Detecting Metastatic Breast Cancer: The Role of Scans and Emerging Blood Tests

Announcer:

Welcome to *Project Oncology* on ReachMD. On this episode, we'll learn about the diagnosis of metastatic breast cancer with Dr. Sarah Sammons, who's an Associate Director of the Metastatic Breast Cancer Program at Dana-Farber Cancer Institute in Boston, Massachusetts, as well as an Assistant Professor at Harvard Medical School. Let's hear from Dr. Sammons now.

Dr. Sammons:

The most common places that breast cancer can return and metastasize are the locations of the liver, bone, lungs, and occasionally the brain.

Detecting metastatic breast cancer can be a little bit of a challenge. When we treat patients with early stage breast cancer—stage I, II or III disease—we treat them with surgery, sometimes radiation, medications, or systemic therapy that goes through the body, and then we send them on their way, sometimes on a maintenance medication. We tell them that they need to get mammograms yearly, occasionally enhanced screening, but we don't do routine scans of the body to detect metastatic breast cancer in early-stage breast cancer survivors for various reasons. And so usually a patient has to experience some sort of symptom, and then we would order a scan of the body. So a patient might say that they're having new back pain, new hip pain, chest pain, or abdominal swelling. Any health abnormality in a breast cancer survivor or a new breast cancer patient I'm going to be a little bit concerned about, and then we're going to order a scan.

The most common scans that detect metastatic breast cancer are CAT scans, so CT scans or PET CT scans. PET CT scans have an additional dye that's able to sort of detect the PET avidity, so how much metabolic activity is in the cancer and how bright things are lighting up. Generally, cancer can light up brighter than normal tissues. The best imaging scan to look at metastasis in the brain would be an MRI, but anything outside of the brain you're either going to do a CT scan or a PET scan. When we're looking in the bones, the two best tests are either a PET CT scan or a bone scan. Occasionally, if we're looking at one area, an MRI is good at looking at the bone as well.

I think one of the key challenges in detecting metastatic breast cancer is that in breast cancer survivors, we're not really doing routine regular interval staging scans. We're doing these scans once patients are symptomatic for the most part, and no imaging test is perfect. The imaging scans that we have the highest sensitivity scan in detecting metastatic disease is probably a PET CT scan. Insurance companies don't always cover a PET CT scan, so that really is one challenge. But if I really have a high suspicion, then I'll usually start out with a CT scan and a bone scan, and if that doesn't show anything, then I'll try to get insurance to cover a PET CT.

I'm very hopeful that in the future, maybe even in the next 5 to 10 years, we're going to have better blood tests to detect the recurrence of or diagnosis of metastatic breast cancer. There are tests out there right now called circulating tumor DNA tests that try to detect cancer cells that shed DNA into the bloodstream. And there are some tests available now, but they're not very sensitive or specific for detection, and so we're not routinely getting them, but there are many companies out there working on more sensitive assays, and I do feel that in the next decade we will have better tests to detect metastatic breast cancer.

Announcer:

That was Dr. Sarah Sammons discussing the diagnosis of metastatic breast cancer. To access this and other episodes in our series, visit *Project Oncology* at ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!