

Magnetic resonance imaging may be more sensitive than computed tomography for early detection of stroke

Clinical question	How effective is the diagnostic accuracy of diffusion-weighted magnetic resonance imaging (DWI) compared to computed tomography (CT) for acute ischaemic stroke, and what is the diagnostic accuracy of DWI for acute haemorrhagic stroke?
Bottom line	There was some evidence that DWI is more accurate than CT for the detection of mild ischaemic strokes in highly selected patients. The 2 studies on haemorrhagic stroke reported high estimates for diffusion-weighted and gradient-echo sequence MRI but had inconsistent reference standards.
Caveat	Given the variability in the quality of included studies and the very selected populations studied, the reliability and generalisability of the observed results are questionable. Practicality and cost-effectiveness issues were not assessed.
Context	DWI is increasingly used for the diagnosis of acute ischaemic stroke but its sensitivity for the early detection of haemorrhagic stroke has been debated. CT is extensively used in the clinical management of acute stroke, especially for the rapid exclusion of haemorrhagic stroke.
Cochrane Systematic Review	Brazzelli M et al. Magnetic resonance imaging versus computed tomography for detection of acute vascular lesions in patients presenting with stroke symptoms. Cochrane Reviews 2009, Issue 4. Article No. CD007424. DOI: 10.1002/14651858. CD007424.pub2. This review contains 8 studies involving 308 participants.
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[References]

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