Optiscan Imaging Ltd (ASX:OIL)

Enabling “Real-time Virtual Biopsy” for Human Cancer Screening and Surgical Margin Detection

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Corporate Snapshot

Board

Darren Lurie – Executive Chairman

B.LLB (Hons) and B.COM (Hons)

Former Group CFO and Head of Corporate Development for EduCo International (an investee company of Baring Private Equity Asia). Darren is a former chair and non-executive director of ASX listed Farm Pride Foods Ltd (ASX:FRM).

Dr Philip Currie – Non Executive Director

MBBS (Hons), FRACP, MBA

Dr Currie is a leading cardiologist with more than 35 years experience in medical research, clinical cardiology and business. He completed his cardiology fellowship at the prestigious Mayo Clinic, staff cardiologist at both Mayo Clinic and Cleveland Clinic and was the Director of Echocardiography at Michigan Heart and Vascular Institute.

Graeme Mutton – Non Executive Director

CPA

Graeme is a long-standing shareholder in Optiscan and has a deep understanding of Optiscan`s technology and applications. He is a former manager of an accounting practice and successful business owner and operator.

Total Securities on Issue

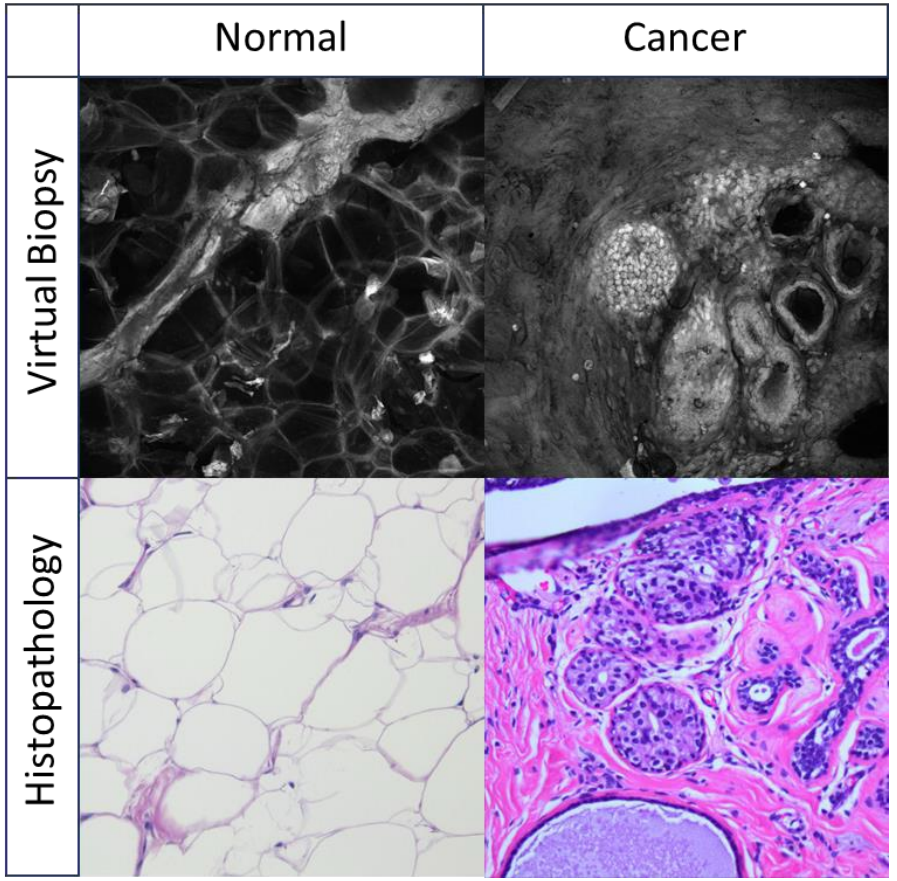
- 470,178,800 Ordinary Shares
- 2,600,000 Performance Rights
- 25,600,000 unlisted options

June Capital Raising: $1.7million @4.0 c
Market Capitalisation: ~$19million @4.1c

Optiscan's Future: Enabling "Real Time Virtual Biopsy"

Optiscan technology changing pathology and surgical cancer practice

- Screening, early cancer diagnosis and targeted biopsies
- Tumour margin detection in cancer surgery

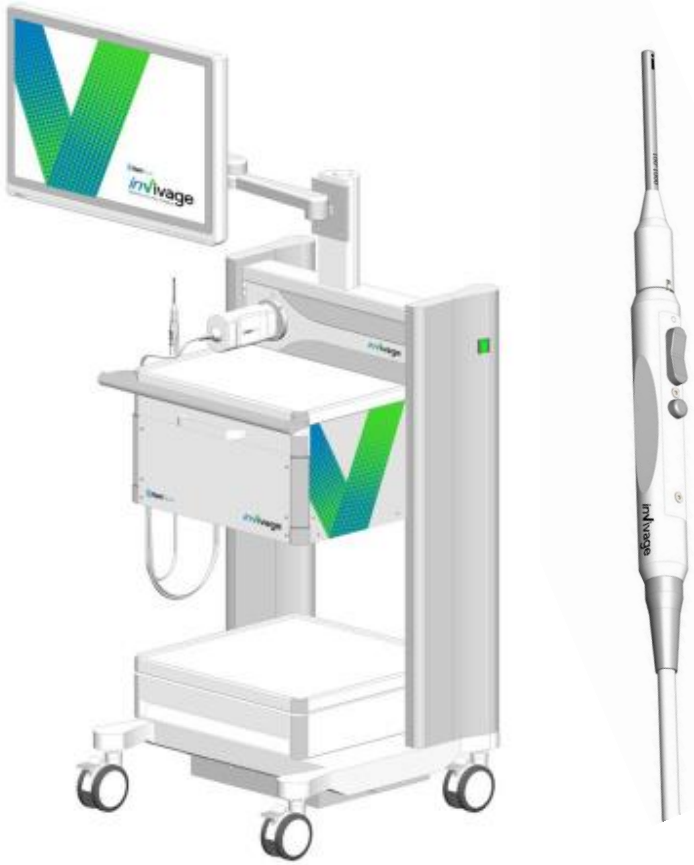


InVivage® Optiscan's Clinical System

Optiscan FIVE2 Laboratory and InVivage® Clinical Systems

FIVE2 (ViewnVivo) Laboratory System

InVivage® Clinical System

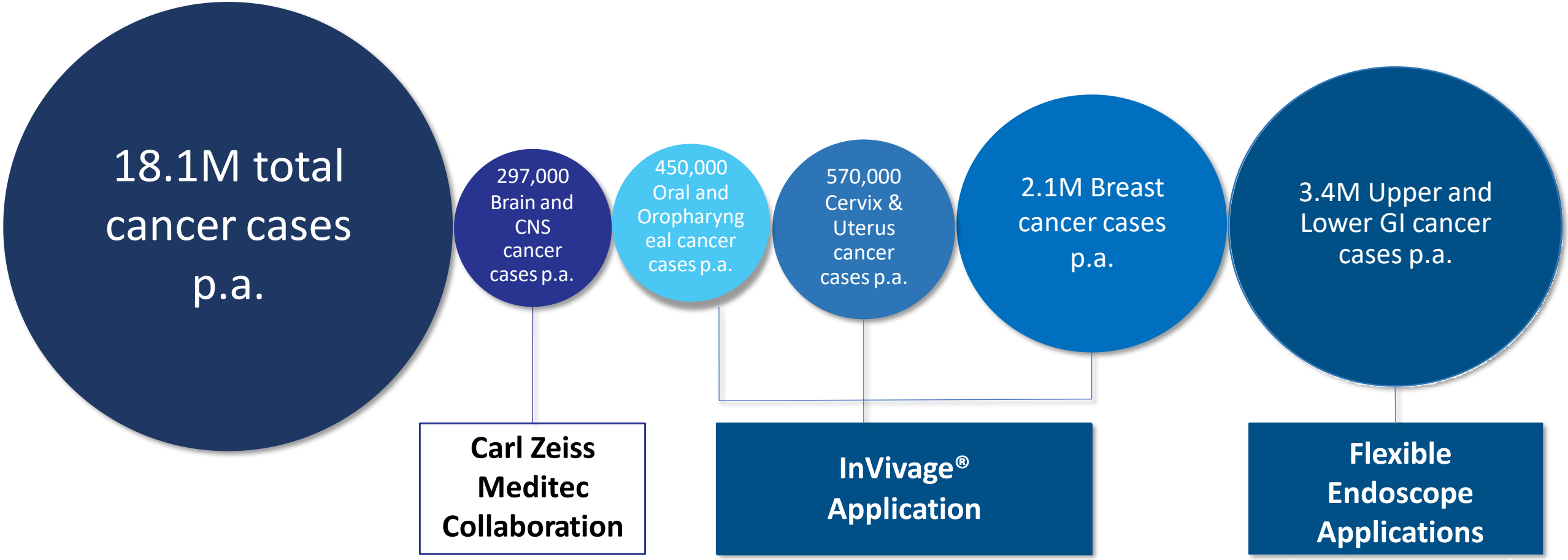


Optiscan InVivage® Clinical System

InVivage® Key Features

- Single Hand Operation with control features operated from probe
- Medical Grade Screen on Trolley Arm enabling preferred positioning by clinician
- Graphic User Interface (GUI) software
- DICOM compliant software to enable integration with Hospital Picture Archiving and Communication System (PACS)
- Sterilisable Sheath

Cancer Cases Worldwide – Addressable Market



Sales opportunities for InVivage®exist for both cancer screening and in-surgery use.

In most applications, the number of screening procedures is many times the number of surgeries.

Oral Cancer Global Incidences

1. Global cancer statistics 2018: GLOBOCAN. https://doi.org/10.3322/caac.21492
2. American Cancer Society Estimated 2019 Statistics.
3. Global Cancer Observatory- Europe. https://gco.iarc.fr/today/data/factsheets/populations/908-europe-fact-sheets.pdf
4. Cancer Statistics in China, 2015, Cancer statistics in China, 2015. https://doi.org/10.3322/caac.21338
5. Cancer Australia (Australian Government) Estimated 2018 Statistics

Oral Cancer – Screening and Surgical Requirement

World Population 7.5 Billion

5% Abnormal Oral Tissue[1]

3 to 5% of Abnormal Oral Tissue will become Cancer[1]

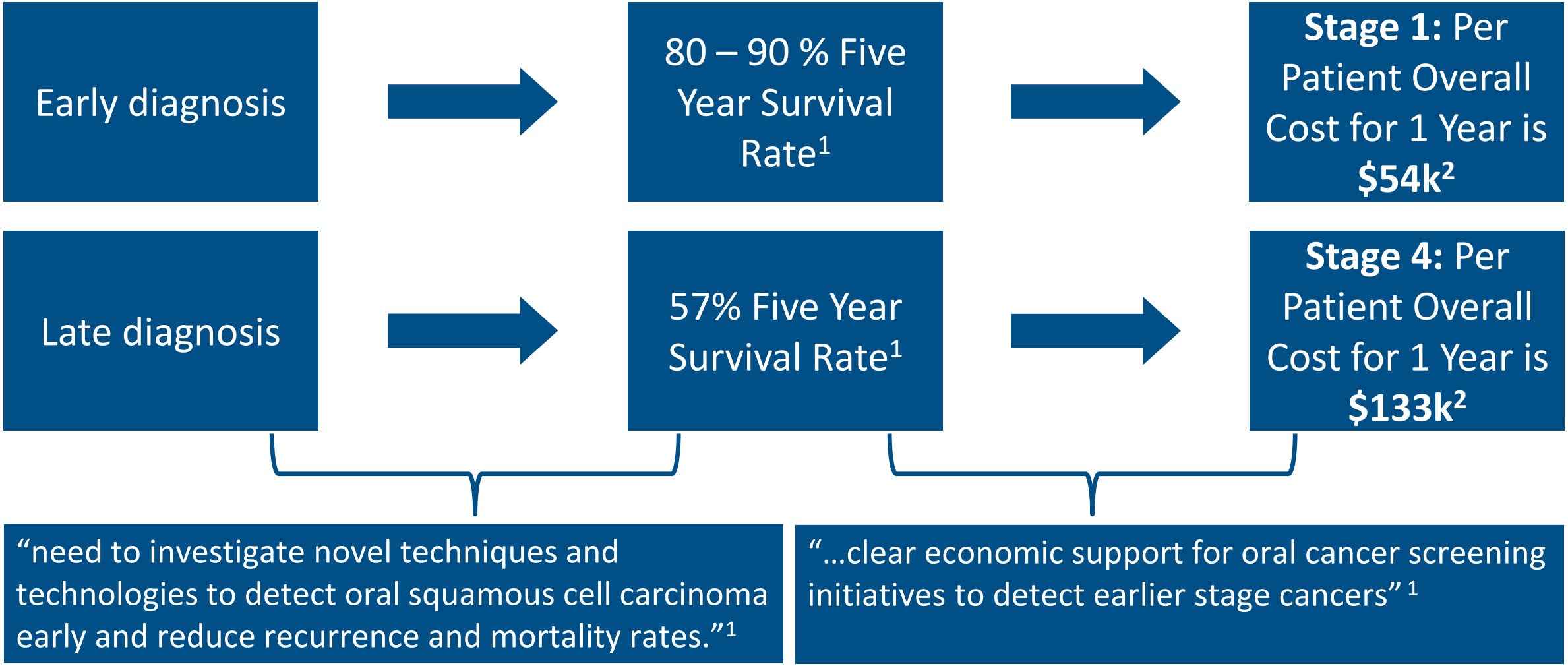
invivage
Optimum *in Vivo* Imaging

Screening and Early Diagnosis

Visual Aid in Oral Cancer Surgery

1. Farah, C.S., et al., Oral Mucosal Malignancies, in Contemporary Oral Medicine: A Comprehensive Approach to Clinical Practice, C.S. Farah, R. Balasubramaniam, and M.J. McCullough, Editors. 2018, Springer International Publishing: Cham. p. 1-188. https://doi.org/10.1007/978-3-319-28100-1_21-1

Early Diagnosis: Survival Rates and Economic Cost

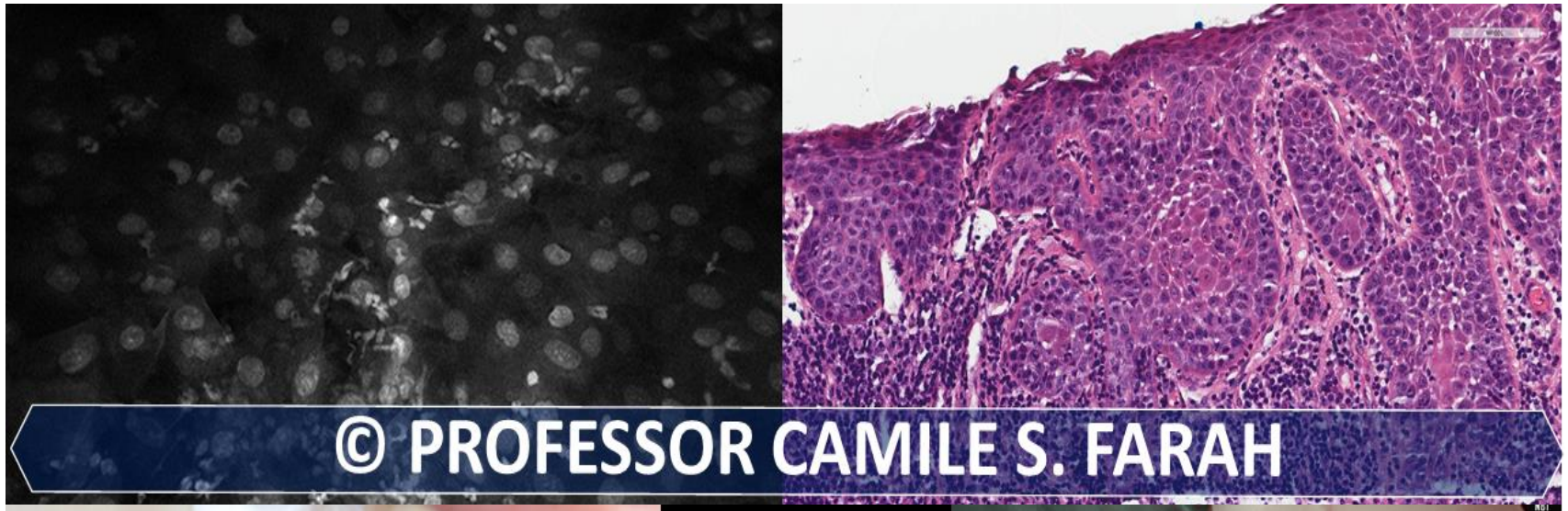


1. Oral Cancer Foundation. https://oralcancerfoundation.org/
2. Pollaers, K., et al., The economic burden of oral squamous cell carcinoma in Australia. Journal of Oral Pathology & Medicine, 2019. 48(7): p. 588-594. doi: 10.1111/jop.12907. Epub 2019 Jun 27.

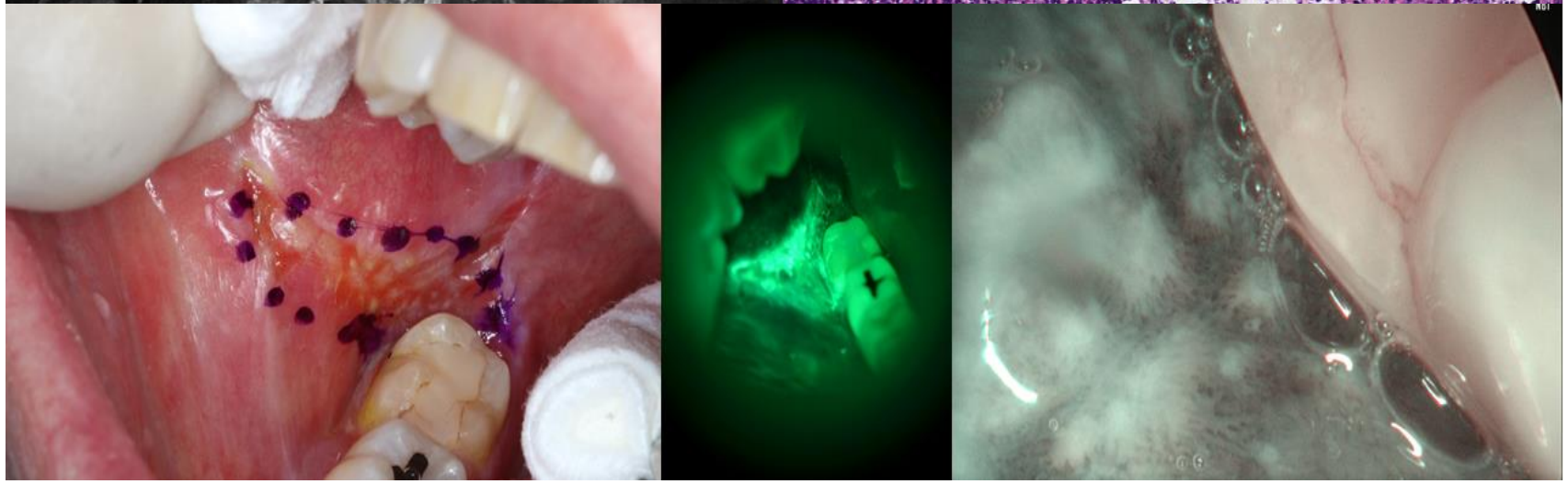
Oral Cancer Screening: Clinical Trials and Studies

Clinical Trials & Studies	Memorial Sloan Kettering Cancer Centre in New York (MSKCC)	Commenced
	Australian Centre for Oral Oncology Research & Education (ACOORE) in Perth	Commenced - 10 patients imaged in the past month
	Melbourne Dental School (University of Melbourne) in collaboration with Royal Melbourne Hospital, Peter MacCallum Cancer Centre, MSKCC and ACOORE	Ethics approval requested to commence trial

Australian Centre for Oral Oncology Research & Education Clinical Study

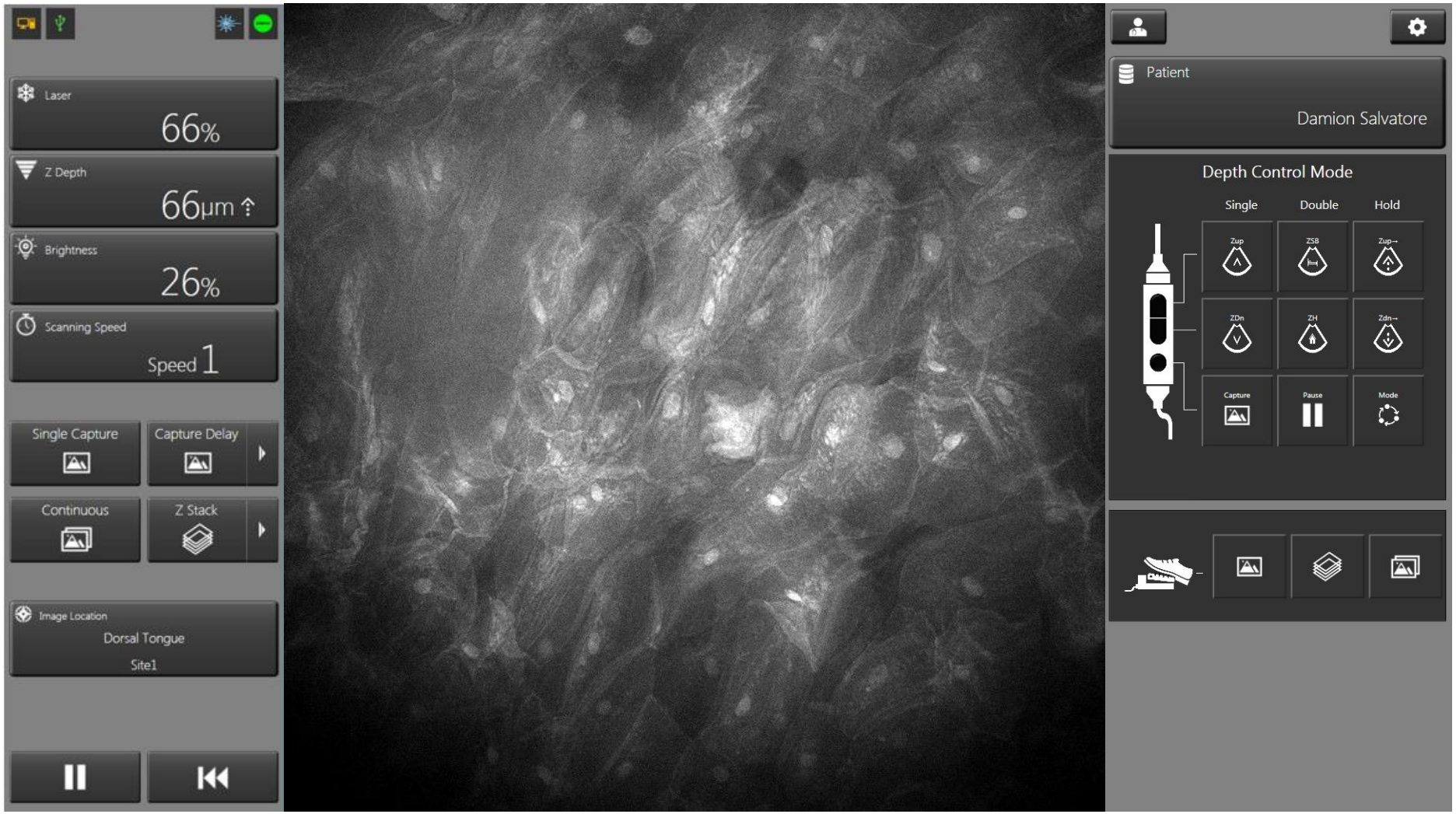


Comparison between Optiscan imaging and histopathology

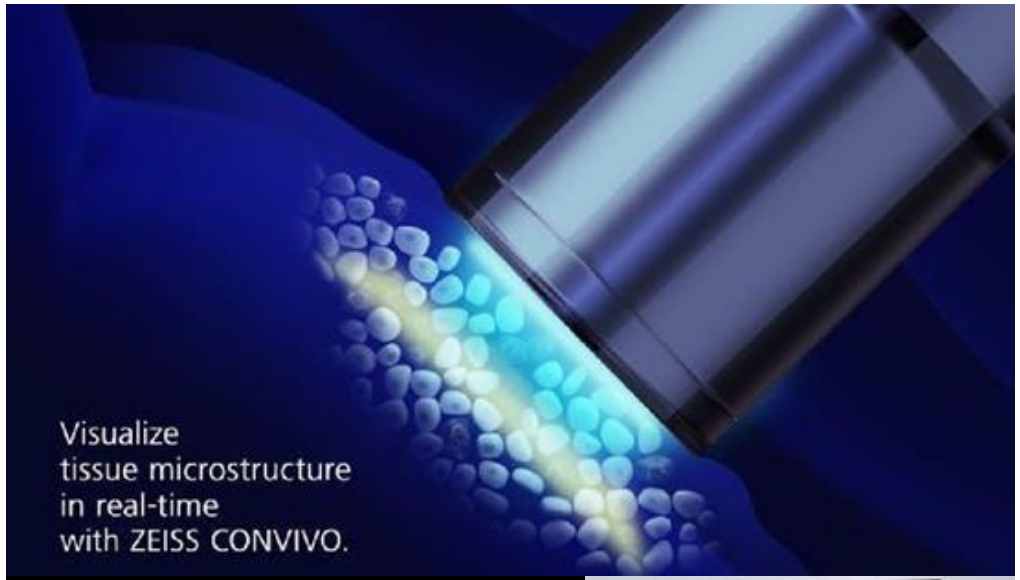


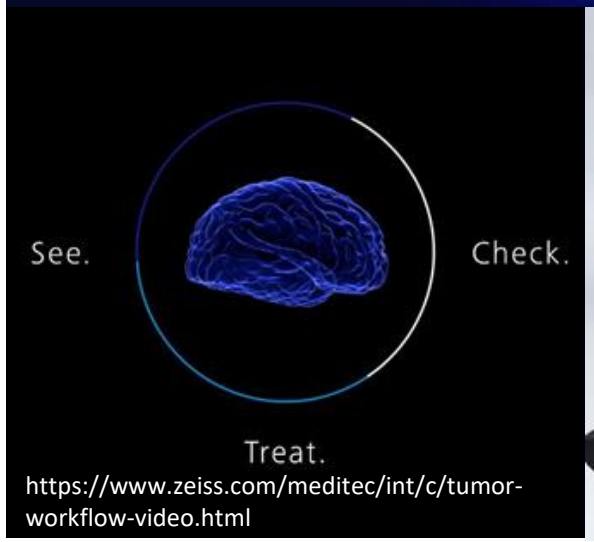
Other imaging modalities for detection of oral cancer

New InVivage® User Interface Designed for Doctors



Brain Cancer – Carl Zeiss Meditec AG Collaboration Update





https://www.zeiss.com/meditec/int/c/tumor-workflow-video.html

Date	Progress
April 2018	European (CE Mark) approval obtained
October 2018	United States (FDA 510(k)) approval obtained
May 2019	CONVIVO “Digital Biopsy Tool” (Check) an integral part of the 3 step Zeiss Tumour Workflow in Neurosurgery
November 2019	$550k of orders for products and services for delivery during the current half year and in late Feb/early March 2020.

Zeiss is an international leader in the field of optics and optoelectronics with a market capitalisation of ~€9.7billion

Breast Cancer - The Most Common Cancer in Women

2.1
Million new cancer cases (globally)[1]

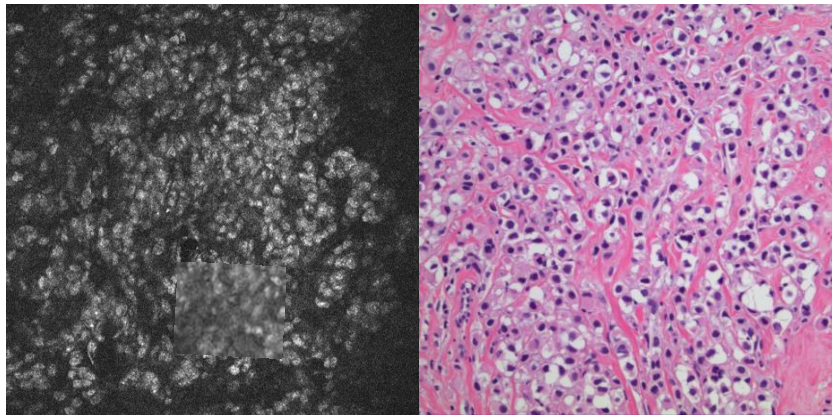
15%
New Cancer cases in United States[2]

556
US Accredited Breast Cancer Centres[3]

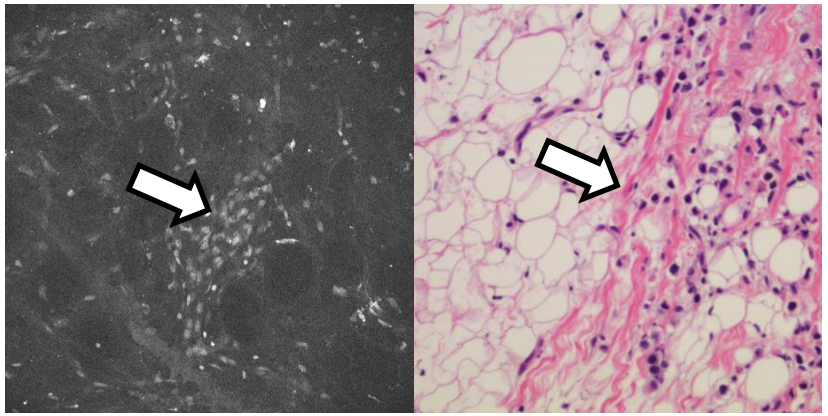
- 4 Stage Breast Cancer Trial at Hollywood Private Hospital (Western Australia's largest private hospital)
- Nearing completion of Stage 2: 3 pathologists assisting comparison of Optiscan images (CLE) and H&E histopathology.
- 30 surgical patients (ex vivo) with multiple specimens per patient (>120 total) across Stage 1 and Stage 2.
- Greater imaging and comparison of CLE and H&E supporting development of imaging protocols and CLE Breast Atlas.
- Discussions with hospitals on-going to establish Stage 3 multi-centre study in the operating theatre with ex vivo imaging of the excised breast lump.
- Optiscan InVivage Clinical system is proposed for Stage 4.

1. GLOBOCAN 2018 estimates; uses Bray et al 2018 paper in CA: A Cancer Journal for Clinicians, page 398
2. American Cancer Society Estimated 2019 statistics
3. https://www.facs.org/search/cancer-programs

Breast Cancer Trial – CLE & Histopathology Correlation

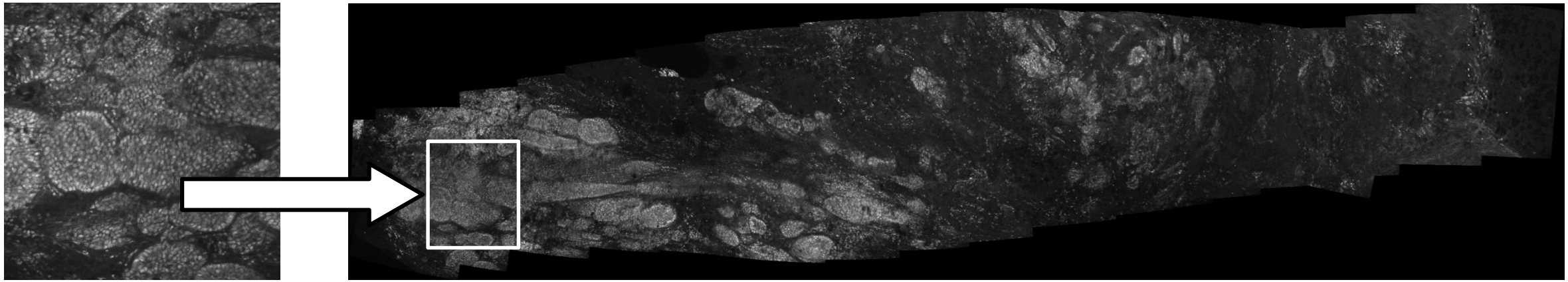


Matching CLE and H&E Cancer cells throughout



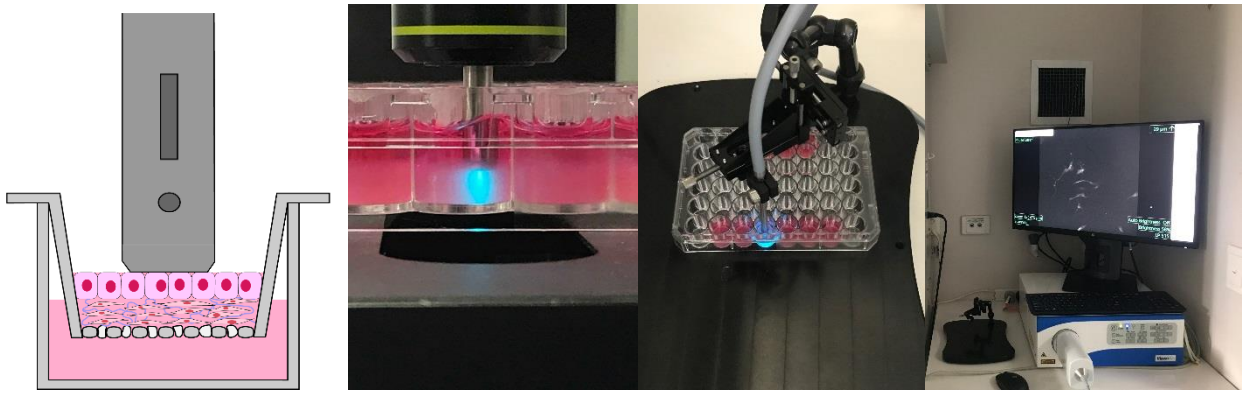
Matching CLE and H&E Cluster of cancer cells (Arrows)

Creation of panoramas: developing a more macro view of the specimen assisting in the CLE and H&E correlation



Development of new applications in research market

Working in collaboration with CSIRO and Monash and Michigan Universities for new applications in 3D Tissue Culture and Anterior Cruciate Ligament (ACL) imaging respectively



3D tissue culture imaging application developed in collaboration with CSIRO.

Autofluorescence imaging in ACL microdamage research in collaboration with Monash and Michigan Universities. Image on the left is a normal ACL while image on the right shows ACL microdamage (collagen disorder).

Rapid Impact of New Distributor Strategy for Chinese Market

- **New multi-distributor model in China with appointment of exclusive distributor in Southern and Western China.**

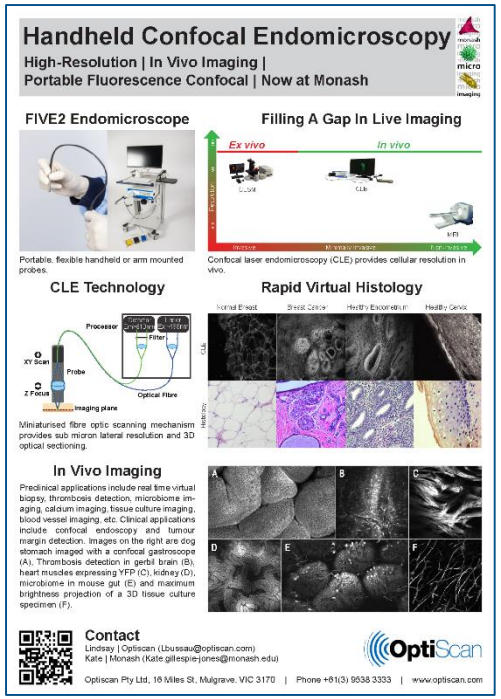
  South and West China: Guangzhou Yunxing (Purple and Blue)

  East China: Under Negotiation (Green)

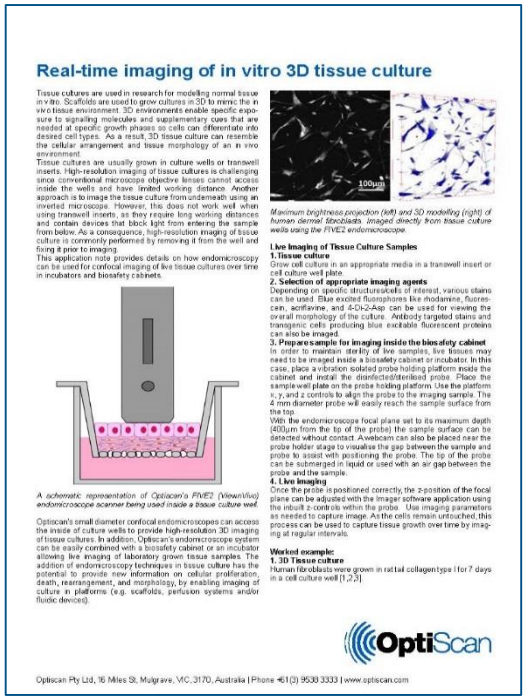
  North China: To be Advised

- **Sale of FIVE2 (ViewnVivo) System in Nov 2019:**
  Chinese University Tender success directly attributable to new Chinese multi-distributor model.

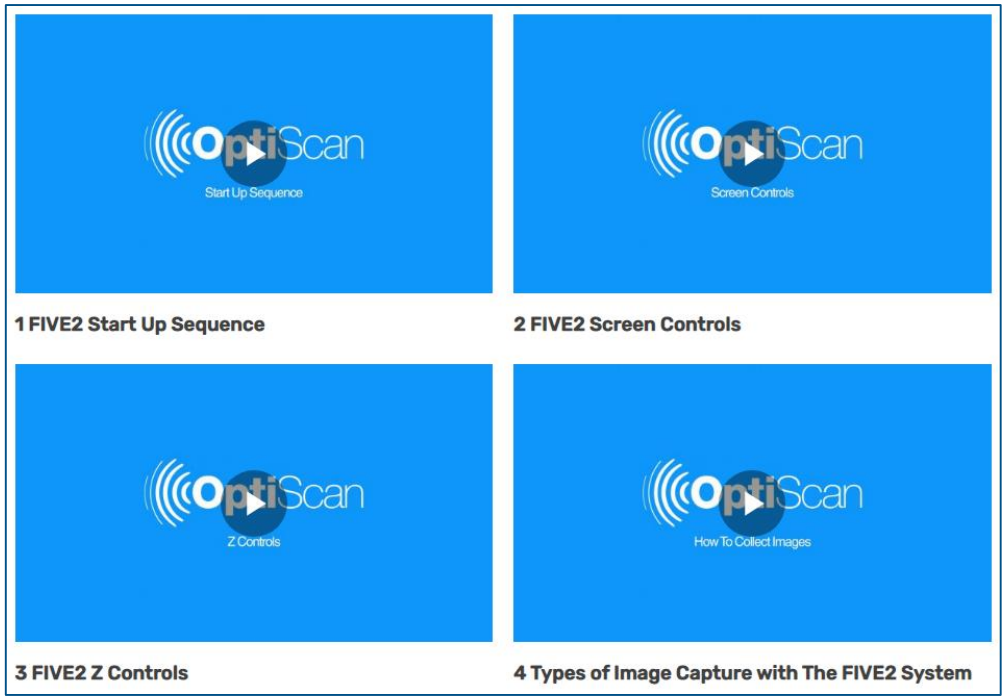
Pre-clinical Marketing Collateral



Pre-clinical application poster



3D tissue culture application developed with CSIRO



FIVE2 (ViewnVivo) tutorial videos for prospective and existing users

Participation in Industry and Investor Conferences

Industry Conferences	Investor Conferences
2019: Light Microscopy Australia Conference at Translational Research Institute, Brisbane	2019: Gold Coast Investment Showcase
2019: 17th World Federation for Ultrasound in Medicine and Biology Congress (WFUMB), Melbourne	2019: Australia Biotech Invest & Partnering
2019: BioPhotonics Career Workshop, Swinburne University of Technology, Melbourne	2019: Proactive Investors Corporate Video Presentation
2019: China Neuroscience Society Conference, Suzhou China	

Month/Year	Milestones
February 2019	Memorial Sloan Kettering Cancer Centre (MSKCC) using Optiscan technology to develop tools for early detection, screening and intraoperative margin assessment.
February 2019	Collaboration agreement with Summit Biomedical Engineering re potential drug/device combination of PARPi-FL and Optiscan FIVE2 (ViewnVivo) system.
March 2019	Commencement of Stage 2 of Breast Cancer Clinical Trial at Hollywood Private Hospital
June 2019	$1.7m Capital Raising
August 2019	Optiscan system approved for use in MSKCC Oral Cancer Human Clinical Trial
August 2019	Optiscan re-sterilisable sheath receives independent 3rd party validation
September 2019	Melbourne Dental School (in collaboration with MSKCC, Peter MacCallum Cancer Centre, Royal Melbourne Hospital and Australian Centre for Oral Oncology Research & Education) to seek ethics approval for human clinical trial to diagnose cancerous change in oral mucosa
October 2019	Launch Multi-Distributor China Model and appointment of South and West China Distributor
November 2019	US Food and Drug Administration (FDA) grants Optiscan a meeting to discuss proposed content of a 510(k) submission
November 2019	Receipt of orders from Carl Zeiss Meditec (CZM) for $550k for delivery during the current half year and in late February/early March.
November 2019	Sale of FIVE2 (ViewnVivo) System to leading Chinese University in East China

Summary

- Optiscan InVivage® Clinical System developed to enable “Real-time Virtual Biopsy” for Human Cancer Screening and Surgical Margin Detection
- Key features of the Optiscan InVivage® Clinical System include new single hand probe controls.
- Pre-Submission hearing with the FDA re 510(k) clearance for InVivage® for Oral Cancer Screening and /or Surgery to take place in the 2nd half of January 2020.
- Current use of Optiscan systems in 3 clinical trials and studies (current and awaiting Ethics approval) for Oral Cancer Screening.
- Discussions with hospitals on-going to establish Stage 3 multicentre Breast Cancer study in the operating theatre with ex vivo imaging of the excised breast lump.
- Collaboration with Carl Zeiss Meditech AG for Brain Cancer Surgical Device progressing with marketing at major neurosurgical conferences and $550k of orders for products and services for delivery during the current half year and in late Feb/early March 2020.
- Launch of Multi-Distributor China Model and appointment of South and West China Distributor. Sale to University in East China within 2 months of commencement of new model.