



# INVESTOR PRESENTATION

MARCH 2019



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Resonance Health (ASX: RHT) is an Australian healthcare company specialising in the delivery and development of non-invasive medical imaging software and analysis services.



Resonance  
Health  
Limited  
(ASX: RHT)

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# CORPORATE PROFILE

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## ASX: RHT

- Founded in 2004
- Headquartered in Perth, Australia
- Global distribution network of over 480 hospital centres
- Expertise of using AI in medical diagnostics
- 5 regulatory cleared medical devices (FDA, TGA, CE Mark)

Resonance Health is an Australian healthcare company specialising in the development and delivery of non-invasive medical imaging software and analysis services. Our products are used by clinicians in the diagnosis and management of human diseases and by pharmaceutical and therapeutic companies in their clinical trials. Resonance Health has gained endorsement by leading physicians worldwide for consistently providing industry leading quantitative measurements essential in the diagnosis and management of particular diseases.

Resonance Health has established a global distribution network of over 480 hospital centres, has successfully obtained regulatory clearance for 5 medical devices, and is expanding its global distribution network further via 'channel partner' collaboration. Resonance Health has expertise in Artificial Intelligence (AI) with both the development of FerriSmart, the Company's ground-breaking regulatory approved AI tool for the quantification of liver iron concentration (LIC), and the active development of other solutions in other disease cohorts.

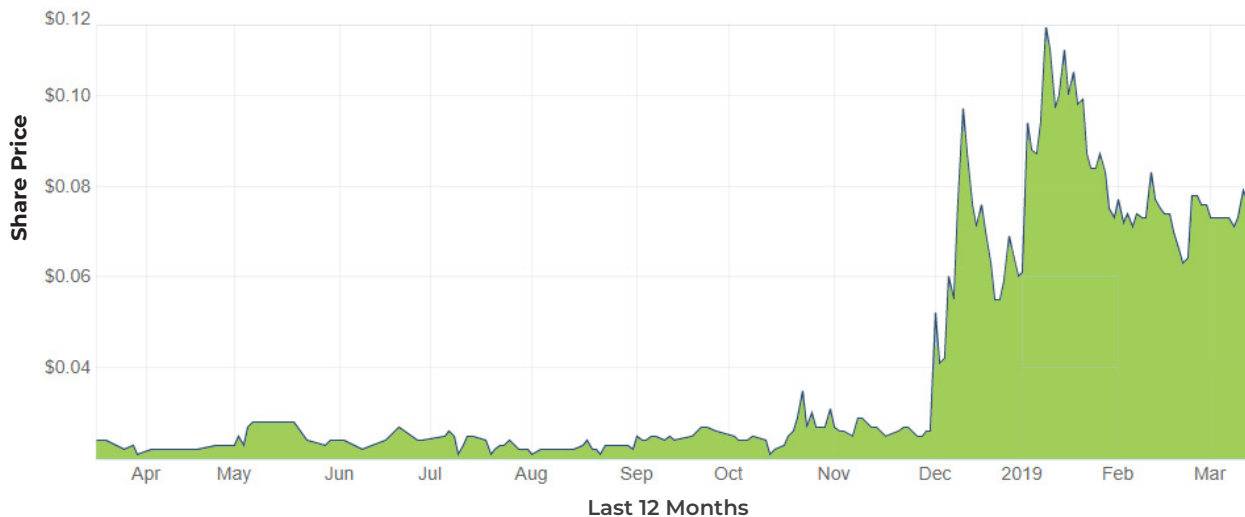
**Resonance Health continues to build upon its outstanding reputation with clinicians, and its strong relationship with pharmaceutical and therapeutic companies to further position its services to the medical community.**

# CORPORATE STRUCTURE

## Board & Management

- Dr Martin Blake - Non-executive Chairman
- Mr Simon Panton - Non-executive Director
- Mr Travis Baroni - Non-executive Director
- Mr Mitchell Wells - Non-executive Director
- Ms Alison Laws - Chief Executive Officer
- Mr Agha Shahzad - Chief Financial Officer & Company Secretary

ASX	RHT(* at 12/3/19)
Share price	0.078*
Shares on issue	402.5m
Options (0.03, 0.05, 0.075, 0.10c, Mar 2021 expiry)	21m
Options (0.05, 0.075c Sept 2021 expiry)	0.5m
Market Capitalisation	\$32m*
Top 20 Shareholders	49.90%
Board & Management	20.61%
52 week range	\$0.02 - \$0.12
EPS (half year- diluted)	0.23 cents



## KEY MILESTONES

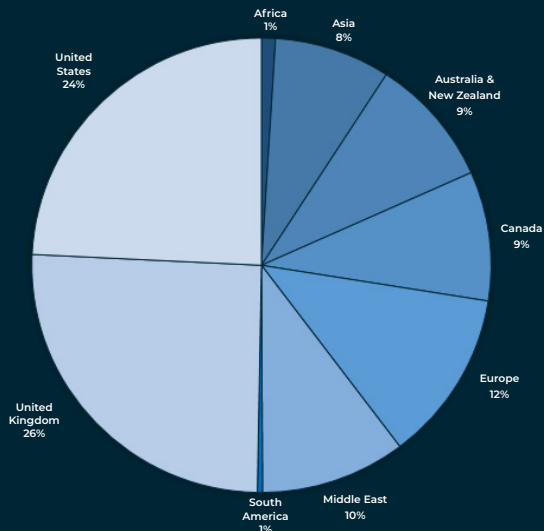
- ✓ FerriSmart, a ground-breaking artificial intelligence solution for the quantification of liver iron concentration achieved CE Mark, TGA, and FDA regulatory clearance, making it the only regulatory approved artificial intelligence tool for use in liver iron quantification;
- ✓ A new MRI-based assessment tool for the screening of non-alcoholic steatohepatitis (NASH) patients launched, with initial uptake expected from pharmaceutical companies;
- ✓ Expedited turnaround for FerriScan analysis was launched for customers needing quicker delivery of patient reports;
- ✓ Alliance Partner Agreement signed with Blackford Analysis, giving Blackford the right to promote, market, sell, distribute, and license FerriSmart directly and/or via resellers;
- ✓ Distribution Agreement signed with EnvoyAI, for the distribution of FerriSmart. The agreement enables seamless integration of FerriSmart to EnvoyAI's global installation network of over 5,000 hospital sites;
- ✓ Dragon 2 Study commenced, a trial looking at several parameters, including protocols to significantly decrease the acquisition time for FerriScan and FerriSmart. To date, Resonance Health has obtained data sets from over 85 trial subjects, containing images collected via several acquisition protocols of varying scan times. Work is underway to test the new protocol across multiple scanner manufacturers;
- ✓ Received an R&D Tax Incentive refund of A\$326,470 for the 2017/2018 financial year. The incentive refund relates to ongoing studies in liver and metabolic disease, improvements to core services, and the development of FerriSmart.

## AND ACHIEVEMENTS (2018 - PRESENT)

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- ✓Eight multi-year contracts executed with pharmaceutical and therapeutic companies for the use of FerriScan and other Resonance Health services for a combined aggregate value of approximately US\$2,75 million. \* Full payment is contingent upon the successful completion of the trial/s;
- ✓Cardiac T2\* phantom developed to complement the Resonance Health services being supplied to three pharmaceutical and therapeutic companies in their clinical trials. The Cardiac T2\* phantoms will be provided annually for the duration of these clinical trials.
- ✓FerriScan® voucher program renewed by a pharmaceutical client for the countries of South Africa and Taiwan for an additional year. Vouchers must be redeemed within a 1 year period, and are used to provide FerriScan® and Cardiac T2\* services to patients;
- ✓Agreement signed with TeleMedC to distribute DR Grader, an AI Diabetic Retinopathy (DR) grading tool;
- ✓Over 100 sites (hospitals and/or MRI centres) onboarded for the use of Resonance Health products and/or services;
- ✓Non-exclusive License Agreement signed with Wisconsin Alumni Research Foundation (WARF) for the use of patents owned by WARF. The License Agreement allows the licensed patents to be used in the development and commercialisation of new and/or alternative methods for measuring proton density fat fraction (PDFF) using MRI images.

## FerriScan by Region



Under this business model, Resonance Health provides the following services: FerriScan®, Cardiac T2\* for iron assessment, Bone Marrow R2 for iron assessment, HepaFat-Scan®, fat assessment in other organs, organ volume measurements (spleen, liver), quantitative iron assessment in organs (pancreas, spleen, kidney, brain), and our new AI solution FerriSmart®.

## Software as a Service (SaaS) business model

Under SaaS, the customer pays for our services (pay-per-use), rather than buying a perpetual license with a once-off, up-front fee (subscription model).

In clinical trials, pharmaceutical and

therapeutic companies may contract Resonance Health for the use of our services (such as FerriScan) and CRO capabilities. In this instance, a project and data management fee will be included as a recurring monthly fee.



480+

Resonance Health has a global distribution network of over 480 hospital centres.

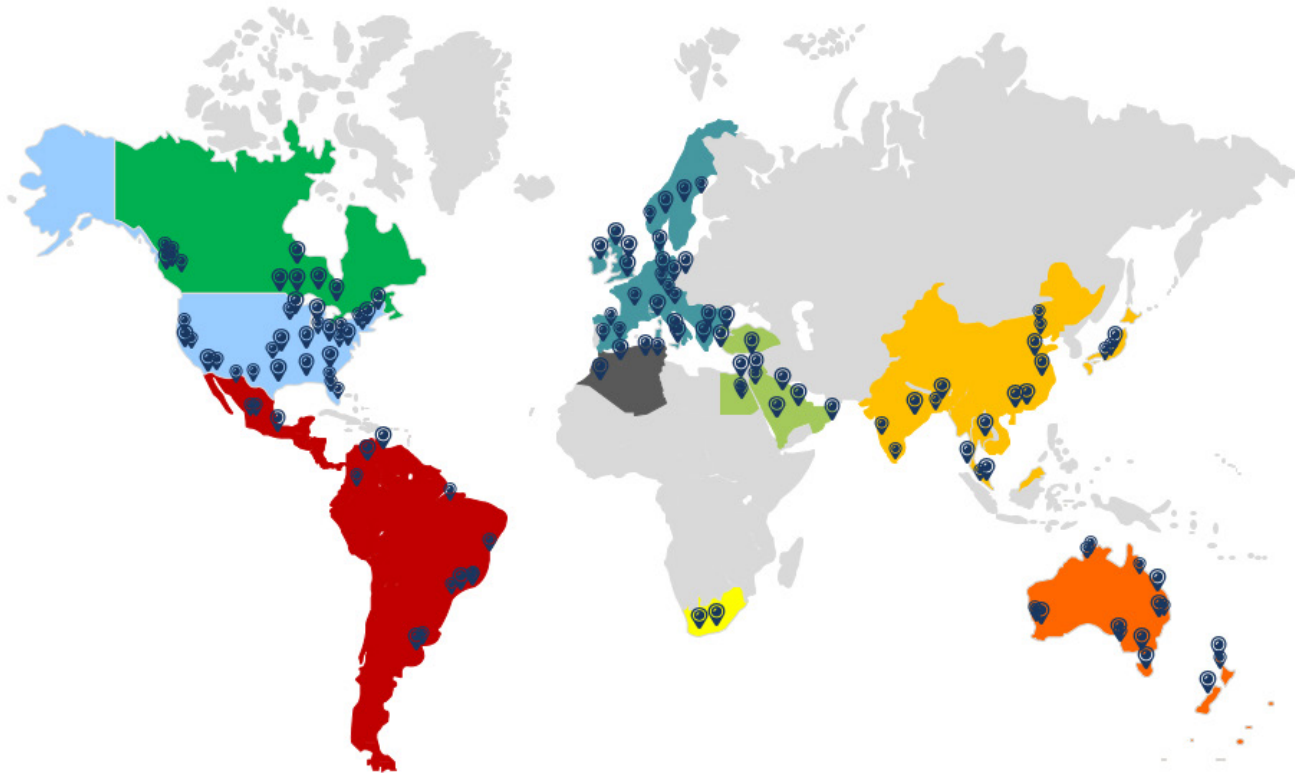


60,000+

Resonance Health has provided over 60,000 patient reports to the medical and scientific community.



# GLOBAL ACCESS TO FERRISCAN



map icons indicate just some of our FerriScan locations, with over 480+ sites having now been activated.

# IRON OVERLOAD MARKET FUNDAMENTALS

## Total Addressable Market (for FerriScan and FerriSmart)

- World Health Organization estimates that over **330,000** affected infants are born annually with iron related disease (83% sickle cell disorders, 17% thalassaemias), **80% of whom are born in developing countries.**
- Between **90,000** to **100,000** people in the US suffer from sickle cell anaemia, while approximately **3 million** people, and 10 percent of African-Americans, have the sickle cell trait.
- Over **100,000** Myelodysplastic Syndrome (MDS) patients in the USA and Europe - approx 15% are transfused and become iron loaded.
- Over **2 million** people suffer from primary iron overload.
- Iron related disease is the **3rd most serious** public health problem in South East Asia following Malaria and HIV.

## Consequences of Iron Overload

Iron overload occurs when total body iron is increased through chronic blood transfusions or absorption of iron through the gastro-intestinal tract.

Excess iron deposits primarily in the liver, but once a threshold level is reached, iron loading may appear in other organs such as the heart. Regular monitoring liver iron concentration therefore provides an early warning of possible future cardiac complications.

## FerriSmart

- ✓ Fully automated
- ✓ Lower cost - suited towards **developing countries**
- ✓ Instantaneous report generation
- ✓ Quality control checks - Automatic DICOM header checks
- ✓ Seamless integration into radiology workflow
- ✓ Regulatory cleared - FDA, CE Mark, and TGA
- ✓ Widely Available - via Resonance Health, Blackford Analysis and EnvoyAI

**Inherited hemoglobin disorders, such as thalassemia and sickle cell disease, are now considered among the most important health challenges worldwide** (Epidemiol Health 2015).

## DIAGNOSIS OF IRON OVERLOAD

Liver Iron Concentration (LIC) provides the best measure of total body iron stores. FerriScan can assist in providing a definitive diagnosis of iron overload where this may be indicated by increased serum ferritin levels, genetic testing or a history of blood transfusions.

## TRANSFUSION AND CHELATION THERAPY

- Patients with thalassemia may require intermittent or regular blood transfusions to treat the anemia and associated conditions.
- After starting regular transfusion therapy, evidence of iron overload can be apparent within 1–2 years.

## WHY IS ACCURATE MONITORING OF LIVER IRON IMPORTANT?

The liver is the primary site of iron storage in the body in either primary iron overload, caused by excessive dietary absorption, or secondary iron overload as a result of a requirement for regular blood transfusions. Liver iron concentration (LIC) is the standard reference method for measuring body iron and the most validated predictor of the risks a particular patient faces from the complications of iron toxicity.

In certain disease groups, most notably beta thalassemia major, once iron has deposited to a certain threshold in the liver, it will then deposit in endocrine organs and the heart where it can rapidly result in cardiac failure and death. It is therefore particularly important that regular and accurate monitoring of LIC is available to inform clinicians' treatment decisions on these patients. In this way, the FerriScan LIC result serves as an early warning system and helps to ensure that cardiac iron loading is avoided.

FDA mandates an approved 'companion diagnostic' to prescribe Exjade in Non-Transfusion Dependent Thalassemia (NTDT)

As part of the Company's FDA regulatory clearance, FerriSmart was accepted with the following indications of use:

- Measure liver iron concentration in individuals with confirmed or suspected systemic iron overload;
- Monitor liver iron burden in transfusion dependent thalassemia patients and patients with sickle cell disease receiving blood transfusions;
- Aid in the identification and monitoring of non-transfusion-dependent thalassemia patients receiving therapy with deferasirox.



The World Health Organization estimates that 5.2% of the world population are carriers of inherited hemoglobin disorders.

# METABOLIC DISEASE MARKET FUNDAMENTALS


## Total Addressable Market (for HepaFat-Scan and other fat and metabolic related products)

- Non-alcoholic Fatty Liver Disease (NAFLD) affects **10-30%** of the global population of **7.6 billion** people.
- In the United States, it is the most common form of chronic liver disease, affecting an estimated **80 to 100 million** individuals.
- Around **25%** of those with NAFLD will develop liver inflammation termed non-alcoholic steatohepatitis (NASH) and **5%** will develop cirrhosis.
- By **2020** NAFLD will be the leading cause of liver transplants globally.
- It is estimated that **415 million** people in the world have diabetes, **46%** of whom are undiagnosed.
- In the United States, an estimated **30.3** million people have diabetes (**9.4** percent of the U.S. population).
- According to the American Diabetes Association's Economic Costs of Diabetes in the U.S., the total estimated cost of diagnosed diabetes in 2017 was **\$327 billion**, including **\$237 billion** in direct medical costs and **\$90 billion** in reduced productivity.
- An estimated **84.1** million adults ages 18 years or older (**33.9 percent** of U.S. adults) have prediabetes.

**Rising global obesity, caused by the consumption of high calorie and nutrient poor diets, is increasing the rates of cardiovascular (heart) disease, diabetes, liver disease (NAFLD/NASH), and cancer.**

### DIAGNOSIS AND THERAPY

The prevalence of NAFLD and NASH in the world is estimated to be up to 46% of the global population (Digestive Diseases and Sciences 2016). In these instances, HepaFat-Scan may be used by clinicians as a diagnostic tool to diagnose and manage these conditions.



HepaFat-Scan provides a reliable non-invasive measure of the volume fraction of fat in liver tissue for screening, diagnosis, treatment planning, and monitoring of patients in a variety of clinical settings, including patients at risk of fatty liver disease.

### TREATMENT ON THE WAY

Several potential treatments for non-alcoholic fatty liver disease (NAFLD) and non-alcoholic steatohepatitis (NASH) are now in phase 3 trials, showing promise of treating these complex disorders.



**Intercept Pharmaceutical's phase 3 trial of Obeticholic Acid (OCA) is the first investigational drug to have received Breakthrough Therapy designation from the FDA for NASH with fibrosis.**

# GROWTH THROUGH PRODUCT

## Product Improvements

- Work is underway to calibrate FerriScan to 3 Tesla (3T) scanners: With the increase in use of 3T scanners globally, Resonance Health is adapting FerriScan to ensure 3T compatibility for those clients who choose to use this technology.
- Significant progress has been made in shortening the FerriScan and FerriSmart acquisition sequence across multiple scanner manufacturers. A shorter scan time will increase scanner throughput, a key selling point for the product.
- HepaFat-Scan has been calibrated across 3T scanners, and is now available on both 1.5 and 3 Tesla scanners.

## New Methods of Deployment and Distribution

- FerriSmart, the Company's artificial intelligence solution for the quantification of liver iron concentration (LIC), achieved TGA, CE Mark, and FDA clearance, making it the only regulatory approved artificial intelligence tool for use in liver iron quantification.
- Agreements with global channel partners Blackford Analysis and EnvoyAI allows FerriSmart to be instantly and seamlessly integrated into existing radiology workflows via the Blackford and EnvoyAI Exchange platforms.



# INNOVATION AND COLLABORATION

**Resonance Health has a long history of collaborating with research institutes and private industry partners and continues to assess opportunities for further expansion.**

## Product Innovation and Collaboration

- Perth Radiological Clinic (PRC) Joint Venture: Resonance Health is assessing the viability of the development and commercialisation of new diagnostic products. PRC is providing Resonance Health with access to CT and MRI data sets for artificial intelligence training.
- Wisconsin Alumni Research Foundation (WARF) License Agreement: Resonance Health has licensed several patents for the development and commercialisation of new and/or alternative methods for measuring proton density fat fraction (PDFF) from MRI images. By combining the Company's expertise in iron and fat measurements with the use of technologies covered by the WARF patents, Resonance Health is working towards offering a wider range of services to clinicians for the diagnosis and management of the ever-growing fat related diseases.
- TeleMedC Agency Agreement: Resonance Health is distributing an artificial intelligence diabetic retinopathy grading tool to provide DR screenings for large populations via primary healthcare providers.
- The Company also continues to assess opportunities to expand core business through acquisitions, channel partners for existing products, and providing distribution services for products that fit with the existing Resonance Health core business.

## 2019 HY RESULTS

**\$1,843K  
REVENUE**

**\$701K\*  
EBITDA**

\*EBITDA AND NPAT HY 2019 INCLUDES  
EMPLOYEE SHARE-BASED PAYMENTS  
OF \$34,804.

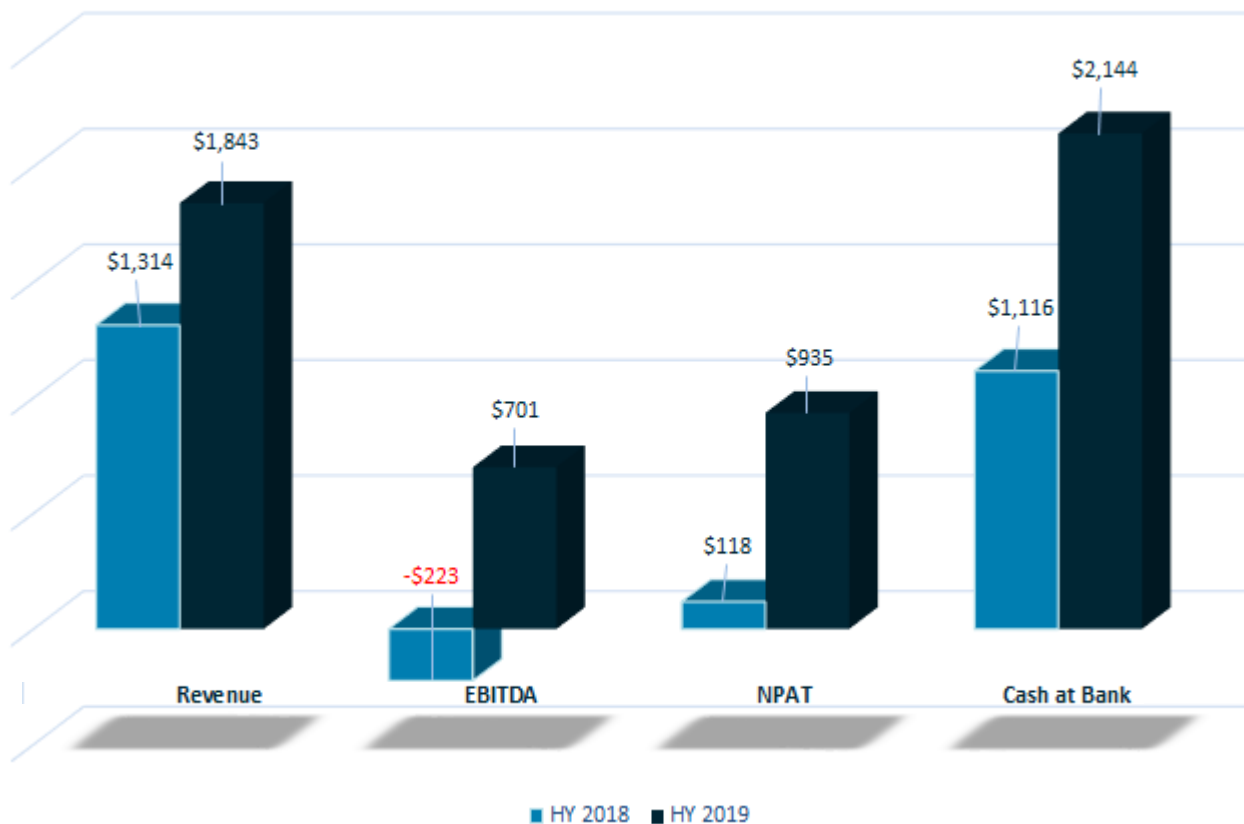
**\$2,144K  
CASH  
BALANCE**

**\$935k\*  
NPAT**

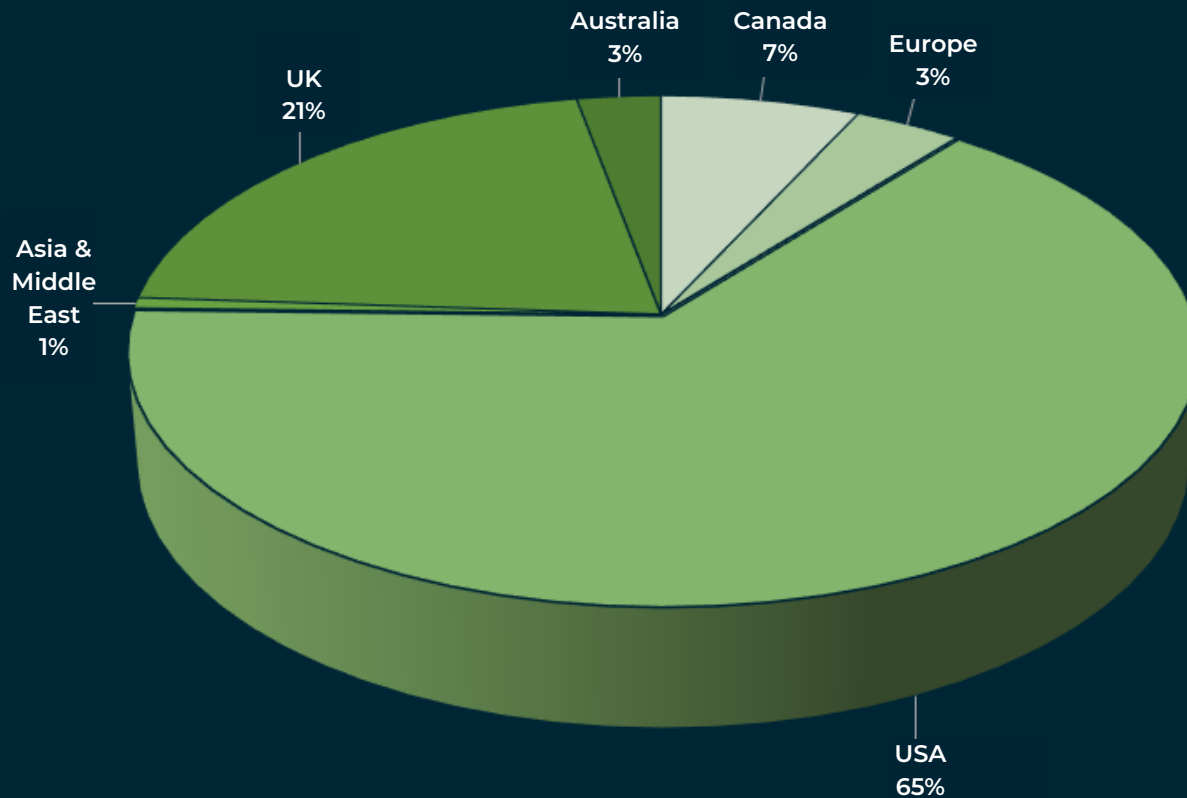
- Revenue for the HY 18/19 was \$1,843k, an increase of 40% versus the previous corresponding half year.
- Cash at half year end was \$2,144k. The company has no debt.
- Net profit after tax of \$934,650 for HY 2018/19 including employee share-based payments.
- Receipts from customers were \$1,587k, up 36% from the previous corresponding half year.



## HALF YEAR RESULTS COMPARISON (\$'000)



## REVENUE BY REGION



# INVESTORS OVERVIEW

LARGEST SHAREHOLDERS (AS OF 12 MARCH 2019)

Rank	Name	Units	% of Units
1	SOUTHAM INVESTMENTS 2003 PTY LTD	73,000,000	18.14
2	HSBC CUSTODY NOMINEES (AUSTRALIA) LIMITED	36,336,300	9.03
3	THE UNIVERSITY OF WESTERN AUSTRALIA	9,078,750	2.26
4	CASTLEREAGH EQUITY PTY LTD	8,500,000	2.11
5	MR JACK MOSTYN LONDON	8,242,989	2.05
6	MR HELMUT ROCKER	7,000,000	1.74
7	BLAKE NOMINEES PTY LTD <M AND T SUPER FUND A/C>	6,464,677	1.61
8	MR GREGORY PETER WILSON	6,183,657	1.54
9	BAINPRO NOMINEES PTY LIMITED	5,663,842	1.41
10	MR ROBERT FRANCIS PANTON	5,64,0824	1.4
11	MR BRUCE ALAN STEVENSON	4,924,921	1.22
12	MR THOMAS PSARAKIS	4,434,777	1.1
13	FULLERTON PRIVATE CAPITAL PTY LIMITED	4,000,000	0.99
14	MR VINCENT OLADELE	3,667,100	0.91
15	MARCOLONGO NOMINEES PTY LTD <MARCOLONGO FAMILY A/C>	3,626,000	0.9
16	ANAHEIN PTY LTD	3,010,598	0.75
17	MR GREGORY YENG TUCK KONG	3,000,000	0.75
18	MS HELEN SAU HENG LOKE	3,000,000	0.75
19	MR DAVID VIGOLO <VIGOLO FAMILY A/C>	2,500,000	0.62
20	MRS PAULINE MARY DEEVES	2,500,000	0.62
		<b>200,774,435</b>	<b>49.9</b>



# INVESTOR PRESENTATION

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Resonance Health (ASX: RHT) is an Australian healthcare company specialising in the delivery and development of non-invasive medical imaging software and analysis services.

141 Burswood Road, Burswood WA 6100

Telephone: +61 (0)8 9286 5300

Fax: +61 8 9286 5399

E-mail: [info@resonancehealth.com](mailto:info@resonancehealth.com)