Complete Brain and Spine Imaging Without Coil Changes

GE Healthcare recently introduced the Signa® High-Density (HD) Head-Neck-Spine Array Coil that revolutionizes MR imaging as we know it today. The Head-Neck-Spine Array Coil utilizes industry-leading RF technology and an advanced design that places the highest density of coil elements in the imaging field of view. This revolutionary design increases signal to noise, facilitates patient throughput and optimizes image quality for greater diagnostic confidence and patient comfort. The 16-Channel HD Head-Neck-Spine Array further expands GE's HD coil portfolio, which includes multiple 8-Channel coils – Neurovascular, Body, Cardiac, Brain, Knee, Wrist and Cervical-Thoracic-Lumbar (CTL) Spine – and higher channel count coils such as the 12-Channel Body Array and the 16-Channel Lower Leg Coil Array.

The HD Head-Neck-Spine Array is the very first multi-site coil designed for convenience without compromise. This 16-Channel coil with 29-targeted elements for the brain and spine minimizes coil changes for most procedures within the typical MR department. By replacing three current coils – Head, Neurovascular and CTL – with a single, combined

coil, the HD Head-Neck-Spine Array reduces redundant coil switches by over 50 percent in studies that, on average, account for 71 percent of the procedural volume in the typical MR unit.

One example of the benefits of this coil can be realized during a typical spine survey. During this exam patients are repositioned up to three times using multiple coils, which interrupts the scanning process each time and significantly increases the scan length. This is more than an inconvenience as most patients are given contrast prior to the exam and the time lost due to coil switches and repositioning may require additional injections be administered. The HD Head-Neck-Spine Array allows one coil to be placed on the table to image multiple anatomical areas without moving the patient or switching coils, reducing patient table time, increasing patient comfort and minimizing the need for multiple injections.

The HD Head-Neck-Spine Array is a simple modular design that allows the individual head, neck and spine sections to be used together as a single, integrated unit for complete head and spine studies, or separately for individual studies. The thoracic and lumbar portion of the HD Head-Neck-Spine Array can be left on the table during most other exams to minimize coil changes and maximize patient throughput.

Key features of the HD Head-Neck-Spine Array include:

- 2D parallel imaging in any plane or scan orientation in the brain;
- PROPELLER HD compatibility for motion-insensitive imaging with no time penalty – even in pediatrics;
- Support of all scanning modes – including anatomical/vascular, spectroscopy and fMRI;
- Full coverage for total spine studies.

The Signa HD Head-Neck-Spine Array further demonstrates GE's leadership in High Density coil technology, our commitment to patient comfort and our desire to improve outcomes through advanced technology and design. ■