Breast cancer genetic testing, as a medical management tool, can detect specific harmful hereditary mutations in BRCA1 and BRCA2 and provide women with a more precise estimate of their projected lifetime risk for the development of breast and ovarian cancer. BRCA1 and BRCA2 genetic testing is not offered to everyone because of the rarity of these mutations in the general population (National Cancer Institute, 2015). Geneticists and genetics counselors offer it to individuals who meet specific hereditary breast and ovarian cancer syndrome testing criteria.


A meta-analysis by Chen and Parmigiani (2007) estimated the average cumulative risk for women with a BRCA1 mutation at 70 years of age to be 57% (95% CI [0.47, 0.66]) for the development of breast cancer and 40% (95% CI [0.35, 0.46]) for ovarian cancer. The average cumulative lifetime risk for the development of breast and ovarian cancer in those who carry a harmful BRCA2 gene mutation is 49% (95% CI [0.4, 0.57]) and 18% (95% CI [0.13, 0.23]), respectively. Women who test positive for a harmful BRCA1 or BRCA2 gene mutation may find that this information enables them to make more informed decisions about risk-reducing and early detection measures, such as prophylactic surgeries and intensive screening options (i.e., mammography, magnetic resonance imaging, and clinical breast examinations), as well as chemoprevention drugs (National Cancer Institute, 2015). However, the knowledge gained through breast cancer genetic testing is not simply a means to make informed decisions about risk-reducing and intensive...