

On-line Table: Data provided on the first 10 patients and various roles that MEG can play

Case	Neurology	MRI	Wada	fMRI	SPECT/PET	MEG Epilepsy	MEG Motor	MEG Language	Impact of MEG
1	L temporal CPS	L anterior temporal dysplasia	L language	Bilateral	—	L posterior temporal, L inferior frontal-temporal junction	—	Bilateral	Identified interictal focus in setting of normal EEG, may have avoided Wada
2	L frontal vs bifrontal GTC sz, myoclonic jerks, partial sz	Nonlesional	Not possible	—	L temporoparietal	L medial frontal, L posterior temporal	—	—	Localized interictal foci, allowed patient to be surgical candidate, surgery successful
3	Electrical status epilepticus of sleep	Nonlesional	—	—	—	Sleep: B spike (L > R); awake: occasional clusters like those seen in sleep	—	—	Avoided phase II, not resection candidate, may guide MSTs
4	L frontotemporal CPS	L posterior temporal cavernoma	Avoided in part due to poor function on MEG	?	L temporal lobe	Left superior temporal gyrus, L inferior frontal lobe	—	Nondiagnostic (expressive aphasia)	Prompted phase II instead of lesionectomy
5	L frontal motor sz	Nonlesional	—	—	—	L primary motor cortex	Orthotopic primary motor cortices	L dominant	Localized interictal foci, not surgical candidate due to location
6	R temporal partial sz	Nonlesional	Avoided, due to MEG findings	Bilateral	—	R posterior temporal-occipital junction, R posterior superior temporal gyrus	—	Bilateral	Localized interictal foci, avoided Wada and phase II, not surgical candidate due to high risk of language deficit
7	Atonic sz	R temporal dysplasia	Too young	Too young	—	B anterior and posterior, L > R	—	—	Confirmed multifocal interictal activity, not surgical candidate, avoided phase II
8	Nocturnal left frontal motor sz	Diffuse white matter lesions	?	?	—	L primary motor cortex	Orthotopic primary motor cortices	—	Directs focal grid placement or avoids phase II (family preference)
9	GTC sz, staring episodes, CPS, myoclonus	Nonlesional	—	—	L frontal focus	Nondiagnostic (due to artifact)	—	—	None; VNS makes MEG nondiagnostic
10	Nocturnal CPS	Nonlesional	?	?	—	R posterior frontal lobe, B occipital alpha	Orthotopic primary motor cortices	L receptive dominant, B expressive	Localized interictal foci, not surgical candidate due to location but strong family desire for surgery, likely explant and VNS

Note:—fMRI indicates functional MR imaging; L, left; R, right; CPS, complex partial seizures; GTC sz, generalized tonic-clonic seizures; SZ, seizures; MSTs, multiple subpial transections; —, not acquired; ?, equivocal; VNS, vagal nerve stimulator.