIVE	0		
SAT		DIFFUSION	
Tag Type	None	Recon All Images	On
		Multi b-values	1000.0;
		Multi NEX Values	1;
TRICKS		CONTRAST	
D 0 10.00	On	Contrast Yes/No	No
Pause On/Off	On	Contrast 10s/110	110
Auto Subtract	0	Contrast 165/110	110

Configuration Plane OBLIQUE Series Description VALV AO ANATOMIC PC SCAN TIMING Flip Angle Receiver Bandwidth 62.50 Silice Thickness Silice Spacing Silic	VALV AO ANATOMIC PC				
Patient Position Supine GE21chFlexL;GE40chGEMPA Imaging Options FC, Gat, Seq, EDR, Fast, Asset Phase 2.00 Series Description VALV AO ANATOMIC PC SCAN TIMING FOV 36.0 Slice Thickness 8.00 Slice Spacing 0.0 Overlap Locations 0 Number of Slices 3 IMAGE ENHANCE Freq 188 Freq DIR R/L NEX 1.00 # of Acq. Before Pause 1 Phase FOV 0.75 Auto Shim Auto Phase Correction No RF Drive Mode Quadrature (CP) Excitation Mode Selective GATING/TRIGGER Trigger Type 5 Views per Segment 4 Valv AO ANATOMIC PC Pulse Sequence Vasc PC Imaging Options FC, Gat, Seq, EDR, Fast, Asset Phase 2.00 SCAN RANGE FOV 36.0 Slice Thickness 8.00 Slice Spacing 0.0 Overlap Locations 0 Number of Slices 3 ACQ TIMING Freq 188 Phase 188 Freq DIR R/L NEX 1.00 # of Acq. Before Pause 1 Phase Correction No RF Drive Mode Quadrature (CP) Excitation Mode Selective GATING/TRIGGER USER CVS Views per Segment 4 Views PCV20 1.00 Views PCV21 1.0	PATIENT POSITI	ON	IMAGING PARAMETERS		
Coil Configuration Configuration Plane OBLIQUE Series Description VALV AO ANATOMIC PC SCAN TIMING Flip Angle Receiver Bandwidth 62.50 IMAGE ENHANCE Filter Choice None None ACQ TIMING Freq 188 Phase 189 Phase 100 # of Acq. Before Pause Phase FOV 0.75 Auto Shim Auto Phase FOV 0.75 Auto Shim Auto Phase Correction No RF Drive Mode Excitation Mode Selective CATING/TRIGGER Trigger Type 5 Views per Segment Pause After Navigator 0 Imaging Options FC, Gat, Seq, EDR, Fast, Asset Phase 2.00 FC, Gat, Seq, EDR, Fast, Asset Phase 2.00 SCAN RANGE FOV 36.0 Slice Spacing 0.0 Verlap Locations 0 Number of Slices 3 IMAGE ENHANCE Freq 188 Preq DIR R/L NEX 1.00 # of Acq. Before Pause 1 Phase FOV 0.75 Auto Shim Auto Phase Correction No RF Drive Mode Excitation Mode Selective CATING/TRIGGER Views per Segment 4 User CV2 1.00 User CV2 1.00	Patient Entry	Feet First	Imaging Mode	2D	
Configuration Plane OBLIQUE Series Description VALV AO ANATOMIC PC SCAN TIMING Flip Angle Receiver Bandwidth 62.50 Silice Thickness Silice Spacing Overlap Locations Number of Slices Filter Choice None MAGE ENHANCE Filter Choice None More Acq. Before Pause Phase FOV Nex 1 00 # of Acq. Before Pause Phase FOV None # of Acq. Before Pause Phase Correction No RF Drive Mode Quadrature (CP) Excitation Mode Selective GATING/TRIGGER Trigger Type 5 User CV0 User CV20 1.00 User CV21 1.00	Patient Position	Supine	Pulse Sequence	Vasc PC	
Series		GE21chFlexL;GE40chGEMPA	Imaging Options	FC, Gat, Seq, EDR, Fast, Asset	
SCAN TIMING	Plane	OBLIQUE	Phase	2.00	
Flip Angle		VALV AO ANATOMIC PC			
Number of Echoes 1 Receiver Bandwidth 62.50 Slice Spacing 0.0 Overlap Locations 0 Number of Slices 3 MAGE ENHANCE	SCAN TIMING		SCAN RANGE		
Receiver Bandwidth 62.50 Slice Spacing 0.0 Overlap Locations 0 Number of Slices 3 MAGE ENHANCE Filter Choice None Freq 188 Phase 188 Freq DIR R/L NEX 1.00 # of Acq. Before Pause 1 Phase FOV 0.75 Auto Shim Auto Phase Correction No RF Drive Mode Quadrature (CP) Excitation Mode Selective CATING/TRIGGER Trigger Type 5 User CV0 1.00 Views per Segment 4 User CV20 1.00 Pause After Navigator 0 User CV21 1.00	Flip Angle	20	FOV	36.0	
Overlap Locations 0 Number of Slices 3 MAGE ENHANCE	Number of Echoes	1	Slice Thickness	8.00	
Number of Slices 3	Receiver Bandwid	th 62.50	Slice Spacing	0.0	
MAGE ENHANCE Filter Choice None Freq 188 Phase 188 Freq DIR R/L NEX 1.00 # of Acq. Before Pause 1 Phase FOV 0.75 Auto Shim Auto Phase Correction No RF Drive Mode Quadrature (CP) Excitation Mode Selective GATING/TRIGGER USER CVS User CV0 1.00 User CV20 1.00 User CV21 User CV21 1.00 User CV21 Use			-	0	
Filter Choice None Freq Phase 188 Freq DIR NEX 1.00 # of Acq. Before Pause 1 Phase FOV 0.75 Auto Shim Auto Phase Correction No RF Drive Mode Quadrature (CP) Excitation Mode Selective GATING/TRIGGER Trigger Type 5 User CV0 Views per Segment 4 Pause After Navigator 0 Freq 188 Preq DIR R/L NEX 1.00 # of Acq. Before Pause 1 Phase FOV 0.75 Auto Shim Auto Phase Correction No RF Drive Mode Quadrature (CP) Excitation Mode Selective			Number of Slices	3	
Phase 188 Freq DIR R/L NEX 1.00 # of Acq. Before Pause 1 Phase FOV 0.75 Auto Shim Auto Phase Correction No RF Drive Mode Quadrature (CP) Excitation Mode Selective GATING/TRIGGER Trigger Type 5 User CV0 1.00 Views per Segment 4 User CV20 1.00 Pause After Navigator 0 User CV21 1.00	IMAGE ENHANC	CE	ACQ TIMING		
Freq DIR NEX 1.00 # of Acq. Before Pause 1 Phase FOV 0.75 Auto Shim Auto Phase Correction No RF Drive Mode Quadrature (CP) Excitation Mode Selective GATING/TRIGGER Trigger Type 5 User CV0 User CV20 1.00 User CV21 1.00	Filter Choice	None	Freq	188	
NEX 1.00 # of Acq. Before Pause 1 Phase FOV 0.75 Auto Shim Auto Phase Correction No RF Drive Mode Quadrature (CP) Excitation Mode Selective CATING/TRIGGER USER CVS User CV0 1.00 Views per Segment 4 User CV20 1.00 Pause After Navigator 0 User CV21 1.00			Phase	188	
# of Acq. Before Pause 1 Phase FOV 0.75 Auto Shim Auto Phase Correction No RF Drive Mode Quadrature (CP) Excitation Mode Selective CATING/TRIGGER USER CVS User CV0 1.00 Views per Segment 4 User CV20 1.00 Pause After Navigator 0 User CV21 1.00			-		
Phase FOV 0.75 Auto Shim Auto Phase Correction No RF Drive Mode Quadrature (CP) Excitation Mode Selective CATING/TRIGGER USER CVS User CV0 1.00 Views per Segment 4 User CV20 1.00 Pause After Navigator 0 User CV21 1.00			i i	1.00	
Auto Shim Auto Phase Correction No RF Drive Mode Quadrature (CP) Excitation Mode Selective CATING/TRIGGER USER CVS			-	•	
Phase Correction No RF Drive Mode Quadrature (CP) Excitation Mode Selective CATING/TRIGGER USER CVS					
RF Drive Mode Quadrature (CP) Excitation Mode Selective CATING/TRIGGER USER CVS					
Excitation Mode Selective CATING/TRIGGER USER CVS Trigger Type 5 User CV0 1.00 Views per Segment 4 User CV20 1.00 Pause After Navigator 0 User CV21 1.00					
GATING/TRIGGER Trigger Type 5 User CV0 1.00 Views per Segment 4 User CV20 1.00 Pause After Navigator 0 User CV21 1.00				. ,	
Trigger Type 5 User CV0 1.00 Views per Segment 4 User CV20 1.00 Pause After Navigator 0 User CV21 1.00			Excitation Mode	Selective	
Views per Segment 4 User CV20 1.00 Pause After Navigator 0 User CV21 1.00	GATING/TRIGGI	ER	USER CVS		
Pause After Navigator 0 User CV21 1.00	Trigger Type	5	User CV0	1.00	
	Views per Segmen	t 4	User CV20	1.00	
Prescan User CV Mask2	1	ator ₍₎			
USCI CV MASK2	Prescan		User CV Mask2	0	

FMRI		MULTI-PHASE	
PSD Trigger	Internal	Seperate Series	0
View Order	Bottom/Up	Mask Phase	0
# of Repetitions REST	0	Mask Pause	0
# of Repetitions ACTIVE	0	Preserve	0
SAT		VASCULAR	
Tag Type	None	Flow Analysis	Slice
		Additional Flow Images	0
		Flow Recon Type	Phase Diff.
		Velocity Encoding	150.0
DIFFUSION		TRICKS	
Recon All Images	On	Pause On/Off	On
# Synthetic b-values	1	Auto Subtract	0
Synthetic b-value	1000.0;	Auto SCIC	Off
CINE		CONTRAST	
# of Cardiac Phases to		Contrast Yes/No	No
Reconstruct	30	Contrast 1cs/1vo	110
VALVULAR. PUEDE SER I	CIÓN DE LA ANTOMIA NO MIDE FLUJO. REEMPLAZADO POR LA LA VALVULA.		



	2D Fast PC BH Ao	
PATIENT POSITION		IMAGING
Patient Entry	Feet First	PARAMETERS
Patient Position	Supine	Imaging 2D
Coil Configuration	GE21chFlexL;GE40chGEMPA	Mode
Plane	OBLIQUE	Pulse Sequence Vasc PC
Series Description	2D Fast PC BH Ao	Imaging Options FC, Gat, Seq, EDR, Fast, Asset
		Phase 2.00
SCAN TIMING		SCAN RANGE
Flip Angle	20	FOV 36.0
Number of Echoes Receiver Bandwidth	1 62.50	Slice Thickness 8.00
2000, 01 2000	0.2.00	Slice Spacing 0.0
		Overlap Locations 0
		Number of Slices 3
IMAGE ENHANCE		ACQ TIMING
Filter Choice	None	Freq 188
		Phase 188
		Freq DIR R/L
		NEX 1.00

		Pause	1
		Phase FOV	0.75
		Auto Shim	Auto
		Phase Correction	No
		RF Drive Mode	Quadrature (CP)
		Excitation Mode	Selective
GATING/TRIGGER		USER CVS	5
Trigger Type	5	User CV0	
Views per Segment	4	User	1.00
Pause After Navigator Prescan	0	CV20	1.00
		User CV21	1.00
		User CV Mask2	0
FMRI		MULTI-PI	IASE
PSD Trigger	Internal	Seperate	0
View Order	Bottom/Up	Series	U
# of Repetitions REST	0	Mask Phase	0
# of Repetitions ACTIVE	0	Mosk	
		Pause	0
		Preserve	0
SAT		VASCULA	R
Tag Type	None	Flow	Slice
		Analysis	
		Additional Flow	0
		Images	
		Flow	n. n. n.
		Recon Type	Phase Diff.
		Velocity Encoding	150.0
DIFFUSION		TRICKS	
Recon All Images	On	Pause	
# Synthetic b-values	1	On/Off	On
Synthetic b-value	1000.0;	Auto Subtract	0
		Auto SCIC	Off
CINE		CONTRAS	ST
# of Cardiac Phases to Reconstruct	30	Contract	No
OTHERS			
Protocol IMPORTANT TIPS: - VENC Notes MIDE FLUJO PLANIFICA SINOTUBULAR, 5 mm SOB CAMARAS Y CORONAL DI	150 - ESTUDIO DE FLUJO AORTICO, CIÓN POR SOBRE LA UNIÓN RE LA UNIÓN, UTILIZANDO PLANO 3 E AORTA 3 CORTES - SE DEBE ORMA CIRCULAR.		



OPCIONAL				
PATIENT POSITION IMAGING PARAMETERS			ΓERS	
Patient Entry	Feet First	Imaging Mode	2D	
Patient Position	Supine	Pulse Sequence	Fiesta	
Coil Configuration	32Ch Body by GE	Imaging Options	Seq, Fast, RealTime	
Plane	AXIAL			
Series Description	OPCIONAL			
SCAN TIMING		SCAN RANGE		
Flip Angle	45	FOV	40.0	
TE	Min Full	Slice Thickness	8.0	
Receiver Bandwidth	62.50	Slice Spacing	0.0	
		Number of Slices	1	
IMAGE ENHANCE		ACQ TIMING		
Filter Choice	None	Freq	128	
		II		

		Phase	96
		Freq DIR	R/L
		NEX	1.00
		Phase FOV	0.80
		Auto Shim	Auto
		Phase Correction	No
		RF Drive Mode	Quadrature
		Excitation Mode	Selective
GATING/TRIGGER		USER CVS	
Auto Trigger Type	Off	User CV20	1.00
Pause After Navigator	0	User CV Mask2	0
Prescan	O		
FMRI		MULTI-PHASE	
PSD Trigger	Internal	Seperate Series	0
Slice Order	Interleaved	Mask Phase	0
View Order	Bottom/Up	Mask Pause	0
# of Repetitions REST	0		
# of Repetitions ACTIVE	0		
SAT		DIFFUSION	
Tag Type	None	Recon All Images	On
		Multi b-values	1000.0;
		Multi NEX Values	1;
TRICKS		CONTRAST	
Pause On/Off	On	Contrast Yes/No	No
Auto Subtract	0		
Auto SCIC	Off		

		PD SSFSE BB	ANATOMICO	
PATIENT POSIT	ION		IMAGING PARAMETERS	
Patient Entry	Feet 1	First	Imaging Mode	2D
Patient Position	Supir	ne	Pulse Sequence	Spin Echo
Coil Configuration	GE21	lchFlexL;GE40chGEMPA	Imaging Options	Gat, Seq, EDR, Fast, SS, BSP, Asset
Plane	OBL	IQUE	Phase	2.00
Series Description	PD S	SFSE BB ANATOMICO		
SCAN TIMING			SCAN RANGE	
TE		Minimum	FOV	42.0
Number of Echoes	S	1	Slice Thickness	8.00
Blood Suppression	n TI	849	Slice Spacing	0.0
Receiver Bandwid	lth	83.33	Overlap Locations	0
			Number of Slices	22
IMAGE ENHANG	CE		ACQ TIMING	
Filter Choice		None	Freq	180
			Phase	160
			Freq DIR	R/L
			# of Acq. Before Pause	5
			Phase FOV	0.85
			Auto Shim	Auto

		Phase Correction	No
		RF Drive Mode	Quadrature (CP)
		Excitation Mode	Selective
GATING/TRIGGER		USER CVS	
Trigger Type	5	User CV2	240.00
Minimum Trigger	4	User CV13	1.00
Delay	4	User CV Mask2	512
Cardiac Phase	1		
Cardiac Slices	1		
FMRI		MULTI-PHASE	
PSD Trigger	Internal	Seperate Series	0
View Order	Bottom/Up	Mask Phase	0
# of Repetitions REST	0	Mask Pause	0
# of Repetitions ACTIVE	0	Preserve	0
		DIEERIGION	
SAT Tog Type	None	DIFFUSION Regen All Images	On
Tag Type	None	Recon All Images Multi b-values	On 1000.0;
		Multi NEX Values	1.0;
		# Synthetic b-values	1.0,
		Synthetic b-value	1000.0;
TRANSPORTER TO THE PROPERTY OF			1000.0,
TRICKS # of RR Intervals	3	CONTRAST Contrast Yes/No	No
	1500	Contrast Yes/No	No
Trigger Delay Pause On/Off	On		
Auto Subtract	0		
Auto SCIC	2		
OTHERS		<u> </u>	
Negra Planific ESTRICTO, n FIESTA TX E Siempre corre artefacto Band TG SIEMPRE CARDIAC -M Delay is set to down menu, a reduced If #	TIPS: Secuencia Sangre racion: AXIAL risma covertura de Ax cho Spacing menor a 5ms gir Shim para disminuir ling y activar Localizer ABRIR VENTANA fake sure that Trigger Diastolic from the pull s cardiac motion is RR Interval =2, then = Recommend is best		

	EC T2 D	IR FS BH	
PATIENT POSITION		IMAGING PARAMET	ERS
	Feet First	Imaging Mode	2D
	Supine	Pulse Sequence	FSE-XL
Coil	GE21chFlexL;GE40chGEMPA	Imaging Options	Gat, Seq, EDR, Fast, BSP, ARC
	OBLIQUE	Phase	2.00
Sorios			
Description	EC T2 DIR FS BH		
SCAN TIMING		SCAN RANGE	
Flip Angle	140	FOV	38.0
TE	90.0	Slice Thickness	10.00
Number of Echoes	1	Slice Spacing	15.0
TI	164	Overlap Locations	0
Echo Train Length	22	Number of Slices	3
Blood Suppression	TI 688		
Receiver Bandwidt	h 83.33		
IMAGE ENHANC	E	ACQ TIMING	
Filter Choice	None	Freq	256
		Phase	200
		Freq DIR	S/I
		Fat Shift DIR	Normal (I)
		NEX	1.00
		# of Acq. Before Pause	1
		Phase FOV	1.00
		Auto Shim	Auto
		Phase Correction	No
		RF Drive Mode	Quadrature (CP)
		Excitation Mode	Selective
GATING/TRIGGE	iR	USER CVS	
Trigger Type	5	User CV14	2.50
Minimum Trigger	4	User CV19	1.00
Delay		User CV Mask2	512
Cardiac Phase	1		
Cardiac Slices	1		
FMRI		MULTI-PHASE	
PSD Trigger	Internal	Seperate Series	0
View Order	Bottom/Up	Mask Phase	0
# of Repetitions RE	EST 0	Mask Pause	0
# of Repetitions	0	Preserve	0
ACTIVE			
SAT		DIFFUSION	
Tag Type	None	Recon All Images	On
Fat/Water Saturati	on Fat Special	# Synthetic b-values	1
		Synthetic b-value	1000.0;
TRICKS		CONTRAST	
# of RR Intervals	2	Contrast Yes/No	No
Trigger Delay	1500		
Pause On/Off	On		

T2 EC SSFSE FS rapido						
PATIENT POSITI	ION	IMAGING PARAMETERS				
Patient Entry	Feet First	Imaging Mode	2D			
Patient Position	Supine	Pulse Sequence	Spin Echo			
Coil Configuration	GE21chFlexL;GE40chGEMPA	Imaging Options	Gat, Seq, EDR, Fast, SS, BSP, Asset			
Plane	OBLIQUE	Phase	2.00			
Series Description	T2 EC SSFSE FS rapido					
SCAN TIMING		SCAN RANGE				
TE	Minimum	FOV	44.0			
Number of Echoes	1	Slice Thickness	8.00			
TI	170	Slice Spacing	0.0			
Blood Suppression		Overlap Locations	0			
Receiver Bandwidth 111.11		Number of Slices	14			
IMAGE ENHANCE		ACQ TIMING				
Filter Choice	None	Freq	192			
		Phase	180			
		Freq DIR	S/I			
		# of Acq. Before Pause	3			
		Phase FOV	1.00			
		Auto Shim	Auto			
		Phase Correction	No			
		RF Drive Mode	Quadrature (CP)			

			Excitation Mode	Selective
GATING/	TRIGGER		USER CVS	
Trigger Ty	ype	5	User CV2	240.00
Minimum	-	4	User CV13	1.00
Delay		4	User CV Mask2	512
Cardiac P	hase	1		
Cardiac S	lices	1		
FMRI			MULTI-PHASE	
PSD Trigg	ger	Internal	Seperate Series	0
View Order		Bottom/Up	Mask Phase	0
# of Repetitions REST		0	Mask Pause	0
# of Repetitions ACTIVE		0	Preserve	0
SAT			DIFFUSION	
Tag Type		None	Recon All Images	On
	Saturation	Fat Special	Multi b-values	1000.0;
		1	Multi NEX Values	1.0;
			# Synthetic b-values	1
			Synthetic b-value	1000.0;
TRICKS			CONTRAST	
# of RR In	itervals	4	Contrast Yes/No	No
Trigger D		1500	Contrast 165/110	110
Pause On	· ·	On		
Auto Subtract		0		
Auto SCI		2		
OTHERS				
	IMPORTANT SANGRE NE ventriculo izq plano valvular para Edema L	TIPS: T2 EJE CORTO GRA FS Abarcar todo el uierdo, un corte sobre el hasta el apex. Estudio imite TR =1000ms A mejor TI para saturar naneja TR		
	Diastolic from cardiac motion	at Trigger Delay is set to the pull down menu, as is reduced If # RR en Trigger Delay = s best option.		

PATIENT POSITION		IMAGING PARAMETERS		
Patient Entry	Feet First	Imaging Mode	2D	
Patient Position	Supine	Pulse Sequence	SPGR	
Coil	-	-	Gat, EDR, Fast, PS,	
Configuration	GE21chFlexL;GE40chGEMPA	Imaging Options	ARC, IrP	
Plane	OBLIQUE	Phase	2.50	
Series	EC PSMDE RAPIDO			
Description	LC I SWIDE KAI IDO			
SCAN TIMING		SCAN RANGE		
Flip Angle	20	FOV	44.0	
Number of Echoes	s 1	Slice Thickness	8.00	
Receiver Bandwid	50.00	Slice Spacing	0.0	
		Overlap Locations	0	
		Number of Slices	14	
IMAGE ENHANC	CE	ACQ TIMING		
Filter Choice	None	Freq	132	
		Phase	128	
		Freq DIR	S/I	
		NEX	1.00	
		# of Acq. Before Pause	7	
		Phase FOV	0.90	
		Auto Shim	Auto	
		Phase Correction	No	
		RF Drive Mode	Quadrature (CP)	
		Excitation Mode	Selective	
GATING/TRIGG	ER	USER CVS		
Trigger Type	5	User CV Mask2	0	
Minimum Trigger				
Delay	4			
Cardiac Phase	1			
Cardiac Slices	1			
Pause After Navig	ator 0			
Prescan				
FMRI		MULTI-PHASE		
PSD Trigger	Internal	Seperate Series	0	
View Order	Bottom/Up	Mask Phase	0	
# of Repetitions R	EST 0	Mask Pause	0	
# of Repetitions	0	Preserve	0	
ACTIVE				
DIFFUSION		TRICKS		
Recon All Images	On	# of RR Intervals	2	
Multi b-values	1000.0;	Trigger Delay	429	
Multi NEX Values	· · · · · · · · · · · · · · · · · · ·	Pause On/Off	On	
# Synthetic b-valu		Auto Subtract	0	
Synthetic b-value	1000.0;	Auto SCIC	Off	
CINE CONTRAST				
CINE		11		
# of Cardiac Phas	es to 20	Contrast Yes/No	No	
	es to 20	Contrast Yes/No	No	
# of Cardiac Phase Reconstruct	20 20	Contrast Yes/No	No	
# of Cardiac Phase Reconstruct	20 EANT TIPS: - When scanning	Contrast Yes/No	No	
# of Cardiac Phase Reconstruct OTHERS Protocol IMPORT	20	Contrast Yes/No	No	

must match #RR interval for PSMDE. For optimal image quality, set the
Trigger Delay to Diastolic or type in a
value manually.

- 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.