

A Personalized Medicine Observational Study Using a Gene Expression Test to Evaluate Patients \geq 65 Years Old Presenting with Symptoms of Suspected Obstructive Coronary Artery Disease

Meeting:

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Background:

The objective of this retrospective chart review study was to assess the role of a personalized gene expression score (GES) in medical decision making by primary care physicians (PCP) considering referral of geriatric patients to a cardiologist for evaluation of suspected obstructive coronary artery disease (CAD).

Methods:

The GES is a validated diagnostic test, measuring expression levels of 23 genes to determine the likelihood of a patient having at least one coronary artery with \geq 50% stenosis. Of the 317 patients without a history of CAD presenting to 4 primary care clinics with symptoms of suspected CAD from January 2011 to September 2011 in our retrospective study, there were 98 stable patients that were 65 years or older. Each patient had a peripheral blood sample sent to a central reference laboratory for gene expression testing. The GES was reported to the physician within 3 days on average.

Results:

The median patient age was 72 years, and 52% were female. There were 15 (15%) patients with low GES (mean=12) and 83 (85%) with elevated GES (mean=28). A total of 49/98 (50%) patients were referred to cardiology: only 1/15 low GES patients (7%) were referred on to cardiology, whereas 48/83 (58%) of elevated scores are referred (OR 0.09, $p=0.04$ adjusted for age, sex, practice and symptoms).

Conclusions:

Among the 71 (72%) patients with average follow-up of 180 days, there were no major adverse cardiac events noted. Thus the GES was incorporated into clinical practice to rule out CAD and showed clinical utility in the elderly population by helping the physicians to manage the geriatric patient in the primary care setting, thus optimizing the delivery of care.