## **Pharmacogenomics**

Pharmacogenomics is the study of the role of the genome in drug response. Its name reflects its combining of pharmacology and genomics. Pharmacogenomics analyzes how the genetic makeup of an individual affects their response to drugs, including drug efficacy, adverse drug reactions, and the appropriate drug dosage on a case-to-case basis. To promote the clinical implementation of PGx testing, which is currently of limited use in clinical practice, recent research has focused on providing reliable evidence for its clinical utility.

In neurology, psychiatry, and neurosurgery, several human leukocyte antigen (HLA) alleles have been reportedly associated with cutaneous adverse drug reactions (cADRs) induced by antiepileptic drugs, which significantly carry the risk of developing cADRs. Prior to using antiepileptic drugs such as carbamazepine and lamotrigine, which are prone to cause severe cADRs, preemptive HLA genetic testing and therapeutic interventions such as drug selection and dosage adjustment based on the results of the tests can reduce the incidence of cADRs in the population before the initiation of treatment <sup>1)</sup>.

## 1)

Mushiroda T. Avoidance of cutaneous adverse drug reactions induced by antiepileptic drugs based on pharmacogenomics. J Hum Genet. 2022 May 9. doi: 10.1038/s10038-022-01040-1. Epub ahead of print. PMID: 35534674.

From: https://neurosurgerywiki.com/wiki/ - **Neurosurgery Wiki** 

Permanent link: https://neurosurgerywiki.com/wiki/doku.php?id=pharmacogenomics

Last update: 2024/06/07 03:00

