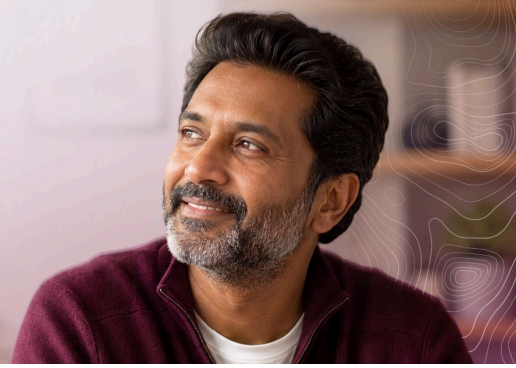
myome | atlas™ CARDIOMETABOLIC

Technical Overview: Cardiometabolic Integrated Risk*

Integrated Risk tests combine disease-specific polygenic risk scores (PRS) from whole-genome sequencing (WGS) with clinical inputs from a patient's health history. Each test produces a genomic dataset that MyOme can re-query as healthcare needs change and new information about the genome is discovered.



Clinical Use

Integrated Risk tests are intended as comprehensive risk assessment tools, not diagnostic tests. Each provides a 10-year absolute risk score and may assist with the development of a personalized treatment and management strategy in conjunction with standard clinical assessment.

Method

Genomic DNA obtained from submitted samples is sequenced using Illumina technology, and reads are aligned to the human genome reference assembly GRCh38.p14. A PRS is calculated for each of 5 continental ancestries—African, Admixed American, East Asian, South Asian, and European—and standardized and weighted to produce a cross-ancestry PRS (caPRS), which is then integrated with clinical risk factors for each condition below.

SELECT A PCR-free whole-genome library is constructed and a sub-aliquot is taken through PCR amplification and exome selection. The blended genome and exome libraries are sequenced to generate 2x150 bp paired-end reads, resulting in low-coverage whole-genome and higher coverage exome data.

PLUS A high-coverage (mean ≥30X) PCR-free whole-genome library is constructed and sequenced.

Sample Types

- Blood (2 EDTA tubes)
- Buccal (2 swabs)

Turnaround Times

- Most results are delivered **5–6 weeks** from the day all samples are received.**
- Follow-up testing or re-requisitions are typically completed in under **1 week**.

**Turnaround times are provided as estimates and begin once sample(s) are processed at MyOme. Turnaround times may be extended in cases outside of MyOme's control, including delays related to confirmation testing or other unforeseen circumstances.

Coronary Artery Disease (CAD)

SELECT (PR42014) PLUS (PR41016)

Intended Population

Adults (aged 40–79) without a personal history of CAD who have all clinical risk factors required to calculate risk.

Integrated Clinical Risk Factors

Includes those defined by the Atherosclerotic cardiovascular disease (ASCVD) pooled cohort equation (PCE) tool.[1,2]

Included in Report

- 10-year integrated risk of incident CAD and the 10-year clinical risk of incident ASCVD.
- Integrated risk is reported as high, intermediate, borderline, or low, based on guidelines published by the American College of Cardiology (ACC) and the American Heart Association (AHA).[3]
- Actionable recommendations for reducing CAD risk, based on ACC/AHA guidelines.[3]

Type 2 Diabetes (T2D)

SELECT (PR42014) PLUS (PR41016)

Intended Population

Adults (aged 35–70) without a personal history of T2D who are not using insulin or oral antidiabetic medication.

Integrated Clinical Risk Factors

Age, sex, waist circumference, smoking status, blood pressure, family history of T2D, fasting glucose, HDL-C, and triglycerides.[4]

Included in Report

- 10-year integrated risk of developing T2D and the average 10-year clinical risk for someone of the same age and sex in the general population.
- Integrated risk is reported as "not at increased risk" or "increased risk", with increased risk defined as a 10-year risk of 15% or greater, matching the average risk associated with BMI ≥25 kg/m^2 (overweight).[5]
- Actionable recommendations for reducing T2D risk, based on American Diabetes Association Professional Practice Committee guidelines.[6]

*This test was previously offered as "Integrated Polygenic Risk (iPRS)" under MyOme Proactive Health.

1. MyOme Inc, Data on File. **2.** Medina-Inojosa J, Somers V, Garcia M, et al. Performance of the ACC/AHA Pooled Cohort Equations in Clinical Practice. *J Am Coll Cardiol.* 2023;82(15):1499-1508. doi:10.1016/j.jacc.2023.07.018. **3.** Arnett D, Blumenthal R, Albert M, et al. 2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease: Executive Summary. *J Am Coll Cardiol.* 2019;74(10):1376-1414. doi:10.1016/j.jacc.2019.03.009. **4.** Ratman D, Sun J, Tshiaba P, et al. Utility of Polygenic Risk Scores for Prediction of Incident Type 2 Diabetes. Poster presented at: The European Human Genetics Conference (ESHG); 2024; Berlin, Germany. Abstract 1165. **5.** US Preventive Services Task Force. Screening for Prediabetes and Type 2 Diabetes. *JAMA.* 2021;326(8):736-743. PMID: 34427594. **6.** American Diabetes Association Professional Practice Committee. Prevention or Delay of Diabetes and Associated Comorbidities: Standards of Care in Diabetes—2025. *Diabetes Care.* 2025;48(Suppl 1):S52-S85.