



An Overview of Genetype

ERIKA SPAETH, PhD SCIENTIFIC/CLINICAL AFFAIRS

About Rhythm Biosciences



We are committed to saving lives through the evaluation of cancer risk and early detection of cancers



Early detection of cancer gives individuals the best possible opportunity for favorable treatment outcomes.

Addressing large under-served global markets worth >USD\$50bn and heavily supported by public and private health care systems.

geneType™ commercially available now and ColoSTAT® anticipated commercial launch in 2H CY2025.

Patent protected, fully characterised proteomic, genomic technology that can be readily adopted in routine laboratories.

A valuable development pipeline of high quality, impactful cancer risk assessment and detection products

Corporate overview



CORPORATE SNAPSHOT

ASX Code	RHY
Share Price (17th June 2025)	\$0.060
Shares on Issue	283,597M
Unlisted & Listed Options	53.4M
Market Capitalisation	\$17.61M
Cash in Bank (31 March 2025)	\$2.3M
Top 20 Shareholders	43.3%

SHARE PRICE CHART - ASX:RHY



BOARD AND MANAGEMENT

David Atkins, PhD
CEO & MD



Former CEO of Congenica (UK) & Synevo Diagnostics, Sr. Executive at Johnson & Johnson and Danaher.

Founder of Veridex – cancer molecular and cellular diagnostics (USA).

Experience in product development and commercial leadership in the global medical device and diagnostic industry.

Otto Buttula
Non-Executive Chairman



Extensive financial, investment, IT & biotech experience.

Co-Founder and CEO of IWL (ASX: IWL); Founder / former CEO of Investors Mutual

Formerly a Director of Imugene (ASX:IMU), Chairman of Investorfirst, now HUB (ASX: HUB), HITIQ (ASX: HIQ) & Oncosil Medical (ASX: OSL).

Sue MacLeman
Non-Executive Director



30 years in Pharma, Biotech and Medtech including Amgen, BMS and Merck and SME's.

Experienced Board member, former CEO of NASDAQ, ASX, & AIM entities. Currently Chair of Medicines Australia, NED at Viral Vector Manufacturing Facility, Smartways Logistics, Healthcare Translation Group, ATSE & OMICO & member of the National Research Infrastructure (NRI) Advisory Group.

Gavin Fox-Smith
Non-Executive Director



38 years as a leader and champion of Medical Technology in Australia/NZ and Asia.

Gavin is Chair of ANDHealth (Australia's National Digital Health Initiative), Board Director for Bowel Cancer Australia and Board Director for SAN Foundation.

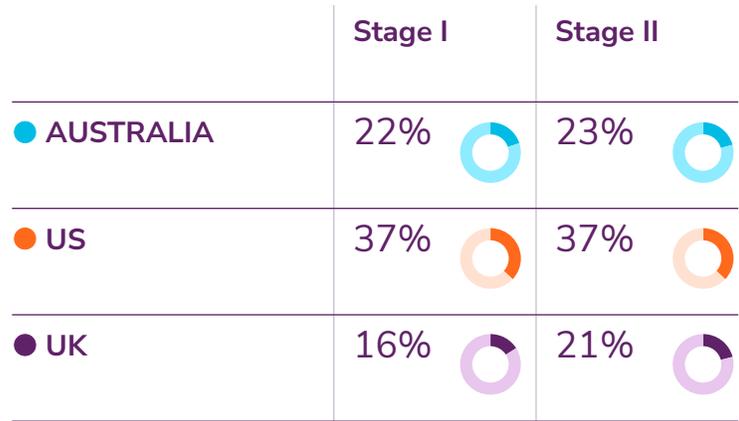
Gavin was previously CEO of Omnigon, a private Australian company in the Ostomy Care market.

When diagnosed early, cancer can be successfully treated

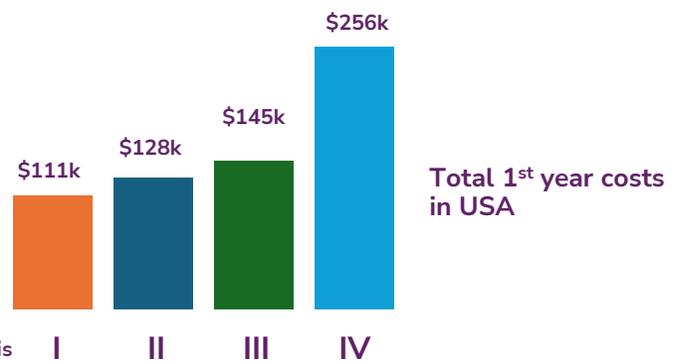
Disease stage for colorectal cancer diagnosis is the key predictor of survival



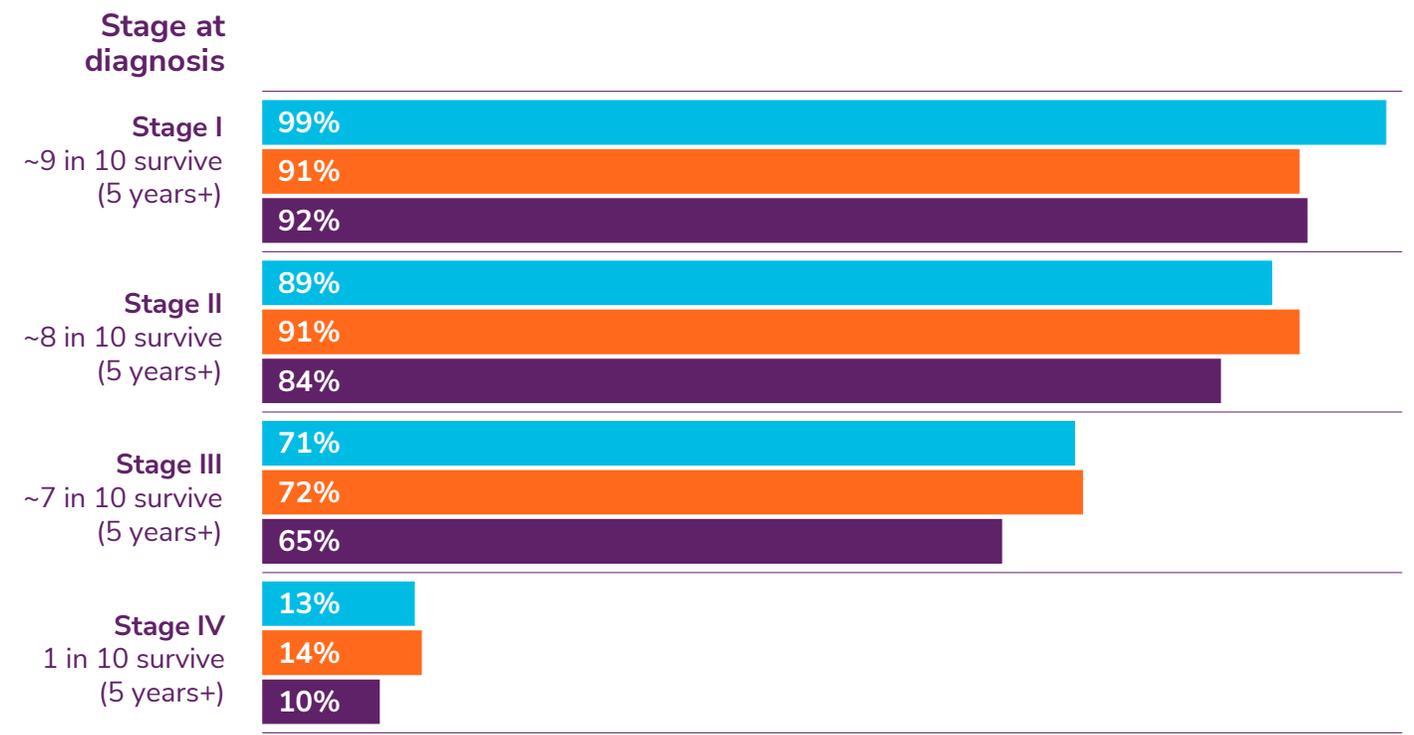
Diagnoses at Stage I or II only represent less than half of all CRCs diagnosed in:



Disease treatment costs increase with later stage#



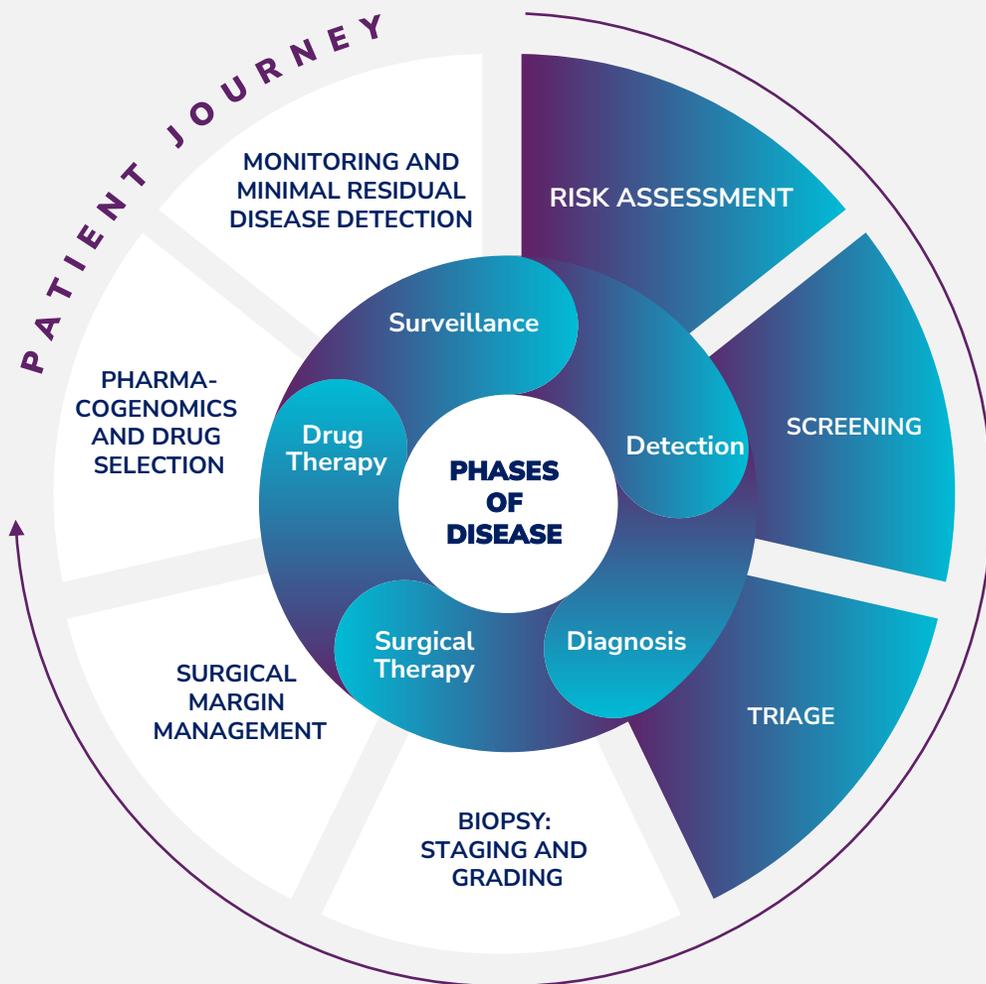
Missed detection of early-stage CRC results in poor survival rates



5-year survival rates in patients with CRC in US, UK and Australia

Detecting cancer earlier and maintaining wellness

The power of the combination of the Rhythm capabilities and portfolio



Risk Assessment

Determination of risk profile

Personalised management of health



Disease Screening

Minimally-invasive detection of disease

Early detection of disease

A powerful combination enabling:

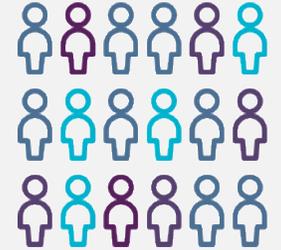
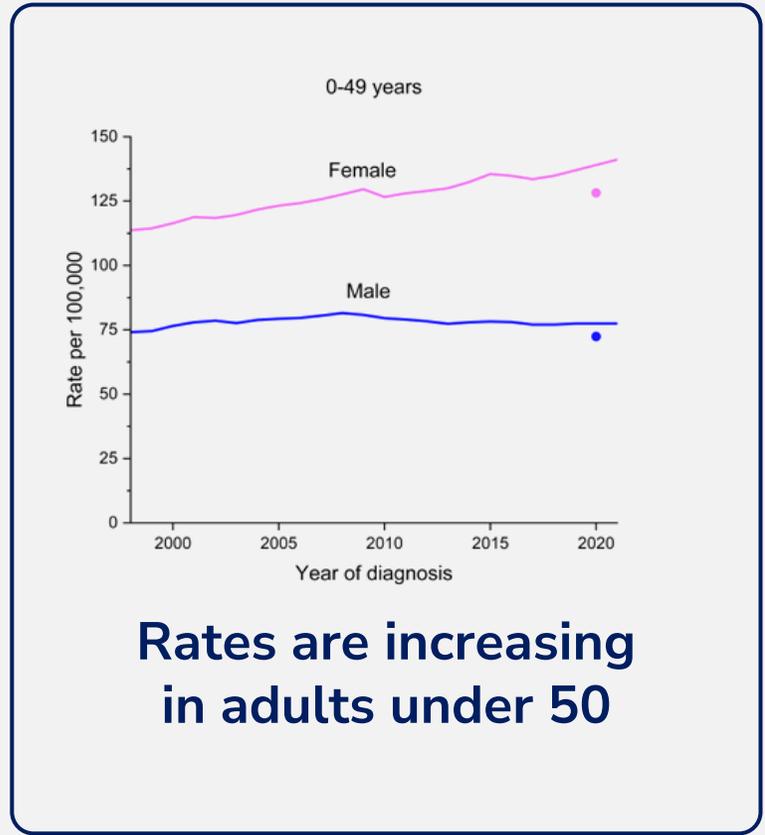
- Supports preventative measures to maintain wellness
- Increase the likelihood of earlier disease detection
- Promote better treatment outcomes for detected disease
- Potential use in drug clinical studies for patient stratification
- Potential for development as companion diagnostic tests

Suitable for 100s millions of individuals/patients globally

Example: geneType™ bowel cancer risk assessment of the general population to help guide usage of ColoSTAT®. Potentially leads to improved screening compliance, earlier disease detection and improved outcomes.

Cancer screening is critical to managing cancer burden

Detection of cancer as early-stage disease leads to better outcomes



40%

of adults will get cancer

Adults that are non-compliant screeners

 **35 - 57%**

 **25%**

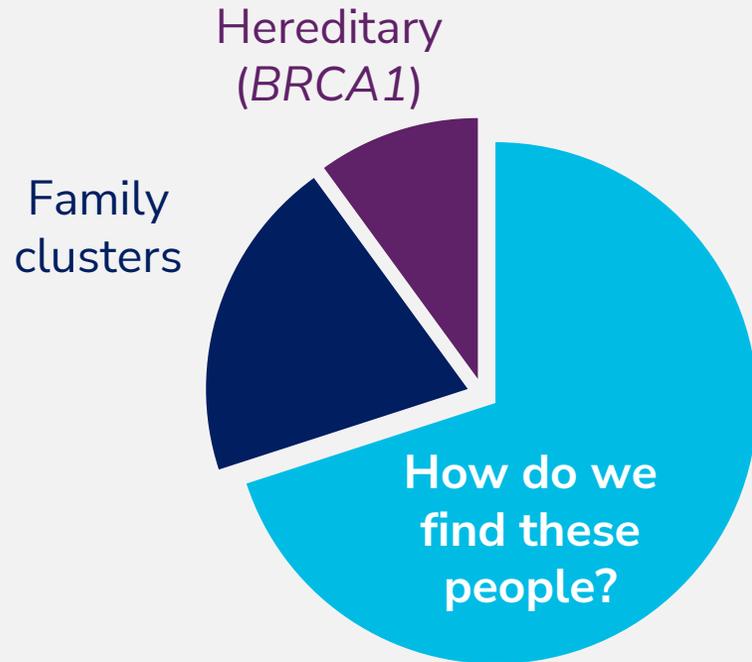
<https://www.cancer.org/research/acs-research-news/cancer-incidence-rate-for-women-under-50-rises-above-mens.html>
<https://www.cancer.gov/about-cancer/understanding/statistics>
Kim RY, Rendle KA, Mitra N, et al. Adherence to Annual Lung Cancer Screening and Rates of Cancer Diagnosis. JAMA Netw Open. 2025;8(3):e250942. doi:10.1001/jamanetworkopen.2025.0942
<https://nccrt.org/our-impact/data-and-progress/>
[https://www.cdc.gov/pcd/issues/2023/23_0071.htm#:~:text=\(RTI%20International\),Results,\(Tables%20%20and%203\).](https://www.cdc.gov/pcd/issues/2023/23_0071.htm#:~:text=(RTI%20International),Results,(Tables%20%20and%203).)

Current Screening programs

The standard of care varies in each geography



One Size Fits All



Breast

- Start at 40 or 45
- Mammogram
- Biennial



Colorectal

- Start at 45
- FIT, Cologuard, colonoscopy
- Frequency dependent on method



Prostate

- Start at 55
- PSA
- Frequency/ start dependent on risk

Cancer is unique to each individual

Detection of disease needs to reflect this uniqueness



Improve the current standard of care
from *one-size-fits-all* screening

Personalised screening approaches

- Precisely identify who is at risk
- Provide tailored risk-reduction options

Risk Assessment is the Gateway to Precision Diagnostics

The first step to employing personalised screening approaches



WHAT?

Predicting a person's chance of developing a condition/disease

WHY?

To provide more appropriate screening/risk-reduction to those who need it

HOW?

Validated Assessment tool that integrates genomics

geneType™ sets the stage for personalised screening options

Risk assessment allows us to move away from a one-size-fits all screening approach



Our understanding of the range of risk factors has advanced

Each individual's risk is a factor of multiple variables

Scientists can assign VALUEs to risk factors:

- Family history
- Low BMI
- High BMI
- Cholesterol levels
- Blood pressure
- Number of live births
- Smoking habits
- Use of aspirin
- Last colonoscopy
- Last mammogram
- **Genetic variants**



Traditional Risk Assessment

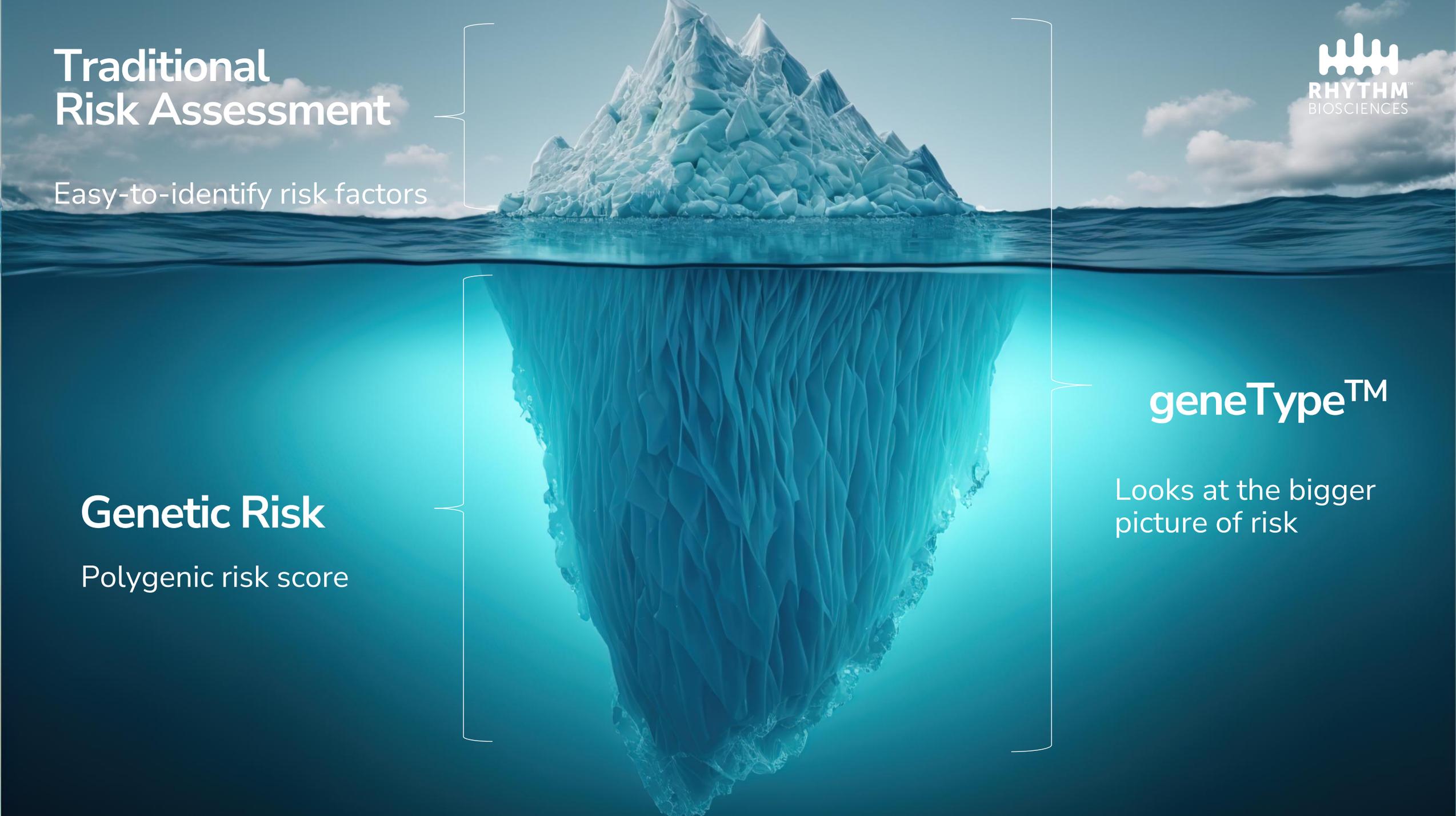
Easy-to-identify risk factors

Genetic Risk

Polygenic risk score

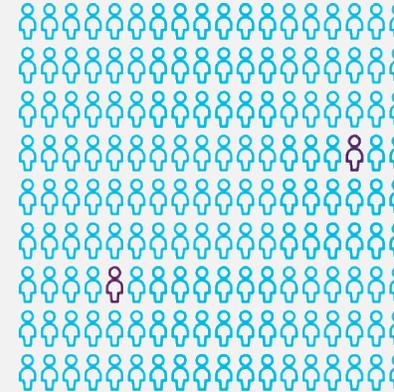
geneType™

Looks at the bigger
picture of risk



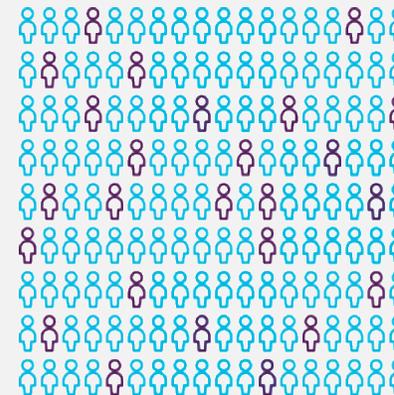
geneType™ is different from other genetic testing

Genetype detects many common low penetrance genetic variants vs. individual mutations.



BRCA1/2

- 1 mutation
- Very high risk
- Rare in the population (0.2-1%)
- Sonic, Healius, LabCorp, Myriad



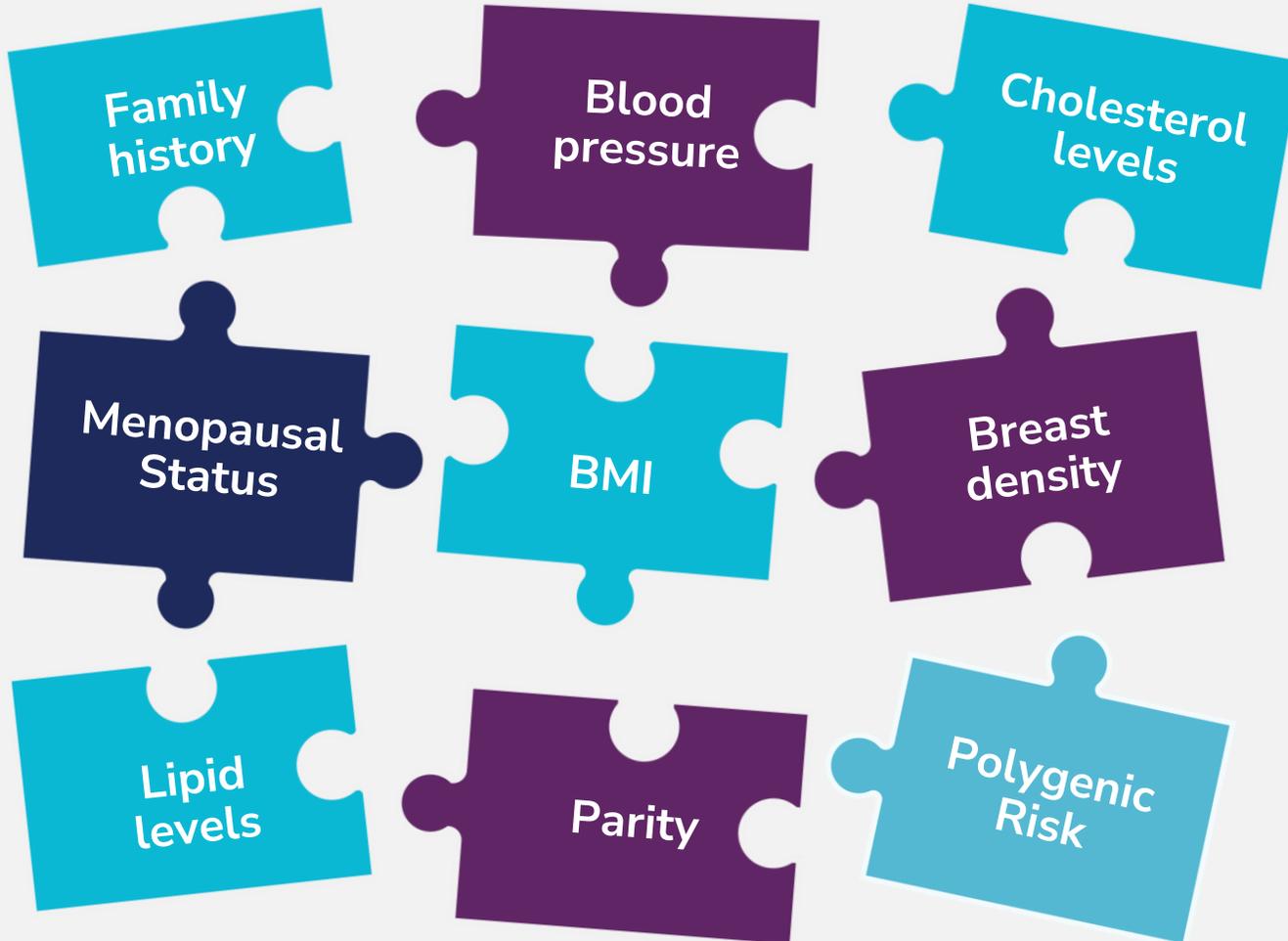
geneType™

- Many risk factors: genetic and clinical
- increased risk
- Up to 20% of the population

Hickmann, E., et al. BMC Health Serv Res 22, 1116 (2022).
Venner, E., et al Commun Biol 7, 174 (2024).
HU et al. N Engl J Med 2021;384:440-451

geneType™ risk assessment

Disease risk prediction is strongest when combining multiple risk factors



% Chance of
developing
disease

Risk Assessment Test Report Summary

GeneType Multi-Suite

Laboratory Accession Number: HG01342
 Date of Specimen Collection: 02-Feb-2022
 Date of Laboratory Receipt: 09-Feb-2022
 Date of Report: 10-Jun-2025

Patient Name: Jane Doe
 Date of Birth: 28-Dec-1974
 Patient Address: 1 Example Road
 Suburbia, VIC 3000

Ordering Med: Dr Sam Bloggs
 42 Demo Street
 Sampletown, VIC 3000

Laboratory Accession Number: HG01342
 Date of Specimen Collection: 02-Feb-2022
 Date of Laboratory Receipt: 09-Feb-2022
 Date of Report: 07-Feb-2025

Patient Name: Cynthia Richardson
 Date of Birth: 28-Dec-1974
 Patient MRN:
 Patient Address: 11 Bourke Street
 Melbourne, VIC 3000

Ordering Med: Dr Laura Jones
 12357 Sandpiper
 Melbourne, VIC

Colorectal Cancer Risk Assessment Final Test Report

GeneType for Colorectal Cancer



Laboratory Accession Number: HG01342
 Date of Specimen Collection: 02-Feb-2022
 Date of Laboratory Receipt: 09-Feb-2022
 Date of Report: 10-Jun-2025

Patient Name: Jane Doe
 Date of Birth: 28-Dec-1974
 Patient MRN:
 Patient Address: 1 Example Road
 Suburbia, VIC 3000

Ordering Medical Practitioner:
 Dr Sam Bloggs
 42 Demo Street
 Sampletown, VIC 3000

This patient received 8 disease risk prediction results and is at **increased risk** for 2 diseases.

Disease	Result Summary	Clinical Action Available
Atrial Fibrillation	HIGH	see supplemental screening and risk reduction
Breast Cancer	INCREASED	see supplemental screening and risk reduction
Coronary Artery Disease	LOW	average risk screening
Colorectal Cancer	AVERAGE	average risk screening
Melanoma	AVERAGE	average risk screening
Ovarian Cancer	AVERAGE	average risk screening
Pancreatic Cancer	AVERAGE	average risk screening
Type 2 Diabetes	MODERATE	see supplemental screening and risk reduction

This patient is at an **INCREASED** risk of breast cancer

0.42%
Patient's 5 year risk



*The average risk is based on the same age, biological gender and race/ethnicity as the patient from the general Australian population.

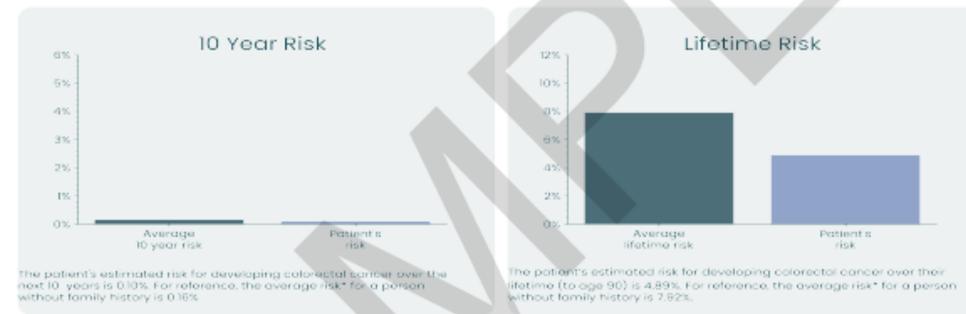
Interpretation

This patient has a 31.53% chance of developing breast cancer within her remaining lifetime up to age 90 years which is considered high risk. This does not mean that the patient will develop breast cancer over this timeframe.

In accordance with the RACGP Guidelines for Preventive Activities in General Practice, any patient with a remaining lifetime risk of developing breast cancer of between >13% and <25% they are at a moderately increased risk and if their remaining lifetime risk is >25% they are at a high risk.

The patient should continue following general population breast screening protocols at a minimum, regardless of their estimated risk scores and cannot be used to estimate risk in relatives. Furthermore, these results should be interpreted in the context of the patient's full clinical history, particularly for patients close to a threshold risk value.

This patient is at an **AVERAGE** risk of developing colorectal cancer



*The average risk is based on the same age, biological gender and race/ethnicity as the patient from the general Australian population.

Interpretation

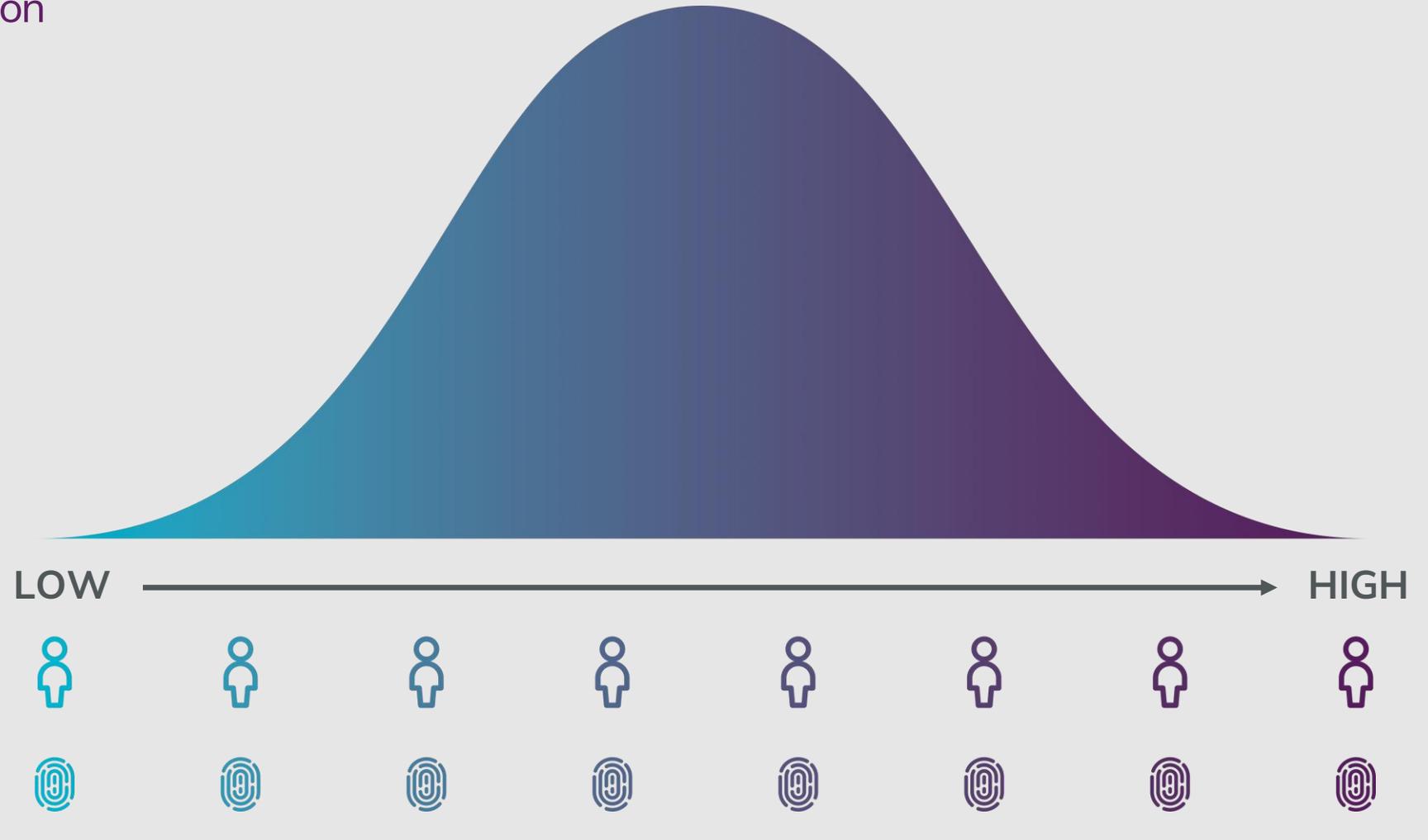
This patient has a 0.10% chance of developing colorectal cancer within 10 years, which is considered average risk.

In accordance with Cancer Council Australia, any patient with a 10-year risk score <2x average risk is defined as average risk, between 2-4x moderately increased risk, and >4x at high risk.

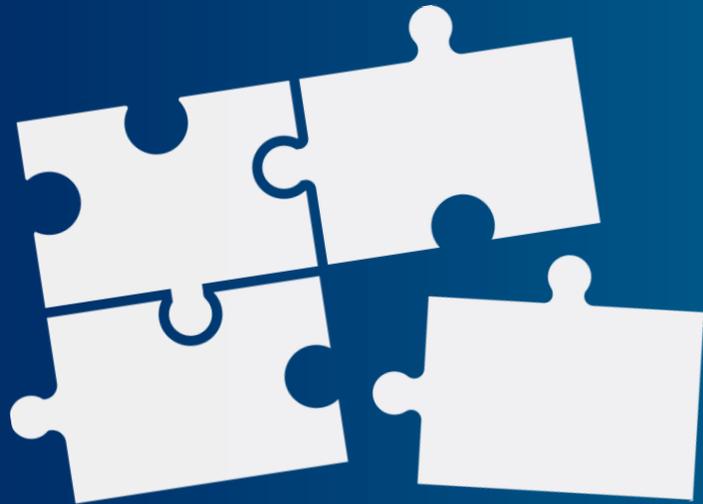
The patient should continue following general population colorectal screening protocols at a minimum, regardless of their estimated risk score. Also note that the risk scores are patient-specific and cannot be used to estimate risk in relatives. Furthermore, these results should be interpreted by a medical practitioner in the context of the patient's full clinical history, particularly for patients close to a threshold risk value.

Inherent risk: We are all born with a polygenic risk profile

Understanding where a patient sits on the spectrum of risk unlocks new opportunities for precision screening and early intervention



The future of personalised medicine



Personalised
healthcare



Risk assessment

geneType™ development

Creating a risk assessment that contains the fewest, but most impactful risk factors

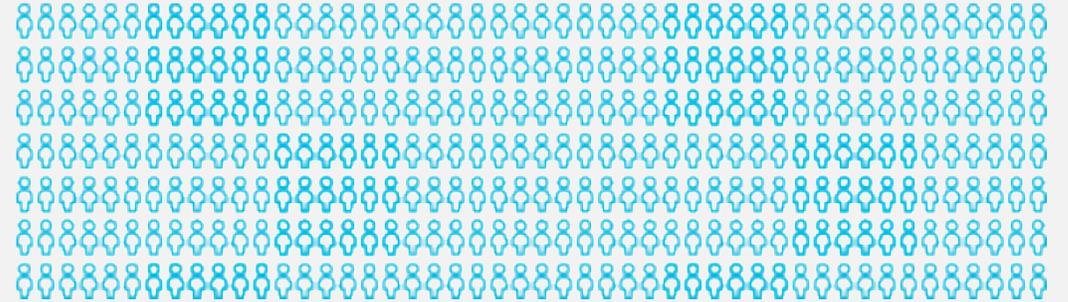
MAJOR CONSIDERATIONS

- Improve current binary risk (standard of care)
- Limit stress to healthcare provider (ease of implementation)

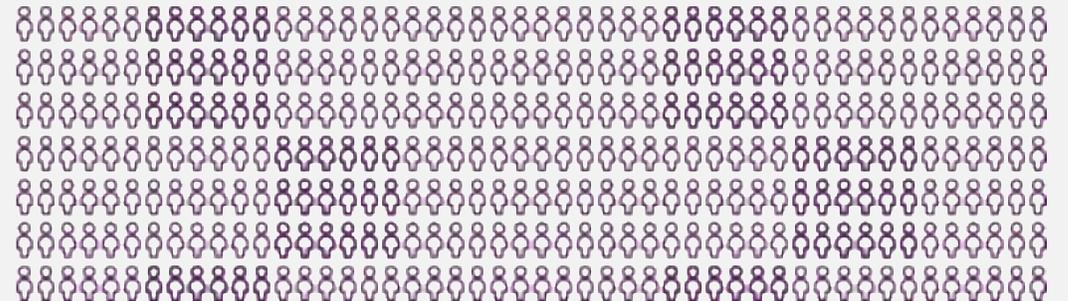
PROCESS

- Develop algorithm
 - literature review
 - access to large datasets for discovery/training
- Validate algorithm
 - access to large datasets for testing/validation
 - file IP/publish data
 - Tech transfer into accredited lab environment

THOUSANDS OF ADULTS **WITHOUT** THE DISEASE



THOUSANDS OF ADULTS **WITH** THE DISEASE



geneType™ vs Gold Standard

Test portfolio consists of diseases that performed better than a current clinical standard tool



Outperforms

Across the following statistical metrics:

- ✓ Discrimination
- ✓ Calibration
- ✓ Net reclassification
- ✓ Net benefit

geneType™ Disease risk assessment

Breast^{1,2}

Ovarian³

Prostate⁴

Colorectal^{5,6}

Pancreatic⁷

Melanoma⁸

Coronary artery disease⁹

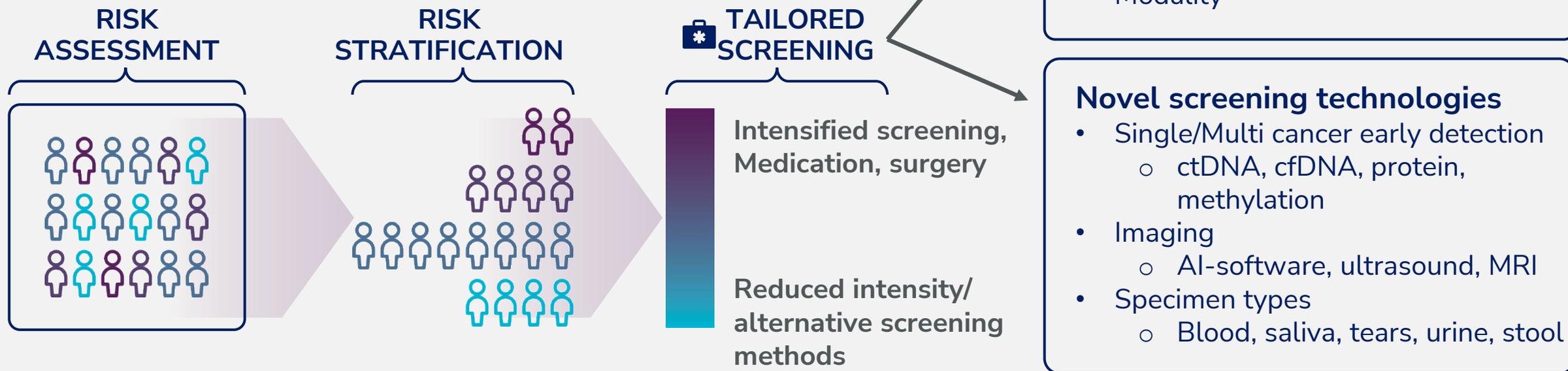
Atrial fibrillation⁹

Type 2 diabetes⁹

Peer-reviewed, published Clinical validation of the integrated cancer risk models

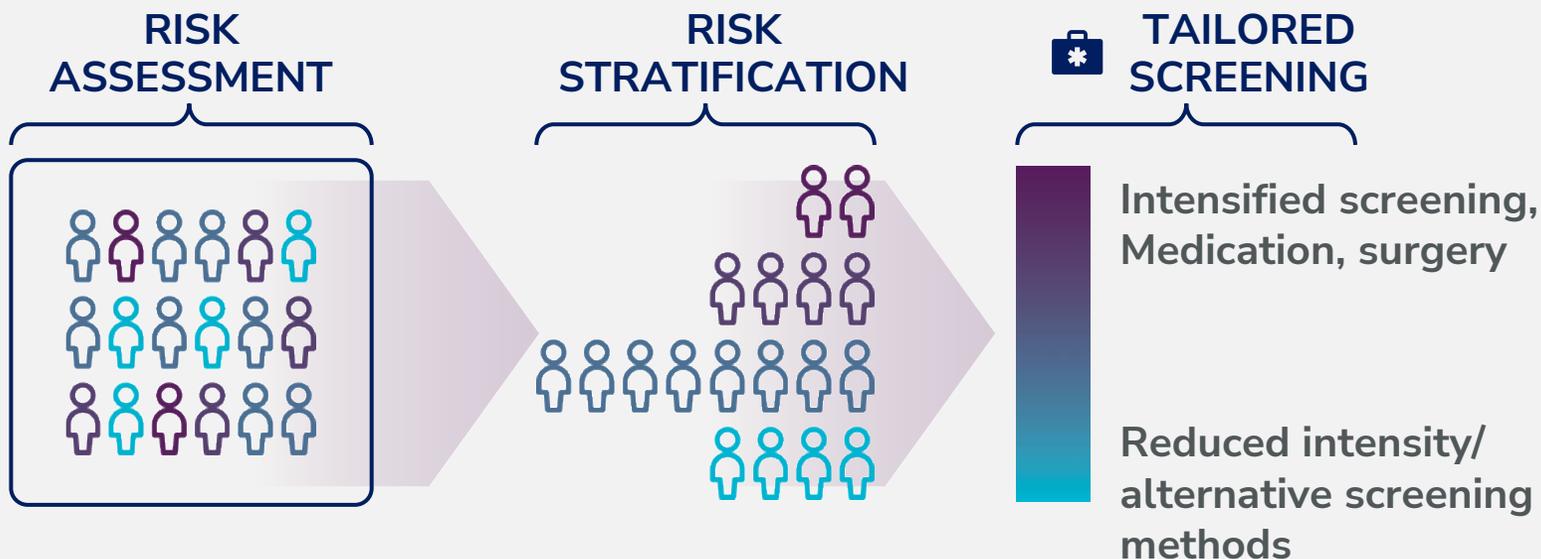
1. Allman R, Mu Y, Dite GS, Spaeth E, Hopper JL, Rosner BA. Validation of a breast cancer risk prediction model based on the key risk factors: family history, mammographic density and polygenic risk. *Breast Cancer Res Treat* 2023; 198: 335-347.
2. Spaeth EL, Dite GS, Hopper JL, Allman R. Validation of an Abridged Breast Cancer Risk Prediction Model for the General Population. *Cancer Prev Res (Phila)* 2023; 16: 281-291.
3. Dite GS, Spaeth E, Murphy NM, Allman R. A combined clinical and genetic model for predicting risk of ovarian cancer. *Eur J Cancer Prev* 2023; 32: 57-64.
4. Dite GS, Spaeth E, Murphy NM, Allman R. Development and validation of a simple prostate cancer risk prediction model based on age, family history, and polygenic risk. *Prostate* 2023.
5. Gafni A, Dite GS, Spaeth Tuff E, Allman R, Hopper JL. Ability of known colorectal cancer susceptibility SNPs to predict colorectal cancer risk: A cohort study within the UK Biobank. *PLOS ONE* 2021; 16: e0251469.
6. Spaeth Tuff EL, Gafni A, Dite GS, Allman R. Improvement of a clinical colorectal cancer risk prediction model integrating polygenic risk. *Journal of Clinical Oncology* 2023; 41: 81-81.
7. Dite GS, Spaeth E, Murphy NM, Allman R. Predicting 10-year risk of pancreatic cancer using a combined genetic and clinical model. *Gastro Hep Advances* 2023 in press
8. Wong CK, Dite GS, Spaeth E, Murphy NM, Allman R. Melanoma risk prediction based on a polygenic risk score and clinical risk factors. *Melanoma Res* 2023.
9. Wong CK, Makalic E, Dite GS, Whiting L, Murphy NM, Hopper JL et al. Polygenic risk scores for cardiovascular diseases and type 2 diabetes. *PLoS One* 2022; 17: e0278764.

geneType™ risk stratification supports screening and prevention strategies



Market entry: risk stratification across the healthcare ecosystem

From general practice to specialty care, and from private payors to public health programs—risk stratification enables targeted, value-driven decision-making at every level



Applications

- Applications
- Individualized patient care
- Primary care
- Specialty care services
- Imaging clinics, urologists, endoscopy clinics, family history/genetics clinics,
- Institutional/payor level care
- Self-insured employers
- US private payors
- Government sponsored care

geneType™ performance has a material and affordable impact

Breast cancer risk assessment on a population basis and health economics



Breast Cancer Risk



- Cases diagnosed annually (incidence) = 20,640
- Individuals living with disease (prevalence) = 79,720
- Average lifetime risk = 1 in 7 or 14%

Risk Assessment Methods#:

- Cross-validated in multiple cohorts of healthy women, age 40 – 69, followed for 5 years

Compared models:

geneType™



traditional clinical models (Gail#, IBIS^)



Data summary#: Out of 200K women:

○ ~23.9K women classified as increased risk

○ ~6.4K women classified as increased risk

Over 5 years, ~3.1K developed breast cancer:

○ 27% (861) were flagged by geneType

○ 6% of those (182) were flagged by traditional models

Economics of Risk Assessment



- Modelled on US costings assuming similar performance
- Assumed 55% adoption rate
- At-risk cases receive supplemental screening (MRI) and annual mammograms
- Increase in early-stage cancers detected
- Decrease in interval cancers
- Reduction in total cost to care

Net saving of \$74 per participant per year

Spaeth et al Cancer Prev Res 2023;16:1–12
^Allman R, et al. Breast Cancer Res Treat 2023; 198: 335-347.

geneType™ customer segment summary

Three distinct customer segments where geneType™ would add significant value



	Worried well – Proactive Preventers 1	Active Risk Assessors – Actively engaged in assessment 2	At Higher Risk – Seeking more information 3
Summary	A desire to understand their risks.	Encounter a reason to believe their risk is higher than average – typically age.	Urgency in need to assess risk. Available information unsatisfactory.
Use case	Otherwise, <u>healthy</u> but intervene to ensure longer healthspan.	Are engaged in population screening initiatives due to age, family or clinical history.	Possibly symptomatic or considered high risk. Reflex test for negative mutation testing or negative biopsy.
Sales channel	Corporate programs, primary carers, functional clinics, General Practice.	General Practice, Clinical geneticists, Specialists, Corporate programs.	Clinical geneticists, Specialists

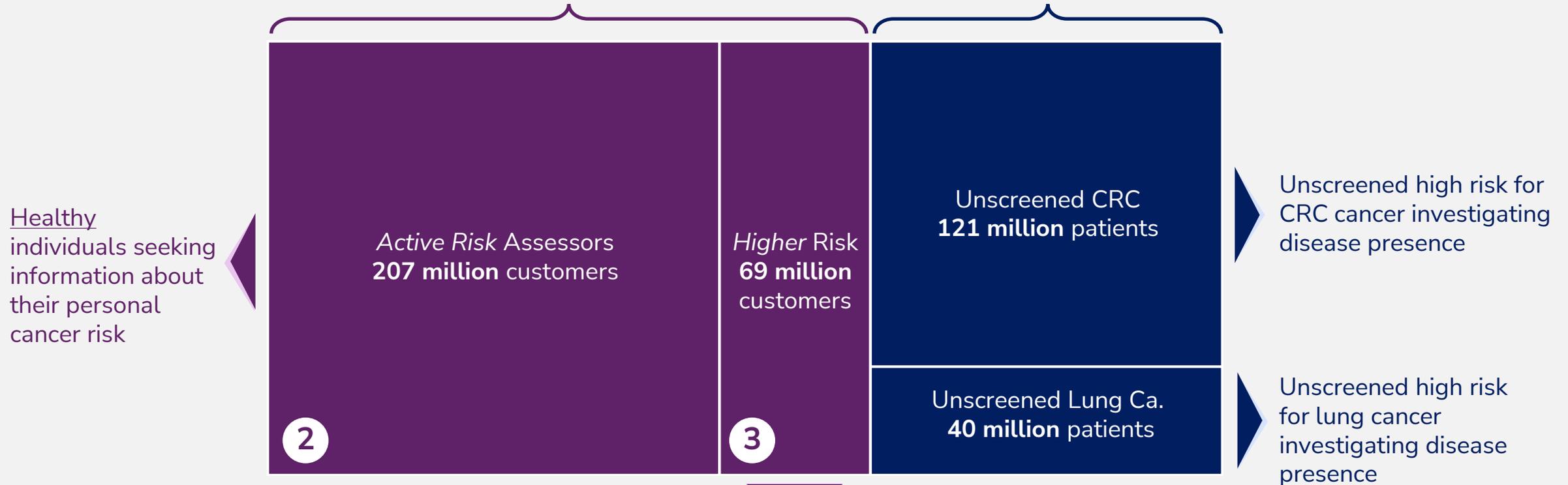
Rhythm is targeting a significant global market

A global market of >0.5bn individuals potentially served by the Rhythm product platform.



Genomic Platform: geneType™

Proteomic Platform: ColoSTAT® & Lung Cancer Screening



Key:

- Area = 1m potential geneType™ customers
- Area = 1m potential screening customers

There are multiple emerging drivers of geneType™ adoption

Rhythm is well positioned to participate in a major change in clinical practice



Clinical Trials: large cohorts	BARCODE1 ¹ , WISDOM ²	Efficacy and validation
Implementation Studies	CASSOWARY ³ , ROBIN ⁴ , GenoVA ⁵ , eMERGE ⁶	Utility and usability
Clinical guidelines	Medical bodies/Gov't: US, EU, ASU	Guidance for routine use
Value Based Care	Public and private payors	Focus on outcomes
Health Economics & Reimbursement	AMA Coding, CMS coverage	Mainstream adoption
Advances in genomics	Massive growth in databases and cost of delivery	Validation data, novel algorithms and reduced COGS
EMR Integration	Availability of test ordering in EMR platforms	Patient and physician engagement

Ordering geneType™ in Australia using an HCP

The ordering options are continuously expanding



The future of disease risk prediction.

Interested in ordering geneType™?

patient: order a test

practitioners: become a geneType™ provider

Genomics is more than family history.

In late 2024, Rhythm Biosciences (ASX:RHY) completed an asset acquisition agreement for the Genetype business assets with business integration currently underway.

geneType™ continues to offer integrated risk testing for a range of serious conditions.

Disease prediction can allow for personalised preventive health plans to manage risk. Early detection can save lives.

The future of disease risk prediction.

Interested in ordering geneType™?

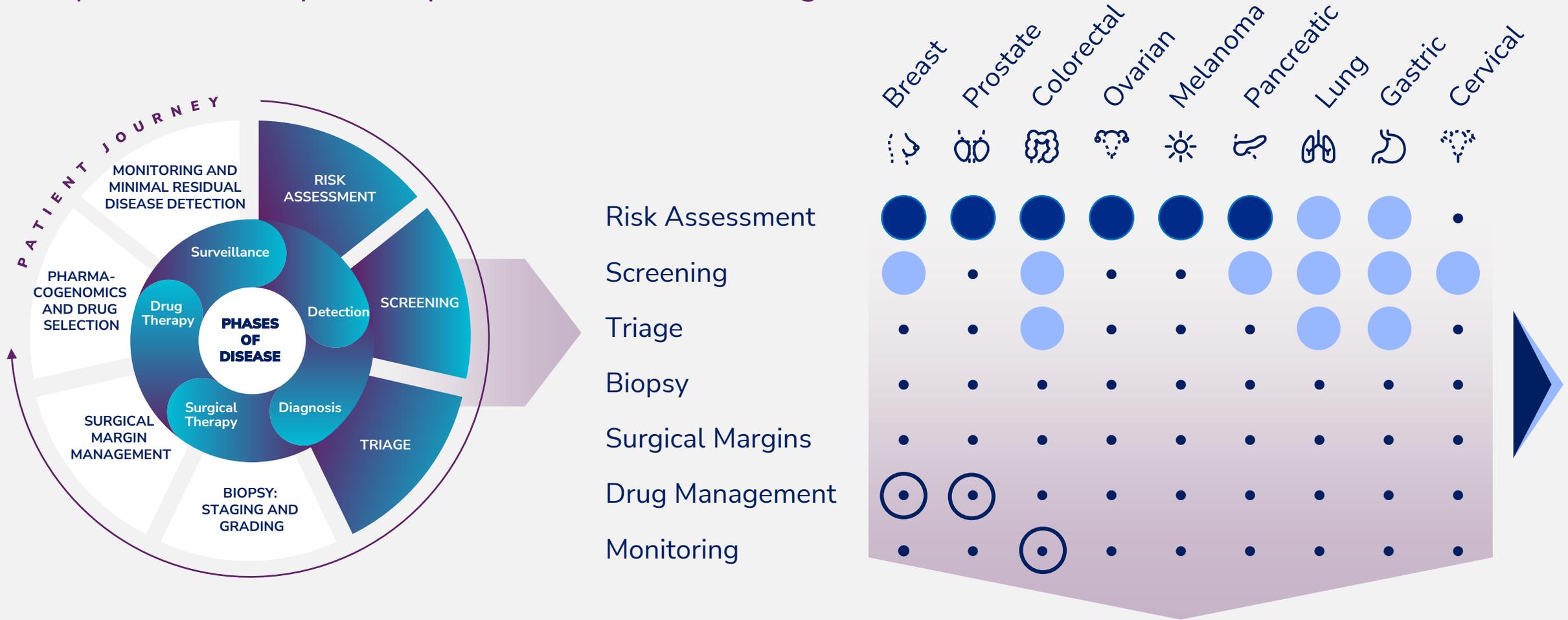
patient: order a test

practitioners: become a geneType™ provider



Our combined platforms supports a highly comprehensive approach to cancer diagnostics

The potential RHY product portfolio addresses a huge total available market



Upcoming value inflection points



PRODUCT	ITEM	DESCRIPTION	COMPLETION DATE
ColoSTAT®	Kit Validation Ready	Kit Verification completion, production kits ready	Q2 CY 2025
ColoSTAT®	Final clinical validation	Evaluation of final system	Q3 CY 2025
geneType™	geneType™ strategic partnerships	Establishment of key commercial partners	Q3 CY 2025
geneType™	geneType™ menu expansion	Expansion of existing commercial portfolio	Q4 CY 2025
ColoSTAT®	Commercialisation	ColoSTAT® Partner's In House IVD launch	Q4 CY 2025
Lung cancer screening assay	Complete pre-clinical evaluation	Design of assay prototype	Q1 CY 2026

Rhythm Bioscience: An attractive investment opportunity



Overview

Rhythm's mission is to detect cancer earlier and reduce the burden of cancer. We are developing and selling proprietary, high value products and services designed to detect cancer earlier.

Growth

Rhythm is solving an important clinical and economic problem. We are preparing for rapid global commercial growth.

Reasons to Invest

1. Multi-product portfolio
2. Addressing a significant TAM
3. Planning for growth acceleration



Thank you!

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