FIRST VALIDATION OF POINT-OF-CARE CYP2C19 GENETIC TESTING IN PATIENTS UNDERGOING CORONARY ANGIOGRAPHY WITH THE VERIGENE NUCLEIC ACID ASSAY

ACC Poster Contributions
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**Background:** Recent FDA boxed warning has highlighted the potential importance of CYP2C19 genotype-guided antiplatelet therapy in PCI patients. A rapid and inexpensive genetic test in the PCI patient may facilitate personalized antiplatelet therapy. The Verigene 2C19/CBS nucleic acid assay detects eleven allelic variants of the CYP2C19 gene and is designed for point-of-care testing. However, the feasibility and validation of the test has not yet been reported in patients undergoing cardiac catheterization.

**Methods:** In this study the Verigene 2C19/CBS nucleic acid assay was used to determine the presence of CYP2C19 *2-*10, *13, and *17 alleles prior to angiography (n=100). The results were validated with bi-directional DNA sequencing.

**Results:** Genotype was determined within 3 hours of blood drawing. The Verigene CYP2C19 assay identified *2 (n=2) and *17 (n=2) homozygotes; *2 (n=26), *8 (n=1), *9 (n=1), *10 (n=1), and *17 (n=29) heterozygotes. Bi-directional sequencing confirmed 100% accuracy.

**Conclusion:** This is the first report to demonstrate that the Verigene 2C19/CBS nucleic acid assay is a promising point-of-care method to rapidly and correctly identify the genotype of the PCI patient for facilitation of personalized antiplatelet therapy.