

Veritas was founded in 2018 by Dr. Luis Izquierdo, Dr. Vincenzo Cirigliano and Javier de Echevarría, who accumulate extensive experience in the field of genetics, diagnostics and biotechnology. Initially linked to Veritas Genetics, a company founded in 2014 by Prof. George Church, one of the pioneers in preventive medicine, Veritas was born with the aim of making genome sequencing and its clinical interpretation available to all citizens as a tool to prevent diseases and improve health and quality of life.

Since its inception, Veritas has led the activity and development in the markets in which it operates, with the goal of turning genomics into a daily instrument at the service of people's well-being.

In March 2022 Veritas announces that it will become part of LetsGetChecked, a global healthcare solutions company based in Dublin and New York that provides the tools to manage health from home, through direct access to diagnostic testing and virtual healthcare.



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# my HealthScore

Polygenic risk screening for  
common diseases



# myHealthScore

## What is myHealthScore?

**myHealthScore** is the genetic screening test that provides **information about the patient's risk of presenting with common multifactorial diseases**. The test determines a previously unperceived genetic risk, enabling the detection of a greater number of people at risk.

## What advantages does it have?

- Allows the quantification of the aggregated genetic risk, scattered along the genome, associated with a particular disease.
- It estimates the disease risk and how it varies throughout a person's lifetime.
- It can be performed before the onset of clinical risk factors, which allows a more effective preventive approach.
- It is carried out once in a lifetime and the inclusion of the result within risk calculators improves their predictive power.
- Information that is independent and complementary to traditional risk factors and the study of gene panels.

## Who is it intended for?

The test is suitable for adults who are proactive about their healthcare. The results provide information about the lifetime risk of presenting the diseases analysed, in order to establish **preventive strategies and lifestyle changes** that will help to reduce the risk.

## What is a polygenic risk?

The majority of common diseases have a polygenic component. In other words, there is a hereditary risk factor that is not associated with just one variant in the genome, but with hundreds or thousands of variants that represent the risk carried by a multitude of biological pathways.<sup>1</sup> Each variant carries a small or moderate risk which is included in a unique global score that can be evaluated with other risk and lifestyle factors.

## What type of sample is required?

The test can be carried out with a saliva or blood sample. Subsequent sequencing is carried out using NGS technology and analysis using EC branded software.

**Genetic factors account for around 40% of the risk in common diseases, such as type 2 diabetes or coronary artery disease.**<sup>2,3</sup>

## Which diseases are included?

myHealthScore enables to know the patient's risk of presenting with the following diseases:

### Cardiovascular disease



> 2 million variants

### Type 2 diabetes



> 600,000 variants

### Breast cancer



> 550,000 variants

### Prostate cancer



> 650,000 variants

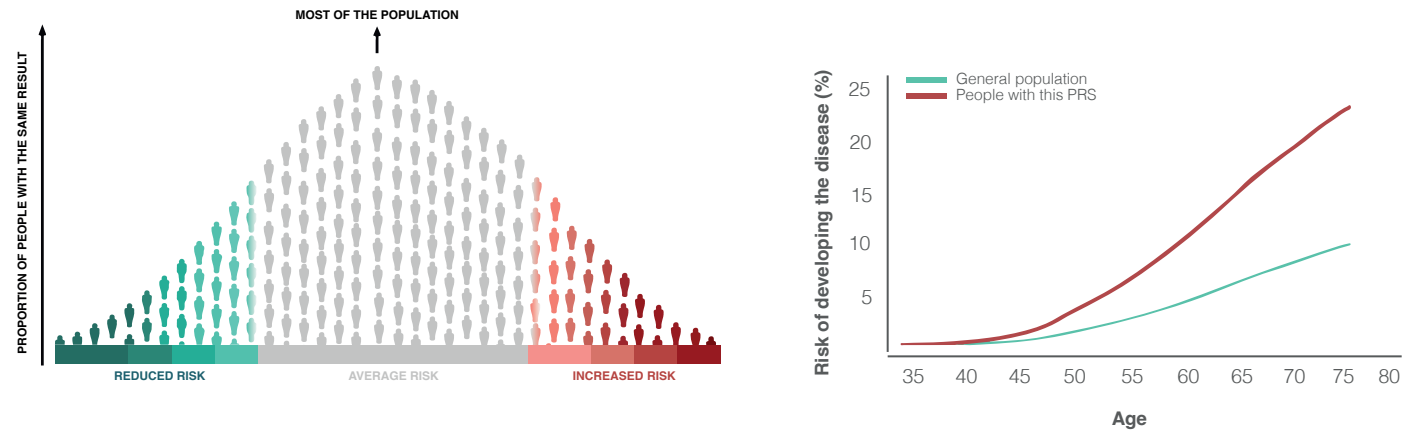
myHealthScore can be requested for cardiovascular disease, type 2 diabetes or cancer risk, either separately or together.

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## How are the results presented?

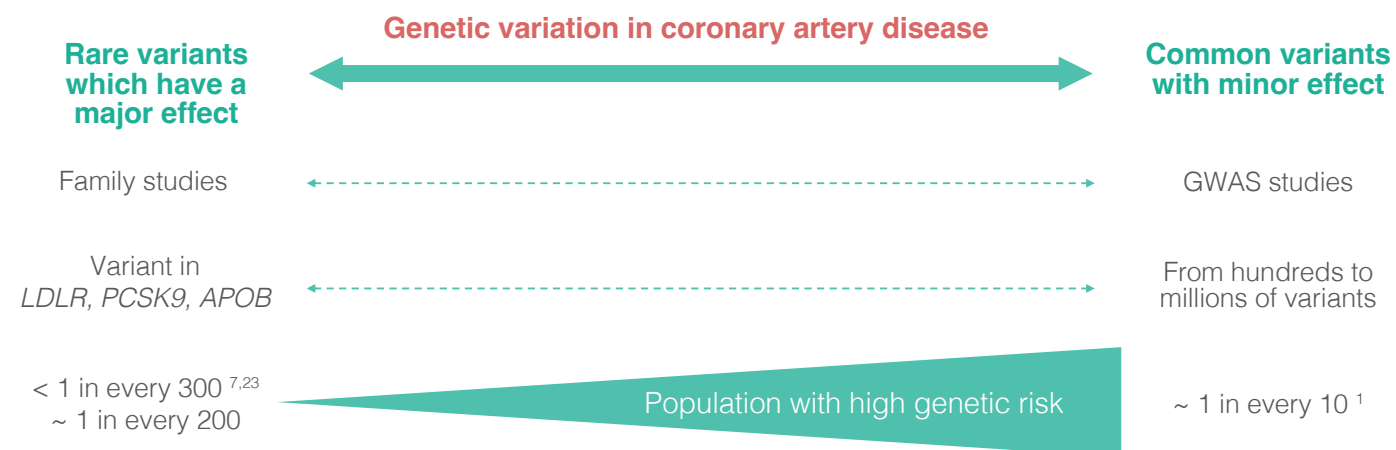
The results include the patient's percentile of risk related to the general population, as well as their lifetime risk. Additionally, a basic analysis of the patient's ancestry is carried out in order to adjust the risk analysis based on this information.



Complex diseases generally have a late onset, and the risk accumulates over time with ageing and environmental exposure. The polygenic risk can modify this risk path, increasing or reducing the tendency. myHealthScore allows to know if there is an increased risk based on genetics, which enables the implementation of prevention or risk reduction strategies before the onset of symptoms.

## Genetic variation in human diseases

Among the common diseases that affect a high percentage of the population, genetic risk takes different forms. On one hand, mutations capture the risk associated with a specific altered pathway and substantially increase the risk of disease, but they are very infrequent within the population. On the other hand, there is a more dispersed risk throughout the genome, but it affects a much higher percentage of the population. This risk is determined through the aggregation of common variants which pose a small risk individually but together, represented as a score, imply a significant risk which, until now, had gone unnoticed.



## Why now?

Large genetic databases with patient data, along with advances in computing and bioinformatics, have made it possible to develop these risk scores and incorporate them into clinical practice.



**Polygenic risk score tests identify more people at risk of presenting with common diseases than monogenic mutations with a comparable level of risk.<sup>4</sup>**



## Clinical application

### Cardiovascular disease



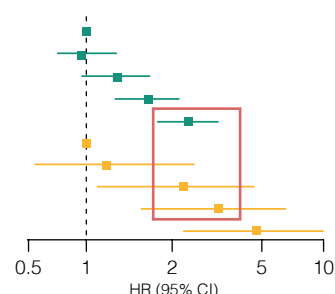
This includes the risk of a patient to present coronary artery disease (CAD), atrial fibrillation, lipid profile (triglycerides, LDL and HDL cholesterol) and hypertension.



**1 in every 4 people suffering from coronary artery disease is not detected through evaluation of clinical factors.<sup>5</sup>**

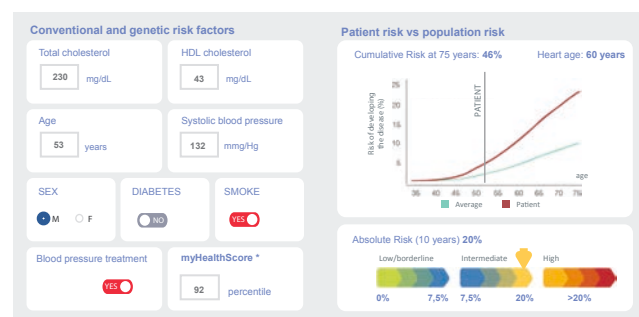
Current protocols for the prevention of CAD recommend the use of statins in people with LDL-c >190 mg/dL. This approach may exclude from the primary prevention strategy about 4% of the population at high polygenic risk.<sup>6</sup> These are the people who obtain the greatest benefit from the implementation of strategies to reduce LDL-c levels.<sup>7,8</sup> In patients with a high-risk result, it is possible to offset the lifetime risk of CAD by up to 50% through lifestyle changes.<sup>9</sup>

Group	LDL-C (mg/dL)	HR (95%CI)
Int PRS	<100	1
	100 - <130	0.94 (0.71-1.24)
	130 - <160	1.25 (0.95-1.63)
	160 - <190	1.62 (1.23-2.13)
	≥ 190	2.34 (1.75-3.14)
High PRS	<100	1
	100 - <130	1.15 (0.54-2.46)
	130 - <160	2.23 (1.08-4.59)
	160 - <190	3.14 (1.52-6.5)
	≥ 190	4.71 (2.23-9.94)



People with mid-level of LDL-c (130-160 mg/dL) with an elevated myHealthScore result present a CAD risk similar to that of people with elevated levels of LDL-c (>190 mg/dL) with average myHealthScore results.<sup>10</sup>

Graphic adapted from Bolli et al 2021.



Veritas has a calculator on its website that allows the integration of **myHealthScore** with other risk factors in order to estimate the patient's absolute risk.

**myHealthScore can identify up to 20 times more people with a risk of CAD that is comparable or greater than the risk associated with familial hypercholesterolemia mutations.<sup>4</sup>**

### Type 2 diabetes



Type 2 diabetes can present in middle-aged and in older people. The likelihood of developing type 2 diabetes is higher after the age of 45 and the risk increases with overweight or family history.<sup>11</sup>

**myHealthScore** provides the risk of type 2 diabetes in order to start a dietary, lifestyle or pharmacological strategy for prevention.



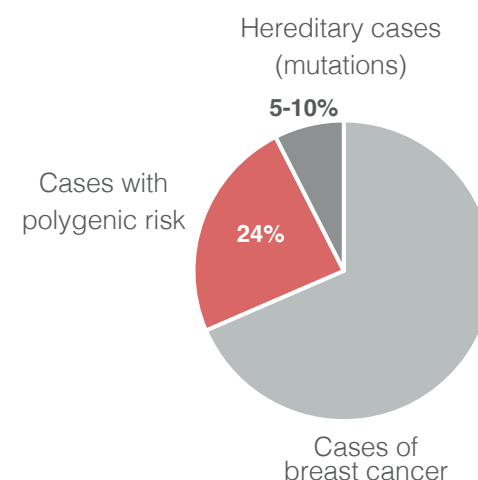
**8 in every 10 people with pre-diabetes are unaware of their condition and the possibilities for prevention.<sup>12</sup>**

## Breast cancer



Only between 5-10% of breast cancer cases are considered hereditary, the rest are considered to be sporadic.<sup>13</sup> Among the sporadic cases, **myHealthScore** evaluates a genetic component which has been unperceived until now, and which acts as an additional risk factor to other clinical factors. The test results enables to:

- Start breast cancer screening in high-risk patients at a younger age.
- Improve the precision of advanced risk calculators that include polygenic risk as an enhancing risk factor.<sup>1</sup>
- Reflect a hereditary risk in the absence of mutations.
- Provide additional information on the risk of disease in women who present with low penetrance mutations.<sup>14,15</sup>



Women presenting with higher percentiles of risk may present up to **double the risk of women with average myHealthScore results.**

Through myHealthScore it is possible to detect up to an additional 24% of breast cancer cases that are considered to be sporadic.<sup>16</sup>



**1 in 8** women will be diagnosed with breast cancer throughout their lives.<sup>17</sup>



**7 in 10** women diagnosed with breast cancer do not have a family history of the disease.<sup>18</sup>



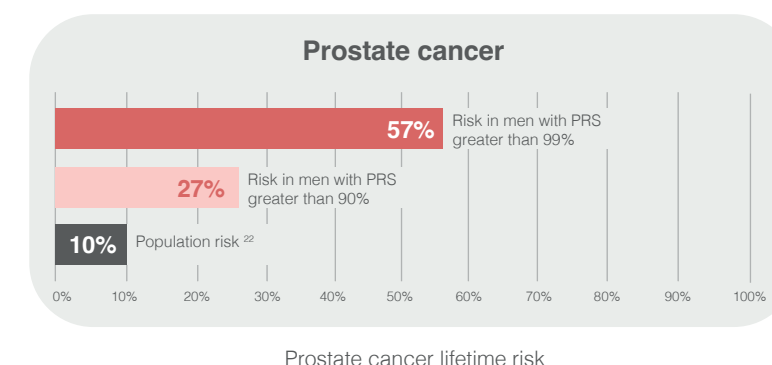
**2 in 10** women diagnosed with breast cancer are under 50 years of age.<sup>19</sup>

## Prostate cancer



Prostate cancer risk assessment is opportunistic and mainly focussed on family history, PSA levels and physical examination. The results generally imply a high rate of overdiagnosis and overtreatment.<sup>20</sup> Carrying out **myHealthScore** allows the integration of polygenic risk to the medical checkups, providing more precise and complete information on patient risk.

**Men with the highest polygenic risk have approximately 5.7 times higher risk of suffering from prostate cancer than men with an average result.** Men in the highest 10% of polygenic risk have 2.7 times more risk than the general male population, making this an important screening tool.<sup>21</sup>



Prostate cancer lifetime risk