Proactive Health
INTEGRATED PRS™
PROSTATE CANCER

TEST CODE: PR42038

Overview

The MyOme Proactive Health Integrated Polygenic Risk Score™ (iPRS™) Prostate Cancer test uses a Blended Genome-Exome (BGE) backbone built from whole exome sequencing and low coverage whole-genome sequencing (WGS) to estimate risk of developing prostate cancer based on clinical and genetic factors.

Clinical Use

This test is a comprehensive risk assessment tool (not a diagnostic test) intended for men of 30-75 years old without a personal history of prostate cancer. It provides a 10-year (for patients aged 40-70) and remaining lifetime risk (for all patients) of developing prostate cancer, together with relative risk contributed by genetic factors. Risk estimates from the test allow for the identification of patients who may benefit from earlier or more frequent monitoring and can be used in conjunction with standard clinical assessment.

Method

Patient data is provided by the ordering physician. Genomic DNA is obtained from submitted samples and sequenced using Illumina technology. 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 2x150bp paired-end reads resulting in low-coverage whole-genome and higher coverage exome data. Reads are aligned to the human genome reference assembly GRCh38.p14. Genotype likelihoods are estimated for bases covered by at least one sequencing read. Genotypes at additional sites are imputed based on a genotype reference panel. 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). The caPRS is integrated with an individual's non-genetic risk factors, including age and family history, to estimate the 10-year and remaining lifetime risk of developing prostate cancer. For patients under age 40 and over age 70, only remaining lifetime risk and relative risk are calculated.

Sample Types

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

Turnaround Times

- From sample received, most results are delivered in 5-6 weeks.*
- Follow-up testing or re-requisitions are typically completed in under 2 weeks, often within a few days.

Included

- A cohesive report with the 10-year risk (for patients aged 40-70) and remaining lifetime risk and relative risk (for all patients) of developing prostate cancer.
- Integrated risk is reported as "not at increased risk" or "increased risk", with a 25% increased risk cutoff, corresponding to remaining lifetime risk >2X above the US population average.[1]
- Actionable recommendations for screening and reducing prostate cancer risk, based on publicly available guidelines, including the American Urological Association, American Cancer Society, and USPSTF, are also included.[2-6]

*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.

1. National Cancer Institute. Cancer stat facts: prostate cancer. **2.** SEER https://seer.cancer.gov/ statfacts/html/prost.html (accessed November 2025). **3.** Wei JT, Barocas D, Carlsson S, et al. Early detection of prostate cancer: AUA/SUO guideline part I: prostate cancer screening. J Urol. 2023;210(1):45-53. PMID: 37096582. **4.** Smith RA, Andrews KS, Brooks D, et al. Cancer screening in the United States, 2019: A review of current American Cancer Society guidelines and current issues in cancer screening. CA Cancer J Clin. 2019;69(3):184-210. PMID: 30875085. **5.** Wolf A. Wender RC, Etzoni RB, et al. American Cancer Society guideline for the early detection of prostate cancer: Update 2010. Ca Cancer J Clin. 2010;60:70-98. PMID: 20200110. **6.** US Preventive Services Task Force. Screening for Prostate Cancer: US Preventive Services Task Force Recommendation Statement. JAMA. 2018;319(18):1901–1913. PMID: 29801017