



### How Are 23AndMe and Counseling with a Genetic Specialist Different?

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As a cancer genetic counselor at Hoag, at least once a week, I’m asked what I think of 23andme’s test for hereditary breast cancer. Most people seem to believe that it’s a comprehensive test for hereditary breast cancer. After all, it’s approved by the FDA.

At Hoag, when we evaluate genetic testing laboratories to use for our patients, we consider the following: cost, sensitivity of test (percentage of people who have a mutation who are identified by the test as positive for a mutation), turnaround time, ease for patient, customer support as well as many other factors.

Let’s say you are a 40-year old woman of Norwegian and Italian ancestry whose mother had breast cancer at 42, and you want to know if you have an increased hereditary risk for breast cancer. You can look for a job, find a date, learn how to fix the leak in your toilet, trade on the stock market and buy a trampoline on the Internet. What about testing for hereditary breast cancer? The following table compares two approaches: testing through 23andme vs traditional genetic counseling and testing.

	23andme*	Traditional
Cost	<b>\$199</b> out-of-pocket cost	<b>Zero</b> cost to patient for consultation and testing
Scope of the test	Analysis of <b>3 mutations</b> (mutations found in Ashkenazi Jewish population) out of 2000+ possible <i>BRCA1/2</i> mutations	<b>Full analysis of BRCA1, BRCA2 and other breast cancer genes.</b> Optional testing for genes associated with other cancer types (no cost).
Sensitivity	<b>0-0.1%</b> for non-Ashkenazi Jewish individuals	<b>~99%</b>
Turnaround time	<b>3-5 weeks</b>	<b>1-3 weeks</b>
Reliability	“Results you receive from 23andMe are not intended for diagnostic use” (23andme website)	Laboratory adheres to strict clinical and privacy regulations
Ease	Test done at <b>home</b>	<b>Appointment with genetic counselor</b> prior to testing
Customer support	23andme website suggests, “ <b>Talk to your doctor or a genetic counselor</b> ”	Your genetic counselor works with you and the laboratory to resolve any concerns.
Follow-up	If test is positive, 23andme recommends <b>confirmation testing in a clinical setting.</b>	Results are interpreted by a genetic counselor, breast cancer risk is calculated and appropriate screening plan is established. Detailed written summary report provided.

\*all information from 23andme website

So, if you had a Volvo that was making a funny noise, and the BMW dealership was easier for you to get to, would you pay more, wait longer and get your car checked by out at a place that was meant for only BMWs?

Genetic testing for hereditary breast cancer might be one of the most important things you do in your life. It seems to me that it’s important to do it right.