

MR Spectroscopy

CPT: 76390

1 Tumor, Suspected

- 1.1 Indeterminate findings on other imaging
- 1.2 Findings on prior imaging suggestive tumor or
 - 1.2.1 Abscess
 - 1.2.2 Demyelination
 - 1.2.3 Encephalitis
 - 1.2.4 Focal cortical dysplasia
 - 1.2.5 Stroke

2 Tumor, Known

- 2.1 Assess tumor extent
- 2.2 Differentiate recurrence from effects of treatment
 - 2.2.1 radiation necrosis
 - 2.2.2 post surgical change
- 2.3 Follow tumor over time and/or during therapy
- 2.4 Histologic type
- 2.5 Identify site for biopsy
- 2.6 Primary or metastatic, to determine type

3 Infections

- 3.1 Initial evaluation
- 3.2 Monitoring effectiveness of treatment

4 Seizure Disorders

- 4.1 Evaluation if surgical intervention is contemplated

- 5 Dementia, to differentiate Alzheimer's disease from other forms of dementia. Medical conditions to explain dementia have been eliminated by normal or nondiagnostic thyroid-function tests, vitamin B12 level, blood urea nitrogen (BUN), serum electrolytes, blood glucose levels, and liver-function

5.1 Signs and/or Symptoms

5.1.1 Apraxia

5.1.2 Confusion

5.1.3 Disorientation

5.1.4 Language Difficulties

5.1.5 Memory loss

5.1.6 Progressive cognitive decline

5.1.7 Social disinhibition

- 6 Hypoxic-ischemic encephalopathy, to predict neuropsychological and motor development, i.e. severity and prognosis
- 7 Multiple sclerosis and related disorders, to distinguish pseudotumoral demyelinating lesions from tumors
- 8 Traumatic brain injury when patient is stabilized to assess degree of neuronal injury and predict patient outcomes

References:

1. ACR-ASNR-SPR Practice Guidelines for the Performance and Interpretation of Magnetic Resonance Spectroscopy of the Central Nervous System, Revised 2013 (resolution 7)
2. Brandao, Laura A. MR Spectroscopy of the Brain. Neuroimaging Clinics of North America. August 2013.
3. Knopman DS; DeKosky ST; Cummings JL; Chui H; Corey-Bloom J; Relkin N; Small GW; Miller B; Stevens JC Practice parameter: diagnosis of dementia (an evidence-based review). Report of the Quality Standards Subcommittee of the American Academy of Neurology. Neurology 2001 May 8;56(9):1143-53.
4. ACR-ASNR-SPR Practice Guidelines for the Performance and Interpretation of Magnetic Resonance Spectroscopy of the Central Nervous System, Revised 2013 (resolution 7) Brandao, Laura A. MR Spectroscopy of the Brain. Neuroimaging Clinics of North America. August 2013