geneType

Genetic based preventative health platform

Personalised,
Precision medicine.

ASX:GTG
NASDAQ: GENE
Investor Presentation
October 2020

Coming soon

Genetic Technologies

Approved by the Board of Directors

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Genetic Technologies - Leader in Genomics

- **Over a decade developing polygenic risk scores** - for major oncological, metabolic and degenerative diseases
- **Strong scientific leadership under Dr Richard Allman** – a pioneer in the development of polygenic risk scores
- **Delivering better outcomes** - at a lower cost to the patient and the medical system
- **Dual listed** - ASX (GTG) and Nasdaq (GENE)

Academic collaborations with some of the most prestigious academic institutions in the world

Memorial Sloan Kettering Cancer Center

UNIVERSITY OF CAMBRIDGE

THE UNIVERSITY OF MELBOURNE

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In 2020 we will offer the most comprehensive suite of polygenic risk assessment tests on the market

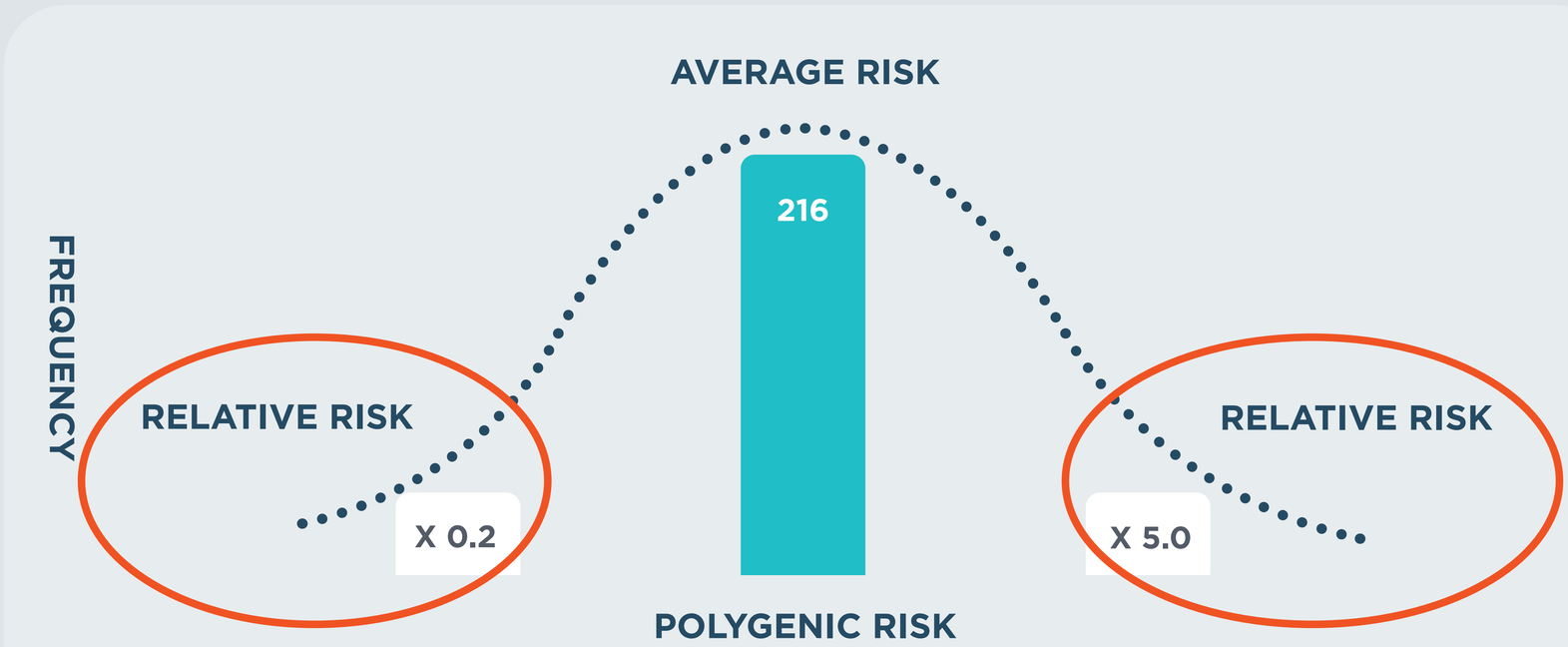
Background to Genomics - The Human Genome Project

- In 2003 scientists mapped the human genome – the three-billion-plus base pairs of DNA that create a living person
- Significant advances in genomics are influencing the way physicians practice medicine in the 21st century

Polygenic predictors are now being used to identify individuals at risk of common complex diseases

Our Platform - Polygenic Risk Score (PRS)

- Most common complex diseases are a result of many genes acting in concert
- Our tests predicts a patient's risk of developing a specific disease by analysing DNA variants across a genome
- Large genome-wide association study (GWAS) datasets are used to identify the specific variants (SNPs)
- Polygenic risk is then determined by a mathematical algorithm indentifying risk from each of these variants
- **We are able to identify people with five times the average disease risk as well as people with as little as 0.2 or one fifth the average disease risk**



ecancer.org, SABCS 2018, "Polygenic risk scores for breast cancer: ready or not?"

Polygenic predictors are now being used to identify individuals at risk of common complex diseases

PRS and Risk Stratification

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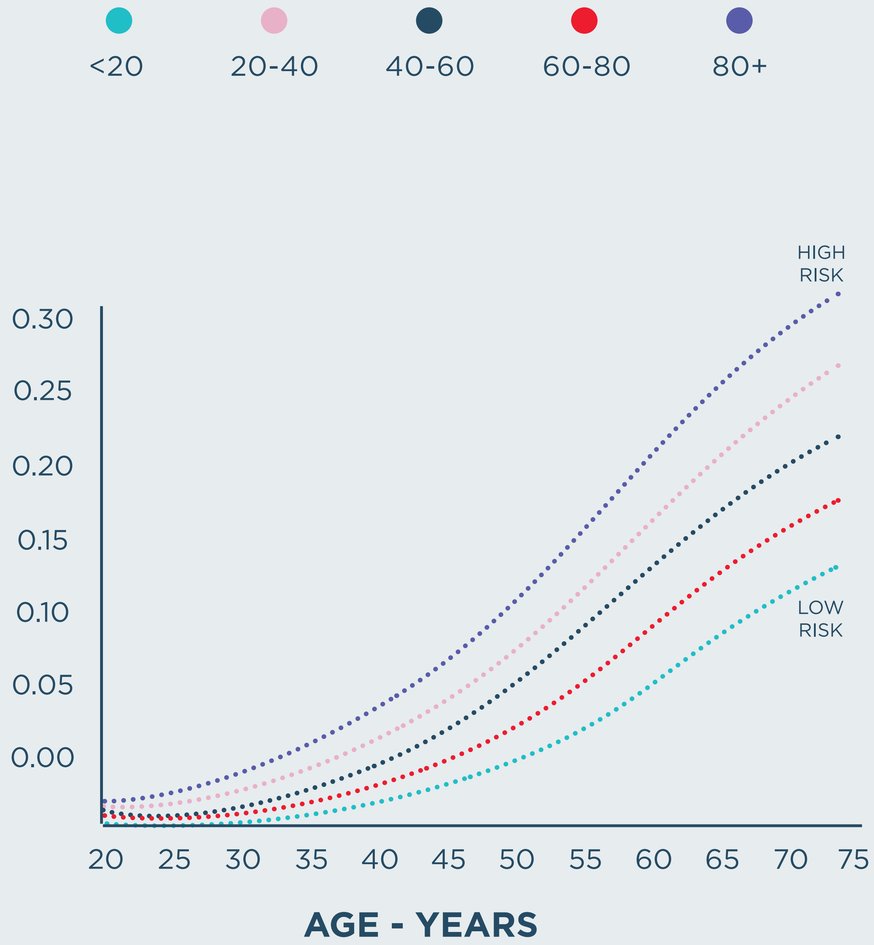
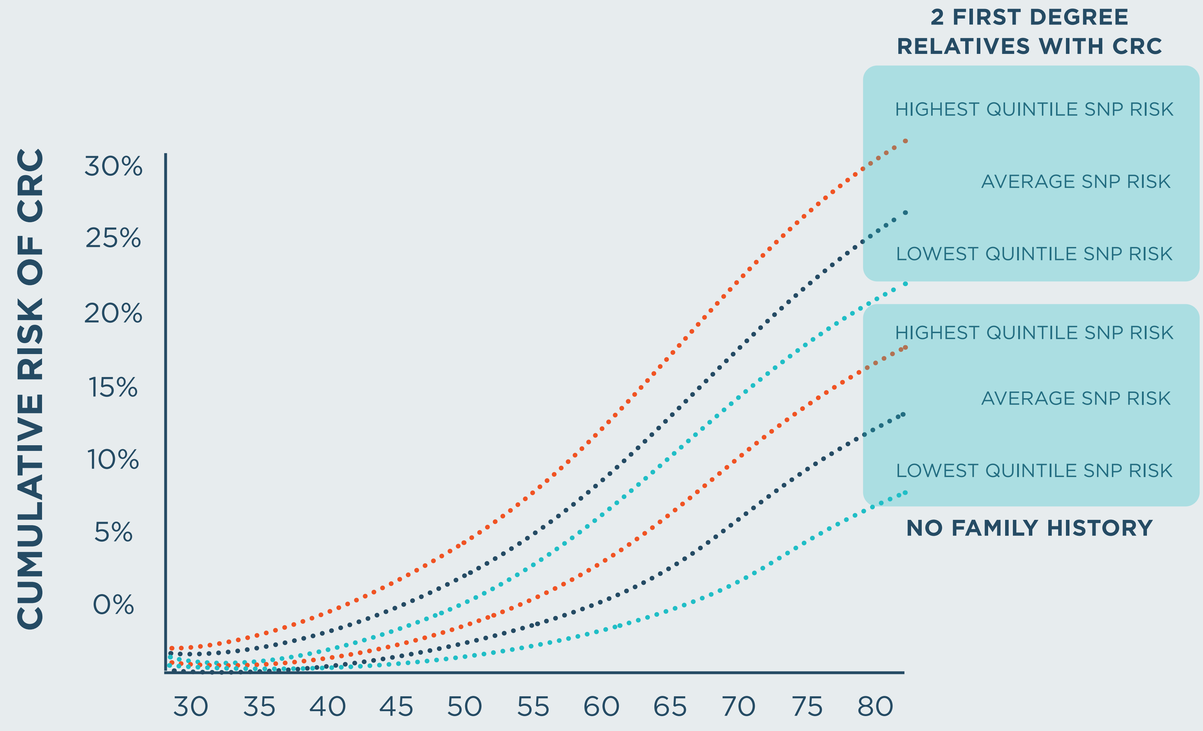
BREAST CANCER -
WOMEN WITH FAMILY HISTORY



Mavaddat et al. (2015) JNCI

COLORECTAL CANCER -
PEOPLE WITH FAMILY HISTORY



Jenkins et al. (2019) Familial Cancer

Introducing PRS to detect high risk groups and deliver better medical outcomes

Differences between PRS & Genetic Testing

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- Current genetic testing only captures hereditary forms of the disease (e.g. inherited cancer risk representing 5-15% of all Breast Cancer (BC)
- PRS captures sporadic (non-inherited) disease - the most common form of all diseases (representing 85-90% of all cancers)
- Allows for the implementation of preventative, personalised, precise medical strategies

GeneType tests evaluate the risk of developing common complex diseases even without family history

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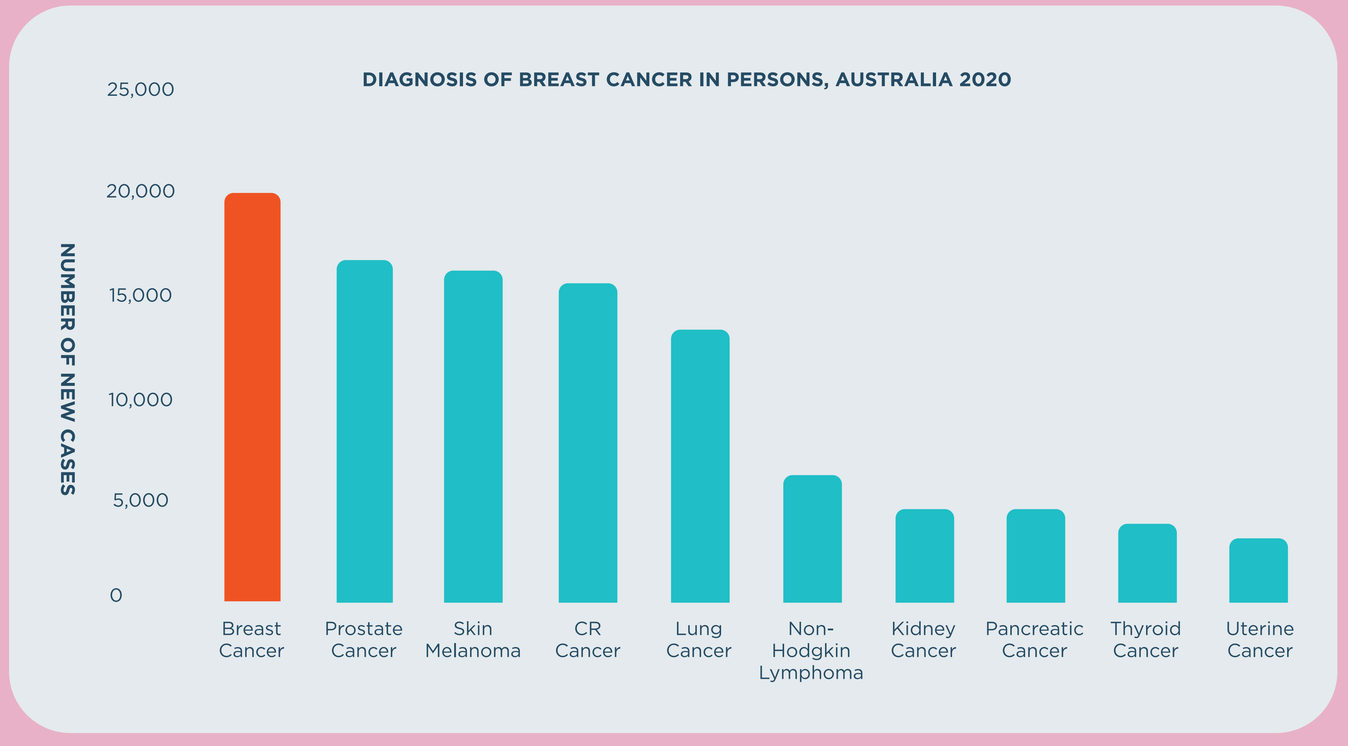
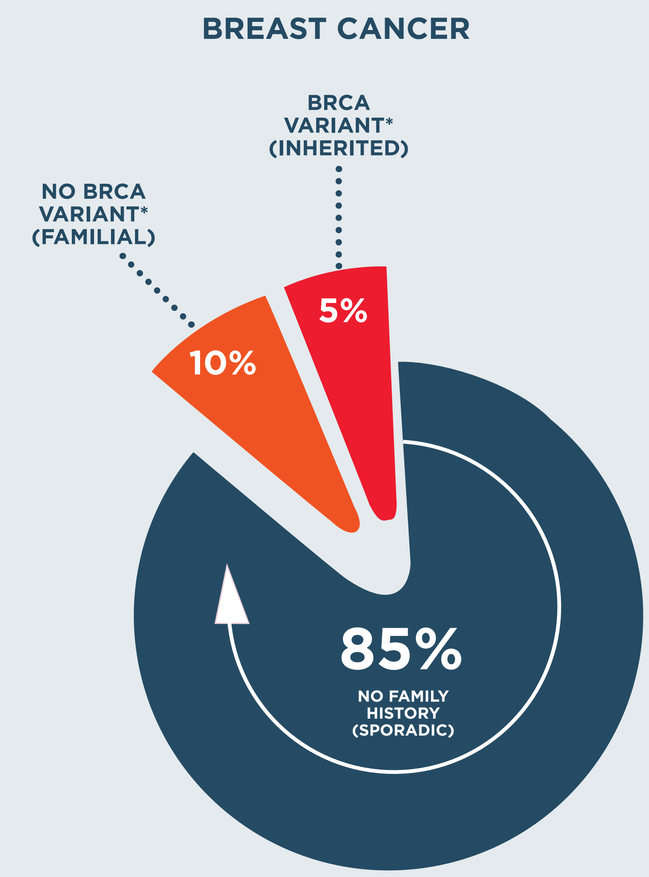
GeneType for Breast Cancer

GeneType for Breast Cancer

- 1 in 8 women will develop breast cancer in their lifetime
- It is the number 1 cancer in Australia with 3000 deaths per year and 20,000 diagnosed this year alone
- 85% of women with breast cancer have no family history (sporadic)





- Only 5% of women with breast cancer have a pathogenic variant, such as BRCA
- 10% have a family history but no high-penetrance mutation, such as BRCA

GeneType's technology covers 95% of women

Screening compliance & breast density risks

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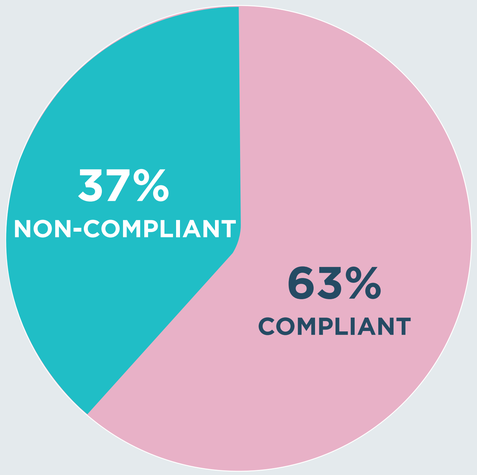
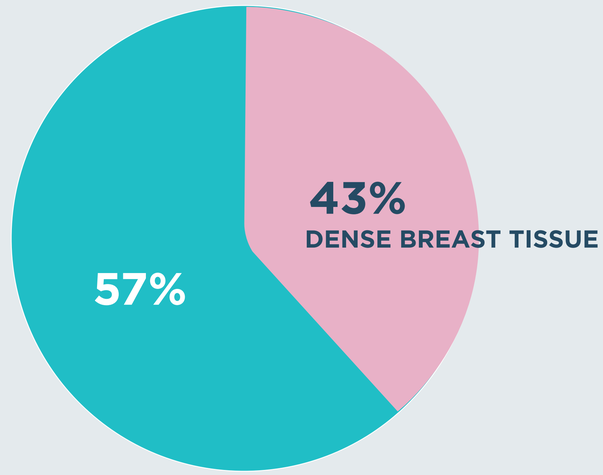
UP-TO-DATE MAMMOGRAM



Over 1/3 of women are
not screened

BREAST DENSITY

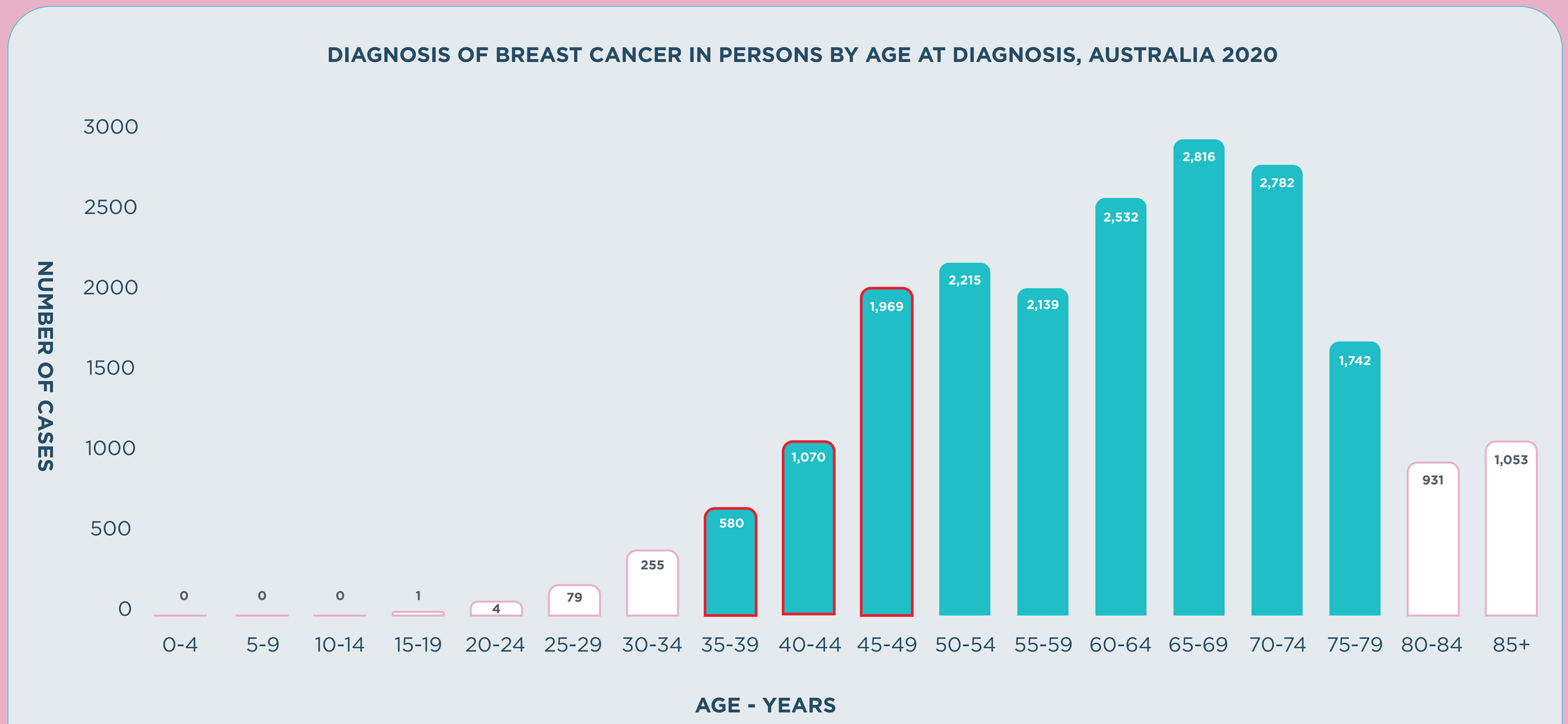


Nearly half of all women have a
significant risk factor - dense breast tissue

Haber et al 2012
.
American Cancer Society. Breast Cancer Facts & Figures 2019-2020. Atlanta: American Cancer Society, Inc. 2019.
Kerlikowski et al 2015

GeneType Age Coverage

- Current Government screening starts at 50 years of age
- Over 20% of women under the age of 50 are diagnosed with breast cancer



GeneType test covers women from 35 years of age

GeneType test for Breast Cancer

- First-to-market
- Clinically validated
- Covers up to 85% of all breast cancers
- Simple cheek swab
- Clinically actionable results with a 5 year and lifetime risk assessment
- Validated for use in Caucasion women over 35

GeneType accurately predicts risk of disease by combining PRS + family history + mammography data

Better Medical Outcomes

- Better compliance with screening
- Enhanced surveillance of high-risk women
- Up to 48% of interval cancers would be detected by stratified screening based on risk
- Lifestyle interventions: Cessation of smoking, lowering BMI, increase activity
- 5-year survival rate significantly improves with early detection
- Preventive Medication Selective estrogen receptor modulators (SERMs), or aromatase inhibitors (AIs)

Earlier risk assessment with GeneType tests saves lives

Better Financial Outcomes

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Early diagnosis means lower cost burden & better outcomes

STAGE 1 ..... **$55,000**

STAGE 2 ..... **$100,000**

STAGE 3 + STAGE 4 ..... **$150,000+**

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GeneType for Colorectal Cancer

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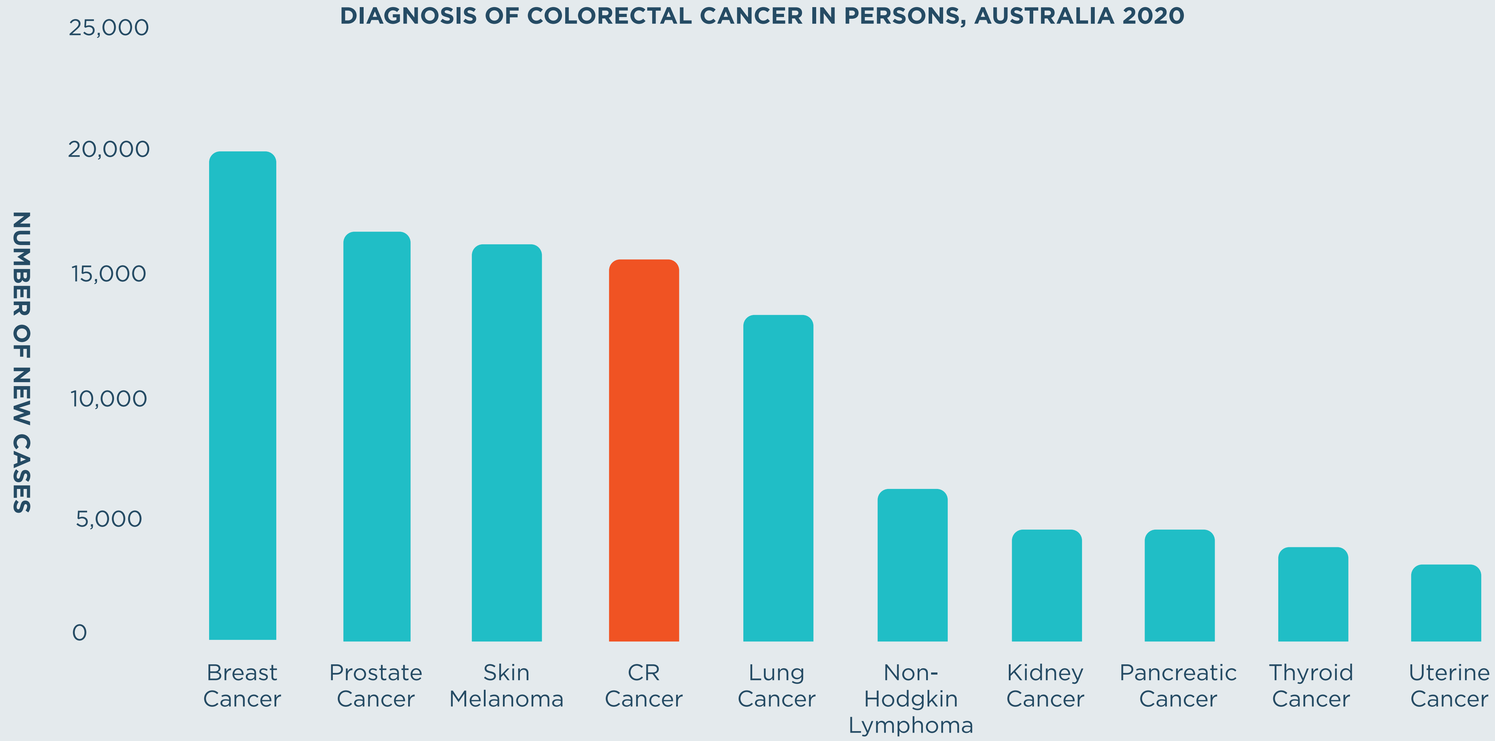
Colorectal Cancer

- 1 in 11 men and 1 in 16 women will contract colorectal cancer in their lifetime
- Second deadliest cancer-responsible for an average 100 deaths per week in Australia
- Current screening begins at 50 with approximately 10% developing the cancer earlier

- Over 33% of the population is non-compliant with testing
- More than 50% of colorectal cancer is first identified in late stage
- 5-year mortality rate of 31%



GeneType for Colorectal Cancer

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- Covers 95% of colorectal cancer
- Improved screening compliance with an easy to use test
- Examines risk in individuals before they are eligible for routine screening

- Simple cheek swab
- Clinically actionable results with a 5-year, 10-year and lifetime risk
- Validated for use in Caucasian men and women over 30

https://www.canceraustralia.gov.au/affected-cancer/cancer-types/bowel-cancer/statistics

GeneType predicts the risk of disease by combining PRS + family history + age

Better Medical Outcomes

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BOWEL CANCER STAGE OF DISTRIBUTION

	NBCSP* SCREENED	UNSCREENED
STAGE 1	**43%**	**17%**
STAGE 2	**27%**	**37%**
STAGE 3	**27%**	**29%**
STAGE 4	**3%**	**18%**

5-YEAR SURVIVAL RATES

	ESTIMATES
STAGE 1	**87%**
STAGE 2	**81%**
STAGE 3	**64%**
STAGE 4	**16%**

- Earlier screening leads to greater detection of Stage 1 cancers.
- Targeted screening leads to significantly higher survival rates.

*National Bowel Cancer Screening Program

https://www.cancervic.org.au/about/media-releases/2010-media-releases/june-2010-media/bowel-treatment-costs.html

Risk stratification enables personalised screening and improved outcomes

Better Channelling of Resources

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Resources targeted to those at a higher risk of developing colorectal cancer

Screening

More frequent & potentially earlier screening
Colonoscopy for high-risk

Preventive Medication

Low-dose aspirin (100-300 mg/day)

Lifestyle

Weight management, alcohol consumption, physical activity, smoking cessation

Better Financial Outcomes

- Bowel cancer treatment costs have soared by over $50K per advanced case

BOWEL CANCER COST INCREASE

	CURRENT ESTIMATES	PREVIOUS ESTIMATES (1999 COSTS)	INCREASE
STAGE 1	$30,890	$17,148	46%
STAGE 2	$47,534	$33,364	17%
STAGE 3	$74,225	$25,771	180%
STAGE 4	$61,423	$6,264	710%

https://www.cancervic.org.au/about/media-releases/2010-media-releases/june-2010-media/bowel-treatment-costs.html

Precision screening leads to earlier detection and lower treatment costs

Coming Soon

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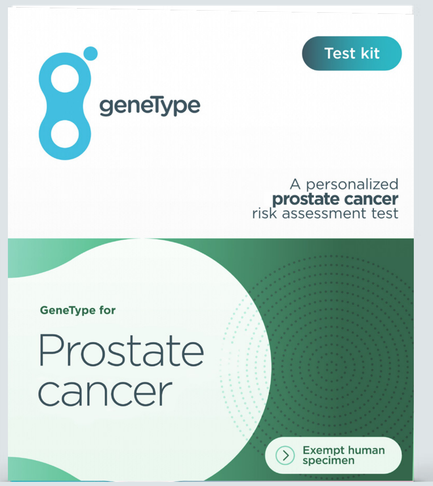
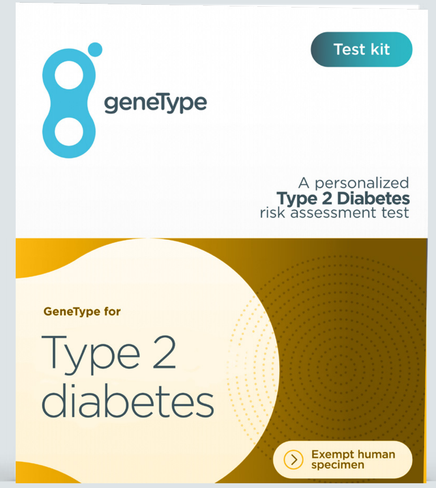
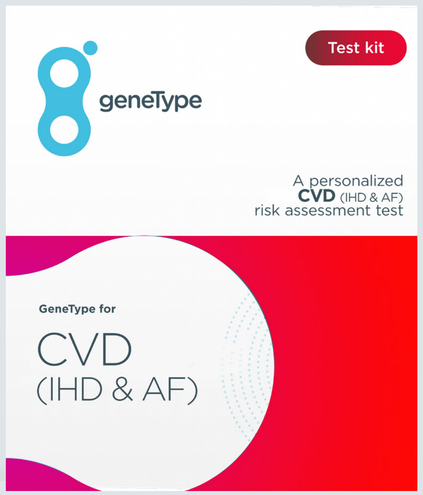


Prostate

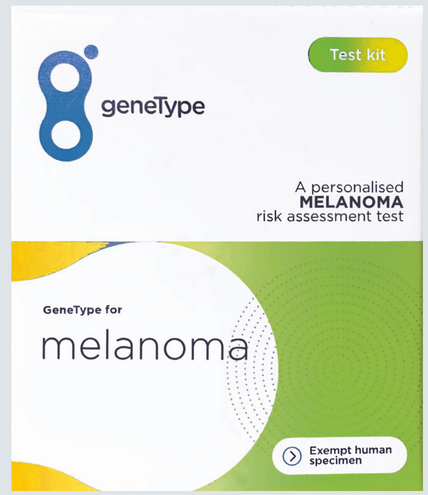


Type 2 Diabetes



Cardiovascular Disease

COVID-19 SDR



Melanoma

COVID-19 SDR (Serious disease risk)

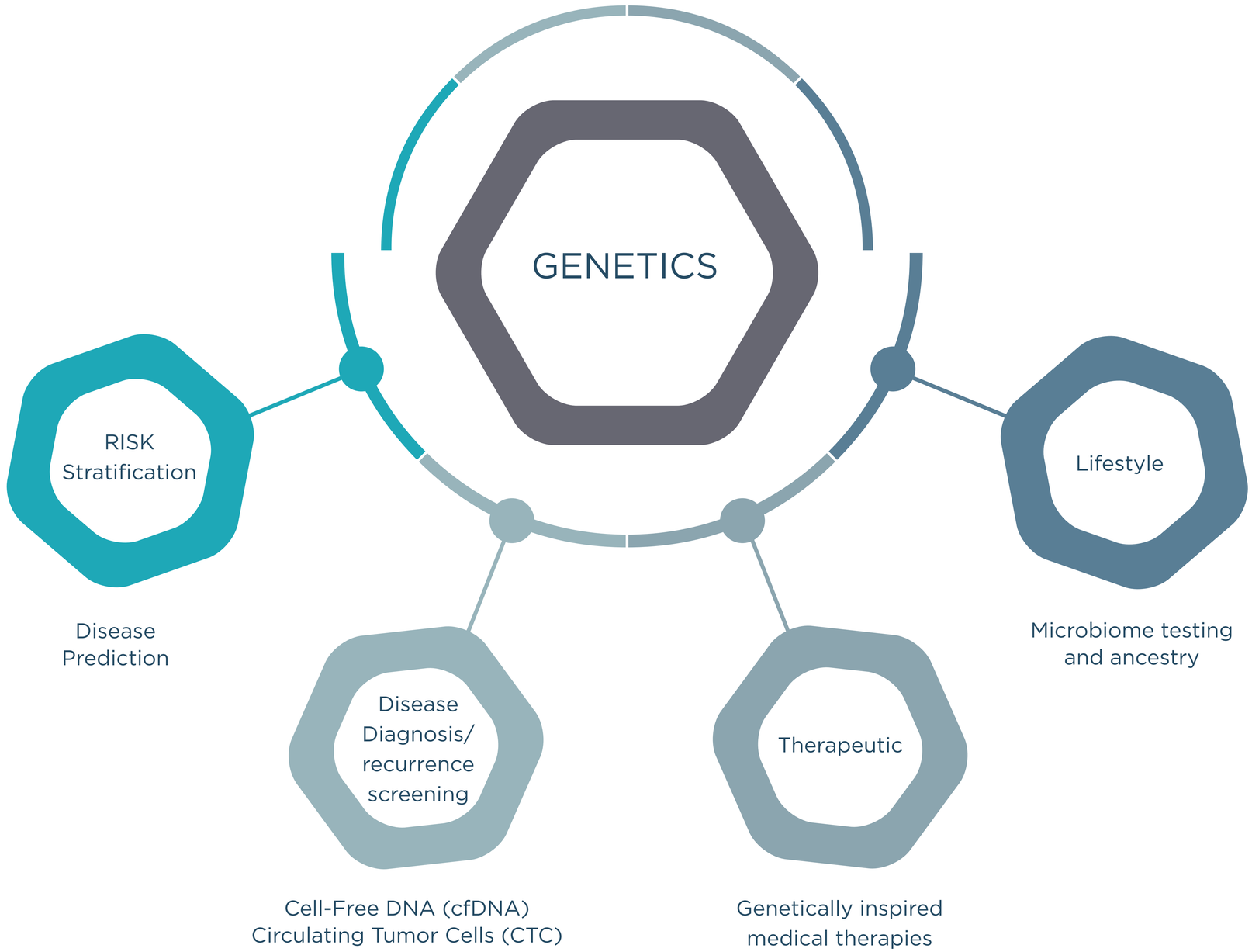
World first genetic risk test that predicts your risk of hospitalisation & life threatening complications

Genetype for COVID-19 SDR

- World first
- Combines genetic risk with clinical risk
- Up to 111% better at identifying risk than clinical risk models on their own*
- Simple oral swab test
- Allows for remote screening
- It's accurate and low cost*
- Designed to protect the vulnerable and first responders
- Has the potential to be an alternative to a one size fits all lockdown strategy
- Fully developed, currently undergoing technical validation in GTG's laboratory
- Expected to be market ready Q4 2020
- In discussion with US labs who are able to scale up & distribute to whole of USA**

* "An integrated clinical and genetic model for predicting risk of severe COVID-19" available at: https://www.medrxiv.org/content/10.1101/2020.09.30.20204453v1.full.pdf
** GTG anticipates the registration of an LDT COVID-19 severity test should take less than 45 days after validation (based on estimates received)

Expansion/Growth Roadmap



Product Development

Between 2010 - 2019

- Developed PRS Test Kits for BC (Breast Cancer) & CRC (Colorectal Cancer)
- 2 to 5 years per test to develop
- Average cost per test in excess of $2M AUD

2020 onwards

- Collaborate with world class medical groups such as MSK, University of Melbourne, T gen.
- Acquire or license best in class genomic risk stratification technology
- Offer germline testing for monogenic mutations in combination with PRS Testing
- Market /Commercialise
- Sales & Distribution
- Integrate into existing health systems
- Relationships with large, commercial genetic laboritories

Expansion/Growth/Market Size

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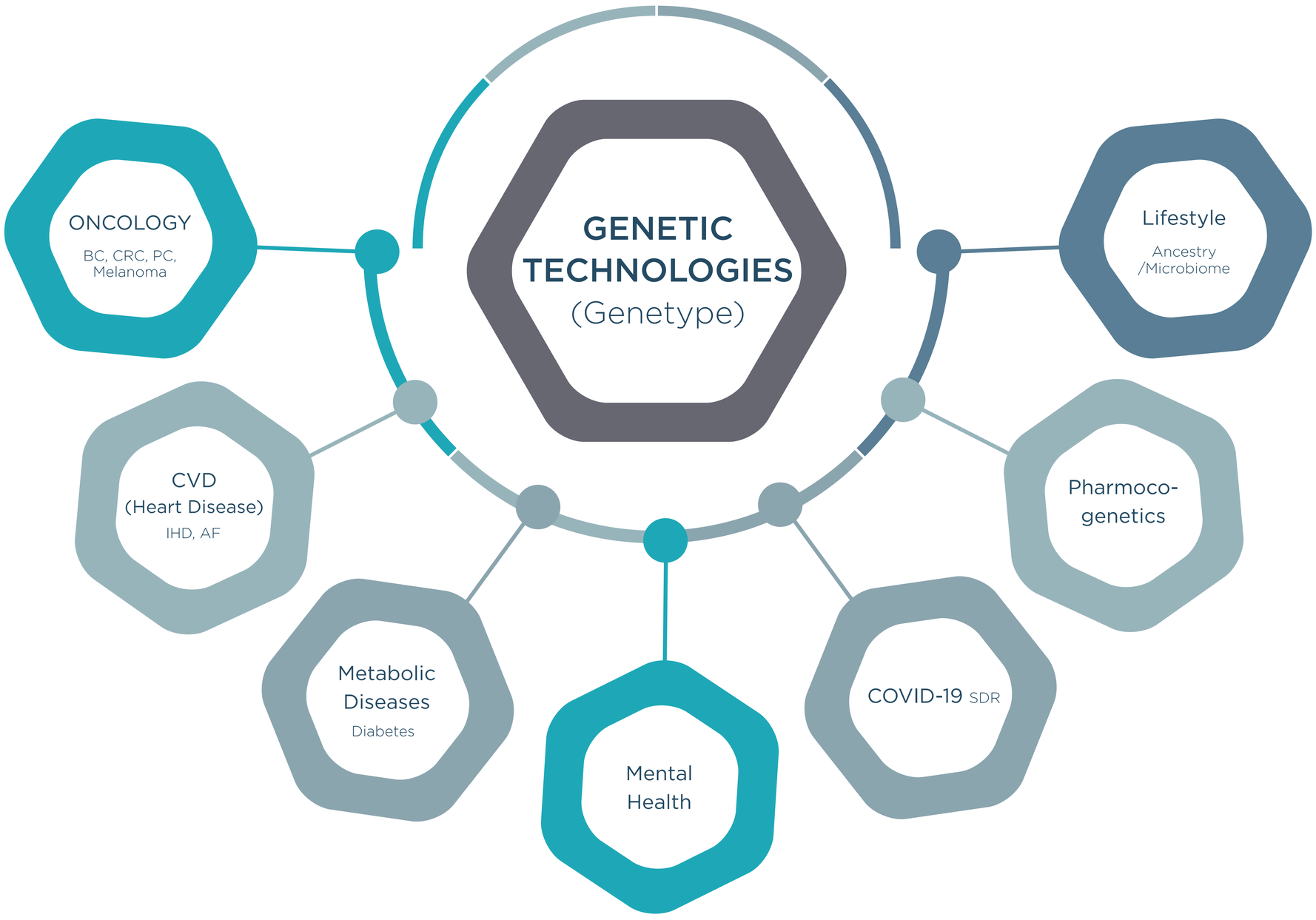

SALES & DISTRIBUTION by Region

- Certified by US regulators **CLIA** to sell into the USA
- Certified by Australian regulators: **NATA**, to sell into the Australian market
- Looking to commence **CE** certification with the view of entering the European market with our novel genetic risk tests in 2021

SALES & DISTRIBUTION by Method

- **CIT** (Consumer initiated testing and online sales and marketing platform with medical supervision) due for launching in Australia & the USA in Q4 2020
- **DTC** (Direct to consumer testing with no medical supervision) including ancestry and gut microbiome testing scheduled Q2 2021
- **BtoB** sales via the medical profession

Corporate

- Dual listed on ASX and the Nasdaq the worlds largest biotech exchange Listings In 2001 and 2005 respectively
- 600 shares on the ASX equate to 1 ADR (American Depository Receipts) in the USA which are interchangeable via custodian bank of Mellon with 70% of stock held in the USA
- 10 million ADR's with extremely low float
- Last 3 months average trade in USD $1.1m shares per day at USD $3.40 current ADR price and .008c on ASX
- Market cap of approximately AUD $70m
- Current mandate with HC Wainright as USA bankers
- Presented at JPMorgan biotech conference in January in San Francisco and HC Wainright virtual conference in July 2020
- Approximately AUD $18m cash with 24 months runway

Our Board

Genetic Technologies

Dr. Jerzy “George” Muchnicki

MBBS

Executive Director & Chief Executive Officer (Interim

Dr. Lindsay Wakefield

MBBS

Non-Executive Director

Mr. Peter Rubinstein

BSc, BEc, LLB

Chairman & Non-Executive Director

Mr Nick Burrows

BSc, BEc, LLB

B.Com, FAICD, FCA, FGIA, FTIA, F Fin

Non-Executive Director