

Our Precision Ketogenic Therapy program (PKT) uses nutrients in a precision medicine approach to treat seizures of patients with refractory epilepsy. Precision medicine requires that the treatment intervention and the monitoring of patients are personalized and precise. It is recognized that seizures differ and that simply counting seizures does not have the precision required for precision medicine. Published seizure scales also have limited precision and are often not included in published papers concerning ketogenic therapy. The number of observed seizures is usually used today to monitor the response of patients with epilepsy to a particular ketogenic therapy.

Different types of seizures have different impacts on patients. The same type of seizure occurring at different times may have different impacts due to differences in characteristics of that particular seizure including length, severity, and postictal status. Additional characteristics such as vocalization, changes in breathing, changes in skin color, and clustering of seizures may also occur. The individualized system we use to monitor the overall impact of the visually observed seizures on the patient's day is termed Seizure Load (SL). The absolute value of the SL at any one time is not as important as the trend of the values with time. Length of the seizure can be measured as a

number. Other characteristics are qualitative assessments of the observer and are analyzed as categorical data based on ranking scales prepared with the guidance of the observer. Monitoring SL can be very labor intensive for people observing the seizure and for the people analyzing the data. Data management processes are being developed to enhance the collection, management, analyses, and visualization of the data.