

Compact, High-Performance 3T MRI

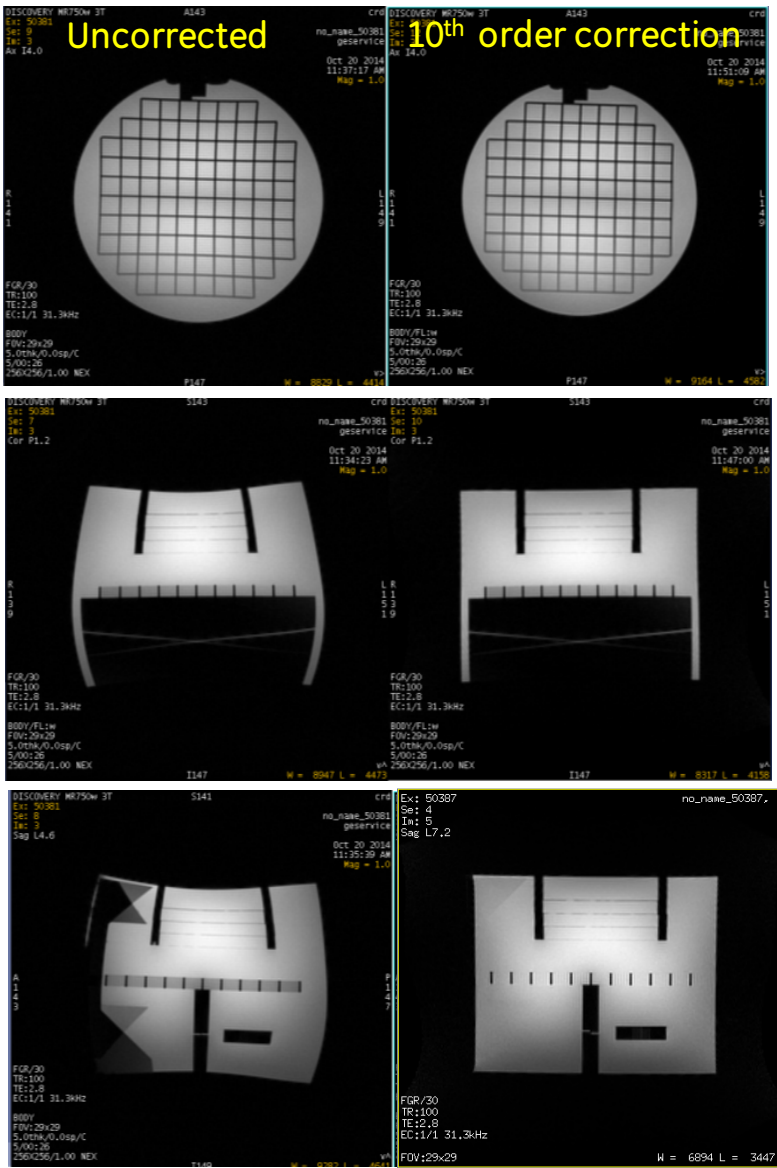


Figure S1: Axial, coronal, and sagittal plane images of an American College of Radiology (ACR) large-phantom (J4459, JM Specialty Parts, San Diego, CA, USA) showing (left column) uncorrected images without gradient non-linearity correction (gradwarp) in 29-cm FOV, and (right column) images using 10th order correction. The two-dimensional images are 5-mm thick and the ACR phantom measures 20.4/19.0-cm in diameter and 16.5/14.8-cm in height (outer and inner dimensions, respectively).

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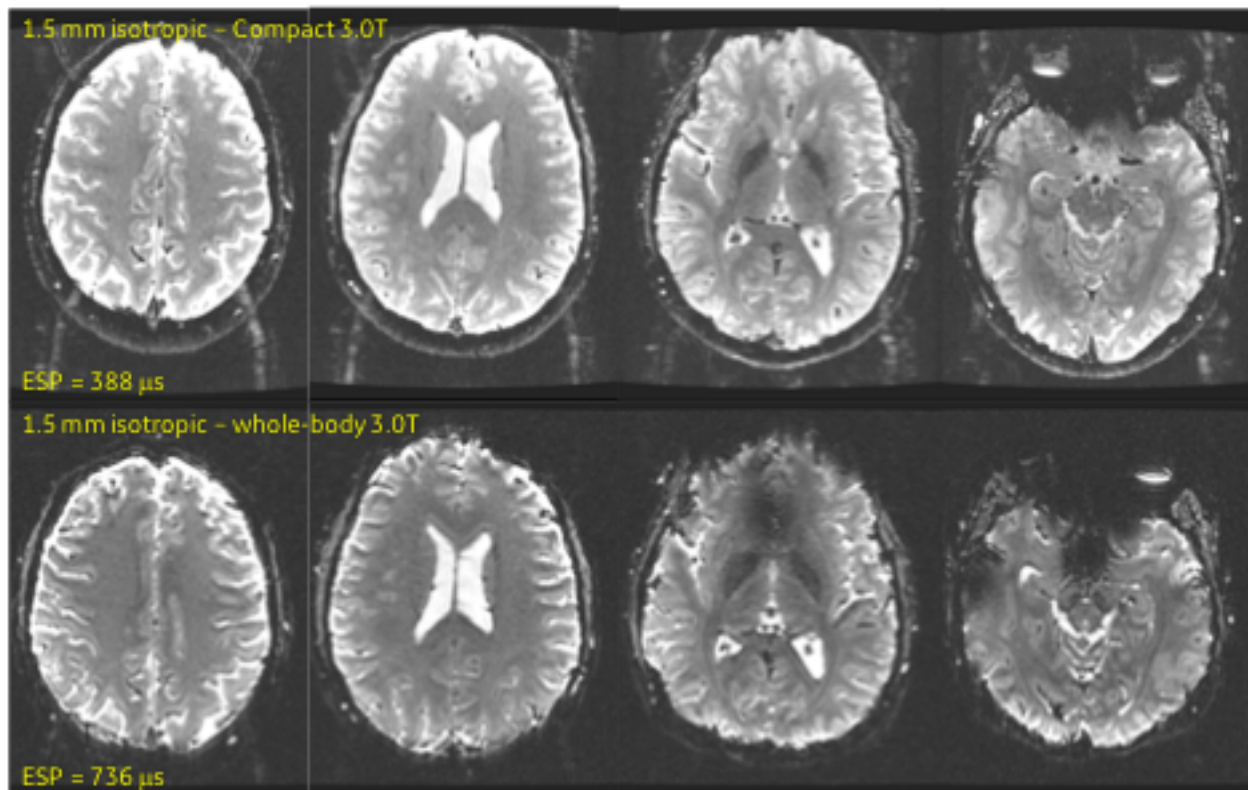
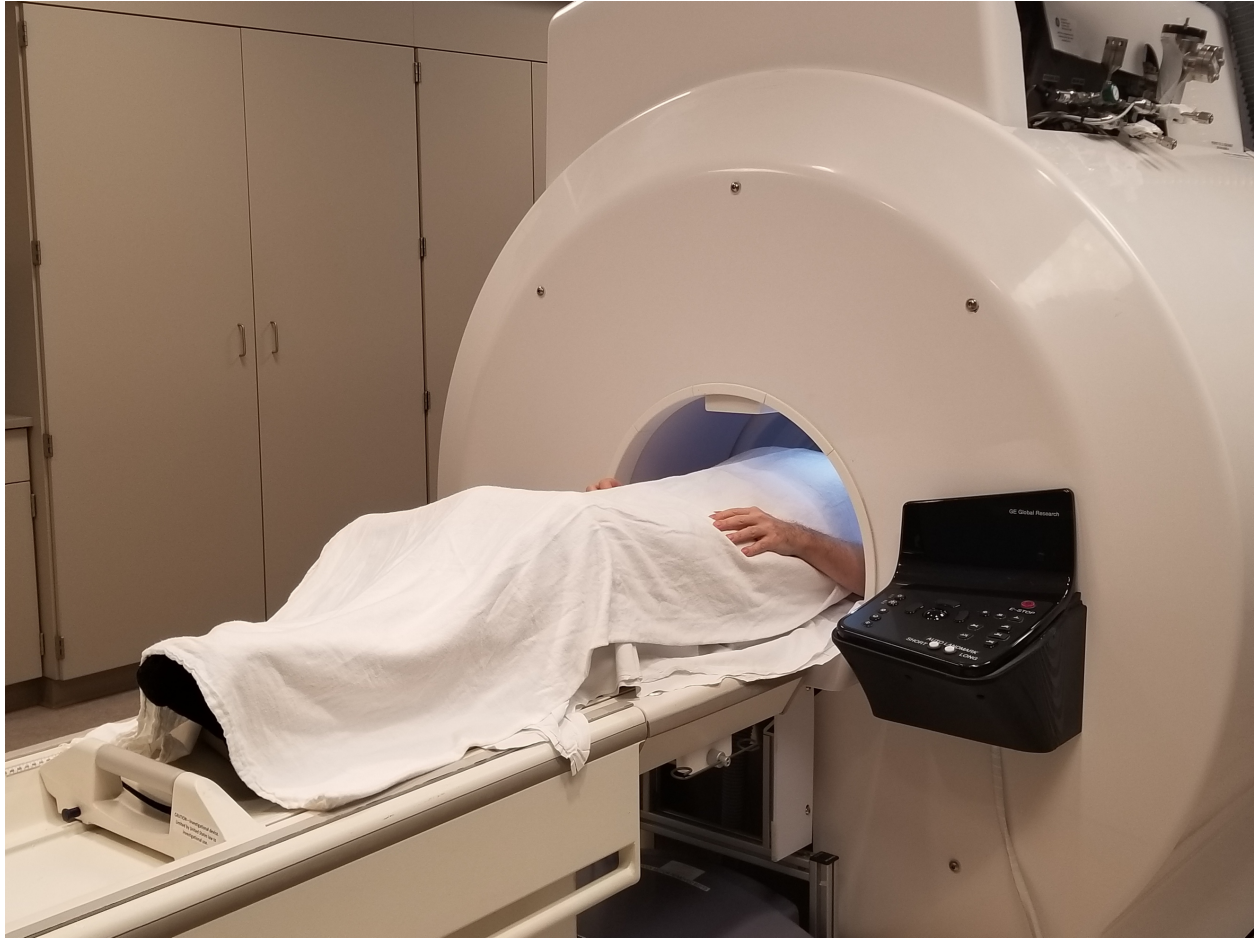


Figure S2: Axial gradient-echo-EPI images at multiple locations in the brain showing (top row) C3T images with a 700 T/m/s slew rate, and (bottom row) images from a whole-body 3T system with 200 T/m/s slew rate. Acquisition parameters were 1.5-mm isotropic resolution, 21.6-cm FOV; TR=1800 ms; TE=40 ms (for both acquisitions). The reduction in signal drop-out with the higher slew rate is clear. Echo spacing reduced from 736 μ s to 388 μ s.

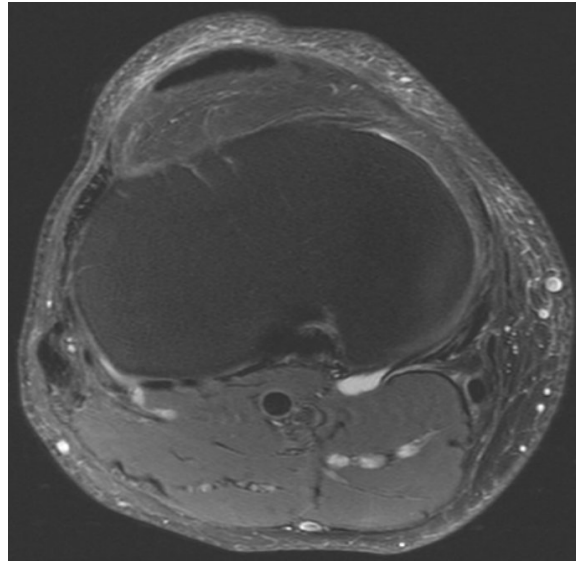
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Supporting Figure 3: A healthy male volunteer (1.87 m tall, 84 kg) positioned for scanning in the 8-channel brain coil. Note that the hands and forearms remain outside the bore.

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(a)



(b)

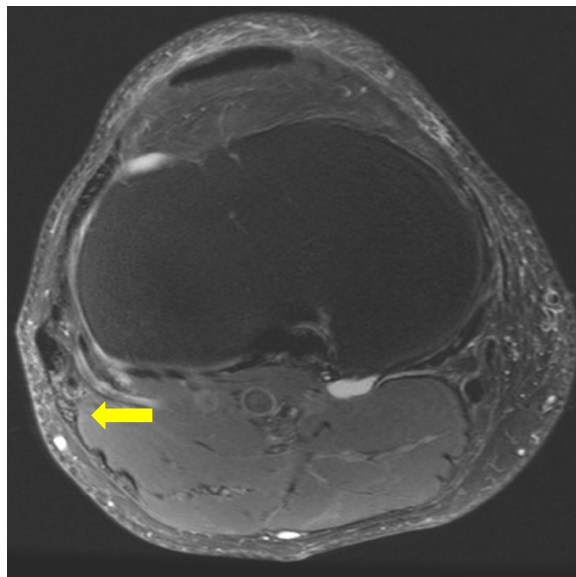


Figure S4: Fat suppressed two-dimensional axial fast spin echo (FSE) images of the knee acquired using a 16-channel Flex coil with R=1 (no acceleration). Acquisition parameters were: 16-cm FOV; 384x356 matrix; 3-mm slice thickness; TR=5626 ms. In both cases, 38 slices were acquired in 4:58. Image (a) was acquired using a clinical 3T GE 750 scanner with ESP=10.856 ms and TE=43.4 ms; image (b) which was acquired using the Compact 3T scanner with ESP=10.520 ms and TE=42.1 ms. There is slightly increased conspicuity and visualization of the common peroneal nerve on image (b) allowing identification of individual nerve fascicles (arrow).