

## ABSTRACT

### BIOETHICS OF DIRECT-TO-CONSUMER GENETIC TESTS

Facebook mindset meets medical science – this is what emerging companies such as deCODEme, 23andMe, and Navigenics are proposing as the future of personalized medicine. Genetic profiling once reserved for research scientists and the extremely wealthy is now available to the mainstream through direct-to-consumer (DTC) genetic testing. These DTC companies offer at-home DNA kits that use single nucleotide polymorphism (SNPs) profiling methods to gauge one's risk for potentially a myriad of genetically related diseases. This study examined the scientific validity and the bioethics of DTC genetic tests for their consumers. To analyze the technical validity of DTC genetic tests, SNPs that are used to determine breast cancer and heart attack risk were examined. These approaches were further evaluated for their ability to confer ethical benefits of autonomy and well-being. Although there are many potential benefits of DTC testing, including increased health awareness, the near absence of regulation of these tests and the lack of a strong educational component in their protocols to assist consumers in interpretation of the genetic results (e.g., no involvement of genetic counselors) suggest there may significant repercussions that could delay the benefits and acceptance of personalized medicine approaches in the future.

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