

MOST PROBABLE EXPLANATIONS

Below, we show the most probable values of the feature variables conditional on the class variables (i.e., Engel score at Y1, Y2 and Y5). These values describe the most probable patient for each possible combination of Engel outcomes at all time scales, as learned by the model.

Engel score: Y1 = I, Y2 = I, Y5 = I

- Race: **White**, Black, Asian, Others
- Handedness: **Right**, Left, Ambidextrous
- History of heavy alcohol / substance use: Yes, **No**
- Age at seizure onset, years: [0, 3.0], (3.0, 9.0], (9.0, 15.6], **(15.6, 27.0]**, >27.0
- Number of focal onset impaired awareness seizures (FIAS) / month: [0, 1.2], (1.2, 3.0], **(3.0, 7.0]**, (7.0, 10.0], >10.0
- Number of GTC seizures / year: **[0, 1.0]**, (1.0, 12.0], >12.0
- History of GTC seizures: **Yes**, No
- History of status epilepticus: Yes, **No**
- Family history of seizure disorder: Yes, **No**
- Type of Focal Aware Seizure: Mesial, Neocortical, **Nonspecific or mixed**, None
- First clinical manifestation during a seizure: Automatisms, **Tonic-clonic or hyperkinetic movements**, Other
- Number of disabling seizures (FIAS and GTC seizures) captured / duration of vEEG in days: [0, 0.33], (0.33, 0.6], (0.6, 0.83], **(0.83, 1.33]**, >1.33
- Proportion of GTC seizures / No. of disabling seizures captured during vEEG: **[0, 0.718]**, >0.718
- Only nocturnal seizures or seizures arising from sleep recorded: Yes, **No**
- Total number of AEDs tried: **[0, 4.0]**, (4.0, 5.0], (5.0, 6.0], (6.0, 7.0], >7.0
- Number of AEDs at time of surgery: **[0, 2.0]**, (2.0, 3.0], >3.0
- History of documented AED noncompliance: Yes, **No**
- Laterality of temporal spike: Ipsilateral, **Bilateral or generalized or contralateral**, No spike
- Oligospiker: Yes, **No**
- Typical interictal spike with maximum negativity over anterior temporal: **Yes**, No
- Ipsilateral temporal slowing seen on EEG: Yes, **No**
- Ictal onset over ipsilateral anterior temporal region: Yes, **No**, Independent bilateral, No seizure recorded
- Ictal EEG onset (Ebersole): **Type 1**, Type 2, Type 3
- Ictal activity remains localized to ipsilateral temporal region: Yes, **No**
- MRI findings: **Mesial temporal sclerosis**, Subtle hippocampal changes, Normal hippocampus
- Temporal meningoencephalocele present: Yes, **No**
- PET hypometabolism over ipsilateral temporal region: **Yes**, No
- Age at surgery, years: [0, 25.2], (25.2, 33.0], **(33.0, 40.0]**, (40.0, 47.0], >47.0
- Duration of epilepsy till surgery, years: [0, 9.0], **(9.0, 14.0]**, (14.0, 23.0], (23.0, 31.0], >31.0
- Type of surgery: **ATL**, SAH, Min invasive, ExtendedATL Tailored resection
- Reoperation case: Yes, **No**

Engel score: Y1 = I, Y2 = I, Y5 = II-IV

- Race: **White**, Black, Asian, Others
- Handedness: **Right**, Left, Ambidextrous
- History of heavy alcohol / substance use: Yes, **No**
- Age at seizure onset, years: [0, 3.0], (3.0, 9.0], (9.0, 15.6], (15.6, 27.0], **>27.0**
- Number of focal onset impaired awareness seizures (FIAS) / month: [0, 1.2], (1.2, 3.0], **(3.0, 7.0]**, (7.0, 10.0], >10.0
- Number of GTC seizures / year: **[0, 1.0]**, (1.0, 12.0], >12.0
- History of GTC seizures: **Yes**, No
- History of status epilepticus: Yes, **No**
- Family history of seizure disorder: Yes, **No**
- Type of Focal Aware Seizure: **Mesial**, Neocortical, Nonspecific or mixed, None

- First clinical manifestation during a seizure: Automatism, Tonic-clonic or hyperkinetic movements, **Other**
- Number of disabling seizures (FIAS and GTC seizures) captured / duration of vEEG in days: [0, 0.33], (0.33, 0.6], (0.6, 0.83], **(0.83, 1.33]**, >1.33
- Proportion of GTC seizures /No. of disabling seizures captured during vEEG: [0, 0.718], **>0.718**
- Only nocturnal seizures or seizures arising from sleep recorded: Yes, **No**
- Total number of AEDs tried: [0, 4.0], **(4.0, 5.0]**, (5.0, 6.0], (6.0, 7.0], >7.0
- Number of AEDs at time of surgery: **[0, 2.0]**, (2.0, 3.0], >3.0
- History of documented AED noncompliance: Yes, **No**
- Laterality of temporal spike: Ipsilateral, **Bilateral or generalized or contralateral**, No spike
- Oligospiker: Yes, **No**
- Typical interictal spike with maximum negativity over anterior temporal: **Yes**, No
- Ipsilateral temporal slowing seen on EEG: Yes, **No**
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- Age at surgery, years: [0, 25.2], **(25.2, 33.0]**, (33.0, 40.0], (40.0, 47.0], >47.0
- Duration of epilepsy till surgery, years: [0, 9.0], (9.0, 14.0], (14.0, 23.0], **(23.0, 31.0]**, >31.0
- Type of surgery: **ATL**, SAH, Min invasive, ExtendedATL Tailored resection
- Reoperation case: **Yes**, No

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- History of GTC seizures: **Yes**, No
- History of status epilepticus: Yes, **No**
- Family history of seizure disorder: Yes, **No**
- Type of Focal Aware Seizure: Mesial, Neocortical, **Nonspecific or mixed**, None
- First clinical manifestation during a seizure: Automatism, **Tonic-clonic or hyperkinetic movements**, Other
- Number of disabling seizures (FIAS and GTC seizures) captured / duration of vEEG in days: [0, 0.33], (0.33, 0.6], (0.6, 0.83], **(0.83, 1.33]**, >1.33
- Proportion of GTC seizures /No. of disabling seizures captured during vEEG: **[0, 0.718]**, >0.718
- Only nocturnal seizures or seizures arising from sleep recorded: Yes, **No**
- Total number of AEDs tried: **[0, 4.0]**, (4.0, 5.0], (5.0, 6.0], (6.0, 7.0], >7.0
- Number of AEDs at time of surgery: **[0, 2.0]**, (2.0, 3.0], >3.0
- History of documented AED noncompliance: Yes, **No**
- Laterality of temporal spike: Ipsilateral, **Bilateral or generalized or contralateral**, No spike
- Oligospiker: Yes, **No**
- Typical interictal spike with maximum negativity over anterior temporal: **Yes**, No
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- Ictal EEG onset (Ebersole): **Type 1**, Type 2, Type 3
- Ictal activity remains localized to ipsilateral temporal region: Yes, **No**
- MRI findings: **Mesial temporal sclerosis**, Subtle hippocampal changes, Normal hippocampus
- Temporal meningoencephalocele present: Yes, **No**

- PET hypometabolism over ipsilateral temporal region: **Yes**, No
- Age at surgery, years: [0, 25.2], (25.2, 33.0], **(33.0, 40.0]**, (40.0, 47.0], >47.0
- Duration of epilepsy till surgery, years: [0, 9.0], **(9.0, 14.0]**, (14.0, 23.0], (23.0, 31.0], >31.0
- Type of surgery: **ATL**, SAH, Min invasive, ExtendedATL Tailored resection
- Reoperation case: Yes, **No**

Engel score: Y1 = I, Y2 = II-IV, Y5 = II-IV

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- Handedness: **Right**, Left, Ambidextrous
- History of heavy alcohol / substance use: Yes, **No**
- Age at seizure onset, years: [0, 3.0], (3.0, 9.0], (9.0, 15.6], (15.6, 27.0], **>27.0**
- Number of focal onset impaired awareness seizures (FIAS) / month: [0, 1.2], (1.2, 3.0], **(3.0, 7.0]**, (7.0, 10.0], >10.0
- Number of GTC seizures / year: **[0, 1.0]**, (1.0, 12.0], >12.0
- History of GTC seizures: **Yes**, No
- History of status epilepticus: Yes, **No**
- Family history of seizure disorder: Yes, **No**
- Type of Focal Aware Seizure: **Mesial**, Neocortical, Nonspecific or mixed, None
- First clinical manifestation during a seizure: Automatism, Tonic-clonic or hyperkinetic movements, **Other**
- Number of disabling seizures (FIAS and GTC seizures) captured / duration of vEEG in days: [0, 0.33], (0.33, 0.6], (0.6, 0.83], **(0.83, 1.33]**, >1.33
- Proportion of GTC seizures / No. of disabling seizures captured during vEEG: [0, 0.718], **>0.718**
- Only nocturnal seizures or seizures arising from sleep recorded: Yes, **No**
- Total number of AEDs tried: [0, 4.0], **(4.0, 5.0]**, (5.0, 6.0], (6.0, 7.0], >7.0
- Number of AEDs at time of surgery: **[0, 2.0]**, (2.0, 3.0], >3.0
- History of documented AED noncompliance: Yes, **No**
- Laterality of temporal spike: Ipsilateral, **Bilateral or generalized or contralateral**, No spike
- Oligospiker: Yes, **No**
- Typical interictal spike with maximum negativity over anterior temporal: **Yes**, No
- Ipsilateral temporal slowing seen on EEG: Yes, **No**
- Ictal onset over ipsilateral anterior temporal region: **Yes**, No, Independent bilateral, No seizure recorded
- Ictal EEG onset (Ebersole): Type 1, Type 2, **Type 3**
- Ictal activity remains localized to ipsilateral temporal region: Yes, **No**
- MRI findings: **Mesial temporal sclerosis**, Subtle hippocampal changes, Normal hippocampus
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- Type of surgery: **ATL**, SAH, Min invasive, ExtendedATL Tailored resection
- Reoperation case: **Yes**, No

Engel score: Y1 = II-IV, Y2 = I, Y5 = I

- Race: **White**, Black, Asian, Others
- Handedness: **Right**, Left, Ambidextrous
- History of heavy alcohol / substance use: Yes, **No**
- Age at seizure onset, years: [0, 3.0], (3.0, 9.0], (9.0, 15.6], **(15.6, 27.0]**, >27.0
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- Number of GTC seizures / year: **[0, 1.0]**, (1.0, 12.0], >12.0
- History of GTC seizures: **Yes**, No
- History of status epilepticus: Yes, **No**
- Family history of seizure disorder: Yes, **No**
- Type of Focal Aware Seizure: Mesial, Neocortical, **Nonspecific or mixed**, None

- First clinical manifestation during a seizure: Automatisms, **Tonic-clonic or hyperkinetic movements**, Other
- Number of disabling seizures (FIAS and GTC seizures) captured / duration of vEEG in days: [0, 0.33], (0.33, 0.6], (0.6, 0.83], **(0.83, 1.33]**, >1.33
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- Laterality of temporal spike: Ipsilateral, **Bilateral or generalized or contralateral**, No spike
- Oligospiker: Yes, **No**
- Typical interictal spike with maximum negativity over anterior temporal: **Yes**, No
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- Reoperation case: **Yes**, No

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