

NEWS BRIEF

At RSNA 2017, GE Healthcare is proud to showcase continued advancements in MR imaging technologies with a complete SIGNA™ MR portfolio, including our most advanced MR system, SIGNA™ Premier, a new wide bore 3.0T magnetic resonance imaging (MRI). These systems are all powered by SIGNAWorks, GE's digital platform intended to deliver enhanced productivity and clinical excellence.

GE is also excited to introduce AIR Technology, an industry-first suite of RF coils that enables total freedom in coil positioning and handling during a MRI scan.

GE Healthcare showcases new wide bore 3.0T MRI system, **SIGNA Premier**, a result of a four-year collaboration with the National Football League (NFL) and research institutions around the world to aid researchers in the detection of biomarkers for the potential diagnosis of mild Traumatic Brain Injury.

The 3-tesla, wide-bore system was developed as part of a \$60 million program launched by GE and the NFL in 2013 to develop imaging technologies that would advance the detection and diagnosis of concussions and speed appropriate treatment for players. The quest included \$40 million to research, develop, and evaluate the next-generation modalities -- such as SIGNA Premier -- and \$20 million was set aside to improve helmets and other protective devices.

SIGNA Premier features a new 70-cm bore, a 3-tesla short-bore superconductive magnet, and the SuperG gradient coil -- the most powerful gradient system GE has produced for a wide-bore, 3-tesla system. SuperG is designed to provide the performance of a research-class 60-cm MR system in a 70-cm bore.

SIGNA Premier also includes new, digital radiofrequency (RF) transmit and receive architecture. The scanner's RF technology offers 146 independent receiver channels, which simultaneously acquire patient data from multiple high channel-density surface coils. The result is faster scanning and enhanced image quality.

The system also includes a 48-channel head coil, which features a fit-adaptable design that can accommodate 99.99 percent of the population.

SIGNA Premier can perform a routine fast brain examination in under five minutes by leveraging **HyperSense**, a new speed scanning tool, delivering up to eight times faster scanning*, which is part of the **HyperWorks** application suite.

With the introduction of the SIGNA Premier comes **AIR Technology**, an industry-first suite of RF coils that enable total freedom in coil positioning and handling during a MRI scan.

MRI is highly effective in imaging patients, however traditional coils can be bulky, heavy and rigid causing discomfort to patients and technologist. Across the MR industry, there has been a concerted effort to develop comfortable coils that are more flexible and conform to a variety of patient sizes.

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The AIR Technology coil is 60 percent lighter than conventional coils benefiting both patients and technologists, offers greater flexibility in all axes to help conform to patients' anatomies and fits all patient ages, sizes and shapes. The ultra-lightweight design makes it easier to position the patient and addresses several clinical needs including clinical coverage with a high signal-to-noise-ratio and optimized geometries for maximum use of parallel imaging. AIR Technology is currently available on SIGNA Premier as a 48-channel head coil designed to fit 99.9 percent of patients, a 30-channel anterior array providing 65 cm of coverage and a 60-channel posterior array providing 110 cm of coverage.

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