# PITFALLS IN THE DIAGNOSIS AND MANAGEMENT OF DRUG RESISTANT EPILEPSY

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### Learning Objectives

- Understand the definition of treatment resistant epilepsy
- List the risks associated with treatment resistance
- Describe the efficacy of various anti-seizure medications in treatment resistant patients
- Define pseudoresistance and explain the factors that can lead to it
- Explain the advantages and disadvantages of monotherapy and polytherapy
- Explain the benefits of prescribing rescue therapies

## Key messages

- Treatment resistance carries an enormous potential cost to patients, which can include risk of injury, loss of employment, social instability, and even death
- Before treatment resistance is confirmed, possible causes of pseudoresistance should be eliminated (wrong syndromic diagnosis, non-adherence and presence of non-epileptic seizures)
- Many people with treatment resistant epilepsy can be rendered seizure free, and there is never a reason to "give up"

#### References

- Kwan P, Arzimanoglou A, Berg AT, Brodie MJ, Allen Hauser W, Mathern G, Moshé SL, Perucca E, Wiebe S, French J. Definition of drug resistant epilepsy: consensus proposal by the ad hoc Task Force of the ILAE Commission on Therapeutic Strategies. Epilepsia. 2010 Jun;51(6):1069-77
- Kwan P, Brodie MJ. Early identification of refractory epilepsy. N Engl J Med. 2000 Feb 3;342(5):314-9
- Viteva EI, Zahariev ZI. Pseudoresistance in patients with epilepsy--characteristics and determining factors. Folia Med (Plovdiv). 2009 Apr-Jun;51(2):33-9.
- Gazzola DM, Balcer LJ, French JA. Seizure-free outcome in randomized add-on trials of the new antiepileptic drugs. Epilepsia. 2007 Jul;48(7):1303-7
- Ryvlin P, Cucherat M, Rheims S. Risk of sudden unexpected death in epilepsy in patients given adjunctive antiepileptic treatment for refractory seizures: a meta-analysis of placebo-controlled randomised trials. Lancet Neurol. 2011 Nov;10(11):961-8
- Kwan P, Brodie MJ. Effectiveness of first antiepileptic drug. Epilepsia. 2001 Oct;42(10):1255-60.