In variant Creutzfeldt-Jakob disease (vCJD), cortical deposition of abnormal prion protein (PrP) aggregates as florid amyloid plaques occur.¹ The 9.4T MRI resolves horizontal laminations of the isocortex.² We scanned blocks of postmortem vCJD brain and a sporadic CJD control after passive staining with gadodiamide using...
a high-resolution 3D gradient echo sequence. Distinct hypointense foci on the MRI in vCJD (figure, A and C) but not control (figure, B) corresponded to PrP-amyloid plaques with greatest density in the central layers of the cortex on histology (figure, D–G). As human high-field systems become widespread, noninvasive monitoring of PrP-amyloid plaques may be of utility in future treatment trials.

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