BRCA Tests Increasing for Younger Breast Cancer Patients

By Gil Ross — February 12, 2016

Among young women with breast cancer, the testing rates for BRCA mutation are increasing, according to research published recently in *JAMA Oncology*. But there were many discouraging findings among the overall trends.

Shoshana M. Rosenberg, ScD, MPH, from the Dana-Farber Cancer Institute in Boston, and colleagues, describe the use of BRCA testing using a cross-sectional analysis of data. The article was entitled "BRCA1 and BRCA2 Mutation Testing in Young Women With Breast Cancer."

Participants included 897 women aged 40 years and younger at breast cancer diagnosis. The study was done as part of the *Helping Ourselves, Helping Others: Young Women’s Breast Cancer Study*, an ongoing prospective cohort analysis. Participants were mostly white, well educated (85 percent completed college and/or graduate school), and virtually all had health insurance.

Unfortunately, there was a serious limitation to the study: It's unlikely that this level of access to, or participation in, genetic cancer risk assessment would be found in the overall community setting or among the economically underserved or ethnic minorities.

The researchers found that 87 percent of women reported BRCA testing by one year after diagnosis. A little over three-quarters of the 39 women diagnosed with breast cancer in 2006 reported testing, while the percentage of women undergoing testing was 70 percent in 2007. The rate of testing increased in each subsequent year, with 96.6 percent being tested in 2012, and 95.3 percent reporting BRCA testing in 2013.

However, the data also showed that many women with negative tests opted for bilateral mastectomy, and women who did not undergo testing often said they did not discuss testing with their doctors. Of the untested women, 31.6 percent did not report discussion about having a mutation with a physician and/or genetic counselor, and 36.8 percent were thinking about testing in the future. A total of 29.8 percent of women said that surgical treatment decisions were influenced by knowledge or concerns about genetic risk.

An editorial in the same *JAMA* issue by Kathleen R. Blazer, EdD, MS, LCGC; Thomas Slavin, MD; and Jeffrey N. Weitzel, MD of the City of Hope in Duarte, CA, expressed serious concerns about the attitudes found in the original study’s participants.
"It is disconcerting that 48% of those who did not get testing indicated that they and/or their physician did not think a \textit{BRCA} mutation was likely," they wrote, "despite the fact that the National Comprehensive Cancer Network (NCCN) guideline has recommended genetic counseling and \textit{BRCA} testing for women with breast cancer diagnosed at 40 years or younger since the outset of the YWS (Young Women's Breast Cancer) study."

The editorial notes the effect that a breast cancer decision made by a famous celebrity had upon young women:

"There is also a broadening social awareness and acceptability of genetic testing for hereditary predisposition. This was most dramatically evidenced during the latter portion of the YWS sampling frame, when in May 2013 actress and director Angelina Jolie announced that she carries a \textit{BRCA1} mutation and chose to undergo a bilateral risk reduction mastectomy (RRM) and reconstruction.

"This announcement generated considerable interest in testing," the authors added. "It is notable that most of the media sound bites on Jolie's announcement included her clear admonition that although bilateral mastectomy was the answer for her, it is not always the answer a qualification that is consistent with the NCCN guideline classification of RRM as an \textit{option} for \textit{BRCA} carriers. The YWS study reported a high uptake of RRM (86%) among the women diagnosed as having a \textit{BRCA} mutation."

On the other hand, it was quite a surprise (not in a good way) that the YWS authors found that 51 percent of women with negative \textit{BRCA} tests chose to undergo a RRM as compared to prior studies showing that only about 9-to-21 percent had previously made this decision.

They say that the high rate of RRM among \textit{BRCA}-negative women "also suggests a need for better communication of the relatively low risk of contralateral breast cancer among women who are noncarriers, that this risk has been decreasing in recent years, and that bilateral mastectomy is not associated with improved survival.

"Given that knowledge and concern about genetic risk influence surgical decisions and may affect systemic therapy trial eligibility," the study’s authors wrote, "all young women with breast cancer should be counseled and offered genetic testing."