LOGIQ Fortis R3.x HDU

Product Specification Sheet

Last updated on: Thursday, January 13, 2022

1	**General Specifications**	
2	**Dimensions and Weight** **(Dimensions given with floating keyboard stowed and display tilted for transport)**	
3	Depth	885 mm, 34.8"
4	Height	1250 – 1800 mm, 49 – 71"
5	Weight	85 kg (187.4 lb)
6	Width	530 mm, 20.9" (Caster), 565 mm, 22.2" (Monitor)
7	**Electrical Power**	
8	Voltage: 100 – 240 Vac	
9	Frequency: 50/60 Hz	
10	Power consumption maximum of 0.9 kVA with peripherals	
11	**Console Design**	
12	4 active probe ports	
13	1 inactive probe storage port	
14	Integrated SSD (1 TB)	
15	Integrated DVD-R Multi Drive	
16	On-board storage of thermal printer	
17	Integrated speaker	
18	Integrated locking mechanism that provides rolling lock and caster swivel lock	
19	Integrated cable management	
20	Front and rear handles	
21	Easily removable air filters	
22	Windows 10 64-bit	
23	**User Interface**	
24	**Operator Keyboard**	
25	Operating keyboard adjustable in height and rotation	
26	Ergonomic hard key layout	
27	Interactive back-lighting	
28	Integrated recording keys for remote control of up to 4 peripheral devices or DICOM® devices	
29	Integrated gel warmer	
30	**Touch Screen**	
31	12.1" High-resolution, color, touch, display screen	
32	Interactive dynamic software menu	
33	Brightness adjustment	
34	User-configurable layout	
35	**Monitor**	
36	23.8" Wide screen high-resolution HDU display	
37	Display translation (independent of console)	
38	350 mm, (13.7 in) horizontal (both directions)	
39	150 mm, (5.9 in) vertical	
40	90° swivel (both directions)	
41	Fold-down and lock mechanism for transportation	
42	Resolution: 1920 X 1080	
43	Anti-glare	
44	Viewing angle 89/89/89/89°	
45	Contrast Ratio: >20,000:1	
46	**System Overview**	
47	**Applications**	
48	Abdominal	
49	Obstetrical	
50	Gynecological	
51	Breast	

52	Small Parts
53	Peripheral Vascular
54	Transcranial (adult and neonatal)
55	Pediatric and neonatal
56	Musculoskeletal (general and superficial)
57	Urological
58	Cardiac (adult and pediatric)
59	Interventional
60	Pleural
61	**Operating Modes**
62	B-Mode
63	M-Mode
64	Color Flow Mode (CFM)
65	B-Flow (Option)
66	Extended Field of View (LOGIQView)
67	Power Doppler Imaging (PDI)
68	PW Doppler
69	CW Doppler (Option)
70	Volume Modes (3D/4D) (Option)
71	Anatomical M-Mode
72	Coded Contrast Imaging (Option)
73	Strain elastography (Option)
74	B Steer+ (Option)
75	Shear wave elastography (Option)
76	UGAP (Option) - Ultrasound Guided Attenuation Parameter Imaging
77	**Scanning Methods**
78	Electronic sector
79	Electronic convex
80	Electronic linear
81	Mechanical volume sweep
82	**Probe Types**
83	Sector phased array
84	Convex array
85	Microconvex array
86	Linear array
87	Matrix array
88	Volume probes (4D)
89	Split crystal
90	**System Standard Features**
91	Advanced user interface with high-resolution 12.1" display touch panel
92	Automatic optimization
93	CrossXBeam™ compounding
94	Speckle Reduction Imaging (SRI-HD, Advanced SRI Type 1)
95	Fine angle steer
96	Coded harmonic imaging
97	Virtual convex
98	Patient information database
99	Image archive on integrated CD/DVD and hard drive
100	Advanced 3D
101	Raw data analysis
102	Real-time automatic Doppler calculations
103	OB calculations
104	Fetal trending
105	Multi gestational calculations
106	Hip dysplasia calculations
107	Gynecological calculations
108	Vascular calculations
109	Urological calculations
110	Renal calculations
111	Cardiac calculations
112	InSite™ capability
113	On-board electronic documentation
114	Auto Doppler Assist

115	Privacy and security, including user and rights management	
116	LOGIQView	
117	External USB printer connection	
118	Network printer support	
119	HDMI output (available for compatible devices)	
120	**System Options**	
121	Tricefy®	
122	DICOM	
123	B-Flow	
124	Compare Assistant	
125	Auto IMT	
126	Scan Assistant	
127	Breast productivity package	
128	Thyroid productivity package	
129	OB measure assistant	
130	Quantificative Flow Analysis available with Color Flow/PDI	
131	Breast Measure Assistant	
132	B Steer+	
133	Strain elastography	
134	Elastography Quantification	
135	Advanced privacy and security (vulnerability scan)	
136	Power assistant and scan on battery	
137	Storage bins	
138	Shear wave Elastography	
139	Volume Navigation	
140	UGAP	
141	Hepatic Assistant	
142	Coded Contrast Imaging	
143	Stress echo	
144	Cardiac Strain (Automatic Function Imaging)	
145	On-board reporting	
146	TVI	
147	Wireless LAN	
148	CW	
149	DVR	
150	Table tools	
151	Advanced probes	
152	Breast Assistant, Powered by Koios DS™	
153	SonoNT SonoIT	
154	Advanced SRI Type 2	
155	**Peripheral Options**	
156	Integrated Option for Digital Color thermal Printer	
157	Digital A6 color thermal printer	
158	Foot switch, with programmable functionality	
159	CRF-200U card reader support (Japan Only)	
160	Console protective cover	
161	LOGIQ smart device apps	• Photo Assistant • Remote Control
162	**Display Modes**	
163	Live and stored display format	• Full size and split screen – both w/ thumbnails. For still and CINE
164	Review image format	• 4x4, and thumbnails. For still and CINE
165	Time line display	• Independent Dual B or CrossXBeam/PW Display • CW • Display formats top/bottom selectable format • Side/side selectable format
166	Virtual convex	
167	**Simultaneous capability**	
168	B or CrossXBeam/PW	
169	B or CrossXBeam/CW (Option)	
170	B or CrossXBeam/CFM or PDI	
171	B/M	
172	B/CrossXBeam	
173	B-Flow/PW	

174	Real-time Triplex Mode - B or CrossXBeam + CFM or PDI/PW	
175	**Selectable alternating modes**	
176	B or CrossXBeam/PW	
177	B or CrossXBeam + CFM (PDI)/PW	
178	B/CW (Option)	
179	**Multi-image (split/quad screen)**	
180	Live and/or frozen	
181	B or CrossXBeam + B or CrossXBeam/CFM or PDI or B-Flow (Option)	
182	PW/M	
183	Independent Cine playback	
184	**Display Annotation**	
185	Patient name: first, last and middle	
186	Patient ID	
187	Alternate patient ID	
188	Age, sex and date of birth	
189	Hospital name	
190	Date format: three types selectable	• MM/DD/YY • DD/MM/YY • YY/MM/DD
191	Time format: 2 types selectable	• 24 hours • 12 hours
192	Gestational age from	• LMP • GA • EDD • BBT
193	Probe name	
194	Map names	
195	Probe orientation	
196	Depth scale marker	
197	Lateral scale marker	
198	Focal zone markers	
199	Image depth	
200	Zoom depth	
201	B-Mode	• Gain • Dynamic range • Imaging frequency • Frame averaging • Gray map • SRI
202	M-Mode	• Gain • Dynamic range • Time scale
203	Doppler Mode	• Gain • Angle • Sample volume depth and width • Wall filter • Velocity and/or frequency scale • Spectrum inversion • Time scale • PRF • Doppler frequency
204	Color Flow Doppler Mode	• Line density • Frame averaging • Color scale, 3 types: Power, directional PDI and symmetrical velocity imaging • Color velocity range and baseline • Color threshold marker • Color gain • PDI • Spectrum inversion • Doppler frequency
205	Digital TGC with 8 independent controls	
206	Acoustic frame rate	

207	CINE gage, image number/frame number	
208	Body pattern: multiple human and animal types	
209	Application name	
210	Measurement results	
211	Operator message	
212	Displayed acoustic output	• TIS: Thermal Index Soft Tissue • TIC: Thermal Index Cranial (Bone) • TIB: Thermal Index Bone • MI: Mechanical Index
213	% of maximum power output	
214	Biopsy guide line and zone	
215	Heart rate	

216	**General System Parameters**	
217	**System Setup**	
218	Pre-programmable categories	
219	User programmable preset capability	
220	Factory default preset data	
221	Languages: English, French, German, Spanish, Italian, Brazilian, Portuguese, Russian, Greek, Swedish, Danish, Dutch, Finnish, Norwegian	
222	OB Report Formats including Tokyo Univ., Osaka Univ., USA, Europe and ASUM and WHO	
223	User defined annotations	
224	Body patterns	
225	Customized comment home position	
226	EZ Imaging: Simplified user interface for high volume workflow	
227	**Complete user manual available on board through Help (F1)**	
228	User manual and service manual are included in USB stick with each system. A printed manual is available upon request.	
229	**CINE Memory/Image Memory**	
230	1 GB of CINE memory	
231	Selectable CINE sequence for CINE review	
232	Prospective CINE mark	
233	Measurements/calculations and annotations on CINE playback	
234	Scrolling timeline memory	
235	Dual Image CINE display	
236	Quad Image CINE display	
237	CINE gauge and CINE image number display	
238	CINE review loop	
239	CINE review speed	
240	**Image Storage**	
241	On-board database of patient information from past exams	
242	Storage formats: DICOM	• Compressed/uncompressed • Single/multi-frame • Enhanced (3D/4D) • With/without raw data
243	Export JPEG, JPEG 2000, WMV (MPEG 4) formats	
244	Storage devices:	• USB memory stick: 64 MB to 64 GB (for exporting individual images/clips) • CD-R storage: 700 MB • DVD storage: -R (4.7 GB) • Hard drive image storage: ~830GB
245	Compare previous exam images with current exam	
246	Reload of archived date sets	
247	Network storage support for import, export, DICOM read, SaveAs, MPEGVue	
248	**Connectivity**	
249	Ethernet network connection	
250	Wireless LAN 802.11ac/a/b/g/n (Option)	
251	DICOM 3.0	• Verify • Print • Store • Modality worklist • Storage commitment • Modality performed procedure step (MPPS) • Media exchange • Off network/mobile storage queue • Query/retrieve
252	Public SR template	
253	Structured Reporting – compatible with vascular and OB, cardiac and breast standard	
254	InSite capability	
255	Advanced privacy and security (Option)	

256	**Physiological input panel (Option)**	
257	Physiological input	• ECG, 1 channel • PCG, 1 channel • AUX, 1 channel • Dual R-Trigger • Pre-settable ECG R delay time • Pre-settable ECG position • Adjustable ECG gain control • Pre-settable PCG position • Adjustable PCG gain control • Pre-settable AUX position • Adjustable AUX gain control
258	Automatic heart rate display	
259	Auto Ejection Fraction	
260	**Report writer (Option)**	
261	On-board reporting package automates report writing	
262	Formats various exam results into a report suitable for printing or reviewing on a standard PC	
263	Exam results include patient info, exam info, measurements, calculations, images, and comments Standard templates provided	
264	Customizable templates	
265	**Scanning Parameters**	
266	cSound™ Imageformer: Infinite number of effective channels	
267	Frame rate: 9,675 Hz maximum	
268	Displayed imaging depth: 0 – 100 cm	
269	Minimum depth of field: 0 – 2 cm (zoom) (probe dependent)	
270	Maximum depth of field: 0 – 100 cm (probe dependent)	
271	Continuous dynamic receive focus	
272	Continuous dynamic receive aperture	
273	Adjustable dynamic range, inifinite upper level	
274	Adjustable field of view (FOV)	
275	System Frequency Range: 0.7-24 MHz	
276	Image reverse: right/left	
277	Image rotation of 0°, 90°, 180°, 270°	
278	8 bits stored per color	
279	256 shades of gray	
280	256 color tones	
281	**Digital B-Mode**	
282	Adjustable	• Acoustic power • Gain • Dynamic range • Frame averaging • Gray scale map • Frequency • Speed of sound (application dependent) • Framerate • Scanning size (FOV or Angle) – Depending on the probe, see probe specifications • CrossXBeam • B colorization • Reject • Suppression • SRI
283	**Digital M-Mode**	
284	Adjustable	• Acoustic power • Gain • Dynamic range • Gray scale map • Frequency • Sweep speed • M colorization • M display format • Rejection
285	**Anatomical M-Mode**	
286	M-mode cursor adjustable at any plane	

287	Can be activated from a CINE loop from a live or stored image	
288	M & A capability	
289	Available with Color Flow Mode	
290	**Digital Spectral Doppler Mode**	
291	Adjustable	• Acoustic power • Gain • Dynamic range • Gray scale map • Transmit frequency • Wall filter • PW colorization • Velocity scale range • Sweep speed • Sample volume length • Angle correction • Steered linear • Spectrum inversion • Trace method • Baseline shift • Doppler auto trace • Time resolution • Compression • Trace direction • Trace sensitivity
292	**Digital Color Flow Mode**	
293	Adjustable	• Acoustic power • Color maps, including velocity-variance maps • Gain • Velocity scale range • Wall filter • Packet size • Line density • Spatial filter • Steering angle • Baseline shift • Frame average • Threshold • Auto ROI placement and steering on linear • Accumulation mode • Flash suppression • Shortcuts
294	**Digital Power Doppler Imaging**	
295	Adjustable	• Acoustic power • Color maps, velocity-variance maps • Gain including • Velocity scale range • Wall filter • Packet size • Line density • Spatial filter • Steering angle • Frame average • Threshold • Accumulation mode • Flash suppression • Shortcuts
296	**Continuous Wave Doppler (Option)**	
297	Available on M5Sc-D, 6S-D, 6Tc-RS, P2D and P6D probes	
298	Steerable CW mode included	

299	Adjustable	• Acoustic power • Gain • Dynamic range • Gray scale map • Transmit frequency • Wall filter • CW colorization • Velocity scale range • Sweep speed • Angle correction • Spectrum inversion • Trace method • Baseline shift • Doppler auto trace • Compression • Trace direction • Trace sensitivity
300	**Automatic Optimization**	
301	Optimize B-Mode image to help improve contrast resolution with one button press	
302	Selectable amount of contrast resolution improvement (low, medium, high)	
303	CTO (Continuous Tissue Optimization) – continuously adjusts B-Mode axial and lateral gain uniformity and overall gain level suppressing the noise	
304	Auto-spectral optimize – adjusts baseline, invert, PRF (on live image), and angle correction with one button press	
305	Auto CF and PW positioning – adjusts ROI position, sample volume position and steering with one button press	
306	**Coded Harmonic Imaging**	
307	Available on all 2D and 4D probes	
308	**B-Flow (Option)**	
309	Available on the following probes: C1-6-D, C1-6VN-D, C2-7-D, C2-7VN-D, C2-9-D, C2-9VN-D, C3-10-D, L2-9-D, L2-9VN-D, L3-12-D, L6-24-D ML6-15-D, M5Sc-D, L8-18i-D	
310	Background	
311	Sensitivity/PRI	
312	Acoustic power	
313	Frequency	
314	Line density	
315	Frame average	
316	Gray scale map	
317	Tint map	
318	Dynamic range	
319	Rejection	
320	Gain	
321	Suppression	
322	SRI	
323	Accumulation	
324	Visualization	
325	**Radiant*flow*™**	
326	Easy, fast visualization of tiny vessels, displaying as a 3D effect	
327	Available in Color Doppler, Power Doppler and MVI	
328	**B Steer+ (Option)**	
329	Available on the following probes: L2-9-D, ML6-15-D, L8-18i-D, L3-12-D, L2-9VN-D	
330	**Coded contrast imaging (Option)**	
331	Available on the following probes: C1-6-D, C1-6VN-D, C2-9-D, C2-9VN-D, C2-7-D, C2-7VN-D, C3-10-D, IC5-9-D, L2-9-D, L2-9VN-D, L3-12-D, M5Sc-D, ML6-15-D, RAB6-D, RIC5-9-D, L6-24-D	
332	2 contrast timers	
333	Timed updates: 0.05 – 10 seconds	
334	Accumulation mode, seven levels	
335	Maximum enhance mode	
336	Flash	
337	Time intensity curve (TIC) analysis	
338	Parametric imaging	
339	Ability to save still image during clip acquisition	

340	The LOGIQ Fortis is designed for compatibility with most commercially available ultrasound contrast agents. Because the availability of these agents is subject to government regulation and approval, product features intended for use with these agents may not be commercially marketed nor made available before the contrast agent is cleared for use. Contrast related product features are enabled only on systems for delivery to an authorized country or region of use.	
341	**LOGIQView**	
342	Extended field of view Imaging	
343	Up to 160 cm (63") scan length	
344	Available on all 2D imaging probes	
345	For use in B-Mode	
346	CrossXBeam is available on linear probes	
347	Auto detection of scan direction	
348	Pre-or post-process zoom	
349	Rotation	
350	Auto best fit on monitor	
351	Measurements in B-Mode	
352	**3D**	
353	Allows unlimited rotation and planar translation	
354	3D reconstruction from CINE sweep	
355	Easy 3D available on all probes	
356	**Advanced 3D**	
357	Acquisition of color data	
358	Automatic rendering	
359	3D landscape technology	
360	3D movie	
361	**Real-time 4D (Option)**	
362	Acquisition modes	• Real Time 4D • Spatio-Temporal Image Correlation (Option) • Static 3D
363	Visualization modes	• 3D rendering (diverse surface and intensity projection modes) • Sectional planes (3 section planes perpendicular to each other) • Omniview (Option) • Volume contrast imaging – Static (Option) • Volume contrast imaging – Omniview (Option) • Tomographic ultrasound imaging (Option) • Volume Analyses – VOCAL: semi-auto/manual segmentation tool (segmentation using touch screen) (Option) – 3D Static only – Threshold Volume: measure volume below and above a threshold
364	Render mode	• Surface texture, surface smooth, max-, min- and X-ray (average intensity projection), mix mode of two render modes • HD*live* ™
365	SonoRender*live*	
366	Curved 3 point Render start	
367	3D Movie	
368	Scalpel: 3D cut tool	
369	Display format:	• Quad: A-/B-/C-Plane/3D • Dual: A-Plane/3D • Single: 3D or A- or B- or C-Plane
370	Automated Volume Calculation – VOCAL II	
371	Betaview	
372	**Volume navigation (Option)**	
373	Available on the following probes: C1-6VN-D, C2-9VN-D, C2-7VN-D, C3-10-D, L2-9VN-D, ML6-15-D, IC5-9-D, L8-18i-D, M5Sc-D	
374	Sensor-based acquisition	
375	Position markers	
376	Needle tip tracking	
377	Virtual tracking	
378	Auto image registration	
379	Tru3D feature includes	
380	Render modes: gray surface, texture, min-, max-, average-intensity	

381	Measurements: distance, angle, area, volume
382	3D Movie
383	**Scan assistant (Option)**
384	Factory programs
385	User-defined programs
386	Steps include image annotations, mode transitions, basic imaging controls and measurement initiation
387	**Compare Assistant (Option)**
388	Allows side-by-side comparison of previous ultrasound and other modality exams during live scanning
389	**Breast productivity package**
390	Auto measurement
391	Worksheet summary includes measurements and locations for lesions and lymph nodes
392	Feature assessment
393	BI-RADS™ assessment
394	User editable
395	**Thyroid productivity package (Option)**
396	Auto measurement
397	Worksheet summary includes measurements and locations for nodule, parathyroid and lymph nodes
398	Feature assessment
399	BI-RADS™ assessment
400	User editable
401	**Start Assistant**
402	Automatically select category, probe, preset, or scan assistant from worklist exam description
403	Learn the category, probe, preset, and scan assistant based on exam description
404	**Shear Wave Elastography (Option)**
405	Available on the following probes: C1-6-D, C1-6VN-D, L2-9-D, L2-9VN-D, IC5-9-D, L8-18i-D, ML6-15-D, L3-12-D
406	User programmable measurement display in kPa and meters per second
407	Single and dual view display
408	Applications: Abdominal, Breast, Musculoskeletal, Small Parts, Prostate
409	**Strain elastography (Option)**
410	Available on the following probes: ML6-15-D, L2-9-D, L2-9VN-D, L3-12-D, IC5-9-D, C2-9-D, C2-9VN-D, C1-6-D, C1-6VN-D, L8-18i-D, BE9CS-D
411	Relative analysis tool
412	Applications: Abdominal, Breast, Musculoskeletal, Small Parts, Prostate, Thyroid
413	**UGAP (Option)**
414	Available on the following probes: C1-6-D, C1-6VN-D, C2-9-D, C2-9VN-D
415	Measures liver attenuation* (attenuation coefficient [dB/cm/MHz]) by auto measure algorithm with reference B-mode
416	Simple and 2D color map (attenuation color map and Measurement Position Indicator Map)
417	**Quantitative flow analysis (Option)**
418	Available in color and power Doppler
419	**TVI (Option)**
420	Available on the following probes: M5Sc-D, 6Tc-RS, 6S-D probes
421	Myocardial Doppler imaging with color overlay on tissue image
422	Tissue color overlay can be removed to show just the 2D image, still retaining the tissue velocity information
423	Curved anatomical M-Mode: free (curved) drawing of M-Mode generated from the cursor independent from the axial plane
424	Q-Analysis: multiple time-motion trace display from selected points in the myocardium
425	**Stress echo (Option)**
426	Advanced and flexible stress echo examination capabilities
427	Provides exercise and pharmacological protocol templates
428	6 default templates
429	Template editor for user configuration of existing templates or creation of new templates
430	Reference scan display during acquisition for stress level comparison (dual screen)
431	Baseline level/previous level selectable
432	Raw data continuous capture
433	Over 100 sec. available
434	Wall motion scoring (bulls-eye and segmental)
435	Smart stress: Automatically set up various scanning parameters (e.g. geometry, frequency, gain) according to same projection on previous level
436	**Auto EF (Option)**
437	Allows semi-automatic measurement of the global EF (Ejection Fraction)
438	User editable
439	**Cardiac AFI (Option)**
440	Allows assessment of the complete left ventricle with all segments at a glance by combining three longitudinal views into one comprehensive bulls-eye view
441	2D strain based data moves into clinical practice

442	**Virtual Convex**	
443	Provides a convex field of view	
444	Compatible with CrossXBeam	
445	Available on all linear and sector probes	
446	**SRI-HD and Advanced SRI**	
447	Speckle reduction imaging	
448	Provides multiple levels of speckle reduction	
449	Compatible with side-by-side DualView display	
450	Advanced SRI: two types selectable	• Type 1 – Compatible with all linear, convex and sector probes • Type 2 (Option) – Compatible with OB/GYN application
451	**CrossXBeam**	
452	Provides variable angle spatial compounding	
453	Live side-by-side DualView display	
454	Compatible with	• Color mode • PW • SRI • Coded harmonic imaging • Virtual convex
455	Available on all curved and linear probes	
456	**Controls available while “live”**	
457	Magnification Zoom: Magnifies the entire image on the screen without zoom ROI, 20x maximum zoom factor	
458	Pan Zoom: Magnifies the display of the data within the ROI	
459	HD Zoom: Magnifies the image within the zoom ROI, with higher spatial resolution than original images	
460	B/M/CrossXBeam-Mode	• Gain • TGC • Dynamic range • Acoustic output • Framerate control • Sweep speed for M-Mode • CrossXBeam angle
461	PW-Mode	• Gain • Dynamic range • Acoustic output • Transmission frequency • PRF • Wall filter • Spectral averaging • Sample volume gate: length, depth • Velocity scale
462	Color Flow-Mode	• CFM gain • CFM velocity range • Acoustic output • Wall echo filter • Packet size • Frame rate control • CFM spatial filter • CFM frame averaging • CFM line resolution • Frequency/velocity baseline shift
463	**Controls available on “freeze” or recall**	
464	Automatic optimization	
465	SRI	
466	CrossXBeam – display non-compounded and compounded image simultaneously in split screen	
467	3D reconstruction from a stored CINE loop	
468	B/M/CrossXBeam-Mode	• Gray map optimization • TGC • Colorized B and M • Frame average (loops only) • Dynamic range
469	Anatomical M-Mode	
470	Magnification zoom	
471	Pan zoom	
472	Maximum read zoom to 8x	

473	Baseline shift	
474	Sweep speed	
475	PW mode	• Gray map • Post gain • Baseline shift • Sweep speed • Invert spectral wave form • Compression • Rejection • Colorized spectrum • Display format • Doppler audio • Angle correct • Quick angle correct • Auto angle correct
476	Color flow	• Overall gain (loops and stills) • Color map • Transparency map • Frame averaging (loops only) • Flash suppression • CFM display threshold • Spectral invert for color/Doppler
477	Anatomical M-Mode on cine loop	
478	4D	• Gray map, colorize • Post gain • Change display – single, dual, quad sectional or rendered
479	**Measurements/Calculations**	
480	**General B-Mode**	
481	Depth and distance	
482	Circumference (ellipse/trace)	
483	Area (ellipse/trace)	
484	Volume (ellipsoid)	
485	% Stenosis (area or diameter)	
486	Angle between two lines	
487	Dual B-mode capability	
488	**General M-Mode**	
489	M-Depth	
490	Distance	
491	Time	
492	Slope	
493	Heart rate	
494	**General Doppler measurements/calculations**	
495	Velocity	
496	Time	
497	A/B ratio (velocities/frequency ratio)	
498	PS (Peak Systole)	
499	ED (End Diastole)	
500	PS/ED (PS/ED Ratio)	
501	ED/PS (ED/PS Ratio)	
502	AT (Acceleration Time)	
503	ACCEL (Acceleration)	
504	TAMAX (Time Averaged Maximum Velocity)	
505	Volume flow (TAMEAN and vessel area)	
506	Heart rate	
507	PI (Pulsatility Index)	
508	RI (Resistivity Index)	
509	**Real-time Doppler Auto Measurements/Calculations**	
510	PS (Peak Systole)	
511	ED (End Diastole)	
512	MD (Minimum Diastole)	
513	PI (Pulsatility Index)	
514	RI (Resistivity Index)	
515	AT (Acceleration Time)	

516	ACC (Acceleration)	
517	PS/ED (PS/ED Ratio)	
518	ED/PS (ED/PS Ratio)	
519	HR (Heart Rate)	
520	TAMAX (Time Averaged Maximum velocity)	
521	PVAL (Peak Velocity value)	
522	Volume flow (TAMEAN and vessel area)	
523	**Abdominal measurements/calculations**	
524	Shear Elasto velocity	
525	Shear Elasto stiffness	
526	Attenuation rate	
527	Attenuation coefficient	
528	Summary reports	
529	**Small Parts measurements/calculations**	
530	Breast Lesion	
531	Thyroid	
532	Parathyroid	
533	Lymph Node	
534	Nodule	
535	Isthmus AP	
536	Shear Elasto velocity	
537	Shear Elasto stiffness	
538	Summary reports	
539	**OB measurements/calculations**	
540	Gestational age by	• GS (Gestational Sac) • CRL (Crown Rump Length) • FL (Femur Length) • BPD (Biparietal Diameter) • AC (Abdominal Circumference) • HC (Head Circumference) • APTD x TTD (Anterior/Posterior Trunk Diameter by Transverse Trunk Diameter) • FTA (Fetal Trunk Cross-sectional Area) • HL (Humerus Length) • BD (Binocular Distance) • FT (Foot Length) • OFD (Occipital Frontal Diameter) • TAD (Transverse Abdominal Diameter) • TCD (Transverse Cerebellum Diameter) • THD (Thorax Transverse Diameter) • TIB (Tibia Length) • ULNA (Ulna Length) • OOD (Outer Orbital Diameter) • IOD (Inner Orbital Diameter) • FIB (Fibula length) • Radius (Radius length) • LV (Lateral Ventricle width) (= SL)
541	Estimated Fetal Weight (EFW) by:	• AC, BPD • AC, BPD, FL • AC, BPD, FL, HC • AC, FL • AC, FL, HC • AC, HC • BPD, APTD, TTD, FL • BPD, APTD, TTD, SL
542	Fetal graphical trending	
543	Growth percentiles	
544	Multi-gestational calculations (4)	
545	Fetal qualitative description (anatomical survey)	
546	Fetal environmental description (biophysical profile)	
547	Programmable OB tables	
548	Over 20 selectable OB calculations	
549	Expanded worksheets	
550	Summary Reports	

551	**OB Calculations and ratios**
552	FL/BPD
553	FL/AC
554	FL/HC
555	HC/AC
556	CI (Cephalic Index)
557	AFI (Amniotic Fluid Index)
558	CTAR (Cardio-Thoracic Area Ratio)
559	Measurements/calculations by: Alexander, ASUM, ASUM 2001, Bahlmann, Baschat, Berkowitz, Bertagnoli, Brenner, Campbell, CFEF, Chervenak, Chitty, Doubilet, Ebing, Eik-Nes Goldstein, Hadlock, Hansmann, Hellman, Hill, Hohler, Jeanty, JSUM, Kramer, Kurmanavicius, Kurtz, Mari, Mayden, Mercer, Merz, Moore, Nelson, Osaka University, Paris, Pexsters, Rempen, Robinson, Shepard, Shepard/Warsoff, Sonek, Tokyo University, Tokyo/Shinozuka, WHO, Williams, Yarkoni
560	**OB measure assistant**
561	Allows automatic measurement of BPD, HC, FL and AC
562	User editable
563	**SonoNT and SonoIT**
564	SonoNT measures the contour detection of the NT border
565	SonoIT is a system supported measurement for Intracranial Translucency
566	**GYN measurements/calculations**
567	Right ovary length, width, height
568	Left ovary length, width, height
569	Uterus length, width, height
570	Cervix length, trace
571	Ovarian volume
572	ENDO (Endometrial thickness)
573	Ovarian RI
574	Uterine RI
575	Follicular measurements
576	Fibroid measurements
577	Qualitative description (anatomical survey)
578	Mean Uterine Artery (Gomez) Doppler Measurement
579	Summary reports
580	**Vascular measurements/calculations**
581	SYS DCCA (Systolic Distal Common Carotid Artery)
582	DIAS DCCA (Diastolic Distal Common Carotid Artery)
583	SYS MCCA (Systolic Mid Common Carotid Artery)
584	DIAS MCCA (Diastolic Mid Common Carotid Artery)
585	SYS PCCA (Systolic Proximal Common Carotid Artery)
586	DIAS PCCA (Diastolic Proximal Common Carotid Artery)
587	SYS DICA (Systolic Distal Internal Carotid Artery)
588	DIAS DICA (Systolic Distal Internal Carotid Artery)
589	SYS MICA (Systolic Mid Internal Carotid Artery)
590	DIAS MICA (Diastolic Mid Internal Carotid Artery)
591	SYS PICA (Systolic Proximal Internal Carotid Artery)
592	DIAS PICA (Diastolic Proximal Internal Carotid Artery)
593	SYS DECA (Systolic Distal External Carotid Artery)
594	DIAS DECA (Diastolic Distal External Carotid Artery)
595	SYS PECA (Systolic Proximal External Carotid Artery)
596	DIAS PECA (Diastolic Proximal External Carotid Artery)
597	VERT (Systolic Vertebral Velocity)
598	SUBCLAV (Systolic Subclavian Velocity)
599	Auto IMT (Option)
600	Summary reports
601	**Urological measurements/calculations**
602	Bladder volume
603	Prostate volume
604	Left/right renal volume
605	Generic volume
606	Post-void bladder volume
607	Pelvic floor measurements
608	Summary reports
609	**TCD measurements/calculations**
610	MCA, ACA, PCA, ICA
611	AComA, PCom A
612	Vert

613	Basilar	
614	MCA/ICA Ratio	
615	Summary reports	
616	**Pediatric and Neonatal measurements/calculations**	
617	Hip angle	
618	Hip orientation	
619	Summary reports	
620	**Probes (All Optional)**	
621	**6S-D, sector probe**	
622	Applications	Pediatric cardiac, pediatric abdomen
623	Bandwidth	2.0 – 8.0 MHz
624	Number of elements	96
625	Field of view (max.)	115°
626	Physical foot print	15 x 9 mm
627	B-Mode frequency	4.0, 4.2, 5.0, 5.5, 6.5 MHz
628	Harmonic frequency	4.7, 4.9, 5.3, 5.7, 6.1, 6.3 MHz
629	PW Doppler frequency	2.8, 3.1, 3.6, 4.2 MHz
630	Color Doppler frequency	2.7, 3.1, 4.2, 5.0 MHz
631	**6Tc-RS, trans-esophageal probe**	
632	Applications	Adult cardiac
633	Bandwidth	2.0 – 8.0 MHz
634	Number of elements	64
635	Field of view (max.)	90°
636	Physical foot print	37 x 13 x 10 mm
637	B-Mode frequency	5.0, 6.0, 6.5 MHz
638	Harmonic frequency	6.0 MHz
639	PW Doppler frequency	3.1, 3.6, 4.2, 5.0, 6.3 MHz
640	Color Doppler frequency	3.3, 4.1, 4.7, 5.5 MHz
641	**BE9CS-D**	
642	Applications	Urology
643	Biopsy guide	Single angle, disposable (E8387M); Single angle, reusable (E8387MA)
644	Bandwidth	3.0 - 12.0 MHz
645	Number of elements	64
646	Field of view (max.)	133°
647	Physical foot print	19 x 19 mm
648	B-Mode frequency	6.0, 7.0, 8.0, 9.0 MHz
649	Harmonic frequency	7.0, 8.0, 9.0, 10.0 MHz
650	PW Doppler frequency	4.2, 5.0, 6.3 MHz
651	Color Doppler frequency	4.3, 6.3, 8.2 MHz
652	**C1-6-D, XDclear™ convex probe**	
653	Applications	Abdomen, OB/GYN, pediatric, peripheral vascular, general musculoskeletal
654	Biopsy guide	Multi-angle, disposable with a reusable bracket (H4917VB)
655	Bandwidth	1.0 – 6.0 MHz
656	Number of elements	192
657	Field of view (max.)	80°
658	Physical foot print	67 x 11 mm
659	B-Mode frequency	2.0, 2.5, 3.0, 4.0 MHz
660	Harmonic frequency	1.5, 2.5, 3.0, 4.5, 6.0, 6.5 MHz
661	PW Doppler frequency	1.7, 2.1, 2.5, 3.6 MHz
662	Color Doppler frequency	1.8, 2.1, 2.5, 2.8, 3.0 MHz
663	**C1-6VN-D, VNav inside XDclear convex probe**	
664	VNav sensor inside probe for Volume Navigation tracking without sensor cables	
665	Applications	Abdomen, OB/GYN, pediatric, peripheral vascular, general musculoskeletal
666	Biopsy guide	Multi-angle, disposable with a reusable bracket (H4917VB)
667	Bandwidth	1.0 – 6.0 MHz
668	Number of elements	192
669	Field of view (max.)	80°
670	Physical foot print	67 x 11 mm
671	B-Mode frequency	2.0, 2.5, 3.0, 4.0 MHz
672	Harmonic frequency	1.5, 2.5, 3.0, 4.5, 6.0, 6.5 MHz
673	PW Doppler frequency	1.7, 2.1, 2.5, 3.6 MHz
674	Color Doppler frequency	1.8, 2.1, 2.5, 2.8, 3.0 MHz

675	**C2-7-D, micro convex biopsy probe**	
676	Applications	Abdomen, pediatric
677	Biopsy guide	Multi-angle, disposable with a reusable bracket (H40482LK), Multi-Angle, reusable stainless bracket (H40482LL)
678	Bandwidth	1.0 – 6.0 MHz
679	Number of elements	144
680	Field of view (max.)	110°
681	Physical foot print	31 x 10 mm
682	B-Mode frequency	2.5, 4.0, 6.0 MHz
683	Harmonic frequency	3.0, 4.0, 5.0, 6.0 MHz
684	PW Doppler frequency	1.8, 2.1, 2.5, 3.1 MHz
685	Color Doppler frequency	2.1, 2.4, 3.1, 3.7 MHz
686	**C2-7-VN-D, VNav inside XDclear convex probe**	
687	VNav sensor inside probe for Volume Navigation tracking without sensor cables	
688	Applications	Abdomen, pediatric
689	Biopsy guide	Multi-angle, disposable with a reusable bracket (H40482LK), Multi-Angle, reusable stainless bracket (H40482LL)
690	Bandwidth	1.0 – 6.0 MHz
691	Number of elements	144
692	Field of view (max.)	110°
693	Physical foot print	31 x 10 mm
694	B-Mode frequency	2.5, 4.0, 6.0 MHz
695	Harmonic frequency	3.0, 4.0, 5.0, 6.0 MHz
696	PW Doppler frequency	1.8, 2.1, 2.5, 3.1 MHz
697	Color Doppler frequency	2.1, 2.4, 3.1, 3.7 MHz
698	**C2-9-D, XDclear convex probe**	
699	Applications	Abdomen, OB/GYN, pediatric, peripheral vascular, neonatal, neonatal transcranial, general musculoskeletal
700	Biopsy guide	Multi-angle, disposable with a reusable bracket (H4913BA)
701	Bandwidth	2.0 – 9.0 MHz
702	Number of elements	192
703	Field of view (max.)	80°
704	Physical foot print	52 x 9 mm
705	B-Mode frequency	3.0, 4.5, 6.0, 7.0 MHz
706	Harmonic frequency	2.5, 3.5, 5.0, 7.0, 9.0 MHz
707	PW Doppler frequency	2.5, 3.1, 3.6, 4.2, 5.0, 6.3 MHz
708	Color Doppler frequency	3.1, 4.2, 4.6, 5.4 MHz
709	**C2-9-VN-D, VNav inside XDclear convex probe**	
710	VNav sensor inside probe for Volume Navigation tracking without sensor cables	
711	Applications	Abdomen, OB/GYN, pediatric, peripheral vascular, neonatal, neonatal transcranial, general musculoskeletal
712	Biopsy guide	Multi-angle, disposable with a reusable bracket (H4913BA)
713	Bandwidth	2.0 – 9.0 MHz
714	Number of elements	192
715	Field of view (max.)	80°
716	Physical foot print	52 x 9 mm
717	B-Mode frequency	3.0, 4.5, 6.0, 7.0 MHz
718	Harmonic frequency	2.5, 3.5, 5.0, 7.0, 9.0 MHz
719	PW Doppler frequency	2.5, 3.1, 3.6, 4.2, 5.0, 6.3 MHz
720	Color Doppler frequency	3.1, 4.2, 4.6, 5.4 MHz
721	**C3-10-D, XDclear micro convex probe**	
722	Applications	Abdomen, neonatal, pediatric, peripheral vascular, neonatal transcranial, small part
723	Bandwidth	2.0 – 11.0 MHz
724	Number of elements	192
725	Field of view (max.)	95°
726	Physical foot print	26 x 5 mm
727	B-Mode frequency	4.0, 6.0, 8.0 MHz
728	Harmonic frequency	6.0, 8.0, 10.0 MHz
729	PW Doppler frequency	3.1, 4.2, 6.3, 7.1 MHz
730	Color Doppler frequency	3.9, 5.3, 6.6 MHz
731	**IC5-9-D, micro convex probe**	
732	Applications	OB/GYN, urology
733	Biopsy guide	Single angle, disposable with a disposable bracket (E8385MJ) or reusable bracket (H40412LN)

734	Bandwidth	3.0 – 10.0 MHz
735	Number of elements	192
736	Field of view (max.)	180°
737	Physical foot print	26 x 6 mm
738	B-Mode frequency	4.5, 5.0, 5.5, 6.0, 7.0, 8.0 MHz
739	Harmonic frequency	6.0, 6.5, 7.0, 9.0 MHz
740	PW Doppler frequency	3.6, 4.2, 5.0 MHz
741	Color Doppler frequency	4.6, 5.9, 6.7 MHz
742	**L2-9-D, XDclear linear probe**	
743	Applications	Peripheral vascular, pediatric, abdomen, OB/GYN, general musculoskeletal, superficial musculoskeletal, neonatal, neonatal transcranial and small parts inculding breast, thyroid and scrotal
744	Biopsy guide	Multi-angle, disposable with a reusable bracket (H44901AM)
745	Bandwidth	2.0 – 10.0 MHz
746	Number of elements	192
747	Field of view (max.)	44 mm
748	Physical foot print	53 x 14 mm
749	B-Mode frequency	4.0, 4.5, 5.0, 6.0, 7.0 MHz
750	Harmonic frequency	5.0, 6.0, 7.0, 8.0, 9.0, 9.4 MHz
751	PW Doppler frequency	2.5, 2.8, 3.1, 3.6, 4.2, 5.0 MHz
752	Color Doppler frequency	3.1, 4.0, 4.6, 5.3 MHz
753	**L2-9VN-D, VNav inside XDclear linear probe**	
754	VNav sensor inside probe for Volume Navigation tracking without sensor cables	
755	Applications	Peripheral vascular, pediatric, abdomen, OB/GYN, general musculoskeletal, superficial musculoskeletal, neonatal, neonatal transcranial and small parts inculding breast, thyroid and scrotal
756	Biopsy guide	Multi-angle, disposable with a reusable bracket (H44901AM)
757	Bandwidth	2.0 – 10.0 MHz
758	Number of elements	192
759	Field of view (max.)	44 mm
760	Physical foot print	53 x 14 mm
761	B-Mode frequency	4.0, 4.5, 5.0, 6.0, 7.0 MHz
762	Harmonic frequency	5.0, 6.0, 7.0, 8.0, 9.0, 9.4 MHz
763	PW Doppler frequency	2.5, 2.8, 3.1, 3.6, 4.2, 5.0 MHz
764	Color Doppler frequency	3.1, 4.0, 4.6, 5.3 MHz
765	**L3-12-D, linear probe**	
766	Applications	Abdomen, OB, general musculoskeletal, superficial musculoskeletal, neonatal, neonatal transcranial, small parts, vascular
767	Biopsy guide	Multi-angle, disposable with a reusable bracket (H78652PA)
768	Bandwidth	3.0 – 11.0 MHz
769	Number of elements	256
770	Field of view (max.)	51 mm
771	Physical foot print	51 x 4 mm
772	B-Mode frequency	6.0, 8.0, 10.0, 12.0 MHz
773	Harmonic frequency	4.0, 6.0, 8.0, 10.0, 12.0 MHz
774	PW Doppler frequency	4.2, 5.0, 6.3, 8.3 MHz
775	Color Doppler frequency	4.3, 4.9, 5.4, 6.1, 7.2, 8.0 MHz
776	**L6-24-D, linear probe**	
777	Applications	General musculoskeletal, superficial musculoskeletal, pediatrics, thyroid
778	Bandwidth	6.0 – 20.0 MHz
779	Number of elements	192
780	Field of view (max.)	26 mm
781	Physical foot print	26 x 2 mm
782	B-Mode frequency	12.0, 16.0, 21.0 MHz
783	Harmonic frequency	12.0, 18.0, 24.0 MHz
784	PW Doppler frequency	8.3, 10.0, 12.5 MHz
785	Color Doppler frequency	9.2, 11.2, 12.2 MHz
786	**L8-18i-D, linear probe**	
787	Applications	Small parts, peripheral vascular, neonatal, neonatal transcranial, general musculoskeletal, superficial musculoskeletal, intraoperative
788	Bandwidth	4.0 – 15.0 MHz
789	Number of elements	168

790	Field of view (max.)	25 mm
791	Physical foot print	35 x 10 mm
792	B-Mode frequency	7.0, 9.0, 13.0, 16.0 MHz
793	Harmonic frequency	14.0, 16.0, 18.0 MHz
794	PW Doppler frequency	5.0, 6.3, 7.1, 8.3 MHz
795	Color Doppler frequency	6.3, 6.7, 9.6, 10.5 MHz
796	**M5Sc-D, XDclear sector probe**	
797	Applications	Adult cardiac, pediatric cardiac, adult cephalic, abdominal
798	Biopsy guide	Multi-angle, disposable with a reusable bracket (H45561FC)
799	Bandwidth	1.0 – 5.0 MHz
800	Number of elements	288
801	Field of view (max.)	120°
802	Physical foot print	28 x 17 mm
803	B-Mode frequency	2.0, 2.5, 3.5, 4.5 MHz
804	Harmonic frequency	2.4, 3.0, 3.2, 3.3, 3.7, 4.0, 4.5 MHz
805	PW Doppler frequency	1.6, 1.7, 1.8, 1.9, 2.1, 2.5, 3.1, 3.6 MHz
806	Color Doppler frequency	1.7, 1.8, 1.9, 2.2, 2.4, 2.5, 3.0, 3.1, 3.7, 3.8 MHz
807	**ML6-15-D, matrix array linear probe**	
808	Applications	Abdomen, peripheral vascular, neonatal, pediatric, neonatal transcranial, general musculoskeletal, superficial musculoskeletal and small parts inculding breast, thyroid and scrotal
809	Biopsy guide	Multi-angle, disposable with a reusable bracket (H40432LJ)
810	Bandwidth	4.0 – 16.0 MHz
811	Number of elements	1008
812	Field of view (max.)	50 mm
813	Physical foot print	50 x 10 mm
814	B-Mode frequency	7.0, 9.0, 10.0, 11.0, 12.0, 15.0 MHz
815	Harmonic frequency	10.0, 12.0, 14.0, 15.0 MHz
816	PW Doppler frequency	5.0, 6.3, 8.3 MHz
817	Color Doppler frequency	5.1, 6.1, 7.3, 8.2, 9.2, 10.3, 11.4, 12.4 MHz
818	**P2D, CW split crystal probe**	
819	Applications	Adult cardiac, pediatric cardiac, peripheral vascular, adult cephalic
820	Frequency	2.1 MHz
821	**P6D, CW split crystal probe**	
822	Applications	Adult cardiac, pediatric cardiac, peripheral vascular, adult cephalic
823	Frequency	6.3 MHz
824	**RAB6-D, convex volume probe**	
825	Applications	Abdomen, OB/GYN, pediatric, neonatal
826	Biopsy guide	Single angle, reusable bracket (H46701AE)
827	Bandwidth	2.0 – 8.0 MHz
828	Number of elements	192
829	Field of view (max.)	80°
830	Physical foot print	62 x 34 mm
831	B-Mode frequency	3.5, 5.0, 8.0 MHz
832	Harmonic frequency	4.0, 5.0, 6.5, 8.0 MHz
833	PW Doppler frequency	3.1, 4.2, 5.0 MHz
834	Color Doppler frequency	2.8, 3.5, 3.8 MHz
835	**RIC5-9-D, convex volume probe**	
836	Applications	OB/GYN, urology
837	Biopsy guide	Single angle, reusable (H46721R)
838	Bandwidth	3.0 – 10.0 MHz
839	Number of elements	192
840	Field of view (max.)	180°
841	Physical foot print	32 x 27 mm
842	B-Mode frequency	5.0, 5.5, 6.0, 6.5, 7.0, 8.0 MHz
843	Harmonic frequency	6.0, 6.5, 7.0, 9.0 MHz
844	PW Doppler frequency	3.6, 4.2, 5.0 MHz
845	Color Doppler frequency	4.3, 6.1, 7.3 MHz
846	**External Inputs and outputs (not including on-board peripherals)**	
847	HDMI	
848	Ethernet	
849	Multiple USB 3.0 ports	
850	**Safety Conformance**	

851	**The LOGIQ Fortis is:**	
852	Classified to UL 60601-1 by a Nationally Recognized Test Lab	
853	Certified to CAN/CSA-C22.2 No. 60601.1-M90 by an SCC accredited test lab	
854	CE Marked to EU Medical Device Regulation MDR 2017/745	
855	Compliant to Council Directive 2011/65/EU for RoHS	
856	Conforms to the following standards for safety (including national deviations)	• EMC Emissions group 1 class A device requirements as per sub clause 4.2 of CISPR 11 • IEC 60601-1 Medical electrical equipment – Part 1: General requirements for safety • IEC 60601-1-2 Medical electrical equipment – Part 1-2: General requirements for basic safety and essential performance – Collateral standard: Electromagnetic disturbance – Requirements and tests • IEC 60601-1-6 Medical electrical equipment Part 1-6 general requirements for basic safety and essential performance – Collateral standard: usability • IEC 60601-2-37 Medical electrical equipment – Part 2-37: Particular requirements for the safety of ultrasonic medical diagnostic and monitoring equipment • IEC 62366 Medical devices – Application of usability engineering to medical devices • IEC62366-1 Medical device software – Software life-cycle processes • ISO 10993-1 Biological evaluation of medical devices – Part 1: Evaluation and testing within a risk management process

857	**Supplement: cardiac measurements/calculations**	
858	**B-Mode measurements**	
859	Aorta	• Aortic Root Diameter (Ao Root Diam) • Aortic Arch Diameter (Ao Arch Diam) • Ascending Aortic diameter (Ao Asc) • Descending Aortic Diameter (Ao Desc Diam) • Aorta Isthmus (Ao Isthmus) • Aorta (Ao st junct)
860	Aortic valve	• Aortic Valve Cusp Separation (AV Cusp) • Aortic Valve Area Planimetry (AVA Planimetry) • (Trans AVA)
861	Left atrium	• Left Atrium Diameter (LA Diam) • LA Length (LA Major) • LA Width (LA Minor) • Left Atrium Diameter to AoRoot Diameter Ratio (LA/Ao ratio) • Left Atrium Area (LAA(d), LAA(s)) • Left Atrium Volume, Single Plane, Method of Disk (LAEDV A2C, LAESV A2C) (LAEDV A4C, LAESV A4C), (LAEDV A-L, LAEDV Index A-L, LAESV A-L, LAESV Index A-L)
862	Left ventricle	• Left Ventricle Mass (LVPWd, LVPWs) • Left Ventricle Volume, Teichholz/Cubic (LVIDd, LVI Ds) • Left Ventricle Internal Diameter (LVIDd, LVI Ds) Left Ventricle Length (LVLd, LVLs) • Left Ventricle Outflow Tract Diameter (LVOT Diam) • Left Ventricle Posterior Wall Thickness (LVPWd, LVPWs) • Left Ventricle Length (LV Major) • Left Ventricle Width (LV Minor) • Left Ventricle Outflow Tract Area (LVOT) • Left Ventricle Area, Two Chamber/Four Chamber/Short Axis (LVA (d), LVA (s)) • Left Ventricle Endocardial Area, Width (LVA (d), LVA(s)) • Left Ventricle Epicardial Area, Length (LVAepi (d), LVAepi (s)) • Left Ventricle Mass Index (LVPWd, LVPWs) • Ejection Fraction, Teichholz/Cube (LVIDd, LVIDs)
863	Left ventricle continued	• Left Ventricle Posterior Wall Fractional Shortening (LVPWd, LVPWs) • Left Ventricle Stroke Index, Teichholz/Cube (LVIDd, LVIDs and Body Surface Area) • Left Ventricle Fractional Shortening (LVIDd, LVIDs) • Left Ventricle Stroke Volume, Teichholz/Cubic (LVIDd, LVIDs) • Left Ventricle Stroke Index, Single Plane, Two Chamber, Method of Disk (LVI Dd, LVIDs, LVSd, LVSs) • Left Ventricle Stroke Index, Single Plane, Four Chamber, Method of Disk (LVI Dd, LVIDs, LVSd, LVSs) • Left Ventricle Stroke Index, Bi-Plane, Bullet, Method of Disk (LVAd, LVAs) • Interventricular Septum (IVS) • Left Ventricle Internal Diameter (LVI D) • Left Ventricle Posterior Wall Thickness (LVPW)
864	Mitral valve	• Mitral Valve Annulus Diameter (MV Ann Diam) • E-Point-to-Septum Separation (EPSS) • Mitral Valve Area Planimetry (MVA Planimetry)
865	Pulmonic valve	• Pulmonic Valve Area (PV Planimetry) • Pulmonic Valve Annulus Diameter (PV Annulus Diam) • Pulmonic Diameter (Pulmonic Diam)
866	Right atrium	• Right Atrium Diameter, Length (RAD Ma) • Right Atrium Diameter, Width (RAD Mi) • Right Atrium Area (RAA) • Right Atrium Volume, Single Plane, Method of Disk (RAAd) • Right Atrium Volume, Systolic, Single Plane, Method of Disk (RAAs)

867	Right ventricle	• Right Ventricle Outflow Tract Area (RVOT Planimetry) • Left Pulmonary Artery Area (LPA Area) • Right Pulmonary Artery Area (RPA Area) • Right Ventricle Internal Diameter (RVIDd, RVIDs) • Right Ventricle Diameter, Length (RVD Ma) • Right Ventricle Diameter, Width (RVD Mi) • Right Ventricle Wall Thickness (RVAWd, RVAWs) • Right Ventricle Outflow Tract Diameter (RVOT Diam) • Left Pulmonary Artery (LPA) • Main Pulmonary Artery (MPA) • Right Pulmonary Artery (RPA)
868	System inferior vena cava	• Systemic Vein Diameter (Systemic Diam) • Patent Ductus Arterosis Diameter (PDA Diam) • Pericard Effusion (PEs) • Patent Foramen Ovale Diameter (PFO Diam) • Ventricular Septal Defect Diameter (VSD Diam) • Interventricular Septum (IVS) Fractional Shortening (IVSd, IVSs)
869	Tricuspid valve	• Tricuspid Valve Area (TV Panimetry) • Tricuspid Valve Annulus Diameter (TV Annulus Diam)
870	**M-Mode measurements**	
871	Aorta	• Aortic Root Diameter (Ao Root Diam) • Aortic Valve • Aortic Valve Diameter (AV Diam) • Aortic Valve Cusp separation (AV Cusp) • Aortic Valve Ejection Time (LVET)
872	Left atrium	• Left Atrium Diameter to AoRoot Diameter Ratio (LA/Ao Ratio) • Left Atrium Diameter (LA Diam)
873	Left ventricle	• Left Ventricle Volume, Teichholz/Cubic (LVIDd, LVI Ds) • Left Ventricle Internal Diameter (LVIDd, LVI Ds) • Left Ventricle Posterior Wall Thickness (LVPWd, LVPWs) • Left Ventricle Ejection Time (LVET) • Left Ventricle Pre-Ejection Period (LVPEP) • Interventricular Septum (IVS) • Left Ventricle Internal Diameter (LVI D) • Left Ventricle Posterior Wall Thickness (LVPW)
874	Mitral valve	• E-Point-to-Septum Separation (EPSS) • Mitral Valve Leaflet Separation (D-E Excursion) • Mitral Valve Anterior Leaflet Excursion (D-E Excursion) • Mitral valve D-E Slope (D-E Slope) • Mitral Valve E-F Slope (E-F Slope) • Mitral Annular Plane Systolic Excursion (MAPSE)
875	Pulmonic valve	• QRS Complex to End of Envelope (Q-PV close)
876	Right ventricle	• Right Ventricle Internal Diameter (RVIDd, RVIDs) • Right Ventricle Wall Thickness (RVAWd, RVAWs) • Right Ventricle Outflow Tract Diameter (RVOT Diam) • Right Ventricle Ejection Time (RVET) • Right Ventricle Pre-Ejection Period (RVPEP)
877	System	• Pericard Effusion (PE (d))
878	Tricuspid valve	• QRS Complex to End of Envelope (Q-TV close) • Tricuspid Annular Plane Systolic Excursion (TAPSE)

879	**Doppler Mode measurements**	
880	Aortic valve	• Aortic Insufficiency Mean Pressure Gradient (AR Trace) • Aortic Insufficiency Peak Pressure Gradient (AR Vmax) • Aortic Insufficiency End Diastole Pressure Gradient (AR Trace) • Aortic Insufficiency Mean Velocity (AR Trace) • Aortic Insufficiency Velocity Time Integral (AR Trace) • Aortic Valve Mean Velocity (AV Trace) • Aortic Valve Velocity Time Integral (AV Trace) • Aortic Valve Mean Pressure Gradient (AV Trace) • Aortic Valve Peak Pressure Gradient (AR Vmax) • Aortic Insufficiency Peak Velocity (AR Vmax) • Aortic Insufficiency End-Diastolic Velocity (AR Trace) • Aortic Valve Peak Velocity (AV Vmax) • Aortic Valve Peak Velocity at Point E (AV Vmax)
881	Aortic valve continued	• Aorta Proximal Coarctation (Coarc Pre-Duct) • Aorta Distal Coarctation (Coarc Post-Duct) • Aortic Valve Insufficiency Pressure Half Time (AR PHT) • Aortic Valve Flow Acceleration (AV Trace) • Aortic Valve Pressure Half Time (AV Trace) • Aortic Valve Acceleration Time (AV Acc Time) • Aortic Valve Deceleration Time (AV Dec Time) • Aortic Valve Ejection Time (AVET) • Aortic Valve Acceleration to Ejection Time Ratio (AV Acc Time, AVET) • Aortic Valve Area(VTI): AVA (Vmax)
882	Left ventricle	• Left Ventricle Outflow Tract Peak Pressure Gradient (LVOT Vmax) • Left Ventricle Outflow Tract Peak Velocity (LVOT Vmax) • Left Ventricle Outflow Tract Mean Pressure Gradient (LVOT Trace) • Left Ventricle Outflow Tract Mean Velocity (LVOT Trace) • Left Ventricle Outflow Tract Velocity Time Integral (LVOT Trace) • Left Ventricle Ejection Time (LVET)
883	Mitral valve	• E' Early diastolic mitral valve annular velocity (E') • E' Avg Averaged early diastolic mitral valve annular velocity (E' Avg) • E' Lat Early diastolic mitral valve lateral annular velocity (E' Lat) • E' Medial Early diastolic mitral valve medial annular velocity (E' Medial) • E' Sept Early diastolic mitral • Mitral inflow E velocity to E' ratio (E/E') • Mitral inflow E velocity to E' Avg ratio (E/E' Avg) • Mitral inflow E velocity to E' Lat ratio (E/E' Lat) • Medial Mitral inflow E velocity to E' Medial ratio (E/E') • Mitral inflow E velocity to E' Sept ratio (E/E' Sept) • Mitral Valve Regurgitant Flow Acceleration (MR Trace) • Mitral Valve Regurgitant Mean Velocity (MR Trace)
884	Mitral valve continued	• Mitral Regurgitant Mean Pressure Gradient (MR Trace) • Mitral Regurgitant Velocity Time Integral (MR Trace) • Mitral Valve Mean Velocity (MV Trace) • Mitral Valve Velocity Time Integral (MV Trace) • Mitral Valve Mean Pressure Gradient (MV Trace) • Mitral Regurgitant Peak Pressure Gradient (MR Vmax) • Mitral Valve Peak Pressure Gradient (MV Vmax) • Mitral Regurgitant Peak Velocity (MR Vmax) • Mitral Valve Peak Velocity (MV Vmax) • Mitral Valve Velocity Peak A (MV A Velocity) • Mitral Valve Velocity Peak E (MV E Velocity)

885	Mitral valve continued	• Mitral Valve Area According to PHT (MV PHT) • Mitral Valve Flow Deceleration (MV DecT) • Mitral Valve Pressure Half Time (MV PHT) • Mitral Valve Flow Acceleration (MV AccT) • Mitral Valve E-Peak to A-Peak Ratio (A-C and D-E) (MV E/ARatio) • Mitral Valve Acceleration Time • (MV Acc Time) • Mitral Valve Deceleration Time (MV Dec Time) • Mitral Valve Ejection Time ((MVET) • Mitral Valve A-Wave Duration (MV A Dur) • Mitral Valve Time to Peak (MV TTP) • Mitral Valve Acceleration Time/Deceleration Time Ratio (MVAcc/Dec Time) • Stroke Volume Index by Mitral Flow (MVA Planimetry, MVTrace)
886	Pulmonic Valve	• Pulmonic Insufficiency Peak Pressure Gradient (PR Vmax) • Pulmonic Insufficiency End-Diastolic Pressure Gradient (PRTrace) • Pulmonic Valve Peak Pressure Gradient (PV Vmax) • Pulmonic Insufficiency Peak Velocity (PR Vmax) • Pulmonic Insufficiency End-Diastolic Velocity (Prend Vmax) • Pulmonic Valve Peak Velocity (PV Vmax) • Pulmonary Artery Diastolic Pressure (PV Trace) • Pulmonic Insufficiency Mean Pressure Gradient (PR Trace)
887	Pulmonic valve continued	• Pulmonic Valve Mean Pressure Gradient (PV Trace) • Pulmonic Insufficiency Mean Square Root Velocity (PR Trace) • Pulmonic Insufficiency Velocity Time Integral (PR Trace) • Pulmonic Valve Mean Velocity (PV Trace) • Pulmonic Valve Velocity Time Integral (PV Trace) • Pulmonic Insufficiency Pressure Half Time (PR PHT) • Pulmonic Valve Flow Acceleration (PV Acc Time) • Pulmonic Valve Acceleration Time (PV Acc Time) • Pulmonic Valve Ejection Time (PVET) • QRS Complex to End of Envelope (Q-to-PV Close) • Pulmonic Valve Acceleration to Ejection TIme Ratio (PV Acc Time, PVET)
888	Right ventricle	• Right Ventricle Outflow Tract Peak Pressure Gradient (RVOT Vmax) • Right Ventricle Outflow Tract Peak Velocity (RVOT Vmax) • Right Ventricle Outflow Tract Velocity Time Integral (RVOTTrace) • Right Ventricle Ejection Time (RV Trace) • Stroke Volume by Pulmonic Flow (RVOT Planimetry, RVOTTrace) • Right Ventricle Stroke Volume Index by Pulmonic Flow (RVOT Planimetry, RVOT Trace)
889	System	• Pulmonary Artery Peak Velocity (PV Vmax) • Pulmonary Vein Velocity Peak A (Reverse) (P Vein A) • Pulmonary Vein Peak Velocity (P Vein D, P Vein S) • Systemic Vein Peak Velocity (PDA Diastolic, PDA Systolic) • Ventricular Septal Defect Peak Velocity (VSD Vmax) • Atrial Septal Defect (ASD Diastolic, ASD Systolic) • Pulmonary Vein A-Wave Duration (P Vein A Dur) • IsoVolumetric Relaxation Time (IVRT) • IsoVolumetric Contraction Time (IVCT) • Pulmonary Vein S/D Ratio (P Vein D, P Vein S) • Ventricular Septal Defect Peak Pressure Gradient (VSD Vmax) • Pulmonic-to-Systemic Flow Ratio (Qp/Qs)
890	Tricuspid valve	• Tricuspid Regurgitant Peak Pressure Gradient (TR Vmax) • Tricuspid Valve Peak Pressure Gradient (TV Vmax) • Tricuspid Regurgitant Peak Velocity (TR Vmax) • Tricuspid Valve Peak Velocity (TV Vmax) • Tricuspid Valve Velocity Peak A (TV A Velocity) • Tricuspid Valve Velocity Peak E (TV E Velocity) • Tricuspid Regurgitant Mean Pressure Gradient (TR Trace) • Tricuspid Valve Mean Pressure Gradient (TV Trace)

891	Tricuspid valve continued	• Tricuspid Regurgitant Mean Velocity (TR Trace) • Tricuspid Regurgitant Velocity Time Integral (TR Trace) • Tricuspid Valve Mean Velocity (TV Trace) • Tricuspid Valve Velocity Time Integral (TV Trace) • Tricuspid Valve Time to Peak (TV TTP) • Tricuspid Valve Ejection Time (TV Acc/Dec Time) • Tricuspid Valve A-Wave Duration (TV A Dur) • QRS Complex to End of Envelope (Q-TV Close) • Tricuspid Valve Pressure Half Time (TV PHT) • Stroke Volume by Tricuspid Flow (TV Planimetry, TV Trace) • Tricuspid Valve E-Peak to A-Peak Ratio (TV E/A Velocity)

892	**Color Flow Mode measurements**	
893	Aortic valve	• Proximal Isovelocity Surface Area: Regurgitant Orifice Area (AR Radius) • Proximal Isovelocity Surface Area: Radius of Aliased Point (AR Radius) • Proximal Isovelocity Surface Area: Regurgitant Flow (AR Trace) • Proximal Isovelocity Surface Area: Regurgitant Volume Flow (AR Trace) • Proximal Isovelocity Surface Area: Aliased Velocity (AR Vmax)
894	Mitral valve	• Proximal Isovelocity Surface Area: Regurgitant Orifice Area (MR Radius) • Proximal Isovelocity Surface Area: Radius of Aliased Point (MR Radius) • Proximal Isovelocity Surface Area: Regurgitant Flow (MR Trace) • Proximal Isovelocity Surface Area: Regurgitant Volume Flow (MR Trace) • Proximal Isovelocity Surface Area: Aliased Velocity (MR Vmax)
895	**Combination Mode measurements**	
896	Aortic valve	• Aortic Valve Area (Ao Root Diam, LVOT Vmax, AV Vmax) • Aortic Valve Area by Continuity Equation by Peak Velocity (Ao Root Diam, LVOT Vmax, AV Vmax) • Stroke Volume by Aortic Flow (AVA Planimetry, AV Trace) • Cardiac Output by Aortic Flow (AVA Planimetry, AV Trace, HR) • Aortic Valve Area by Continuity Equation VTI (Ao Root Diam, LVOT Vmax, AV Trace)
897	Left ventricle	• Cardiac Output, Teichholz/Cubic (LVIDd, LVI Ds, HR) • Cardiac Output Two Chamber, Single Plane, Area-Length/Method of Disk (Simpson) (LVAd, LVAs, HR) • Cardiac Output Four Chamber, Single Plane, Area-Length/Method of Disk (Simpson) (LVAd, LVAs, HR) • Ejection Fraction Two Chamber, Single Plane, Area-Length/Method of Disk (Simpson) (LVAd, LVAs) • Ejection Fraction Four Chamber, Single Plane, Area-Length/Method of Disk (Simpson) (LVAd, LVAs) • Left Ventricle Stroke Volume, Single Plane, Two Chamber/Four Chamber, Area-Length (LVAd, LVAs)
898	Left ventricle continued	• Left Ventricle Stroke Volume, Single Plane, Two Chamber/Four Chamber, Method of Disk (Simpson) (LVIDd, LVIDs, LVAd, LVAs) • Left Ventricle Volume, Two Chamber/Four Chamber, Area-Length (LVAd, LVAs) • Ejection Fraction, Bi-Plane, Method of Disk (LVAd, LVAs, 2CH, 4CH) • Left Ventricle Stroke Volume, Bi-Plane, Method of Disk (LVAd, LVAs, 2CH, 4CH) • Left Ventricle Volume, Bi-Plane, Method of Disk (LVAd, LVAs, 2CH, 4CH) • Left Ventricle Stroke Index, Single Plane, Two Chamber/Four Chamber, Area-Length (LVSd, LVSs and BSA) • Left Ventricle Volume, Single Plane, Two Chamber/Four Chamber, Method of Disk (LVAd, LVAs) • Left Ventricle Volume, Apical View, Long Axis, Method of Disk (LVAd, LVAs)
899	Mitral valve	• Stroke Volume by Mitral Flow (MVA Planimetry, MV Trace) • Cardiac Output by Mitral Flow (MVA Planimetry, MV Trace, HR)
900	Pulmonic valve	• Stroke Volume by Pulmonic Flow (PV Planimetry, PV Trace) • Cardiac Output by Pulmonic Flow (PV Planimetry, PV Trace, HR)
901	Tricuspid valve	• Cardiac Output by Tricuspid Flow (TV Planimetry, TV Trace, HR)
902	**Combination Mode measurements**	
903	Parameter: lists the mode, the measurement folder and the specific measurement	

904	Measured Value: Up to six measurement values for each item. Average, maximum, minimum or last
905	**Generic study in cardiology**
906	Stroke Volume (SV)
907	Cardiac Output (CO)

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PEDIATRICS


THYROID


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CLINICAL IMAGES | Head & Neck

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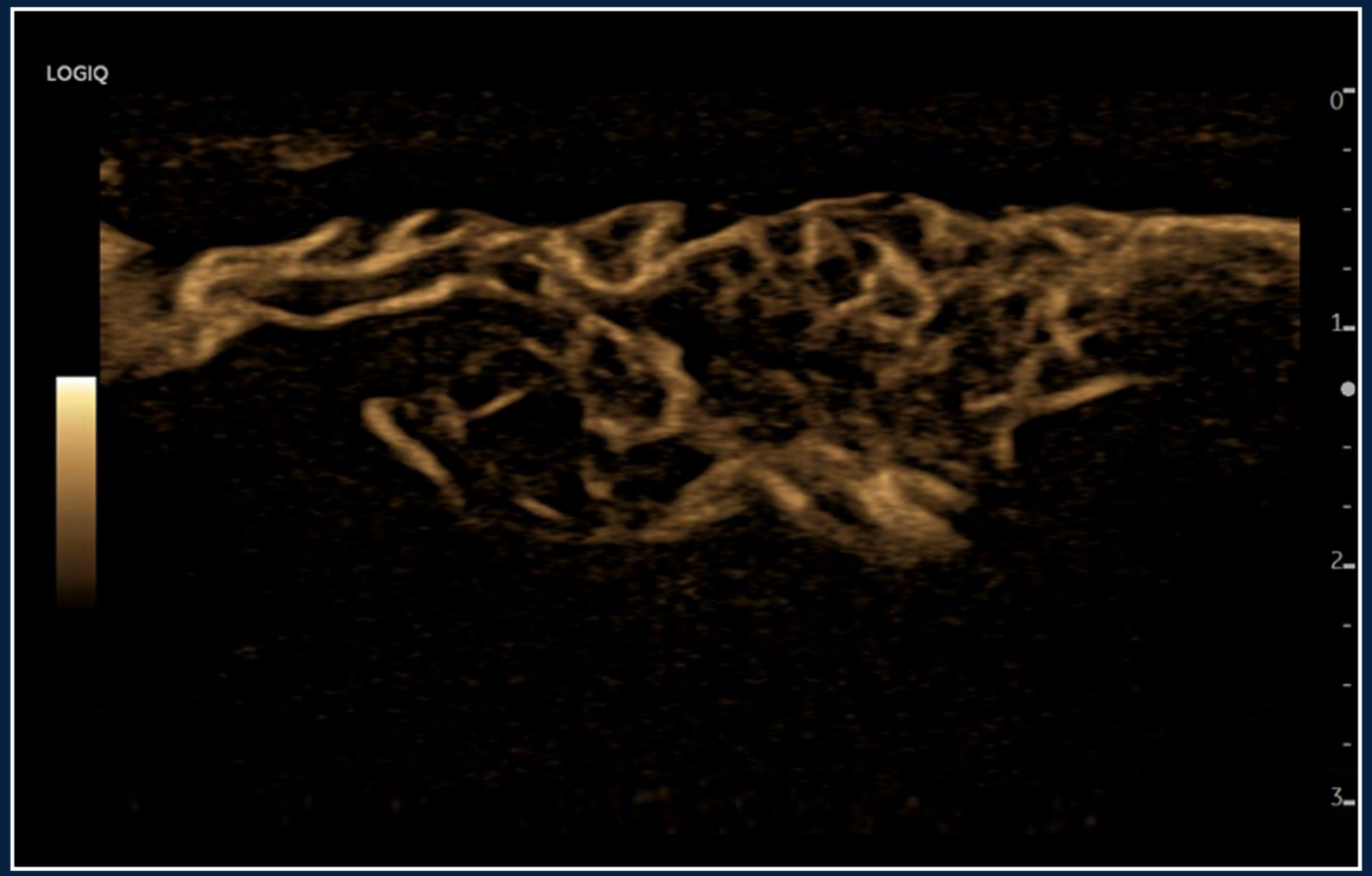

Flow Visualization, B-Flow in Thyroid, ML6-15-D

CLINICAL IMAGES | Head & Neck

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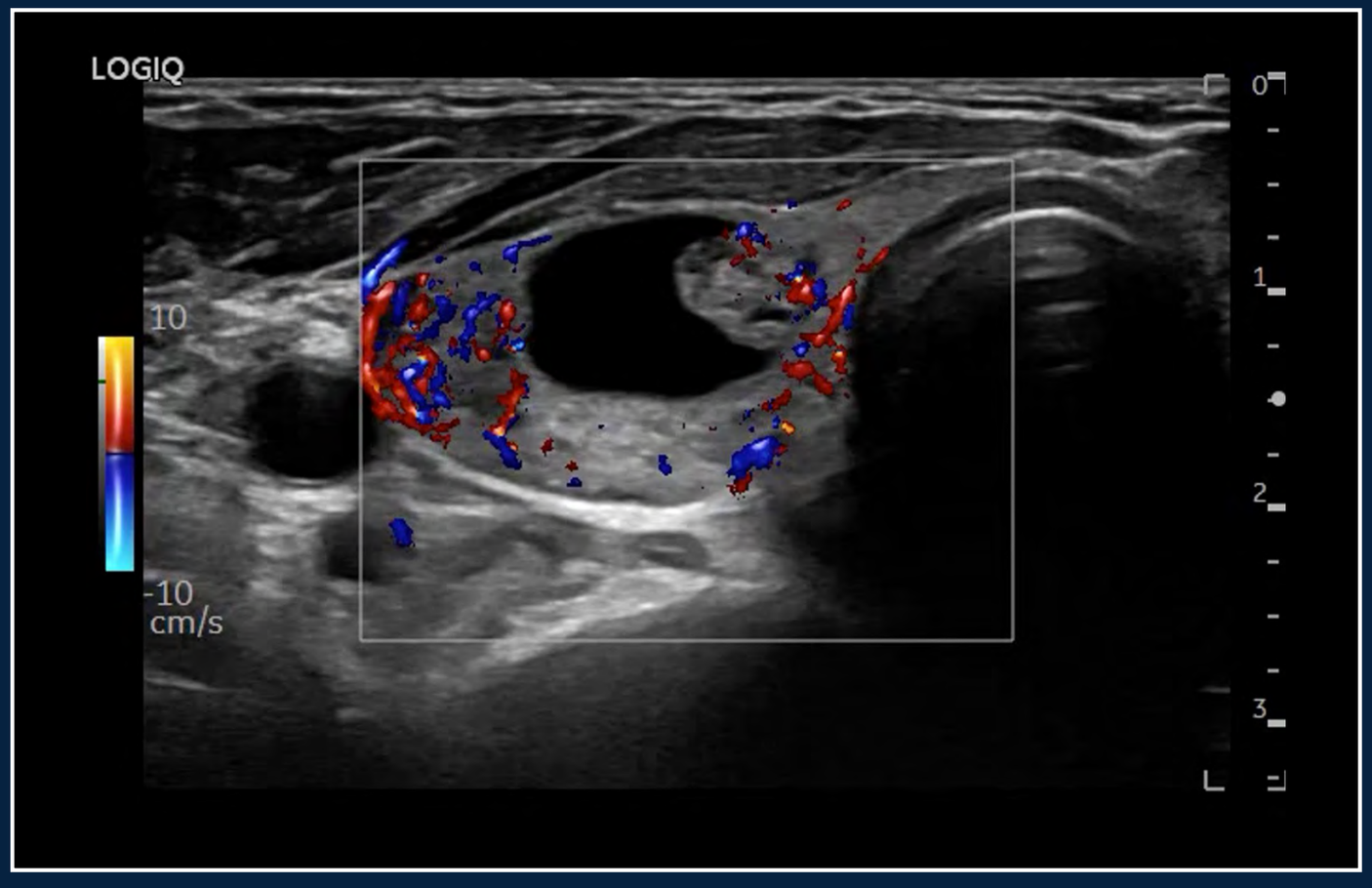

Radiant*flow*™ Color Flow in Thyroid, ML6-15-D

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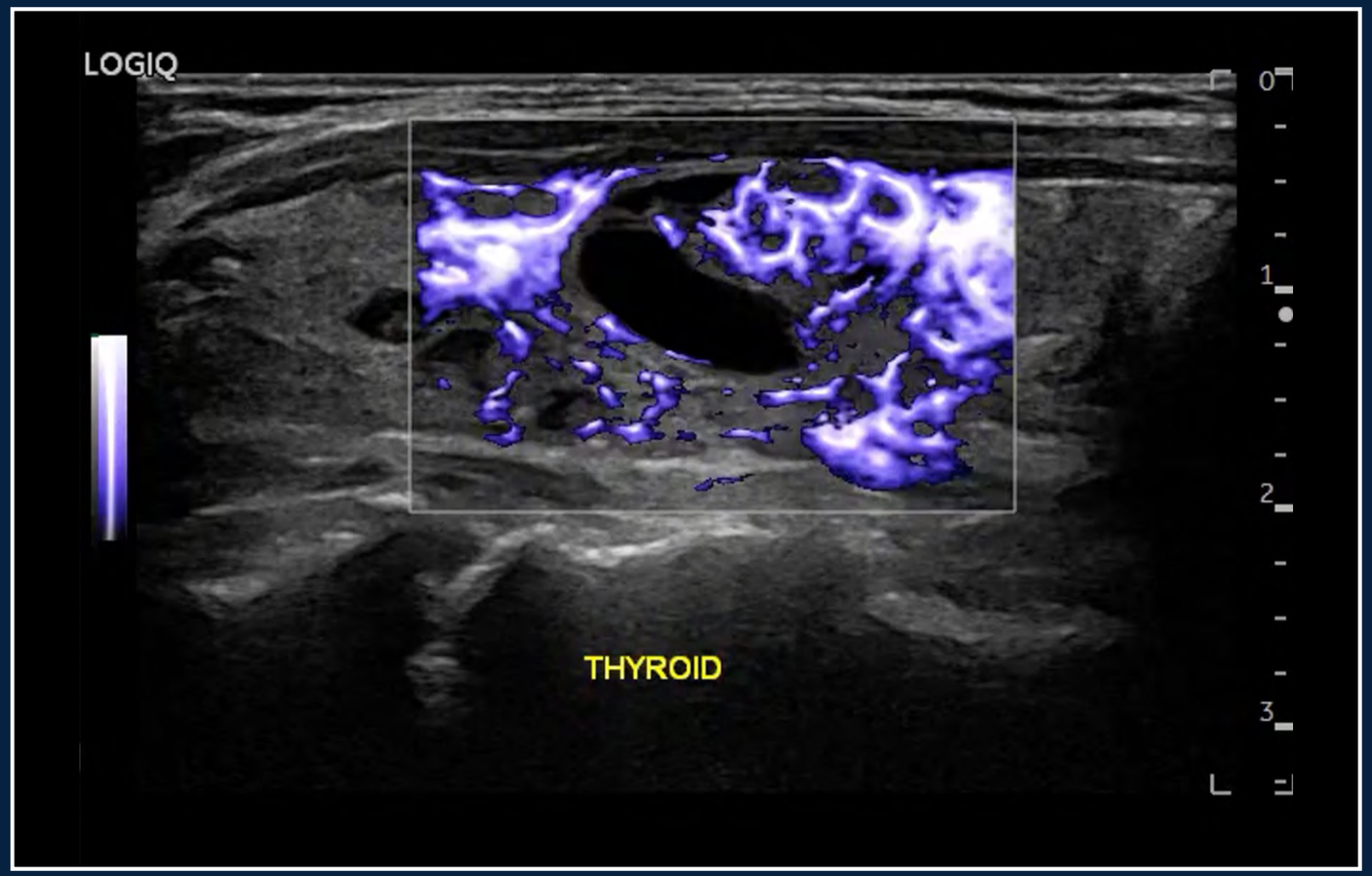

MVI with Radiant*flow* in Thyroid, ML6-15-D

CLINICAL IMAGES | OB/GYN

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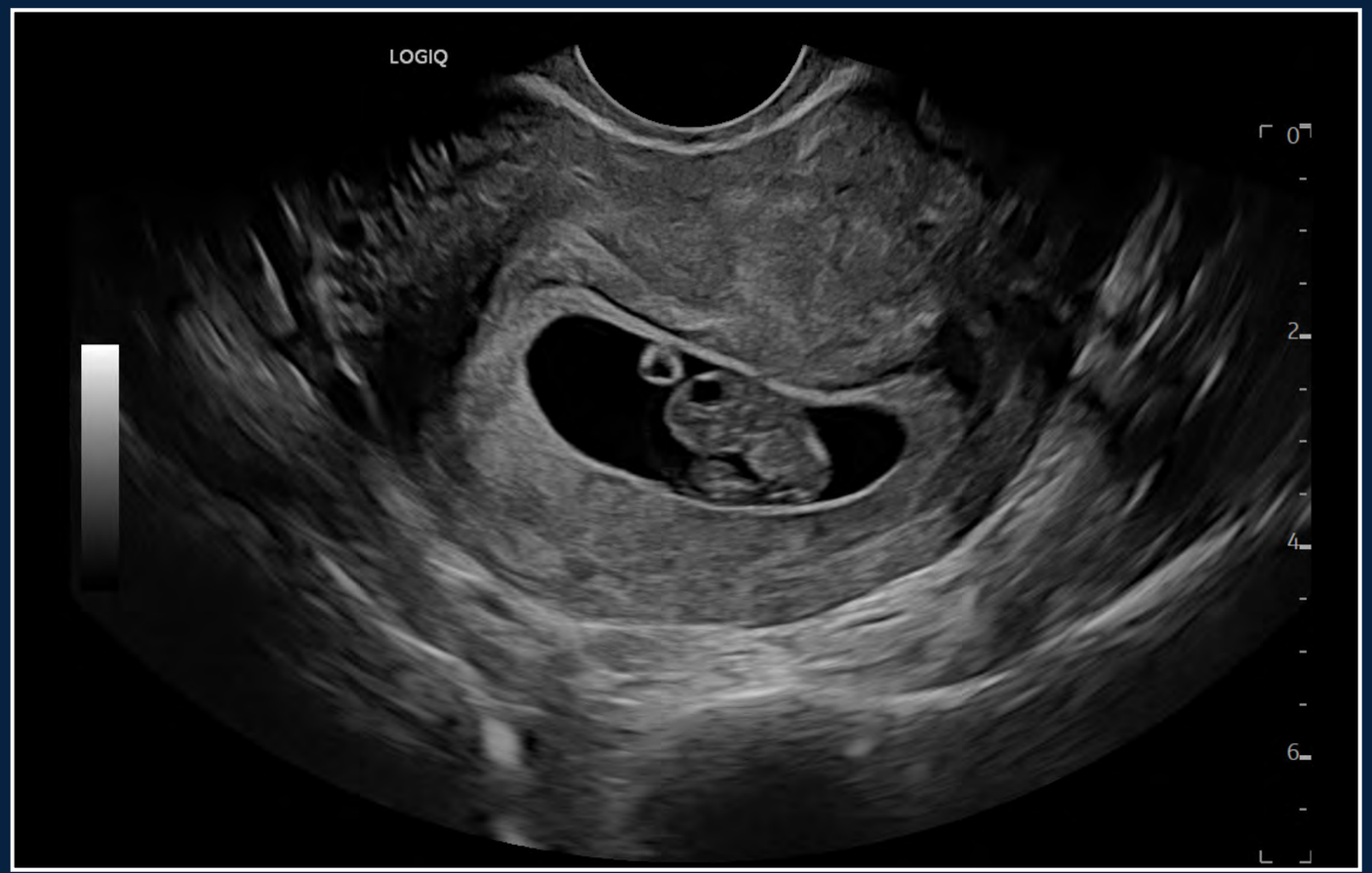

B-Mode with Advanced SRI Early Fetus and Yolk Sac, IC5-9-D

CLINICAL IMAGES | OB/GYN

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PDI with Radiant*flow* in Umbilical Cord, C1-6-D

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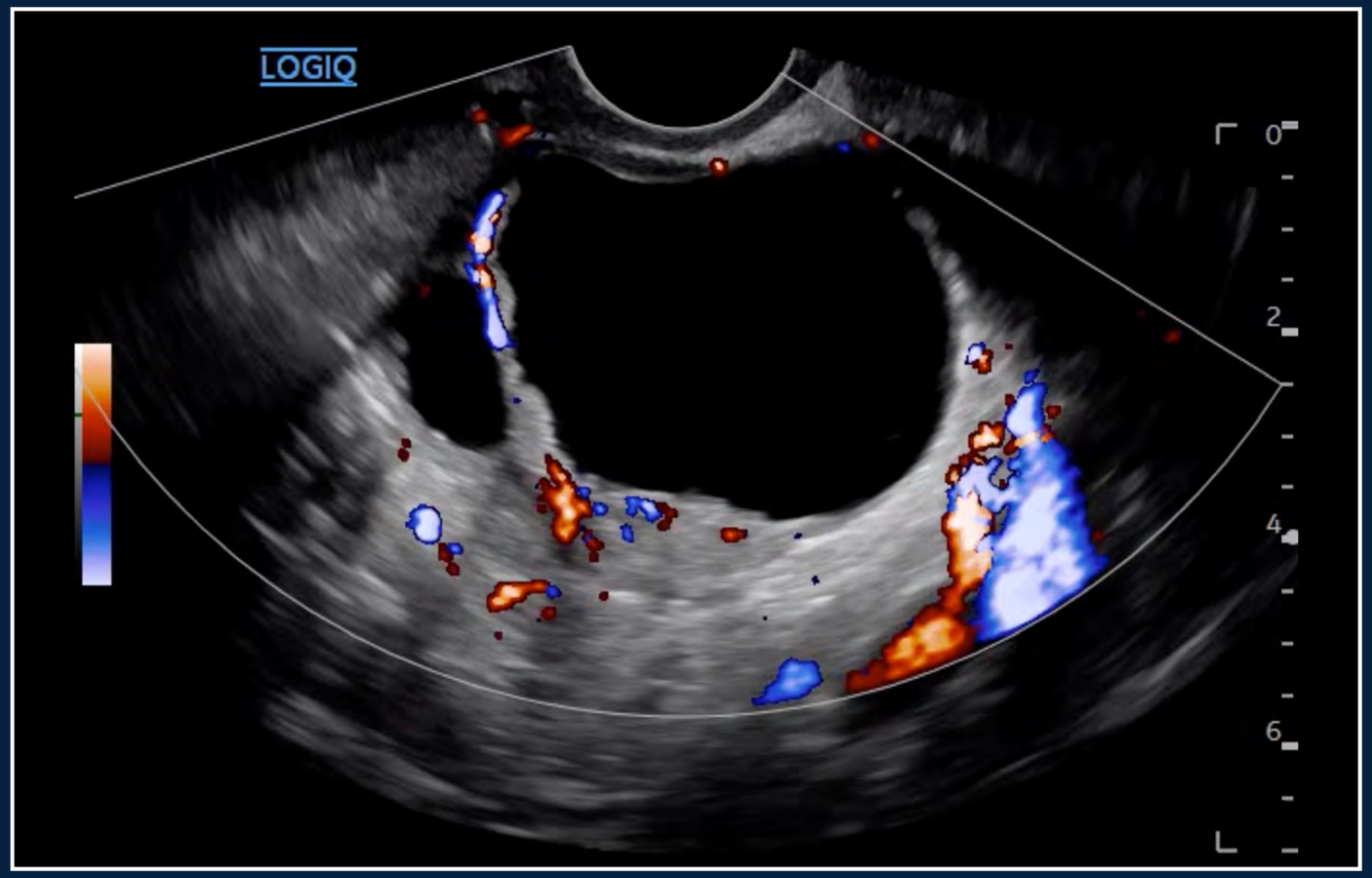
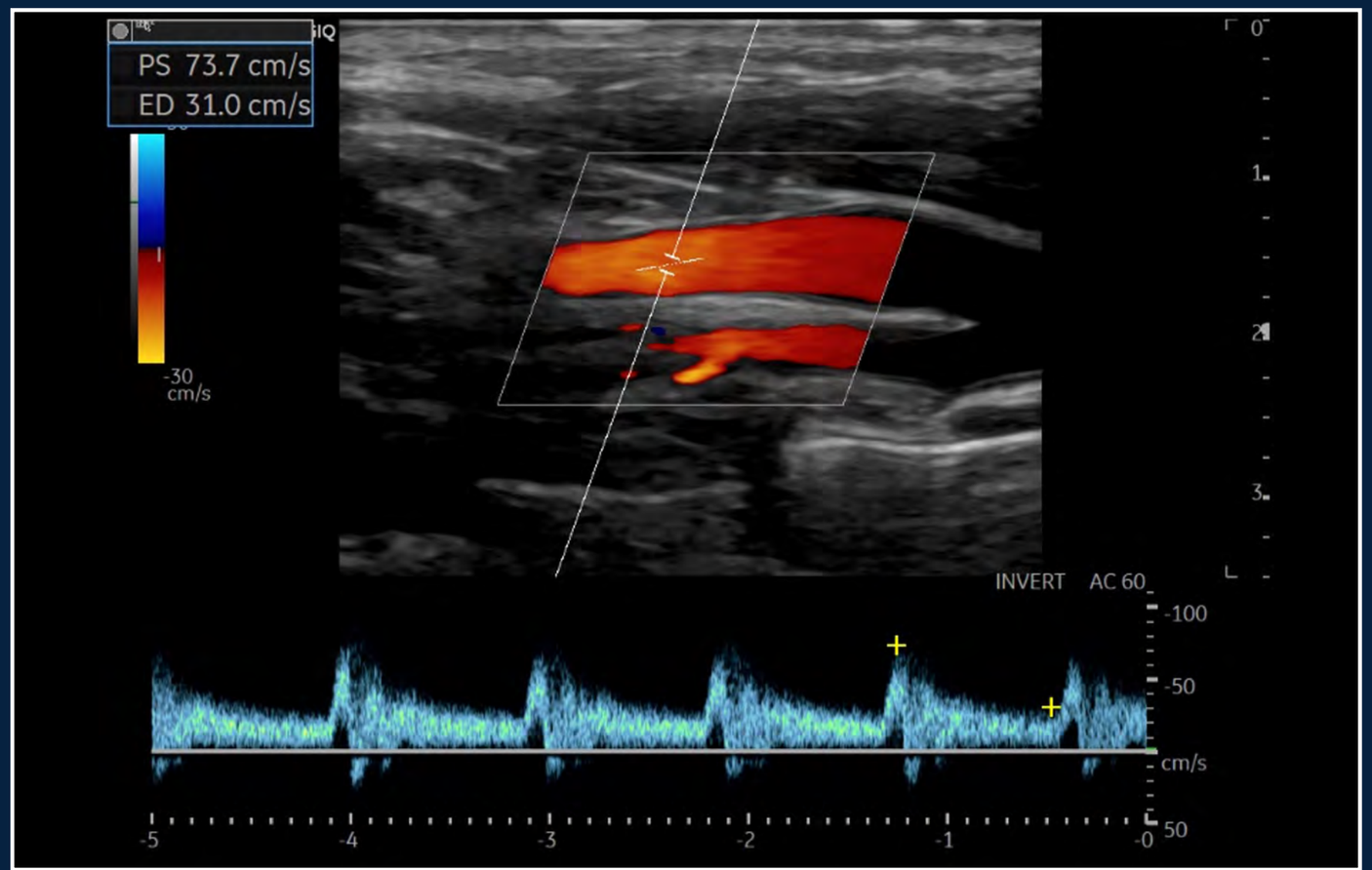


PDI of Ovary, IC5-9-D

CLINICAL IMAGES | Vascular

Exceeding your expectations: whole body imaging



Color Flow and PW Doppler in Internal Carotid Artery, L2-9-D

CLINICAL IMAGES | Vascular

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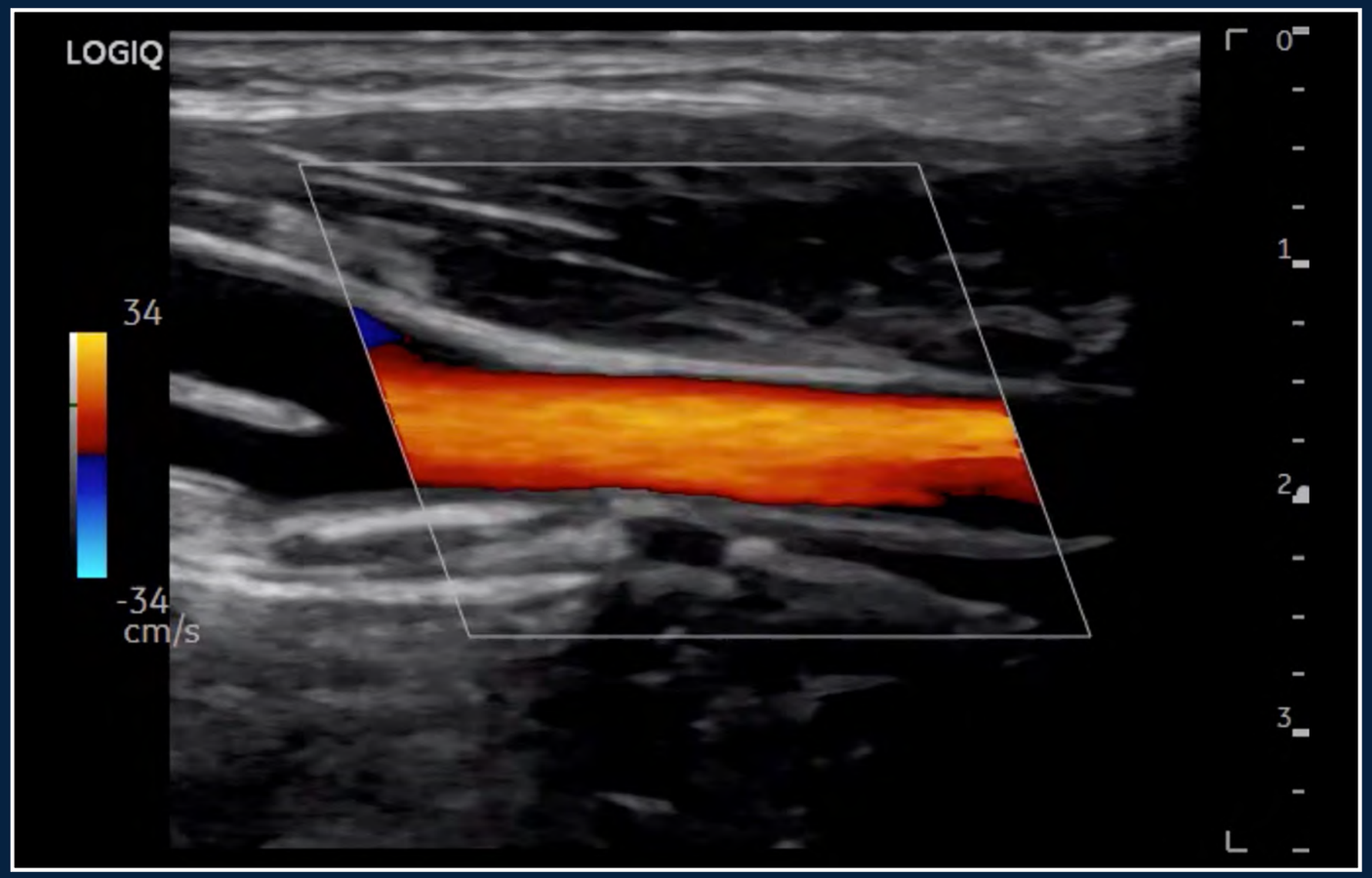
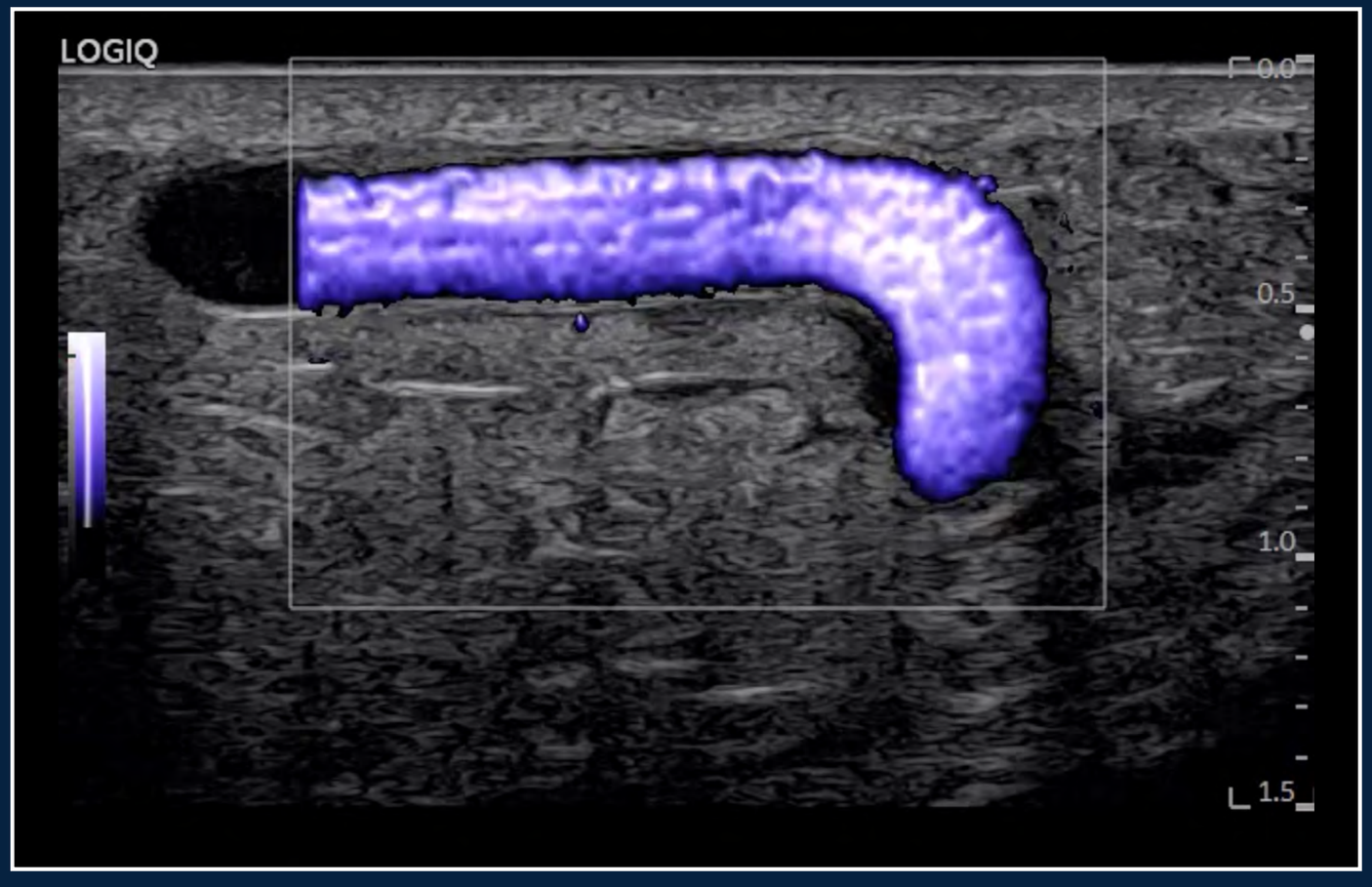


Color Flow Carotid, L2-9-D

CLINICAL IMAGES | Vascular

Exceeding your expectations: whole body imaging



MVI Superficial Vein, L6-24-D

CLINICAL IMAGES | Liver

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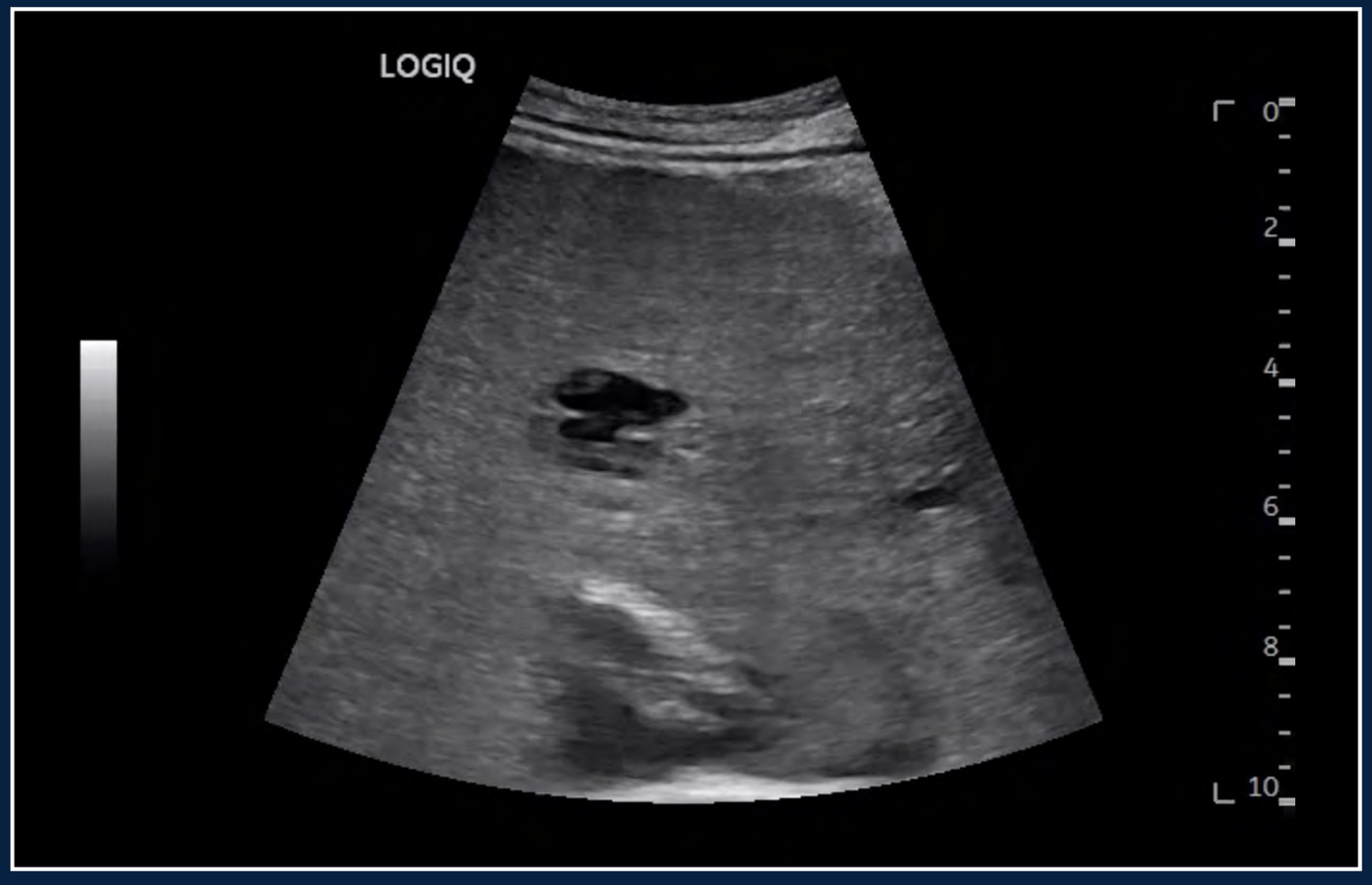

B-Mode with Advanced SRI Liver with TIPS, C1-6-D

CLINICAL IMAGES | Liver

Exceeding your expectations: whole body imaging

Liver B-Flow Cine Capture, C2-9-D

CLINICAL IMAGES | Liver

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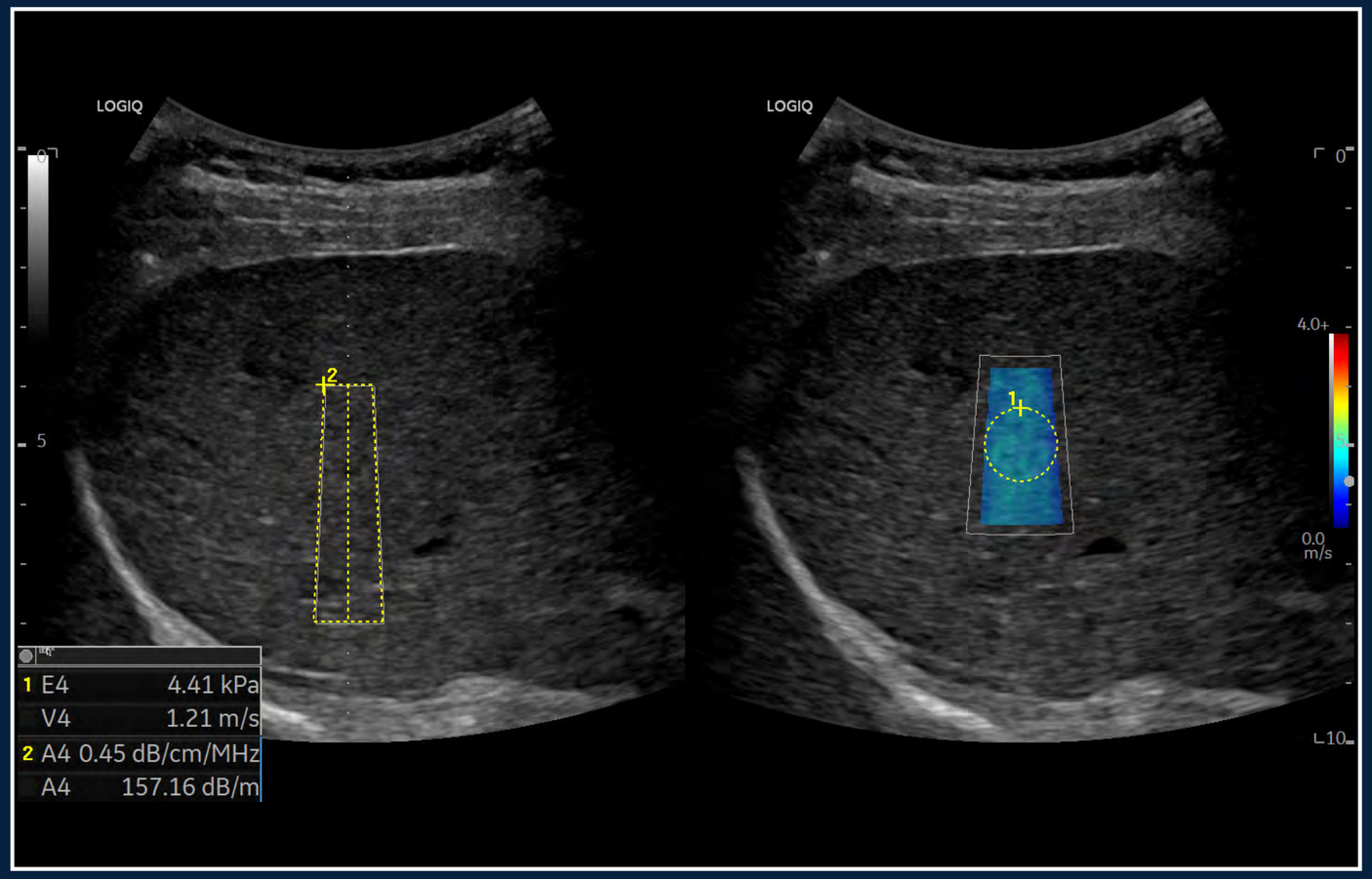

Hepatic Assistant UGAP and Shear Wave, C1-6-D

CLINICAL IMAGES | Liver

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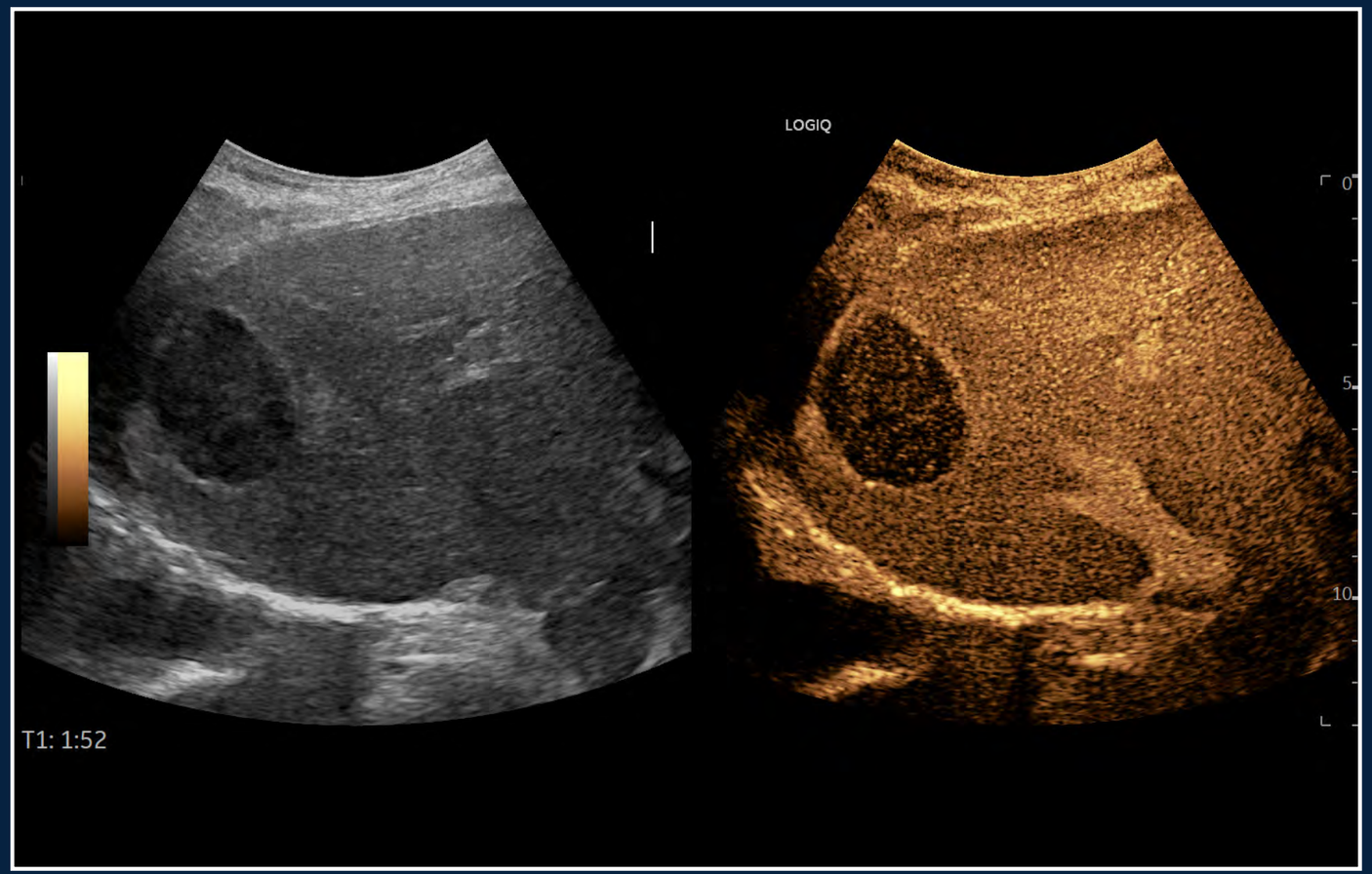
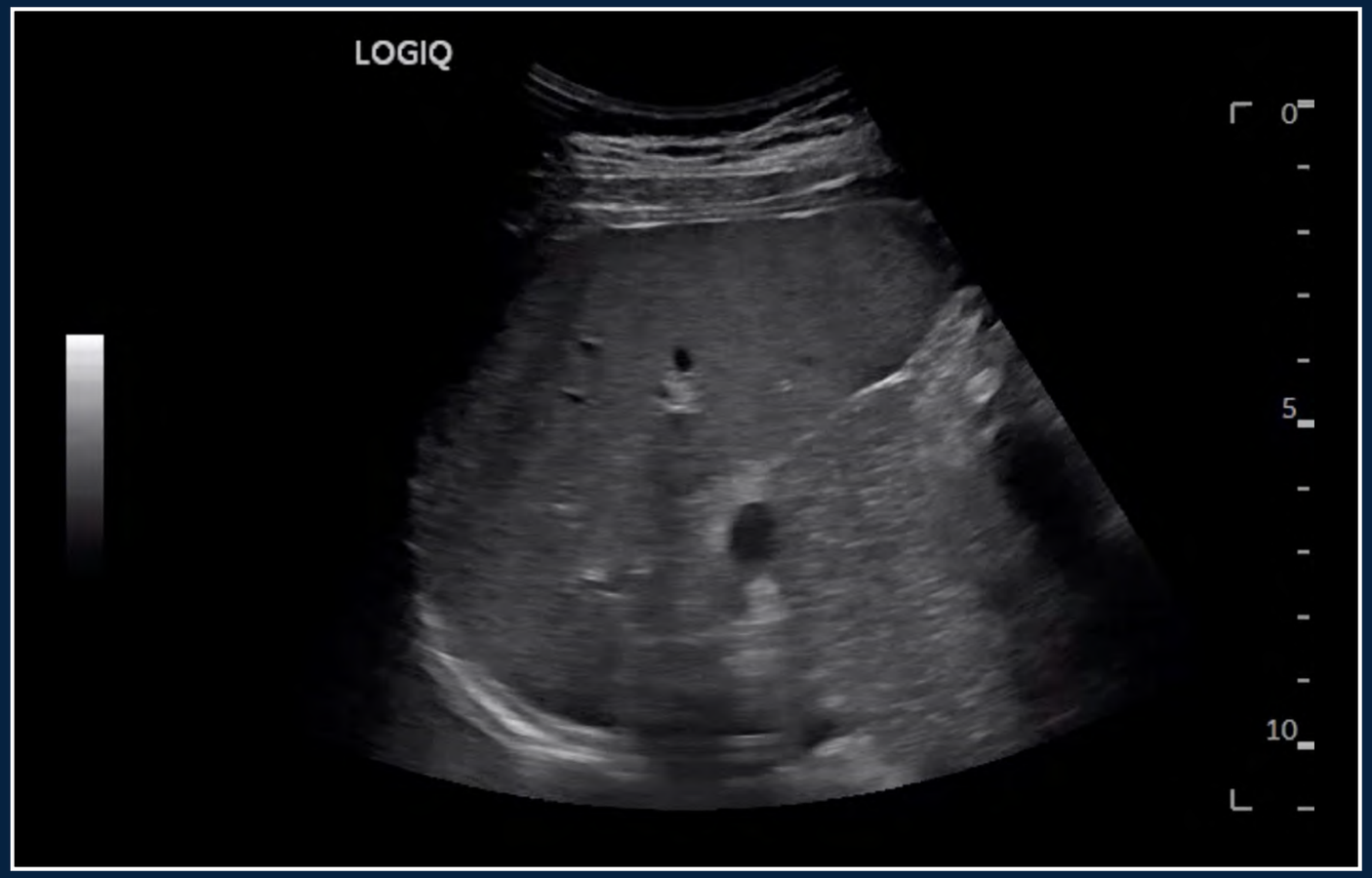


Liver Lesion CEUS, C1-6-D

CLINICAL IMAGES | Spleen

Exceeding your expectations: whole body imaging



B-Mode with Advanced SRI Spleen, C2-9-D

CLINICAL IMAGES | Kidney

Exceeding your expectations: whole body imaging

Color Flow with Radiant*flow*, C2-9-D

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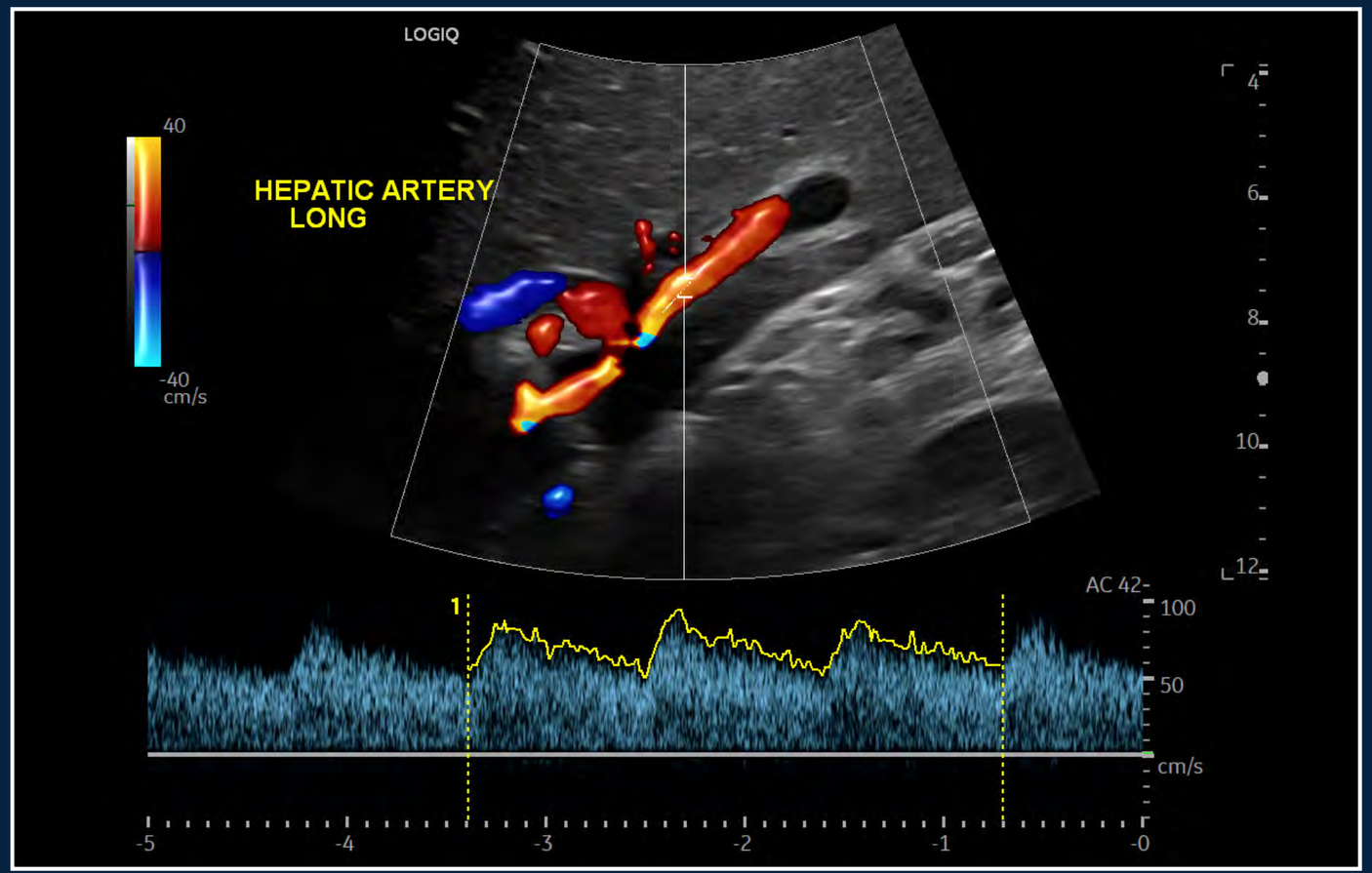
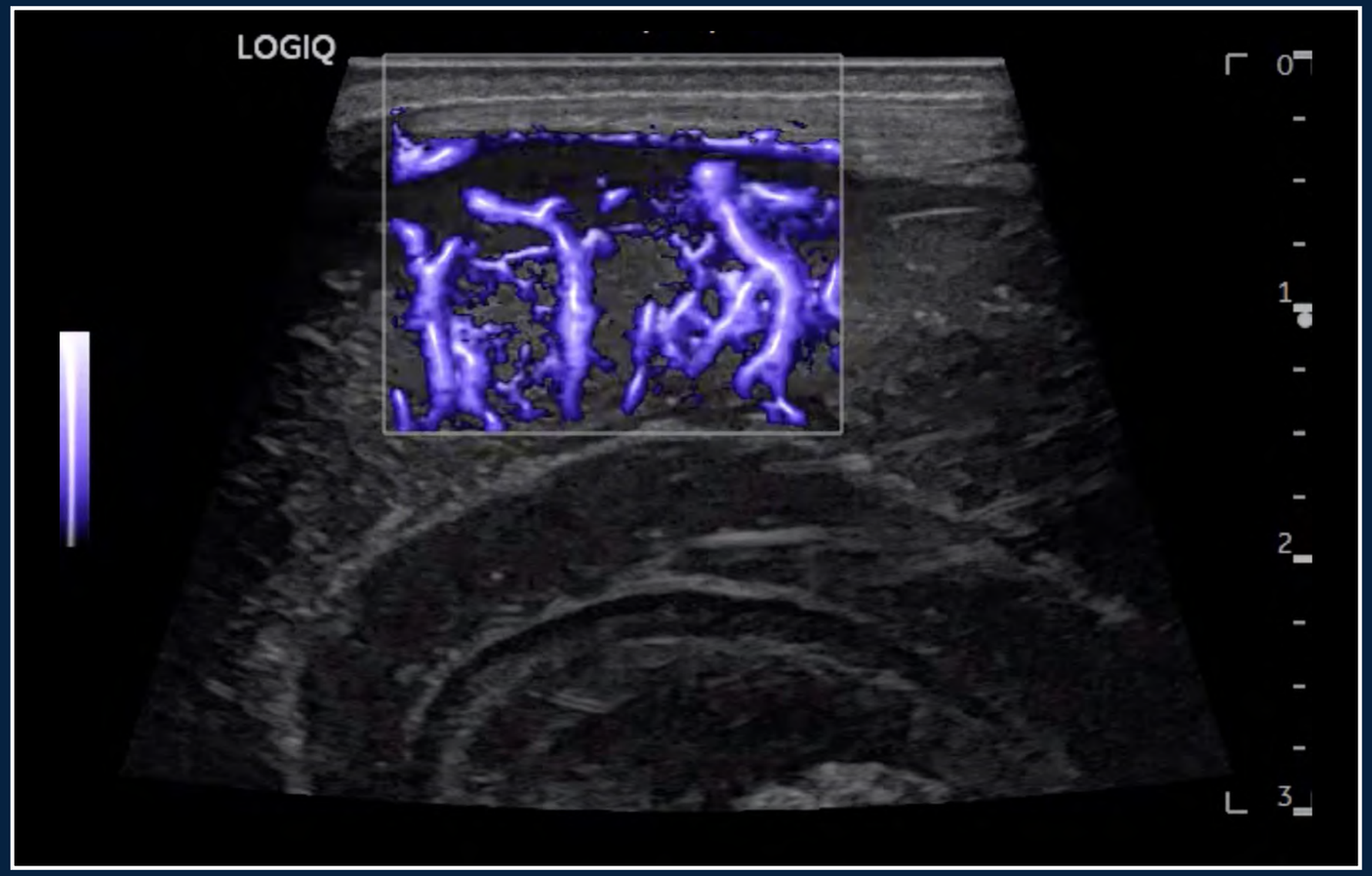


cSound B-Mode CF with Radiant*flow* and PW Doppler, C1-6-D

CLINICAL IMAGES | Pediatrics

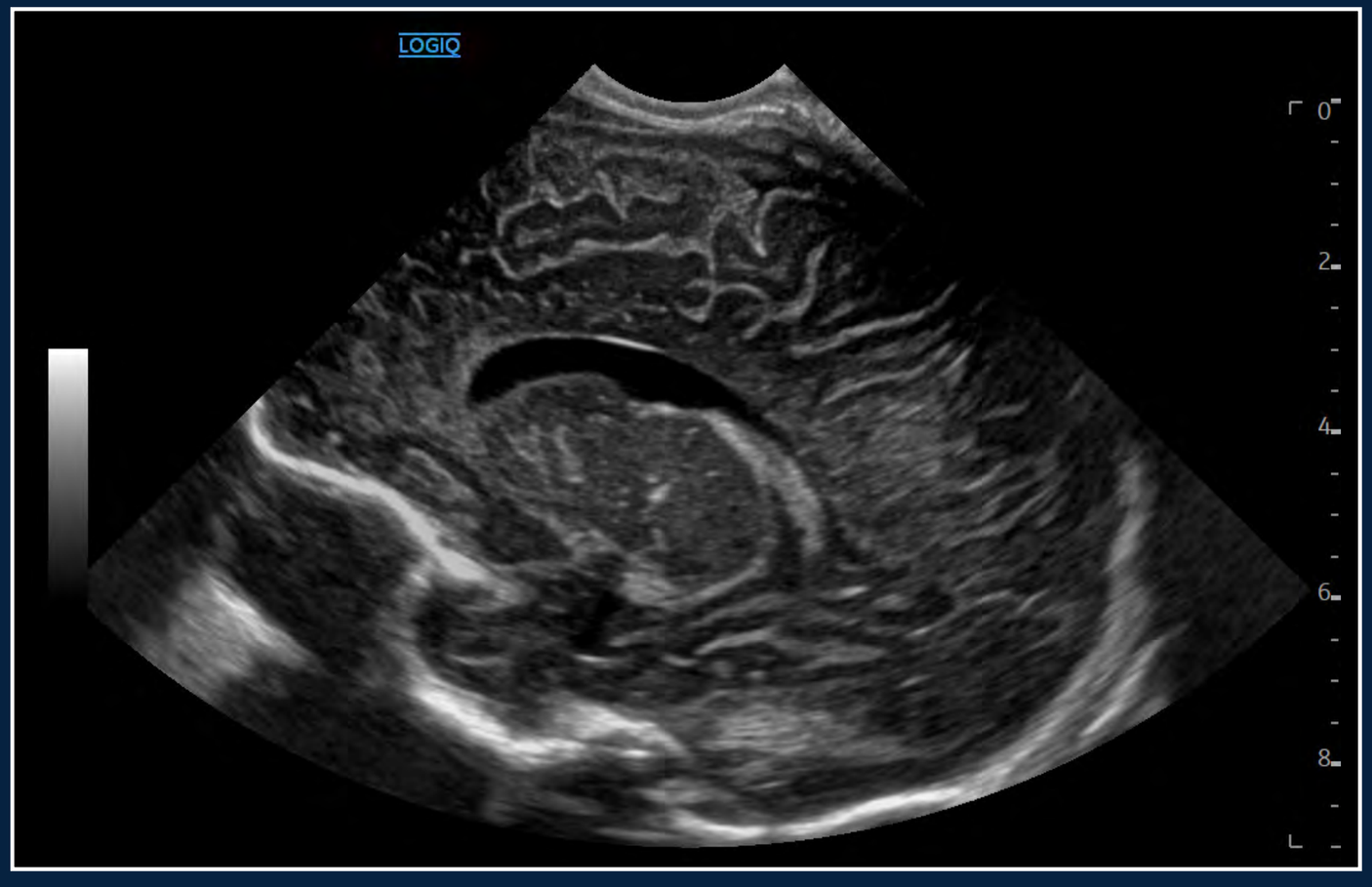
Exceeding your expectations: whole body imaging



MVI with Radiant*flow* neonatal brain, L6-24-D

CLINICAL IMAGES | Pediatrics

Exceeding your expectations: whole body imaging



Neonatal head, C3-10-D

CLINICAL IMAGES | Small Parts

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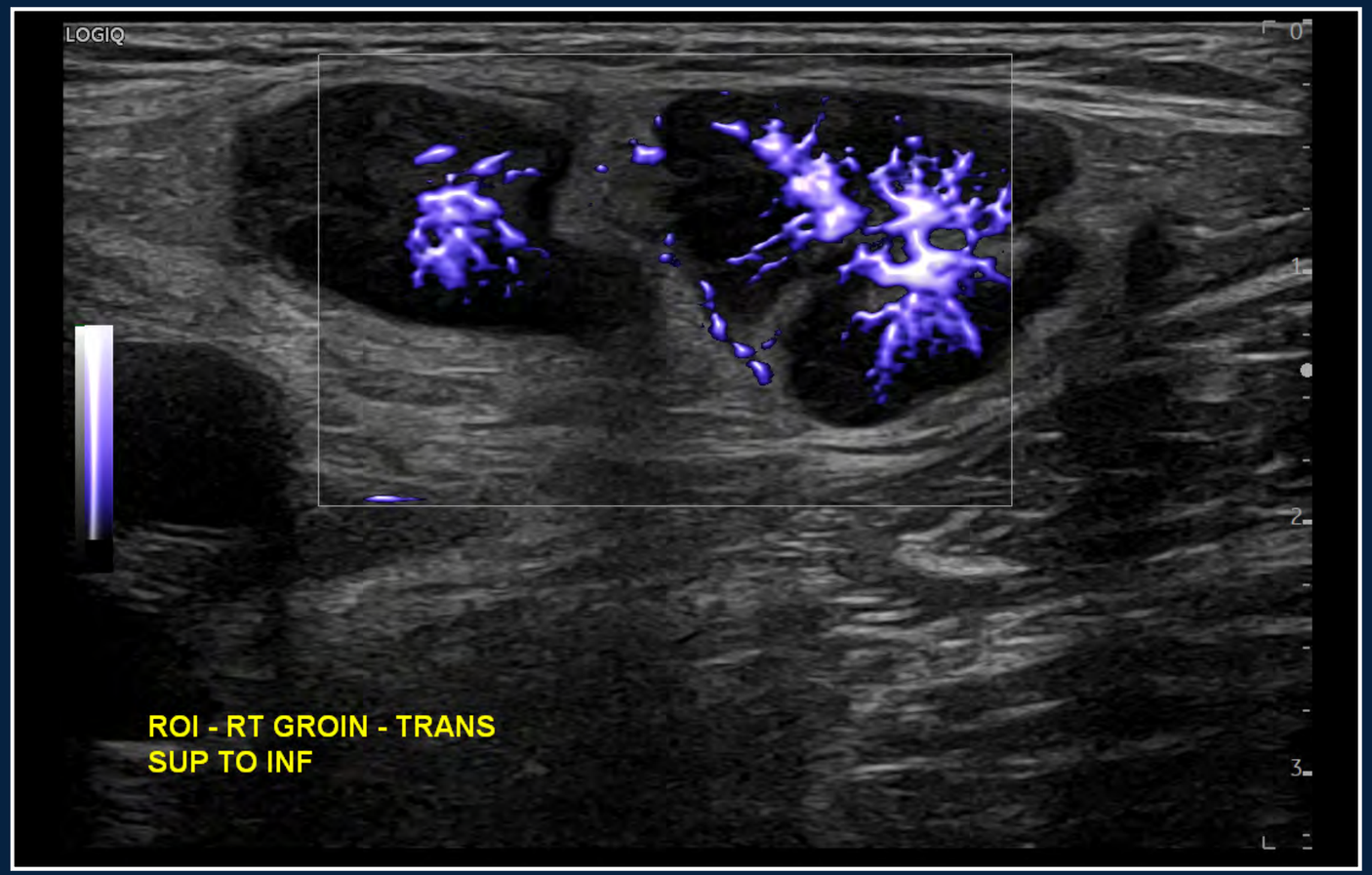
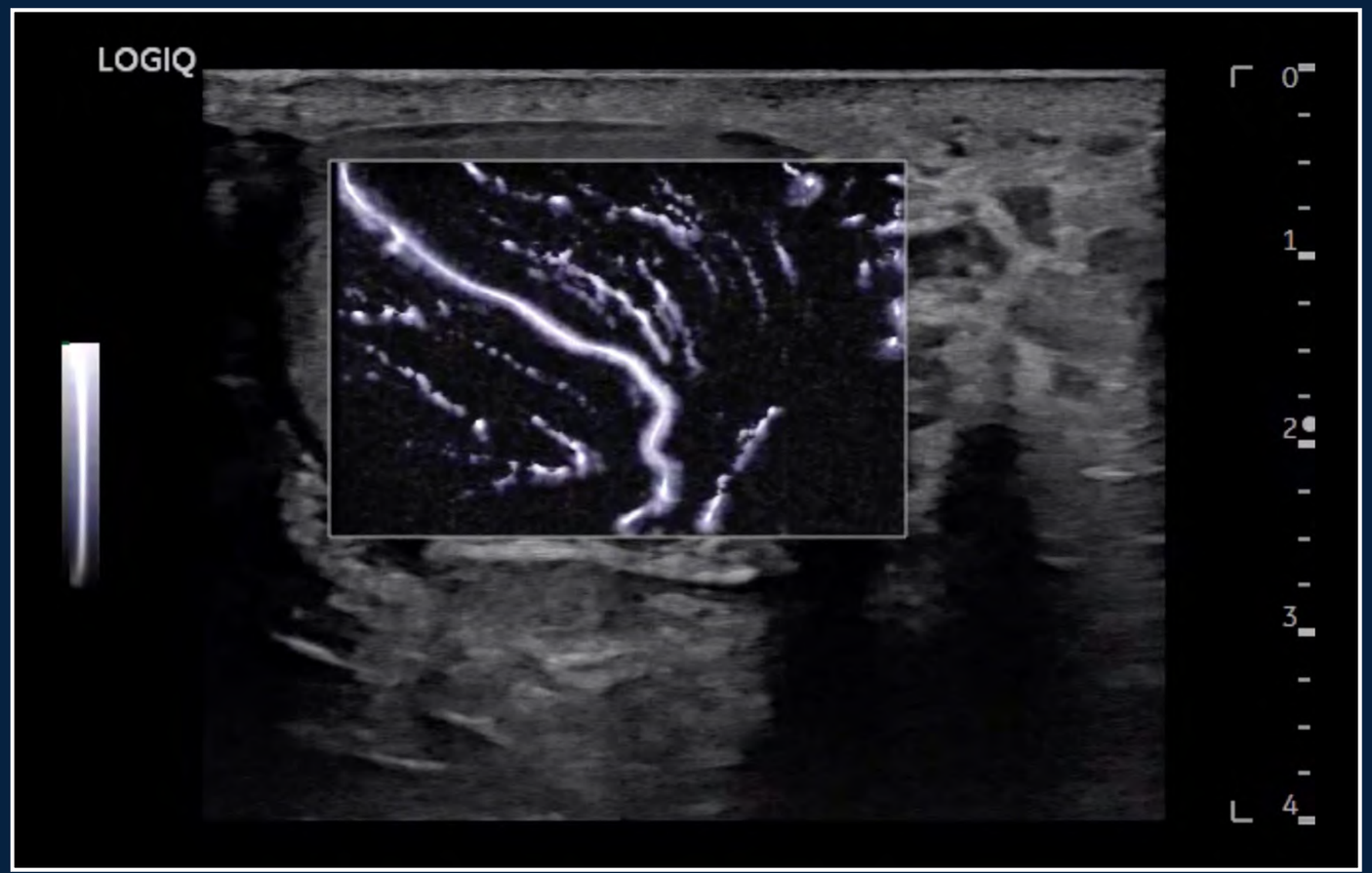


MVI with Radiant*flow* groin lymph node, ML6-15-D

CLINICAL IMAGES | Small Parts

Exceeding your expectations: whole body imaging



MVI with Radiant*flow* in scrotal, L3-12-D

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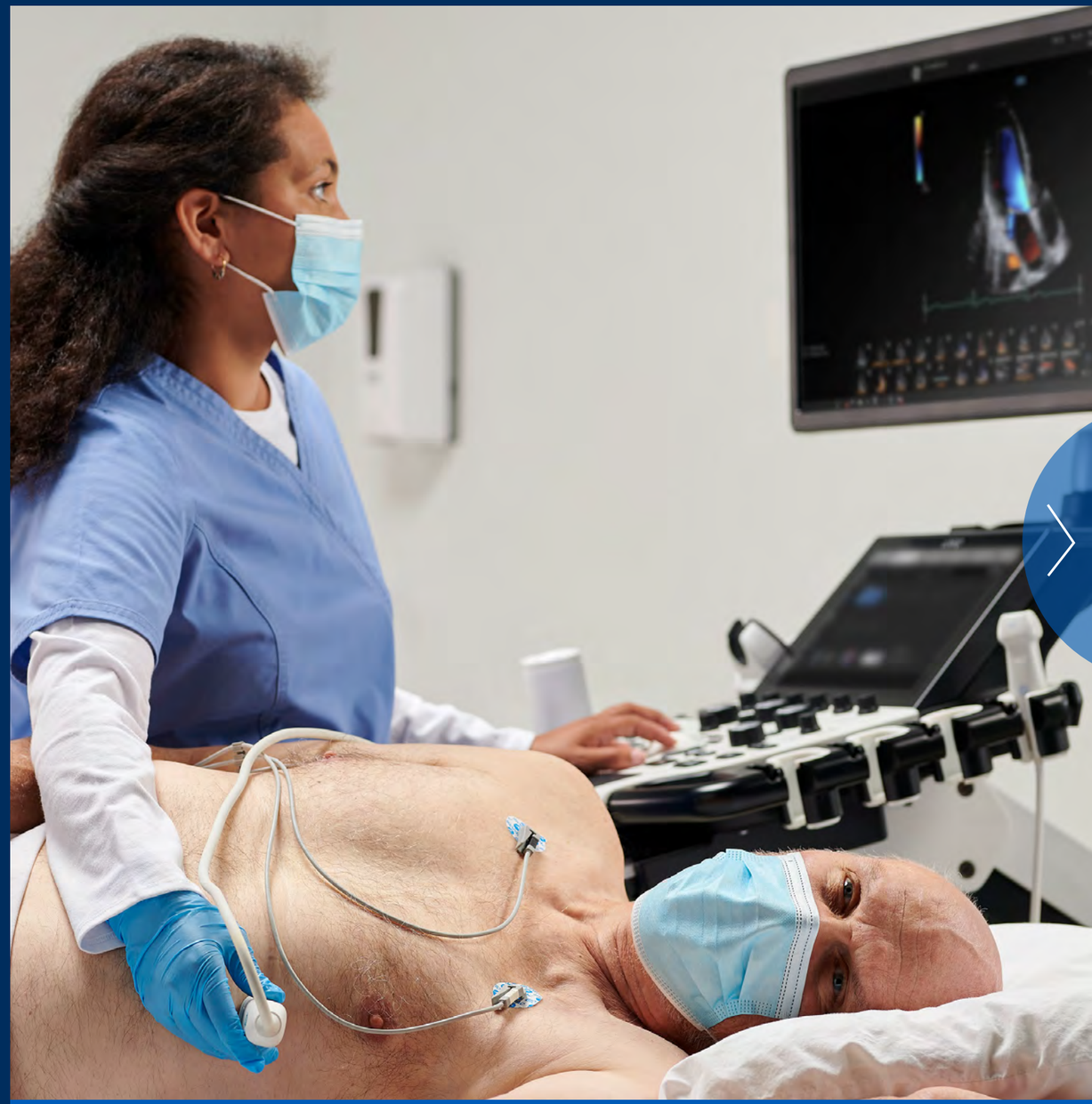

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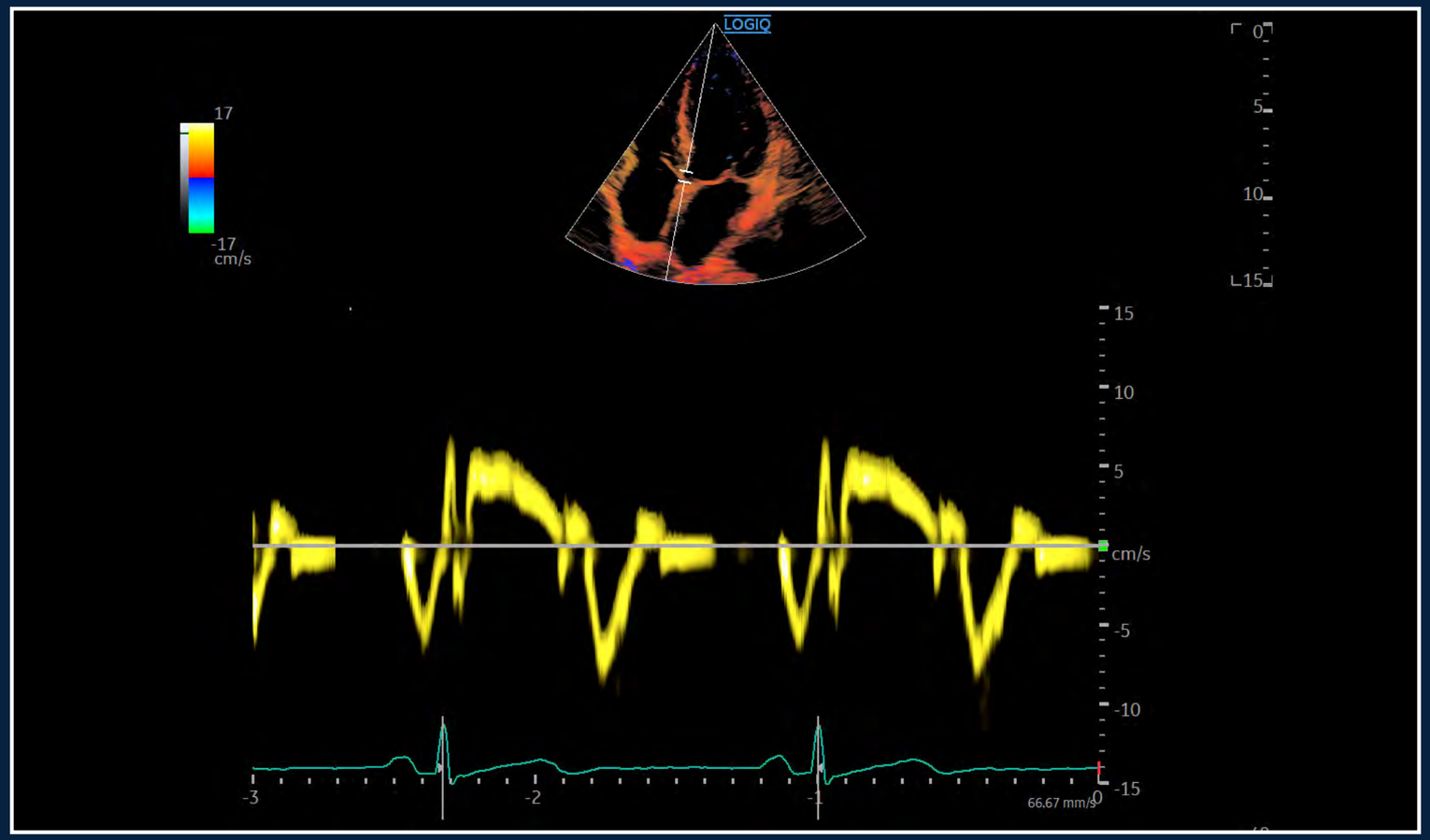
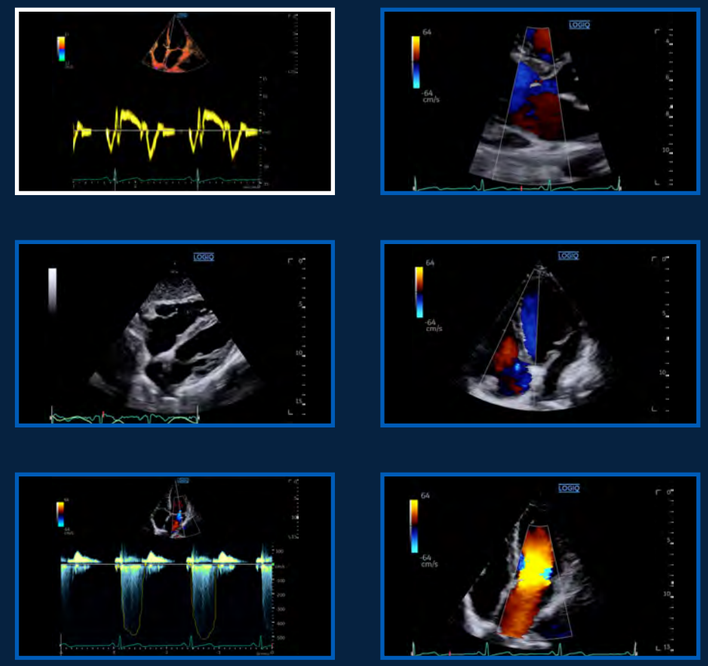


TVI and TVD Apical 4 Chamber View, M5Sc-D



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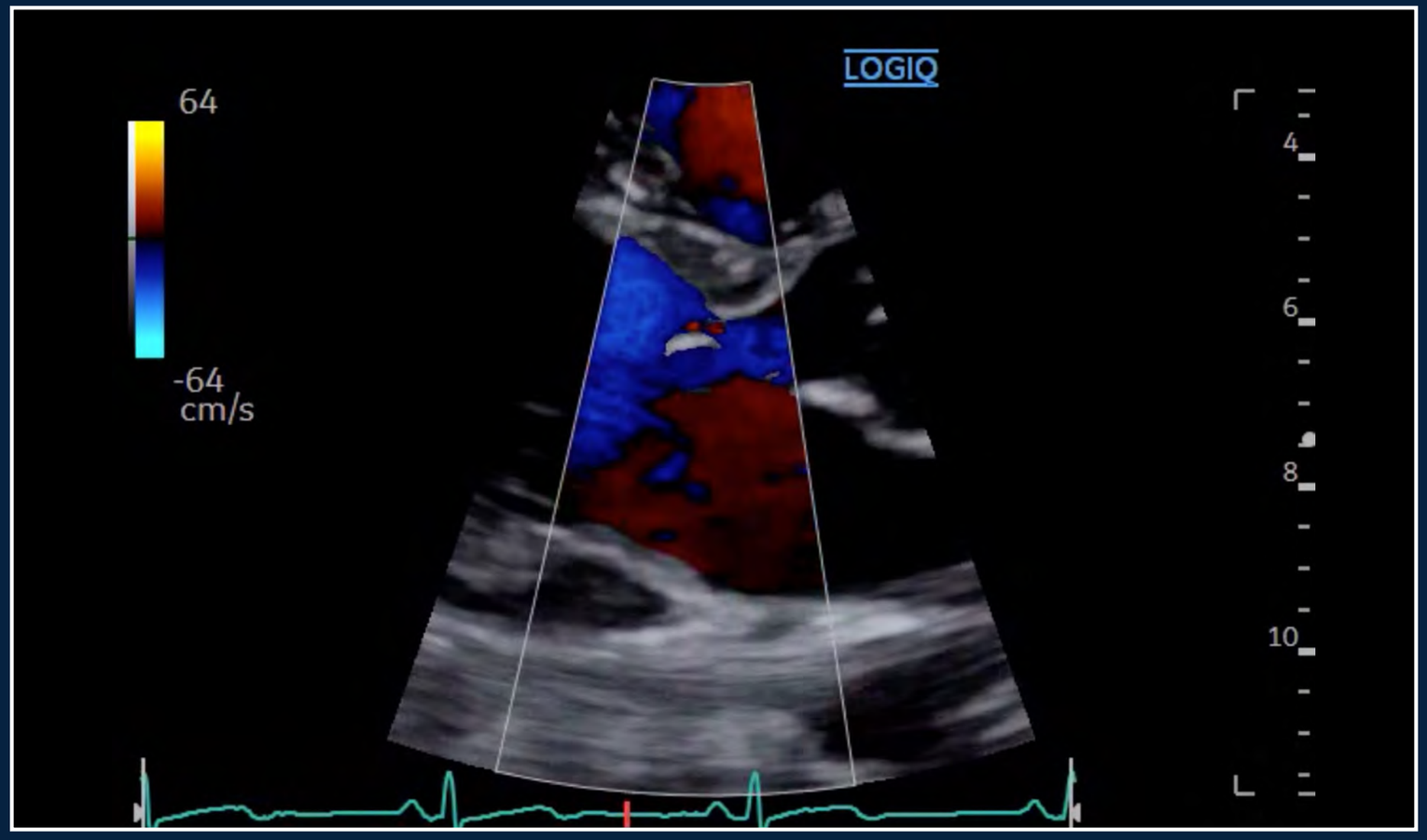

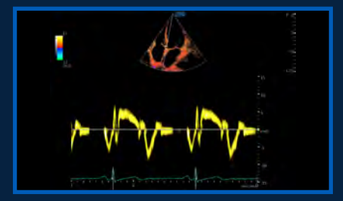

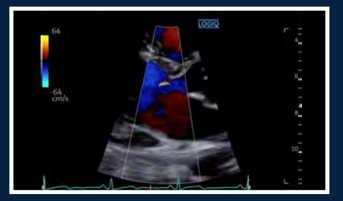

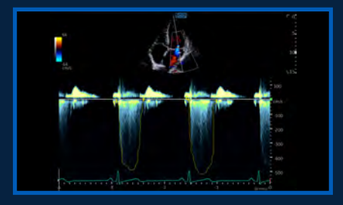

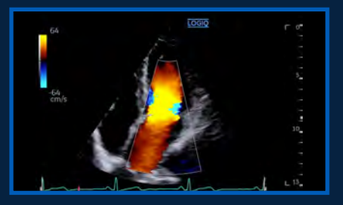

Color Flow in Cardiac Parasternal Long Axis View, M5Sc-D

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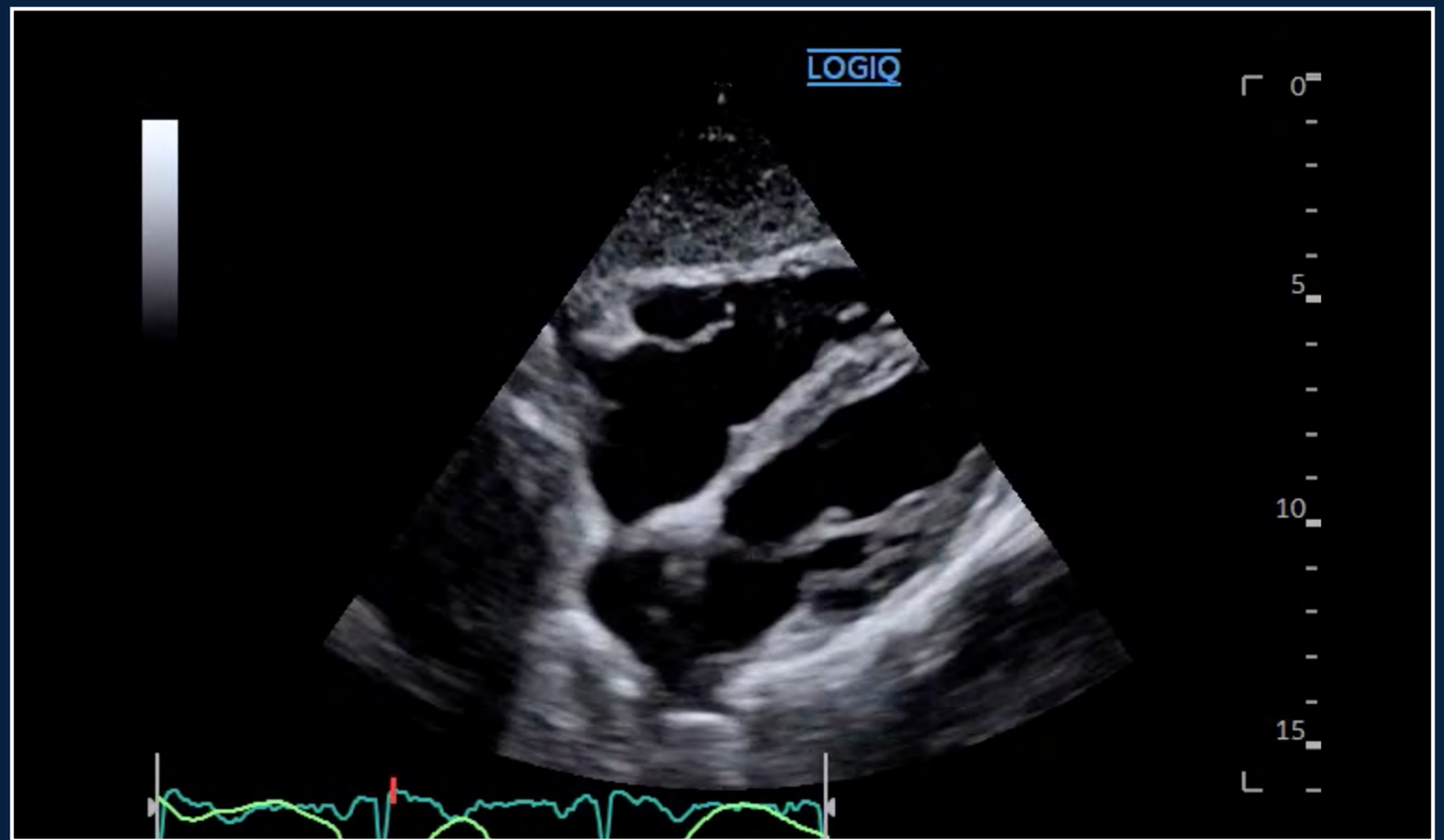
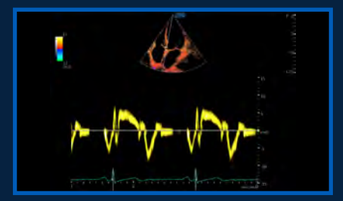
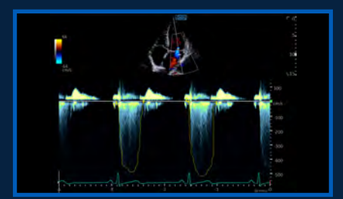
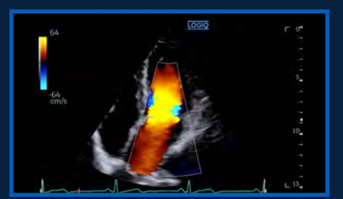


B-Mode with Advanced SRI ECG and Respirometer Display, M5Sc-D

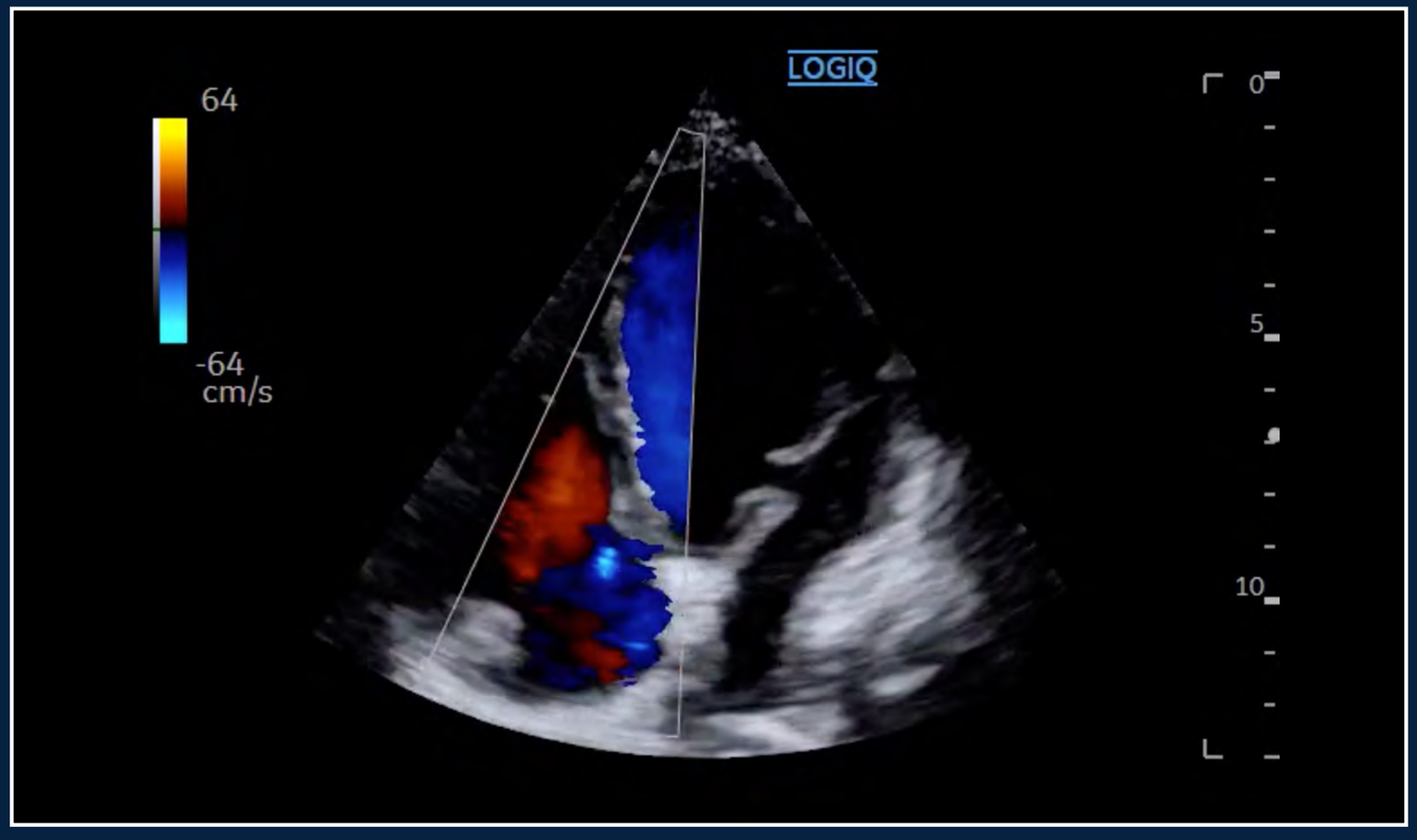


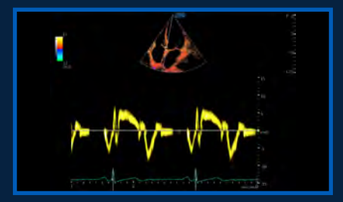


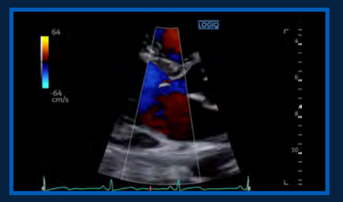


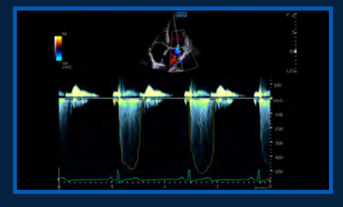
CLINICAL IMAGES | Cardiology

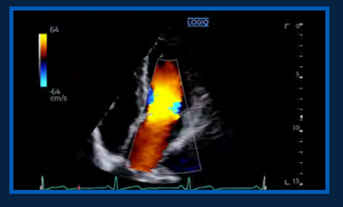
Acquire highly detailed cardiac images within efficient exam times, even in challenging cases







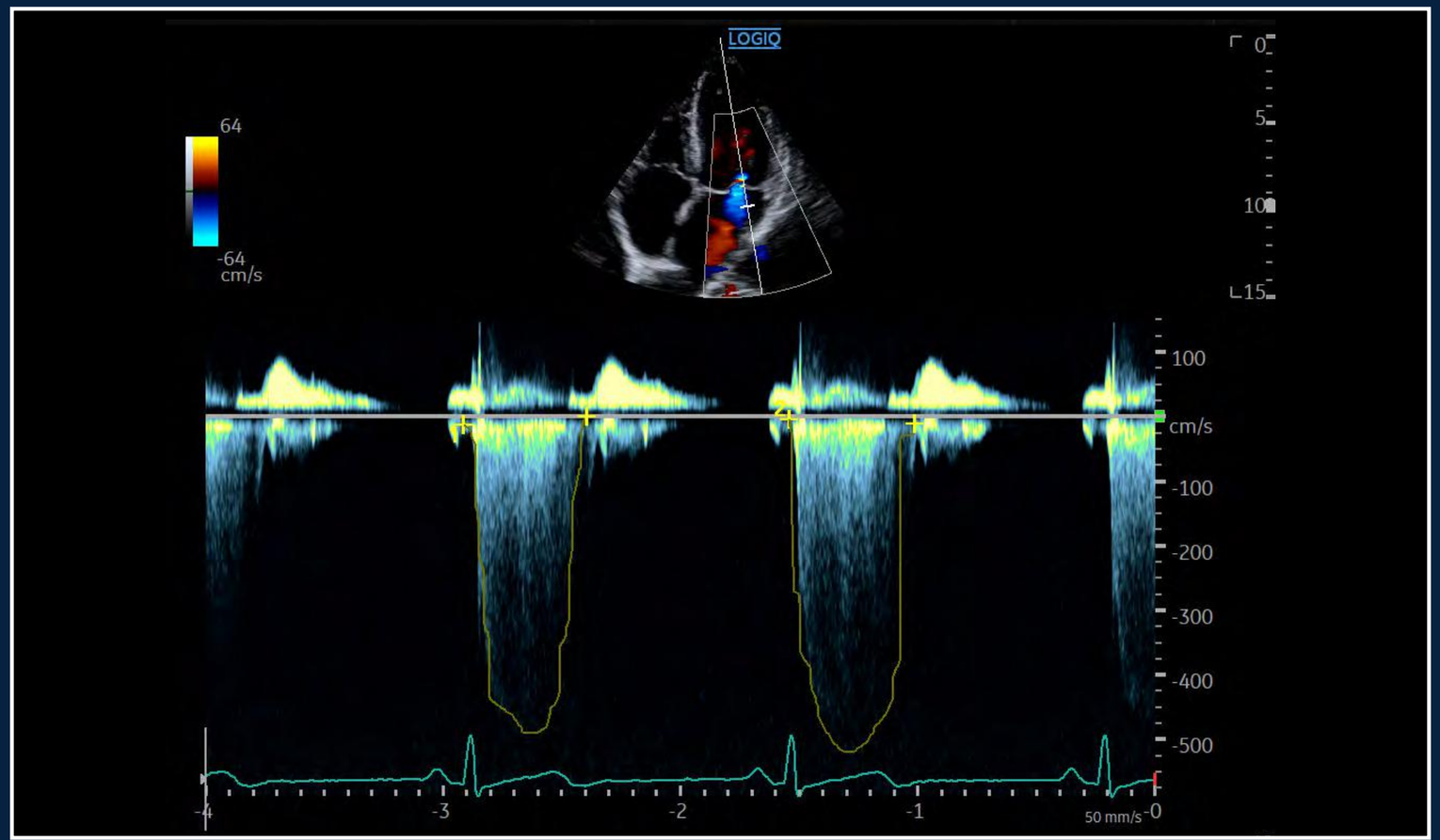


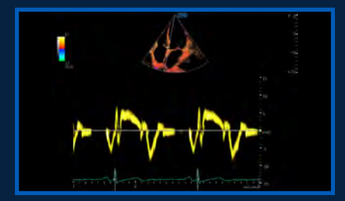


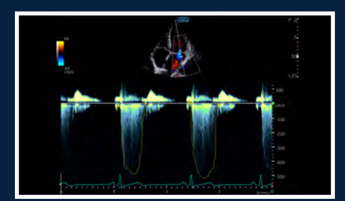
Color Flow Apical 4 Chamber View, M5Sc-D

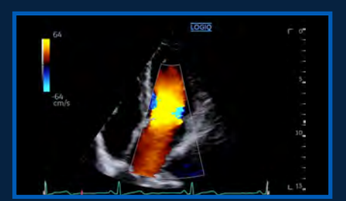
CLINICAL IMAGES | Cardiology

Acquire highly detailed cardiac images within efficient exam times, even in challenging cases





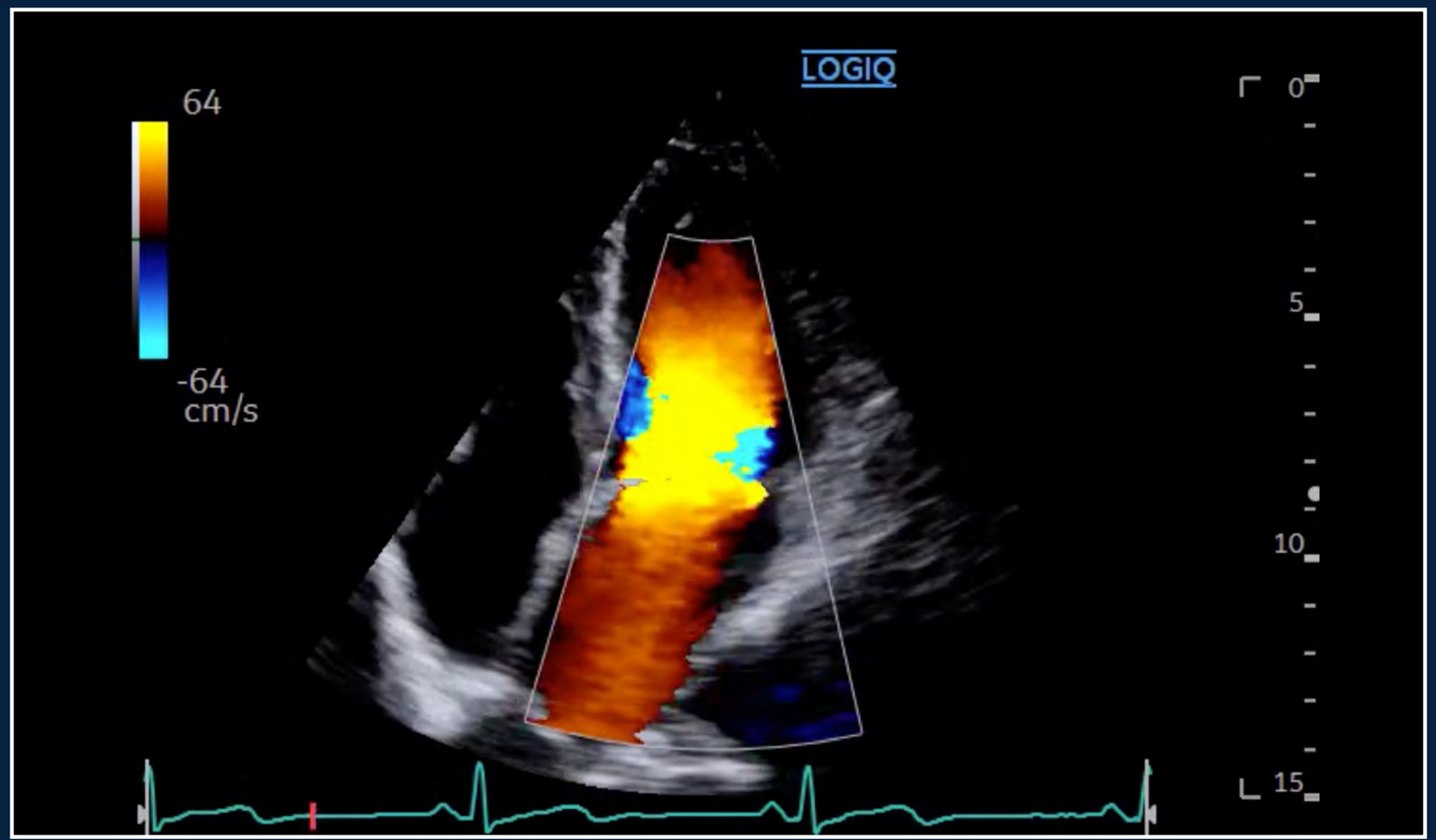




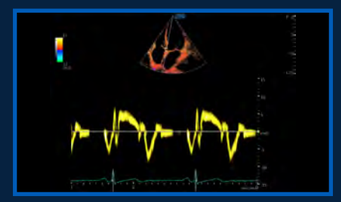
Color Flow and CW Doppler Mitral Valve, M5Sc-D

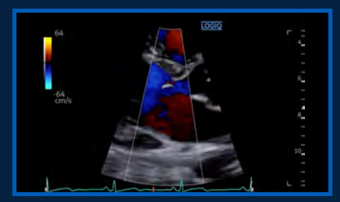
CLINICAL IMAGES | Cardiology

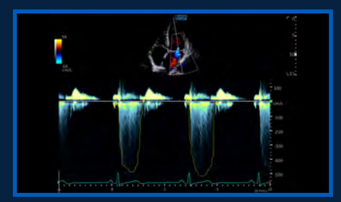
Acquire highly detailed cardiac images within efficient exam times, even in challenging cases

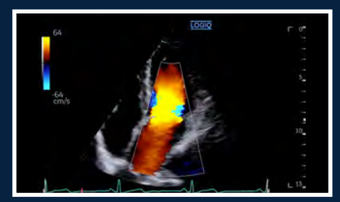


Color Flow Apical 4 Chamber View Mitral Valve, M5Sc-D







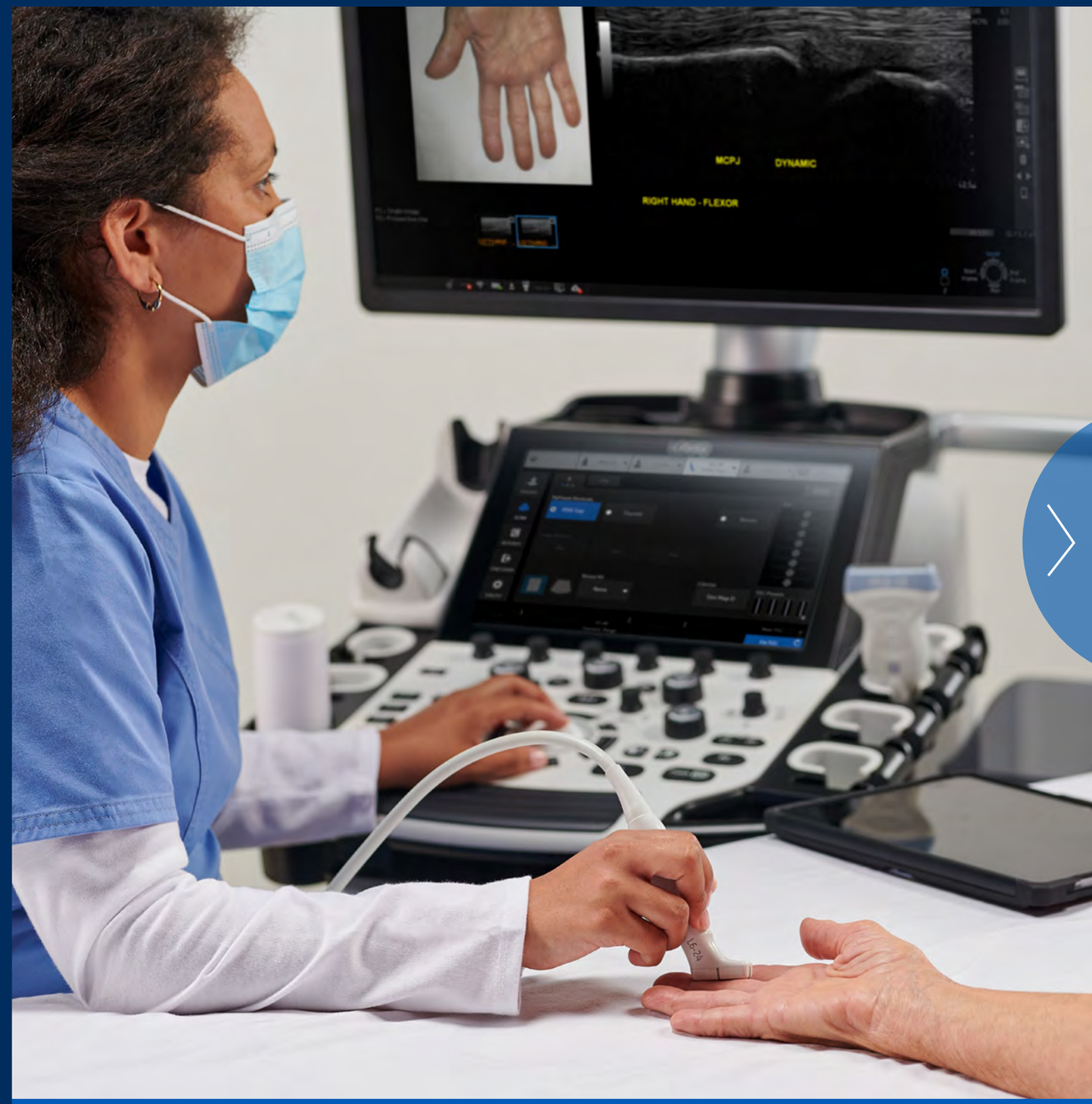


MUSCULOSKELETAL

With precise, efficient imaging, LOGIQ Fortis assists clinicians in managing a wide range of musculoskeletal conditions and a high volume of patients.

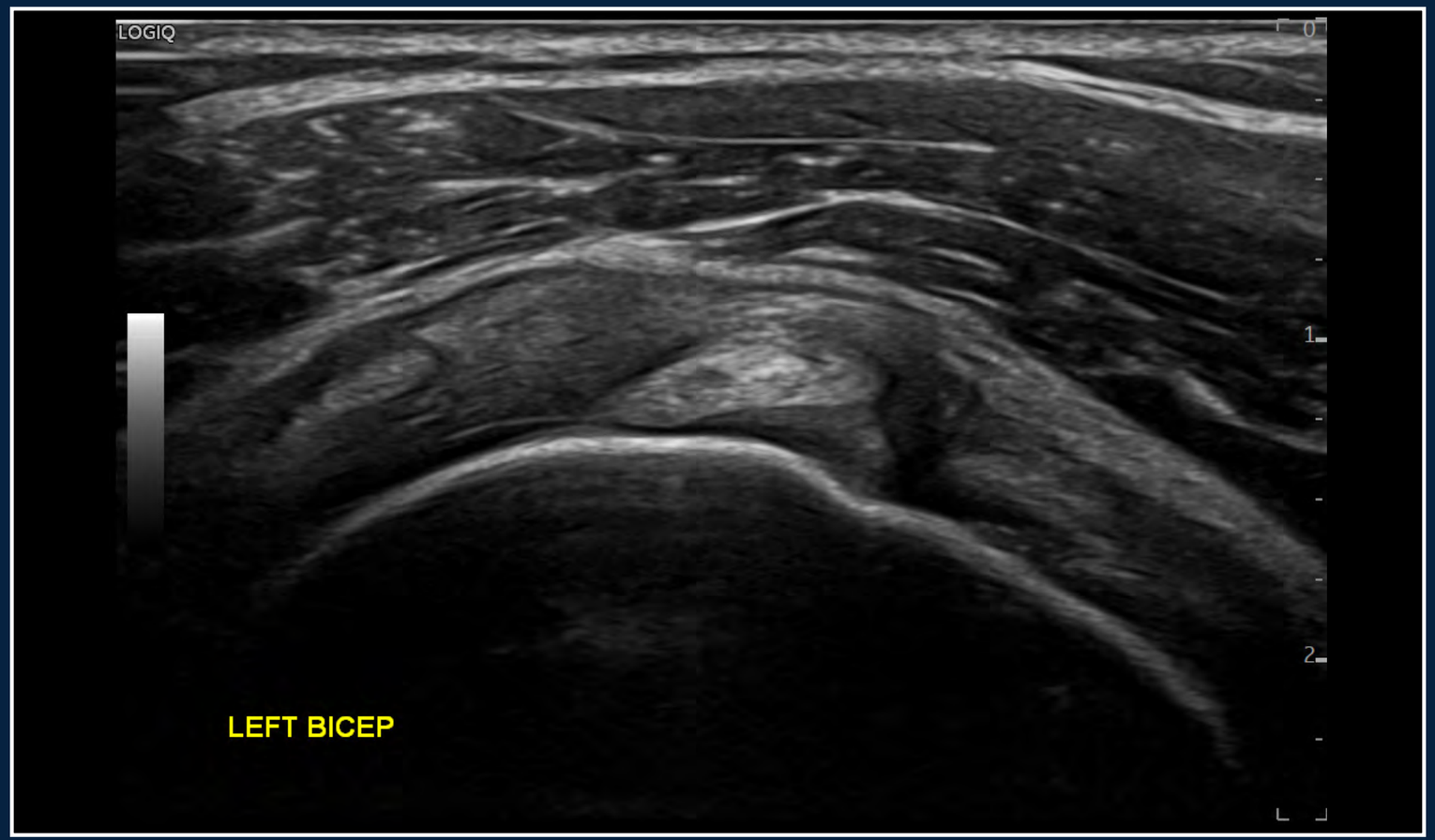
- Micro Vascular Imaging (MVI) and Radiant*flow* combine to enable near-3D visualization of tiny, slow-flow vessels
- 2D Shear Wave Elastography available on multiple probes
- Photo Assistant App lets you acquire and send photos of relevant anatomy from an Android™ device

+ CLINICAL IMAGES

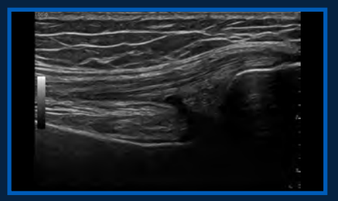


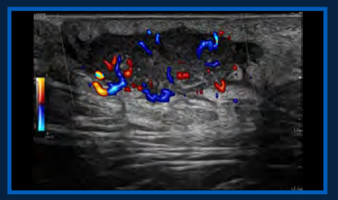
CLINICAL IMAGES | Musculoskeletal

Excellent detail and contrast resolution to support in-depth understanding of tissue, pathology, blood flow, and inflammation



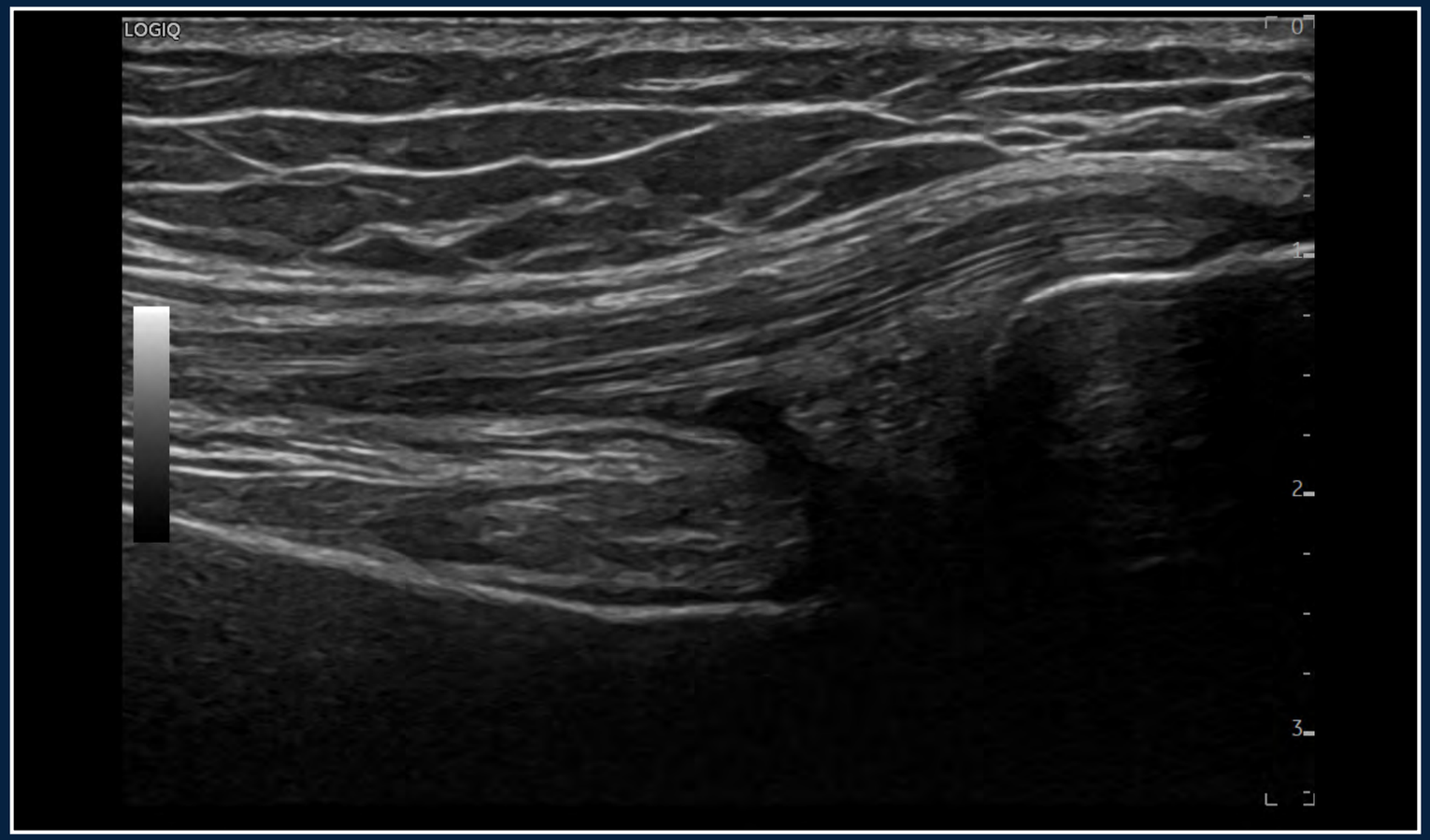
B-Mode with Advanced SRI Shoulder, ML6-15-D



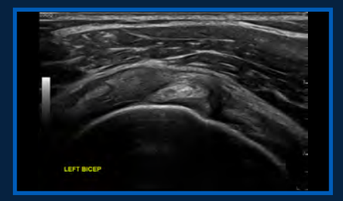


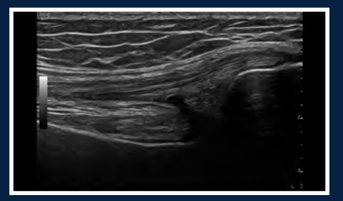
CLINICAL IMAGES | Musculoskeletal

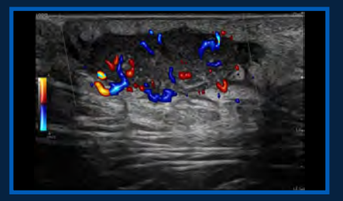
Excellent detail and contrast resolution to support in-depth understanding of tissue, pathology, blood flow, and inflammation



B-Mode with Advanced SRI Knee Tendon, ML6-15-D

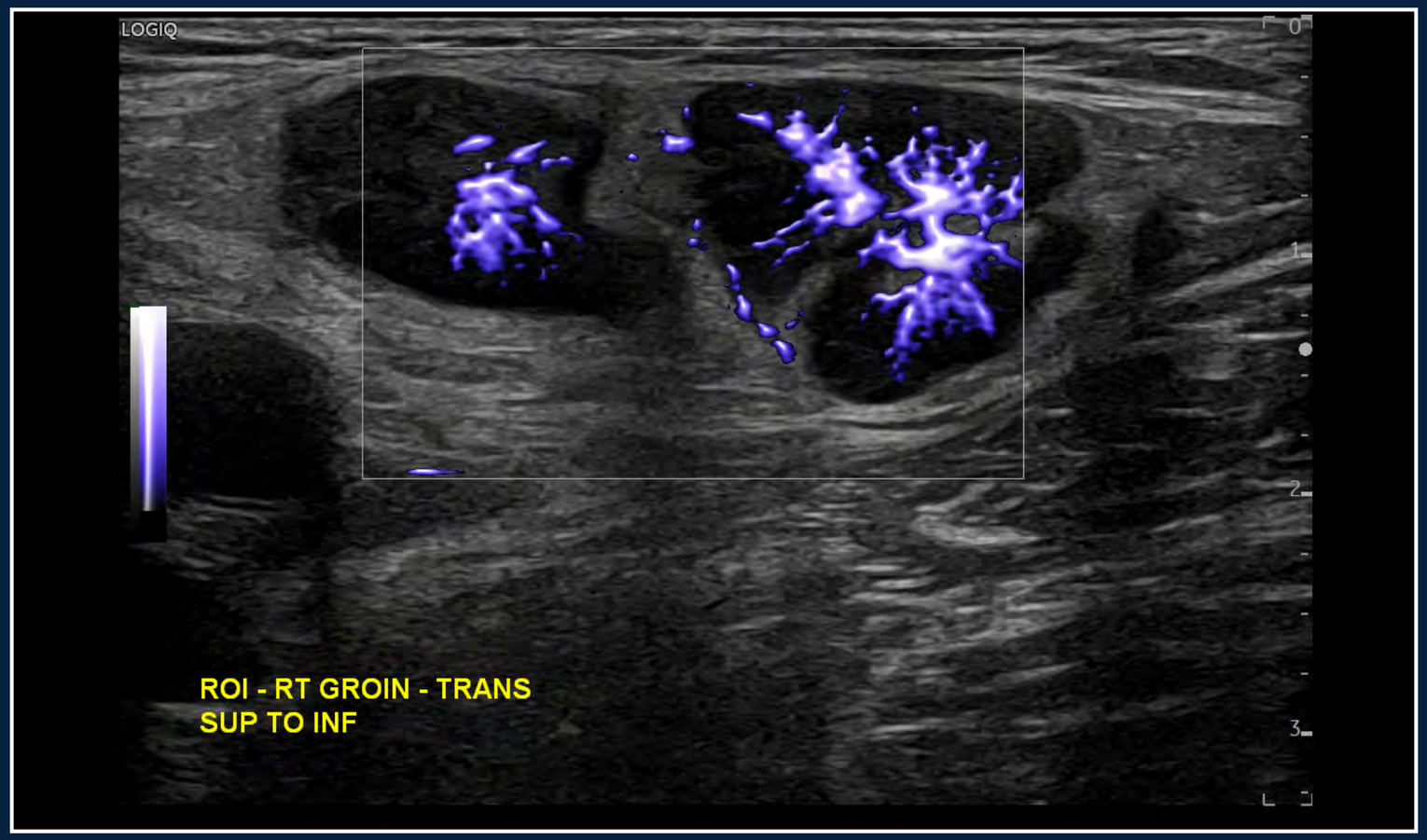


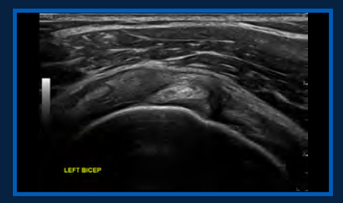


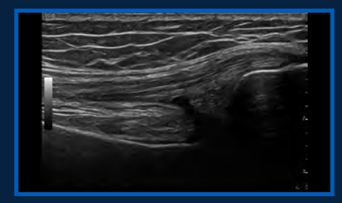


CLINICAL IMAGES | Musculoskeletal

Excellent detail and contrast resolution to support in-depth understanding of tissue, pathology, blood flow, and inflammation



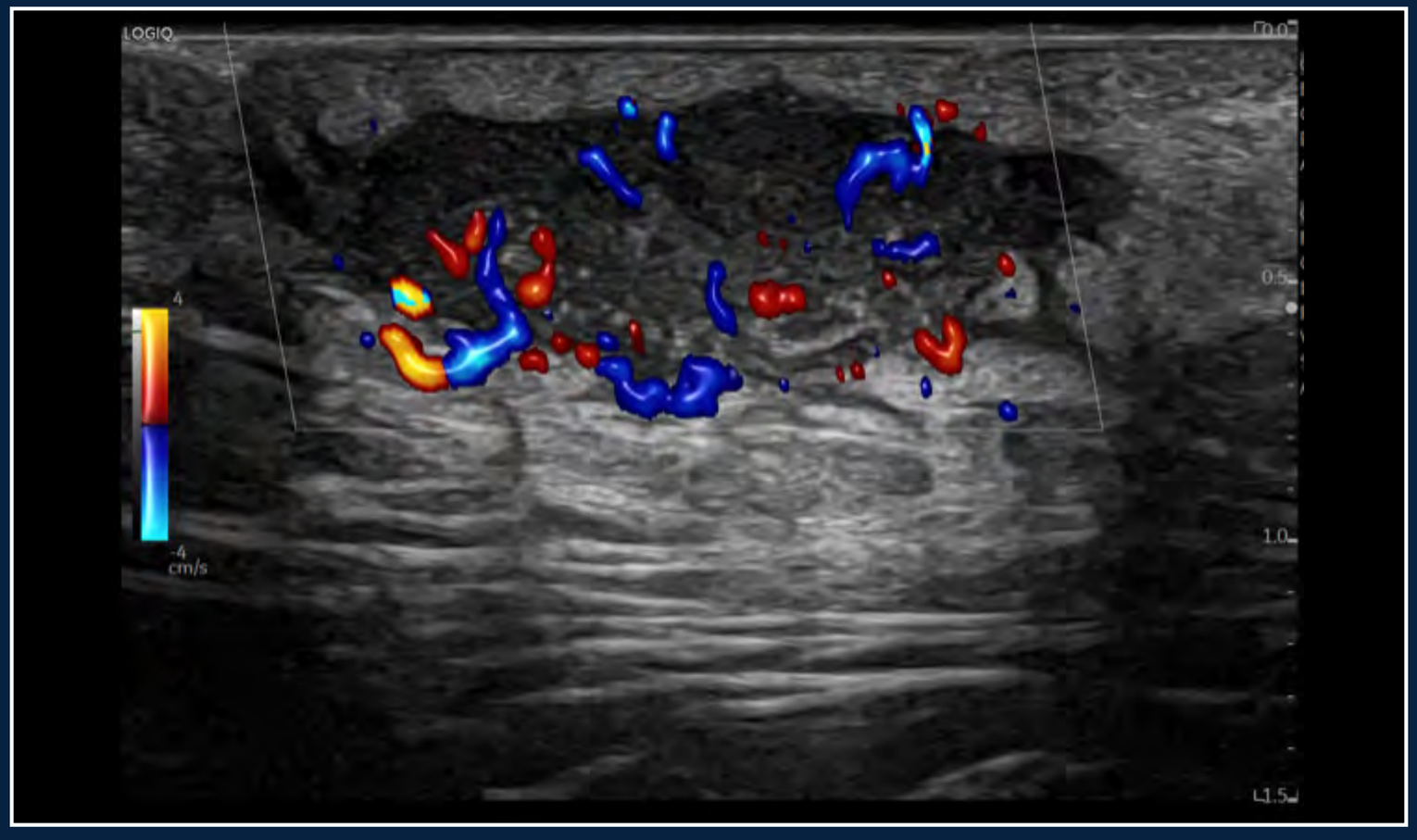




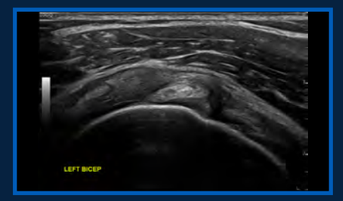
MVI with Radiant*flow* Groin Lymph Node, ML6-15-D

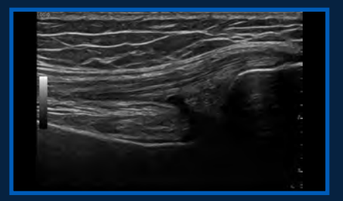
CLINICAL IMAGES | Musculoskeletal

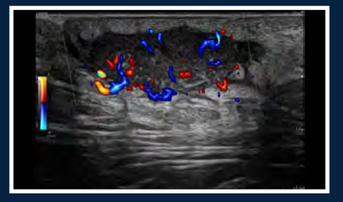
Excellent detail and contrast resolution to support in-depth understanding of tissue, pathology, blood flow, and inflammation



Leg Mass with Color Flow and Radiant*flow*, L6-24-D







BREAST

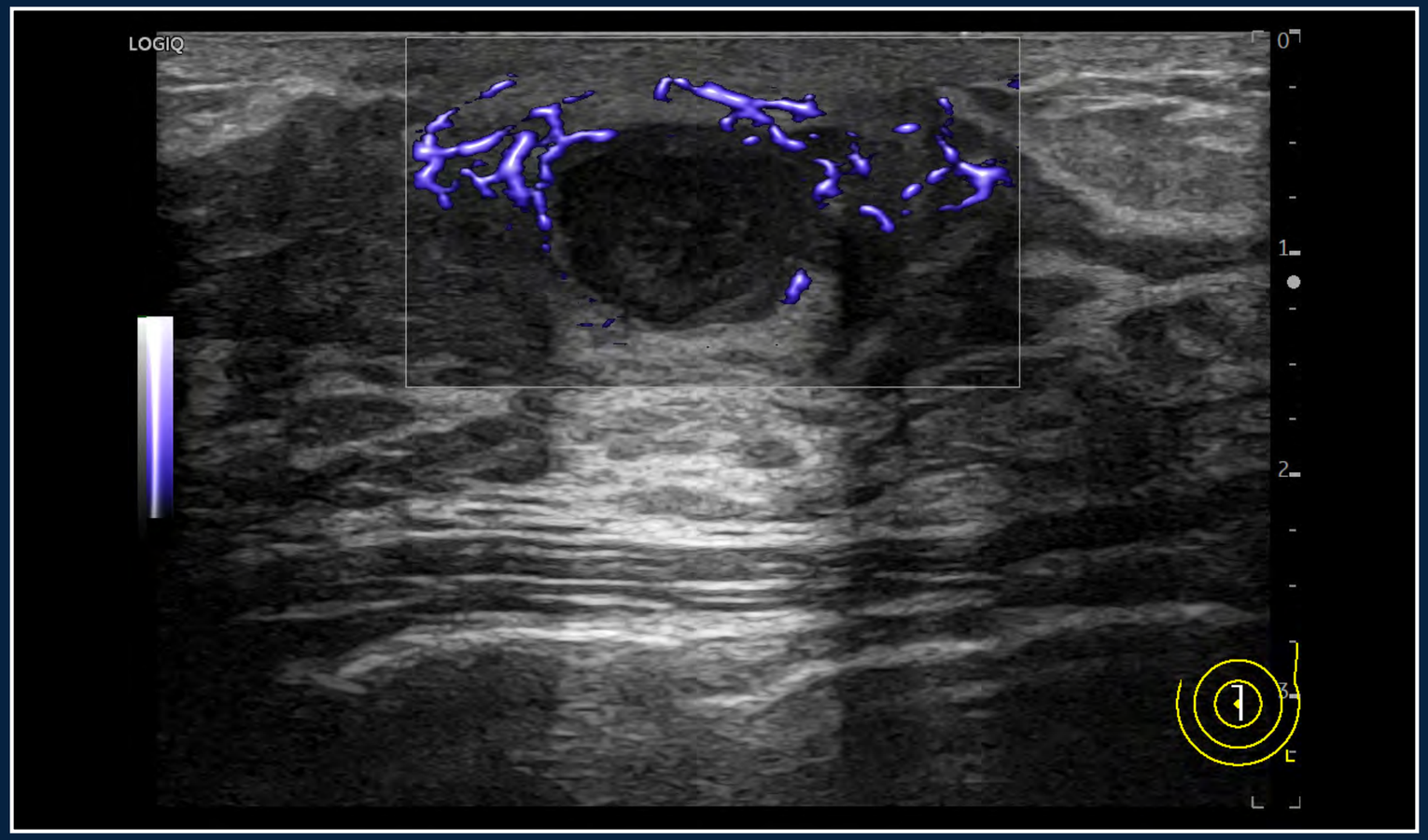
LOGIQ Fortis provides high-quality images and robust tools to help clinicians detect and characterize breast disease as efficiently as possible.

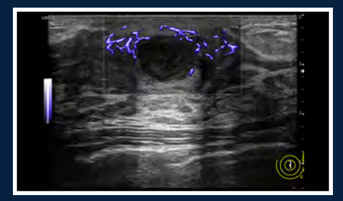
- 2D Shear Wave Elastography with Quality Indicator
- Automated workflow tools, including Measure Assistant and Compare Assistant
- Breast Assistant, powered by Koios DS,™ an AI-based decision support tool providing quantitative risk assessment aligned to a BI-RADS® category*

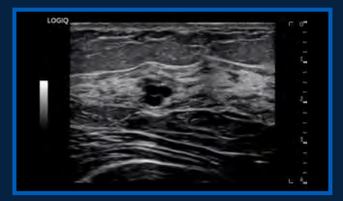
+ CLINICAL IMAGES

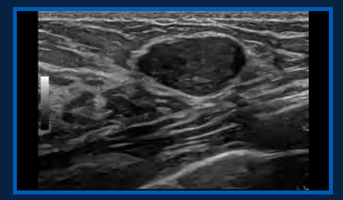
CLINICAL IMAGES | Breast

Highly detailed images to detect and characterize breast disease efficiently





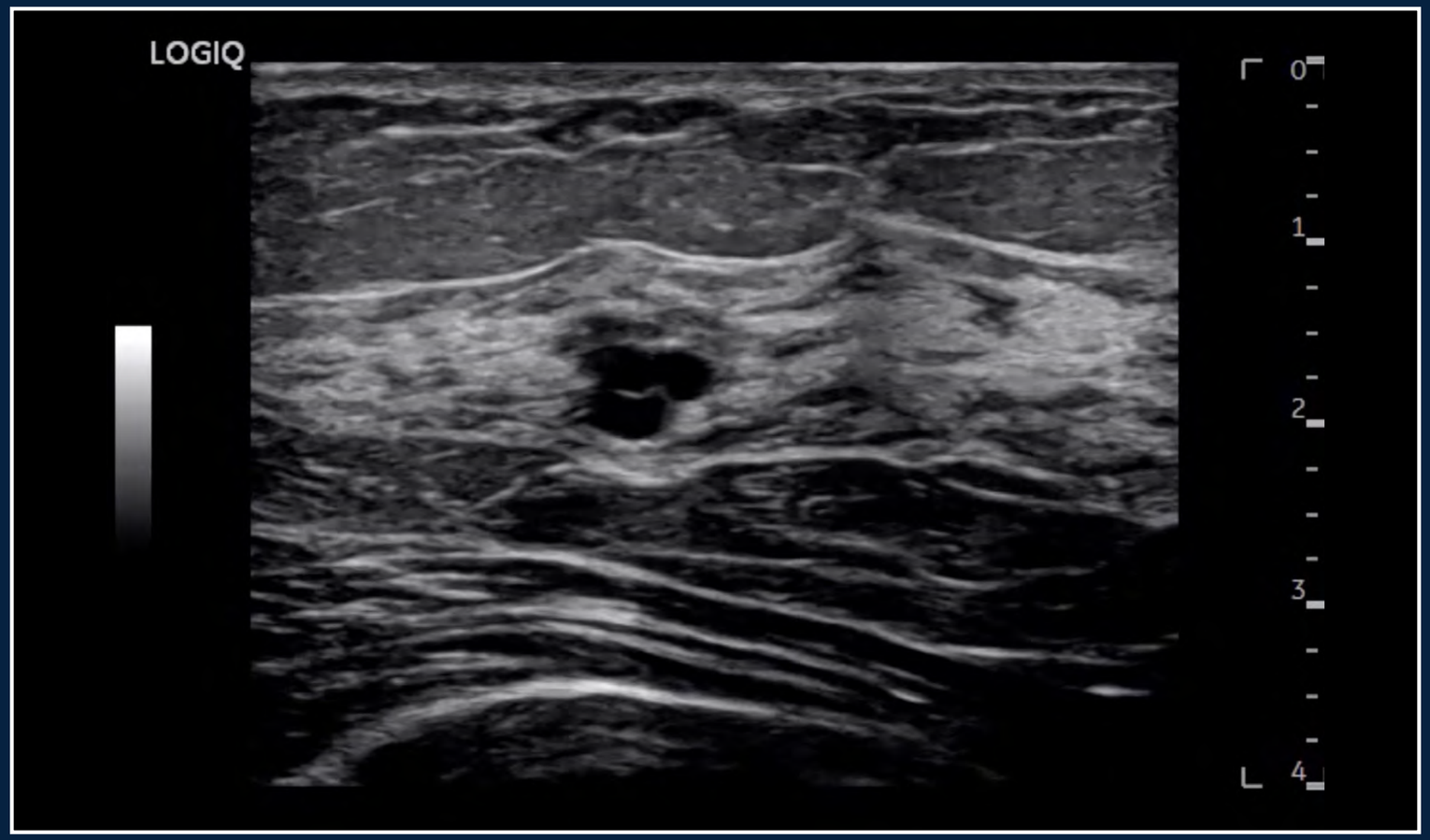


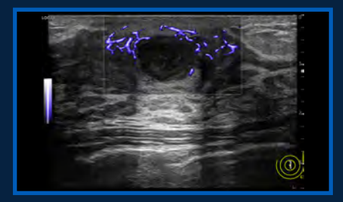


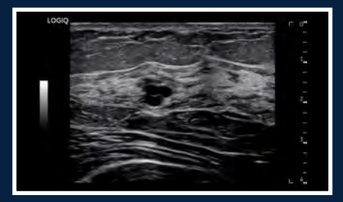
MVI Breast, ML6-15-D

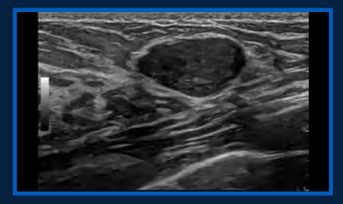
CLINICAL IMAGES | Breast

Highly detailed images to detect and characterize breast disease efficiently





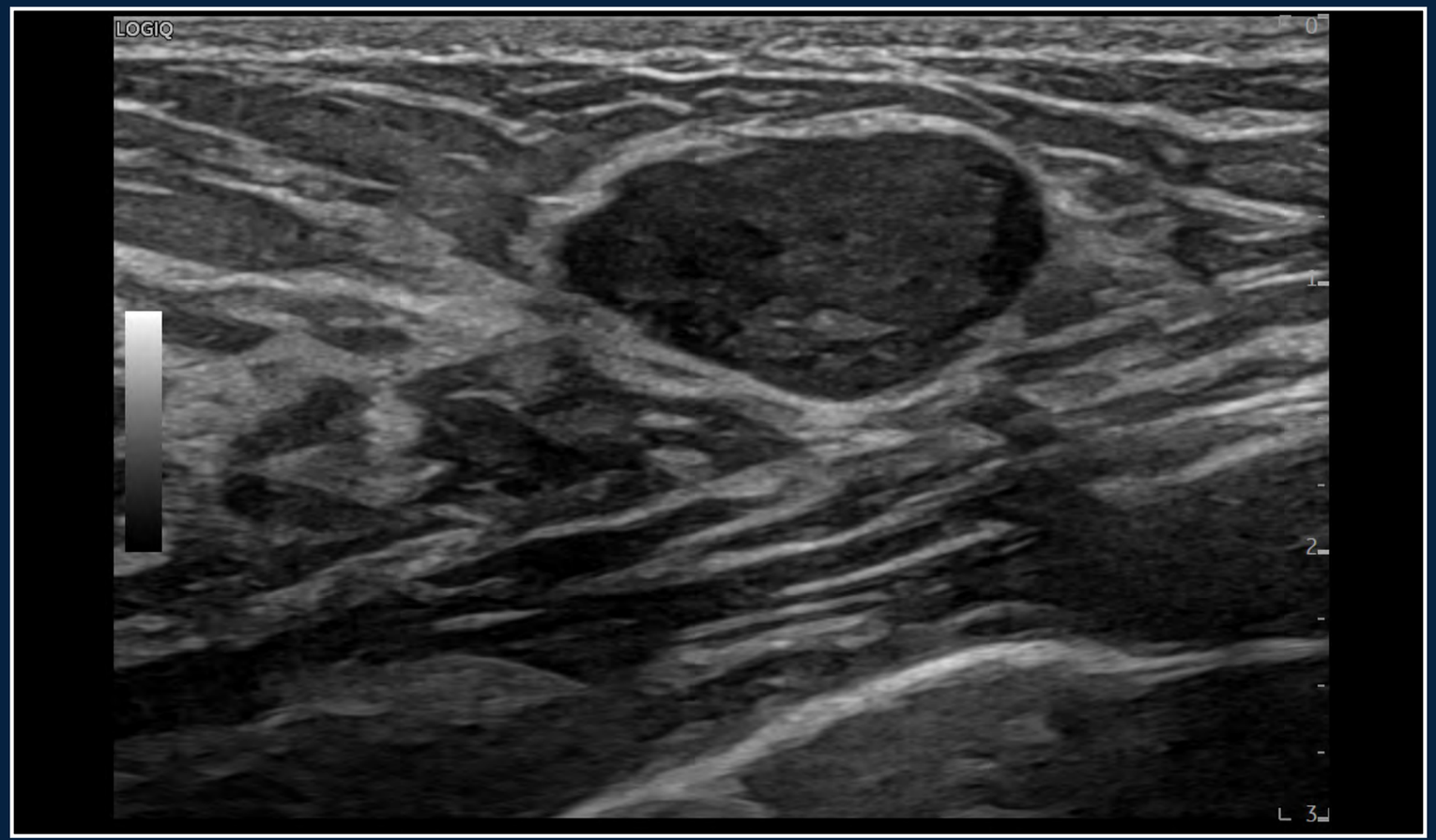


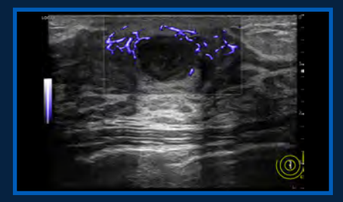


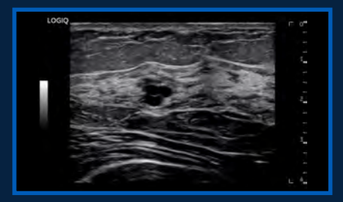
B-Mode with Advanced SRI in Breast, L3-12-D

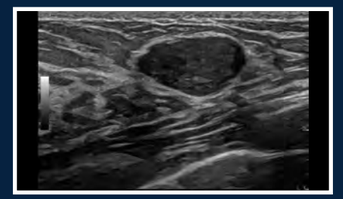
CLINICAL IMAGES | Breast

Highly detailed images to detect and characterize breast disease efficiently









B-Mode with Advanced SRI in Breast, ML6-15-D

OPTIMIZING YOUR PRODUCTIVITY

LOGIQ Fortis is powerfully streamlined to help clinicians optimize workflow, ensure accurate results, and enhance clinical confidence.

- New EZ Imaging with customizable probe presets, simplified touch panel to reduce operator interactions, and quick patient set-up
- AI-based and automated tools to speed up workflow
- Easy system maneuverability with Scan on Battery

COVID-19 Support

Systems Cleaning Compatibility

Transducers Cleaning Compatibility

LOGIQ Club

MAXIMIZING YOUR INVESTMENT

From radiology to cardiology, the multi-purpose LOGIQ Fortis is easily scaled to your needs, so you can avoid acquiring multiple ultrasound systems for different requirements.

- A to A digital platform lets you add next-generation capabilities to stay at the forefront of ultrasound
- Lifecycle solutions—from InSite™ remote support to iCenter™ performance analytics—help optimize asset performance and utilization
- SonoDefense multi-layer cybersecurity and data privacy protection guards your investment 24/7

LOGIQ Fortis

A powerful, streamlined ultrasound solution that's always ready, always by your side.

*For more information, visit the **LOGIQ Digital Experience**.*

* Not all products or features are available in all geographies.
Check with your local GE Healthcare representative for availability in your country.

January 2022
JB18811XX

LOGIQ Fortis™

A powerfully streamlined,
next-generation ultrasound solution

gehealthcare.com

Introducing GE LOGIQ Fortis—the next generation of LOGIQ ultrasound technology.

LOGIQ Fortis—the LOGIQ platform's newest member—provides a multi-purpose, all-in-one, ultra-secure ultrasound solution that can be easily scaled to fit your specific needs.

LOGIQ Fortis is characterized by both its **strength** and its **power**. It gives you the power to enhance your clinical capabilities and increase productivity exponentially.

Everything you expect in a LOGIQ system—*powerfully streamlined*
With a sleek and compact design, LOGIQ Fortis can be used in almost any space. Its state-of-the-art features and technologies make it strong enough to conduct a full spectrum of ultrasound exams and procedures on any body type. It was specifically designed to optimize clinicians' productivity, exceed expectations regarding performance, and to maximize your investment.

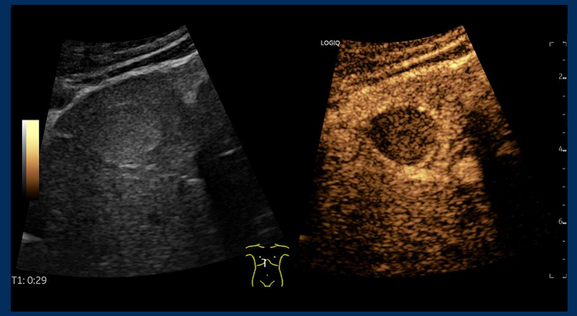
Clinical Expectations: **EXCEEDED**

With LOGIQ Fortis, you'll find that any expectations you might have regarding an all-in-one, high-performing ultrasound system aren't just met. They're exceeded. If your facility needs a powerful and scalable ultrasound solution, LOGIQ Fortis is the answer.

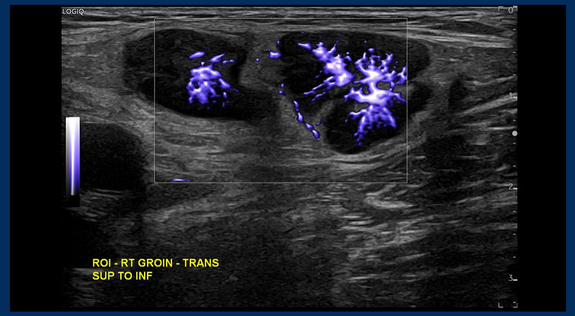
cSound™ Architecture facilitates next-generation imaging
LOGIQ Fortis features cSound Architecture, which combines versatile XDclear™ probes, cSound Imageformer and new, advanced Speckled Reduction Imaging (SRI) technology. The result is increased processing power that delivers enhanced data throughput for exceptional image quality, clarity and confidence.

Advanced quantification simplifies patient management
Robust tools, such as 2D Shear Wave Elastography and Ultrasound-Guided Attenuation Parameter (UGAP), help reduce the need for invasive procedures and help provide valuable information for patient management decisions.

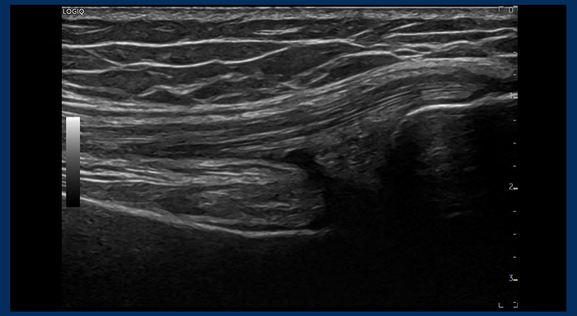
LOGIQ Fortis at work



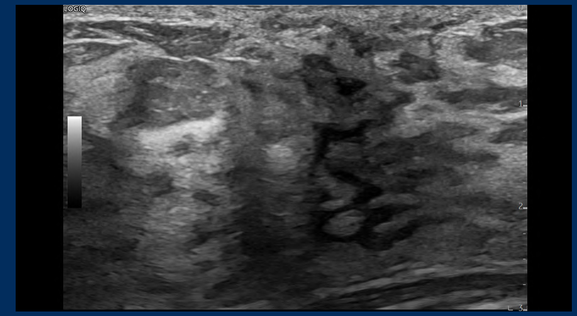
Contrast enhanced liver lesion, C2-9-D



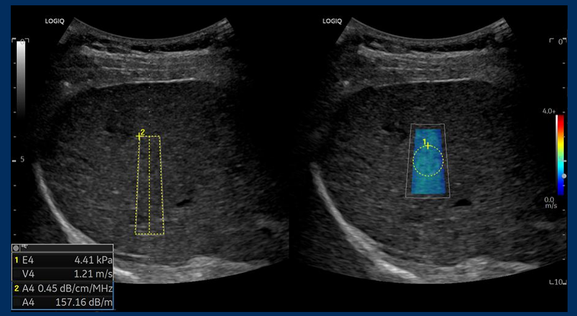
MVI with Radiant*flow* – groin lymph node, ML6-15-D



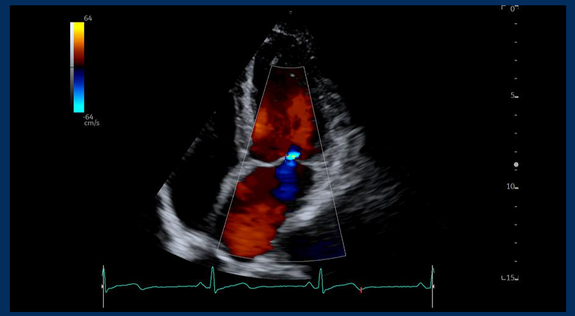
B-Mode with Advanced SRI – knee tendon, ML6-15-D



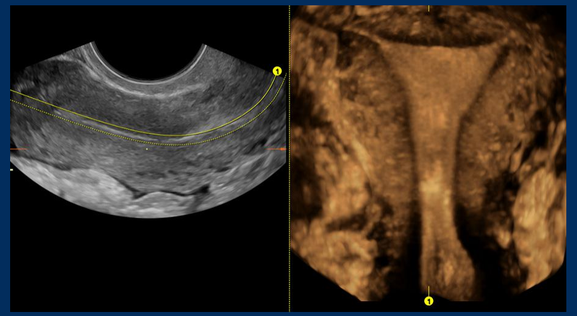
B-Mode with Advanced SRI in breast, ML6-15-D



Hepatic Assistant – UGAP and Shear Wave Elastography, C1-6-D



Color flow of mitral valve apical 4-chamber view, M5Sc-D



OmniView dual screen, RIC5-9-D

For your multi-purpose ultrasound needs, LOGIQ Fortis is always ready and always by your side.

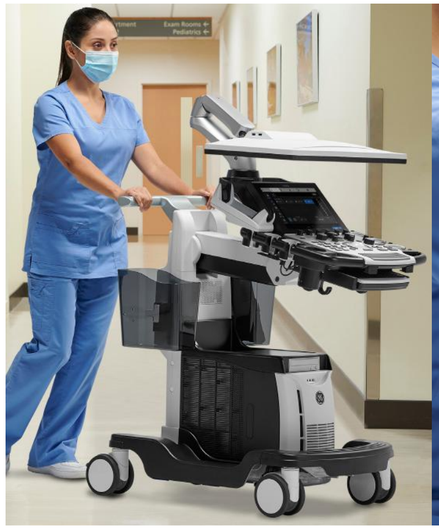
LOGIQ Fortis helps clinicians streamline their workflow, ensure accurate results, and enhance patient comfort. Its productivity tools help facilitate diagnoses and its design makes it easy to clean and simple to operate.

A system that's easily moved to where it's needed
Due to its sleek footprint, LOGIQ Fortis is simple to maneuver and can fit into almost any space—from patient rooms to exam rooms to operating rooms.

AI-based tools streamline and optimize workflow
LOGIQ Fortis harnesses the power of artificial intelligence to improve the speed, ease and comfort of exams. With its AI-based tools, users can achieve exceptional images quickly.

LOGIQ apps make remote usage possible—and simple
A variety of apps for mobile devices add next-level context with photos and enable users to control LOGIQ Fortis remotely. The result is an optimized ergonomic experience for you and your patients.

Productivity & workflow: **OPTIMIZED**



Your investment: **MAXIMIZED**

When you purchase an ultrasound system, it's not just an investment for your facility—it's also an investment in your clinicians and patients. With LOGIQ Fortis, you'll be able to maximize that investment for everyone. Because it's easily scaled to meet the evolving needs of today and tomorrow, you'll be able to depend on LOGIQ Fortis for years to come. And, because it can be used for a wide variety of exams and procedures on any body type, the need to purchase multiple ultrasound systems for different requirements is eliminated. LOGIQ Fortis is the all-in-one ultrasound system that delivers a one-of-a-kind solution.

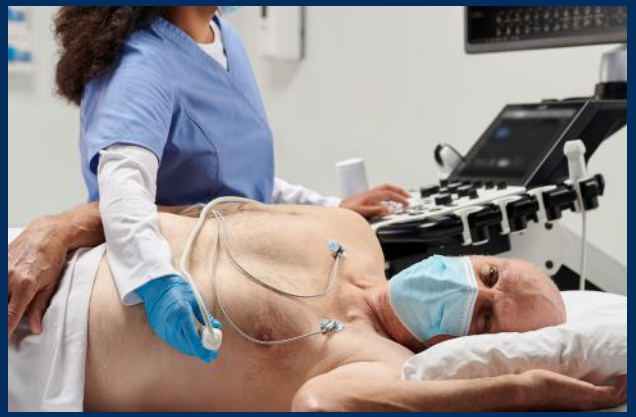
The A to A digital platform enhances the intelligence of the LOGIQ Fortis
From Awareness to Assistance, our A to A digital platform allows your organization to stay at the forefront of clinical imaging. It's specifically engineered so you can add next-generation capabilities to LOGIQ Fortis in the years ahead.

Lifecycle solutions for where you are today—and where you will be tomorrow
The advanced digital support features of LOGIQ Fortis make it easy to optimize your ownership experience. From InSite™ remote support, to iCenter™ performance analytics, to AVURI remote device management, you'll have access to the tools you'll need to optimize your assets, streamline your operations, and to ensure you're prepared to meet your facility's evolving needs.

SonoDefense Data Security Protection guards your investment 24/7
With its multi-layer approach to cybersecurity and data privacy protection, SonoDefense protects LOGIQ Fortis from cyberthreats and unauthorized access around the clock. Your investment is secured—and so is your confidence.





LOGIQ Fortis

A powerful, streamlined ultrasound solution that's always ready, always by your side.

September 2021
JB16976XX
Global

LOGIQ Fortis™

Data sheet

The LOGIQ Fortis is GE's premium ultrasound imaging system designed for general imaging applications including abdominal, vascular, obstetric, gynecologic, neonatal, pediatric, urological, transcranial, cardiac, and small parts applications.

gehealthcare.com

General specifications

Dimensions and weight *(Dimensions given with floating keyboard stowed and display tilted for transport)*	
Height	1250 – 1800 mm, 49 – 71"
Width	530 mm, 20.9" (Caster) 565 mm, 22.2" (Monitor)
Depth	885 mm, 34.8"
Weight	85 kg (187.4 lb)

Electrical power
Voltage 100 – 240 VAC
Frequency 50/60 Hz
Power consumption maximum of 0.9 KVA with peripherals

Console design
4 active probe ports
1 inactive probe storage port
Integrated SSD (1 TB)
Integrated DVD-R Multi Drive
On-board storage of thermal printer
Integrated speaker
Integrated locking mechanism that provides rolling lock and caster swivel lock
Integrated cable management
Front and rear handles
Easily removable air filters

User interface

Operator keyboard
Operating keyboard, adjustable in height and rotation
Ergonomic hard key layout
Interactive back-lighting
Integrated recording keys for remote control of up to 4 peripheral or DICOM® devices
Integrated gel warmer

Touch screen
12.1" High-resolution, color, touch display screen
Interactive dynamic software menu
Brightness adjustment
User-configurable layout

Display monitor
23.8" Widescreen high-resolution HDU Display
Display translation (independent of console)
350 mm (13.7") horizontal (both directions)
120 mm (4.7") vertical
90° swivel (both directions)
Fold-down and lock mechanism for transportation
Resolution: 1920 x 1080
Anti-glare
Viewing angle 89/89/89/89°

System overview

Applications
Abdominal
Obstetrical
Gynecological
Breast
Small Parts
Peripheral Vascular
Transcranial (adult and neonatal)
Pediatric and Neonatal
Musculoskeletal (general and superficial)
Urological
Cardiac (adult and pediatric)
Interventional
Pleural

System overview *(cont.)*

Operating modes	
B-Mode	
M-Mode	
Color Flow Mode (CFM)	
B-Flow™ (Option)	
Extended Field of View (LOGIQ View)	
Power Doppler Imaging (PDI)	
PW Doppler	
CW Doppler (Option)	
Volume Modes (3D/4D) (Option)	• 3D Static • 4D Real Time
Anatomical M-Mode	
Coded Contrast Imaging (Option)	
Strain Elastography (Option)	
B-Steer+ (Option)	
Shearwave Elastography (Option)	
UGAP (Option)	

Scanning methods
Electronic sector
Electronic convex
Electronic linear
Mechanical volume sweep

Probe types
Sector phased array
Convex array
Micro convex array
Linear array
Matrix array
Volume probes (4D)
Split crystal

System standard features
Advanced user interface with high-resolution 12.1" display touch panel
Automatic optimization
CrossXBeam™
Speckle Reduction Imaging (SRI-HD, Advanced SRI Type 1)
Fine angle steer
Coded harmonic imaging
Virtual convex
Patient information database
Image archive on integrated CD/DVD and hard drive
Advanced 3D
Real-time automatic Doppler calculations
OB calculations
Fetal trending
Multigestational calculations
Hip dysplasia calculations
Gynecological calculations
Vascular calculations
Urological calculations
Renal calculations
Cardiac calculations
InSite™ capability
On-board electronic documentation
Auto CF/PW positioning feature
Privacy and security, including user and rights management
LOGIQView
Breast productivity package (Option)
Thyroid productivity package (Option)
External USB printer connection
Network printer support
HDMI output (available for compatible devices)

System overview *(cont.)*

Options
Tricefy®
DICOM
B-Flow
Auto IMT
Compare assistant
Scan assistant
OB measure assistant
Color quantification
Strain Elastography
Elastography quantification
Advanced privacy and security (vulnerability scan)
Power assistant and scan on battery
Storage bins
Shear wave elastography
Volume navigation
UGAP
Hepatic assistant
Coded Contrast Imaging
Stress echo
Cardiac Strain (Automatic Function Imaging)
On-board reporting
TVI
Wireless LAN
CW
DVR
Tablet tools
Advanced probes
KOIOS
SonoNT SonoIT
Advanced SRI Type 2

Peripheral options	
Integrated options for	• Digital B&W thermal printer • DVD video recorder
Digital color thermal printer	
Digital A6 color thermal printer	
Foot switch with programmable functionality	
Console protective cover	
LOGIQ smart device apps	• Photo Assistant • Remote Control
CRF-200U card reader (for Japan)	

Display modes	
Live and stored display format	• Full size and split screen – both w/ thumbnails. For still and CINE.
Review image format	• 4x4, and thumbnails. For still and CINE.
Timeline display	• Independent Dual B or CrossXBeam/ PW Display • CW • Top/bottom selectable display format • Side/side selectable format
Virtual convex	

Simultaneous capability
B or CrossXBeam/PW
B or CrossXBeam/CW (Option)
B or CrossXBeam/CFM or PDI
B/M
B/CrossXBeam
B-Flow/PW
Real-time Triplex Mode
B or CrossXBeam + CFM or PDI/PW

Selectable alternating modes
B or CrossXBeam/PW
B or CrossXBeam + CFM (PDI)/PW
B/CW (Option)

System overview *(cont.)*

Multi-image (split/quad screen)
Live and/or frozen
B or CrossXBeam + B or CrossXBeam/CFM or PDI
PW/M
Independent CINE playback

Display annotation		
Patient name: first, last, and middle		
Patient ID		
Alternate patient ID		
Age, sex, and date of birth		
Hospital name		
Date format: three types selectable	• MM/DD/YY • YY/MM/DD	• DD/MM/YY
Time format: two types selectable	• 24 hours	• 12 hours
Gestational age from	• LMP • EDD	• GA • BBT
Probe name		
Map names		
Probe orientation		
Depth scale marker		
Lateral scale marker		
Image depth		
Zoom depth		
B-Mode	• Gain • Imaging frequency • Gray map	• Dynamic range • Frame averaging • SRI-HD
M-Mode	• Gain • Time scale	• Dynamic range
Doppler Mode	• Gain • Sample volume depth and width • Spectrum inversion • Time scale • Doppler frequency	• Angle • Wall filter • Velocity and/or frequency scale • PRF

Display annotation *(cont.)*	
Color Flow Doppler Mode	• Line density • Frame averaging • Color Scale, 3 types: power, directional PDI, and symmetrical velocity imaging • Color velocity range and baseline • Color threshold marker • Color gain • PDI • Spectrum inversion • Doppler frequency
TGC curve	
Acoustic frame rate	
CINE gage, image number/frame number	
Body pattern: multiple human and animal types	
Application name	
Measurement results	
Operator message	
Displayed acoustic output	• TIS: Thermal Index Soft Tissue • TIC: Thermal Index Cranial (Bone) • TIB: Thermal Index Bone • MI: Mechanical Index
% of maximum power output	
Biopsy guideline and zone	
Heart rate	

General system parameters

System setup
Pre-programmed categories
User programmable preset capability
Factory default preset data
Languages: English, French, German, Spanish, Italian, Brazilian Portuguese, Russian, Greek, Swedish, Danish, Dutch, Finnish, Norwegian
OB report formats including Tokyo Univ., Osaka Univ., USA, Europe, ASUM, and WHO
User defined annotations
Body patterns
Customized comment home position
EZ Imaging: Simplified user interface for high volume workflow

General system parameters *(cont.)*

Complete user manual available on-board through Help (F1)

User manual and service manual are included on USB with each system. A printed manual is available upon request.

CINE memory/image memory

1 GB of CINE memory
Selectable CINE sequence for CINE review
Prospective CINE mark
Measurements/calculations and annotations on CINE playback
Scrolling timeline memory
Dual Image CINE display
Quad Image CINE display
CINE gauge and CINE image number display
CINE review loop
CINE review speed

Image storage

On-board database of patient information from past exams	
Storage formats: DICOM	• Compressed/uncompressed • Single/multi-frame • Enhanced (3D/4D) • With/without raw data
Export JPEG, JPEG 2000, WMV (MPEG 4) formats	
Storage devices	• USB memory stick: 64 MB to 64 GB (for exporting individual images/clips) • CD-R storage: 700 MB • DVD storage: -R (4.7 GB) • Hard drive image storage: ~730GB
Compare previous exam images with current exam	
Reload of archived data sets	

Connectivity

Ethernet network connection	
Wireless LAN 802.11ac/a/b/g/n (Option)	
DICOM 3.0	• Verify • Print • Store • Modality worklist • Storage commitment • Modality performed procedure step (MPPS) • Media exchange • Off network/mobile storage queue • Query/retrieve
Public SR template	
Structured Reporting – compatible with vascular, OB, cardiac, and breast standard	
InSite capability	
Advanced privacy and security (Option)	

Physiological input panel (Option)

Physiological input	• ECG, 1 channel • PCG, 1 channel • AUX, 1 channel • Dual R-Trigger • Pre-settable ECG R delay time • Pre-settable ECG position • Adjustable ECG gain control • Pre-settable PCG position • Adjustable PCG gain control • Pre-settable AUX position • Adjustable AUX gain control
Automatic heart rate display	
Auto Ejection Fraction	

Report writer (Option)

On-board reporting package automates report writing
Formats various exam results into a report suitable for printing or reviewing on a standard PC
Exam results include patient info, exam info, measurements, calculations, images, and comments with standard templates provided
Customizable templates

General system parameters *(cont.)*

Scanning parameters

Displayed imaging depth: 0 – 100 cm

Minimum depth of field: 0 – 2 cm (zoom) (probe dependent)

Maximum depth of field: 0 – 100 cm (probe dependent)

Continuous dynamic receive focus/continuous dynamic receive Aperture

Adjustable dynamic range	Adjustable field of view (FOV)

Image reverse: right/left

Image rotation of 0°, 90°, 180°, 270°

Digital B-Mode

Adjustable

- Acoustic power
- Dynamic range
- Gray scale map
- Speed of sound (application dependent)
- Scanning size (FOV or Angle)
  - Probe type dependent; consult individual probe specifications
- Gain
- Frame averaging
- Frequency
- Frame rate
- CrossXBeam
- B colorization
- Reject
- Suppression
- SRI-HD

Digital M-Mode

Adjustable

- Acoustic power
- Dynamic range
- Frequency
- M colorization
- Rejection
- Gain
- Gray scale map
- Sweep speed
- M display format

Anatomical M-Mode

M-Mode cursor adjustable at any plane

Can be activated from a CINE loop from a live or stored image

M & A capability

Available with Color Flow Mode

Digital Spectral Doppler Mode

Adjustable

- Acoustic power
- Dynamic range
- Transmit frequency
- PW colorization
- Sweep speed
- Sample volume length
- Spectrum inversion
- Baseline shift
- Time resolution
- Trace direction
- Gain
- Gray scale map
- Wall filter
- Velocity scale range
- Angle correction
- Steered linear
- Trace method
- Doppler auto trace
- Compression
- Trace sensitivity

Digital Color Flow Mode

Adjustable

- Acoustic power
- Gain
- Velocity scale range
- Wall filter
- Packet size
- Spatial filter
- Frame average
- Accumulation mode
- Flash suppression
- Shortcuts
- Color maps, including velocity-variance maps
- Line density
- Steering angle
- Threshold
- Auto ROI placement and steering on linear

Digital Power Doppler Imaging

Adjustable

- Acoustic power
- Gain
- Velocity scale range
- Wall filter
- Packet size
- Spatial filter
- Frame average
- Accumulation mode
- Shortcuts
- Color maps, including velocity-variance maps
- Line density
- Steering angle
- Threshold
- Flash suppression

Continuous Wave Doppler (Option)

Available on the following probes: M5Sc-D, P2D , P6D ,6S-D, 6Tc -RS

Steerable CW mode included

Adjustable

- Acoustic power
- Dynamic range
- Transmit frequency
- CW colorization
- Sweep speed
- Angle correction
- Trace method
- Baseline shift
- Compression
- Trace direction
- Gain
- Gray scale map
- Wall filter
- Velocity scale range
- Spectrum inversion
- Doppler auto trace
- Trace sensitivity

Automatic optimization

Optimize B-Mode image to help improve contrast resolution

Selectable amount of contrast resolution improvement (low, medium, high)

CTO (Continuous Tissue Optimization) – continuously adjusts B-Mode axial and lateral gain uniformity and overall gain level, suppressing the noise

Auto-spectral optimize – adjusts baseline, invert, PRF (on live image), and angle correction

Auto CF and PW positioning – adjusts ROI position, sample volume position, and steering

General system parameters *(cont.)*

Coded Harmonic Imaging

Available on all 2D and 4D probes

B-Flow (Option)

Available on the following probes: C1-6-D, C1-6VN-D, C2-7-D, C2-7VN-D, C2-9-D,C2-9VN-D, C3-10-D, L2-9-D, L2-9VN-D, L3-12-D, ML6-15-D,M5Sc-D, L8-18i-D, L6-24D

Background

Sensitivity/PRI

Acoustic power

Frequency

Line density

Frame average

Gray scale map

Tint map

Dynamic range

Rejection

Gain

Flash suppression

SRI-HD

Accumulation

Visualization

Radiant*flow*™

Easy, fast visualization of tiny vessels, displaying as a 3D effect

B Steer+

Available on the following probes: L2-9-D, L3-12-D, ML6-15-D, L8-18i-D, L2-9VN-D, L6-24

Coded contrast imaging (Option)

Available on the following probes: C1-6-D, C1-6VN-D, C2-9-D, C2-9VN-D, C2-7-D, C2-7VN-D, C3-10-D, IC5-9-D, L2-9-D, L2-9VN-D, L3-12-D, M5Sc-D, ML6-15-D, RAB6-D, RIC5-9-D

2 contrast timers

Timed updates: 0.05 – 10 seconds

Accumulation mode, seven levels

Maximum enhance mode

Flash

Time intensity curve (TIC) analysis

Parametric imaging

The LOGIQ Fortis is designed for compatibility with most commercially available ultrasound contrast agents. Because the availability of these agents is subject to government regulation and approval, product features intended for use with these agents may not be commercially marketed nor made available before the contrast agent is cleared for use. Contrast related product features are enabled only on systems for delivery to an authorized country or region of use.

LOGIQView

Extended field of view Imaging

Up to 160 cm (63") scan length

Available on all 2D imaging probes

For use in B-Mode

CrossXBeam is available on linear probes

Auto detection of scan direction

Pre-or post-process zoom

Rotation

Auto best fit on monitor

Measurements in B-Mode

3D

Allows unlimited rotation and planar translations

3D reconstruction from CINE sweep

Advanced 3D

Acquisition of color data

Automatic rendering

3D landscape technology

3D movie

General system parameters *(cont.)*

Real Time 4D (Option)

Acquisition modes	• Real Time 4D • Static 3D • Spatio-Temporal Image Correlation
Visualization modes	• 3D rendering (diverse surface and intensity projection modes) • Sectional planes (3 section planes perpendicular to each other) • Omniview • Volume contrast imaging – static • Volume contrast imaging – Omniview • Tomographic ultrasound imaging • Volume Analyses – VOCAL: semi-auto/manual segmentation tool (segmentation using touch screen) – 3D static only – Threshold Volume: measure volume above and below a threshold
Render mode	• Surface texture, surface smooth, max-min- and X-ray (average intensity projection), mix mode of two render modes • HD*live*™
SonoRender*live*	
Curved 3-point render start	
3D movie	
Scalpel: 3D cut tool	
Display format	• Quad: A-/B-/C-Plane/3D • Dual: A-Plane/3D • Single: 3D or A- or B- or C-Plane
Automated volume calculation – VOCAL II	
Betaview	

Volume navigation (Option)

Available on the following probes: C1-6VN-D, C2-9VN-D, C2-7VN-D, C3-10-D, L2-9VN-D, ML6-15-D, IC5-9-D, L8-18i-D, M5Sc-D	
Sensor-based acquisition	
Position markers	
Needle tip tracking	
Virtual tracking	
Auto image registration	
Tru3D feature includes:	Display of data in: main-, parallel-, angular-mode
Render modes: gray surface, texture, min-, max-, average-intensity	
Measurements: distance, angle, area, volume	
3D movie	

Scan assistant (Option)

Factory programs

User-defined programs

Steps include image annotations, mode transitions, basic imaging controls, and measurement initiation

Compare assistant (Option)

Allows side-by-side comparison of previous ultrasound and other modality exams during live scanning

Breast productivity package

Auto measurement

Worksheet summary includes measurements and locations for lesions and lymph nodes

Feature assessment

BI-RADS® assessment

User editable

Thyroid productivity package

Auto measurement

Worksheet summary includes measurements and locations for nodule, parathyroid, and lymph node

Feature assessment

TI-RADs assessment

User editable

Start Assistant

Automatically select category, probe, preset, or scan assistant from worklist exam description

Learn the category, probe, preset, and scan assistant based on exam description

Shear Wave Elastography (Option)

Available on the following probes: C1-6-D, C1-6VN-D, IC5-9-D, L2-9-D, L2-9VN-D,L3-12D, ML6-15-D, L8-18D

User programmable measurement display in kPa and meters per second

Single and dual view display

General system parameters *(cont.)*

Strain Elastography (Option)

Available on the following probes: ML6-15-D, L2-9-D, L2-9VN-D, L3-12-D, IC5-9-D, C2-9-D, C2-9VN-D, C1-6-D, C1-6VN-D, L8-18i-D, BE9CS-D

Relative analysis tool

UGAP (Option)

Available on the following probes: C1-6-D, C1-6VN-D, C2-9D, C2-9VN-D

Measures liver attenuation* (attenuation coefficient [dB/cm/MHz]) by auto measure algorithm with reference B-mode

Simple and 2D color map (attenuation color map and Measurement Position Indicator Map)

Quantitative flow analysis (Option)

Available in color and power Doppler

TVI (Option)

Available on the following probes: M5Sc-D, 6S-D, 6TC-RS, 6Tc-RS

Myocardial Doppler imaging with color overlay on tissue image

Tissue color overlay can be removed to show just the 2D image, still retaining the tissue velocity information

Curved anatomical M-Mode: free (curved) drawing of M-Mode generated from the cursor independent of the axial plane

Q-Analysis: multiple time-motion trace display from selected points in the myocardium

Stress echo (Option)

Advanced and flexible stress echo examination capabilities

Provides exercise and pharmacological protocol templates

6 default templates

Template editor for user configuration of existing templates or creation of new templates

Reference scan display during acquisition for stress level comparison (dual screen)

Baseline level/previous level selectable

Raw data continuous capture

Over 100 sec. available

Wall motion scoring (bulls-eye and segmental)

Smart stress: Automatically set up various scanning parameters (e.g. geometry, frequency, gain) according to same projection on previous level

Auto EF (Option)

Allows semi-automatic measurement of the global EF (Ejection Fraction)

User editable

Cardiac AFI (Option)

Allows assessment of the complete left ventricle with all segments at a glance by combining three longitudinal views into one comprehensive bulls-eye view

2D strain-based data moves into clinical practice

Virtual convex

Provides a convex field of view

Compatible with CrossXBeam

Available on all linear and sector probes

SRI-HD and Advanced SRI

Speckle reduction imaging

Provides multiple levels of speckle reduction

Compatible with side-by-side DualView display

Advanced SRI: two types selectable	• Type 1 – Compatible with all linear, convex, and sector probes • Type 2 (Option) – Compatible with OB/GYN application

CrossXBeam

Provides variable angle spatial compounding

Live side-by-side DualView display

Compatible with	• Color mode • SRI-HD • Virtual convex	• PW • Coded harmonic imaging

Available on all curved and linear probes

Controls available while “live”

Magnification Zoom: Magnifies the entire image on the screen without zoom ROI

Pan Zoom: Magnifies the display of the data within the ROI

HD Zoom: Magnifies the image within the zoom ROI with higher spatial resolution than original images

B/M/CrossXBeam-Mode	• Gain • Dynamic range • Framerate control • CrossXBeam angle	• TGC • Acoustic output • Sweep speed for M-Mode

General system parameters *(cont.)*

Controls available while "live" *(cont.)*		
PW-Mode	• Gain • Acoustic output • PRF • Wall filter • Sample volume gate: length, depth	• Dynamic range • Transmission frequency • Spectral averaging • Velocity scale
Color Flow Mode	• CFM gain • Acoustic output • Wall echo filter • Frame rate control • CFM frame averaging • Frequency/velocity baseline shift	• CFM velocity range • Packet size • CFM spatial filter • CFM line resolution

Controls available on "freeze" or recall	
Automatic optimization	
SRI-HD	
CrossXBeam – display non-compounded and compounded image simultaneously in split screen	
3D reconstruction from a stored CINE loop	
B/M/CrossXBeam mode	• Gray map optimization • TGC • Colorized B and M • Frame average (loops only) • Dynamic range
Anatomical M-Mode	
Magnification zoom	
Pan zoom	
Baseline shift	
Sweep speed	
PW mode	• Gray map • Baseline shift • Invert spectral wave form • Colorized spectrum • Quick angle correct • Post gain • Sweep speed • Compression • Display format • Angle correct • Auto angle correct
Color flow	• Overall gain (loops and stills) • Color map • Transparency map • Frame averaging (loops only) • CFM display threshold • Spectral invert for color/Doppler
Anatomical M-Mode on CINE loop	
4D	• Gray map, colorize • Post gain • Change display – single, dual, quad sectional or rendered

Measurements/calculations

General B-Mode
Depth and distance
Circumference (ellipse/trace)
Area (ellipse/trace)
Volume (ellipsoid)
% Stenosis (area or diameter)
Angle between two lines
Dual B-Mode capability

General M-Mode
M-Depth
Distance
Time
Slope
Heart rate

General Doppler measurements/calculations
Velocity
Time
A/B ratio (velocities/frequency ratio)
PS (Peak Systole)
ED (End Diastole)
PS/ED (PS/ED Ratio)
ED/PS (ED/PS Ratio)
AT (Acceleration Time)
ACCEL (Acceleration)
TAMAX (Time Averaged Maximum Velocity)
Volume flow (TAMEAN and vessel area)
Heart rate
PI (Pulsatility Index)
RI (Resistivity Index)

Real-time Doppler auto measurements/calculations
PS (Peak Systole)
ED (End Diastole)
MD (Minimum Diastole)
PI (Pulsatility Index)
RI (Resistivity Index)

Measurements/calculations *(cont.)*

Real-time Doppler auto measurements/calculations *(cont.)*
AT (Acceleration Time)
ACC (Acceleration)
PS/ED (PS/ED Ratio)
ED/PS (ED/PS Ratio)
HR (Heart Rate)
TAMAX (Time Averaged Maximum Velocity)
PVAL (Peak Velocity Value)
Volume Flow (TAMEAN and Vessel Area)

Abdominal measurements/calculations
Shear Elasto velocity
Shear Elasto stiffness
Attenuation rate
Attenuation coefficient
Summary reports

Small Parts measurements/calculations
Breast Lesion
Thyroid
Parathyroid
Lymph Node
Nodule
Isthmus AP
Shear Elasto velocity
Shear Elasto stiffness
Summary reports

OB measurements/calculations	
Gestational age by	• GS (Gestational Sac) • CRL (Crown Rump Length) • FL (Femur Length) • BPD (Biparietal Diameter) • AC (Abdominal Circumference) • HC (Head Circumference) • APTD x TTD (Anterior/Posterior Trunk Diameter by Transverse Trunk Diameter) • FTA (Fetal Trunk Cross-sectional Area) • HL (Humerus Length) • BD (Binocular Distance) • FT (Foot Length) • OFD (Occipital Frontal Diameter) • TAD (Transverse Abdominal Diameter) • TCD (Transverse Cerebellum Diameter) • THD (Thorax Transverse Diameter) • TIB (Tibia Length) • ULNA (Ulna Length) • OOD (Outer Orbital Diameter) • IOD (Inner Orbital Diameter) • FIB (Fibula length) • Radius (Radius length) • LV (Lateral Ventricle width) (= SL)
Fetal graphical trending	
Growth percentiles	
Multi-gestational calculations (4)	
Fetal qualitative description (anatomical survey)	
Fetal environmental description (biophysical profile)	
Programmable OB tables	
Over 20 selectable OB calculations	
Expanded worksheets	

Estimated fetal weight (EFW) by:
AC, BPD
AC, BPD, FL
AC, BPD, FL, HC
AC, FL
AC, FL, HC
AC, HC
BPD, APTD, TTD, FL
BPD, APTD, TTD, SL

Measurements/calculations *(cont.)*

Calculations and ratios
FL/BPD
FL/AC
FL/HC
HC/AC
CI (Cephalic Index)
AFI (Amniotic Fluid Index)
CTAR (Cardio-Thoracic Area Ratio)
Measurements/calculations by: Alexander, ASUM, ASUM 2001, Bahlmann, Baschat, Berkowitz, Bertagnoli, Brenner, Campbell, CFEF, Chervenak, Chitty, Doubilet, Ebing, Eik-Nes Goldstein, Hadlock, Hansmann, Hellman, Hill, Hohler, Jeanty, JSUM, Kramer, Kurmanavicius, Kurtz, Mari, Mayden, Mercer, Merz, Moore, Nelson, Osaka University, Paris, Pexsters, Rempen, Robinson, Shepard, Shepard/Warsoff, Sonek, Tokyo University, Tokyo/Shinozuka, WHO, Williams, Yarkoni

OB measure assistant
Allows automatic measurement of BPD, HC, FL, AC, and HL
User editable

SonoNT and SonoIT
SonoNT measures the contour detection of the NT border
SonoIT is a system supported measurement for Intracranial Translucency

GYN measurements/calculations
Right ovary length, width, height
Left ovary length, width, height
Uterus length, width, height
Cervix length, trace
Ovarian volume
ENDO (Endometrial thickness)
Ovarian RI
Uterine RI
Follicular measurements
Fibroid measurements
Summary reports
Mean Uterine Artery (Gomez) Doppler Measurement and graph
Qualitative description (anatomical survey)

Vascular measurements/calculations
SYS DCCA (Systolic Distal Common Carotid Artery)
DIAS DCCA (Diastolic Distal Common Carotid Artery)
SYS MCCA (Systolic Mid Common Carotid Artery)
DIAS MCCA (Diastolic Mid Common Carotid Artery)
SYS PCCA (Systolic Proximal Common Carotid Artery)
DIAS PCCA (Diastolic Proximal Common Carotid Artery)
SYS DICA (Systolic Distal Internal Carotid Artery)
DIAS DICA (Systolic Distal Internal Carotid Artery)
SYS MICA (Systolic Mid Internal Carotid Artery)
DIAS MICA (Diastolic Mid Internal Carotid Artery)
SYS PICA (Systolic Proximal Internal Carotid Artery)
DIAS PICA (Diastolic Proximal Internal Carotid Artery)
SYS DECA (Systolic Distal External Carotid Artery)
DIAS DECA (Diastolic Distal External Carotid Artery)
SYS PECA (Systolic Proximal External Carotid Artery)
DIAS PECA (Diastolic Proximal External Carotid Artery)
VERT (Systolic Vertebral Velocity)
SUBCLAV (Systolic Subclavian Velocity)
Automatic IMT
Summary reports

Urological calculations
Bladder volume
Prostate volume
Left/right renal volume
Generic volume
Post-void bladder volume
Pelvic floor measurements

Probes *(All Optional)*

BE9CS-D

Applications: urology

Biopsy guide: single angle, disposable (E8387M); single angle, reusable (E8387MA)

6S-D, sector probe

Applications: cardiac, pediatric cardiac

6Tc-RS, trans-esophageal probe

Applications: cardiac

TEE RS-DLP Adapter (H46352LK)

C1-6-D, XDclear™ convex probe

Applications: abdomen, OB/GYN, pediatric, peripheral vascular, general musculoskeletal

Biopsy guide: multi-angle, disposable with a reusable bracket (H4917VB)

C1-6VN-D, VNav inside XDclear convex probe

VNav sensor inside probe for Volume Navigation tracking without sensor cables

Applications: abdomen, OB/GYN, pediatric, peripheral vascular, general musculoskeletal

Biopsy guide: multi-angle, disposable with a reusable bracket (H4917VB)

C2-7-D, micro convex biopsy probe

Applications: abdomen, pediatric

Biopsy guide: multi-angle, disposable with a reusable bracket (H40482LK); multi-angle, with a reusable stainless bracket (H40482LL)

C2-7VN-D, VNav inside micro convex biopsy probe

VNav sensor inside probe for Volume Navigation tracking without sensor cables

Applications: abdomen, pediatric

Biopsy guide: multi-angle, disposable with a reusable bracket (H40482LK); multi-angle, with a reusable stainless bracket (H40482LL)

C2-9-D, XDclear convex probe

Applications: abdomen, OB/GYN, pediatric, peripheral vascular, neonatal, neonatal transcranial, general musculoskeletal

Biopsy guide: multi-angle, disposable with a reusable bracket (H4913BA)

C2-9VN-D, VNav inside XDclear convex probe

VNav sensor inside probe for Volume Navigation tracking without sensor cables

Applications: abdomen, OB/GYN, pediatric, peripheral vascular, neonatal, neonatal transcranial, general musculoskeletal

Biopsy guide: multi-angle, disposable with a reusable bracket (H4913BA)

C3-10-D, XDclear micro convex probe

Applications: abdomen, neonatal, pediatric, peripheral vascular, neonatal transcranial, small parts

IC5-9-D, micro convex probe

Applications: OB/GYN, urology

Biopsy guide: single angle, disposable with a disposable bracket (E8385MJ) or a reusable bracket (H40412LN)

L2-9-D, XDclear linear probe

Applications: peripheral vascular, small parts, pediatric, abdomen, OB/GYN, general musculoskeletal, superficial musculoskeletal, neonatal, neonatal transcranial

Biopsy guide: multi-angle, disposable with a reusable bracket (H44901AM)

L2-9VN-D, VNav inside XDclear linear probe

VNav sensor inside probe for Volume Navigation tracking without sensor cables

Applications: peripheral vascular, small parts, pediatric, abdomen, OB/GYN, general musculoskeletal, superficial musculoskeletal, neonatal, neonatal transcranial

Biopsy guide: multi-angle, disposable with a reusable bracket (H44901AM)

L3-12-D, linear probe

Applications: abdomen, OB, general musculoskeletal, superficial musculoskeletal, neonatal, neonatal transcranial, small parts, vascular

Biopsy guide: multi-angle, disposable with a reusable bracket (H78652PA)

L6-24-D, linear probe

Applications: general musculoskeletal, superficial musculoskeletal, pediatrics, thyroid

Probes *(cont.)*

L8-18i-D, linear probe

Applications: small parts, peripheral vascular, neonatal, neonatal transcranial, general musculoskeletal, superficial musculoskeletal, intraoperative

M5Sc-D, XDclear sector probe

Applications: adult cardiac, pediatric cardiac, adult cephalic, abdominal

Biopsy guide: multi-angle, disposable with a reusable bracket (H45561FC)

ML6-15-D, matrix array linear probe

Applications: abdomen, small parts, peripheral vascular, neonatal, pediatric, neonatal transcranial, general musculoskeletal, superficial musculoskeletal

Biopsy guide: multi-angle, disposable with a reusable bracket (H40432LJ)

P2D, CW split crystal probe

Applications: adult cardiac, pediatric cardiac, peripheral vascular, adult cephalic

P6D, CW split crystal probe

Applications: adult cardiac, pediatric cardiac, peripheral vascular, adult cephalic

RAB6-D, convex volume probe

Applications: abdomen, OB/GYN, pediatric, neonatal

Biopsy guide: single angle, reusable bracket (H46701AE)

RIC5-9-D, convex volume probe

Applications: OB/GYN, urology

Biopsy guide: single angle, reusable (H46721R)

External Inputs and outputs (not including on-board peripherals)

HDMI

Ethernet

Multiple USB 3.0 ports

Safety conformance

The LOGIQ Fortis is:

Classified to ANSI/AAMI ES60601-1 2005 R1 2012 Medical Electrical Equipment, Part 1: General Requirements for Safety by a Nationally Recognized Test Lab

Certified to CSA CAN/CSA-C22.2 NO. 60601-1:14 General requirements for safety

CE Marked to EU Medical Device Regulation MDR 2017-745 and Council Directive 93/42/EEC on Medical Devices and conforms to the following standards for safety:

- IEC/EN 60601-1 Edition 3.1 Medical electrical equipment – Part 1: General requirements for basic safety and essential performance
- IEC/EN 60601-1-2 Medial electrical equipment – Parts 1-2: General requirements for safety – Collateral standard: Electromagnetic compatibility – requirements and tests
- IEC/EN 60601-1-6 Medical electrical equipment Parts 1 -6: General requirements for basic safety and essential performance – Collateral standard: usability
- IEC/EN 60601-2-37 Medical electrical equipment – Parts 2-37: Particular requirements for the safety of ultrasonic medical diagnostic and monitoring equipment
- IEC 61157 (Standard means for the reporting of the acoustic output of medical diagnostic ultrasonic equipment)
- IEC/EN 62366 Application of usability engineering to medical devices
- IEC/EN 62304 Software life cycle processes
- IEC/EN 62359 Ultrasonic – Field characterization – Test methods for the determination of thermal and mechanical indices related to medical diagnostic ultrasonic fields
- EN ISO 15223-1: Symbols to be used with medical device labels, labelling, and information to be supplied
- ISO 10993-1 Biological evaluation of medical devices – Part 1: Evaluation and testing
- ISO14971:2012 (Medical devices – Application of risk management to medical devices)
- EMC Emissions Group 1, Class A device requirements as per sub-clause 4.2 of CISPR 11
- WEEE (Waste Electrical and Electronic Equipment)
- ROHS according to 2011/65/EU including national deviations
- Wireless equipment shall be certified to FCC, RED, and Japan Radio Law.
- Medical Device Good Manufacturing Practice Manual issued by the FDA (Food and Drug Administration, Department of Health, USA)

Supplement: cardiac measurements/calculations

B-Mode measurements	
Aorta	• Aortic Root Diameter (Ao Root Diam) • Aortic Arch Diameter (Ao Arch Diam) • Ascending Aortic Diameter (Ao Asc Diam) • Descending Aortic Diameter (Ao Desc Diam) • Aorta Isthmus (Ao Isthmus) • Aorta (Ao st junct)
Aortic valve	• Aortic Valve Cusp Separation (AV Cusp) • Aortic Valve Area Planimetry (AVA Planimetry) • Trans AVA
Left atrium	• Left Atrium Diameter (LA Diam) • LA Length (LA Major) • LA Width (LA Minor) • Left Atrium Diameter to AoRoot Diameter Ratio (LA/Ao ratio) • Left Atrium Area (LAA(d), LAA(s)) • Left Atrium Volume, Single Plane, Method of Disk (LAEDV A2C, LAESV A2C) (LAEDV A4C, LAESV A4C), (LAEDV A-L, LAEDV Index A-L, LAESV A-L, LAESV Index A-L)

B-Mode measurements *(cont.)*	
Left ventricle	• Left Ventricle Mass (LVPWd, LVPWs) • Left Ventricle Volume, Teichholz/Cubic (LVIDd, LVI Ds) • Left Ventricle Internal Diameter (LVIDd, LVI Ds) Left Ventricle Length (LVLd, LVLs) • Left Ventricle Outflow Tract Diameter (LVOT Diam) • Left Ventricle Posterior Wall Thickness (LVPWd, LVPWs) • Left Ventricle Length (LV Major) • Left Ventricle Width (LV Minor) • Left Ventricle Outflow Tract Area (LVOT) • Left Ventricle Area, Two Chamber/Four Chamber/Short Axis (LVA (d), LVA (s)) • Left Ventricle Endocardial Area, Width (LVA (d), LVA(s)) • Left Ventricle Epicardial Area, Length (LVAepi (d), LVAepi (s)) • Left Ventricle Mass Index (LVPWd, LVPWs) • Ejection Fraction, Teichholz/Cube (LVIDd, LVIDs) • Left Ventricle Posterior Wall Fractional Shortening (LVPWd, LVPWs) • Left Ventricle Stroke Index, Teichholz/Cube (LVIDd, LVIDs and Body Surface Area) • Left Ventricle Fractional Shortening (LVIDd, LVIDs) • Left Ventricle Stroke Volume, Teichholz/Cubic (LVIDd, LVIDs) • Left Ventricle Stroke Index, Single Plane, Two Chamber, Method of Disk (LVI Dd, LVIDs, LVSd, LVSs) • Left Ventricle Stroke Index, Single Plane, Four Chamber, Method of Disk (LVI Dd, LVIDs, LVSd, LVSs) • Left Ventricle Stroke Index, Bi-Plane, Bullet, Method of Disk (LVAd, LVAs) • Interventricular Septum (IVS) • Left Ventricle Internal Diameter (LVI D) • Left Ventricle Posterior Wall Thickness (LVPW)

Supplement: cardiac measurements/calculations *(cont.)*

B-Mode measurements *(cont.)*	
Mitral valve	• Mitral Valve Annulus Diameter (MV Ann Diam) • E-Point-to-Septum Separation (EPSS) • Mitral Valve Area Planimetry (MVA Planimetry)
Pulmonic valve	• Pulmonic Valve Area (PV Planimetry) • Pulmonic Valve Annulus Diameter (PV Annulus Diam) • Pulmonic Diameter (Pulmonic Diam)
Right atrium	• Right Atrium Diameter, Length (RAD Ma) • Right Atrium Diameter, Width (RAD Mi) • Right Atrium Area (RAA) • Right Atrium Volume, Single Plane, Method of Disk (RAAd) • Right Atrium Volume, Systolic, Single Plane, Method of Disk (RAAs)
Right ventricle	• Right Ventricle Outflow Tract Area (RVOT Planimetry) • Left Pulmonary Artery Area (LPA Area) • Right Pulmonary Artery Area (RPA Area) • Right Ventricle Internal Diameter (RVIDd, RVIDs) • Right Ventricle Diameter, Length (RVD Ma) • Right Ventricle Diameter, Width (RVD Mi) • Right Ventricle Wall Thickness (RVAWd, RVAWs) • Right Ventricle Outflow Tract Diameter (RVOT Diam) • Left Pulmonary Artery (LPA) • Main Pulmonary Artery (MPA) • Right Pulmonary Artery (RPA)
System inferior vena cava	• Systemic Vein Diameter (Systemic Diam) • Patent Ductus Arterosis Diameter (PDA Diam) • Pericard Effusion (PEs) • Patent Foramen Ovale Diameter (PFO Diam) • Ventricular Septal Defect Diameter (VSD Diam) • Interventricular Septum (IVS) Fractional Shortening (IVSd, IVSs)
Tricuspid valve	• Tricuspid Valve Area (TV Panimetry) • Tricuspid Valve Annulus Diameter (TV Annulus Diam)

M-Mode measurements	
Aorta	• Aortic Root Diameter (Ao Root Diam) • Aortic Valve • Aortic Valve Diameter (AV Diam) • Aortic Valve Cusp separation (AV Cusp) • Aortic Valve Ejection Time (LVET)
Left atrium	• Left Atrium Diameter to AoRoot Diameter Ratio (LA/Ao Ratio) • Left Atrium Diameter (LA Diam)
Left ventricle	• Left Ventricle Volume, Teichholz/Cubic (LVIDd, LVI Ds) • Left Ventricle Internal Diameter (LVIDd, LVI Ds) • Left Ventricle Posterior Wall Thickness (LVPWd, LVPWs) • Left Ventricle Ejection Time (LVET) • Left Ventricle Pre-Ejection Period (LVPEP) • Interventricular Septum (IVS) • Left Ventricle Internal Diameter (LVI D) • Left Ventricle Posterior Wall Thickness (LVPW)
Mitral valve	• E-Point-to-Septum Separation (EPSS) • Mitral Valve Leaflet Separation (D-E Excursion) • Mitral Valve Anterior Leaflet Excursion (D-E Excursion) • Mitral Valve D-E Slope (D-E Slope) • Mitral Valve E-F Slope (E-F Slope) • Mitral Annular Plane Systolic Excursion (MAPSE)
Pulmonic valve	• QRS Complex to End of Envelope (Q-PV close)
Right ventricle	• Right Ventricle Internal Diameter (RVIDd, RVIDs) • Right Ventricle Wall Thickness (RVAWd, RVAWs) • Right Ventricle Outflow Tract Diameter (RVOT Diam) • Right Ventricle Ejection Time (RVET) • Right Ventricle Pre-Ejection Period (RVPEP)
System	• Pericard Effusion (PE (d))
Tricuspid valve	• QRS Complex to End of Envelope (Q-TV close) • Tricuspid Annular Plane Systolic Excursion (TAPSE)

Supplement: cardiac measurements/calculations *(cont.)*

Doppler Mode measurements	
Aortic valve	• Aortic Insufficiency Mean Pressure Gradient (AR Trace) • Aortic Insufficiency Peak Pressure Gradient (AR Vmax) • Aortic Insufficiency End Diastole Pressure Gradient (AR Trace) • Aortic Insufficiency Mean Velocity (AR Trace) • Aortic Insufficiency Velocity Time Integral (AR Trace) • Aortic Valve Mean Velocity (AV Trace) • Aortic Valve Velocity Time Integral (AV Trace) • Aortic Valve Mean Pressure Gradient (AV Trace) • Aortic Valve Peak Pressure Gradient (AR Vmax) • Aortic Insufficiency Peak Velocity (AR Vmax) • Aortic Insufficiency End-Diastolic Velocity (AR Trace) • Aortic Valve Peak Velocity (AV Vmax) • Aortic Valve Peak Velocity at Point E (AV Vmax) • Aorta Proximal Coarctation (Coarc Pre-Duct) • Aorta Distal Coarctation (Coarc Post-Duct) • Aortic Valve Insufficiency Pressure Half Time (AR PHT) • Aortic Valve Flow Acceleration (AV Trace) • Aortic Valve Pressure Half Time (AV Trace) • Aortic Valve Acceleration Time (AV Acc Time) • Aortic Valve Deceleration Time (AV Dec Time) • Aortic Valve Ejection Time (AVET) • Aortic Valve Acceleration to Ejection Time Ratio (AV Acc Time, AVET) • Aortic Valve Area(VTI): AVA (Vmax)
Left ventricle	• Left Ventricle Outflow Tract Peak Pressure Gradient (LVOT Vmax) • Left Ventricle Outflow Tract Peak Velocity (LVOT Vmax) • Left Ventricle Outflow Tract Mean Pressure Gradient (LVOT Trace) • Left Ventricle Outflow Tract Mean Velocity (LVOT Trace) • Left Ventricle Outflow Tract Velocity Time Integral (LVOT Trace) • Left Ventricle Ejection Time (LVET)
Mitral valve	• E' Early diastolic mitral valve annular velocity (E') • E' Averaged Early diastolic mitral valve annular velocity (E' Avg) • E' Lat Early diastolic mitral valve lateral annular velocity (E' Lat) • E' Medial Early diastolic mitral valve medial annular velocity (E' Medial) • E' Sept Early diastolic mitral valve septal annular velocity (E'Sept)

Doppler Mode measurements *(cont.)*	
Mitral valve *(cont.)*	• Mitral inflow E velocity to E' ratio (E/E') • Mitral inflow E velocity to E' Avg ratio (E/E' Avg) • Mitral inflow E velocity to E' Lat ratio (E/E' Lat) • Medial Mitral inflow E velocity to E' Medial ratio (E/E') • Mitral inflow E velocity to E' Sept ratio (E/E' Sept) • Mitral Valve Regurgitant Flow Acceleration (MR Trace) • Mitral Valve Regurgitant Mean Velocity (MR Trace) • Mitral Regurgitant Mean Pressure Gradient (MR Trace) • Mitral Regurgitant Velocity Time Integral (MR Trace) • Mitral Valve Mean Velocity (MV Trace) • Mitral Valve Velocity Time Integral (MV Trace) • Mitral Valve Mean Pressure Gradient (MV Trace) • Mitral Regurgitant Peak Pressure Gradient (MR Vmax) • Mitral Valve Peak Pressure Gradient (MV Vmax) • Mitral Regurgitant Peak Velocity (MR Vmax) • Mitral Valve Peak Velocity (MV Vmax) • Mitral Valve Velocity Peak A (MV A Velocity) • Mitral Valve Velocity Peak E (MV E Velocity) • Mitral Valve Area According to PHT (MV PHT) • Mitral Valve Flow Deceleration (MV DecT) • Mitral Valve Pressure Half Time (MV PHT) • Mitral Valve Flow Acceleration (MV AccT) • Mitral Valve E-Peak to A-Peak Ratio (A-C and D-E) (MV E/ARatio) • Mitral Valve Acceleration Time (MV Acc Time) • Mitral Valve Deceleration Time (MV Dec Time) • Mitral Valve Ejection Time ((MVET) • Mitral Valve A-Wave Duration (MV A Dur) • Mitral Valve Time to Peak (MV TTP) • Mitral Valve Acceleration Time/Deceleration Time Ratio (MV Acc/Dec Time) • Stroke Volume Index by Mitral Flow (MVA Planimetry, MVTrace)
Pulmonic valve	• Pulmonic Insufficiency Peak Pressure Gradient (PR Vmax) • Pulmonic Insufficiency End-Diastolic Pressure Gradient (PR Trace) • Pulmonic Valve Peak Pressure Gradient (PV Vmax) • Pulmonic Insufficiency Peak Velocity (PR Vmax)

Supplement: cardiac measurements/calculations *(cont.)*

Doppler Mode measurements *(cont.)*	
Pulmonic valve *(cont.)*	• Pulmonic Insufficiency End-Diastolic Velocity (Prend Vmax) • Pulmonic Valve Peak Velocity (PV Vmax) • Pulmonary Artery Diastolic Pressure (PV Trace) • Pulmonic Insufficiency Mean Pressure Gradient (PR Trace) • Pulmonic Valve Mean Pressure Gradient (PV Trace) • Pulmonic Insufficiency Mean Square Root Velocity (PR Trace) • Pulmonic Insufficiency Velocity Time Integral (PR Trace) • Pulmonic Valve Mean Velocity (PV Trace) • Pulmonic Valve Velocity Time Integral (PV Trace) • Pulmonic Insufficiency Pressure Half Time (PR PHT) • Pulmonic Valve Flow Acceleration (PV Acc Time) • Pulmonic Valve Acceleration Time (PV Acc Time) • Pulmonic Valve Ejection Time (PVET) • QRS Complex to End of Envelope (Q-to-PV Close) • Pulmonic Valve Acceleration to Ejection TIme Ratio (PV Acc Time, PVET)
Right ventricle	• Right Ventricle Outflow Tract Peak Pressure Gradient (RVOT Vmax) • Right Ventricle Outflow Tract Peak Velocity (RVOT Vmax) • Right Ventricle Outflow Tract Velocity Time Integral (RVOT Trace) • Right Ventricle Ejection Time (RV Trace) • Stroke Volume by Pulmonic Flow (RVOT Planimetry, RVOT Trace) • Right Ventricle Stroke Volume Index by Pulmonic Flow (RVOT Planimetry, RVOT Trace)
System	• Pulmonary Artery Peak Velocity (PV Vmax) • Pulmonary Vein Velocity Peak A (Reverse) (P Vein A) • Pulmonary Vein Peak Velocity (P Vein D, P Vein S) • Systemic Vein Peak Velocity (PDA Diastolic, PDA Systolic) • Ventricular Septal Defect Peak Velocity (VSD Vmax) • Atrial Septal Defect (ASD Diastolic, ASD Systolic) • Pulmonary Vein A-Wave Duration (P Vein A Dur) • IsoVolumetric Relaxation Time (IVRT) • IsoVolumetric Contraction Time (IVCT)

Doppler Mode measurements *(cont.)*	
System *(cont.)*	• Pulmonary Vein S/D Ratio (P Vein D, P Vein S) • Ventricular Septal Defect Peak Pressure Gradient (VSD Vmax) • Pulmonic-to-Systemic Flow Ratio (Qp/Qs)
Tricuspid valve	• Tricuspid Regurgitant Peak Pressure Gradient (TR Vmax) • Tricuspid Valve Peak Pressure Gradient (TV Vmax) • Tricuspid Regurgitant Peak Velocity (TR Vmax) • Tricuspid Valve Peak Velocity (TV Vmax) • Tricuspid Valve Velocity Peak A (TV A Velocity) • Tricuspid Valve Velocity Peak E (TV E Velocity) • Tricuspid Regurgitant Mean Pressure Gradient (TR Trace) • Tricuspid Valve Mean Pressure Gradient (TV Trace) • Tricuspid Regurgitant Mean Velocity (TR Trace) • Tricuspid Regurgitant Velocity Time Integral (TR Trace) • Tricuspid Valve Mean Velocity (TV Trace) • Tricuspid Valve Velocity Time Integral (TV Trace) • Tricuspid Valve Time to Peak (TV TTP) • Tricuspid Valve Ejection Time (TV Acc/Dec Time) • Tricuspid Valve A-Wave Duration (TV A Dur) • QRS Complex to End of Envelope (Q-TV Close) • Tricuspid Valve Pressure Half Time (TV PHT) • Stroke Volume by Tricuspid Flow (TV Planimetry, TV Trace) • Tricuspid Valve E-Peak to A-Peak Ratio (TV E/A Velocity)

Color Flow Mode measurements	
Aortic valve	• Proximal Isovelocity Surface Area: Regurgitant Orifice Area (AR Radius) • Proximal Isovelocity Surface Area: Radius of Aliased Point (AR Radius) • Proximal Isovelocity Surface Area: Regurgitant Flow (AR Trace) • Proximal Isovelocity Surface Area: Regurgitant Volume Flow (AR Trace) • Proximal Isovelocity Surface Area: Aliased Velocity (AR Vmax)

Supplement: cardiac measurements/calculations *(cont.)*

Color Flow Mode measurements *(cont.)*	
Mitral valve	• Proximal Isovelocity Surface Area: Regurgitant Orifice Area (MR Radius) • Proximal Isovelocity Surface Area: Radius of Aliased Point (MR Radius) • Proximal Isovelocity Surface Area: Regurgitant Flow (MR Trace) • Proximal Isovelocity Surface Area: Regurgitant Volume Flow (MR Trace) • Proximal Isovelocity Surface Area: Aliased Velocity (MR Vmax)

Combination Mode measurements	
Aortic valve	• Aortic Valve Area (Ao Root Diam, LVOT Vmax, AV Vmax) • Aortic Valve Area by Continuity Equation by Peak Velocity (Ao Root Diam, LVOT Vmax, AV Vmax) • Stroke Volume by Aortic Flow (AVA Planimetry, AV Trace) • Cardiac Output by Aortic Flow (AVA Planimetry, AV Trace, HR) • Aortic Valve Area by Continuity Equation VTI (Ao Root Diam, LVOT Vmax, AV Trace)
Left ventricle	• Cardiac Output, Teichholz/Cubic (LVIDd, LVI Ds, HR) • Cardiac Output Two-Chamber, Single Plane, Area-Length/Method of Disk (Simpson) (LVAd, LVAs, HR) • Cardiac Output Four-Chamber, Single Plane, Area-Length/Method of Disk (Simpson) (LVAd, LVAs, HR) • Ejection Fraction Two-Chamber, Single Plane, Area-Length/Method of Disk (Simpson) (LVAd, LVAs) • Ejection Fraction Four-Chamber, Single Plane, Area-Length/Method of Disk (Simpson) (LVAd, LVAs) • Left Ventricle Stroke Volume, Single Plane, Two-Chamber/Four-Chamber, Area-Length (LVAd, LVAs) • Left Ventricle Stroke Volume, Single Plane, Two-Chamber/Four-Chamber, Method of Disk (Simpson) (LVIDd, LVIDs, LVAd, LVAs) • Left Ventricle Volume, Two-Chamber/ Four-Chamber, Area-Length (LVAd, LVAs)

Combination Mode measurements *(cont.)*	
Left ventricle *(cont.)*	• Ejection Fraction, Bi-Plane, Method of Disk (LVAd, LVAs, 2CH, 4CH) • Left Ventricle Stroke Volume, Bi-Plane, Method of Disk (LVAd, LVAs, 2CH, 4CH) • Left Ventricle Volume, Bi-Plane, Method of Disk (LVAd, LVAs, 2CH, 4CH) • Left Ventricle Stroke Index, Single Plane, Two-Chamber/Four-Chamber, Area-Length (LVSd, LVSs and BSA) • Left Ventricle Volume, Single Plane, Two-Chamber/Four-Chamber, Method of Disk (LVAd, LVAs) • Left Ventricle Volume, Apical View, Long Axis, Method of Disk (LVAd, LVAs)
Mitral valve	• Stroke Volume by Mitral Flow (MVA Planimetry, MV Trace) • Cardiac Output by Mitral Flow (MVA Planimetry, MV Trace, HR)
Pulmonic valve	• Stroke Volume by Pulmonic Flow (PV Planimetry, PV Trace) • Cardiac Output by Pulmonic Flow (PV Planimetry, PV Trace, HR)
Tricuspid valve	• Cardiac Output by Tricuspid Flow (TV Planimetry, TV Trace, HR)

Cardiac worksheet
Parameter: lists the mode, the measurement folder, and the specific measurement
Measured Value: Up to six measurement values for each item. Average, maximum, minimum, or last

Generic study in cardiology
Stroke Volume (SV)
Cardiac Output (CO)

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LOGIQ Fortis™

Probe Guide

The LOGIQ Fortis is GE's premium ultrasound imaging system designed for abdominal, vascular, obstetric, gynecologic, neonatal, pediatric, urological, transcranial, cardiac, and small parts applications.

Featuring XDclear™ Technology

gehealthcare.com

	Description	Applications	FOV	Bandwidth	Biopsy Guide	Volume Navigation
	CONVEX					
 C1-6-D C1-6VN-D*	XDclear broad-spectrum convex probe	Abdominal, Obstetrics, Gynecology, Vascular, Musculoskeletal	80°	1 – 6 MHz	Multi-angle disposable with a reusable bracket	Yes * Internal VNav sensor, does not require an external bracket
 C2-9-D C2-9VN-D*	XDclear broad-spectrum convex probe	Abdominal, Obstetrics, Gynecology, Pediatrics, Vascular, Musculoskeletal	80°	2 – 9 MHz	Multi-angle disposable with a reusable bracket	Yes * Internal VNav sensor, does not require an external bracket
 C3-10-D	XDclear broad-spectrum convex probe	Neonatal, Pediatrics, Vascular, Small Parts	95°	2 – 11 MHz	No	Yes
 IC5-9-D	Broad-spectrum micro-convex intra-cavitary probe	Obstetrics, Gynecology, Urology	180°	3 – 10 MHz	Single-angle disposable or single-angle reusable	Yes
 C2-7-D C2-7VN-D*	Broad spectrum convex probe	Abdominal	110°	1 – 6 MHz	Multi-angle disposable with reusable bracket options	Yes * Internal VNav sensor, does not require an external bracket
	LINEAR					
 L2-9-D L2-9-VN-D*	XDclear broad-spectrum linear probe	Vascular, Small Parts, Musculoskeletal, Neonatal Cephalic, Pediatric, Abdominal, Obstetrical	44 mm	2 – 10 MHz	Multi-angle disposable with a reusable bracket	Yes * Internal VNav sensor, does not require an external bracket
 L3-12-D	Broad-spectrum linear probe	Abdominal, Obstetric, Vascular, Musculoskeletal, Small Parts, Pediatric, Neonatal	51 mm	2 – 11 MHz	Multi-angle disposable with a disposable bracket	Yes
 L6-24-D	Broad-spectrum linear probe	Musculoskeletal	26 mm	6 – 20 MHz	No	No
 L8-18i-D	Broad-spectrum linear probe	Small Parts, Vascular, Intraoperative, Neonatal	25 mm	4 – 15 MHz	No	Yes
 ML6-15-D	Broad-spectrum linear matrix array probe	Vascular, Small Parts, Neonatal, Pediatrics	50 mm	4 – 16 MHz	Multi-angle disposable with a reusable bracket	Yes

	Description	Applications	FOV	Bandwidth	Biopsy Guide	Volume Navigation
	SECTOR					
 M5Sc-D	XDclear broad-spectrum sector probe	Cardiac, Transcranial, Abdominal	120°	1 – 5 MHz	Multi-angle disposable with a reusable bracket	Yes
 6S-D	Broad-spectrum sector probe	Cardiac	115°	2 – 8 MHz	No	No
	REAL-TIME 4D					
 RAB6-D	Broad-spectrum real-time 4D probe	Abdominal, Obstetrics, Gynecology, Pediatrics	80°	2 – 8 MHz	Single-angle disposable with a reusable bracket	No
 RIC5-9-D	Broad-spectrum real-time 4D micro-convex probe	Obstetrics, Gynecology, Urology	180°	3 – 10 MHz	Single-angle reusable	No
	SPECIALTY					
 P2D	CW split crystal pencil probe	Cardiac, Vascular	N/A	1 – 3 MHz	No	No
 P6D	CW split crystal pencil probe	Cardiac, Vascular, Transcranial	N/A	5 – 7 MHz	No	No
 6Tc-RS	TEE probe	Cardiac	90°	2 – 8 MHz	No	No
 BE9CS-D	Wideband bi-plane micro-convex probe	Urology, Endocavity	133°	3 – 12 MHz	Single-angle disposable bracket or reusable bracket	No

For probe care and cleaning information, visit www.gehealthcare.com/transducers.

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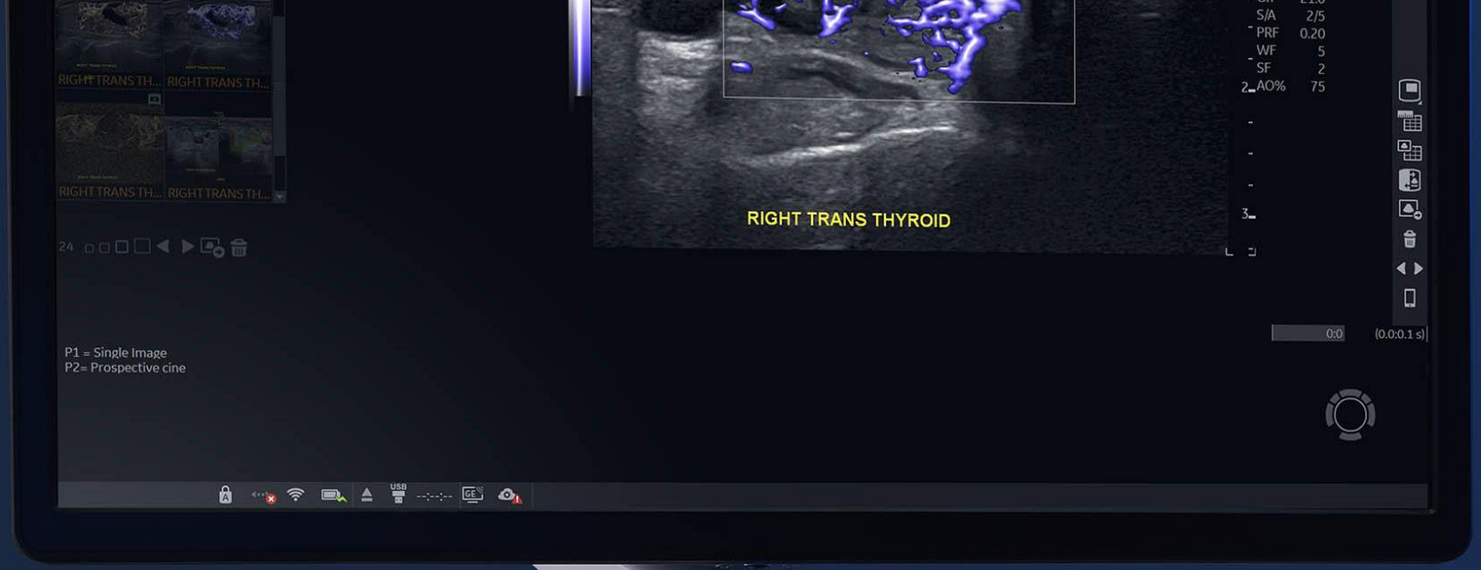

LOGIQ Fortis

Product Tree EMEA

Rev. 5

May 12th, 2022

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System overview:

LOGIQ Fortis

Probes:

- C1-6(VN)-D
- C2-9(VN)-D
- C3-10-D
- C2-7(VN)-D
- L2-9(VN)-D
- L6-24-D
- L8-18i-D
- L3-12-D
- ML6-15-D
- M5Sc-D
- 6S-D
- 6TC-RS
- IC5-9-D
- RIC5-9-D
- RAB6-D
- BE9CS-D
- P2D
- P6D

SW Options:

- Coded Contrast Imaging
- UGAP
- Shearwave Elastography
- Strain Elastography
- Cardiac AFI
- DVR
- Report Writer
- Stress Echo
- Tricefy
- LOGIQ Apps
- Scan Assistant
- Auto IMT
- B-Steer+
- Flow QA
- Measure Assist Breast
- Measure Assist OB
- SRI HD Type 2
- SonoNT/SonoIT

HW Options:

- CW Doppler
- Pencil CW Kit
- Realtime 4D
- Power Assistant
- Scan on Battery
- Wireless LAN
- S-Video Kit

ECG Options:

- ECG incl. Auto EF, TVI
- ECG cord – IEC & AHA

Volume Navigation:

- Volume Navigation
- Dual Probe Sensors
- Navigation Stand
- eTrax Tracker
- Virtual Tracker
- OmniTrax (Active Tracker) Kit
- MR Active Tracker
- V Nav brackets

Printers:

- BW printer UP-D898DC
- Color printer UP-D25MD
- Inkjet printer

Accessories:

- Tray Box
- Probe Holder Inserts
- Footswitch – 3 buttons
- Protective cover
- UPS

Veterinary Use:

- Veterinary Kit
- Probe Label Kit

EU offering only

EM / FSA offering only

Product Tree LOGIQ Fortis		
Item Number	**Description**	**Description / Comments**
	Base System	
H43302LA	LOGIQ Fortis Console	

Standard Features (see datasheet for more information)

23.8” Wide-screen HDU monitor

12,1” High-resolution Touch Display

Power Cord 220V for EU

4 Active Probe Ports, 1 Parking port

Gel-Warmer

Mid Cabinet

LOGIQView

Privacy & Security Package – SonoDefense Solution

EU offering only

EM / FSA offering only

Product Tree LOGIQ Fortis

Item Number	Description	Description / Comments
	Power Cords	
H46342LZ	Power Cord 220V for EU	Just as a replacement - one is included in the standard config
H46712LM	Power cord UK	Power cord for UK
H46712LR	Power cord ISRAEL	Power cord for Israel
H46712LS	Power cord SWISS	Power cord for Swiss
H46712LT	Power cord DENMARK	Power cord for Denmark
H46692LK	Power cord DENMARK Grey	Power cord DK STD C13 GRY
H46722LD	Power cord ITALY	Power cord for Italy - only order if needed, standard EU power cord should be feasible for most Italian installations
H46712LW	Power cord US	Power cord US
H46712LN	Power cord South Africa	Power cord South Africa
	Alphanumeric Keyboards	
H43342LR	AN Keyboard ENGLISH	AN Keyboard ENGLISH
H43342LS	AN Keyboard GERMAN	AN Keyboard GERMAN
H43342LT	AN Keyboard FRENCH	AN Keyboard FRENCH
H43342LW	AN Keyboard GREEK	AN Keyboard GREEK
H43342LY	AN Keyboard NORWEGIAN	AN Keyboard NORWEGIAN
H43342LZ	AN Keyboard RUSSIAN	AN Keyboard RUSSIAN
H43352LA	AN Keyboard SWEDISH	AN Keyboard SWEDISH

EU offering only

EM / FSA offering only

Product Tree LOGIQ Fortis

Item Number	Description	Item Number	Description
Manuals and Documentation (Hard Copies) Contains: Basic User manual (translated), Advanced Reference Manual (English), Release Notes (translated), Service Manual (English)			
H43312LA	LOGIQ Fortis Italian DOCs Kit	H43312LW	LOGIQ Fortis Latvian DOCs Kit
H43312LB	LOGIQ Fortis Bulgarian DOCs Kit	H43312LZ	LOGIQ Fortis Lithuanian DOCs Kt
H43312LC	LOGIQ Fortis Croatian DOCs Kit	H43322LA	LOGIQ Fortis Norwegian DOCs Kit
H43312LE	LOGIQ Fortis Czech DOCs Kit	H43322LC	LOGIQ Fortis Euro Port DOCs Kit
H43312LF	LOGIQ Fortis Danish DOCs Kit	H43322LD	LOGIQ Fortis Polish DOCs Kit
H43312LG	LOGIQ Fortis German DOCs Kit	H43322LE	LOGIQ Fortis Romanian DOCs Kit
H43312LH	LOGIQ Fortis Dutch DOCs Kit	H43322LF	LOGIQ Fortis Serbian DOCs Kit
H43312LJ	LOGIQ Fortis English DOCs Kit	H43322LG	LOGIQ Fortis Swedish DOCs Kit
H43312LK	LOGIQ Fortis Estonian DOCs Kit	H43322LH	LOGIQ Fortis Slovakian DOCs Kit
H43312LL	LOGIQ Fortis French DOCs Kit	H43322LJ	LOGIQ Fortis Slovenian DOCs Kit
H43312LM	LOGIQ Fortis Finnish DOCs Kit	H43322LK	LOGIQ Fortis Spanish DOCs Kit
H43312LN	LOGIQ Fortis Greek DOCs Kit	H43322LL	LOGIQ Fortis Turkish DOCs Kit
H43312LP	LOGIQ Fortis Hungarian DOCs Kit	H43322LM	LOGIQ Fortis Russian DOCs Kit
H43312LS	LOGIQ Fortis Ukrainian DOCs Kit	H43322LN	LOGIQ Fortis R3 Advanced Reference Manual - English
H43322LS	LOGIQ Fortis R3 Kazakhstan Docs Kit	H43322LT	LOGIQ Fortis R3 Advanced Reference Manual - French

Note: Electronic Instructions for Use (eIFU) containing a leaflet with instructions translated into all languages and a USB Stick with all User Documentation are included with every system.
Above DOCs Kits are only needed if a customer requires a printed copy of the documents listed below (electronic versions of those are included in the eIFU).

EU offering only

EM / FSA offering only

Product Tree LOGIQ Fortis

Item Number	Description	Description / Comments
	XDclear Curved Array Probes	
H40472LT	C1-6-D XDclear Convex Array Probe	
H40472LW	C1-6VN-D 'VNav Inside' XDclear Convex Probe*	
H40462LN	C2-9-D XDclear Convex Array Probe	
H40472LY	C2-9VN-D 'VNav Inside' XDclear Convex Probe*	
H40482LB	C3-10-D XDclear Microconvex Probe	H4915P Probe Holder Insert 2 recommended
	XDclear Linear Array Probes	
H44901AI	L2-9-D XDclear Linear Array Probe	
H44901AJ	L2-9VN-D 'VNav Inside' XDclear Linear Array Probe*	
	XDclear Sector Phased Array Probes	
H44901AE	M5Sc-D XDclear Sector Phased Array Probe	CW Doppler requires H43342LA CW Doppler Kit
	XDclear Pobe Enabler	
H46612LS	Advanced Probes	SW option to enable XDclear probes; mandatory with following probes: H40472LT, H40472LW, H40462LN, H40472LY, H40482LB, H44901AI, H44901AJ, H44901AE

***Note:**
'VN' Probes also work on systems without V Nav Option

Product Tree LOGIQ Fortis

EU offering only

EM / FSA offering only

Item Number	Description	Description / Comments
	2D Curved Array Probes	
H46422LM	C2-7-D Probe	
H46422LN	C2-7VN-D Probe*	
	2D Linear Array Probes	
H40452LG	ML6-15-D Active Matrix Linear Array Probe	
H40452LL	L8-18i-D Linear Array Hockeystick Probe	H43352LC Small Probe Holder recommended
H48062AA	L3-12-D Probe Linear Probe	
H4920HF	L6-24-D Linear Array Hockeystick Probe	H43352LC Small Probe Holder recommended
	2D Sector Phased Array Probes	
H45021RR	6S-D Sector Probe	CW Doppler requires H43342LA CW Doppler Kit
	2D Endocavitary Probes	
H40442LK	IC5-9-D Micro Convex Endocavitary Probe	
H40482LE	BE9CS-D Biplane Endocavitary Probe	
	4D Mechanical Probes	
H48681MG	RAB6-D Volume Convex Probe	Requires H43342LB Realtime 4D Option Kit
H48651MS	RIC5-9-D Volume Endocavitary Probe	
	Pencil Probes	
H4830JE	P2D - 2 MHz CWD Pencil Probe	Requires H43342LA CW Doppler Kit and H43342LJ Pencil CW Installation Kit
H4830JG	P6D - 6 MHz CW Pencil Probe	Requires H43342LA CW Doppler Kit and H43342LJ Pencil CW Installation Kit

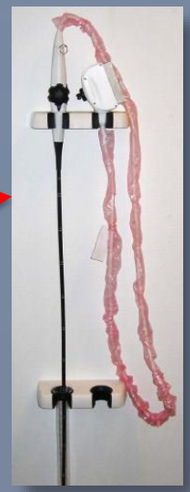
***Note:**
'VN' Probes also work on systems without V Nav Option

Product Tree LOGIQ Fortis

EU offering only

EM / FSA offering only

Item Number	Description	Description / Comments
	TEE Adult Probe	
H45551ZE	6Tc-RS Multi-Plane TEE Probe	CW Doppler requires H43342LA CW Doppler Kit
H46352LK	TEE RS-DLP Adapter	MANDATORY!
	TEE Probe Accessories	
H45551NM	TEE Storage Rack	Strongly recommended to order with the TEE probe For storage of Adult and Pediatric TEE probes, wall mounted unit. Store (and dry) disinfected probes, ready for the next use.
H45521CK	TEE Scan-head protection cover	ADULT TEE SCANHEAD PROTECTION COVER
H45511EE	TEE Clip-on Bite Guard Adult	TEE clip-on bite guard for adults, keyhole type
H45521CB	TEE Clip-on Bite Guard Adult OR	TEE clip-on bite guard for adults, U-form type - Operating Room use
H45521JH	Conventional Bite Guard Adult	TEE clip-on bite guard for adults, U-form type
H45531HS	Bite Hole Indicator	Bite Hole Indicator for TEE Probes; Type: KZ200800



TEE Probe user manuals			
H45531RA	TEE Probes User Manual - English German French Chinese	H45541PP	TEE Probes User Manual - Czech
H45531RD	TEE Probes User Manual - Italian	H45541PQ	TEE Probes User Manual - Latvian
H45531RE	TEE Probes User Manual - Spanish	H45541PR	TEE Probes User Manual - Lithuanian
H45531RJ	TEE Probes User Manual - Swedish	H45541PS	TEE Probes User Manual - Turkish
H45531RK	TEE Probes User Manual - Norwegian	H45541PT	TEE Probes User Manual - Estonian
H45531RL	TEE Probes User Manual - Danish	H45551ZQ	TEE Probes User Manual - Serbian
H45531RM	TEE Probes User Manual - Polish	H45551ZR	TEE Probes User Manual - Bulgarian
H45531RN	TEE Probes User Manual - Finnish	H45561RH	TEE probes User manual - Croatian
H45531RP	TEE Probes User Manual - Greek	H45581AN	TEE Probes User Manual - Portuguese
H45531RQ	TEE Probes User Manual - Russian	H45581PL	TEE Probes User Manual - Ukrainian
H45531RR	TEE Probes User Manual - Dutch	H45581PT	TEE Probes User Manual - Slovenian
H45541PL	TEE Probes User Manual - Hungarian	H45601HR	TEE Probes User Manual - Kazakh
H45541PM	TEE Probes User Manual - Slovak		
H45541PN	TEE Probes User Manual - Romanian		

Product Tree LOGIQ Fortis

EU offering only

EM / FSA offering only

Item Number	Description	Description / Comments
	Biopsy Guides (Biopsy Guides only, not for VNAV)	
	Biopsy Options 2D Curved Array	
H4917VB	C1-6 Biopsy Starter Kit *(Verza)*	
H40482LK	C2-7 Biopsy Kit	
H40482LL	C2-7 Stainless Biopsy Kit	
H4913BA	C2-9 Biopsy Starter Kit	
	Biopsy Options 2D Linear Array	
H44901AM	L2-9-D Biopsy Starter Kit *(Verza)*	
H40432LJ	ML6-15-D Biopsy Starter Kit	
H48302AA	L3-12 Biopsy Kit	
	Biopsy Options 2D Sector Phased Array	
H45561FC	M5Sc-D Biopsy Bracket	
	Biopsy Options 2D Endocavity	
E8385MJ	E8C/IC5-9 Short Biopsy Kit (disposable)	This Kit Contains 24 Disposable Biopsy Needle Guides
H40412LN	E8C/IC5-9 Re-usable Biopsy Device	One stainless steel single angle, reusable biopsy kit for E8CS/E8C/E721/IC5-9 transducers.
E8387M	Sterile Disposable Biopsy Needle Guide Kit for BE9C Probe	This Kit Contains 24 Disposable Biopsy Needle Guides (Protek)
H42742LJ	BE9CS Biopsy Kit	This Kit Contains 24 Disposable Biopsy Needle Guides (Civco)
E8387MA	Reusable Biopsy Needle Guide for BE9C Probe	One stainless steel single angle, reusable biopsy kit
	Biopsy Options 4D	
H48681ML	RAB6-D Biopsy Starter Kit	None sterile multi angle bracket (Depth crossing w/ probe axis at 4, 6, 8 cm) & 5 needle guide kits
H46721R	RIC5-9-D Reusable Biopsy Guide	Reusable Stainless Steel: PEC 63 (<1.6 mm)
H48691Z	RIC Probe Disposable Biopsy Guide with Latex Cover	Civco - 24 Sterile endocavity needle guide kits with latex covers
H48681GF	RIC Probe Disposable Biopsy Guide without latex covers	Civco - 24 Sterile endocavity needle guide kits without covers

EU offering only

EM / FSA offering only

Product Tree LOGIQ Fortis

Item Number	Description	Description / Comments
	Software Options	
	Care Area Packages	
H43332CA	Cardiac Package	The Cardiac Package includes the following advanced tools: ECG Kit (incl. AutoEF & TVI) , IEC ECG cable, Cardiac AFI, Stress Echo, AutoIMT, Flow QA, Comapre Ass., Scan Ass.
H43332BR	Breast Package	The Breast Package includes the following advanced tools: B-Flow, Coded Contrast, Shearwave Elastography, Elastography, Elasto QSA, Breast Productivity, Measure Ass. Breast, B Steer+, Compare Ass., Scan Ass., LOGIQ Apps
H43332OB	OB Package	The OB Package includes the following advanced tools: Realtime 4D Kit, SRI HD type 2, OmniView, STIC, TUI; VCI-Static, VOCAL II, SonoNT/IT, Measure Ass. OB, Compare Ass., Scan Ass., LOGIQ Apps, Tricefy
H43332MS	MSK Package	The MSK Package includes the following advanced tools: B-Flow, Shearwave Elastography, B Steer+, Compare Ass., Scan Ass., LOGIQ Apps

EU offering only

EM / FSA offering only

Product Tree LOGIQ Fortis

Item Number	Description	Description / Comments
	Software Options 1/2	
	Connectivity	
H46622LA	DICOM	
H46622LL	Adv. Security	Vulnerability Scan Option for Nessus Server communication
H46622LT	Tricefy	Trice Imaging Ultrasound Cloud Solution
H46622LW	LOGIQ Apps	Requires H46612LH Wireless Option Kit for Bluetooth capability
H4918DR	DVR	Digital Video Recorder
	Imaging	
H46612LY	B-Flow	
H4920SR	SRI HD Type 2	For OB/Gyn application only
H46612LS	Advanced Probes	To enable XDclear probes
	Comprehensive Tools	
H43332LA	Coded Contrast	Incl. TIC Analysis
H43332LB	Parametric Imaging	
H46622LE	Shear Wave Elastography	
H46622LH	UGAP	Ultrasound Guided Attenuation Parameter
H43332LE	Hepatic Assistant	Both SWE (H46622LE) and UGAP (H46622LH) are required
H43332LC	Strain Elasto	
H43332LD	Elasto QA	Elastography quantification tool
H46622LS	Stress Echo	
H46622LN	Cardiac AFI	Cardiac Strain
H46622LB	FLOW QA	Quantification tool for Color Flow and Power Doppler imaging
H46612LW	B Steer+	B mode steering image to help improve needle visualization/reflectivity

EU offering only

EM / FSA offering only

Product Tree LOGIQ Fortis

Item Number	Description	Description / Comments
	Software Options 2/2	
	Concise Workflow	
H46622LZ	Scan Assistant	
H46612LZ	Compare Assistant	
H46622LR	Report Writer	
H43332LL	Thyroid Productivity	Thyroid-specific measurement package allows user to enter TI-RADS criteria/assessment
H43332LM	Breast Productivity	Breast-specific measurement package allows user to enter BI-RADS criteria/assessment
H46622LC	Measure Assist Breast	
H46622LD	Measure Assist OB	
H46612LT	AUTO IMT	
H46622LJ	SonoNT/SonoIT	Sonography based Intracranial Translucency & Nuchal Translucency Measurement
	3D/4D	
H43332LF	Omni View	OmniView helps improve the contrast resolution and visualization of the rendered anatomy in any image plane
H43332LG	STIC	Advanced STIC (Spatio-Temporal Image Correlation)
H43332LH	TUI	Tomographic Ultrasound Imaging (TUI) enables volume data to be viewed in multiple slices
H43332LJ	VCI-Static	Static Volume Contrast Imaging is a volume acquisition technique which helps improve B-mode contrast resolution and speckle suppression
H43332LK	VOCAL_II	VOCAL provides both contour detection (manual, semi-automated or automated) and automated volume calculation

EU offering only

EM / FSA offering only

Product Tree LOGIQ Fortis		
Item Number	**Description**	**Description / Comments**
	Software Options	
	Breast Assistant powered by Koios DS™	
H46622LY	KOIOS SW*	Breast Assistant SW option powered by Koios
	Software As A Service Option	
H4919KI	LOGIQ Koios Installation Service*	**Mandatory to be ordered for Koios Software Installation on Customer on-premises Server** (1st time only)
H4919SO	LOGIQ Breast Assistant Scanner only Subscription*	- One Year Subscription for 100 breast exams on Scanner Only - **Must order a minimum of 6 per customer** - 12 months plus 2 additional months at no charge (first year only)
H4919SP	LOGIQ Breast Scanner and PACS WS Subscription*	- One Year Subscription for 100 breast exams on PACS + Scanner **- Must order a minimum of 6 per customer** - 12 months plus 2 additional months at no charge (first year only)

***LOGIQ™ Breast Assistant powered by Koios DS™ commercial availability is subject to RA clearance in each country and upon regional go-to market strategy''**

EU offering only

EM / FSA offering only

Product Tree LOGIQ Fortis

Item Number	Description	Description / Comments
	Hardware Options	
H43342LA	CW Doppler Option kit	- includes SW Option Key in OAC
H43342LJ	Pencil CW Installation kit	- includes SW Option Key in OAC - Requires H43342LA CW Doppler Option
H43342LB	Realtime 4D Option kit	- includes SW Option Key in OAC
H43342LE	Power Assistant Option kit	*Exclusive with "H43342LE Scan on Battery Option kit"*
H43342LD	Scan on Battery Option kit	*Exclusive with "H43342LD Power Assistant Option kit"*
H43342LG	Wireless Option kit	- includes SW Option Key in OAC
H43342LH	S-Video Option Kit	
	ECG Option	
H43342LC	ECG Installation kit	- Requires H43342LP 5inch bay installation kit - includes SW Option Key in OAC Includes: - Auto Ejection Fraction Option - Tissue Velocity Imaging Option
H4911JC	ECG cords - IEC Style	
H4910EC	ECG cords – AHA styles	For USA/Emerging Market use
H45521AL	ECG Cable set ext.	Set of various cables and connectors to enable connection of ECG from stress treadmills and ECG monitors.
	Cabinet options	
H43342LL	High Cabinet	
H43342LM	Low Cabinet	
H43342LN	Side Cabinet	
H43342LP	5inch bay Installation kit	Mandatory to be ordered with H43342LC and/or H43342LF (one kit)

Only one option can be selected:
H43342LE **OR** H43342LD

Refer to appendix B for cabinet compatibility

Product Tree LOGIQ Fortis

EU offering only

EM / FSA offering only

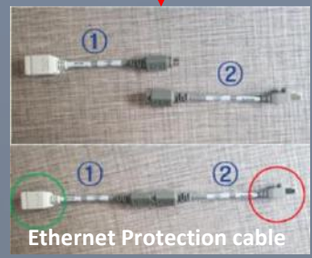
Item Number	Description	Description / Comments
	Volume Navigation	
	V Nav Hardware Options	
H43372LK	Volume Navigation Kit	- includes SW Option Key in OAC - Requires H43342LP 5inch bay installation kit
H4913PS	V Nav Dual Probe Sensors	For V Nav bracket probes: C3-10, IC5-9, ML6-15, L8-18i, M5Sc
H4908NS	Volume Navigation Stand	
	V Nav Brackets	
H40482LF	C3-10 V Nav Holder St Kit	**C1-6 and C2-9 V Nav brackets are not supported on LOGIQ Fortis. Only C1-6VN-D & C2-9VN-D probes are supported in V Nav.**
H4908NF	IC5-9 Volume Navigation Bracket	
H40432LK	ML6-15 Volume Navigation Bracket	
H4908NH	L8-18i-D V Nav Bracket	
H4908NM	M5Sc-D V Nav Bracket	
	V Nav Needle Tracking Options	
H4910NT	V Nav eTRAX 16/18G Starter Kit	For use of 18G biopsy needles
H4913NT	V Nav eTRAX 18/20G Starter Kit	For use of 20G biopsy needles
H4913NU	V Nav eTRAX 12/14G Starter Kit	For use of 14G biopsy needles
H4913NV	V Nav eTRAX 14/16G Starter Kit	For use of 16G biopsy needles
H4910NY	V Nav Virtual Needle Tracker	VirtuTRAX Instrument Navigator (10FR-14GA)
H4911NG	Virtual Tracker Sensor	General Purpose Electromagnetic Sensor
H4913NS	V Nav Needle Tracking storage insert	
	V Nav Active Tracker	
H4913AT	omniTRAX Active Patient Tracker Kit	Non-sterile reusable general purpose electromagnetic sensor with omniTRAX Patient Tracker 10.4cm (4.1") (5)
H4915MT	omniTRAX MR Active Patient Tracker Kit	Non-sterile reusable general purpose electromagnetic sensor with omniTRAX MR Patient Tracker 10.4cm (4.1") (5)

Product Tree LOGIQ Fortis

EU offering only

EM / FSA offering only

Item Number	Description	Description / Comments
	Peripherals	
H43342LK	Onboard Printer UP-D898DC	Onboard Installation
H4911JT	Sony UP-D25MD Color Printer	A6 Digital Color Printer for off-board installation, incl. EU 220V power cord; an appropriate power cord is required from the power cord list.
H4918RP	LOGIQ Inkjet Printer	For off-board installation, HP Officejet Pro 8210 Printer incl. USB-cable 2.0
	Accessories	
H46732LF	USB FOOTSWITCH 3 Button	
H43352LC	Small Probe Holder	
H43352LD	VERTICAL TV PROBE Holder	Position on L/H side of the OPIO
H43352LE	TVTR Probe Holder	
H44412LA	PROBE CABLE HANGER	
H43372LF	TRAY BOX	H43372LG is required for installation
H43372LG	TRAY Bracket	Brackets for tray box; H43372LF is required
H4918DC	LOGIQ Protective Cover	LOGIQ padded canvas cover to protect the ultrasound system for transport or storage
H43272LJ	Ethernet protection cable	
	UPS	
H4921UP	Powervar 1.44kVA 230V UPS medical grade	Must order H46672LM and specified power cord {H48502AW / H48512AF / H48512AJ / H48532AY} at same time
H46672LM	UPS Document Kit	Mandatory to be ordered if H4921UP is selected
H48502AW	AC Power Cord Europe/Korea	For use with H4921UP
H48512AF	AC Power Cord UK/Ireland	For use with H4921UP
H48512AJ	AC Power Cord Switzerland	For use with H4921UP
H48532AY	Power Cord for Denmark, Hospital Grade C13 RED	For use with H4921UP



GE Healthcare

LEAD

LOGIQ Expert Academy Days

LEAD Mission

Developing Skills and Improving Knowledge of Leadership Ultrasound

LEAD Vision

Brining Experts together and Building a LOGIQ Super Users Network

GE Healthcare Ultrasound Middle East offers various educational experiences which aims to develop ultrasound skills, improve knowledge of advanced ultrasound and elevate diagnostic confidence.

H4917LC LEAD Course - GIUS

For Emerging Markets offering only

EU offering only

EM / FSA offering only

Product Tree LOGIQ Fortis		
Item Number	**Description**	**Description / Comments**
	Veterinary Use Items	
H43352LB	Console Veterinary Kit	Contains Vet console labels and multi-language Vet User Manual Addendum
H48492AW	Vet Probe Caution Labeling Kit	One Kit to be ordered for each probe

Caution:

For Veterinary use, dedicated VET Kits containing console and probe labels indicating that the system and probes are for veterinary use only must be ordered with the console and for each probe. A dedicated 'VET Addendum' to the Basic User Manual is also included.
Labels will be applied to the console and probes by either the Make Center or the LPC before shipping the system/probes.
It is not allowed to ship/install any system and probe for Veterinary usage not being labeled "For Veterinary Use Only"

LOGIQ Fortis Product Tree

Revision History

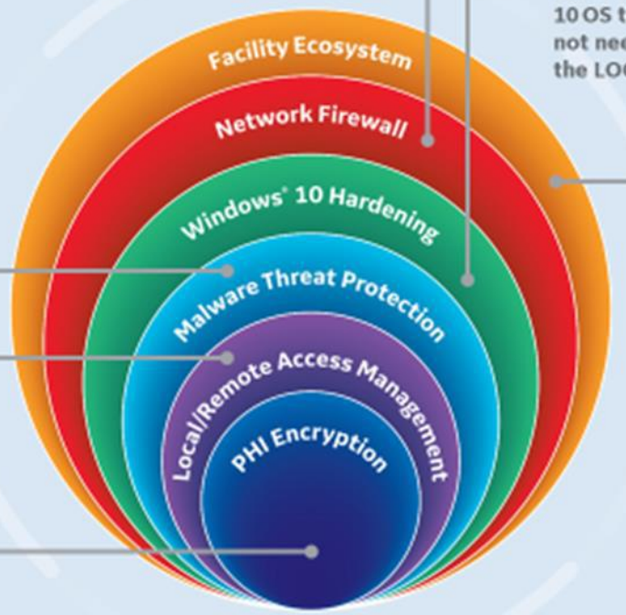
Rev	Date	Created by	Description of Changes
1	Dec 03, 2021	Jens Heimann	Initial Release
2	Feb 08, 2022	Jens Heimann	Corrected descriptions, typos, requirements Added UPS (page17)
3	Mar 01, 2022	Jens Heimann	Added Care Area Packages (page 11) Replaced Volume Navigation Kit H43342LF by H43372LK (page 16); dual probe sensor cable is no longer included Added Appendix B Cabinet Compatibility
4	Mar 08, 2022	Jens Heimann	Corrected Hcat for Strain Elastography to H43332LC (page 12)
5	May 12, 2022	Jens Heimann	Added H45521AL ECG Cable Set Kit ext. (page 15)

Appendix A

SonoDefense is part of the main console and not an option.

Defense-in-depth strategy

SonoDefense is designed for maximum security protection with a defense-in-depth strategy that incorporates security controls deployed in multiple layers. This approach enhances security by protecting the system against any particular attack using several independent methods.



Blocks unused communication channels

Disables services in the Windows® 10 OS that are not needed by the LOGIQ E10

Reduces potential points of attack

Seamlessly integrates into your facility's security ecosystem

Limits what can be run on the LOGIQ™ E10

- Customizable, role-based access
- Federated Identity Management
- Session management
- Auditing
- Secure remote access

- Customizable patient data encryption
- Enterprise wireless encryption
- IPv6 Internet Protocol address standard

Appendix B
Cabinet Compatibility Overview

Cabinet Type	Side Cabinet?	Device Installation Location (Bay)								Note
		A	B-Upper	B-Lower	C-Upper	C-Lower	D	E	F	
Low	No	DVD	-		-		-	-		
	Yes	DVD	-		-		-	Open	BW	
		DVD	-		-		-	P-IO (ECG)	Open	
		DVD			-		-	V-Nav	Open	
		DVD					-	V-Nav	BW	
		DVD					-	P-IO (ECG)	BW	
Mid	No	DVD	Cover		-		-	-		Note 1
		DVD	BW		-		-	-		
		DVD	P-IO (ECG)	Cover	-		-	-		
		DVD	V-Nav	Cover	-		-	-		
		DVD	P-IO (ECG)	V-Nav	-		-	-		
	Yes	DVD	P-IO (ECG)	Cover	-		-	Open	BW	
		DVD	V-Nav	Cover	-		-	Open	BW	
		DVD	P-IO (ECG)	V-Nav			-	Open	BW	
High	No	DVD			P-IO (ECG)	Cover	BW	-		
		DVD			V-Nav	Cover	BW	-		
		DVD			P-IO (ECG)	V-Nav	BW			

Note 1: Mid cabinet with DVD Drive and cover on device bay is standard LOGIQ Fortis configuration.

GE Healthcare

Vscan Air™

Data Sheet

Vscan Air is a battery-operated general-purpose diagnostic ultrasound imaging system for use by qualified and trained healthcare professionals or practitioners. It enables ultrasound imaging guidance, visualization and measurement of anatomical structures and fluid.

Vscan Air consists of a dual-headed probe, which integrates both curved and linear array transducers, and an app that can be installed on Android™ or iOS® mobile devices.

Its pocket-sized portability and simplified user interface enables integration into training sessions and examinations in professional healthcare facilities (ex. hospital, clinic, medical office, home environment, road/air ambulance and in other environments described in the product user manual).

The information can be used for basic/focused assessments and adjunctively with other medical data for clinical diagnosis purposes during routine, periodic follow-up, and triage assessments for adult, pediatric and neonatal patients. Vscan Air can also be useful for interventional guidance.

Vscan Air customers have access to the Vscan web portal, including online access to product and product usage information for selected clinical scenarios.

Probe Characteristics

128 physical channel beamforming

Black-and-white mode for displaying anatomy in real-time

Color-coded overlay for real-time blood flow imaging

Harmonic imaging for increased signal-to-noise ratio and reduced artifacts from side lobes, grating lobes and reverberations, resulting in superior tissue definition and reduced speckle artifacts. With the greater penetration of lower ultrasound frequencies, high-quality harmonic imaging at greater depth can be performed.

Selectable centerline marker

Selectable focal zone marker

Selectable TGC control with 6 depth-dependent gain controls

Total scan time of 50 minutes with fully charged battery (with 80% black and white, 20% color imaging)

Any Qi-compliant wireless charger can be used to charge probe

Recharge battery in 75 minutes from 10% to 90% battery capacity

Dimensions: 131 x 64 x 31 mm

Weight: 205 +/- 3 grams

IP67 rated

Curved array transducer for deep scanning

Specific clinical applications and exam types include: abdominal, fetal/obstetrics, gynecological, urology, thoracic/lung, cardiac (adult and pediatric, 40 kg and above), vascular/peripheral vascular, musculoskeletal (conventional), pediatrics, interventional guidance (includes free hand needle/catheter placement, fluid drainage, nerve block and biopsy)

Broad-bandwidth curved array: from 2 - 5 MHz with center frequency of 3.3 MHz

Number of elements: 128

Footprint: 64 mm x 16 mm (lens)

Viewing angle: 60°

Depth: up to 24 cm

Linear array transducer for shallow scanning

Specific clinical applications and exam types include: vascular/peripheral vascular, musculoskeletal (conventional and superficial), small organs, thoracic/lung, ophthalmic, pediatrics, neonatal cephalic, interventional guidance (includes free hand needle/catheter placement, fluid drainage, nerve block, vascular access and biopsy)

Broad-bandwidth linear array: from 3 - 12 MHz with center frequency of 7.7 MHz

Number of elements: 192

Footprint: 40 mm x 7 mm (lens)

Depth: up to 8 cm

User Interface

The Vscan Air offers ultrasound imaging with a minimized number of keys and intuitive thumb-controllable touchscreen user interface. The Vscan Air app supports portrait as well as landscape mode to optimize image size and ergonomics for different use scenarios.

Single key/gesture to control freeze/unfreeze, store, color on/off, gain and depth control

2 steps to change preset with appropriate transducer

2 steps to start reviewing images from an exam

Presets with optimized settings for imaging different organs. User-selectable default preset for immediate use after starting the app.

Measurements: distance, ellipse

Device configuration and management tools in easy reach through swiping in menu:

- Enablement of TGC controls, preview mode, storage of binary images
- Setting Auto Freeze Time, video duration
- Configuration of probe button function (Freeze or Store)
- Download user manual in selectable language to Vscan Air app
- Diagnostics in Vscan Air app with ability to upload log files to GE server
- Direct access to customer support information
- Link to cloud-based educational materials
- Information about software status of probe and app with ability to un- and re-register

Data Storage

Patient data identification:

- Manual data entry of patient information for an exam
- Select from DICOM Modality Worklist on request. Such worklist supports consistent labeling of images, video clips and exams before export to DICOM PACS.

Exam data on device
Data for up to 500 exams can be stored on mobile device
Data is stored in generic formats: jpg for still frames, mpg for videos
Complementing storage of binary image data can be selected. Such data could be useful for further image analytics in collaboration with GE.
Data is organized as individual examinations with collection of images and can be linked with patient identification
All stored data can be recalled for review

Data export
Anonymized images and videos can be shared with other apps available on smart device
Images, video clips or exams with or without patient information can be wirelessly exported in generic formats (jpg, mp4) to shared network folders
Images, video clips or exams with patient information can be wirelessly exported in DICOM format to DICOM PACS

Supported DICOM services
Verify
Modality Worklist
Store
Storage Commitment
Secure DICOM (TLS)

Data security

Secured data at rest:

- Vscan Air app starts only after confirmation of mobile device protection with user authentication
- Images and other patient information data are stored in private space of device with no access from other apps on mobile device
- Images are stored on device without embedded patient identification and linked with encrypted patient database
- FIPS 140-2 compliant database encryption (AES-256 bit encryption)
- User selectable, additional PIN protected access to patient data on Vscan Air app
- Wiping off exam data after 10 attempts with incorrect PIN

Secured data on the move:

- Images are anonymized before being shared with other apps on the mobile device
- Support of enterprise-grade wireless encryption standards including EAP and WPA2 (PSK)
- TLS encryption with optional peer authentication to support secure DICOM transfer
- Configurable time period for image removal on the device after export to a DICOM PACS server

Standard Configuration

The following items are included in the standard Vscan Air offering:

Vscan Air CL probe
Vscan Air app (Vscan Air for iOS and Vscan Air for Android)[i]
Protective carrying case
Hardcopy Quick Start Guide
Electronic Instruction Use Guide
Wireless charger pad including micro USB cable
Country-specific AC adapter[ii]

Available Accessories

Hardcopy user manual in different languages

Additional protective carrying case

Additional wireless charger pad

International AC adapters[ii]

Supported Mobile Platforms[iii]

Operating system options

Android phones and tablets with OS version 9, 10 or 11, device with 0x64 ARM based CPU architecture and 64-bit Kernel, Android open GL ES 3.0, and compatibility with Google Play™ store

iPad and iPhone devices with iOS 13 or 14

Screen requirements

Size: from 5 to 20 inches

960 x 640 (or 640 x 960) pixel or more

Internal memory requirements

8GB or more

Connectivity requirements

IEEE 802.11n

Peer-to-peer connectivity (Android only)

Bluetooth BLE 4.0

Security requirements

WPA2™

Data on device must be encrypted and authentication enabled

Verified/ Validated mobile devices

The list of the verified and validated mobile devices can found on Vscan family web portal.

User Support Tools

Vscan family web portal

Online services to enhance the Vscan Air experience by providing resources, from product information to clinical and service support

Additional educational resources will be posted on the Vscan web portal, including webinars, thought leadership, further online programs and training opportunities

Ultrasound education solutions[iv]

To help users get familiar with common point-of-care applications and improve ultrasound skills and knowledge, two digital education solutions are available via our partners.

Point of Care Ultrasound FocusClass by 123 Sonography

- This course includes access to five hours of high-quality video content, easy-to-follow hands-on demos, practical clinical examples and proven didactive principles to help increase competence and confidence. This program is designed for primary care covering a variety of ultrasound exam types including cardiac, OB, abdominal, lung and joints

SonoSim® 365 for GE Healthcare

- SonoSim 365 for GE Healthcare provides convenient ultrasound education through integrated didactic instruction, hands-on training, and knowledge assessment. A portable, virtual ultrasound training experience utilizing real patient cases with a broad spectrum of normal and pathologic conditions. This offering includes a SonoSim probe, SonoSim drive, and your choice of five modules immediately accessible online – choose from a wide selection of modules including anatomy, physiology, and clinical procedures.

Safety Conformance

Safety classification
Vscan Air CL probe is classified as internally powered medical electrical equipment with type BF applied parts according to IEC 60601-1[v]
Vscan Air CL probe is CE-marked according to MDD (93/43/EEC), RED (2014/53/EU), RoHS (2011/65/EU), and is compliant to 2012/19/EU (WEEE)
Vscan Air for Android and Vscan Air for iOS are CE-marked according to MDD (93/42/EEC)
Vscan Air CL probe is NRTL Certified to CAN/CSA-C22.2 No. 60601-1 and ANSI/AAMI ES60601-1.
Wireless charger pad of Vscan Air is certified according to IEC/EN62368-1 and/or IEC/UL/cUL60950-1

Vscan Air conforms to applicable clauses of the following safety standards:

IEC 60601-1[vi]	Medical electrical equipment – Part 1: General requirements for basic safety and essential performance
IEC 60601-1-2[iv]	Medical electrical equipment – Part 1-2: General requirements for basic safety and essential performance – Collateral Standard: Electromagnetic disturbances – Requirements and tests. (Group One, Class B per CISPR 11 / EN 55011)
IEC 60601-2-37	Medical electrical equipment – Part 2-37: Particular requirements for the basic safety and essential performance of ultrasonic medical diagnostic and monitoring equipment
IEC 60601-1-11	Medical electrical equipment – Part 1-11: General requirements for basic safety and essential performance – Collateral Standard: Requirements for medical electrical equipment and medical electrical systems used in the home healthcare environment
IEC 60601-1-12	Medical electrical equipment – Part 1-12: General requirements for basic safety and essential performance – Collateral Standard: Requirements for medical electrical equipment and medical electrical systems intended for use in the emergency medical services environment
EN 13718-1	Medical vehicles and their equipment – Air ambulances Part 1: Requirements for medical devices used in air ambulances
EN 1789	Medical vehicles and their equipment – Road ambulances
ISO 10993-1[vii]	Biological evaluation of medical devices Part 1: Evaluation and testing within a risk management process
IEC62304	Medical device software – Software life cycle processes.
IEC62366-1	Medical devices – Part 1: Application of usability engineering to medical devices

[i] The Vscan Air app can be downloaded via App Store or Google Play, accordingly. It converts after confirmed by e-mail registration into a medical device. Before converting, it can be used for preview purposes as non-medical device.

[ii] In accordance to IEC classification for power plugs, one AC adapter with either an A, C, G, or I connector will be part of standard configuration.

[iii] Using the Vscan Air app with a mobile device which does not meet the minimum requirements may result in low-quality images, unexpected results and possible misdiagnosis. The Vscan Air app may not work in all devices. A recommended step in testing a particular device compatibility is the download, installation and first use of the Vscan Air app in preview mode.

[iv] Not available in every country

[v] When not charging using the wireless charger.

[vi] Including national deviations.

[vii] Includes compliance to relevant sub-parts of ISO 10993 as per the intended use of Vscan Air.

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GE Healthcare

Vscan Air™

Indications Reference Guide

This information is meant to be reference for examples of anatomies and examinations that can be evaluated by this product. The list may not be all inclusive.

Deep Scanning Transducer (Curved Array)

Complete both shallow and deep exams with a simple flip of the 2-sided probe.

The curved array transducer on Vscan Air CL supports Black/ white (B-mode), Color (Color doppler) and Harmonic imaging modes. Vscan Air is indicated for ultrasound imaging, measurement, and analysis of the human body in clinical applications that include the following.

CLINICAL APPLICATION	ANATOMY	EVALUATION
Abdominal ultrasound (Adult/ Pediatrics)	• Gall bladder, biliary tree, common bile duct • Liver • Pancreas • Spleen • Bowel including Appendix, small bowel loops • Abdominal aorta • Kidneys	• Gall stones • Gall bladder inflammation (wall thickening, surrounding fluid) • Biliary obstruction (duct dilatation) • Hepatomegaly • Fatty liver • Splenomegaly • Intestinal obstruction • Appendicitis • Peritoneal fluid • Mass/cyst / Abscess • Abdominal aortic aneurysm • Kidney stones
Urology (Adult/ Pediatrics)	• Kidneys • Ureter • Urinary Bladder • Uretero-vesicular junction • Prostate	• Kidney, ureteral, bladder stones • Kidney length • Hydronephrosis • Bladder dysfunction • Pre-post Bladder volume • Bladder inflammation (wall and mucosal changes, calcifications) • Prostate size and volume • Mass/cyst • Ureteral jets with color
OB-Gyn	• Uterus and endometrium • Ovaries • Cervix • Pouch of Douglas (POD) • Gestational Sac (GS) • Placenta • Amniotic fluid • Fetus(es)	• GS location (Intra-uterine/ extra-uterine) • Fetal viability/ heart motion • Placenta position (including low-lying and previa) • Fetal position and presentation • Amniotic fluid assessment • Cervical length measurement/ cervical insufficiency • Fetal well-being assessment: Biophysical profile (breathing, movements, tone, amniotic fluid) • Confirmation of fetal death • Intrauterine device position • Endometrial thickness measurement • Uterine/ adnexal mass/ cyst (fibroids, cysts) • Free fluid in Pouch of Douglas

Deep Scanning Transducer (Curved Array) Cont.

CLINICAL APPLICATION	ANATOMY	EVALUATION
Lung/Thoracic (Adult/ Pediatrics)	• A-lines, B-lines, E-lines • Pleura • Lung tissue • Lung sliding • Lung point	• Pneumothorax and hemothorax • Pleural Effusion • Lung consolidation – Pneumonia/ pneumonitis – Pulmonary fibrosis • Pulmonary interstitial and inflammatory disorders (Ex. ILD, COPD) • Acute respiratory distress syndrome
Cardiac and hemodynamic assessment (Adult/ Pediatrics*)	• Heart (atria, ventricles, valves) including pericardium – Subcostal view • Inter-atrial and interventricular septum • Pulmonary arteries/ veins • IVC	• Pericardial fluid • LV and RV size and function • Valvular regurgitations/ stenosis • Volume status and responsiveness – IVC size – Respiratory variation
Musculoskeletal (Conventional) (Adult/ Pediatrics)	• Hip/knee/ Shoulder joints • Femur • Humerus/elbow • Tibia/fibula • Radius/ulna • Muscles • Ligaments • Tendons • Nerves	• Fluid • Cyst/mass • Long bone fractures • Ligament and joint integrity • Tendon injuries (tendonitis, rupture/tear) • Muscle tears • Peripheral nerve blocks
Procedure guidance (Adult/ Pediatrics)	• Heart • Lung • Uterus • Abdomen • Thorax • Bladder • Nerve plexus • Hip/knee /Shoulder joints	• Fluid detection: Pericardial, Pleural, Peritoneal, Amniotic, Joints • Procedures: Thoracentesis, Paracentesis, Pericardiocentesis, Amniocentesis, Arthrocentesis • Foreign body visualization/ localizations • Bladder catheterization • Nerve blocks • Biopsy • Placement and monitor position of tubes and catheters
Protocols	• Heart • IVC • Lungs • Abdomen	• FAST • eFAST • BLUE • FASH • FASE

Shallow Scanning Transducer (Linear Array)

Complete both shallow and deep exams with a simple flip of the 2-sided probe.

The linear array transducer on Vscan Air CL supports Black/ white (B-mode), Color (Color doppler) and Harmonic imaging modes. Vscan Air is indicated for ultrasound imaging, measurement, and analysis of the human body in clinical applications that include the following.

CLINICAL APPLICATION	ANATOMY	EVALUATION
Peripheral Vascular (Adult/ Pediatrics)	• Arteries including Carotid, vertebral, subclavian, axillary, brachial, iliac, saphenous, popliteal, femoral • Veins including Jugular, subclavian, cephalic, basilic, saphenous, femoral, popliteal, tibial	• Deep vein thrombosis • Atherosclerosis- Intima media thickness, plaques, vessel occlusion/ stenosis • Subclavian Steel syndromes
Lung/ Thoracic (Adult/ Pediatrics)	• A, B, E lines • Pleura • Lung tissue • Lung sliding • Lung point	• Pneumothorax and hemothorax • Pleural Effusion • Lung consolidation – Pneumonia/ pneumonitis – Pulmonary fibrosis • Pulmonary interstitial and inflammatory disorders (Ex. ILD, COPD) • Acute respiratory distress syndrome
Small organs (Adult/ Pediatrics)	• Testes • Scrotum • Thyroid • Breast • Bowel • Abdominal wall • Skin • Subcutaneous tissue • Fascia • Lymph nodes	• Testicular torsion (size, echo-texture and vascularity) • Epididymo-orchitis • Fluid collection in scrotal sac • Hematomas, hernias • Breast nodules, mass, cyst • Abdominal wall masses, hernias • Thyroid nodules/cyst/mass/ diffuse enlargement • Bowel pathology (ex. appendicitis, diverticulitis, intestinal obstruction) • Pyloric stenosis/ Intussusception for pediatric patients) • Soft tissue infection (cellulitis, abscess, bed sore) • Foreign body visualization/ localization) • Cutaneous mass
Musculoskeletal – (Superficial and conventional) (Adult/ Pediatrics)	• Tendons • Muscles • Ligaments • Nerves • Long bones (ex. Humerus, Radious, Ulna, Femur, Tibia, Fibula) • Joints (ex. Ankel, Shoulder, Knee, Elbow, Wrist) • Joint space/ bursae	• Tendon injuries (tendonitis, rupture/ tear) • Muscle tears • Long bone fractures • Carpal Tunnel syndrome • Fluid collection in joint space, muscles, bursae • Joint and ligaments integrity • Cyst/ mass • Hip joint evaluation for neonates and infants
Nerves (Adult/ Pediatrics)	• Peripheral nerves including examples as Interscalene, supraclavicular, infraclavicular, axillary plexus, Median N, Radial N, Ulnar, Femoral, Popliteal, Tibial, Peroneal, Saphenous N	• Peripheral nerve blocks

Shallow Scanning Transducer (Linear Array) Cont.

CLINICAL APPLICATION	ANATOMY	EVALUATION
Neck and airway (Adult/ Pediatrics)	• Cervical Lymph nodes • Trachea • Epiglottis, cricoid cartilage, cricothyroid membrane • Esophagus • Vocal folds	• Neck massess • Airway assessment • Vocal cord dysfunction
Procedural guidance (Adult/ Pediatrics)	• Thorax • Veins (including Jugular/ Subclavian/ Axillary/ Femoral / Brachial/ Basilic/ Cephalic) • Arteries (including femoral, radial, brachial, axillary, dorsalis pedis) • Peripheral nerves • Joints • Vertebral spaces • Skin and subcutaneous tissue • Trachea and surrounding structures	• Fluid detection and removal support: thoracentesis • Peripheral venous access • Central venous catheterization • Arterial access • Assessment and support of dialysis access • Nerve blocks • Joint aspiration and injections • Cyst aspiration • Biopsy • Abscess drainage • Foreign body visualization/ localization • Lumbar Puncture • Endotracheal tubes placement and confirmation • Support placement and monitor position of tubes and catheters
Ophthalmic**	• Optic nerve sheath • Retina • Globe • Lens	• Retinal detachment • Vitreous hemorrhage • Intra-ocular foreign body visualization • Globe rupture • Optic Nerve sheath diameter • Lens dislocation
Cephalic (Neonatal)	• Fontanelle • Superficial and mid-superficial cranial structures	• Gyral-sulcal anatomy • Superior sagittal sinus thrombosis • Cerebral edema • Extra-axial fluid collections
Protocols	• Lungs	• eFAST • BLUE

*Pediatric population for Cardiac application defined as minimum body weight 40 Kg and above.

**Ophthalmic not available in Japan and China

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