



## **Clinical pharmacogenetics implementation consortium (CPIC) guideline; Using pharmacogenetic tests in patient care**

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The Clinical Pharmacogenetics Implementation Consortium (CPIC®) is an international consortium of individual volunteers and a dedicated staff for facilitating use of pharmacogenetic tests for patient care. The Clinical Pharmacogenetics Implementation Consortium (CPIC), a shared project with the Pharmacogenomics Knowledgebase (PharmGKB: [www.pharmgkb.org](http://www.pharmgkb.org)) and the Pharmacogenomics Research Network (PGRN) from 2009 for the need of practice guidelines to enable the translation of genetic laboratory test results into actionable prescribing decisions for specific drugs. CPIC members are self-nominated and have expertise for the successful implementation of pharmacogenetic testing into patient care. CPIC membership now spans 12 countries and includes over 100 members from 58 institutions and multiple observers from the National Institutes of Health (NIH) and the Food and Drug Administration (FDA).

CPIC guidelines are designed to help clinicians understand how available genetic test results should be used to optimize drug therapy, rather than what genetic tests should be ordered. A key assumption in the CPIC guidelines is that clinicians can have patients' genotypes before prescription even if they have not ordered a genetic test for a specific drug through the wide spread clinical high-throughput and pre-emptive (pre-prescription) genotyping.

Each CPIC guideline has a standard format with a standard system for grading levels of evidence of genotypes to phenotypes, the way to assign phenotypes to clinical genotypes, prescribing recommendations on genotype/phenotype, and a standard system for assigning strength to each prescribing recommendation. CPIC guidelines use standardized terminology with a peer-review, and they are published in a journal of Clinical Pharmacology and Therapeutics, that is the partnership with the CPIC, with a simultaneous posting to [cpicpgx.org](http://cpicpgx.org) and regularly updated.

At present 33 CPIC guidelines are freely available at the CPIC website (<https://cpicpgx.org/guidelines/>).

### **References**

- <https://cpicpgx.org/>
- CPIC: Clinical Pharmacogenetics Implementation Consortium of the Pharmacogenomics Research Network. Clinical pharmacology and therapeutics 2011-3 Relling MV, Klein TE
- Incorporation of Pharmacogenomics into Routine Clinical Practice: the Clinical Pharmacogenetics Implementation Consortium (CPIC) Guideline Development Process. Current drug metabolism 2014-1 Caudle KE et al.
- Standardizing terms for clinical pharmacogenetic test results: consensus terms from the Clinical Pharmacogenetics Implementation Consortium (CPIC). Genetics in medicine : official journal of the American College of Medical Genetics 2016-7 Caudle KE et al.