

# WHAT IS 23ANDME?



23andMe is a company that offers services such as ancestry information service and DTC (Direct-To-Customer) genetic testing service which examines a person's DNA in a variety of ways to identify changes in chromosomes, genes, or proteins, or, in other words, to find a specific gene that may cause a genetic disorder.

## MARKET RESEARCH

There has been an increasing number of genetic tests that have been made available worldwide between 2012 and 2020, which can also reflect the growing market size of this unique market (Halbisen and Lu, 2023). The most popular genetic testing companies are 23andME, AncestryDNA, and MyHeritage DNA. They offer overlapping services such as trait information including, for example, finger length, and sweet sensitivity.



## STRENGTHS AND WEAKNESSES

- Pros:
- Various services:
- It has more diverse services that can be categorized into health predispositions, ancestry, wellness, carrier status, and wellness, while it is 2 categories for Ancestry DNA, ancestry, and traits.
- 23andMe has eleven FDA-approved Health predisposition tests (Kim and Garner, 2019)
  - It allows users to control how their genetic information is shared and used for studies.

- Cons:
- High-cost tools/services
  - interpretation of results could be misleading
  - insufficient coverage on rare conditions

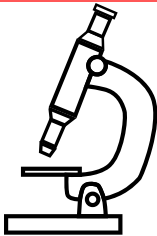
## VIDEO OVERVIEW



## ETHICAL CONSIDERATIONS

- Data misuse harms:  
Genetic information reveals sensitive information about the individual and related family members, thus potential misuse of it can lead to a breach of personal autonomy, and reduced quality of life (Kim and Garner, 2019). To prevent this, customers are given control over their data by being informed of how it is exchanged and used.
- Accuracy  
Accuracy is essential in genetic testing as it affects the quality of decisions, well-being and the trust of customers.  
However, the reliability of many tests is often questionable.  
To tackle this issue, the company does independent research improve the quality of tests (23andMe Customer Care, n.d.).
- Inadequate Information  
Information provided to customers may not be sufficiently clear and understandable, impacting the validity of their informed consent and could lead to people to misunderstand genetic information (Kim and Garner, 2019).

## OPPORTUNITY SPOTTING AND INNOVATION & IMPACT



- Cheaper and more reliable testing kits can be developed to gain more trust from customers and regulators such as the FDA. To make this possible, the company can invest in research that is exploring new ways to do genetic testing in several ways such as by financial and physical investment such as providing facilities and tools required.
- Expanded and Varied Data Repository:  
This can significantly help to increase the coverage of rare medical conditions/disorders, thus leading to more accurate results. To get this result, the company could need to upgrade its existing data storage, implement optimization techniques, and collaborate with field experts.
- Services offered can be integrated into the healthcare system if it is accurate and efficient enough. To achieve this, implementation of the approaches mentioned above is crucial.



## REFERENCES

23andMe Customer Care. (n.d.). How Accurate Is 23andMe? [online] Available at: <https://customercare.23andme.com/hc/en-us/articles/360044957274-How-Accurate-Is-23andMe->

Halbisen, A.L. and Lu, C.Y. (2023). Trends in Availability of Genetic Tests in the United States, 2012–2022. Journal of Personalized Medicine, [online] 13(4), p.638. doi:<https://doi.org/10.3390/jpm13040638>.

Kim, J. and Garner, S. (2019). The Privacy Risks of Direct-to-Consumer Genetic Testing: A Case Study of 23andMe and Ancestry. [online] papers.ssrn.com. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3521662](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3521662).