

# EPILOG DIAGNOSTIC

## Report Interpretation Guideline

# Overview of the report's structure

## Overview page



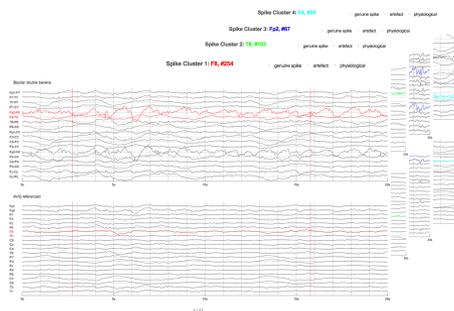
The first page gives an overview of the spike clusters that have been detected, the lateralisation of these clusters and at what time during the recording the spikes were detected.

Each of the clusters is color coded. This color is used throughout the report to denote this cluster.

## Spike detections / cluster



The next pages are grouped per cluster. Per cluster the first page provides more detail about the detected spikes. Several individual spikes are displayed using the bipolar and referential montages.



The next pages per cluster provide more detail about the spikes in the context of the full recording.

The epoch with the most spikes in a window of 60 seconds is shown.

# Overview page: header

The report header is shown on the **first page** and contains information on patient identification and on the uploaded data.



The **patient ID** corresponds to the ID that was entered at data upload.

The comments (notes) that were included for this patient while submitting the data are shown.



In the **EEG** section, the header shows the number of electrodes that were used, the date of acquisition and the total duration.

# Overview page: average spikes, lateralization and timing

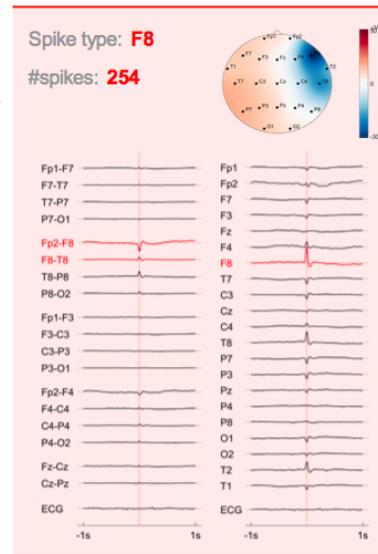
The first page gives an overview of the spike clusters that have been detected, the lateralization of these clusters, and at what time during the recording the spikes were detected.

It is important to note that only the 4 most dominant spike clusters with **more than 15 spikes detected per cluster** are reported.



EpiLog automatically clusters individual spikes that have comparable morphology into **spike clusters**. These spike clusters are determined by the electrode at which the (average) spike is maximal. The number of spikes detected in this cluster is also shown.

Each cluster is **color coded**, and this color code is used further throughout the report.



The **voltage map** depicts the voltage of the average spike at the spike maximum.

This map shows the calculated **scalp voltages** for the average spike. It does not give an estimation of where the spike originated within the brain, i.e., it does not include any source estimation.

The **average spike** is obtained by taking the average of all single spikes that were detected for this spike cluster. The average recording is shown from 1.0s before to 1.0s after the spike maximum for both bipolar and referential montages.

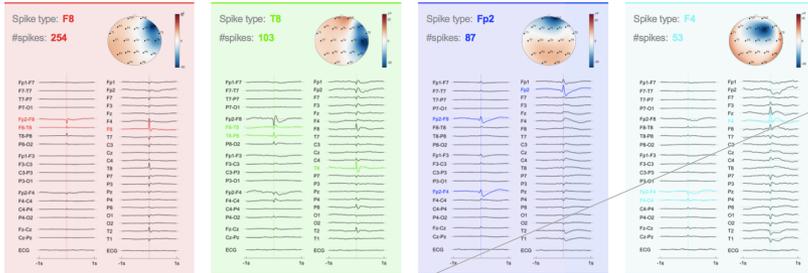
Averaging is done by first aligning the maximum (peak) of all individual spikes and taking the sum of all recordings.

Averaging increases the **signal-to-noise ratio** of the data, which yields a more accurate source estimation. Both bipolar and referential montages are shown.

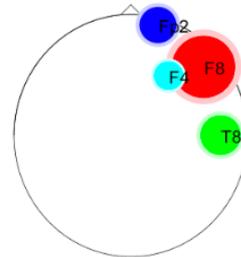
# Overview page: average spikes, lateralization and timing

PATIENT ID: ANONYMOUS | EEG: # electrodes: 21 | date: 02 Dec 2016 14:33:23 | duration: 18.5 hours

## Detected Spike Clusters



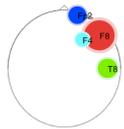
## Spike Lateralization



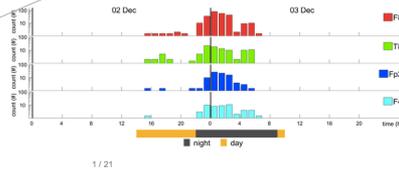
The spike lateralization diagram gives an overview of the electrodes where spike clusters were detected. All detected spike clusters are shown with their color code.

The size of the discs is correlated to the number of spikes that were detected for each cluster. This diagram is generated solely based on scalp recordings. It does not include any information on where the spikes originated in the brain, i.e., no source estimation.

## Spike Lateralization

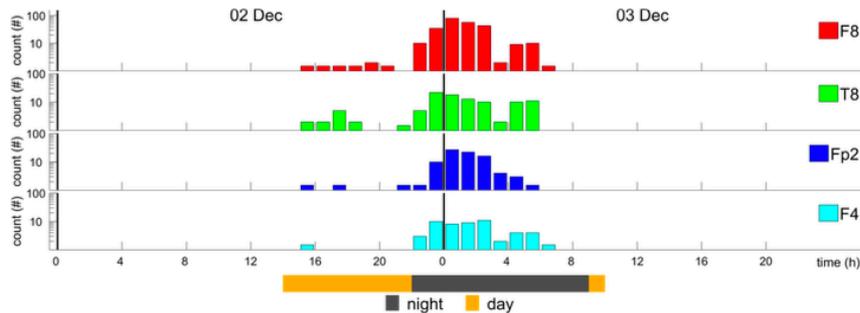


## Spike timing



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## Spike timing

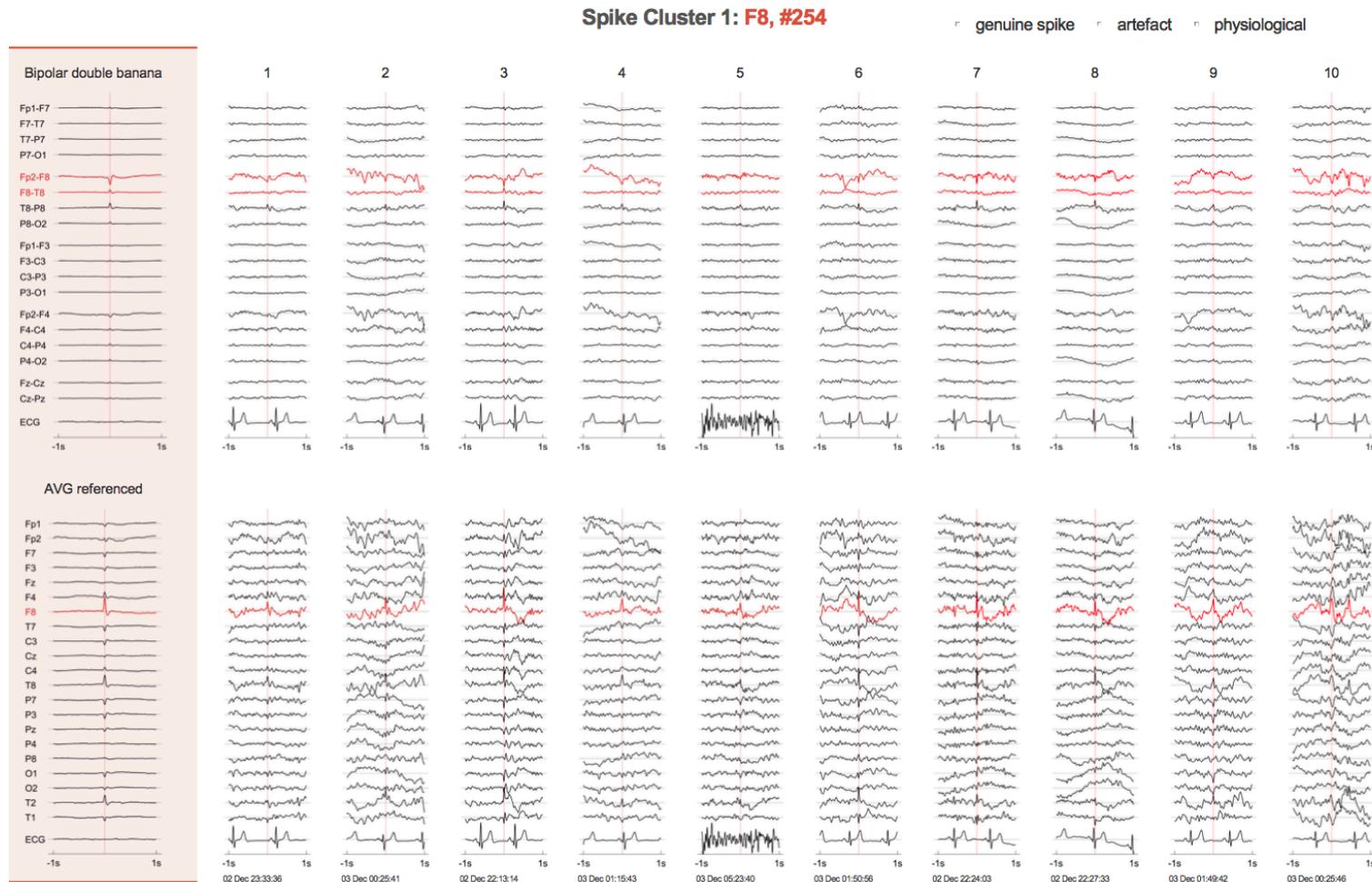


These histograms give information about when individual spikes were detected during the recording. The size of each histogram bar is correlated to the number of individual spikes detected during that period of time. All detected spike clusters are shown – not only the two clusters of which the details are shown on this page.

This information can be correlated to clinical information from the recording. For example, more spikes of certain clusters may have appeared after reduction of anti-epileptic drug dose.

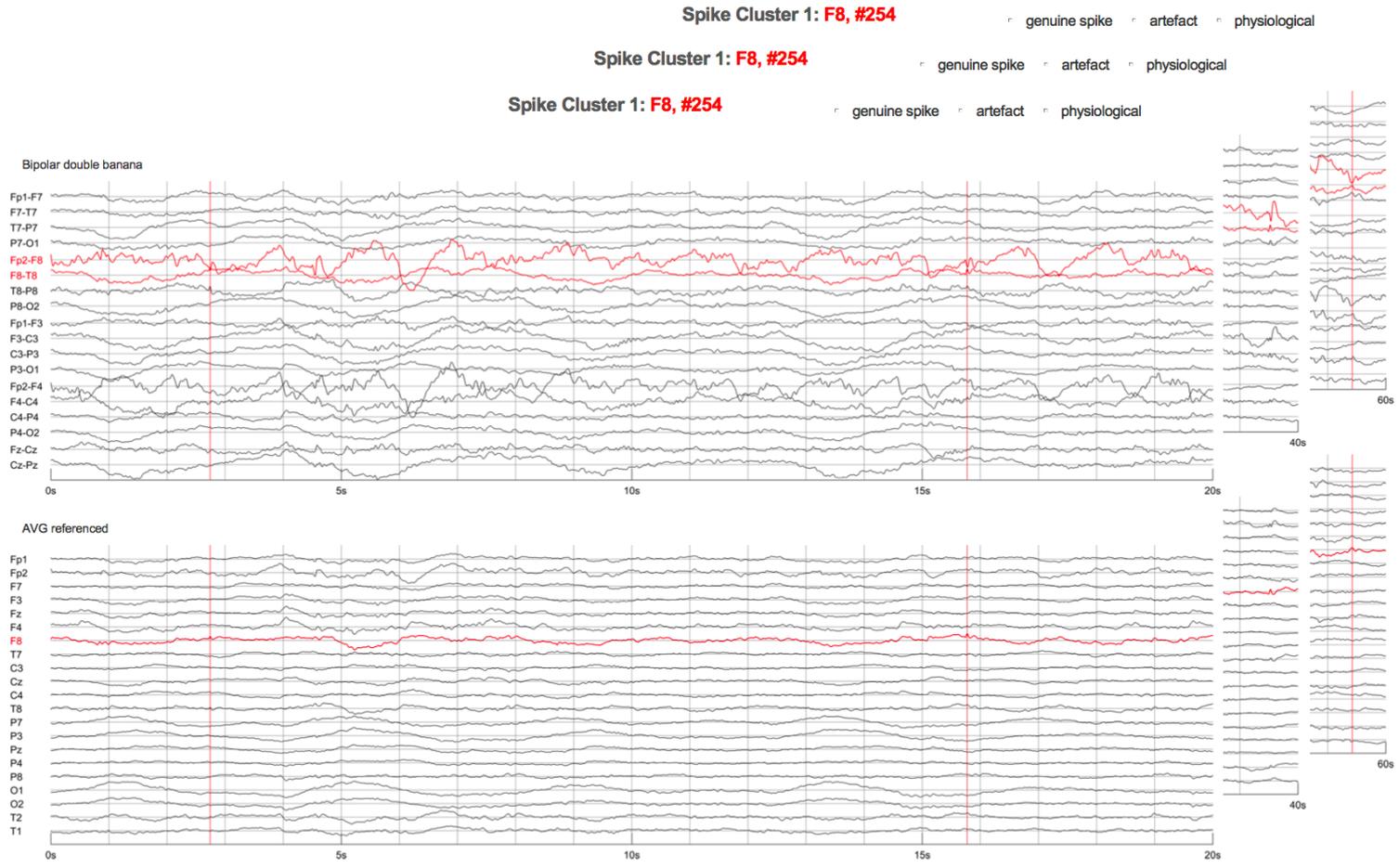
# Spike detections / cluster page

The next pages provides more detail for each of the spike detections per cluster. For each spike cluster, 20 individual spikes are shown in **bipolar** and **referential** montage. For this, the individual spikes with the highest **similarity** are selected. These are the individual spikes that have a morphology that is most comparable to the average spike.



# Maximum Spike detections in epoch of 60 seconds per cluster

The next pages correspond with the epoch of 60 seconds with the maximum number of spike detections per cluster. The vertical lines depict the spike detections per cluster.



## The Epilog Diagnostic software is for professional use only



Requires prescription in the United States.



Indicates the need for the user to consult the instructions for use for important cautionary information such as warnings and precautions that cannot, for a variety of reasons, be presented on the medical device itself.



Indicates the need for the user to consult the instructions for use.

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