

# **Classification Model for Epileptic Seizure Using Simple Postictal Laboratory Indices**

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**Table S1.** References in the literature-based search for variables.

Variables	Journal	Author	Year of publication
Age	Epilepsy in older people	Sen et al.	2020
Sex	Sex differences in seizure types and symptoms	Carison et al.	2014
Cerebrovascular disease	Epilepsy in cerebrovascular diseases: Review of experimental and clinical data with meta-analysis of risk factors	Ferlazzo et al.	2016
Neurodegenerative disease	Dementia and adult-onset unprovoked seizures	Hesdorffer et al.	1996
Hypertension	Hypertension and the risk of new-onset unprovoked seizures.	Ng et al.	1993
Diabetes mellitus	Association Between Seizures and Diabetes Mellitus: A Comprehensive Review of Literature	Yun et al.	2013
Dyslipidemia	A high risk of hyperlipidemia in epilepsy patients: a nationwide population-based cohort study	Harnod et al.	2014
Cardiovascular disease	Association Between Midlife Risk Factors and Late-Onset Epilepsy Results From the Atherosclerosis Risk in Communities Study	Johnson et al.	2018
Cardiac arrhythmia	Cardiac arrhythmias during or after epileptic seizures	van der Lende et al.	2016
Liver disease	Risk of seizures and status epilepticus in older patients with liver diseases	Alkhachroum et al.	2018
Renal disease	Subclinical seizure activity and prophylactic phenytoin infusion in acute liver failure: a controlled clinical.	Ellis et al.	2000
Thyroid disease	Thyroid hormones: Possible roles in epilepsy pathology	Tamijani et al.	2015
Erythrocyte sedimentation rate	Predictors of early seizure recurrence in patients admitted for seizures in the emergency department	Choquet et al.	2008
White blood cell	Peripheral WBC count and serum prolactin level in various seizure types and nonepileptic events	Shah et al.	2001
Red blood cell	A study on the relationship between CBC and EEG for epilepsy patients	Jo et al.	2015
Hemoglobin	A study on the relationship between CBC and EEG for epilepsy patients	Jo et al.	2015
Hematocrit	A study on the relationship between CBC and EEG for epilepsy patients	Jo et al.	2015
Platelet	A study on the relationship between CBC and EEG for epilepsy patients	Jo et al.	2015
Delta neutrophil index	Delta neutrophil index: in search of an early indicator of sepsis	Peneva et al.	2021
Myeloperoxidase index	Evaluation of usefulness of myeloperoxidase index (MPXI) for differential diagnosis of systemic inflammatory response syndrome (SIRS) in the emergency department	Cha et al.	2014
Creatinine kinase	Serum creatine phosphokinase is helpful in distinguishing generalized tonic-clonic seizures from psychogenic nonepileptic seizures and vasovagal syncope	Petramfar et al.	2009
Creatinine kinase-myoglobin binding	Elevated CK-MB mass and plasma brain-type natriuretic peptide concentrations following convulsive seizures in children and adolescents: Possible evidence of subtle cardiac dysfunction	Alehan et al.	2009
Cardiac troponin I	Cardiac involvement in patients with acute neurologic disease: confirmation with cardiac troponin I.	Dixit et al.	2000
Brain-type natriuretic peptide	cTnI, BNP and CRP profiling after seizures in patients with drug-resistant epilepsy	Faria et al.	2020
Ammonia	Postictal transient hyperammonemia as an indicator of seizure disorder.	Liu et al.	2010
Prolactin	Predictivity of Plasma Prolactin Levels in Differentiating Epilepsy from Pseudoseizures: A Prospective Study	Anzola et al.	1993
Lactate	Lactate as a diagnostic marker in transient loss of consciousness	Matz et al.	2016
Myoglobin	Impairment of renal function after generalised seizures	Nielsen et al.	1987
Neuron specific enolase	Serum neuron-specific enolase level as a biomarker in differential diagnosis of seizure and syncope	Lee et al.	2010
Protein S100-B	Clinical significance of serological biomarkers and neuropsychological performances in patients with temporal lobe epilepsy	Chang et al.	2012

**Table S2.** Sensitivity, specificity, positive predictive value, and negative predictive value for Feature 3, Feature 4, and Feature 5 (final seizure classification model).

	<b>Sensitivity</b>	<b>Specificity</b>	<b>Positive predictive value</b>	<b>Negative predictive value</b>
<b>Feature 3</b>	0.700	0.733	0.832	0.564
<b>Feature 4</b>	0.729	0.756	0.849	0.596
<b>Feature 5 (Final seizure classification model)</b>	0.771	0.811	0.885	0.652