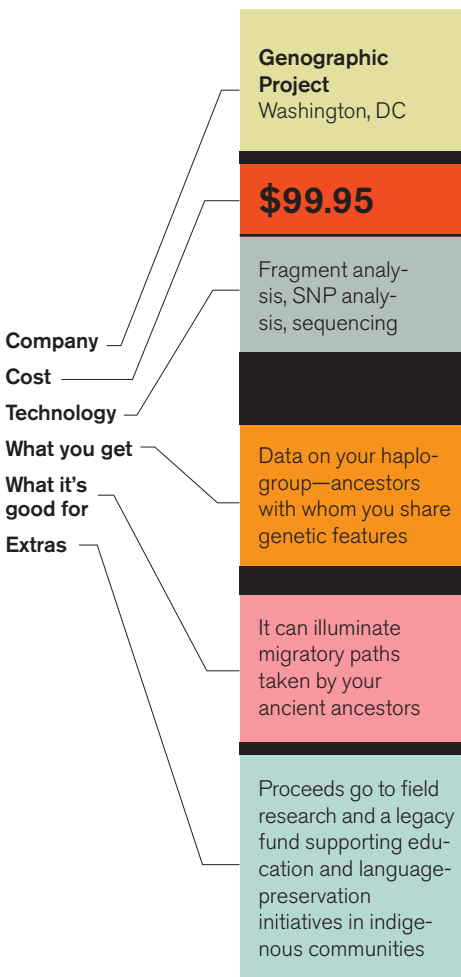


BIOTECH

BUYER'S GUIDE TO PERSONAL GENOMICS

In new offerings, much fascination, not yet much utility



Genographic Project
Washington, DC

\$99.95

Fragment analysis, SNP analysis, sequencing

Data on your haplogroup—ancestors with whom you share genetic features

It can illuminate migratory paths taken by your ancient ancestors

Proceeds go to field research and a legacy fund supporting education and language-preservation initiatives in indigenous communities

DeCode
Reykjavik, Iceland

23andMe
Mountain View, CA

About **\$1,000**

Microarrays that test for up to one million genetic variations

Information on ancestry, genetic risk of disease, and characteristics such as eye color

The microarrays detect variations linked to disease and indicate varying amounts of risk; best for the cautious who want all information on the table

Both companies' online interfaces let you compare your genome with those of family and friends; 23andMe's also lets you compare your ancestry with that of notables including Bono and Genghis Khan

Navigenics
Redwood Shores, CA

\$2,500

Microarrays that test for up to one million genetic variations

Information on genetic predisposition to 18 diseases, including Alzheimer's and type 2 diabetes

Like the services from deCode and 23andMe, Navigenics' tests indicate varying amounts of disease risk

This is the most medically oriented of the three microarray analysis companies—and the only one that offers genetic counseling

DNA Direct
San Francisco, CA

\$175–\$3,456
(varies by test)

Various, through subcontractors

Information on your risk for more than a dozen conditions having very well documented genetic components, such as cystic fibrosis and breast cancer

Test results can inform preventive actions: someone found to have a mutation linked to breast cancer may choose prophylactic mastectomy, and prospective parents who both carry a cystic fibrosis mutation may screen their embryos

DNA Direct provides the most usable information for your personal-genomics dollar

Knome
Cambridge, MA

\$350,000

Sequencing

The sequence of your entire genome and an analysis by a team of scientists; customers get a personalized report tailored to their particular interests, which could pertain to health, ancestry, or physical traits

Sequencing detects myriad genetic variations that can't be identified with microarrays; if these variations are later linked to disease, customers could gain further insights

You'll join a rarefied club whose members include genomics pioneers James Watson and Craig Venter—the first humans to have their genomes sequenced

IN THE PAST year, several direct-to-consumer genetic tests have been introduced to capitalize on the falling cost of genomic technologies and the flood of studies linking genetic variants to disease. The tests generally use two technologies: microarray analysis, which searches the genome for specific genetic variations, such as single-nucleotide polymorphisms (SNPs), linked to disease or ancestral groups; and sequencing, which reads a DNA molecule letter by letter. Getting your genome examined is great fun. But the understanding of ancestry is still evolving. And broad genetic screening hasn't been tested for its clinical utility. —Emily Singer