

A Steady Trickle - If Not Yet A Deluge - Of Good News For Breast Cancer

No one would deny we have managed significant improvements in our ability to achieve early diagnosis and more effective management of breast cancer, especially over the past two decades. Nonetheless, breast cancer remains the most commonly diagnosed malignancy in the world, and its prevalence is highest in North America. In the US alone, 230,000 breast cancer cases are diagnosed yearly—and despite recent treatment advances, 40,000 deaths due to breast cancer are recorded annually in this country. Accordingly, each advance in breast cancer treatment is rightly greeted with excitement by oncologists and their breast cancer patients. Three recent advances, discussed here, are worthy of such optimism.

The first advance addresses the management of breast cancer recurrence risk in a group of patients at high risk due to age. Breast cancers in young women are usually more aggressive than those in older women. This is felt due in part to the stimulation of breast cancer growth by estrogen production in premenopausal women who have cancers that are positive for the so-called estrogen receptor. We have known for several decades that Tamoxifen, an estrogen receptor blocker, can help reduce recurrence risk; and some oncologists have suggested we should also consider suppressing ovarian function to more completely eliminate estrogen production from the ovaries. A recent study looked at this approach: after surgical breast cancer removal, premenopausal patients were treated with either Tamoxifen or ovarian ablation plus a drug called Aromasin that inhibits estrogen production from non-ovarian sites. Significant survival improvement was suggested for those women under age 35 with lymph node-positive disease when they were managed with ovarian suppression (removing or radiating the ovaries) plus Aromasin. This is very encouraging for that unfortunate subset of very young patients with high recurrence risk.

The second advance suggests we can sometimes be less aggressive surgically with breast cancer. Up to now, if during surgery, a marker lymph node called the sentinel lymph node is found positive for cancer, surgeons generally perform complete lymph node dissection under the arm. The journal *Lancet* recently reported a study showing that in patients with a primary breast cancer less than 2 cm, even if the sentinel lymph node is positive a lymph node dissection under the arm can be avoided if radiation under the arm is administered. This approach not only avoids unnecessary surgery but reduces the risk of lymphedema—chronic swelling of the arm on that side.

The third advance may be the most profound: a new class of anti-cancer drug for breast cancer. The drug, called Palbociclib—trade name Ibrance—works by inhibiting a metabolic process (called the cyclin-D-dependent pathway) unique to some breast cancer cells. Although Ibrance can cause a drop in blood cell counts, it is a generally very well-tolerated oral medication. Results from its use in a recent study caused the FDA to grant it a breakthrough therapy designation with a fast track for approval, and just this past week the FDA approved Ibrance for general use. Ibrance is a major advance. When it is used in conjunction with another oral medicine called Femara, Ibrance doubles the duration of the anti-cancer response. It now allows for treatment of post-menopausal women with estrogen receptor-positive, Her-2 negative breast cancer that has spread to other sites with a much more effective and very well tolerated treatment in pill form.

These advances are just the most recent examples of a sea change in the way we have come to manage cancer over the past several years—and we can be certain these advances will continue.



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