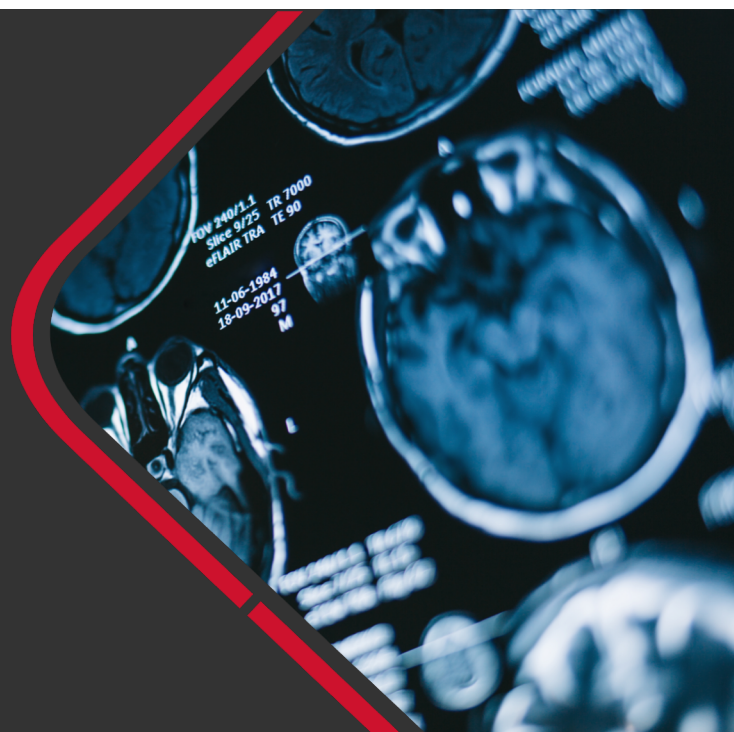


LesionQuant 3.0

Scanner Parameters



Attention LesionQuant Users:

Prior to using LesionQuant module, the same version of NeuroQuant (3D T1) and LesionQuant (T2 FLAIR) scanner settings need to be configured on your scanner(s).

NOTE: You do not need both the 2D and the 3D T2 FLAIR sequences to generate LesionQuant reports. You do need the NeuroQuant Sagittal 3D T1 and either the 2D or the 3D T2 FLAIR sequences.

LesionQuant / GE T2 FLAIR Settings

FIELD STRENGTH	1.5T		3T	
<i>Mode</i>	2D	3D	2D	3D
<i>Plane</i>	Axial	Sagittal	Axial	Sagittal
<i>Frequency</i>	256	256	256	256
<i>Phase</i>	256	256	256	256
<i>FOV</i>	220 – 240	220 – 240	220 – 240	220 – 240
<i>Slice Thickness</i>	≤ 3 mm	1.2 mm	≤ 3 mm	1.2 mm
<i>TE</i>	127 ms	90 ms	147 ms	130 ms
<i>TR</i>	8,000 ms	6,900 ms	11,000 ms	6,000 ms
<i>Flip Angle</i>	90°	90°	90°	90°
<i>TI</i>	2,000 ms	2,030 ms	2,250 ms	1,854
<i>Bandwidth</i>	195 Hz/px or 50 KHz	122 Hz/px or 31 KHz	122 Hz/px or 31 KHz	122 Hz/px or 31 KHz
<i>ASSET Parallel Imaging Factor</i>	NONE	NONE	2	2

Notes

1. ASSET parallel imaging compatible with Discovery 750 3T, Signa 3T, and Signa HDxt 3T scanners only
2. Variable flip angle flag should be **off**
3. Variable Bandwidth should be **off**
4. **Do not** use post processing filters
5. ZIP512 not supported

LesionQuant / Philips T2 FLAIR Settings

FIELD STRENGTH	1.5T		3T	
<i>Mode</i>	2D	3D	2D	3D
<i>Plane</i>	Axial	Sagittal	Axial	Sagittal
<i>Gradient Mode</i>	Default	Default	Default	Default
<i>Fast Imaging Mode</i>	Default	Default	FSE	FSE
<i>In Plane Pixel Resolution</i>	1.0 mm x 1.0 mm	1.0 mm x 1.0 mm	1.0 mm x 1.0 mm	1.0 mm x 1.0 mm
<i>Percent Phase FOV</i>	100%	100%	100%	100%
<i>FOV</i>	22 – 25.6 cm	22 – 25.6 cm	22 – 25.6 cm	22 – 25.6 cm
<i>Slice Thickness</i>	≤ 3 mm	2.4 mm	≤ 3 mm	1.2 mm
<i>TE</i>	120 ms	296 ms	90 ms	274 ms
<i>TR</i>	6,000 ms	8,000 ms	9,000 ms	4,800 ms
<i>Inversion Time/TI</i>	2,000 ms	2,400 ms	2,500 ms	1,650 ms
<i>Flip Angle</i>	90°	90°	90°	90°
<i>SENSE Parallel Imaging Factor</i>	1	≤ 2	1.6	≤ 2

Notes

1. 1.5T scan protocol is based on Philips Acheiva scanner with software version 3.2.2
2. SENSE Parallel imaging compatible with Acheiva, Ingenia 3T, and Intera 3T scanners only
3. **Do not** use post processing filters
4. ZIP512 not supported

LesionQuant / Siemens T2 FLAIR Settings

FIELD STRENGTH	1.5T		3T	
<i>Mode</i>	2D	3D	2D	3D
<i>Plane</i>	Axial	Sagittal	Axial	Sagittal
<i>Matrix Scan</i>	256	256	256	256
<i>Base Resolution</i>	256	256	256	256
<i>Phase Resolution</i>	100%	100%	100%	100%
<i>FOV</i>	22 – 25.6	22 – 25.6	22 – 25.6	22 – 25.6
<i>Slice Thickness</i>	≤ 3 mm	1.2 mm	≤ 3 mm	1.2 mm
<i>Averages</i>	1	1	1	1
<i>Magn. Preparation</i>	Slice-sel IR	Slice-sel IR	Slice-sel IR	Slice-sel IR
<i>TE</i>	111 ms	358 ms	90 ms	392 ms
<i>TR</i>	9,000 ms	5,000 ms	9,000 ms	5,000 ms
<i>Inversion Time/TI</i>	2,500 ms	1,800 ms	2,500 ms	1,800 ms
<i>Flip Angle</i>	150°	120°	150°	120°
<i>Bandwidth</i>	130 Hz/px or 33 KHz	592 Hz/px or 152 KHz	222 Hz/px or 57 KHz	780 Hz/px or 2 KHz
<i>GRAPPA Parallel Imaging Factor</i>	NONE	NONE	2	2

Notes

1. GRAPPA parallel imaging compatible with Verio 3T, Trio Tim 3T and Skyra 3T scanners only
2. **Do not** use post processing filters
3. ZIP512 not supported

LesionQuant / Canon (Toshiba) T2 FLAIR Settings

FIELD STRENGTH	1.5T		3T	
<i>Mode</i>	2D	3D	2D	3D
<i>Plane</i>	Axial	Sagittal	Axial	Sagittal
<i>Sequence</i>	FSE2D+13	FASE3D+5.5	FSE2D+12	FASE3D+5.5
<i>Sequence Option</i>	Basic	MPV T2	Basic	MPV T2
<i>In Plane Pixel Resolution</i>	1 mm x 1 mm	1 mm x 1 mm	1 mm x 1 mm	1 mm x 1 mm
<i>FOV</i>	22 – 25.6 cm	22 – 25.6 cm	22 – 25.6 cm	22 – 25.6 cm
<i>Slice Thickness</i>	3 mm	1.2 mm	3 mm	1.2 mm
<i>Gradient Type</i>	SLT	N/A	Normal	N/A
<i>RF Type</i>	Normal	N/A	Low SAR	N/A
<i>TE</i>	104 ms	352 ms	96 ms	401.5 ms
<i>TR</i>	10,000 ms	7,000 ms	9,000 ms	6,000 ms
<i>TI</i>	2,500 ms	2,200 ms	2,500ms	2,000 ms
<i>Flip Angle</i>	90°	90°	90°	90°
<i>FLOP</i>	180°	180°	140°	180°
<i>IR Pulse</i>	Robust	Robust	Standard	Robust
<i>No Wrap</i>	1	SE 1.2	None	SE 1.2
<i>Speeder</i>	PE 1	PE 2 SE 2	PE 2	PE 2 SE 2
<i>Number of Shots</i>	N/A	1	N/A	1
<i>Bandwidth</i>	139.5 Hz/px	651 Hz/px	195.3 Hz/px	651 Hz/px

Notes

1. Fat Suppression should be **off**
2. IDC (Gradient Correction) – set to VMC
3. **Do not** use post processing filters
4. ZIP512 not supported

LesionQuant / Hitachi T2 FLAIR Settings

FIELD STRENGTH	1.2T		1.5T		3T	
<i>Mode</i>	2D	3D	2D	3D	2D	3D
<i>Plane</i>	Axial	Sagittal	Axial	Sagittal	Axial	Sagittal
<i>Sequence</i>	opFIR	isoFSE	opFIR	isoFSE	FIR	isoFSE
<i>In Plane Pixel Resolution</i>	1 mm x 1 mm	1 mm x 1 mm	1 mm x 1 mm	1 mm x 1 mm	1 mm x 1 mm	1 mm x 1 mm
<i>FOV</i>	22 cm	24 – 26 cm	22 cm	24– 26 cm	22 cm	24 – 26 cm
<i>Slice Thickness</i>	≤ 3 mm	1.5 acquired / 1 recon	≤ 3 mm	1.2 acquired / 1 recon	≤ 3 mm	1.2 acquired / 1 recon
<i>TE</i>	132 ms	390 ms	132 ms	390 ms	116 ms	438 ms
<i>TR</i>	9,130 ms	5,500 ms	9,660 ms	6,000 ms	10,000 ms	10,000 ms
<i>TI</i>	2,400 ms	1,800 ms	2,500 ms	1,860 ms	2,300 ms	2,600 ms
<i>Flip Angle</i>	90°	90°	90°	90°	90°	90°
<i>Rapid Phase</i>	1	2	1.2	2	1.1	2
<i>Rapid Slice</i>	N/A	1.4	N/A	1.7	N/A	2.5
<i>Rapid Mode</i>	N/A	RCM	RCM	RCM	RCM	RCM
<i>Vivid Filter</i>	3	1	3	2	3	1
<i>Bandwidth</i>	56 KHz	96.2 KHz	65 KHz	91 KHz	80 KHz	108.7 KHz

Notes

1. Percent Phase FOV should be **100%**
2. Gradient Correction should be **On**
3. **Do not** use post processing filters other than Vivid
4. ZIP512 not supported