

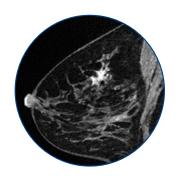
# BodyWorks Women's health imaging

Enable fast, high-resolution, quantitative and personalized MR for women's health



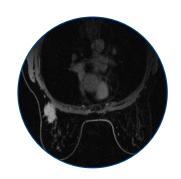


## Comprehensive women's health imaging portfolio

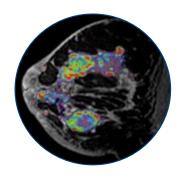


Fast
15-minute breast exam
DISCO
HyperSense

HyperCube



FSE
PROPELLER
FLEX / IDEAL
VIBRANT



Quantifiable
eDWI
FOCUS DWI
MUSE
CADstream®
GenIQ
READYView / BodyView
OncoQuant



**Personalized** 

8ch Breast Coil

16ch NeoCoil Breast Coil 16ch Sentinelle Coil 16ch Rapid Breast Coil

Precision health: Better outcomes, delivered more efficiently



# Learn more >

### BodyWorks – Women's Health

### Now with AIR™ Recon

#### Because everyBODY has a story...

#### **Fast Breast Protocols**

ACR compliant breast imaging in 10 minutes

#### **Cube with HyperSense and HyperCube**

Isotropic T2 volume to reformat to any plane Reduce scanning time & artifacts for 3D T2 scans

#### **VIBRANT**

Isotropic, high-resolution dynamic T1 imaging in the axial or sagittal planes

### **Robust Breast Imaging**

High spatial & temporal resolution diagnostic breast scans

#### **DISCO VIBRANT**

Extreme, high-resolution for 4D dynamic imaging

#### T2 Flex

Homogeneous fat suppression for breast & axilla

#### **FOCUS DWI**

High resolution, small FOV diffusion imaging

#### **BodyWorks Workflow Solutions**

Automated, patient centric workflows

**Smart Selective Anatomy** 

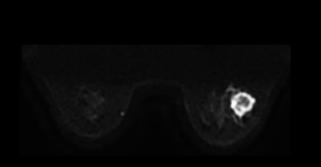
Flexible No Phase Wrap

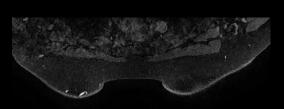
Automated peak arrival & delays with DynaPlan

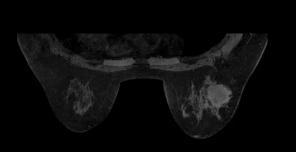
**Automated Inline Subtraction** 

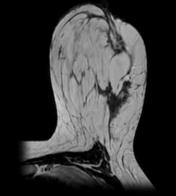
Automated Inline ADC map generation

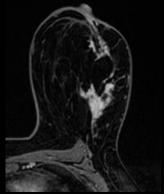
Personalized protocol notes











VIBRANT DISCO

VIBRANT DISCO Multi-phase

FSE T2 Flex Fat / Water Separated

### ACR compliant fast breast MR protocol in <10 min

"At MGH, we went **from a 45-minute exam to a 9-minute, 48-second exam** without losing the key components that the ACR requires for an accredited exam. This really changes the whole process for us and how our patients will think about breast MR."

Dr. Connie Lehman, MGH

### MGH fast breast protocol\*

Series	PSD	FOV	Matrix	Resolution	Slice	NEX	TR/TE	Time
T1w Non fat sat	VIBRANT	32cm	400×400	0.8mm³	0.8mm	1	5/2.3	1:19
T2w fat sat	Cube T2	32cm	352x352	0.9x0.9x0.8	0.8mm	1	2500/90	1:54
T1 Dyn fat sat x3	VIBRANT	32cm	400x400	0.8mm³	0.8mm	1	6.4/2.4	2:04 per phase (1 pre, 2 post)

<sup>\*</sup>Using the 16ch Sentinelle coil

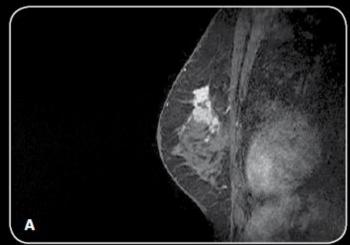


Figure A) Isotropic thin slice acquisition allows multiplanar reconstruction to other planes

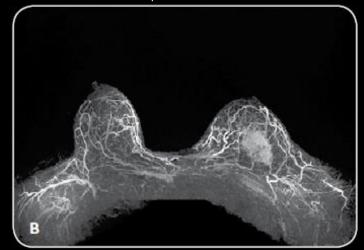


Figure B) detailed Maximum Intensity Projection

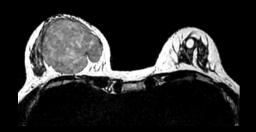


Women's health imaging Courtesy: MGH, USA

### Seamless Breast MR workflow

### Visualization of functional and morphological data in less than 15-minutes

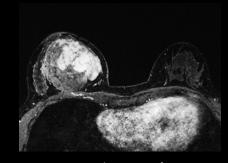
#### Cube T2



2:28 min

3D isotropic T2 acquisition specifies anatomical localization in all planes

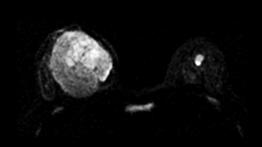
#### DISCO T1



1:00 min per phase

3D isotropic T1w dynamic sequence offers very high resolution (temporal and spatial), to precisely identify the boundaries

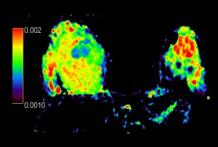
#### **FOCUS DWI**



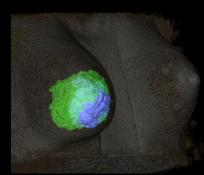
2:56 min

Allows very high-resolution diffusion sequence with precise ADC map

# Volume Share 7 ADC



**Topography** 



Post-processing with Advantage
Workstation VS7 enables in few clicks to
study functional and topographic aspect of
the lesion via multiparametric maps,
enhancement curves and segmentation
and quantification of mass



# High-resolution volumetric imaging

Double your resolution with

**VIBRANT DISCO** while preserving

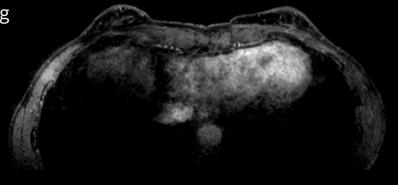
scan time per phase and homogeneous image quality

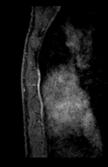
#### **VIBRANT DISCO - Single Echo**

512 x 512 (acquired resolution) 1 mm slice (acquired resolution) 0:55 min / phase

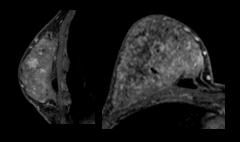
#### **Axial T2 Cube**

340 x 320 2 mm slice 3:57 min

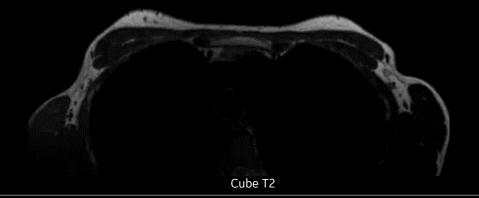




Sagittal VIBRANT DISCO Reformat



Axial & Coronal **VIBRANT DISCO** Reformat

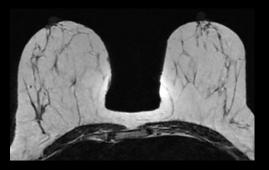


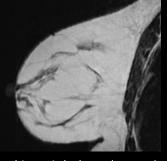


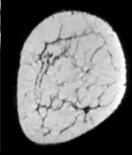
Sagittal Cube Reformat

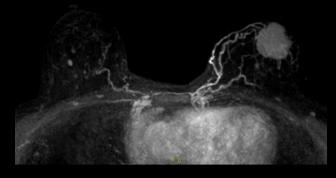


# High-resolution volumetric imaging



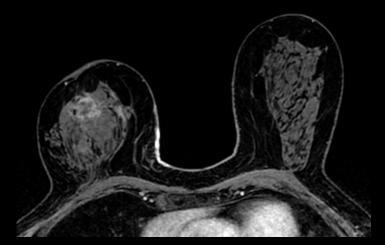




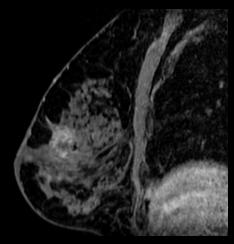


Axial T2 Cube – Acquired in axial plane (1mm³) with seamless reformats

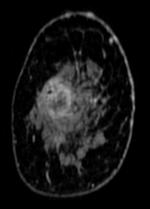
Axial T1 dynamic contrast subtracted (phase 1)



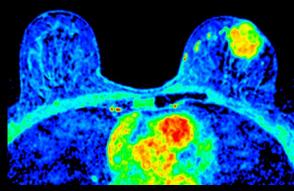
Axial DISCO Water image  $0.9 \times 0.9 \times 1.2 \text{ mm}$ 



Sagittal reformat



Coronal reformat



Axial T1 dynamic contrast positive enhancement integral map

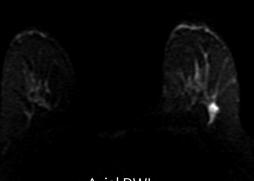


# BodyWorks

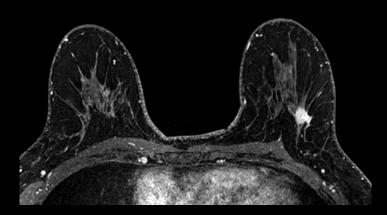
High resolution breast imaging



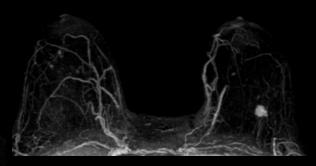
Sagittal T1 FSE  $0.6 \times 0.8 \times 4 \text{ mm}^3$ 40 slices, 3:28 min



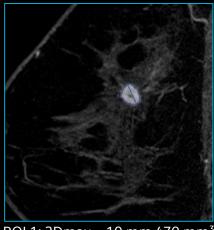
**Axial DWI** b700 2 x 1.7 x 3.3 mm<sup>3</sup> 4:55 min



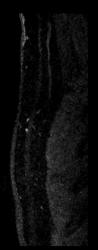
Axial T1 VIBRANT FatSat (ASPIR)  $0.7 \times .7 \times .8 \text{ mm}^3$ 376 slices, 2:20 min



MIP from DISCO Arterial phase



ROI 1: 2Dmax = 10 mm 470 mm<sup>3</sup>



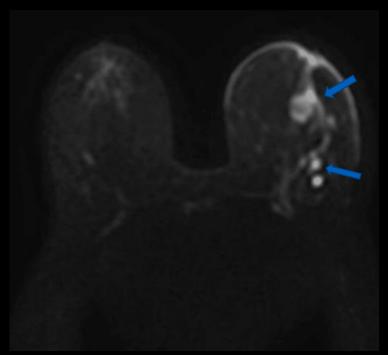
Sagittal T1 DISCO VIBRANT FatSat (ASPIR)  $0.5 \times 0.5 \times 1 \text{ mm}^3$ 260 slices, 45 sec/phase



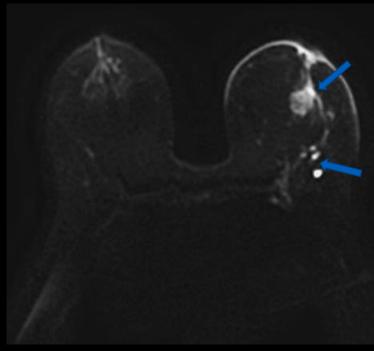


# High Resolution Diffusion

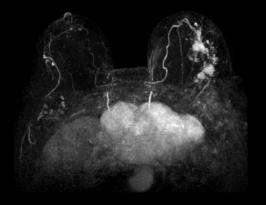
### Conventional eDWI vs. MUSE (Multi-shot DWI)

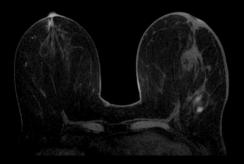


Axial DWI b600 3.8 x 2.8 x 3.5 mm

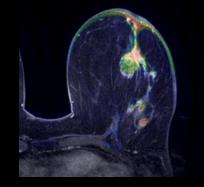


Axial DWI MUSE b600 2.3 x 2.3 x 3.5 mm





Axial VIBRANT Temp Resolution 1:14 Voxel Size 0.9 x 0.9 x 2.0



Color Fusion Axial Vibrant (post gad) & MUSE



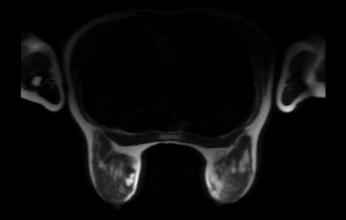
### HyperCube and HyperSense

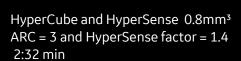
### Reduce scan time with high resolution breast imaging

### Benefits

- HyperSense reduces scan time
- HyperCube increases patient comfort with arms on the side scanning while avoiding wrap without scan time penalty
- Cube's variable flip angle scheme corrects for cardiac motion contamination for clean Axilla assessment

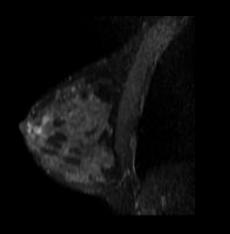
16ch Sentinelle Breast Coil Arms on the side scan 44 cm localizer

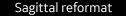


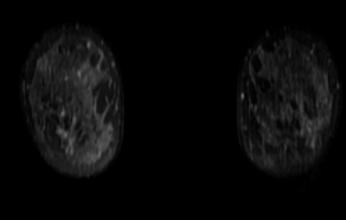












Coronal reformat

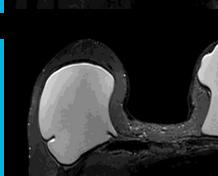
# Silicone implant imaging

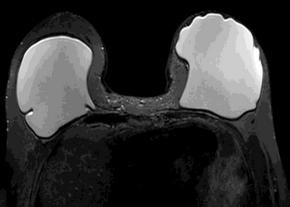
16ch NeoCoil breast coil enabling higher accelerations and resolution

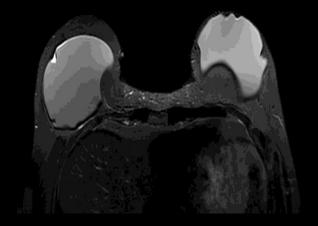
**Axial STIR Cube** TI 210ms 1.2 x 1.2 x 1 mm ARC factor 2 x 1

Scan time: 5:02 min

Acceleration 2x1







**Axial STIR Cube** TI 210 ms  $1 \, \text{mm}^3$ ARC factor 2 x 2 Scan time = 3:13 min







For more information, contact your GE Healthcare sales representative or click here to contact us now.