
2009 ASHP Midyear Clinical Meeting Las Vegas, Nevada Educational Session Abstracts

271-All

From Research to Clinical Practice: Integrating Pharmacogenomics into Practice

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Pharmacogenomics is ready for implementation into the clinical setting of several therapeutic areas. Unfortunately, the pace of this translation into practice has been slow due to numerous physical and educational barriers. Utilization of the “NAVAGATE” system can provide a systematic method to assess key considerations when implementing pharmacogenomics principles into therapy decisions. These considerations address many of the barriers preventing widespread application including availability of a validated or FDA test, turn around time for genotype analysis, payment/reimbursement for the test, and evidence-based recommendations for actions following a genotype result. Current, clinically relevant examples of pharmacogenomics in practice include genotyping for CYP2C9 and VKORC1 prior to warfarin initiation, ability of HLA-B*5701 to predict and prevent abacavir hypersensitivity reactions, and CYP2D6 genotype associations with tamoxifen efficacy. The NAVAGATE method can provide clinicians with improved education and confidence to evaluate current and future pharmacogenomics literature and facilitate increased translation of pharmacogenomics into clinical practice.

Learning Objectives:

1. Explore the scope of pharmacist practice integrating pharmacogenomics to selected therapeutic areas in the clinical setting.
2. Identify operational issues integrating pharmacogenomic testing into practice.
3. Evaluate challenges faced by pharmacists when they try to incorporate available scientific evidence into practice.

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Self-Assessment Questions:

1. Which of the following alleles is associated with a decreased warfarin clearance and a decreased maintenance dose of warfarin?
 - a. CYP2C8*1
 - b. CYP2C9*1
 - c. CYP2C9*2
 - d. CYP2C19*2
2. Of the following anti-retroviral medications, which has been prospectively shown to avoid hypersensitivity reactions by testing for HLA-B*5701?
 - a. Tenofovir
 - b. Abacavir
 - c. Stavudine
 - d. Lamivudine
3. HG is a 38 yo woman who has been started on tamoxifen 20 mg PO daily for her ER + breast cancer. After initiating therapy, she develops severe hot flashes. HG most likely has which of the following genotypes?
 - a. CYP2D6 *1/*1
 - b. CYP2D6 *1/*4
 - c. CYP2D6 *4/*41
 - d. CYP2D6 *4/*4

Answers: 1. c; 2. b; 3. d