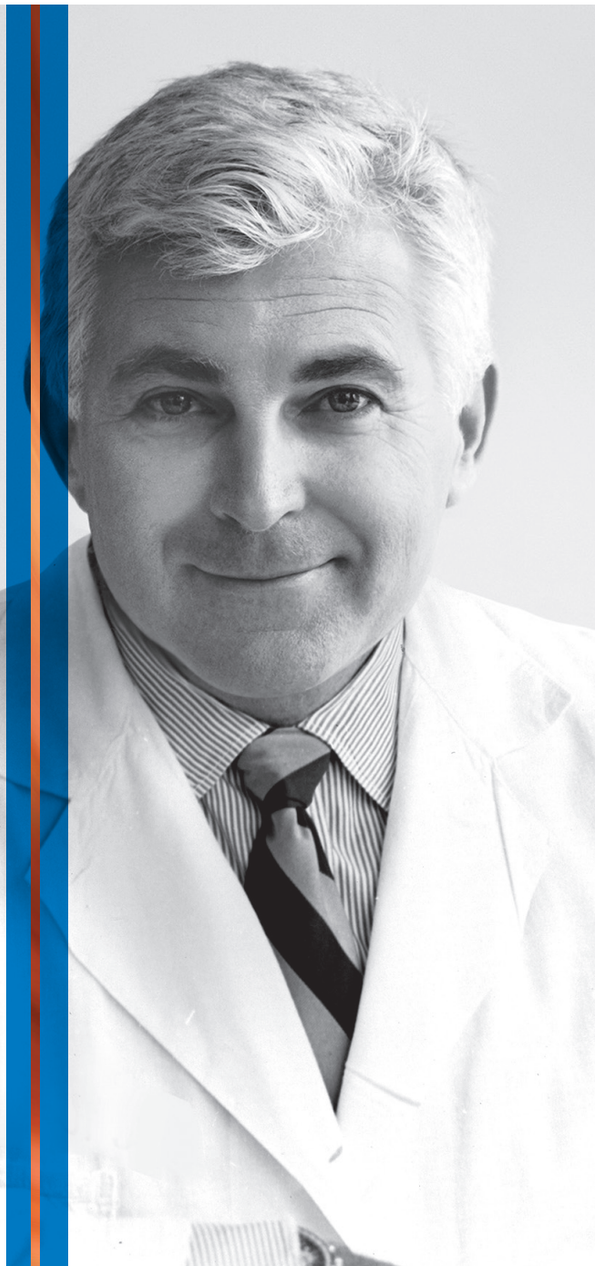
GE Healthcare

Outperform

with the power of next-generation PET/MR.

SIGNA™ PET/MR

Imagine what MR can be.



Shatter

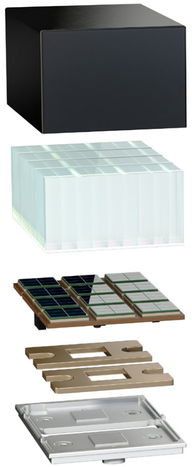
diagnostic boundaries.

Spearhead a diagnostic revolution with SIGNA PET/MR.

Built with pioneering Turbo Time-of-Flight (TOF) technology, SIGNA PET/MR expands your imaging capabilities. An integrated PET with exceptional quantitative count rate accuracy is combined with 3.0T MR for simultaneous imaging. The result is the delivery of a stunning 3x higher sensitivity than previous generations of PET technology. Besides offering impressive diagnostic capabilities and efficient workflow, SIGNA PET/MR is designed to provide an extraordinary level of clinical flexibility and patient comfort, defining the future of PET/MR.

SIGNA PET/MR – outperform with the power of next-generation PET/MR.

GE TurboTOF SiPM Technology
- Timing Resolution: <400 ps
- Scintillator Crystal Dimensions: 4.0mm x 5.3mm x 25mm
- PET Sensitivity: 21 cps/KBq



Turbocharge

your diagnostic capabilities.

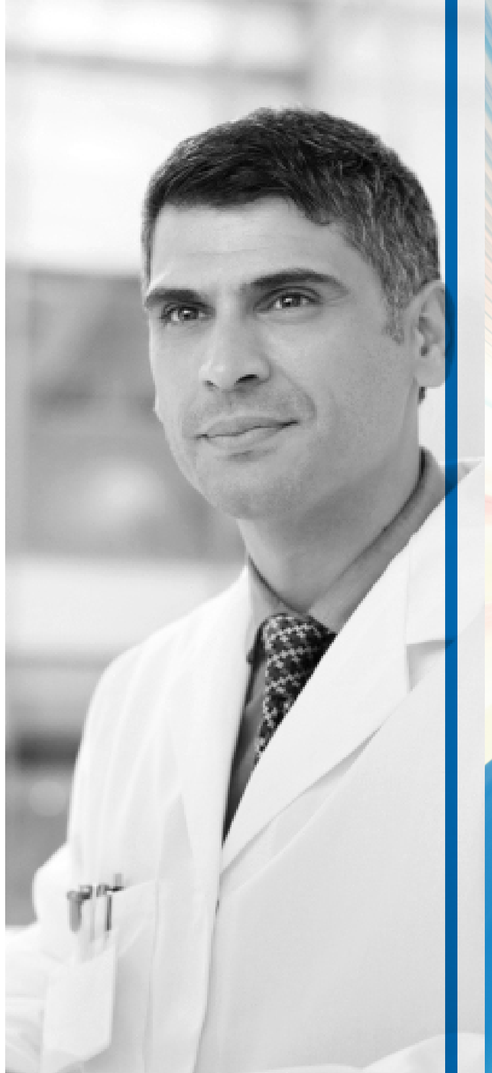
Get ready to enter a whole new world of clinical possibilities with the revolutionary technology of SIGNA PET/MR.

SIGNA PET/MR utilizes pioneering TurboTOF technology with digital PET detector modules based on Silicon Photomultipliers (SiPM) with excellent timing resolution.

Its breakthrough, deep 25mm crystal complemented with a 25cm FOV delivers exceptional sensitivity, at a level that is 3x higher than previous generations of PET technology.

Add to this its sharper IQ and precise attenuation maps, and you'll see what we mean by next generation PET/MR. What's more, it is backed by active and passive thermal control, providing stability and improving your diagnostic capabilities, for your most demanding protocols.

SIGNA PET/MR – outperform with exemplary diagnostic potential.



Standard on

SIGNA PET/MR

SilentScan - a comprehensive set of sequences designed to generate high-resolution images with T1, T2, T2 FLAIR, PD-weighted and MRA contrast with sound levels that are within 3dB of ambient conditions.

PROPELLER - to combat patient motion and susceptibility artifacts potentially reducing the need for sedation.

Inhance 2.0 - to help visualize arterial and venous flow with an advanced array of powerful and robust pulse sequences without contrast injection.

3D ASL - Arterial Spin Labeling (ASL) provides a high resolution quantitative brain assessment using an FSE-based sequence with pulsed continuous labeling, reporting cerebral blood flow in ml/100 g/min.

MAVRIC SL - for advanced visualization of soft tissues and bone near MR Conditional devices.

IDEAL IQ - an acquisition and reconstruction technique that generates quantitative triglyceride fat-fraction maps to measure the degree of fat within the liver.

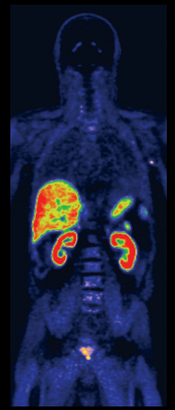
Integrated Registration - enables easy comparison of 3D anatomical images from PET and MR data.

SharpIR - an advanced modeling in PET reconstruction that enhances visual contrast and resolution in PET images.

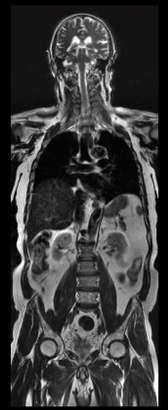
VUEPoint FX - combined with TurboTOF technology, it leverages the innovative VUEPoint HD iterative reconstruction process by adding timing information to each step within the iterative loop to improve the signal-to-noise ratio.

3D TurboTOF
5.88 mCi F18 Choline
4 min/bed
6 bed positions

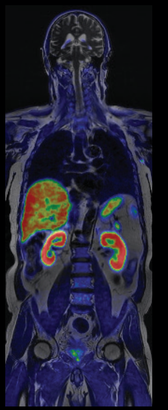
PET

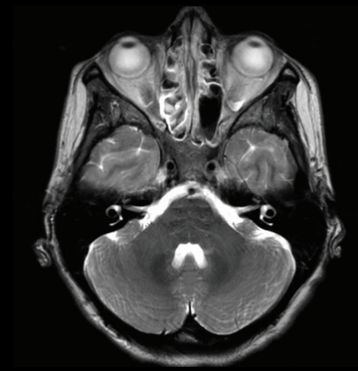


MR SSFSE



PET/MR





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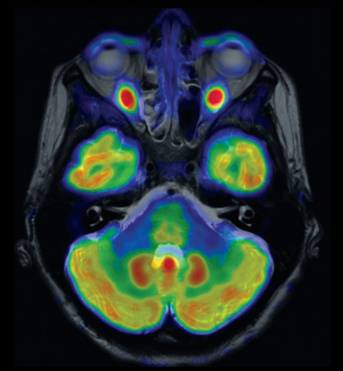

PET/MR
Fused with Integrated Registration

Standard on

SIGNA PET/MR

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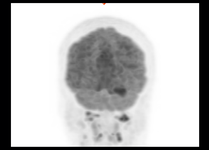
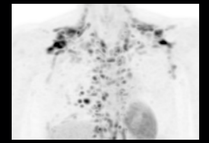
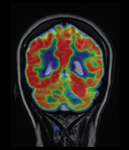
3D TurboTOF

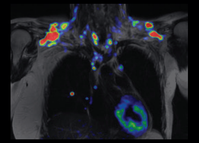


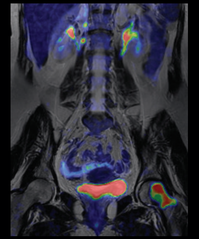


History: Breast Cancer
Findings: Multiple Metastases
6.19 mCi
3 min/bed
6 bed positions

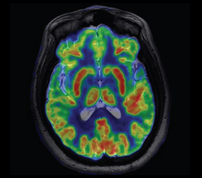
PET/MR FDG



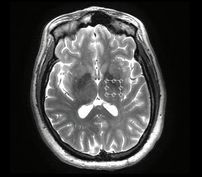




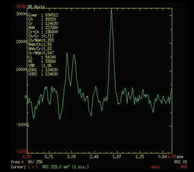
PET/MR FDG

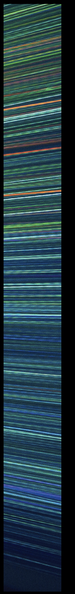


MR SSFSE

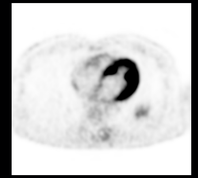


Single Voxel Spectroscopy
Findings: Normal Bio-distribution

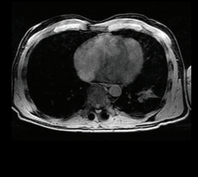




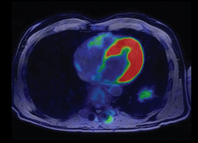
PET



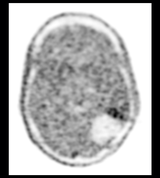
MR LAVA Flex



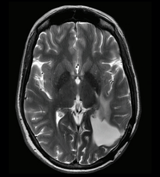
PET/MR
5.43 mCi FDG
2 hr post-injection



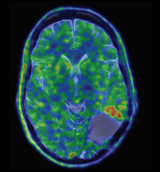
PET



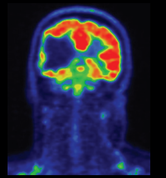
MR SSFSE



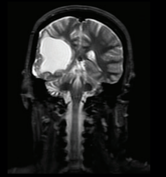
PET/MR
3.46 mCi
Fluoro-Ethyl-Tyrosine (FET)



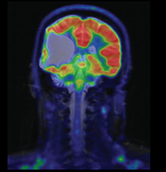
PET



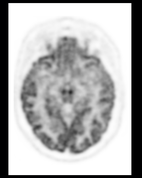
MR SSFSE



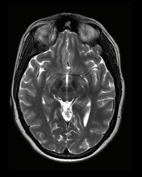
PET/MR
9.40 mCi FDG



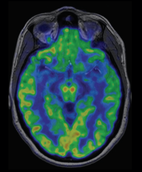
PET



MR SSFSE



PET/MR
6.35 mCi FDG



Red Nuclei routinely visualized in both PET and MR images.

Surpass

traditional norms of quantitative reliability.

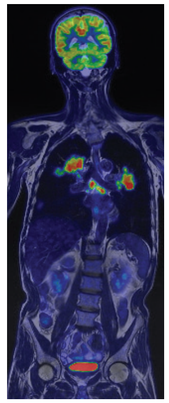
Raise clinical confidence with the exceptional quantitative reliability of SIGNA PET/MR.

Its pioneering TurboTOF technology enables MR-based attenuation correction and minimized anatomical truncation artifacts, creating a system to explore quantitative imaging. And SIGNA PET/MR offers higher SNR than previous generations of PET technology. The detachable table improves bed positioning precision and accuracy. And features like MAVRIC SL and FOCUS reduce magnetic susceptibility artifacts. So, your diagnostic confidence is as high as it is consistent.

SIGNA PET/MR – outperform with exceptional quantitative reliability.

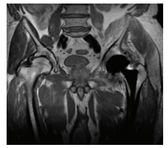
MR SSFSE

PET/MR

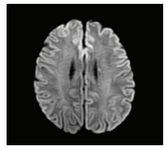


5.65 mCi FDG
3 min/bed
6 bed positions

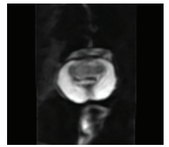
MAVRIC SL
Left Hip Prosthesis



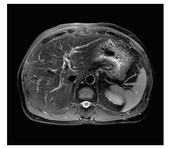
Diffusion Weighted Image (DWI)
FOV 24 cm
b-value 1000



FOCUS
Axial Prostate
FOV 30 x 9 cm
b-value 50

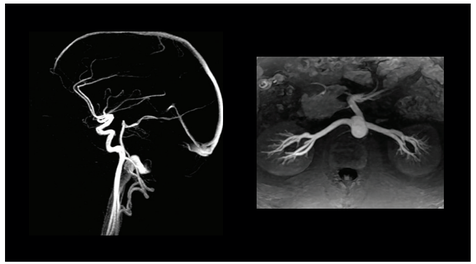


PROPELLER
Axial Liver
FOV 32 cm



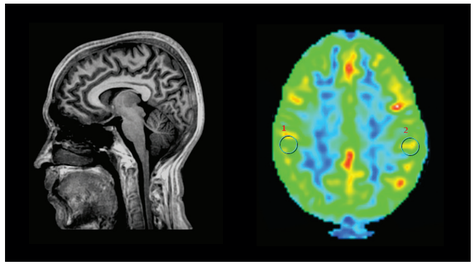
Sagittal Inhance Brain

Axial Inhance Renal Arteries

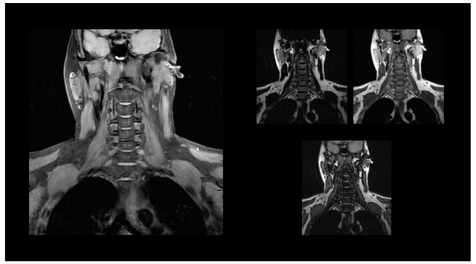


Silenz – 0 TE

3D ASL
Quantitative Blood Perfusion



IDEAL



Reimagine

the benchmarks for clinical flexibility and patient comfort.

Leap ahead in clinical flexibility and patient comfort with the breakthrough technological excellence of SIGNA PET/MR.

This simultaneous integrated PET/MR includes intuitive workflow to improve efficiency while its exceptional sensitivity enhances IQ, potentially cutting down imaging time or dose.

Our revolutionary ultra-short TE SilentScan technology delivers outstanding neuro imaging at near ambient noise levels.

And motion reduction features set new standards in patient comfort and reduce data inconsistency. SIGNA PET/MR also includes advanced MR capabilities like 3D ASL and Inhance MRA for quantitative perfusion and blood flow measurements without injected contrast media.

IDEAL imaging generates water, fat, in-phase, and out-of-phase images in a single scan in challenging anatomies such as the head/neck and foot/ankle. Set your workflow free with the remarkably versatile detachable table, which allows patient preparation inside or outside the scan room.

As part of the GE Continuum™, SIGNA PET/MR also offers unique potential for easy, economical upgradeability from other GE systems.

SIGNA PET/MR – outperform with outstanding clinical flexibility and patient comfort.

About GE Healthcare

GE Healthcare provides transformational medical technologies and services that are shaping a new age of patient care. Our broad expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, drug discovery, biopharmaceutical manufacturing technologies, performance improvement and performance solutions services help our customers to deliver better care to more people around the world at a lower cost. In addition, we partner with healthcare leaders, striving to leverage the global policy change necessary to implement a successful shift to sustainable healthcare systems.

Our "healthymagination" vision for the future invites the world to join us on our journey as we continuously develop innovations focused on reducing costs, increasing access and improving quality around the world. Headquartered in the United Kingdom, GE Healthcare is a unit of General Electric Company (NYSE: GE). Worldwide, GE Healthcare employees are committed to serving healthcare professionals and their patients in more than 100 countries. For more information about GE Healthcare, visit our website at **www.gehealthcare.com.**

GE Healthcare
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USA

imagination at work

Images courtesy of:
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University of Zurich – Zurich, Switzerland
University of California/San Francisco – San Francisco, California

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