Can Serum Tumor Markers Be Used in the Management of Lung Cancer?

Dr. Edward S. Kim from the Levine Cancer Institute in Charlotte, NC describes the use of serum tumor markers in various types of cancer, and the lack of a useful serum tumor marker in lung cancer.

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Transcript
Now, we’ve talked about ways of doing what we call liquid biopsies, and trying to measure tumors in the blood, but we don’t have any system with those technologies, as of yet — this will be summer of 2015, that we can actually use them to track or measure cancer and its response to therapy.

There are some other cancers out there, such as those that involve the bowel, or the colon, or the esophagus, in which, after you’ve already diagnosed a cancer, you can use a blood marker. One is called CEA, or carcinoembryonic antigen. This CEA is something that will rise when there is more cancer, or fall when there is less cancer. So, if one is being treated with chemotherapy, a physician can follow this level during the course of therapy, and after therapy, they can follow the levels and see if they begin to rise.

CA 125 in ovarian cancer is another example of where you have a blood marker that will actually rise or fall in the response for therapy. You can also use CA 125 to detect if there is cancer, and you can also use something we call PSA, or prostate specific antigen, to diagnose and follow prostate cancer. It’s an important distinction on these blood markers — some we can use to actually help diagnose: PSA, CA 125, and some we can’t use to diagnose as accurately, but we can use them to see the effect of treatment, after you’ve been diagnosed and started on therapy, something like CEA.

Unfortunately, in lung cancer, we don’t have anything right now that helps us follow the course and response of a lung cancer during treatment. Really, we rely on two things. One is serial radiographic assessment, with CAT scans, PET scans, wherever the site of disease is, and two, how the patient, themselves, is feeling. So, that’s a clinical response that we look for — we also, then, look for a radiographic response, and if both the patient is feeling better, and the tumor is shrinking, that is the best case scenario.

But right now, there isn’t anything we have, as far as a blood marker, that we use to follow serially.