

EEG-Related Terminology

TERMINOLOGY (SYNONYM)	ACRONYM	DEFINITION
Continuous EEG monitoring	cEEG	=> 16 EEG channel recording with simultaneous video recording, typically of > 12h and in ICU settings, with the aim of detecting and monitoring seizures, including ESz.
Routine EEG		=> 16 EEG channels recording, typically 20-60 min duration with simultaneous video recording, with the aim of detecting abnormalities of EEG background, IEDs, seizures, & status epilepticus. In ICU settings, routine EEG is considered a screening tool.
Amplitude-integrated	aEEG	Compressed EEG recording using =>2 channels, typically of >12h duration & in ICU settings.
Spontaneous epileptiform discharges (IEDs).	IEDs	Non-rhythmic & non-periodic (intermittent) interictal EEG phenomena that are intermixed with the background & are associated with seizures e.g. spikes, polyspikes, sharp waves.

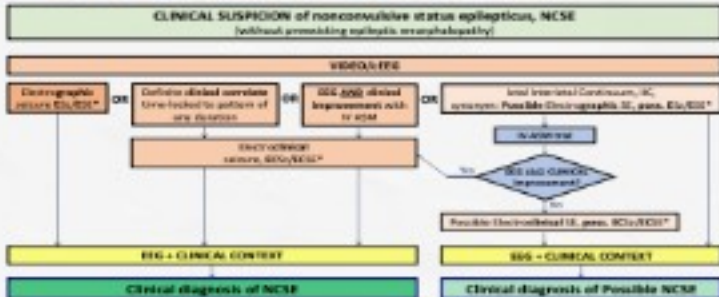
Indications of cEEG

What are the international consensus statements on cEEG in the ICU?

Society/body	Indications and recommendations
American Clinical Neurophysiology Society (ACNS)	<ul style="list-style-type: none"> - Diagnosis of ESez, ESE, and paroxysmal events (recommended). - Assessment of efficacy of therapy for Szs and SE (recommended). - Identification of cerebral ischemia (suggested). - Monitoring of sedation and high-dose IV anesthetic therapy (suggested). - Assessment of severity of encephalopathy and prognostication (proposed).
International Multidisciplinary Consensus Conference on Multimodality Monitoring in Neurocritical Care	<ul style="list-style-type: none"> - Pts with TBI, unexplained and persistent ALC (strong recommendation, low evidence). - ECSE with no return to functional baseline within 60min after ASM and pts with RESE (strong recommendation, low evidence). - During TH and within 24hr of rewarming to exclude ESez in comatose pts after cardiac arrest (strong recommendation, low evidence). - Comatose ICU pts without acute primary brain condition and with unexplained impairment of mental status or unexplained neurological deficits to exclude ESez, particularly in severe sepsis or renal/hepatic failure (weak recommendation, low evidence).



Summary – Practical Approach to cEEG Interpretation



* Status epilepticus: E/ACCS continuous intervals OR 3-50% of any burst, lasting at least 5 min.

IV AED: intravenous Antiepileptic Medication; E: periodic discharge; ACS: aperiodic discharge; AED: spike and wave or sharp and wave.