ANGLE

ANGLE Liquid Biopsy Sample to Answer

Presentation to Shares Investor Event

Andrew Newland and Ian Griffiths

28 November 2017

Legal disclaimer

This presentation has been prepared by ANGLE plc (the "Company"). By attending this presentation and/or reviewing the slides you agree to be bound by the following conditions.

The information and opinions contained in this presentation have not been independently verified, are provided as at the date hereof and are subject to amendment, revision and completion without notice. No person is under any obligation to update or keep current the information contained in this presentation. No representation, warranty or undertaking, express or implied, is made by the Company, its advisers or representatives, or their respective officers, employees or agents as to, and no reliance should be placed on, the fairness, accuracy, completeness, correctness or reasonableness of the information or the opinions contained herein. The Company, its advisers or representatives, or their respective officers, employees and agents expressly disclaim any and all liability which may be based on this presentation and any errors therein or omissions therefrom.

This presentation does not constitute or form any part of, and should not be construed as, an offer to sell, or an invitation or solicitation or recommendation to purchase, or subscribe for or underwrite or otherwise acquire any securities in the Company in any jurisdiction and does not constitute or form part of a prospectus. No part of this presentation should form the basis of, or be relied on in connection with, or act as any inducement to enter into, any contract or commitment or investment decision whatsoever. The Company's nominated adviser, Cenkos Securities PLC ("Cenkos") has not approved this document for the purposes of section 21 of the Financial Services and Markets Act 2000 ("FSMA") and accordingly it is a communication made only to persons who (a) fall within one or more of the exemptions from section 21 of FSMA contained in articles 19 and 49 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (which includes persons who are authorised or exempt persons within the meaning of FSMA, certain other investment professionals, high net worth companies, unincorporated associations or partnerships and the trustees of high value trusts) and persons who are otherwise permitted by law to receive it and (b) are an "eligible counterparty" within the meaning of Article 24(2), (3) and (4) of Directive 2004/39/EC ("MiFID")) as implemented into national law of the relevant EEA state. Any investment or investment activity to which this document relates is only available to such persons. Persons of any other description, including those who do not have professional experience in matters relating to investments, should not rely on this document or act on its contents for any purpose whatsoever and should return it to Cenkos immediately.

This presentation should not be considered as the giving of investment advice by the Company or any of its shareholders, directors, officers, agents, employees or advisers. Each party to whom this document is made available must make its own independent assessment of the Company after making such investigations and taking such advice as may be deemed necessary. If you are in any doubt in relation to these matters, you should consult your stockbroker, bank manager, solicitor, accountant, taxation adviser or other independent financial adviser (where applicable, as authorised under the Financial Services and Markets Act 2000).

This presentation contains certain statements that are neither reported financial results nor other historical information. These statements include information with respect to the Company's financial condition, its results of operations and businesses, strategy, plans and objectives. Words such as "anticipates", "expects", "should", "intends", "plans", "believes", "outlook", "seeks", "estimates", "targets", "may", "will", "continue", "project" and similar expressions, as well as statements in the future tense, identify forward-looking statements. These forward-looking statements are not guarantees of the Company's future performance and are subject to assumptions, risks and uncertainties that could cause actual future results to differ materially from those expressed in or implied by such forward-looking statements. Many of these assumptions, risks and uncertainties relate to factors that are beyond the Company's ability to control or estimate precisely and include, but are not limited to, the general economic climate and market conditions, as well as specific factors including the success of the Group's research and development and commercialisation strategies, the uncertainties related to regulatory clearance and the acceptance of the Group's products by customers.

For further details regarding these and other assumptions, risks and uncertainties that may affect the Group, please read the Directors' Report section including the "Principal risks and uncertainties" in the most recent Annual Report & Accounts of ANGLE plc. In addition, new factors emerge from time to time and the Company cannot assess the potential impact of any such factor on its activities or the extent to which any factor, or combination of factors, may cause actual future results to differ materially from those contained in any forward-looking statement. Except as may be required by law or regulation, the Company undertakes no obligation to update any of its forward-looking statements, which speak only as of the date of this document.

Parsortix™ and Axela systems

- **Simple blood test for personalised cancer care**
- Proven performance with multiple Key Opinion Leaders
- **Emerging $ multi-billion market (Goldman Sachs $14bn in US alone by 2025)**
- Circulating tumor cell (CTC) solution with strong competitive differentiation
- **Product based solution with instruments and cassettes**
- Downstream analysis capability provides unique sample to answer solution

Financial Results for the year ended 30 April 2017

Year ended 30 April	2017	2016
Statement of Comprehensive Income	£'000	£'000
Revenue	498	361
Cost of sales	(123)	(107)
Gross profit	376	254
Operating costs	(7,810)	(5,703)
Tax credit and other income	1,043	331
Loss for the year	(6,392)	(5,118)
Statement of Financial Position	30Apr17	30Apr16
Trade and other receivables and tax	1,975	798
Inventories	665	376
Cash	5,536	3,764
Property, plant and equipment	824	455
Intangible assets	1,918	1,346
Total assets	10,918	6,739

Comments

- Research use sales established and growing
- 75% gross margin
- Planned expenditure on clinical studies
- Cash position strengthened with £15m fundraise in November 2017
- Seeking a leading position in $ billion emerging market

Liquid biopsy improving healthcare and reducing costs: driving precision medicine

ANGLE

Cancer Research UK: "One in two people born after 1960 in the UK will be diagnosed with some form of cancer during their lifetime."

- Each patient's cancer is different
- Patient's cancer changes over time
- Effective treatment requires personalised care
- Reducing healthcare costs

- Big pharma developing more selective drugs:
  - Colorectal cancer KRAS- Erbitux (Merck Serono)
  - Lung cancer EGFR+ Iressa (AstraZeneca)
  - Breast cancer HER2+ Herceptin (Genentech)
  - Non small cell lung cancer PDL1+ Keytruda (Merck)
  - Immunotherapies

Obtaining cancer cells for analysis

Existing approach: solid tumour biopsy

- Clinicians cut out part of the tumour and analyse the cancer cells
  - breast cancer mastectomy or lumpectomy
  - colorectal cancer colonoscopy tumour biopsy
  - prostate cancer fine needle biopsy and prostatectomy
- Difficulty in accessing some tumours
  - pancreatic, lung, brain, liver and bone cancers
- Repeat tumour biopsy problematic

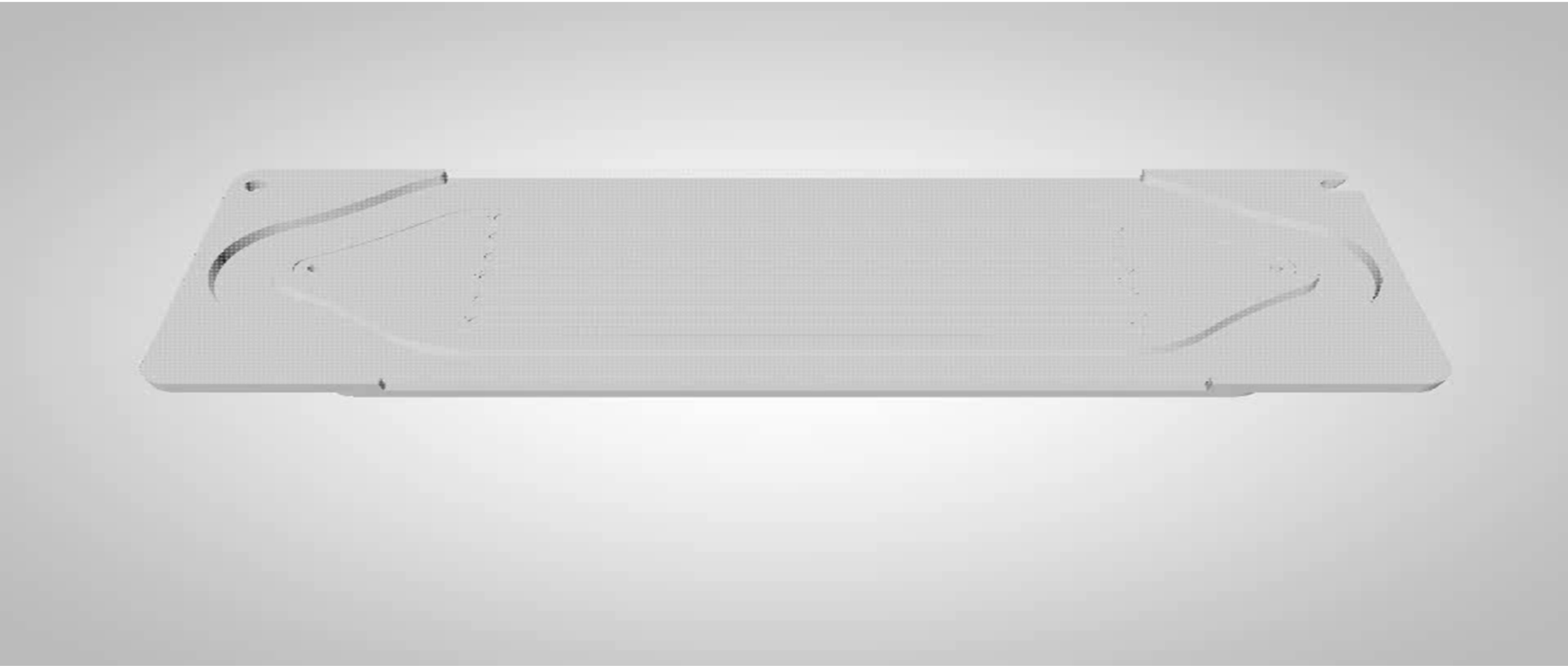
New approach: liquid biopsy

- Harvest intact cancer cells from blood
- Non-invasive, repeatable, real time, cost effective
- But only one CTC in one billion blood cells

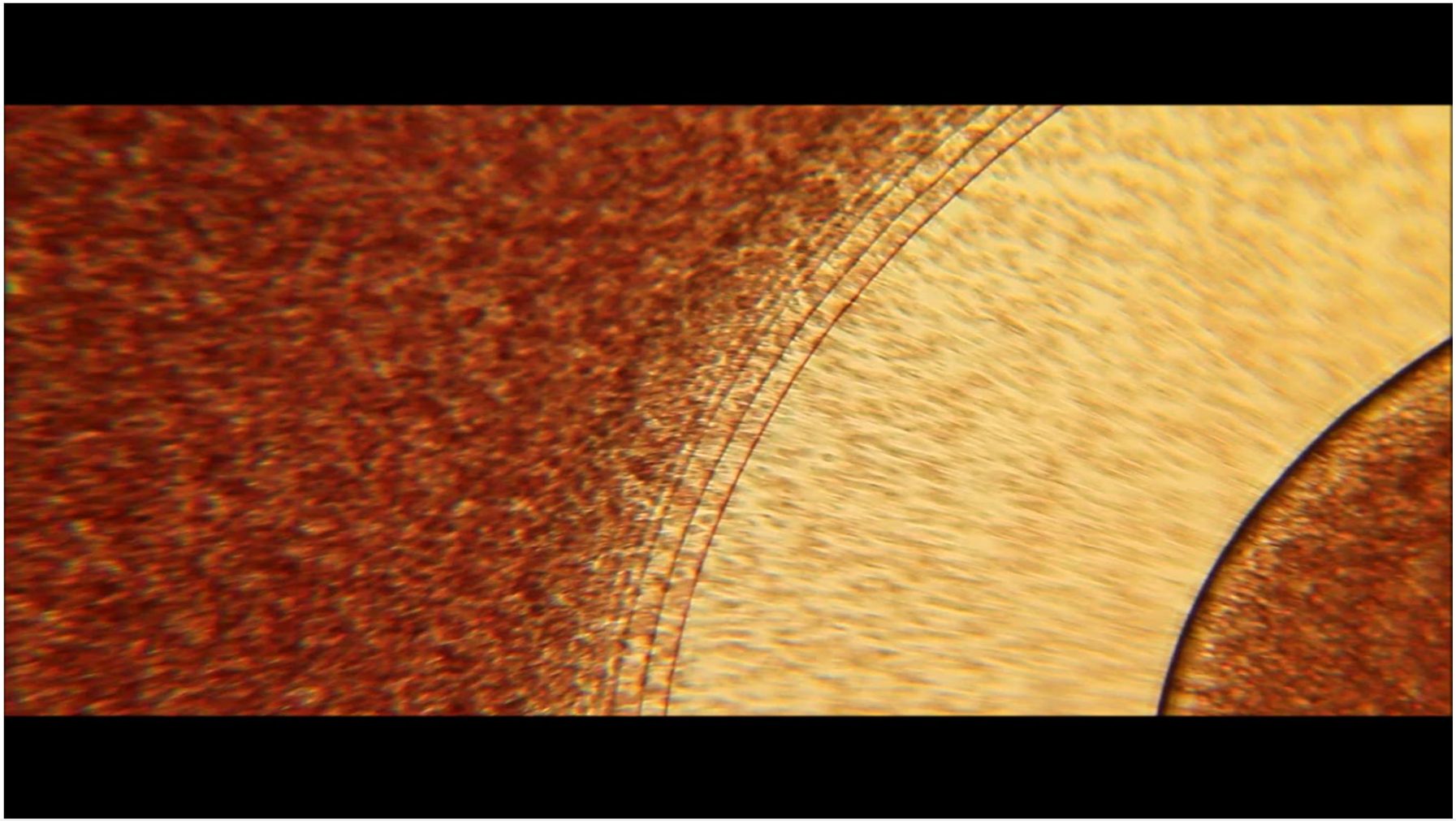
Whole blood from a simple peripheral blood draw contains approximately one cancer cell per ml of blood. The cancer cells are circulating tumor cells shed by the primary tumour in the process of metastasis. The CTCs travel in the blood and if they take root in another organ are the cause of a secondary cancer at a new location.

Over 90% of cancer deaths are caused by metastasis.

Animation showing Parsortix™ patented steps



Video showing blood flowing in Parsortix™ cassette

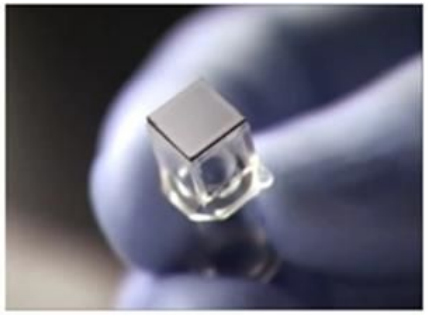


Parsortix™ system – the Complete Picture

- Intact CTCs not just ctDNA
  Compatible with existing downstream analysis techniques
- Parsortix™ system captures living cancer cells
  These cannot be present unless the patient has cancer
- Evidence-based driven by KOLs and clinical studies
- Patented product solution
- Scaleable business with third party manufacture

Axela patent protected downstream analysis solution

Axela's Ziplex System incorporating flow-thru expression panels



Axela's Flow-thru TipChip

- **Ziplex® System**: medium-density microarray platform designed for routine and focused multiplex analysis of protein or RNA biomarkers
- Consumables: **Flow-thru TipChip®** containing gene expression/protein expression panels for common pathways or disease processes
- **HyCEAD chemistry** enables simultaneous measurement of 100s of genes while eliminating multiplex PCR constraints
- Software: embedded software for method creation, data gathering and data analysis

Axela products are well protected as the subject of multiple granted patents

Benefits of Parsortix™ CTCs

		Solid tissue biopsy		Liquid biopsy	
Source		Primary tumour	Metastatic site	CTCs[1]	CNA (cfDNA[2])
Sample type		Intact cells	Intact cells	Intact cells	Fragmented DNA
Procedure		Invasive	Invasive	Non-invasive[3]	Non-invasive[3]
Sample accessibility		Not always accessible	Less accessible	**Accessible using Parsortix[4]**	Accessible
Patient recovery time		Varies	Longer	None	None
Test costs		Varies	Higher	Lower	Lower
Test turnaround time		Varies	Longer	Shorter	Shorter
Repeatability		Varies – difficult	Very difficult	Easy	Easy
Molecular analysis	DNA	Yes	Yes	Yes	Yes
	RNA	Yes	Yes	Yes	Difficult
	Protein	Yes	Yes	Yes	No
Live cells	Cell culture	Yes	Yes	Yes	No
	Xenograft	Yes	Yes	Yes	No
Standard of care		Proven	Proven	Not yet proven	Not yet proven

1. CTCs are live cancer cells circulating in the blood known as circulating tumour cells
2. cfDNA also known as ctDNA is cell-free circulating fragments of DNA from dead cells, which may be found in the plasma component of the blood
3. Tissue obtained from simple peripheral blood test
4. Access to CTCs technically challenging given low number of CTCs present and historically has been very difficult. ANGLE's Parsortix system has been specially designed to address this issue

Far-reaching market potential

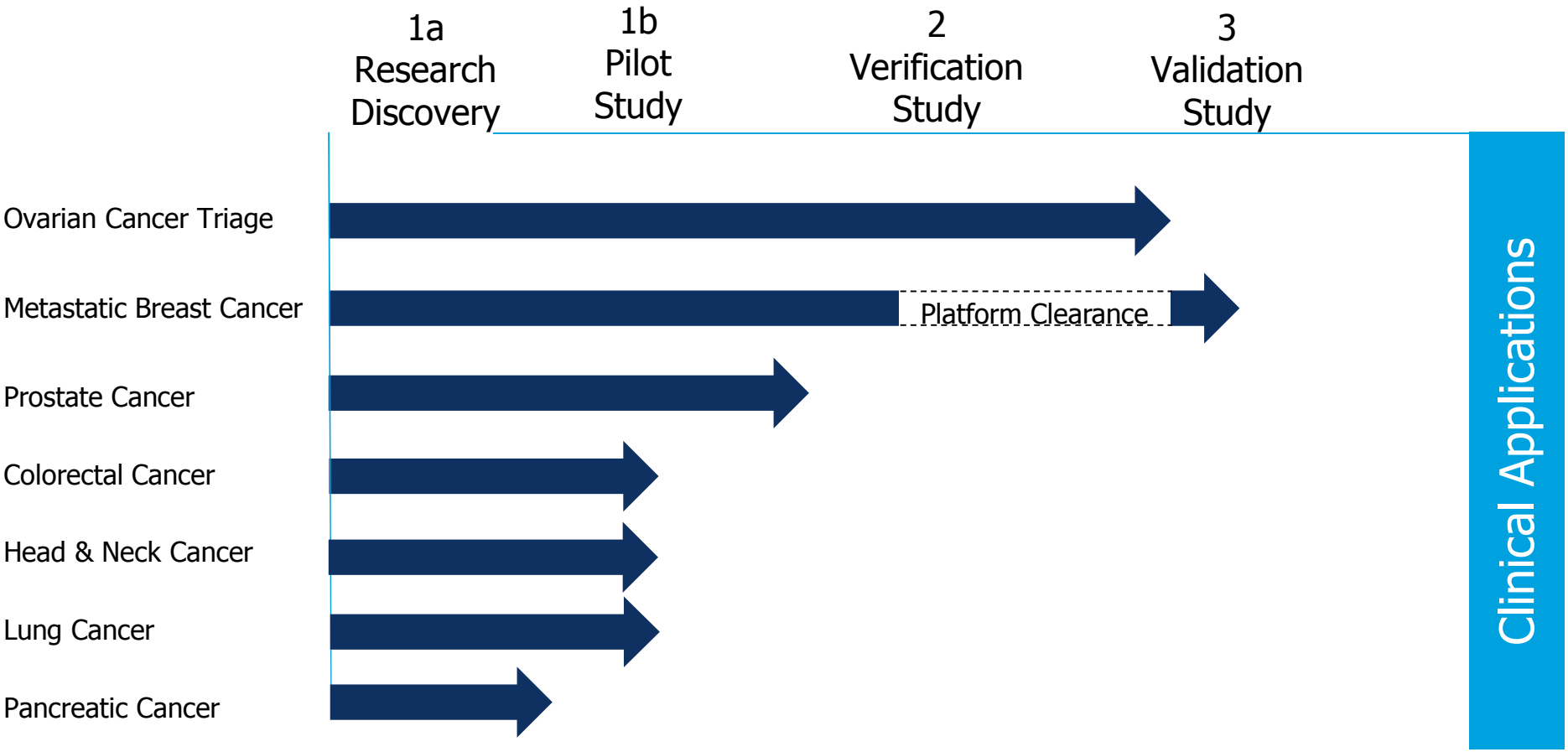
ANGLE targets

Research use	Screening trials		Basic and translational research Drug trials
Clinical use		Ovarian triage Prostate biopsy	Metastatic breast
Tissue sample provision	Platform feeding in to existing molecular analysis systems for applications in all cancers in all segments "Parsortix inside"		

Emerging $ multi-billion market (Goldman Sachs $14bn in US alone by 2025)

- Evidence-based approach to prove performance with ovarian cancer, FDA breast cancer
- Substantiating value as sample collection platform
- Partnering strategy for widespread deployment

Clinical Applications



Clinical application

Ovarian cancer clinical studies: 400 patients £300 million p.a. market potential

- 400 patient European (ANG-001) and United States (ANG-003) studies
  - Medical University of Vienna, Charité and Vivantes
  - University of Rochester Wilmot Cancer Center
- **Both studies report positive results**
- **Potential to significantly out-perform current clinical care** in discriminating malignant from benign
  - **up to 95% sensitivity and nearly double specificity of CA125**
  - provide valuable gene expression information on malignant cases

- **Moving to Optimisation and Validation Phase**
- Optimisation (6 months) to improve performance still further
- Validation studies (12-18 months) to support CE Mark and FDA clearance
- Opportunities for accelerated commercialisation via commercial partnerships
- **750,000 women p.a. with abnormal pelvic mass in US alone**

Dr Richard Moore, Director of the Gynecologic Oncology Division, University of Rochester Medical Center Wilmot Cancer Institute "The 200 patient ANG-003 clinical study shows that the Parsortix test has the ability to accurately discriminate malignant from benign pelvic masses prior to biopsy or surgery. The test also offers key additional benefits over existing practice through the gene expression information it provides, which may help to further guide choices for targeted therapy in women with ovarian cancer. Additionally, the test may allow separate identification of patients with low malignant potential and/or other cancer types using a non-invasive liquid biopsy test."

Regulatory clearance for clinical use

Breast cancer FDA clearance progress (400 patient study)

- **Potential to be first FDA cleared system for harvesting cancer cells from blood**
- Seeking FDA clearance in metastatic breast cancer
  - breadth of clearance to provide flexibility
  - base clearance to which specific clinical uses can be added
  - ovarian cancer and other cancer types to follow
- **Analytical studies in progress**
  - precision and reproducibility (internally and externally)
  - limits of quantification and detection
  - accuracy and linearity
  - potential interferents and carryover
- **FDA clearance will differentiate Parsortix in markets worldwide**
- **ANG-002 clinical study plan developed in consultation with several world-class US breast cancer centres**
  - designed to meet FDA regulatory requirements
  - 200 metastatic breast cancer patients and 200 age appropriate healthy volunteers
- **MD Anderson, #1 cancer centre in the US, contracted to lead ANGLE FDA clinical study**
- Contractual negotiations with 6 major cancer centres in progress
- **Results expected H1 2018**

Clinical application under consideration

Non-invasive metastatic breast cancer biopsy

£1 billion p.a. market potential

- CTCs harvested and RNA-Seq analysis successful for 100% of patients
- **CTCs from Parsortix liquid biopsy had similar patterns of expression for 192 genes to the traditional biopsy of cancer cells from metastatic sites in all cases (21 patient study)**
- Wide range of metastatic sites
  Skin, pleural effusion (fluid around the lung), pericardial effusion (fluid around the heart), breast, cerebrospinal fluid (fluid found in brain and spine) and bone tissue
- **CTCs provide information on 66 different pathways that may be targeted by new or existing cancer drugs**

Julie E. Lang, MD, FACS, Director, USC Breast Cancer Program, Associate Professor of Surgery, Norris Comprehensive Cancer Center, University of Southern California
"As a breast cancer surgeon, I am very enthusiastic about the potential of liquid biopsy … Our pilot data shows that potentially the same information can be obtained from a simple blood test using Parsortix as from an invasive tissue biopsy and indeed may be advantageous over invasive tissue biopsies in regards to the diverse sites of metastatic disease …"

Clinical application under consideration

Non-invasive prostate biopsy

£3 billion p.a. market potential

- Barts Cancer Institute pilot studies
  - harvested CTCs in 100% of patients (52 patient study)
  - number of mesenchymal CTCs showed good correlation to Gleason score (80 patient study)
- **Simple blood test before solid biopsy test**
  - **detect presence of prostate cancer**
  - **assess aggressiveness of disease**
  - patient risk stratification – differentiate between active surveillance (indolent) or intervention (aggressive)
- Blood cell discovery with Parsortix: cells identified as megakaryocytes linked to patient survival (n=40)
  - **option for worldwide exclusive licence over megakaryocyte IP**
- **New Parsortix CMS (combined EMTed CTC and megakaryocyte score) predicts overall survival: patients 10x more likely to die**

Dr Yong-Jie Lu, Reader in Medical Oncology at Barts Cancer Institute
"The exciting part of this research is the potential for the Parsortix system to be used to assess the severity of the disease as well as to detect it. This meets a key medical need to avoid over-treatment as well as to ensure treatment is available for patients who need it."

QIAGEN Co-marketing Agreement

- QIAGEN leading molecular testing company
  - 500,000 customers and $1.3bn revenues
  - NGS (next generation sequencing), PCR (polymerase chain reaction), single cell analysis products and bioinformatics capabilities

- Selected Parsortix after year long evaluation process identifying key benefits of Parsortix
  1) **Epitope-independent: captures all relevant cells**
  2) **Cells harvested intact and alive**
  3) **Highly sensitive: works with almost all patients**

- Opportunity to extend co-marketing to cover Axela platform

- Similar partnerships planned with other leading companies

Michael Kazinski, QIAGEN's Senior Director Molecular Preanalytic Technologies
"ANGLE's Parsortix system is a unique, epitope-independent CTC solution offering easy, automated processing of whole blood to harvest all types of CTCs, including the clinically relevant mesenchymal CTCs, for analysis. It complements very well with our AdnaTest CTC portfolio, now allowing for both phenotypic and molecular characterization of CTCs. The modular combination abilities of this system with QIAGEN's liquid biopsy-based Sample to Insight offering, including AdnaTest, our targeted RNAseq and single cell solutions, along with our bioinformatics offering, will allow scientists and clinical researchers to significantly advance their research."

Axela platform acquired November 2017

- **Axela provides multiplex downstream analysis of nucleic acid and protein expression** in an easy to use, automated platform for up to 100 genes simultaneously
- Axela platform can deliver results **similar to NGS at the cost of qPCR**
  - NGS covers a vast number of genes but is expensive (c. $500 to $1,000 per sample) and complex to perform
  - qPCR is low cost (c. $20 to $100 dependent on # genes) but can only provide information on a small number of genes
  - Axela potential to provide information on a large number of genes at low cost: meeting key requirements for cancer
- Genomic Health's **Oncotype DX is a breast cancer gene panel** (21 genes) based on solid tissue biopsy, which has a **list price of $4,175** (FY16 test revenue $327m)
- Combining Parsortix™ and Axela would offer the opportunity to develop similar cancer gene panels for liquid biopsy (simple blood test)
- Together with Axela, **ANGLE has the potential to access the entire liquid biopsy value chain with a cost of goods <$100** (Oncotype DX cost of goods $483)

Expected Newsflow

- Customers and KOLs working in 20 different cancer types
  - developing peer-reviewed publications, posters and presentations
  - 5 new peer-reviewed publications in process
- Multiple customer and KOL reports at recent ACTC Conference, Rhodes
- FDA studies patient enrolment
- Ovarian cancer study results published
- Ovarian cancer assay optimised
- FDA studies complete H1 2018
- Additional corporate partnership deals (medtech, pharma, CRO)

Parsortix™ patented system developing a world-leading position in emerging $ multi-billion liquid biopsy market

- Providing the **Complete Picture** (viable, intact CTCs for DNA, RNA, and protein analysis not just ctDNA)
  - Widespread adoption by leading cancer centres in Europe and the United States
- FDA study to support platform clearance for metastatic breast cancer with results expected H1 2018
- Ovarian cancer application successfully moved into optimisation / validation phase
- Co-marketing agreement with QIAGEN
- **Acquisition strengthens market differentiation and captures more of value chain**

ANGLE plc

ANGLE Europe Ltd
10 Nugent Road
The Surrey Research Park
Guildford GU2 7AF
United Kingdom

www.ANGLEplc.com

ANGLE North America Inc
3711 Market Street
University Science Center 8th floor
Philadelphia PA 19104
USA

ANGLE Biosciences Inc
50 Ronson Drive, Suite 105
Toronto
Ontario M9W 1B3
Canada