Raising the Bar
No studies have shown that chemosensitivity testing improves overall survival. The 2011 literature review by ASCO’s working group found that of 11,313 new articles on chemosensitivity testing within the 7-year window assessed, only 21 met predefined inclusion criteria. Of these, five were randomized clinical trials, none of which supported chemosensitivity testing in oncology practice, given the few patients involved.

Such studies are incredibly difficult to do, Lancaster said. Moreover, many tests in medicine today don’t categorically improve survival, he said, such as weekly blood count monitoring after chemotherapy or even some widely used cancer drugs. “We can delay growth of a tumor or increase the time of stable disease, but does it improve survival? Are we holding these assays to a higher standard than we do other tests?”

One practitioner, Robert Nagourney, M.D., Ph.D., medical and laboratory director of a company in California, who has been doing chemosensitivity testing for more than two decades, thinks so. From his perspective, the scientific elegance of genomics testing has obscured research interest in chemosensitivity assays, which were “not well done for a long time, so they were dismissed.”

But new tests can better capture the microenvironment of tumor cells inside the body, he contends, enabling technicians to isolate cancer cells into clusters that include even some of their vasculature.

Still, doctors generally prefer to follow treatment results from clinical trials rather than from the laboratory. According to Richard Levine, M.D., president of Space Coast Cancer Center in Titusville, Fla., and a member of ASCO’s National Quality Care Committee, “If you have a standard regimen for a particular cancer, but chemosensitivity testing says don’t give a certain drug, there’s no article that shows a patient will do better. We have to go with the known data.”

Although genomic testing already carries storied data (including advances with Her2/neu, ALK inhibitors, and BCR–ABL gene mutations in chronic myeloid leukemia) that have influenced patient care, chemosensitivity assays have not yet attained the same level of success, Levine said.

But a recent ASCO initiative called CancerLinQ might change that. The multimillion-dollar massive electronic database will record, track, and collate chemosensitivity and molecular profiling testing results for clinicians to access.

“This system should help guide treatment and help us be current,” Levine said. “It will have all the toxicities, response rates, and survival, so doctors can mine the data for the best care for their patients.”

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PDQ (Physician Data Query) is the National Cancer Institute’s source of comprehensive cancer information. It contains peer-reviewed, evidence-based cancer information summaries on treatment, supportive care, screening, prevention, genetics, and complementary and alternative medicine. The summaries are regularly updated by six editorial boards. The following PDQ summaries were recently updated:

PMID: 22036019
The PDQ Genetics of Colorectal Cancer summary was recently updated to include the results of a randomized, double-blind, placebo-controlled trial of 861 patients with Lynch syndrome (LS) in which aspirin was shown to have a protective effect compared with a placebo in an analysis of colorectal cancer (incidence rate ratio = 0.56, 95% CI = 0.32 to 0.99; P = .05) and an analysis of all other LS-associated cancers (endometrial, ovarian, pancreatic, small bowel, gall bladder, ureter, stomach, kidney, and brain) (hazard ratio = 0.65, 95% CI = 0.42 to 1.00; P = .05). Participants in the multicenter trial, known as the Colorectal Adenoma/Carcinoma Prevention Programme (CAPP2), were randomly assigned to receive 600 mg aspirin per day, an aspirin placebo, 30 mg resistant starch, or a starch placebo for up to 4 years. A study using lower doses of aspirin is expected to begin in 2013.

To review the summary, please use the following link: http://cancer.gov/cancertopics/pdq/genetics/colorectal/healthprofessional/allpages#Section_1412

The PDQ Screening and Prevention Editorial Board recently completed a major update of the screening by chest x-ray and/or sputum cytology section of the Lung Cancer Screening summary. The Board conducted a review of the published literature and revised the text of the summary and updated the citations. To review the summary, please use the following link: http://cancer.gov/cancertopics/pdq/screening/lung/HealthProfessional/page1/AllPages#Section_241

The PDQ Adult Treatment Editorial Board recently completed a major update of the Intraocular (Uveal) Melanoma Treatment summary. The Board conducted a review of the published literature and revised the text of the summary and updated the citations. To review the summary, please use the following link: http://cancer.gov/cancertopics/pdq/treatment/intraocularmelanoma/HealthProfessional

The PDQ Pediatric Treatment Editorial Board recently completed a major update of the Childhood Soft Tissue Sarcoma Treatment summary. The Board conducted a review of the published literature
and revised the text of the summary and updated the citations. To review the summary, please use the following link:


The PDQ Adult Treatment Editorial Board recently completed a major update of the Urethral Cancer Treatment summary. The Board conducted a review of the published literature and revised the text of the summary and updated the citations. To review the summary, please use the following link:

http://www.cancer.gov/cancertopics/pdq/treatment/urethral/HealthProfessional

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### STATBITE

**Chemosensitivity Testing Assay Results**

In vitro chemosensitivity assays use proprietary screening tests for clues about each individual’s cancer. The data above reflect the results of 192 women from participating institutions with ovarian cancer who underwent chemosensitivity assay testing using ChemoFX, which was published in the *Journal of the National Comprehensive Cancer Network* in September, 2011.

Source: *Journal of the National Comprehensive Cancer Network*

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