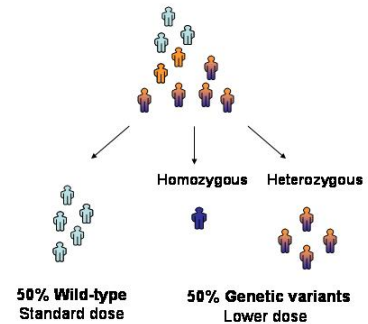


## Irinotecan (Camptosar) Sensitivity Pharmacogenomics

### INTRODUCTION

- Detects genetic variations of UGT1A1 (presence of UGT1A1 \*28 allele) that affects irinotecan catabolism
- The test is intended to identify patients at risk for severe neutropenia due to irinotecan toxicity in genetically susceptible individuals
- Recommended dose reductions resulting from irinotecan sensitivity pharmacogenomic testing can lead to significant overall reductions in cost and adverse drug effect

### Irinotecan Sensitivity Pharmacogenomics



### INDICATIONS

- Useful for guiding administration of irinotecan to patients with metastatic or treatment resistant colorectal cancer

### SPECIMEN REQUIREMENTS

- Blood is collected in standard EDTA tube (5 – 7 ml)
- Ship specimens immediately at room temperature within 24 hours

### CONSULTATIVE SERVICES PROVIDED

- UGT1A1 genotyping is performed
- Genotyping directly guides recommended dosing for irinotecan
- Typically, dose reductions of at least 1 dose level are recommended for patients who are homozygous for the UGT1A1\*28 allele

### CONSIDERATIONS

- Irinotecan therapy is common—there are about 150,000 new cases of colorectal cancer/year, approximately 50% of which are regionally or systemically metastatic
- 40% of the population possesses one copy of the UGT1A1\*28 allele. In these patients, the risk of toxicity is 12.5%. Genotyping recommends dose reduction in such patients
- About 10% of the population carries two copies of the UGT1A1\*28 allele, which is associated with a 50% risk of toxicity. Genotyping recommends decreased irinotecan dosing in these patients
- In 2005, the FDA approved pharmacogenomic testing for detection of the UGT1A1 \*28 allele

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