

# In Focus Spotlight on the November 9 Issue

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## White matter hyperintensity volume is increased in small vessel stroke subtypes

The authors used a quantitative measurement of white matter hyperintensity (WMH) in patients with acute stroke to demonstrate that small cerebral vessel stroke subtypes have the highest WMH burden. These data support the hypothesis that small vessel ischemic stroke and intracerebral hemorrhage represent severe forms of common small cerebral vessel disease.

See p. 1670; Editorial, p. 1664

### Cost-effectiveness of multimodal CT for evaluating acute stroke



Markov modeling showed that multimodal CT had lower costs (-\$1,716) and greater quality-adjusted life years (0.004) than noncontrast CT over 3 months. With >90% probability, multimodal CT was cost-effective at 3 months and over a lifetime. This has implications for imaging choices in acute stroke.

See p. 1678

#### Removing interictal fast ripples on electrocorticography linked with seizure freedom in children



This study identified interictal fast ripples episodes in 24 children with neocortical epilepsy during intraoperative electrocorticography (ECoG) and correlated complete resection of tissue-generating fast ripples with seizure freedom. These findings support the view that fast ripples at ECoG could become a useful biomarker for epileptic zones, guiding epilepsy surgery without the need for chronic intracranial recordings.

See p. 1686; Editorial, p. 1666

#### Magnetic resonance spectroscopy biomarkers in premanifest and early Huntington disease





This study evaluated in vivo brain metabolites in 85 participants by using  $^1\text{H}$  magnetic resonance spectroscopy and assessing their relationship with motor performance. Putaminal 3-T MRS evaluations revealed  $\sim\!15\%$  lower total N-acetyl aspartate (tNAA) and  $\sim\!40\%$  higher myoinositol levels in early Huntington disease. These metabolite changes may be useful functional measures in future therapeutic trials.

See p. 1702

#### Drug-induced deactivation of inhibitory networks predicts pathological gambling in PD



The authors studied 14 patients with Parkinson disease (gamblers or nongamblers) and assessed the direction of dopamine agonist-related activity change in brain areas implicated in impulse control and response inhibition.

Dopamine agonist medications increased activity in these areas in controls, whereas in gamblers activity was reduced.

See D. 1711

From editorialist Richard B. Dewey, Jr. "From the present results, we can perhaps encourage patients and families sometimes devastated by the consequences of pathological gambling that this behavior is likely not the fault of the patient, but probably due in part to an interaction between dopaminergic therapy and an intrinsic defect in brain physiology important for impulse control."

### Neuromyelitis optica and NMO-IgG in European pediatric patients

This study evaluated 118 pediatric patients who presented with demyelinating CNS disorders between 2000 and 2009. NMO-IgG status was determined in all patients. NMO IgG-negative patients had a better prognosis, but not all children with NMO require immunosuppressant treatment after the first attack as suggested in the recent literature.

See p. 1740

NB: "Child Neurology: Hereditary spastic paraplegia in children" and "Clinical Reasoning: A 70-year-old man with walking difficulties," see pp. e75 and e80. To check out other publications in these subsections, point your browser to www.neurology.org/misc/Residents\_and\_Fellows.dtl to see the online section of Neurology devoted to Residents and Fellows.

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