

GE Healthcare

Signa 3.0T

Signa HD 3.0T

Signa HDx 3.0T



*Capture what you
couldn't capture before*



Born of innovation.

Bred on evolution.

Signa HD and HDx 3.0T are hardly what you'd call your everyday MR scanners.

Until now.

Every day.



Signa HD

Proven in clinical practice, Signa HD 3.0T makes the impossible possible. Thanks to GE-exclusive Signa HD (High-Definition MR) technologies that improve clarity, detail and process, you can easily diagnose those patients who are the most challenging to examine with conventional MR approaches.

Signa® HD and HDx 3.0T take the industry's most advanced 3.0T MR technology out of the research lab. And put it right in the heart of your daily clinical practice.

This is 3.0T MR that's easy enough to be used every day. No matter who's on the table. Or at the console.

A high-performance, clinically proven scanner, Signa HD 3.0T helps you definitively diagnose your most complex cases. Signa HDx 3.0T further supercharges HD performance with lightning speed, superb image quality and unique premium clinical applications.

These are the only high-field MR systems ready for clinical prime time. Ready to set your facility apart. Ready to put leading-edge MR right where it belongs.

On your front lines.





3.0T



Signa HDx

Signa HD supercharged. Accelerated. Optimized to the max. The ultimate in HD MR imaging performance, Signa HDx 3.0T adds yet another chapter to GE's leadership in 3.0T MR technology development with ultra-fast reconstructions. Breathtaking images. Streamlined exams. And definitive diagnoses on even your most difficult cases.

Imagine your 3.0T system could definitively scan every patient. Every time. On every MR study. Only GE Signa HD and HDx 3.0T scanners let you do just that.

Every patient.



Start with the imaging power of 3.0T. Add the ease and efficiency of 1.5T. That's how Signa HD and HDx 3.0T systems make the extraordinary routine.

Picture the impossible with GE-exclusive HD Clinical Applications – including LAVA-HD, TRICKS-HD and PROPELLER™-HD – that let you easily image your toughest cases. And further push the limits of MR on the Signa HDx 3.0T, with additional advanced XV Clinical Applications that meet your unmet clinical needs quickly and confidently.

You clearly capture detail you couldn't see before in neuro imaging. Challenging vascular scans. Advanced body studies. Exquisite musculoskeletal exams.

And with over 12 years' expertise in high-field SAR optimization, only we enable 3.0T scanning with full efficiency. And no compromises.



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Every answer.



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If you think all full-capability 3.0T MR scanners are created equal, think clinically proven. Think unmatched leadership. Think GE.

Think GE 3.0T

Is it easy to use? Will it do all we want it to? Quickly? Efficiently? With the same throughput we have now? Or better?

At GE, we understand your questions about 3.0T MR. After all, we've been answering them longer and better than any other MR manufacturer.

We were the first to image the whole body at 3.0T. Today, we have the world's largest installed base of full-capability 3.0T scanners – many at sites where GE 3.0T is the only MR system. And we're the only MR manufacturer on its third-generation 3.0T platform, thanks to our high-field MR experience that began in 1993.

Only we offer you a SAR-optimized system and preset protocols for full scanning efficiency. The same simple user interface as on our 1.5T system. The most support and service. The peace of mind you're looking for.

At 3.0T, it's GE.



Signa HDx

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So fast. So easy. So clear. So reproducible.
Ease of use means consistently better image quality.
Signa HD and HDx 3.0T are as easy to use
as GE's 1.5T scanner.

Click.

Simple and intuitive, a streamlined user interface provides easy, automated scanning with little technologist retraining. With just a few clicks of the mouse, you position slices, set parameters, launch the scan and post-process your results.



These days, you may have a different technologist sitting at your MR scanner every morning.

That's why Signa HD and HDx 3.0T deliver great results without the need for extensive retraining. With a user interface that's simpler, more intuitive and easier to use than ever before. 3.0T-optimized protocols developed by our GE luminaries for each study, accessible at the click of a button. And results that are easily reproducible, thanks to GE-exclusive motion-control and acceleration techniques.

Add to that the inherent technological advantages of the Signa HD and HDx 3.0T systems – like the industry's most advanced SAR management – and you're assured of scanning efficiency and consistently high image quality.

Scan after scan. Patient after patient.
Image after great image.

No matter who's manning the mouse.

Bonjour
Hello
Ciao
Hola

Designed to simplify breath-hold procedures, AutoVoice lets you preprogram automatic breathing commands for patients in their native language.



With the detachable table, you can prep patients outside the MR suite to improve throughput and ensure their safety — and quickly remove a patient from inside the scanner to outside the room to eliminate the need for 3.0T-compatible emergency equipment.

Scan.





More imaging horsepower than any other 3.0T scanners drives diagnostic confidence in the most difficult patients. And helps you fly through the most data-intensive scans.

Technn

Signa HDx 3.0T Breakthrough Technologies

Delivering astonishing speed, detail and confidence, Signa HDx 3.0T technologies are unrivaled in MR.

Lightning-quick image reconstructions.

Signa HDx 3.0T's powerful new XV_{RE} volume-reconstruction engine ensures virtually real-time image generation. The XV_{RE} is the enabler for new XV (expanded volume) Clinical Applications that utilize acceleration techniques such as ASSET and GEM. GEM is a hybrid acceleration technique that uses variable sampling to provide the fastest image acceleration.

An integrated, GE-exclusive acoustic management package keeps in-bore noise on a par with 1.5T levels.

By focusing a higher density of coil elements on a specific region of interest, easy-to-use Signa HD high-density coils maximize image signal-to-noise and resolution for convenience without compromise.



Superb homogeneity and fat saturation.

The unique design of the Signa HD and HDx 3.0T short magnet doesn't shortchange you on homogeneity or field of view. That's because it delivers the largest FOV and highest homogeneity of any compact 3.0T scanner.

Worry-free SAR management.

GE-exclusive PERFORM SAR Management lets you run your Signa HD and HDx 3.0T scanners as if they were 1.5T systems – without giving SAR a second thought.

High-fidelity, high-performance gradients.

Signa HD and HDx gradients deliver top accuracy, reproducibility, and the shortest TRs, TEs and ESPs available across all applications and pulse sequences.

But it's not what's under the hood of the Signa HD or HDx 3.0T that powers your practice.

It's what's on its screen.

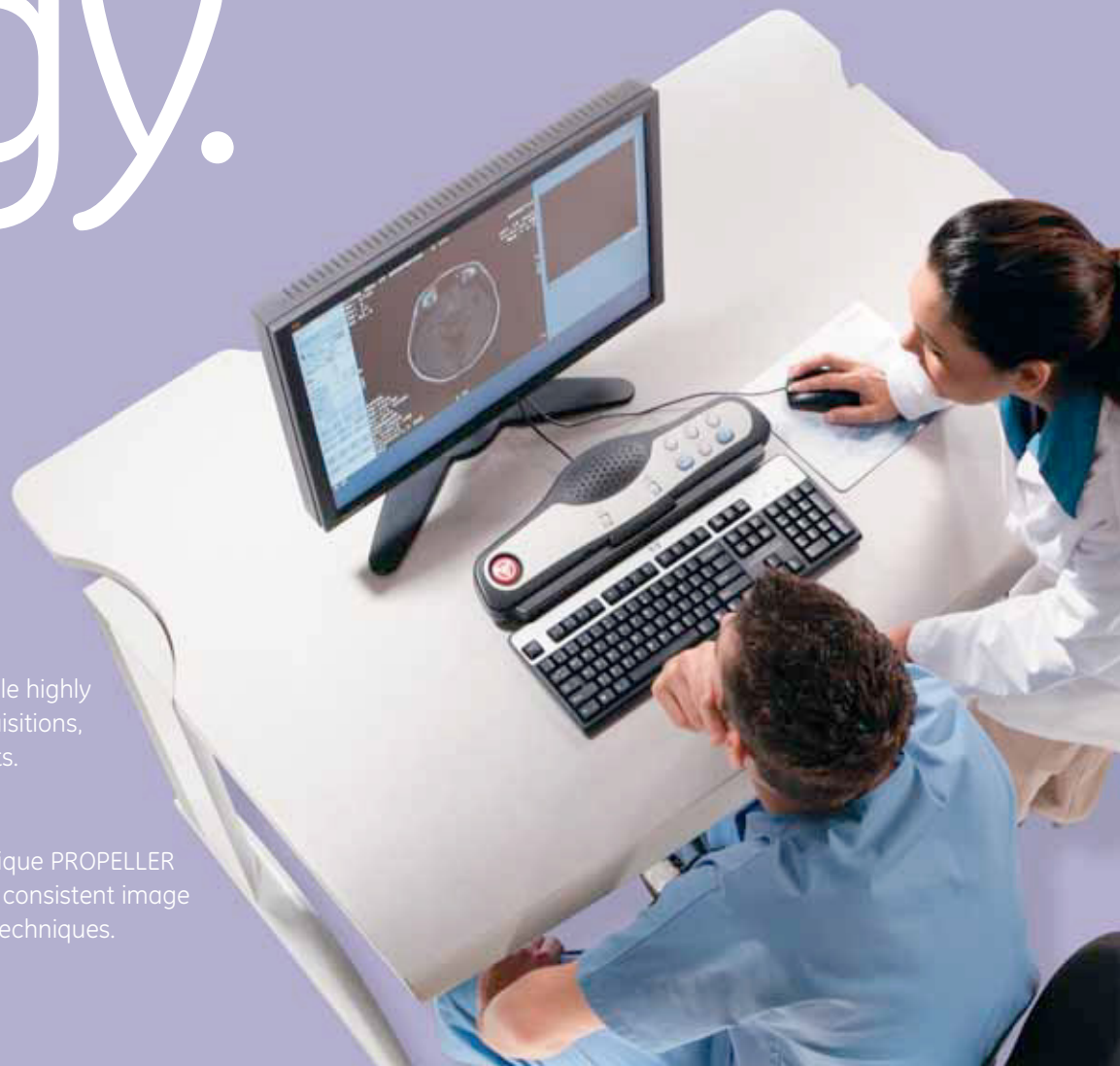
ology.

Breakthroughs in parallel imaging.

New advances in parallel imaging enable highly accelerated, self-calibrated image acquisitions, for simpler, faster scans with no artifacts.

Innovative acquisition strategies.

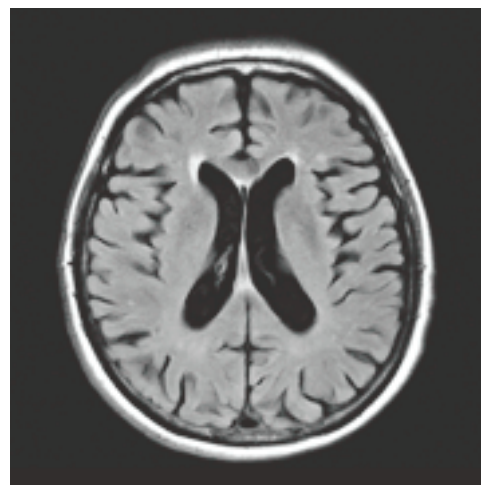
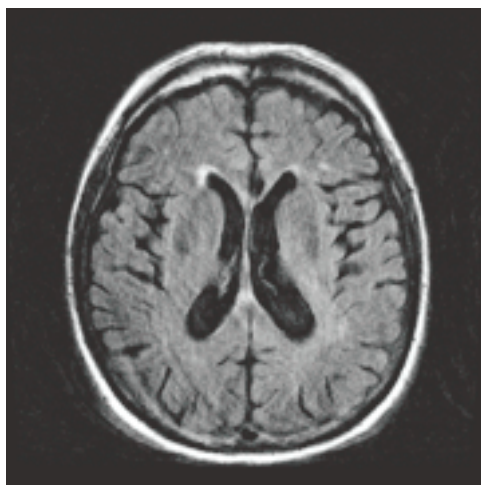
In patients both young and old, GE's unique PROPELLER acquisition technology generates more consistent image quality than traditional MR acquisition techniques.



Signa HD and HDx 3.0T Clinical Applications

Neuro

GE-exclusive motion control. A modular Signa HD high-density Head-Neck-Spine Array. With a full suite of brain and spine imaging applications, Signa HD and HDx 3.0T are naturals for neuro.



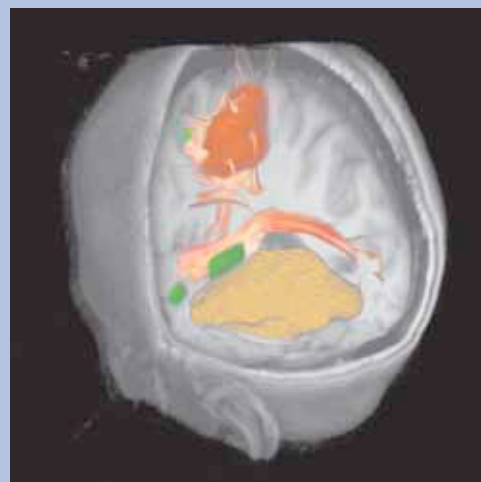
Reading through poorly constructed images due to motion or susceptibility artifacts is solved with PROPELLER as shown on the right.

Signa HDx 3.0T XV Clinical Applications

Exclusive to Signa HDx 3.0T systems, XV Clinical Applications build on HD MR's capabilities – giving you the broadest range of additional advanced applications to meet your unmet clinical imaging needs.



HDx technology provides whole-brain fMRI with parallel-imaging enabled acquisitions that are processed and visualized in real-time using GE's exclusive BrainWave fMRI package.



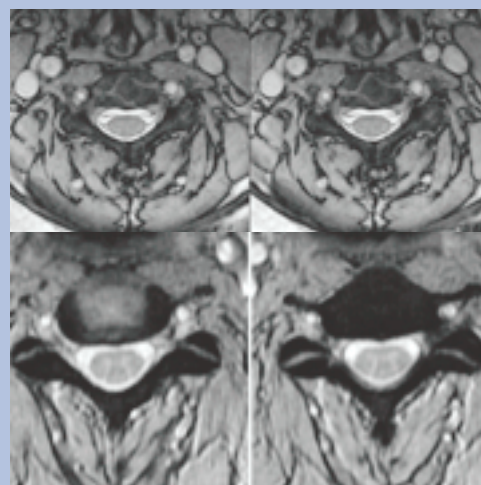
GE's BrainWave Fusion software co-registers BOLD fMRI and diffusion tensor tractography onto a single high-resolution anatomical data set. Clinicians can visualize regions of eloquent gray matter and its relation to critical white matter fibers.

Signa HD high-density Head-Neck-Spine Array

Image the head, neck and spine without changing coils.



Sagittal C-Spine using 8-channel CTL coil displays the uniform fat saturation over a large FOV. Note the clear definition of white-matter lesion in this example.

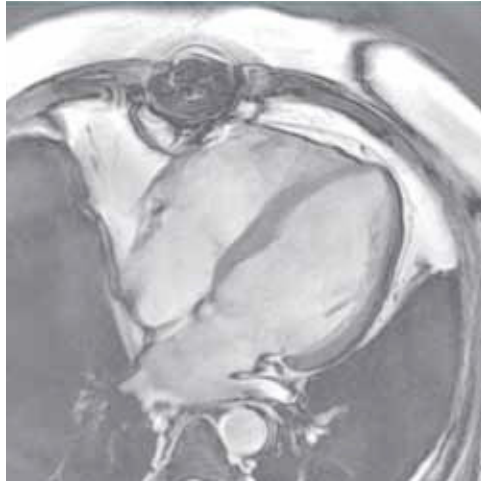


Top: 3D Cosmic enhances the visualization of nerve roots and inter-vertebral disks, while maintaining soft tissue contrast.

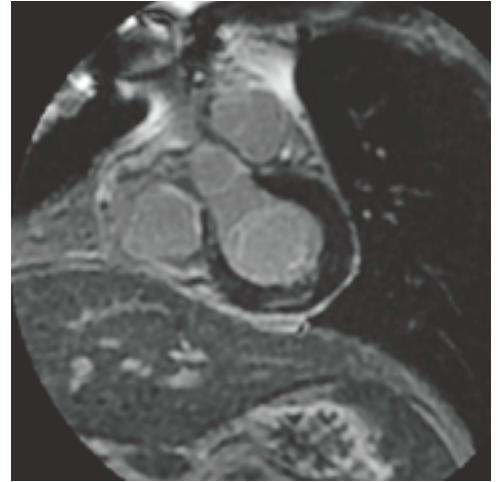
Bottom: 2D MERGE generates excellent gray-white matter contrast in the cord without sacrificing SNR.

Cardiac & Vascular

Advanced vascular techniques that provide high-definition results without temporal tradeoffs. And the ability to deliver comprehensive cardiac studies. Signa HD and HDx 3.0T take cardiac and vascular imaging to heart.



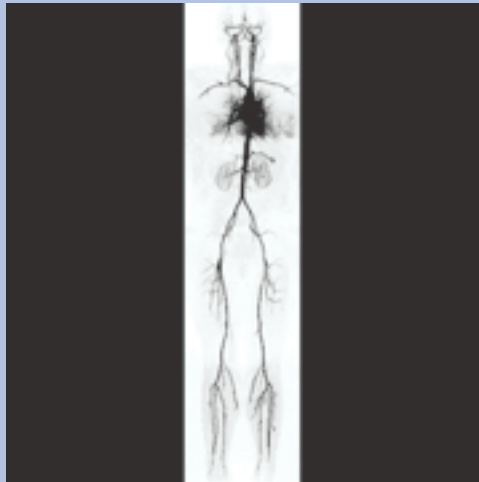
4-chamber FIESTA – graphic volume shim ensures excellent FIESTA images at 3.0T.



Myocardial evaluation – short-axis delayed-enhancement image in a patient with sarcoid.



TRICKS-XV takes the guesswork out of MRA timing. Combined with parallel imaging acceleration, TRICKS-XV provides entire 3D volumes in as little as 2.5 seconds, capturing arterial and venous phases and small-vessel detail.



Whole-body MR Angiography at 3.0T with MR Paste permits visualization of the entire vascular tree.

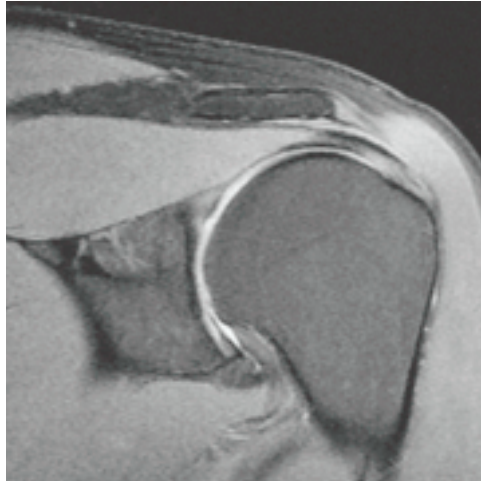
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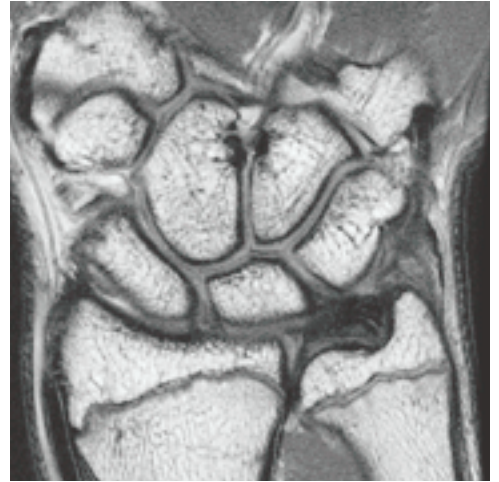
ReportCARD-3.0 is GE's exclusive tool designed to speed and simplify the analysis and reporting of cardiac MR data. Providing an expanded and comprehensive tool kit of analysis capability that's easy to use.

Musculoskeletal

With robust fat saturation across the entire field of view – even out to the very edges – Signa HD and HDx 3.0T make no bones about capturing musculoskeletal anatomy like you've never seen it.



The homogeneity of GE's 3.0T magnet provides uniform fat saturation even during off-isocenter shoulder imaging.



The increased SNR at 3.0T allows for smaller FOV and slice thickness as demonstrated in this 8 FOV 2-mm slice image, outlining the cartilage definition.

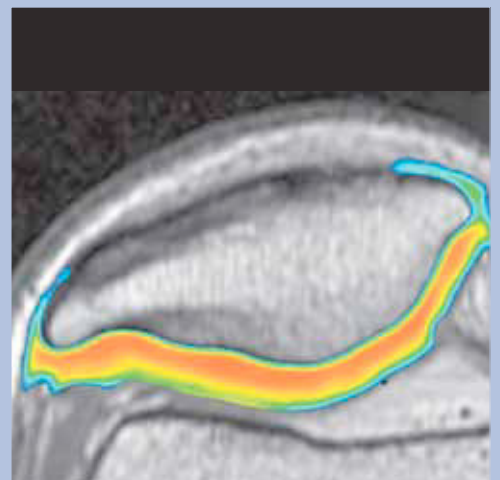
eashed.



Signa HD high-density 8-channel Knee Array



High resolution imaging enabled with the 8-channel Knee Array allows you to visualize the smallest cartilage defects.



CartiGram provides a non-invasive assessment of articular cartilage disease and automatically generates color-coded maps.

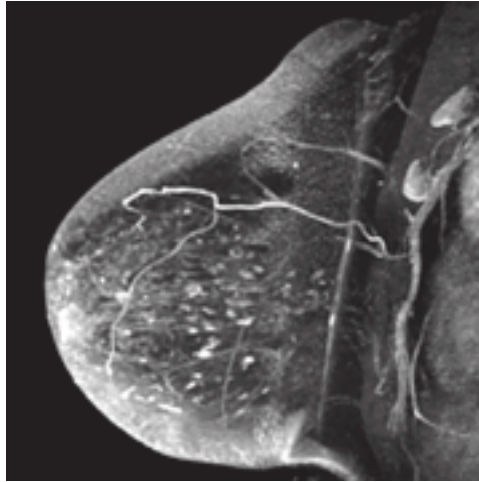
Signa HD and HDx 3.0T Clinical Applications

Body & Breast

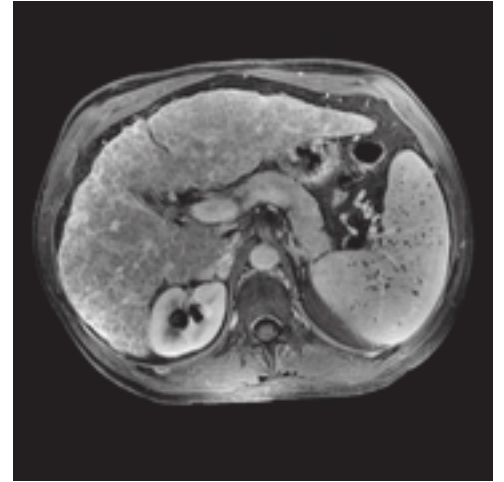
A huge and homogenous field of view. Spatial resolution without temporal compromise. Unique acceleration approaches for single-breath-hold abdomen acquisitions. Signa HD and HDx 3.0T do a body good.



Signa HD high-density
8-channel Breast Array



VIBRANT provides the choice of direct sagittal acquisition without compromising in-plane resolution. And automatically optimizes parameters to give you consistent exams. Note the uniform fat suppression.



LAVA generates high-resolution, multi-phase, whole-organ coverage with excellent fat saturation and short breath-hold acquisitions.



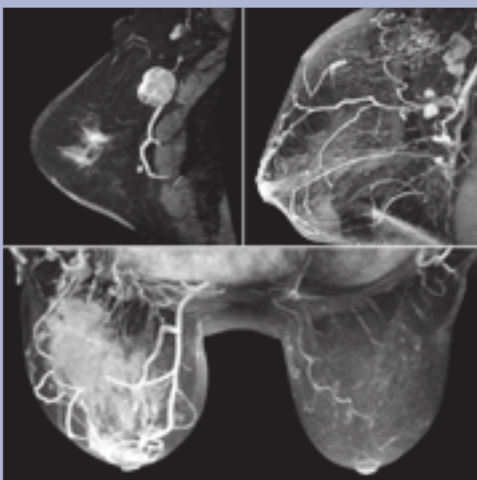
LAVA-XV provides the soft tissue contrast of MR with the simplicity of CT and enables entire abdominal coverage in a single breath-hold.



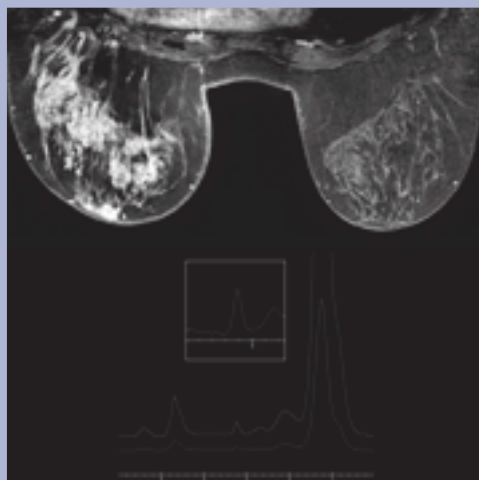
Higher acceleration factors allow the routine use of higher spatial resolution with short breath-hold scan time. In addition, larger volumes mean multiorgan coverage is possible.

Signa HDx 3.0T XV Clinical Applications

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VIBRANT-XV at 3.0T provides higher resolution, faster imaging with true – not interpolated – in-plane resolution for uncompromised breast imaging.



Spectroscopy has a potential role as choline (3.25 ppm) is a strong indicator of malignancy. BREASE (Breast Spectroscopic Examination) was developed as a problem solving tool to be used in cases of equivocal contrast uptake or indeterminate morphology.

Push the iLinq button and instantly contact a live GE applications specialist or service engineer. Right answers. Right now. Right from your console. Just one of the many ways GE gives you unmatched MR support.

Pressing needs?



InSite remote diagnostics and repair.

Thanks to our InSite, a constant data connection to your Signa HD or HDx 3.0T lets us monitor, diagnose and repair your system remotely.

TiP Virtual Assist.

Combining expertise and convenience, live, interactive applications training with remote GE trainers helps you get the most from your Signa HD or HDx 3.0T.

The GE Healthcare Institute.

Receive comprehensive, hands-on training on your system at our dedicated educational facility.

Remote magnet monitoring.

Our exclusive, remote monitoring of your magnet's overall health helps you avoid unnecessary downtime.



The most service engineers worldwide.

Unmatched GE field support is provided by a global team of approximately 5,500 engineers that are the most experienced in the industry.

The most applications specialists worldwide.

GE applications specialists are available globally to train you on Signa HD and HDx 3.0T applications, techniques and protocols.

The most parts distribution centers worldwide.

Located in numerous countries around the globe, GE parts distribution centers streamline part delivery to minimize downtime.

The most physician training options.

The GE MR Masters Series – the first of its kind in the industry – offers clinicians the widest selection of training and education programs on MR technology and techniques.

Wherever you are. From wherever we are. Your Signa HD and HDx 3.0T are supported by the world's most advanced portfolio of service and asset management tools.

So you reap all the benefits of GE MR ownership. Like maximum uptime. Optimized workflow. Higher productivity. Better patient care. And true peace of mind.



Through the Signa Continuum, you'll rest easy – with the assurance that your Signa HD or HDx 3.0T system can be upgraded throughout its lifetime.

With the Signa Continuum, you shield yourself from obsolescence. Protect the most important technology investment you'll ever make. And look forward to a future of endless MR innovation.

That's because every GE Signa MR system is built on a solid architecture for future development – with a clear and easy upgrade path that keeps your imaging technology forever at the forefront of MR.

Fact is, over 94% of all customers who've ever purchased a GE Signa system are currently scanning with state-of-the-art MR capabilities.

You'll be living with your 3.0T MR scanner for a long time.

Invest in Signa. Be Capable. Be Certain.

**State-of-the-art
Signa MR**



Future

2006

2007

2008

2009

2010

2011

2012

2013

2014

2015

2016

2017

2018

**State-of-the-art
Signa MR**



Friendly.

In over 20 years, GE has left no customer behind in MR technology. Who else can say that? No one. Because only GE backs every MR system with the legendary Signa Continuum.

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Healthcare Re-imagined

GE is dedicated to helping you transform healthcare delivery by driving critical breakthroughs in biology and technology. Our expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, drug discovery, and biopharmaceutical manufacturing technologies is enabling healthcare professionals around the world discover new ways to predict, diagnose and treat disease earlier. We call this model of care “Early Health.” The goal: to help clinicians detect disease earlier, access more information and intervene earlier with more targeted treatments, so they can help their patients live their lives to the fullest. Re-think, Re-discover, Re-invent, Re-imagine.

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imagination at work