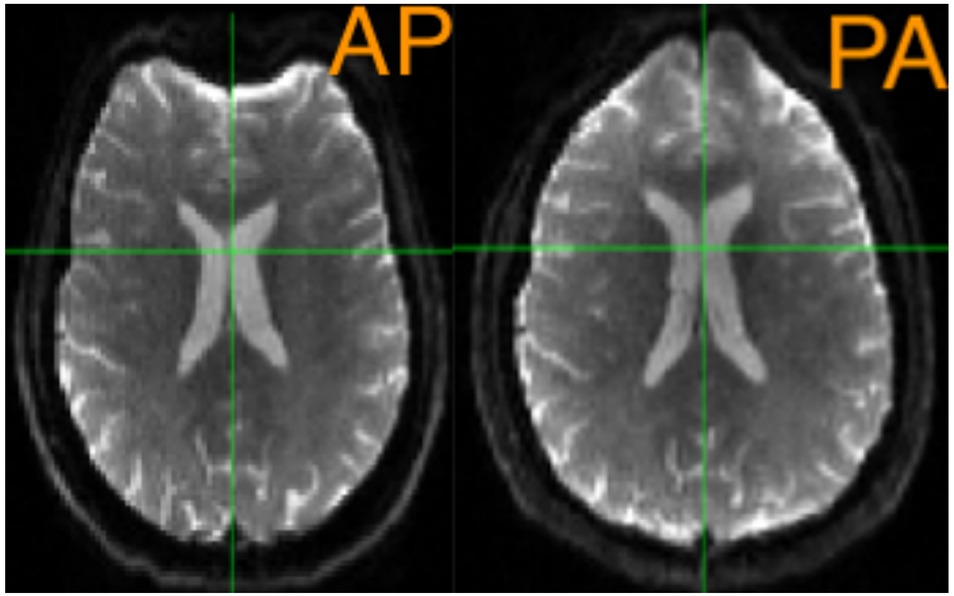
OSTRICH APPROACH?



FAR REACHING EFFECTS

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EPI susceptibility correction introduces significant differences far from local areas of high distortion

John P. Begnoche [a,*], Kurt G. Schilling [b,c], Brian D. Boyd [a], Leon Y. Cai [d], Warren D. Taylor [a], Bennett A. Landman [a,b,c,d,e]

[a] Center for Cognitive Medicine, Department of Psychiatry and Behavioral Sciences, Vanderbilt University Medical Center, Nashville, TN, USA
[b] Department of Radiology and Radiological Sciences, Vanderbilt University Medical Center, Nashville, TN, USA
[c] Vanderbilt University Institute of Imaging Science, Vanderbilt University, Nashville, TN, USA
[d] Department of Biomedical Engineering, Vanderbilt University, Nashville, TN, USA
[e] Department of Electrical Engineering and Computer Science, Vanderbilt University, Nashville, TN, USA

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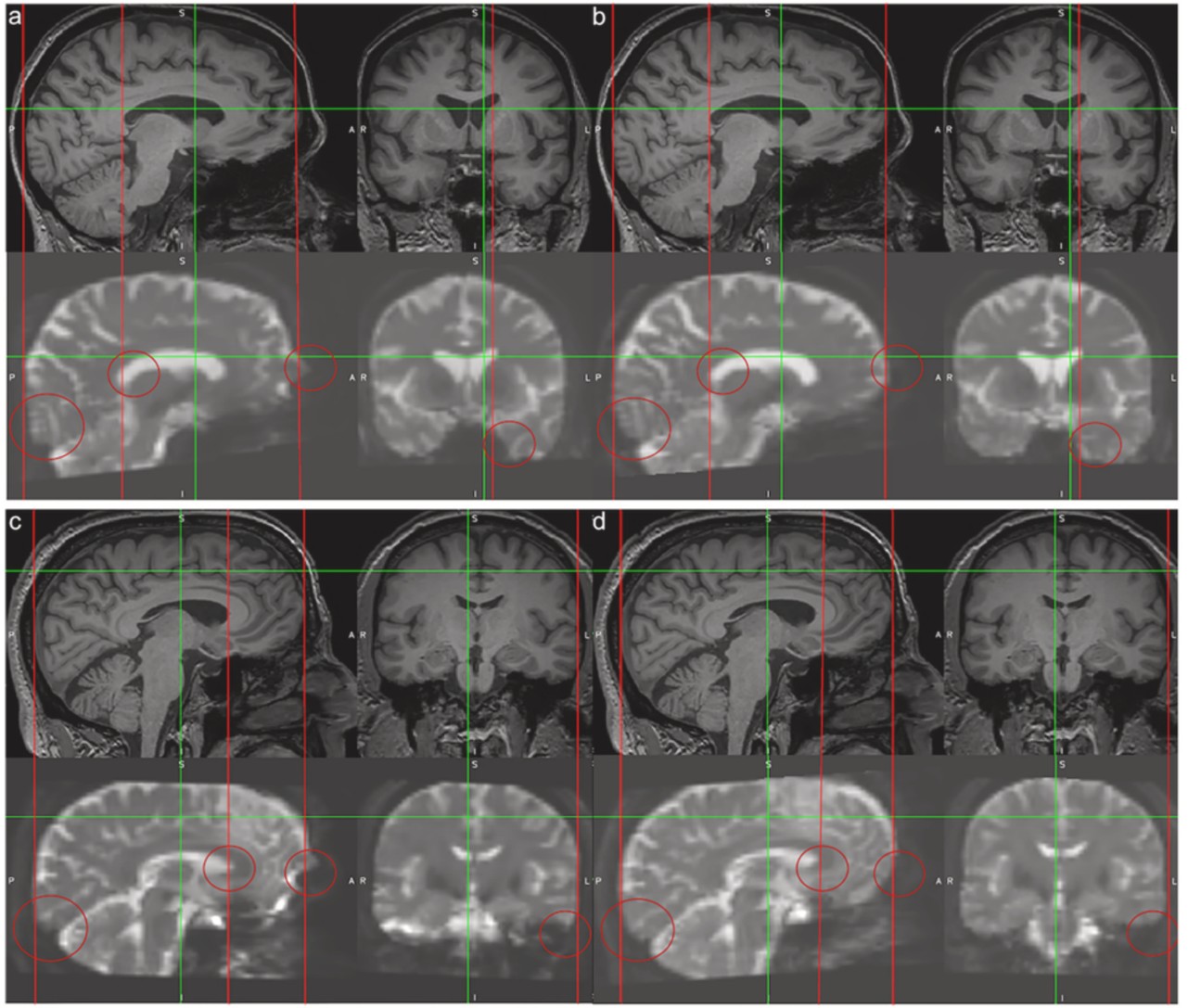
ABSTRACT

Purpose: In echo-planar diffusion-weighted imaging, correcting for susceptibility-induced artifacts typically requires acquiring pairs of images, known as blip-up blip-down acquisitions, to create an undistorted volume as a target to correct distortions that are often focal where regions with differences in magnetic susceptibility interface, such as the frontal and temporal areas. However, blip-up blip-down acquisitions are not always available, and distortion effects may not be specifically localized to such areas, with subtle effects potentially extending throughout the brain. Here, we apply a deep learning technique to generate an undistorted volume to correct susceptibility-induced artifacts and demonstrate implications for image fidelity and diffusion-based inference outside of areas where high focal distortion is present.



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