



American
Clinical Laboratory
Association

Statement of
The American Clinical Laboratory Association
Before
The Medicare Evidence Development & Coverage
Advisory Committee
Pharmacogenomic Testing
January 27, 2010

ACLA Comment to MedCAC

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The American Clinical Laboratory Association (ACLA) appreciates the opportunity to testify today on behalf of its members who represent national, regional, local and hospital clinical laboratories. Many if not all ACLA members perform genomic testing; thus, our members have a significant interest in the topic of pharmacogenomic testing and its value in improving health outcomes.

ACLA has completed technical summaries for all five of the pharmacogenomic topics under discussion and is providing these as attachments. These summaries conclude, based on significant evidence, that all these cancer biomarkers identify patients who will respond to the anticancer treatment or who would be considered eligible or ineligible for such treatment, and thus confirm their ability to improve health outcomes. This conclusion takes into consideration the broad spectrum of evidence that should be considered in evaluating diagnostic tests, clinical guideline recommendations from government agencies and professional societies and on-going clinical research.

As shown in the reviews, the topics are extremely disparate and complex. Two of the topics concern genetic variations for which a genetic test can help predict the expected effective dose or risk of severe toxicity for a particular drug based on an individual's metabolism (so-called "pharmacogenomic tests"). Three other topics concern "companion diagnostic tests" which are used to characterize specific molecular alterations of the cancer which predict response to a particular therapeutic compound that either targets this alteration or a related growth pathway in the cancer cells.

Certain of these tests identify inherited genetic variation that impact the metabolism of anti-cancer drugs and can be tested on routine blood samples. Others identify cancer-related acquired molecular defects in the tumor rather than normal cells. These tests are performed on the tumor tissue acquired at diagnosis or surgery. Additionally, the analytical technology concerning these tests continues to be optimized to improve detection rates as does the impact of test results on treatment strategies for various cancers at various stages of disease to improve outcome for cancer patients.

Because of this complexity and continual optimization, any general summary decision/recommendation on sufficiency of evidence and health outcome improvement could confuse rather than clarify matters as regards CMS actions in this important area.

Recently, Dr. Francis Collins, who led the National Institutes of Health (NIH) project that mapped the human genome and is now the Director of the NIH, authored an article entitled "Dramatic Breakthroughs in Cancer Treatment" in Parade magazine. In it, he states "Based on our rapid increase in understanding the molecular structure of cancer cells, the 'carpet-bombing' strategy is beginning to give way to medicines that act more like 'smart bombs'." He goes on to say, "For an increasing number of cancers, molecular analysis of tumor tissue can be an important guide to the best treatment plans." He uses estrogen positive breast cancer and chronic myelogenous leukemia – both under discussion today - as specific examples of the value of DNA targeted therapy.

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ACLA also believes that as we continue to research and make available dramatic advances in cancer treatment for patient care, genetic testing will continue to play a vital role in helping determine the best treatment for individuals. These tests can be validated and patient outcomes can be measured by a range of scientific methods and on a case-by-case basis to demonstrate their value and utility in improving care.

When ACLA commented to this committee in February 2009 on the need for evidence standards for genomic tests, we stressed the important differences in the types and uses of genetic biomarkers and their distinction from drugs and strongly encouraged MedCAC to apply flexibility and alternative options in evaluating diagnostic tests. Diagnostics and drugs are fundamentally different. Unlike drugs, which have a direct relationship to patient outcomes, diagnostics have an indirect but integral relationship to patient outcomes, and the measurement of their effectiveness and utility necessarily must be different from how the effectiveness of drugs is measured. While randomized clinical trials may be the “gold” standard for drug therapies, clinical trials have significant limitations when applied to many diagnostics.

Diagnostics can lead to the selection of an appropriate therapy, help manage disease by tracing changes associated with therapeutic interventions, and are used as measurement tools in outcomes research. The ability of tests to influence clinical decisions and outcomes is subject to factors that are beyond or independent of the technical attributes of the tests themselves. Diagnostic biomarker pathways are most commonly identified well into the drug investigation process. Thus, the impact of laboratory practice on health outcomes can be inferred through linkages between the tests and surrogate outcomes that have been validated as being strongly associated with subsequent patient outcomes.

Alternative scientific methods exist for determining whether genetic tests are reasonable and necessary. Carefully constructed retrospective studies involving patient data can yield scientifically valid, clinically meaningful results more quickly. Genetic test validation can be performed using archived specimens that have been stored and catalogued. Utilizing such retrospective reviews of archived specimens, in lieu of prospective clinical trials, can result in more rapid determination of the utility of a diagnostic procedure without adversely affecting incentives to develop beneficial new tests.

ACLA encourages MedCAC to make recommendations that carefully consider the complexity of these subjects and that are based fundamentally upon recognition of the value of these tests to cancer patients. MedCAC should avoid recommendations that oversimplify these very complex subjects. It would be an error and significantly set back the promise of personalized medicine to place coverage restrictions on the fullest and most beneficial possible use of cancer biomarkers for Medicare patients.