

Biocartis

Corporate Presentation

9 May 2019

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Leader in oncology precision diagnostics

Differentiated technology

- Idylla™: first **fully automated** sample-to-result qPCR platform
- Superior and validated **performance** versus competition
- Enabling **global decentralization** of clinical molecular diagnostics (MDx)

Attractive market

- Global MDx market of USD 6.5bn; oncology fastest growing segment with **high double digit annual growth** rates
- Large, global initial **customer base** (i.e. pathology labs) with opportunity to expand (e.g. labs that want to step into MDx testing)
- Potential to add new **customer segments**

Focus on oncology

- Unique platform features bring strong **competitive advantage in oncology testing**
- Broad **test menu** (solid & liquid biopsies) currently focused on **targeted therapies** and to move into **immunotherapy** and **liquid biopsy based monitoring**. Content partners (e.g. Genomic Health) to add high value genomic signatures to the menu
- Validation via **partnerships** with pharma (e.g. Amgen, Merck KGaA, AstraZeneca, Bristol-Myers Squibb)

Proven commercial strategy

- Installed base grew to around **970 Idylla™ instruments** as per 31 December 2018
- **Commercial footprint** in place that covers all majority MDx markets **worldwide**
- Delivering **solid performance across existing markets** (Europe, US and RoW*), working towards launch in China and Japan

2018 full year performance

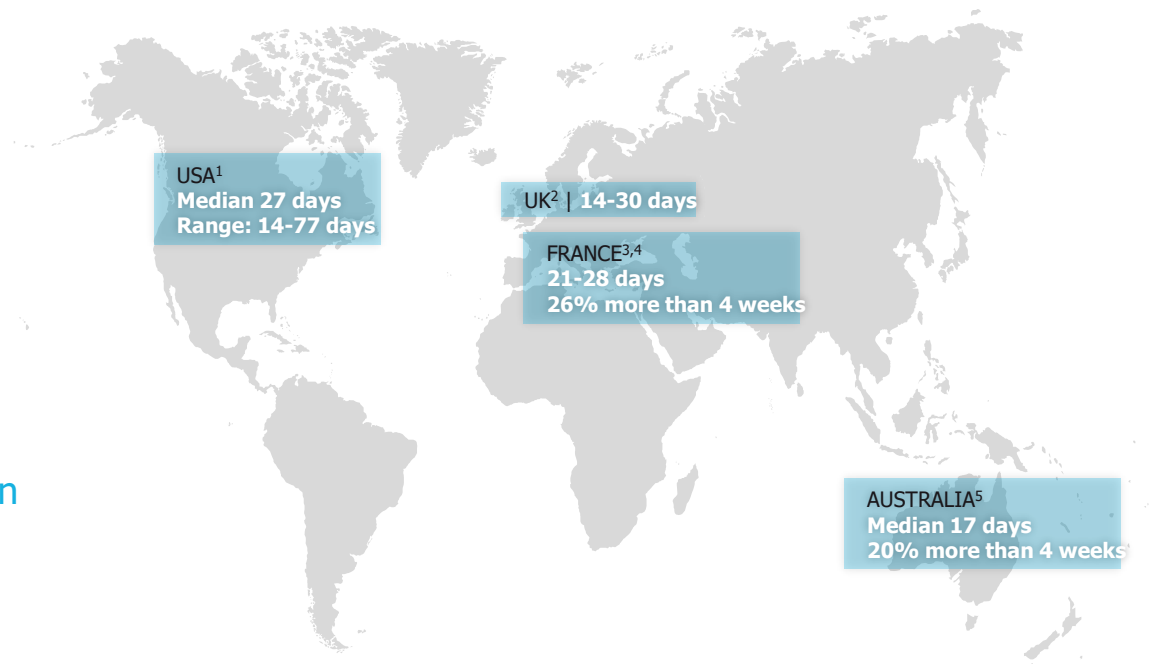
- **326 new Idylla™ instrument placements** in 2018, resulting in an installed base of around 970 Idylla™ instruments at the end of 2018
- Commercial volume of approx. **133k cartridges** in 2018, representing a year-over-year increase of approx. **87%**
- **Product revenues** increased year-over-year with **46% to EUR 18.8m**. **Total operating** income amounted to **EUR 28.7m** (year-over-year increase of 24%)

Positioned for further growth

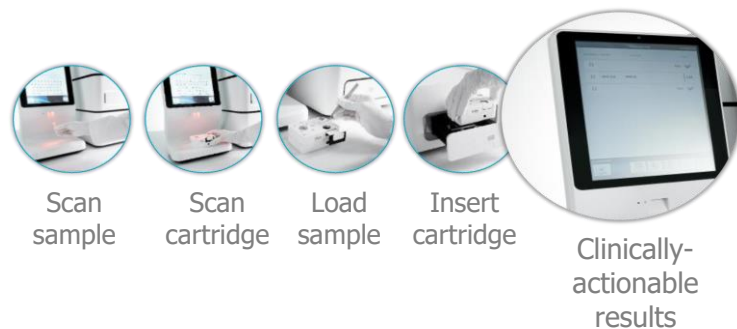
- **Expansion into major additional markets:** successful initial roll-out of the Idylla™ platform in the US, joint venture with Wondfo for commercialization in China and distribution agreement with Nichirei Bioscience for commercialization in Japan
- CE-marking of the **Idylla™ MSI Test** in Q1 2019 achieved, driving cartridge volume growth at existing and new clients
- Additional **highly automated second cartridge manufacturing line** validated to support volume growth and cost effectiveness

Difficult access to molecular diagnostics information

- In the US, nearly **80%⁴** of cancer patients do **not have genetic mutation results available** at initial oncology consultation
- Up to **25%** of patients **begin treatment before receiving their results⁴**







Fully automated molecular testing with Idylla™



Superior sensitivity and ease-of-use, combined with sample to result turnaround time of 90 to 150* minutes

Enabling decentralized testing

	Idylla™ workflow	Traditional workflow*
Instruments needed		
Lab consumables needed		
Lab infrastructure (# rooms)	1	3
Workflow	<ul style="list-style-type: none"> Fully automated ('sample-to-result') and on demand 	<ul style="list-style-type: none"> Manual and batch-based testing, 1/week or biweekly
Turnaround time	<ul style="list-style-type: none"> < 2.5hrs turnaround time per test In 1-2 days to treatment initiation*** 	<ul style="list-style-type: none"> 1-4 days turnaround time per test On average 18 days** to treatment initiation***

Traditional workflow results in:

- **Centralized** testing (many labs send out samples) by specialized labs with experienced lab technicians
- **Poor reproducibility** of results (i.e. human errors)
- **Long turnaround** time (~ weeks)

Idylla™ enables:

- **Decentralized** testing by all labs (no geographical differences in quality)
- **'First-time-right'** results
- **Short turnaround** time (~ 'same-day-result')

Comparative studies confirm superior performance

Example study organized by AstraZeneca

Background

- Comparison of 13 different KRAS mutation detecting technologies:

6x NGS	
3x qPCR	
2x mass spec.	
1x ddPCR	
1x Sanger sequencing	

- Focused on detection of KRAS mutations in lung cancer based on **blinded samples**

Conclusions

Sensitivity

Technology	Overall sensitivity
Idylla™ KRAS	96%
Other qPCR (cobas/therascreen)	46-52%
Mass-spectrometry	58-92%
NGS	48-100%
ddPCR	52-60%

Ease-of-use

- Highest score for Idylla™ KRAS technology:
 - Lowest number of manual handling steps in sample preparation (1 to 2 steps versus 3 to > 20 steps)
 - Requires lowest level of expertise (1 versus 2-4 for others*)

TaT**

- Highest score for Idylla™ KRAS technology on total turnaround time (2 to 4 hours versus 1 day to 3 weeks)

Idylla™ abstracts presented by US customers

Summary abstracts³ at AMP¹, 1-3 Nov 2018



Memorial Sloan Kettering
Cancer Center.

- Rapid Assessment of Microsatellite Instability Status using the Idylla™ MSI Test⁴
- Ultra-Rapid EGFR Mutation Assessment in Lung Adenocarcinoma without Prior DNA Extraction⁵



Dartmouth-
Hitchcock

- Detection of Microsatellite Instability in Endometrial Carcinoma Using the Novel Idylla™ MSI Assay^{2,6}
- Biocartis Idylla™ Cartridge-based Microsatellite Instability Assay Shows High Concordance with Immunohistochemical Analysis for Mismatch Repair Status in Colorectal Cancer⁷
- Stat EGFR Mutation Detection in Fresh Lung Cancer Tissue Specimens Using Touch Preparation and the Idylla™ System⁸
- Rapid EGFR Mutation Testing in Lung Cancer Tissue Samples Using a Fully Automated System and Single-use Cartridge⁹



On the comparison of the Idylla™ EGFR Mutation Assay², based on 79 clinical FFPE tissue samples¹⁰



THE UNIVERSITY OF
ALABAMA AT BIRMINGHAM

- Validation of FFPE Tissue Punches for Detection of KRAS and BRAF Mutations with the Idylla™ PCR-based Molecular Diagnostics Assay¹¹

1 AMP: Association for Molecular Pathology

2 Research Use Only, not for use in diagnostic procedures

3 All abstracts are available on [https://jmd.ampathol.org/article/S1525-1578\(18\)30401-X/pdf](https://jmd.ampathol.org/article/S1525-1578(18)30401-X/pdf)

4-5 K. Nafa et al., Memorial Sloan Kettering Cancer Center, "Rapid Assessment of Microsatellite Instability Status using the Idylla™ MSI Test"; M.E. Arcila et al., Memorial Sloan Kettering Cancer Center, "Ultra-Rapid EGFR Mutation Assessment in Lung Adenocarcinoma without Prior DNA Extraction"

6-9 C.M. Nicka et al., Dartmouth-Hitchcock Medical Center, "Detection of Microsatellite Instability in Endometrial Carcinoma Using the Novel Idylla™ MSI Assay"; N.S. Maloney et al., Dartmouth-Hitchcock Medical Center, "Biocartis Idylla™ Cartridge-based Microsatellite Instability Assay Shows High Concordance with Immunohistochemical Analysis for Mismatch Repair Status in Colorectal Cancer"; M. Rabie Al-Turkmani et al., Dartmouth-Hitchcock Medical Center, "Stat EGFR Mutation Detection in Fresh Lung Cancer Tissue Specimens Using Touch Preparation and the Idylla™ System"; M. Rabie Al-Turkmani et al., Dartmouth-Hitchcock Medical Center, "Rapid EGFR Mutation Testing in Lung Cancer Tissue Samples Using a Fully Automated System and Single-use Cartridge"

10 M. Kohlman et al., AstraZeneca, on the comparison of the Idylla™ EGFR Mutation Assay based on 79 clinical FFPE tissue samples

11 D. Morlote et al., "Validation of FFPE Tissue Punches for Detection of KRAS and BRAF Mutations with the Idylla™ PCR-based Molecular Diagnostics Assay"

Summary abstracts¹² at USCAP¹³, 16-21 March 2019



Memorial Sloan Kettering
Cancer Center.

- A hairy cell leukemia focused study¹⁴ using different sample types including stained smear slides, blood and bone marrow without pre-extraction



Dartmouth-
Hitchcock

- A colorectal cancer focused prospective study¹⁵ and a melanoma focused study¹⁶ with comparison to next-generation sequencing (NGS)



MEDICAL
COLLEGE
OF WISCONSIN

- A colorectal cancer focused study¹⁷ with comparison to PCR and IHC for Microsatellite Instability Status and a multiple cancers focused study¹⁸ using challenging FFPE samples not suitable for conventional sanger and NGS testing



Wake Forest
Baptist Health

- A melanoma focused study¹⁹ using pigmented melanomas

12 All abstracts are available on <https://www.xcdsystem.com/uscap/program/2019/index.cfm?pgid=1318&fixed=1&sessiontype=Poster%20Presentation>

13 The USCAP (United States and Canadian Academy of Pathology) Annual Meeting took place in Maryland, US, from 16-21 March 2019

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14 "Sensitive and Ultra-Rapid BRAF V600E Mutation Assessment in Hairy Cell Leukemia From Stained Smear Slides, Blood and Bone Marrow Without Pre-Extraction"; Memorial Sloan Kettering Cancer Center.

15 "Evaluation of a fully automated system for use in somatic mutation testing in colorectal cancer: A prospective study with comparison to next-generation sequencing"; Dartmouth Hitchcock Medical Center

16 "Rapid Detection of BRAF and NRAS Mutations in Melanoma Using a Fully Automated System: A Comparison with Next Generation Sequencing"; Dartmouth Hitchcock Medical Center

17 "Evaluation of a fully automated system for use in somatic mutation testing in colorectal cancer: A prospective study with comparison to next-generation sequencing"; Medical College of Wisconsin

18 "Rapid Detection of BRAF and NRAS Mutations in Melanoma Using a Fully Automated System: A Comparison with Next Generation Sequencing"; Medical College of Wisconsin



BIOCARTIS

Uniquely positioned in attractive oncology MDx market

Fast growing market

Onco MDx

- Represents 19% of the USD 6.5bn total MDx market in 2016¹
- Fastest growing segment in MDx, expected to grow 26% per annum (doubling of market) to 2020²

Key growth drivers

- Global incidence ~18.1bn; growing at ~2.5% per annum³
- Increased need for MDx testing:
 - Broader availability of targeted therapies
 - Significant clinical pipeline targeted therapies: in 2015, >800 cancer treatments were in development in the US⁴, ~70% has potential to be personalized medicines⁵
 - Addition of new application areas: immuno-oncology, liquid biopsy testing, etc.
- Growth of decentralized market (i.e. under-penetrated customer potential)

Idylla™ unique selling points



- 1 Ability to combine advantages of point-of-care testing with **performance** of lab reference testing: enabling MDx in virtually **any lab setting**
- 2 Reduction of **time-to-result** from weeks to **hours**
- 3 **Sample-to-result** (i.e. full automation) capabilities for:
 - **Solid biopsies**: FFPE^{6*}, FNA^{7^}, fresh samples[^]
 - **Liquid biopsies**: Plasma^{*}, whole blood[^], urine[^]

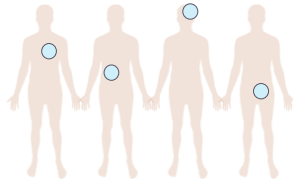
Market trends drive oncology menu strategy

Targeted therapies



- Therapy selection driven by **specific cancer mutations**
- **Significant pipeline** of new targeted therapies across cancer types
- Examples
 - Zelboraf^{®1} (BRAF)
 - Tagrisso^{®2} (EGFR)
 - Erbitux^{®3} (RAS)
 - Vectibix^{®4} (RAS)

Pan-cancer therapies



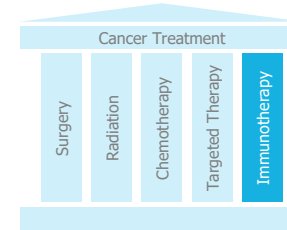
- Therapy selection driven by **genetics rather than location** of the tumor
- Allows therapy use across **multiple cancer types**
- Positive impact on underlying **test volumes**
- Examples
 - Vitkravi^{®5}
 - Keytruda^{®6}

Gene signatures



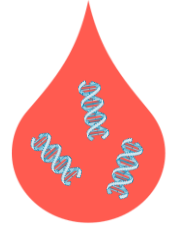
- MDx tests that target applications **beyond therapy selection**, e.g.:
 - Cancer risk
 - Prognosis
- Often **high value once validated** and clinical value demonstrated
 - Critical information for medical decision-making

Immuno-oncology



- **'Fifth pillar'** of cancer treatment
- Consists of **several therapeutic classes**, e.g.:
 - Immune checkpoint inhibitors
 - Cell and viral therapies
 - Vaccines
- **High unmet need** for underlying clinical testing

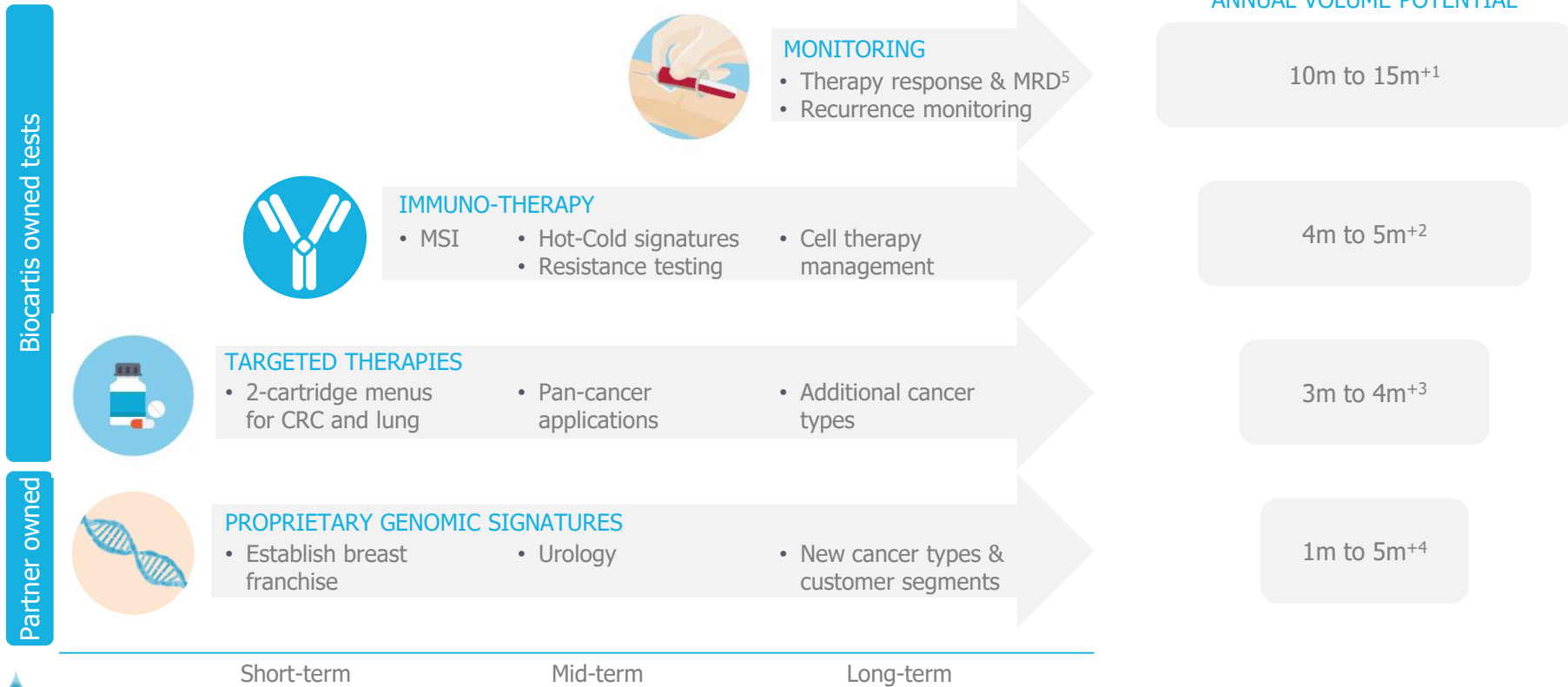
Liquid biopsy



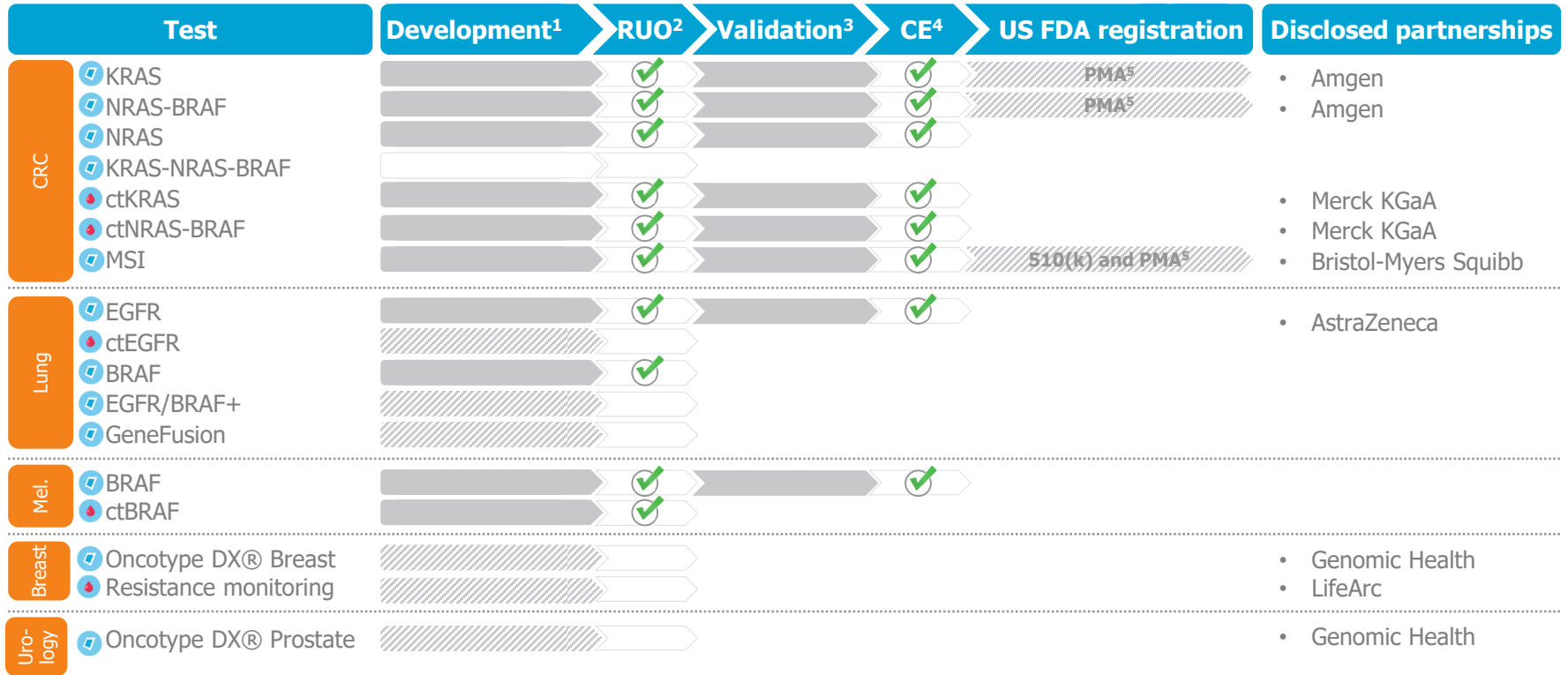
- Assess tumor information via **liquid samples**
- **Clinical value** increasingly demonstrated
- Front-runner applications:
 - Therapy selection
 - On-therapy monitoring
 - Post-treatment Minimal Residual Disease ('MRD')

Idylla™ addressable market potential

Indicative, subject to change
See appendix for more details



Rapidly expanding Idylla™ test menu



completed
ongoing
To be initiated
▣ = solid biopsy
 ● = liquid biopsy

1. Generally includes analytical validation. 2. Research Use Only 3. Clinical validation. 4. CE-IVD. 5. Premarket approval process with US FDA.
 Overview is subject to change in amongst others prioritization of test development by Biocartis and/or partners driven by commercial, partnering and operational considerations.

Underpenetrated customer base

Potential pathology customer base

- Initial Idylla™ customer base
- Around 16,000 pathology laboratories worldwide¹
- Significant number of hospitals not performing MDx today, table below shows situation in US²:

Hospital Segment	Number	Performing MDx (total)	%
Small	3816	382	10%
Medium	988	632	64%
Large	420	353	84%

Unlocking Idylla™ customer base potential

Sales approach pathology labs

- Initial focus on labs offering MDx testing (= **existing market**)
- Second phase focused on targeting labs that want to step into MDx testing (= **new market**)

Additional customer bases

- Ongoing menu expansion and content partnerships could expand Idylla™ customer base into oncologists, urologists, dermatologists, etc.



Launch Idylla™ CE-IVD MSI Test

Background MSI

- MSI is the abbreviation of Micro Satellite Instability
- MSI is the result of inactivation of the body's so-called DNA mismatch repair (MMR) system. Consequently, errors that normally spontaneously occur during DNA replication are no longer corrected, contributing to tumor growth and evolution
- MSI testing is included in [international guidelines](#) for colorectal cancer, but is present in several other tumor types as well, such as gastric & endometrial cancer
- MSI is an independent factor that may predict a patient's response to certain [immunotherapies](#)



The Idylla™ MSI Test¹

- Includes [novel set of 7 MSI biomarkers⁵](#), exclusively licensed to Biocartis² in 2013
- **Unique characteristics:**
 - Fully automated
 - Fast and accurate information on MSI status in colorectal cancer directly from FFPE tissue without the need for matched normal samples³
 - High concordance (> 97%) and lower failure rates compared to standard methods³
 - No need for paired normal tissue testing
 - Unbiased results reporting for a variety of cancer types independent of ethnicities³
- Expected to overcome drawbacks of conventional MSI testing, making MSI testing available to a [larger patient population](#)

Key addition to Biocartis' colorectal cancer menu

Accelerated menu expansion with partners

	Pharma & biotech companies	Content partners	Development partners
Focus	<ul style="list-style-type: none"> (Joint) development of CDx¹ on Idylla™ platform 	<ul style="list-style-type: none"> Porting of proprietary biomarker panels developed and validated by third parties on Idylla™ platform 	<ul style="list-style-type: none"> Development Biocartis Idylla™ assays in partnership with research institutions
Benefit Biocartis	<ul style="list-style-type: none"> Faster commercial adoption, higher market shares 	<ul style="list-style-type: none"> Proprietary 3rd party content on Idylla™ platform 	<ul style="list-style-type: none"> Lowered menu development costs
Benefit partners	<ul style="list-style-type: none"> Better and faster selection of eligible patients for targeted therapies given faster TaT & high sensitivity: <ul style="list-style-type: none"> Fast TaT: reduces competition with therapies not requiring a biomarker High sensitivity: more patients detected with relevant biomarkers 	<ul style="list-style-type: none"> Accelerated global roll-out of content No platform education needed: focus on content education Realization of cost efficiencies 	<ul style="list-style-type: none"> Contribution to medical innovation Knowledge sharing and building
Partners			

1. CDx = Companion Diagnostics

2. On 15 June 2017, MRC Technology changed its name to LifeArc. LifeArc has been involved in helping deliver a number of therapies including Keytruda (pembrolizumab, marketed by MSD) which is an important immunotherapy treatment for various cancers

3. Partnership is with ETPL, the commercialization arm of A*STAR

Strategic collaboration with Genomic Health[®]

LIFE, CHANGING.

Background collaboration

- Focused on **exclusive test development** of proprietary Genomic Health tests on the Idylla™ platform
- Aimed at **accelerating** adoption and market access around the world of Genomic Health's tests
- First test to be developed on Idylla™ is the **Oncotype DX Breast Recurrence Score[®] test**, second test is the **Oncotype DX Genomic Prostate Score[®] Test**

Background Genomic Health

- A leading provider of genomic-based diagnostic tests in cancer with **revenues of USD 377m** in 2017
- Based in California (US) and listed on NASDAQ (GHDX) with a market cap of approx. USD **2.97bn**
- **On-market tests** for **breast**, **prostate** and **colon cancer**, currently offered through own service laboratories

Oncotype DX Breast Recurrence Score[®] Test

- Examines the activity of **21 genes** in a patient's breast tumor tissue to provide personalized information for tailoring treatment based on the biology of their individual disease.
- Only test proven to **predict chemotherapy benefit**
- Included **in all major cancer guidelines** worldwide and is now considered standard of care for early-stage breast cancer.

Oncotype DX Genomic Prostate Score[®] Test

- Examines the activity of **17 genes** in a patient's prostate biopsy sample to provide information on the aggressiveness of their individual disease
- Predicts risk of metastasis and helps to make better informed & more personalized treatment decisions
- Has been validated in **> 4,500 patients**, which is described in **18 publications**

Global strategic collaboration with



Background

- In 2018, **over 1,100 cancer treatments** were in development in the US¹, and **42%** of all 2018 new approved therapies represented **a personalized medicine approach**
- Clinical studies for targeted therapies, which include testing that is performed in global laboratories such as Covance, require **rapid & standardized biomarker MDx testing platforms**
- Covance has been involved in the development of all of the current **top 50 drugs on the market** as measured by sales revenue, and collaborated on **more than 90%** of the novel drugs approved by the FDA in 2018, including most of the novel oncology drugs

Details

- Covance, LabCorp's Drug Development business, has the **leading central laboratory network** serving the biopharma industry, with a specific focus on precision medicine
- Agreement announced on **23 April 2019**, aimed at offering the Idylla™ platform and its existing Idylla™ oncology assay menu³ to Covance's customer base
- Several Idylla™ instruments have already been placed at Covance sites **in the US and China**
- The agreement provides for additional placement of Idylla™ instruments at Covance sites **globally** to support customer needs for clinical trials and, when appropriate, to validate and implement companion diagnostic applications

Immuno-oncology collaboration Bristol-Myers Squibb

Background collaboration

- Collaboration focused on **MSI testing** in connection with **immuno-oncology** therapies
- Allows for **joint developments** and **registrations** of the **Idylla™ MSI test** for use in a variety of indications, commercial settings and geographies
- Initial focus under agreement is expected to be registration **in the US** of Idylla™ MSI test as a **companion diagnostic test**
- Bristol-Myers Squibb Company (NYSE: BMY) is a global biopharmaceutical company that amongst others markets **OPDIVO®**
- Financial details are not disclosed

Background OPDIVO®

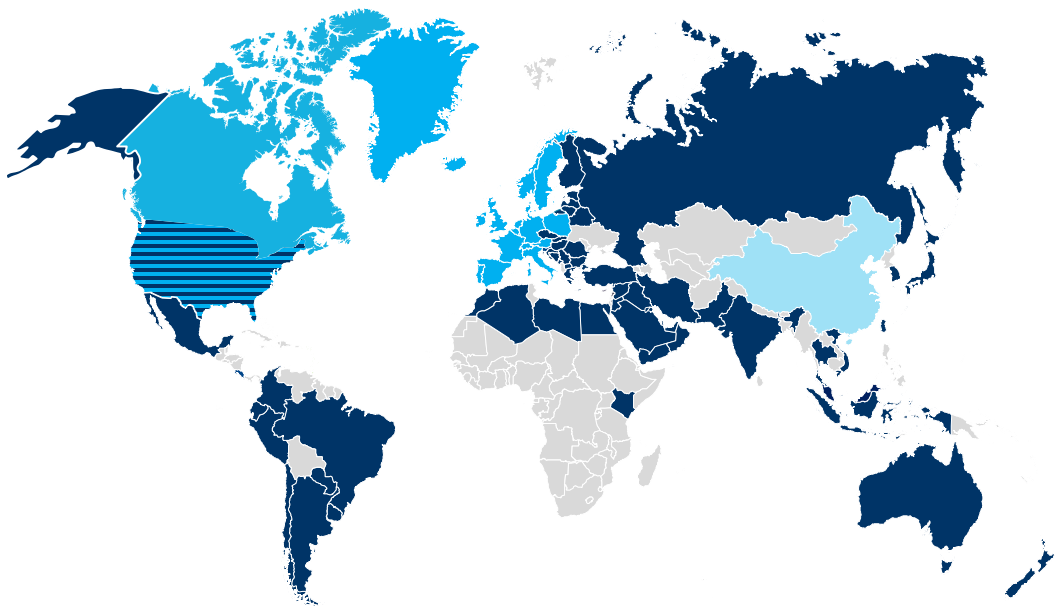


- OPDIVO® (nivolumab) plus low-dose Yervoy⁺ (ipilimumab) is the first **immuno-oncology** combination treatment approved by the US FDA for **MSI-High** or mismatch repair deficient (dMMR) metastatic colorectal cancer (**mCRC**) that has progressed following treatment with certain chemotherapies*
- OPDIVO® generated **USD 4.9bn** of global **sales** in 2017~

Continued expansion global commercial footprint¹

Over 70 countries covered through four sales channels:

- 1 **Direct sales force** covering Western European countries, US and Canada
- 2 **Distributor contracts** in place covering ~ 65 countries
 - Hybrid sales strategy in the **US** with own sales team & Fisher Healthcare² as commercialization partner
 - Distribution agreement with Nichirei Bioscience for **Japanese market**
- 3 Joint venture in **China** with Wondfo
- 4 **Pharma collaborations** (e.g. Merck KGaA (Darmstadt, Germany), Amgen and AstraZeneca) and **content partnerships** (e.g. Genomic Health, Immunexpress)



- Commercialization through direct sales force
- Commercialization through distributor partners
- Commercialization through joint venture

Go-to market strategies in place for China & Japan

Chinese go-to market strategy



- Joint venture established with Wondfo for Chinese market
- Chinese MDx market **one of fastest growing** in the world²
- Wondfo (SHE:300482) is a **fast growing diagnostics leader** in China with focus on POC¹ testing, listed on **Shenzhen Exchange** (current market capitalization of USD ~1.3bn) with revenues in 2017 of ~ USD 160m
- Joint venture structure: **50%-50%** ownership. Capital commitment of **EUR 14m**, split between parties and over several tranches
- Focus on local manufacturing, commercialization & **registration** with Chinese Regulatory Authorities of **existing Idylla™ oncology tests**

Japanese go-to market strategy



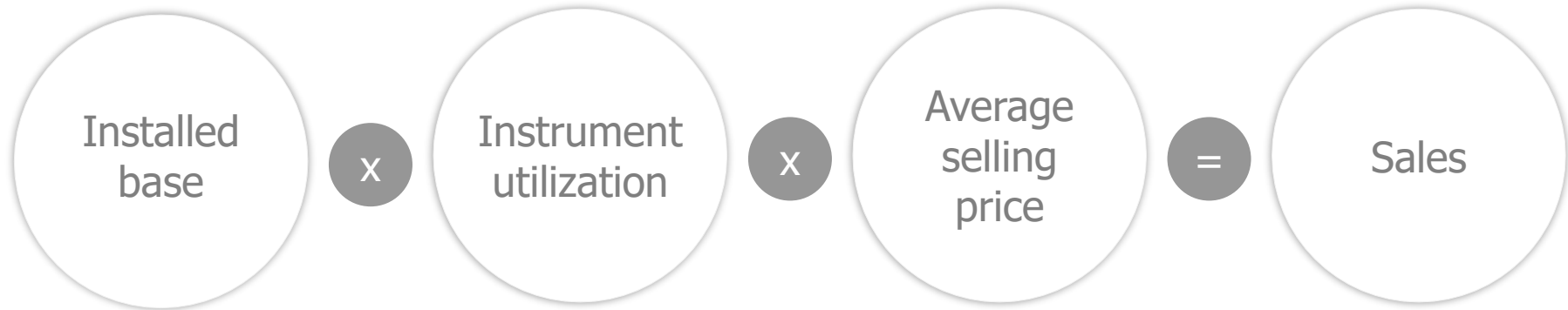
- **Commercialization agreement** with **Nichirei Bioscience** for Japanese market
- Japanese MDx market is **one of the largest** in the world, representing around 10% of global MDx market¹
- Part of **Nichirei Corporation** (TYO: 2871), a holding company with an annual turnover of **~¥ 550 billion**²
- Nichirei Bioscience to seek **regulatory approval** of Idylla™ platform and its oncology tests with Japanese Ministry of Health, Labor and Welfare
- Upon successful registration, Nichirei Bioscience's sales force will distribute the Idylla™ platform across its commercial network of approx. **2,000 pathology laboratories in Japan**

High volume second cartridge manufacturing line operational since end 2018



- Located in Mechelen (Belgium), providing an additional **annual capacity of over 1,000,000 cartridges**
- Fully **automated** assembly workstations (versus a semi-automated on first line with an annual capacity of over 200k cartridges)
- Plastic parts manufactured with new **multi-cavity moulds** (versus single cavity on first line)
- Operational since end of 2018, transfer process of high-volume commercial tests initiated in Q1 2019
- Key driver in further **reduction of cartridge unit costs**

Platform and consumable driven business model



Key drivers

- Commercial footprint
- Commercialization partnerships

Key drivers

- Menu of tests
- Regulatory registrations

Key drivers

- Reimbursement
- Competitive advantage

Gross margin driven by

- Volume
- Manufacturing automation

Key messages FY 2018 results

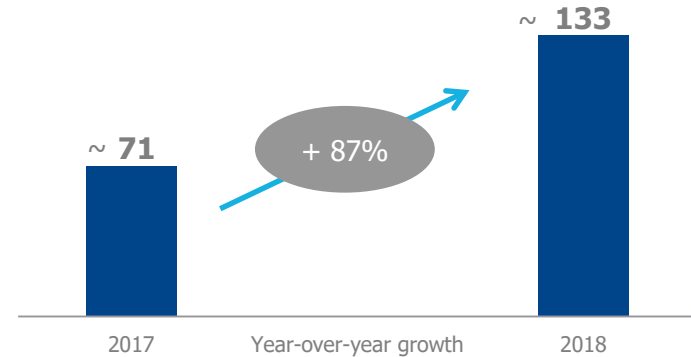
Installed base	Growth of installed base to over 970 instruments
Cartridge volume	133k Idylla™ cartridges, year-over-year increase of approx. 87%
Product revenues	Increased year-over-year with 46% to EUR 18.8m
Total operating income	Increased year-over-year with 24% to EUR 28.7m
Cash position	EUR 64m per end 2018
Test menu	Promising initial market adoption of the Idylla™ MSI Test²
Partnerships	Expansion partnership with Genomic Health and new collaboration with AstraZeneca
Geographical expansion	Successful first commercialization year in US , go-to market strategies established for China and Japan

Strong continued placements & volume growth

Installed base (in # instruments)



Commercial cartridge volume (x 1,000)



- + 326 instruments in 2018, exceeded guidance of 300
- Majority of placements in European and US markets
- Continued installed base growth in Q1 2019, incl. crossing of the 1,000 installed base milestone

- 2018: commercial cartridge volume approx. 133k or + 87% year-over-year increase
- In Q1 2019, continued growth in commercial cartridge volumes, mainly driven by European and RoW¹ markets.
- Accelerated ramp-up of US cartridge volumes due to more routine cartridge orders of existing & new US customers is expected in Q2 and Q3 2019



Continued global roll-out Idylla™ platform in Q1 2019

Europe

- Installed base growth driven by:
 - Idylla™ moving to **first line** testing at existing customers
 - **New customers**, esp. in France
- Cartridge volume growth **across all geographies** with highest growth rates in **France, Italy** and the **UK**

US

- Continued expansion, esp. within the **larger top segment** where Idylla™ is seen as complementary to NGS workflows & as an ultra-rapid solution where fast, actionable results are key
- Accelerated ramp-up of **US cartridge volumes** expected in Q2 and Q3 2019 due to more routine cartridge orders of existing and new US customers

RoW¹

- **New customers & healthy pipeline** of installations following co-visits with distributors to large accounts & pharma partner events
- Increased **routine testing use**, supporting further cartridge volume growth

China

- Completion of **closing conditions of China joint venture** ('JV') with Wondfo
- **Core JV employees hired**, continued recruitment geared towards product registration filings, with a first focus on MSI testing, and establishment of local manufacturing capabilities
- Several **initial Idylla™ placements** were realized at Chinese customers in Q1 2019

Japan

- Agreement with **Nichirei Bioscience**, a leading supplier of biological & diagnostics products in Japan, announced on 7 January 2019
- Aimed at **product registrations and distribution** of the Idylla™ platform in Japan
- Upon successful registration, Nichirei Bioscience's sales force will commercialize the Idylla™ platform across its network of some 2,000 pathology laboratories

Product revenues increased with 46% in 2018

Breakdown product revenues (in EUR 1,000)

By product	2018	2017
Idylla™ System sales	4,185	4,620
Idylla™ Cartridge sales	14,658	8,316
Product sales revenue	18,843	12,936

By type	2018	2017
Commercial revenue	17,843	12,748
R&D revenue	1,000	187
Product sales revenue	18,843	12,936

Breakdown total operating income

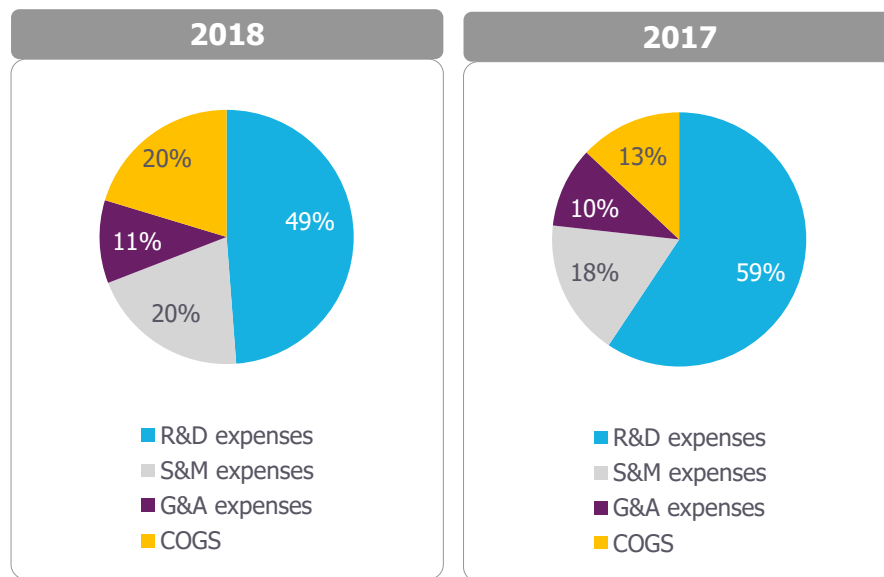
In EUR 1,000	2018	2017
Product sales revenue	18,843	12,936
Collaboration revenue	8,329	7,739
Service revenue	639	282
Total revenue	27,811	20,957
Grants and other income	840	2,153
Total operating income	28,651	23,110

2018 operating result of EUR -47m

Condensed income statement

In EUR 1,000	2018	2017
Total operating income	28,651	23,110
COGS	(15,349)	(8,673)
R&D expenses	(36,842)	(39,594)
S&M expenses	(15,349)	(11,600)
G&A expenses	(7,971)	(6,832)
Total operating expenses	(75,511)	(66,699)
Operating result	(46,860)	(43,589)
Net financial result	(1,402)	(1,736)
Income taxes	109	3,365
Net result	(48,153)	(41,960)

Breakdown operating expenses



Cash position of EUR 64m end of 2018

Condensed cash flow statement

In EUR 1,000	2018	2017
Result for the period	(48,153)	(41,960)
Depreciation and amortization	4,273	5,096
Impairment losses	3,456	0
Working capital changes	(3,797)	(2,841)
Other adjustments	2,228	(1,700)
CF operating activities	(41,993)	(41,405)
CF investing activities	(5,820)	(4,320)
CF financing activities	(1,508)	75,256
Total net cash flow	(49,320)	29,531
Cash and cash equivalents¹	63,539	112,765
Financial debt	35,335	35,388

1. Including EUR 1.2 million restricted cash related to KBC Lease financing

Remarks

- **Cash flow from operating activities** slightly lower as result of:
 - A lower net result for 2018
 - Increased investments in working capital
 - Increased (non-cash) adjustments in 2018 due to impairment losses and an one-off income statement impact in 2017 related to a tax adjustment
- **Cash flow from investing activities:**
 - Consists of capitalization of Idylla™ instrumentation as well as investments in laboratory and manufacturing equipment
 - Note: 2018 investments for cartridge manufacturing expansion were directly paid for via lease financing
- **Cash flow from financing activities** consisted of repayments on borrowings partially offset by proceeds from the exercise of warrants
- **Net cash flow** of EUR -49.3m, resulting in a **cash position** per year-end of **EUR 64m**. Note: due to the capital raise in January 2019, the cash position as per end January 2019 amounted to over **EUR 110m** (unaudited figure)

Strong financial position driven by 2019 funding events

EUR 55.5m capital raise - January 2019

- Gross proceeds of **EUR 55.5m** by means of a private placement via an accelerated bookbuild offering
- Participation from **high quality institutional investors**, both existing and new international investors, from both **Europe** and the **US**
- New shares represent approx. **9.73%** of the Company's share capital immediately prior to the capital raise
- One of the first equity capital markets transaction of the European Life Sciences and Healthcare industry in 2019

EUR 150m convertible bond issue - May 2019

- EUR 150 million senior **unsecured convertible bonds** due 9 May 2024
- Participation from a renowned group of **international** and **local institutional investors**
- Bonds bear a **coupon of 4.00%** per annum and can be converted into shares at an initial **conversion price of ~EUR 12.90** (representing a 25% conversion premium*)
- Application will be made to list the bonds on the regulated market of Euronext Brussels by no later than 1 December 2019

Guidance 2019



Targeting installed base growth in 2019 of **350 new instrument placements**, bringing the total installed base to **over 1,300 Idylla™** instruments by year-end



Targeting a commercial volume of **210k-225k Idylla™** cartridges in 2019, representing a year-over-year increase of around **60%-70%**



Targeted cash position in the range of **EUR 55m – EUR 65m** by 2019 year end, excluding drawdowns on the Company's multiple purpose credit facility.

Short term menu outlook (selection)

Area	Test	Timing
Colorectal cancer	<ul style="list-style-type: none"> • CE-marking Idylla™ MSI Assay • US FDA 510(k) submission Idylla™ MSI Test • US FDA PMA submission Idylla™ RAS PMA¹ documentation 	<ul style="list-style-type: none"> • Q1 2019 ✓ • 2020 • 2020
Lung cancer	<ul style="list-style-type: none"> • Launch Idylla™ ctEGFR Assay (RUO²) • Launch Idylla™ GeneFusion Panel 	<ul style="list-style-type: none"> • H2 2019 • 2020
Breast cancer	<ul style="list-style-type: none"> • Placement of Idylla™ instruments at European sites for the clinical validation studies of the Idylla™ Oncotype DXi IVD Breast Recurrence Score™ test in H2 2019 	<ul style="list-style-type: none"> • H2 2019

Financial calendar 2019

- Annual General Meeting 10 May 2019
- H1 2019 results 5 September 2019
- Q3 2019 Business Update 14 November 2019

Shareholders and coverage

Shareholder overview (as per 28 February 2019)

Shareholder >3% table	% shares
Johnson & Johnson Innovation	10.5%
OppenheimerFunds	8.6%
Debiopharm Innovation Fund	7.5%
Sycomore Asset Management	4.8%
ParticipatieMaatschappij Vlaanderen NV (Flemish Region)	4.2%
Other institutional and retail investors	64.5%
Total outstanding shares (non-diluted)	100.0%

Note: The percentages above are based on the most recent transparency notifications received by Biocartis. See website Biocartis for more details

Stock facts

IPO date: 27 April 2015, Euronext Brussels

ISIN: BE0974281132

Ticker: BCART

Market cap: ~EUR 664m (23 April 2019)

Coverage



Michael Ruzic-Gauthier



Hugo Solvet



Stéphanie Put



Lenny Van Steenhuyse & Sandra Cauwenberghs



Alexandru Cogut



Kris Kippers

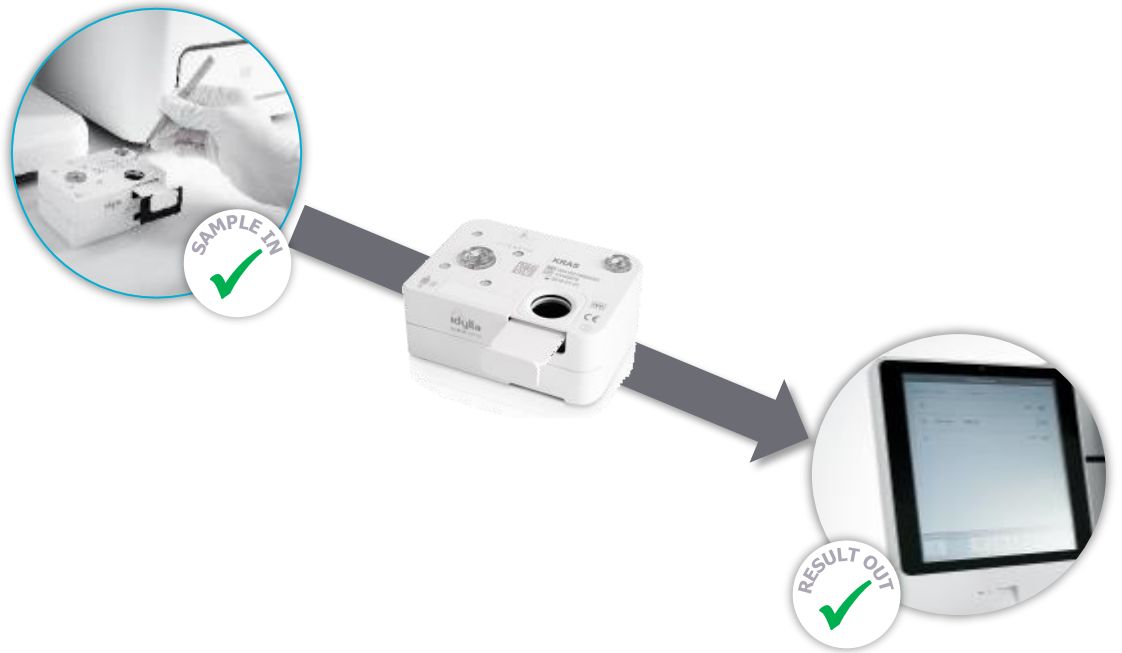


Dylan van Haften & Anita Yé

Appendix

Fewer erroneous results due to **standardized** cartridge

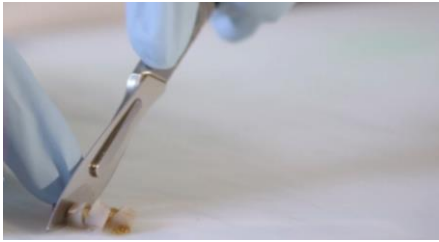
- Virtually any sample type
- No sample pre-treatment
- All reagents on board
- No PCR lab infrastructure
- No cold chain
- Stable at room temperature



Offering potential for CLIA waiver

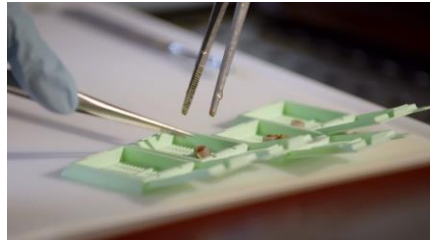
FFPE (formalin-fixed and paraffin-embedded) sample

Step 1: tissue macroscopy



- A laboratory technician cuts the tissue into smaller pieces

Step 2: formalin-fixing



- This incubate overnight in formalin for optimal conservation while maintaining the fixation of the morphology

Step 3: paraffin-embedding



- The next day, the tissue is embedded in fluid paraffin

Step 4: microtome cutting



- The paraffin block is then cut into thin slices (tissue sections), suitable for (microscopic) analysis

FFPE is the gold standard sample type within oncology

Targeted therapies: towards actionable 2-cartridge menus and pan-cancer applications

Cancer-specific applications

2-cartridge menus for current cancer markets

- Enhanced development capabilities allow for higher number of targets in one Idylla™ cartridge
- Opportunity to offer actionable 1st line menus based on two Idylla™ cartridges only:



CRC¹ menu

1. KRAS/NRAS/BRAF
2. MSI



Lung menu

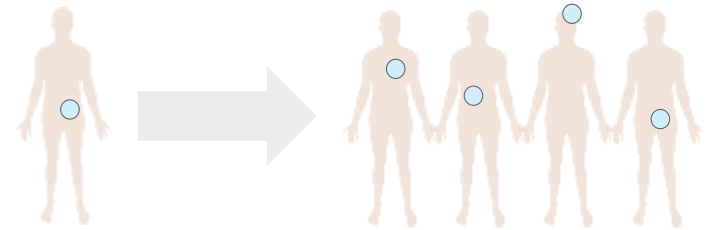
1. EGFR/BRAF+ (DNA-based)
2. GeneFusion (RNA-based)

New areas

- Development of new tests for additional cancer types e.g.:
 - o Breast cancer
 - o Gastric cancers
 - o Hematological cancers
- Validation existing menu for additional sample types

Pan-cancer applications

- Core tests of cancer-specific menu are applicable for pan-cancer applications



Idylla™ cartridge

- KRAS/NRAS/BRAF
- MSI
- GeneFusion (NTRK)

Select potential applications

- Breast, endometrial, cervical
- Gastric, prostate, endometrial
- Gastro-intestinal, breast

Comprehensive actionable 1st-line menu in 2-cartridge format allows for higher market shares and gross margins

Efficient access to pan-cancer setting (validation of existing menu)

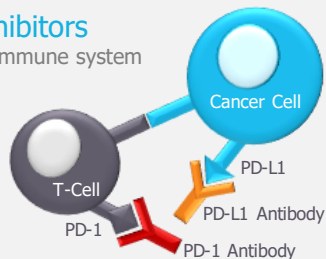
Immunotherapy: towards menu serving major therapy classes

Idylla™ addressable immunotherapy segments

Immune checkpoint inhibitors

Prevent tumor from hiding from the immune system

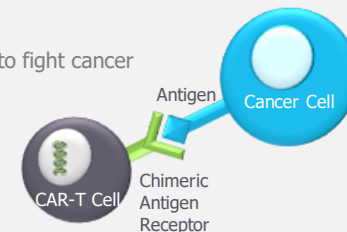
- **Immune cells can fight** cancer
- **Cancers can hide** from immune cells
- Immune checkpoint inhibitors such as **Keytruda**^{®1} prevent this hiding
- Such inhibitors often act **pan-cancer**



Cell therapy

Deploy immune cells designed to fight cancer

- Immune cells can be specifically **selected or engineered to fight** cancer
- To date, cell therapies have proven successful in **hematological** cancers
- Clinical trials ongoing also for **solid** cancers



Idylla™ for immune checkpoint inhibitors

Idylla™ MSI test

- May be validated for immunotherapy (i.e. immune checkpoint inhibitors) selection
- Initial focus on CRC immunotherapy
- Pan-cancer validation in the future

Idylla™ for both major therapeutic classes

Idylla™ Hot-Cold signature

- Is the immune system already fighting this cancer? Does it need to be enabled?

Idylla™ immunotherapy resistance test

- Is the tumor resistant to immunotherapy?

Idylla™ for cell therapy

Idylla™ test(s) for patient management

- Cell therapies are highly successful
- Therapy cost (e.g., hospitalization) and side effects create high need for rapid patient management around treatment

Growth in emerging therapeutic areas. Address testing needs of major immuno-therapies and leverage menu toward pan-cancer applications



Monitoring: liquid biopsy testing for on- and post-therapy monitoring

Liquid biopsy testing

- Access genetic tumor information via **liquid samples**:
 - Blood
 - Urine
 - Saliva
- **Advantages over solid biopsy** testing
 - Less invasive
 - Less expensive
 - Less sampling bias
 - More repeatable
 - Real-time mutation status
- Improved **detection** of low burden disease
 - **Earlier and more accurate** than current protein tests; earlier than imaging
 - Advantage for MRD¹, recurrence monitoring

Idylla™ liquid biopsy and monitoring menu

Cancer care continuum

Pre-diagnosis	<ul style="list-style-type: none"> • Inherited risk • Screening / early detection
<i>Diagnosis</i>	
Pre-therapy	<ul style="list-style-type: none"> • Prognostics / stratification • Therapy selection 1
<i>Treatment Start</i>	
On-therapy	<ul style="list-style-type: none"> • Response monitoring • Resistance monitoring 2
<i>Treatment Stop</i>	
Post-therapy	<ul style="list-style-type: none"> • Post-therapy MRD¹ 2 • Recurrence monitoring 3
<i>Relapse</i>	
Recurrence	<ul style="list-style-type: none"> • Therapy selection 1 • Recurrence management

Menu focus

- 1 Therapy selection**
 - Liquid biopsies **complement solid biopsy** menu
 - Focus: if **tissue not available** at diagnosis or at progression
- 2 Response monitoring and post-therapy MRD¹**
 - **Focus:** applications that **require Idylla™ speed** and are backed by growing evidence of **clinical utility**:
 - On-therapy monitoring
 - Post-treatment MRD¹
 - Population: **Mid and late stage** patients across most cancer types
- 3 Recurrence monitoring**
 - Focus: on **hematological** cancers (e.g., CML²) as these are **established markets** (i.e. guidelines inclusion)
 - Population: long-term therapy and recurrence monitoring

A high volume menu for repeat-testing applications that require Idylla™'s unmatched turn-around-time. Address testing needs across early and late stage cancers for a range of major cancer treatments. Access new customer base: hemato-oncologists and blood testing laboratories



Gene signatures: high value and volume menu developed by partners

Market landscape

- **Growing number of tests**
 - Driven by genomic discovery and validation efforts over past decade
- **Broad range of testing applications**
 - Prognostic, risk stratification, screening tests, etc.
 - Tests are generally cancer-specific
- **Diverse cancers and sample types**
 - On-market or in development for many solid and hematological cancers
 - Solid & liquid samples

Test selection criteria

- **Focus on oncology tests**
- **Clinically validated content**
 - Increases barrier to entry for competitors
- **High clinical utility and reimbursement**
 - Provides attractive pricing and fast market adoption
- **High volume applications**
 - Large addressable population
 - High market share potential
 - Repeat testing

Idylla™ opportunity

- **Additional cancer franchises**
 - Complementary menu (e.g. breast cancer)
- **Expansion into new customer segments**
 - General oncology
 - Oncology sub-specialties within urology, dermatology, hematology...
- **Broader commercial footprint**
 - Commercialization supported by sales network partner
- **Development mainly partner-funded**

Example collaboration Genomic Health



- **Market leader** in breast, urology cancer

- **Biocartis development partner**
 - ✓ Clinically validated
 - ✓ High reimbursement
 - ✓ Attractive volumes

- **Breast: launch 2020**
- **Urology franchise opportunity**
 - Initial focus on prostate cancer

Complementary menu with proprietary high value and volume tests with a focus on existing and potentially additional customer segments



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