

Optimism for Inflammatory Breast Cancer

BY ELIZABETH WHITTINGTON

Inflammatory breast cancer, or IBC, is considered the most aggressive type of breast cancer and tends to mimic the appearance of a breast infection. The breast may be sore, tender, swollen and red—a consequence of cancer cells clogging up the lymph vessels. IBC is rare in the United States with about 3,500 people diagnosed with the disease each year, and researchers are finding it's on the rise.

Women with IBC are usually prescribed the gamut of cancer therapies, including chemotherapy, radiation, hormone therapy, surgery and targeted therapies, including Herceptin® (trastuzumab). Now, Tykerb® (lapatinib) may also be added to the list.

Neil Spector, MD, at Duke Comprehensive Cancer Center, says the power of Tykerb in IBC was found by chance—researchers weren't actively selecting IBC patients for a phase I trial, but a handful were treated with Tykerb alone or in combination with chemotherapy and showed a dramatic response to the drug.

“We saw five out of six incredibly dramatic responses, and when we looked at those tumors more carefully, we found just incredible overexpression of HER2,” Dr. Spector says. Tykerb inhibits HER2 (the target of Herceptin), as well as HER1. In those initial studies, researchers were able to conduct tumor biopsies before treating patients with Tykerb and during therapy to better understand what was going on in the tumors. Investigators hoped to find biomarkers, including HER2, which they could then correlate with clinical response.

“Three years ago when I tried to convince people that conducting studies in inflammatory breast cancer with Tykerb was worthwhile, people looked at me like I was crazy,” Dr. Spector says. But now at least three phase II trials are studying the drug in IBC.

Early results of a phase II trial were presented at the American Society of Clinical Oncology last summer. Of 24 patients with relapsed or refractory HER2-positive IBC, 15, or 62.5 percent, had their cancer stabilize or shrink in response to Tykerb. Side effects seen in the trial included skin rash and gastrointestinal issues.

“You have to step back and realize these are women that have one of the worst prognoses, most aggressive types of breast cancer,” Dr. Spector says, including women who had at least four or five prior treatments. “I think it's incredibly exciting. It gives a snapshot of what is it about IBC that makes it sensitive to a drug like Tykerb?”

Researchers hope to use the information gathered in the IBC Tykerb trial in other breast cancers to find similar tumors in gastric, lung and esophageal cancers. If researchers are able to find a similar type of gene signature among other cancers, it will identify patients who are more likely to respond.

“If we can understand why this drug works so well in some women with inflammatory breast cancer, we can use that information and design much smarter combination therapies in other tumor types and benefit a tremendous number of individuals,” Dr. Spector says. “Inflammatory breast cancer is just one of those small tumor types that opens up the door wide to understand how this drug works. It’s a great story.”