



**Biomarker-Based
Molecular Diagnostics
for Early Cancer Detection**

KOSDAQ (228760)

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 **Genomictree**
(주)지노믹트리

01

Prologue

EarlyTect® Cancer Series

1. Company Overview

- Focusing on methylation biomarkers for 20 years

BIOMARKER-Based Molecular Diagnostics Company
Specialist in **EARLY CANCER** Detection (IVD)



Best-in-class



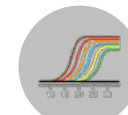
Novel Biomarker Discovery
Engine for Early Cancer
Detection

First-in-class



Possession of **Innovative**
Biomarkers
High Sensitivity & Specificity

Best-in-class



High Sensitivity Biomarker
Detection Method

Contribute to Improving the Quality of Healthy Life and Reducing of Total Medical Costs

02. Unmet Needs in Healthcare Market for Healthy Life Quality of Aging Society

PROBLEM: Shortage of Medical Budget

- Rapidly increasing healthcare expenses by country
- Shortage of national healthcare budget



Healthcare Reform



P4 (Prevention-Predictive-Personalized-Participation)



Insurance Subscription / Payment Structure Reform



Moon Jae-in Care

- Percentage of Healthcare Expenditure to GDP by Country

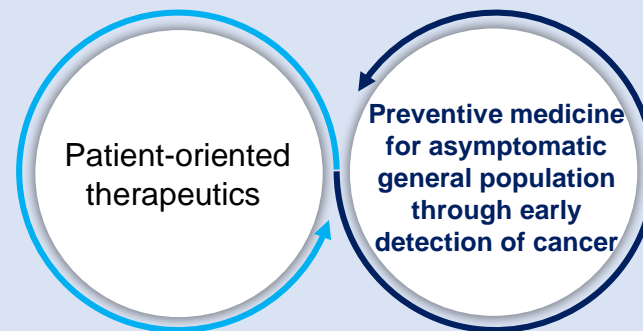


*Source: The World Bank

Unmet Needs

Increase of Cancer Incidence Rate in Aging Society

Increased Demand for Preventive Medicine through Early Detection of Cancer



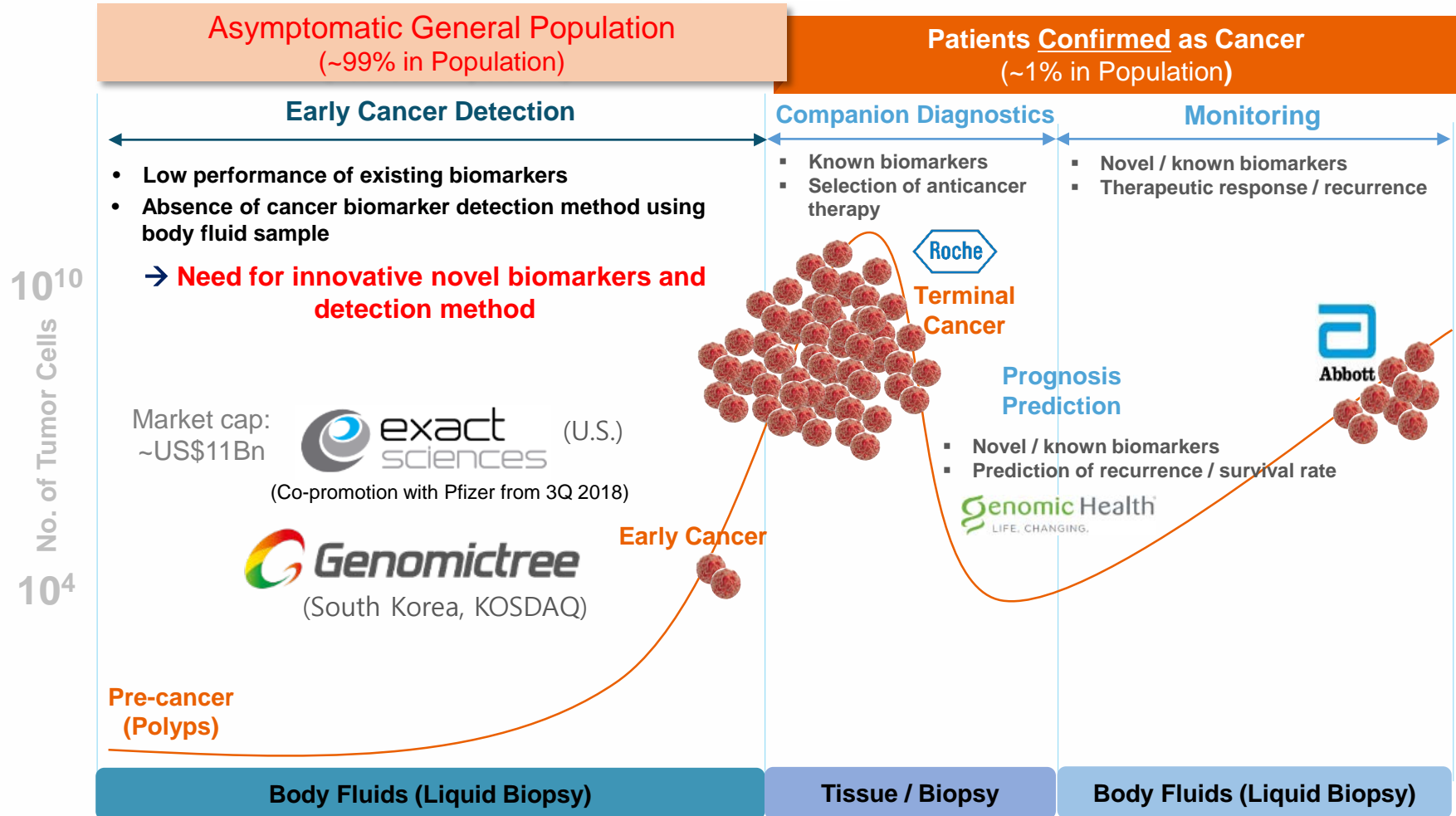
GOAL

- Mitigate the increase of healthcare expenditure rate
- Maintain healthy life quality

03. In Vitro Cancer Early Diagnostics Market

Emerging Blockbuster Market

Existing Cancer Diagnostics Market



04. Market Position and Case Study of IVD Companies

Remains as **unexplored field** due to absence of early cancer detection biomarkers and detection technology

Worldwide IVD (In Vitro Diagnostics) Sales : Top 10 Companies & Total Market (2017-2024)

Ranking	Company	Sales (US\$ mn)		CAGR	Market Share		Ranking Changes 2017-24
		2017	2024	2017-24	2017	2024	
1	Roche	10,276	14,159	+4.7%	19.5%	17.8%	-
2	Abbott Laboratories	5,616	10,120	+8.8%	10.7%	12.7%	+1
3	Danaher	5,840	8,290	+5.1%	11.1%	10.4%	-1
4	Siemens Healthineers	4,705	6,036	+3.6%	8.9%	7.6%	-
5	Thermo Fisher Scientific	3,241	4,232	+3.9%	6.2%	5.3%	-
6	Becton Dickinson	2,849	4,044	+5.1%	5.4%	5.1%	-
7	Sysmex	2,301	3,579	+6.5%	4.4%	4.5%	-
8	bioMerieux	2,091	3,377	+7.1%	4.0%	4.2%	-
9	Ortho-Clinical Diagnostics	1,800	2,101	+2.2%	3.4%	2.6%	-
10	EXACT Sciences	266	1,781	+31.2%	0.5%	2.2%	+14
	Top 10	38,984	57,719	+5.8%	74.1%	72.5%	
	Other	13,638	21,842	+7.0%	25.9%	27.5%	
	Total Industry	52,622	79,561	+6.1%	100.0%	100.0%	

*Source: Evaluate, September 2018 Excludes Glucose Test System which are included in diabetic care classification

05. Key Success Factors of Early Cancer Detection

In Vitro Cancer Early Detection Method

A molecular diagnostics method to detect cancer at early stage by measuring biomarkers from body fluid (Liquid Biopsy: Blood, Urine, Stool, Sputum etc.)



Finding the needle
in the haystack

3 Factors

Clinical Validity

Cancer-specific
biomarkers
(First-in-class)

High sensitivity and
specificity



Analytical Validity

Biomarker detection
technology
(Best-in-class)

High sensitivity selective DNA
amplification method



Analytical Validity

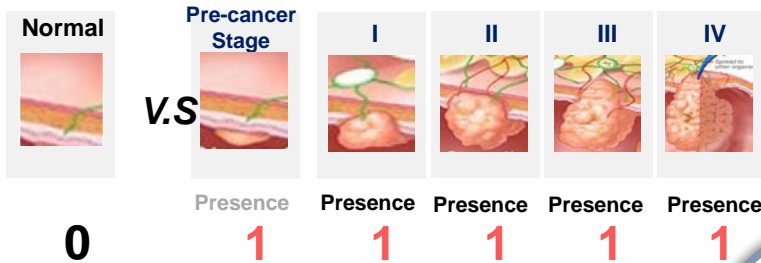
Reaction instrument
(PCR equipment)

High throughput analysis

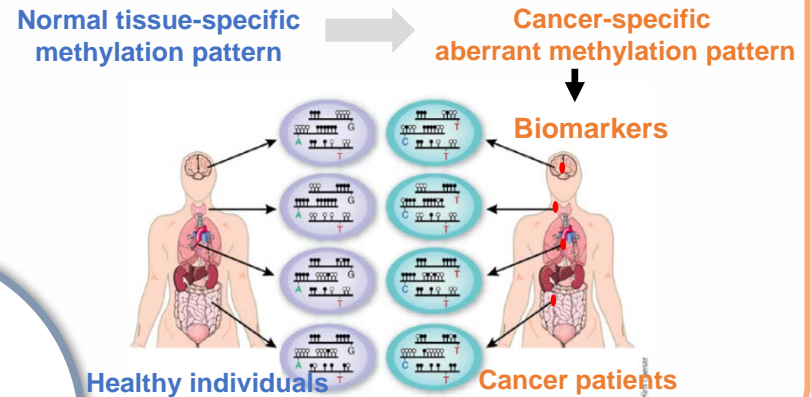
When sensitivity / specificity is satisfied, in vitro early cancer detection kit is successful

06-1 . Why DNA Methylation Biomarkers?

- Aberrant change exists in the **early** stage of tumorigenesis
- **Constantly** maintained **regardless of clinical stage**

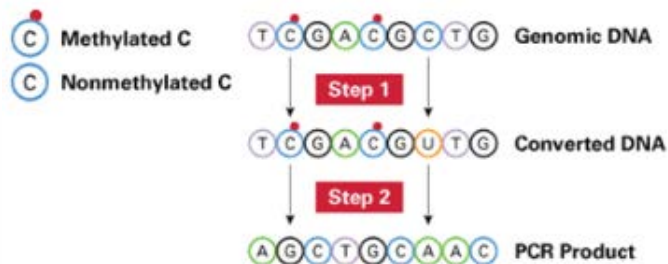


- High cancer **specificity**

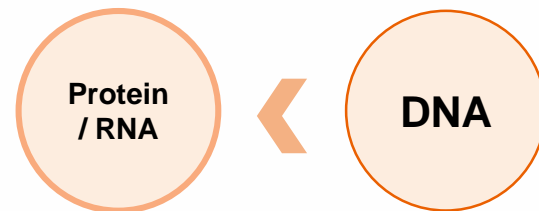


DNA Methylation

- Possible to amplify by PCR when **minute amount** of DNA methylation biomarkers exist in body fluids



- High detection **stability** in body fluids



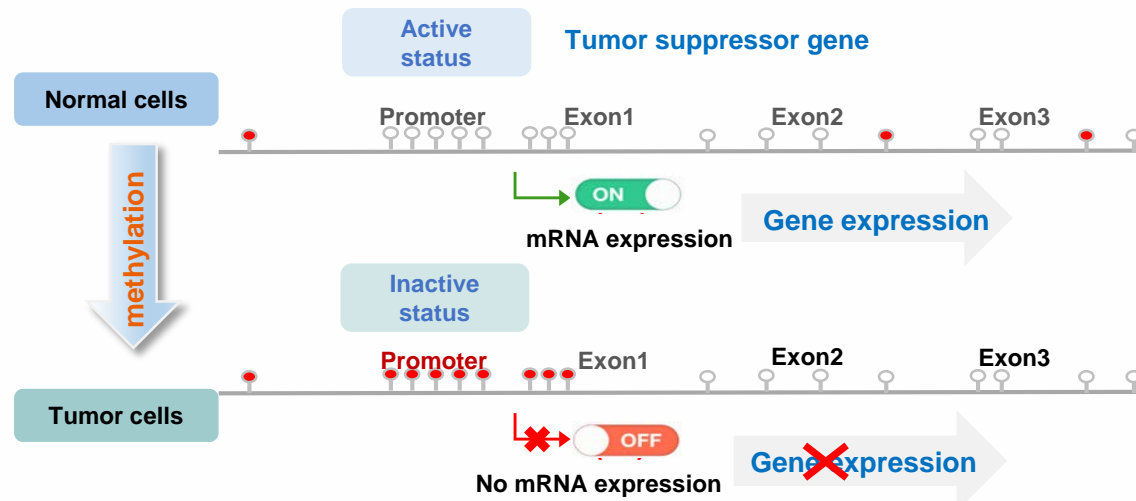
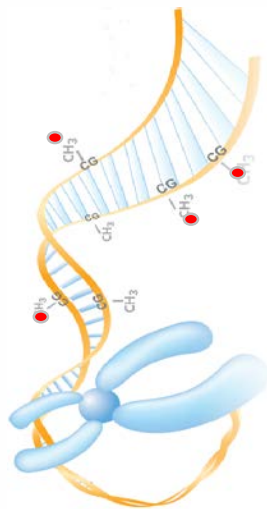
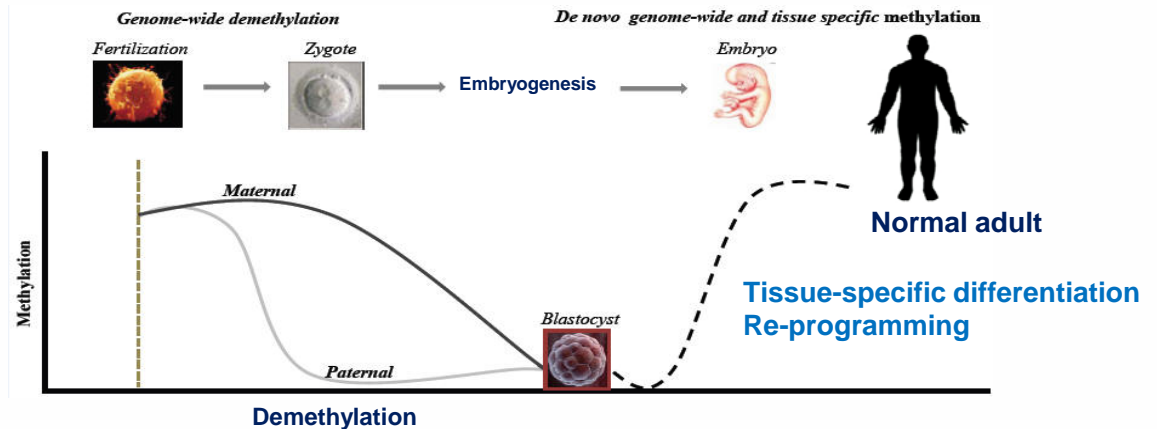
High structural stability of DNA compared to RNA & protein

*Source: Zhu et al. (2009) Int J Biochem Cell Biol

06-2. Why DNA Methylation Biomarkers?

- The binding of methyl groups to specific site of DNA that determines gene expression is a natural phenomenon that blocks gene expression
- Aberrant DNA methylation induces cancer by inactivating tumor suppressor genes which controls gene expression in response to external stimuli such as smoking and drinking etc. (Baylin&Jones,2011)

Regulation of spatiotemporal gene expression during embryogenesis





02

Core Competencies

EarlyTect® Cancer Series

01 Core Technology : Best-in-class New Biomarker Discovery Engine & Detection Technology

Capable of Discovering High Potential Novel High-Performance Biomarkers Efficiently / Continuously

Novel High-Performance Biomarker Discovery Engine

Directly select and capture methylated DNA

Methyl-DNA Capture™
(proprietary development)



Gene expression analysis by DNA microarray

i-MAGIC System

Methylation DB



Continue to discover high-performance biomarkers & expand new pipeline

Expand New Product Pipeline through Discovery of New Biomarkers

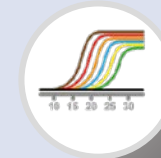
Highly Sensitive & Precise Biomarker Detection Technology: LTE-qMSP

Linear Ttarget Enrichment -Quantitative Methylation Specific PCR

Patents filed (domestic & international)

Methylated biomarker DNA

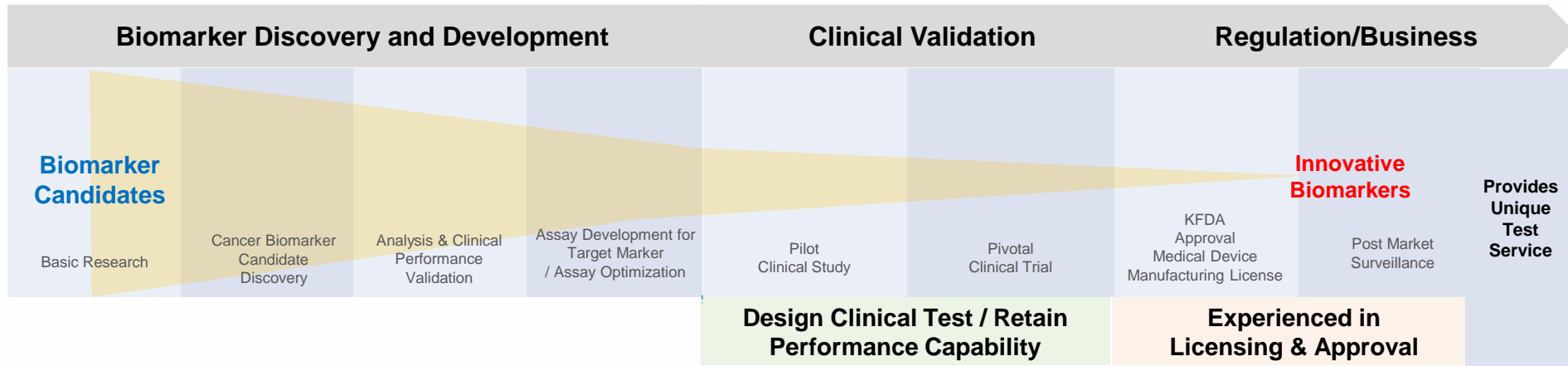
Control gene DNA



Highly sensitive biomarker detection from minute amounts existing in body fluid using selective DNA amplification technology

02. Core Competences

Possess Unique Technology from Biomarker Discovery to Commercialization



First-in-Class Possess Cancer-specific Biomarkers

Syndecan-2 (SDC2)
Colorectal Cancer
Methylation Biomarker

PENK
Bladder Cancer
Methylation Biomarker

PCDHGA12
Lung Cancer
Methylation Biomarker



**EarlyTect[®]
Cancer Series
Product Line**

Best-in-Class Possess Biomarker Detection Technology

LTE-qMSP
Selective DNA Amplification technology

Best-in-Class Possess Biomarker Discovery Engine

Methyl-DNA Capture[™] + Microarray
+
i-MAGIC System

03. Main Product Pipeline

Early Cancer Detection Technology: EarlyTect[®] Cancer Series Products

EarlyTect[®] Colon Cancer



- Cancer type: colorectal cancer
- Subject: asymptomatic general population
- Biomarker: *SDC2* methylation
- Specimen: stool
- Intended use: early detection of patients who should undergo colonoscopy
- Status: **KFDA approval (Class III IVD)**
Granted international patents

EarlyTect[®] Lung Cancer



- Cancer type: lung cancer
- Subject: patients with pulmonary nodules
- Biomarker: *PCDHGA12* methylation
- Specimen: blood (serum)
- Intended use: early detection of patients with high-risk lung cancer
- Status: **Ongoing pivotal clinical trial for KFDA approval (Class III IVD)**
Granted International patents

EarlyTect[®] Bladder Cancer



- Cancer type: bladder cancer
- Subject: hematuria patients
- Biomarker: *PENK* methylation
- Specimen: urine
- Intended use: triage of hematuria patients who will undergo cystoscopy
- Status: **development**
Granted International patents

**Technology for Early Detection of CRC
EarlyTect[®] Colon Cancer
(Stool-based)**

**KFDA approval for IVD (Class III)
(Aug 28, 2018)**

Flagship product

01 . The Need for Early Detection of Colorectal Cancer (CRC)

High Medical Costs

- Cancer mortality rate ranked **second** in the world
- About 60% of patients are detected at **late stage**
- Average treatment cost per patient : up to KRW 150 mil. (US), up to KRW 30 mil. (South Korea)



❖ ~10 years >> Early Detection >> Improved Quality of Life & Treatment Cost Savings



02. Development Needs of Innovative In Vitro Early CRC Detection Technology

Current Screening Tools for CRC Early Detection

Colonoscopy (Gold Standard)



- High invasiveness, inconvenience
- Low participation rate due to bowel preparation (worldwide average of less than 30%)

FOBT / FIT



- Low sensitivity to early CRC (less than 50%) and polyps (≥ 1.0 cm; less than 20%)

CRC Incidence Rate & Mortality Rate Remain High

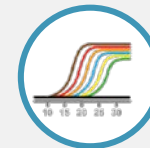
Unmet Needs

- Increase in participation rate of colonoscopy screening
- Increase in early CRC detection



Evidence-based early CRC detection

in vitro early detection technology utilizing biomarkers



03. Innovative In Vitro Early CRC Detection Method : EarlyTect® Colon Cancer

EarlyTect® Colon Cancer (KGMP Production) Stool Sample Collection / Storage / Delivery / Pre-treatment / Reaction Process / Test Process

Stool Collection Kit (1~2g)



Stool Preservation Solution
(Self-Development)

Delivery
(Room
Temperature)

DNA Extraction
GT Stool DNA Kit
(Class I Medical Device)

Bisulfite
Treatment

Real time PCR
▪ SDC2, Control
▪ Duplex PCR

Data Result
Analysis

Positive(+)

Recommend
Colonoscopy

Negative(-)

3 years Interval

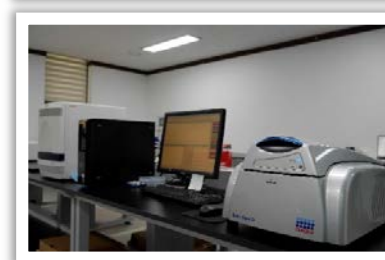
- Single stool collection: no restriction on diet or medication
- Real time PCR test / analyze within 8 hours, minimum training required

04. Central Service Lab (In Operation)



Area	1,432.16 m ² (2-story building)
Examination Capacity	170,000 tests/ year (340,000 tests using 2 shift rotation)
Sales Capability	KRW 17 billion ~ 34 billion / year

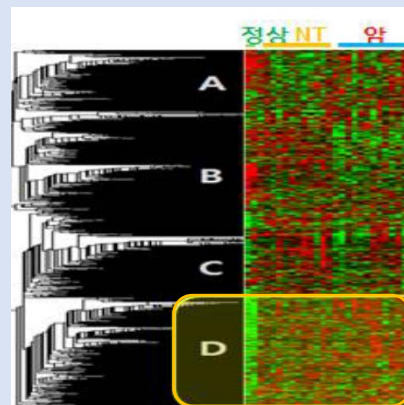
Establishment of Infrastructure for Examination Process of Early Cancer Detection Products



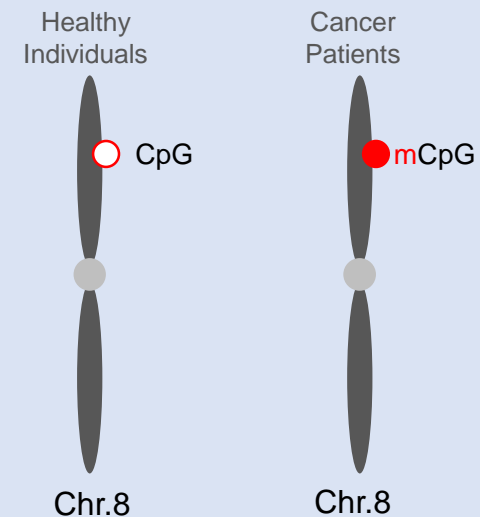
05-1 . CRC Biomarker: Syndecan-2 Methylation

Innovative CRC Biomarker Discovery Utilizing Unique Biomarker Discovery Engine

Comprehensive Analysis of Methylation Patterns in Normal Colorectal Tissue VS Colorectal Tumor Tissue



Unmet Needs



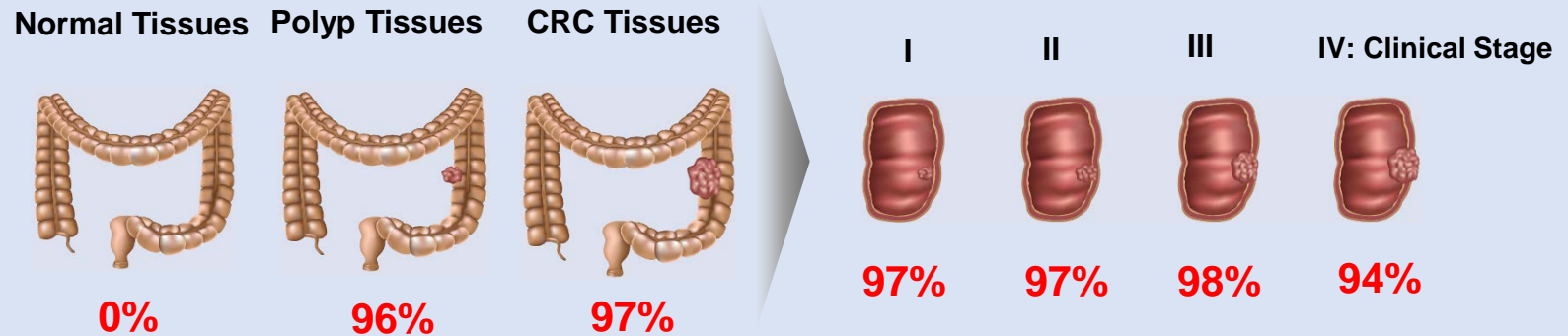
Promoter UTR **SDC2**
CpG island

Involvement in Cell Proliferation, Cell Migration, Intercellular Interaction

05-2. CRC Biomarker: Syndecan-2 Methylation

Established the Clinical Validity for Early CRC Detection in **Tissue**

[Frequency of positive SDC2 methylation (%)]



CRC Tissues ($n = 320$)
(J. Mol. Diag. 2013;15(4):498-507)

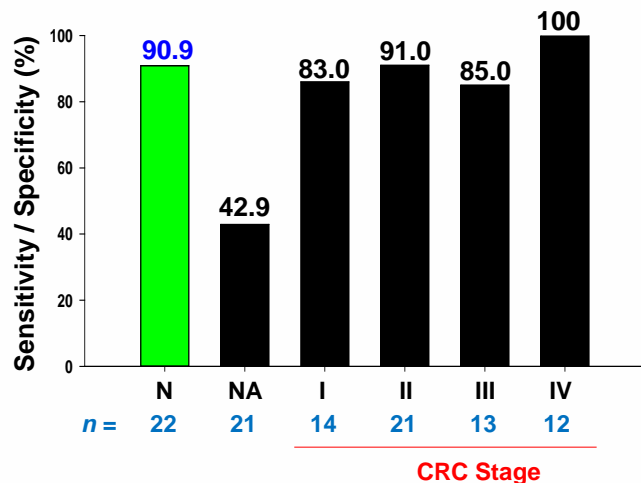
05-3. CRC Biomarker: Syndecan-2 Methylation

Established Clinical Validity Using Stool-based Biomarker Detection Method: KFDA approval (Class III)

Two Independent Clinical Trials: Confirmed High Replicability

Pilot Clinical Trial Results (n = 93)

- Total Sensitivity = 90%, Early Cancer (I – II) Sensitivity = 86%
- Total Specificity = 90.9%
- Cutoff C_T 40

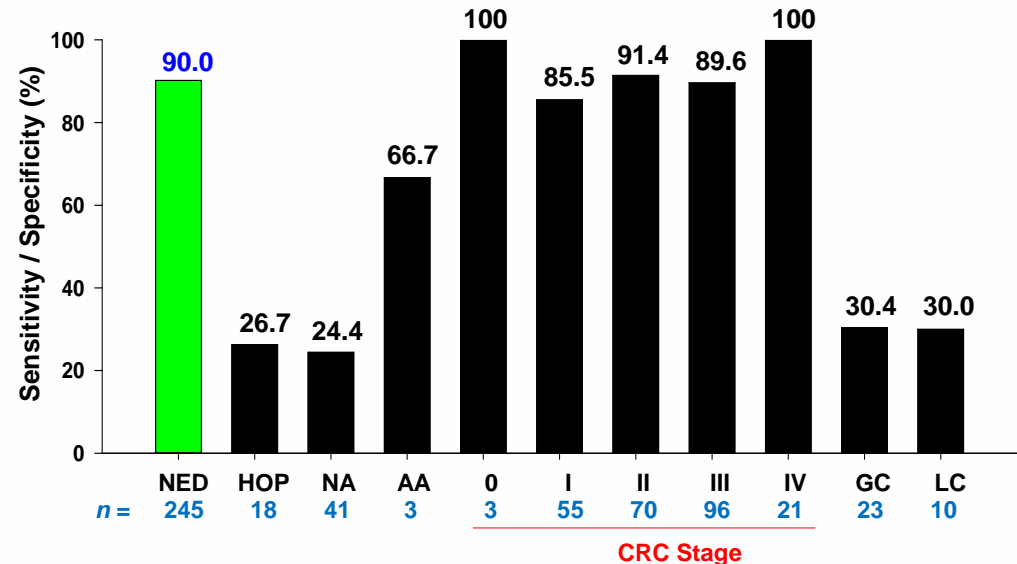


- N: Normal Person, No Colonoscopy
- NA: Non-advanced adenomas (< 1.0 cm)

Feasibility of quantifying SDC2 methylation in stool DNA for early detection of colorectal cancer
Clinical Epigenetics, 2017;9:126.

Pivotal Clinical Trial Results (n = 585)

- Total Sensitivity = 90%, Early Cancer (0 – II) Sensitivity = 89%
- Total Specificity = 90%
- Cutoff C_T 40 (1/2 algorithm)



- NED: No evidence of disease on colonoscopy,
- HOP: Hyperplastic or other polyp,,
- NA: Non-advanced adenomas (< 1.0 cm),
- AA: Advanced adenomas (≥ 1.0 cm),
- GC: Gastric cancer
- LC: Liver cancer

Published in Clinical Epigenetics, 2019;11(1):51

06-1 . Global Competitiveness (versus Exact Sciences)



VS





USA	Country	South Korea
1995	Established	2000
NASDAQ	Listed	KOSDAQ(2019.03)
Whole Stool	Specimen	1~2 g of Stool
2x methylation markers (NDRG4,BMP3) + KRAS 7 mutations + FIT (Fecal Immunochemical Test)	Biomarker Gene	SDC2 methylation Duplicate reactions
CRC 92% Polyp (≥ 1.0 cm) 42%	Sensitivity	CRC 90% Polyp (≥ 1.0 cm) ~50%
87%	Specificity	90%
~26 hours	Test Duration	~8 hours
US FDA approval (PMA) (2014)	Certification and Approval	KFDA approval (Class III) (2018)
List price : \$650 Revenue per test: ~\$490	Test price	List price: up to KRW 200K (domestic) Revenue per test: KRW 100K(domestic)

06-2. Global Competitiveness (versus Exact Sciences)



VS



<p>Whole Stool License-In</p> <p>KRAS Gene Mutations (7 sites) No patent</p> <p>FIT Polymedco</p> <p>DNA Methylation <i>NDRG4, BMP3</i> MDx Health Mayo Clinic</p>	<p>First-in-class Biomarker</p>	<p>1~2g of Stool</p> <p>Proprietary Development: Patent Granted DNA methylation SDC2</p>
<p>License-In</p> <p>QuARTS Invader probe Allele Specific PCR</p>		<p>Best-in-class Detection Technology</p>
<p> PCR Equipment Roche / AB 7500 / Qiagen</p>	<p>Detection Instrument</p>	<p> PCR Equipment Roche / AB 7500 / Qiagen</p>
<p>Cologuard (FDA)</p> <p>Up to US\$ 650 (Insurance coverage 80%) Limited to US market</p>	<p>Competitiveness</p>	<p>EarlyTect CRC (KFDA)</p> <p>When entering US, about ~US\$350 (target insurance coverage up to 100%) High global scalability</p>

07 . High Business Value of CRC Early Detection Products

Provide Diverse Benefits to Both Patient and Physician

Patient: Increased Early Diagnosis

- High confidence: **increase compliance with colonoscopy** for confirmation of positive patients
- Increase in early detection probability of CRC or polyps due to high compliance: expect significant reduction in medical expenses and improvement in quality of life

Physician: Increased Revenue Generation

- **Increase of patients undergoing colonoscopy** due to increased compliance
- Positive patients may have polyps or CRC, and **treatment results in revenue**
- Hospitals without Colonoscopy can Benefit from Additional Medical Income without Additional Investment (in Korea)

**Technology for Early Detection of Lung Cancer (LC)
EarlyTect[®] Lung Cancer
(Blood-based)**

Ongoing Pivotal Clinical Trial for K-FDA Approval (Class III)

01. Lung Cancer (LC) Early Detection

No LC early detection tool

Unmet Needs

Low-dose chest CT scan

Patients with pulmonary nodules
(prevalence can be as high as 25%)
(more than 95% are false positives)

Early detection of
high-risk LC patients

Follow-up Test

- Bronchoscopy with bronchial wash:
Sensitivity up to 30%
- Sputum cytology: sensitivity up to 35%
- Lung biopsy: high Invasiveness / high-risk
- CT follow-up test: radiation

•EarlyTect® Lung Cancer (Ongoing Pivotal Clinical Trial for Approval)

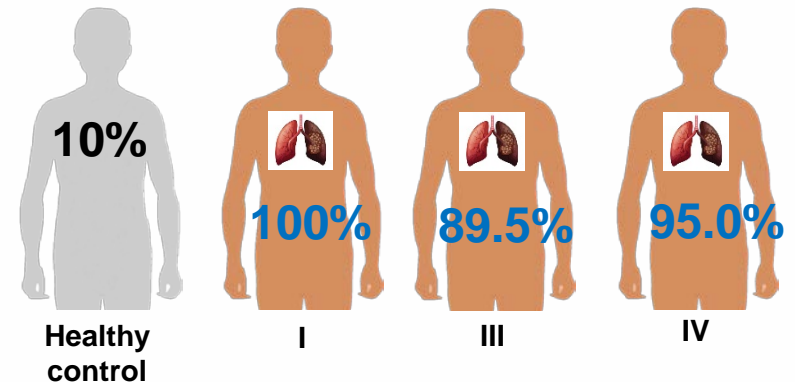


- Cancer type: lung cancer (early detection)
- Subject: patients with pulmonary nodules
- Biomarker: *PCDHGA12* methylation
- Specimen: blood (serum)
- Patent granted: South Korea, US, Europe, China and Japan

"Ranked #4 in total cancer incidence rate
(South Korea) by 11.3%"
5 year relative survival rate 26.7%

PCDHGA12 Methylation Positivity (%)

n = 80, Patients



02. Competitiveness of LC Early Detection Product

Company Name (Country)	Epigenomics (Germany)	Genomictree (South Korea)
Specimen	Plasma DNA	Serum DNA
Amount of Specimen Used	Blood 10 mL	Blood 2 mL
Biomarker Gene	SHOX2, PTGER4 methylation	A novel single gene PCDHGA12 methylation
Sensitivity	90%	92.5% (pilot trial)
Specificity	73%	90% (pilot trial)
Price	Unknown	US\$150~200 (in Korea)
Test Method (Frequency)	qPCR (triplicate tests)	qPCR (single test)
Regulatory Approval	CE-IVD (2018)	Ongoing pivotal clinical trial (Class III) (Subject n = 547 by 1 institute (KNU hospital) in South Korea)

**Technology for Early Detection of Bladder Cancer (BC)
EarlyTect[®] Bladder Cancer
(Urine-based)**

In Development

01 . Bladder Cancer (BC) Early Detection

Unmet Needs

Hematuria patients
(Approximately 85% of BC patients present with hematuria)

BC prevalence among hematuria patients
Micro: ~5%, Macro: ~20%

Cystoscopy is performed for almost all hematuria patients (lack of suitable triage test)

- High invasiveness
- Pain
- Side effects



Need for triage of high-risk patients who will undergo cystoscopy

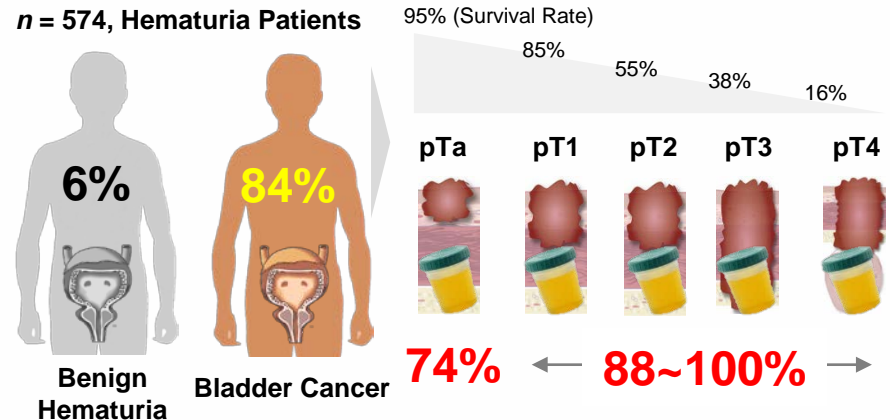
EarlyTect® Bladder Cancer



- Cancer type: bladder cancer (early detection)
- Subject: patients with hematuria
- Biomarker: *PENK* methylation
- Specimen: urine DNA (10 mL)
- Patent granted: South Korea, US, Europe, China and Japan

PENK Methylation Positivity (%)

Pilot study results



02. Competitiveness of BC Early Detection Product

Company Name (Country)	Abbott (USA)		Genomictree (South Korea)
Specimen	Urine	Urine DNA	Urine DNA
Amount of Specimen Used	Less than 1.0 mL	Urine > 30 mL	Urine 10 mL
Biomarker Gene	A single protein marker NMP22	UroVysion 4 chromosome abnormality (3, 7, 9p21, 17)	A novel single gene PENK methylation
Sensitivity	68%	76%	84% (Pilot Trial)
Specificity	79%	85%	94% (Pilot Trial)
Price	Up to US\$ 35	Up to US\$ 250	US\$ \$150~200 (in Korea)
Test Method (Frequency)	Rapid kit	FISH	qPCR (single test)
Approval	US FDA Approval (2002)	US FDA Approval (2004)	In development
Remarks	Low accuracy of BC monitoring	High cost of BC recurrence monitoring, complicated analysis of test and data (Not used in domestic)	High accuracy, simplicity

High Entry Barrier of Genomictree's Early Cancer Detection Technology

Secured Intellectual Property

- Domestic patent granted (filed): Total of 49
- Overseas patent granted (filed): Total of 50
- Biomarker patents granted in domestic and in key countries overseas

Difficulty of Technology Replication

- Ingenious biomarker: non-reproducible
- Clinical validation / approval procedure: high level of technical barriers

Countermeasures on Newly Released Products

- Marker discovery ~ verification process: high entry barrier
- Continuously obtain clinical data through post-marketing surveillance

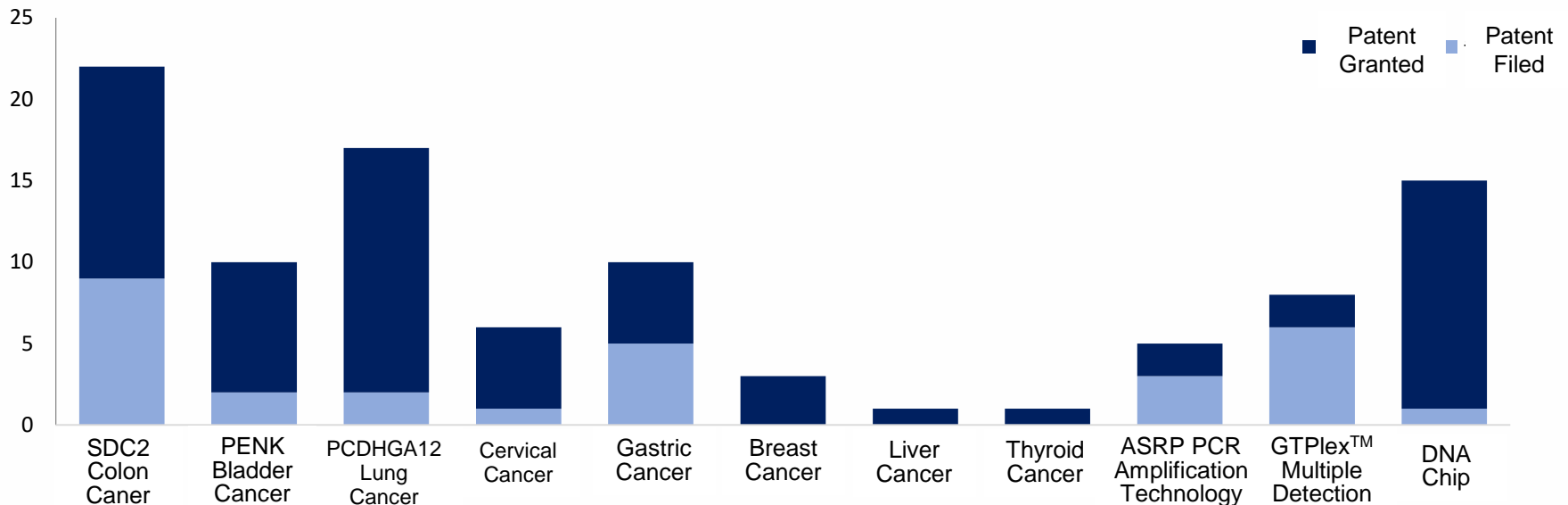
Difficult for second movers to enter the market due to inimitable and high entry barrier

**New product release, development of upgrade products and adaptive expansion
→ Market leader**

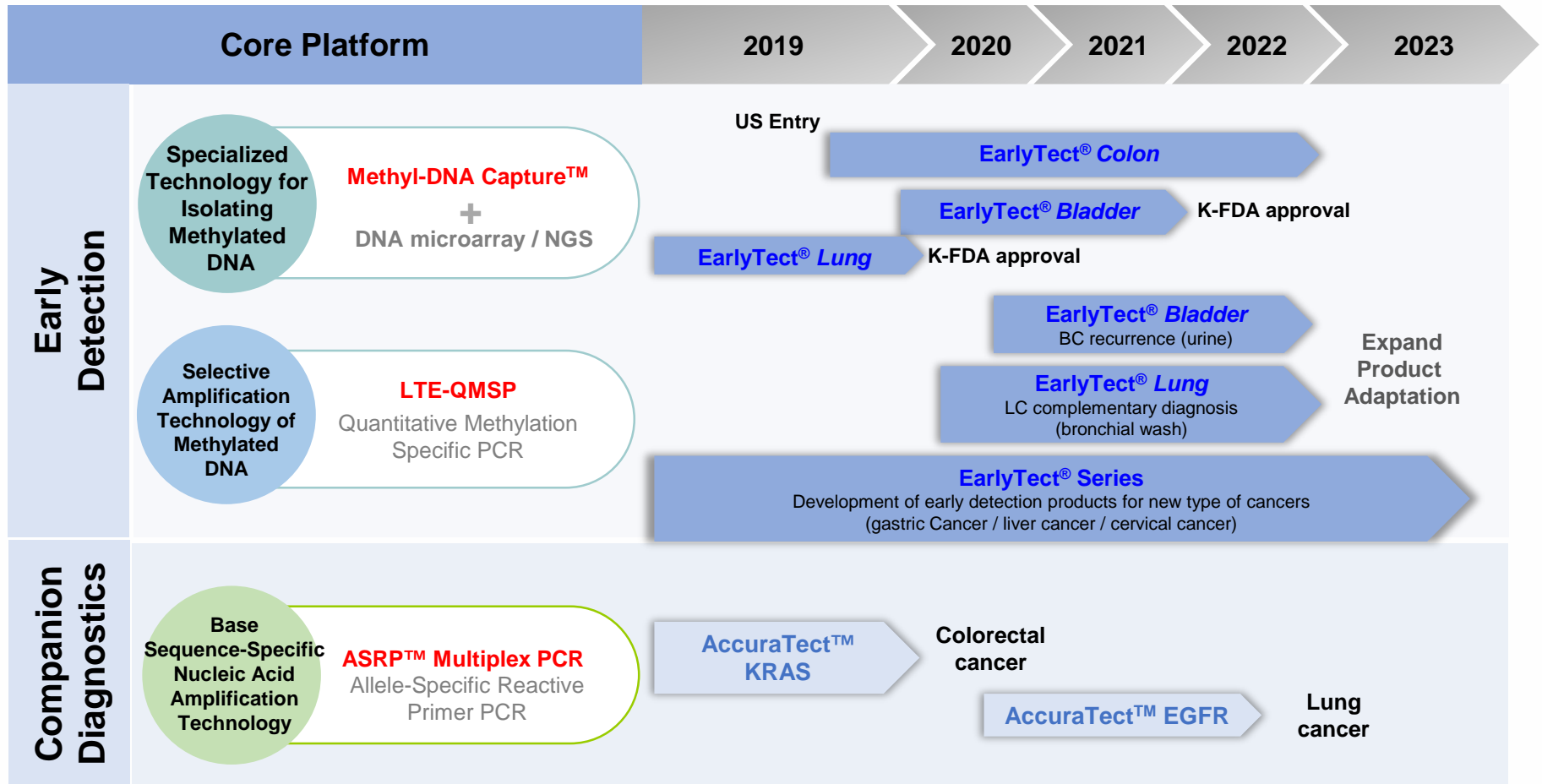
Main Intellectual Property Status

- Patenting **methylation biomarkers** by cancer types: biomarker **patents granted** in Korea & in key countries worldwide
 - Assay: patenting open **platform / element technology**
- Colorectal cancer (SDC2): patent granted in South Korea, US, Europe, Japan, China
 - Bladder cancer (PENK): patent granted in South Korea, US, Europe, Japan, China
 - Lung cancer (PCDHGA12): patent granted in South Korea, US, Europe, Japan, China
 - Methylated biomarker detection technology (LTE-qMSP): patent filed in South Korea and PCT application
 - Base sequence-specific amplification technology (ASRP-multiplex PCR): patent granted in South Korea, US, Europe, China

(No. of Patents)



Main Product Development Timeline

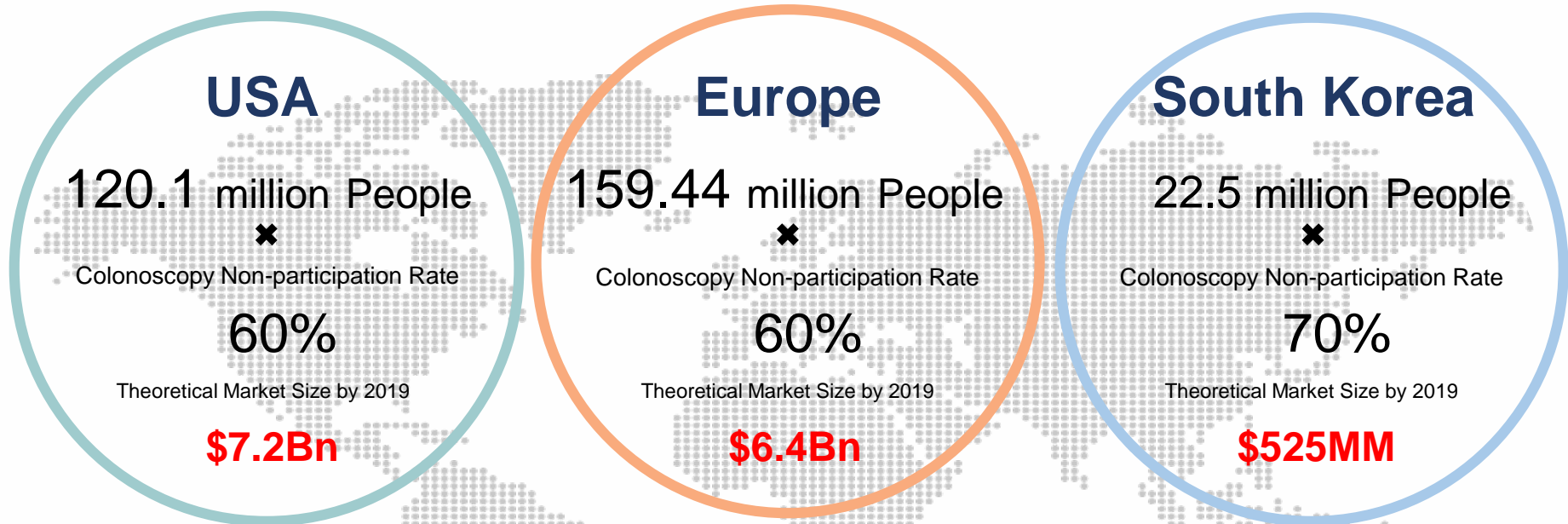




03

Commercialization

01 Potential Market Size of Colorectal Cancer Early Diagnosis by Major Countries



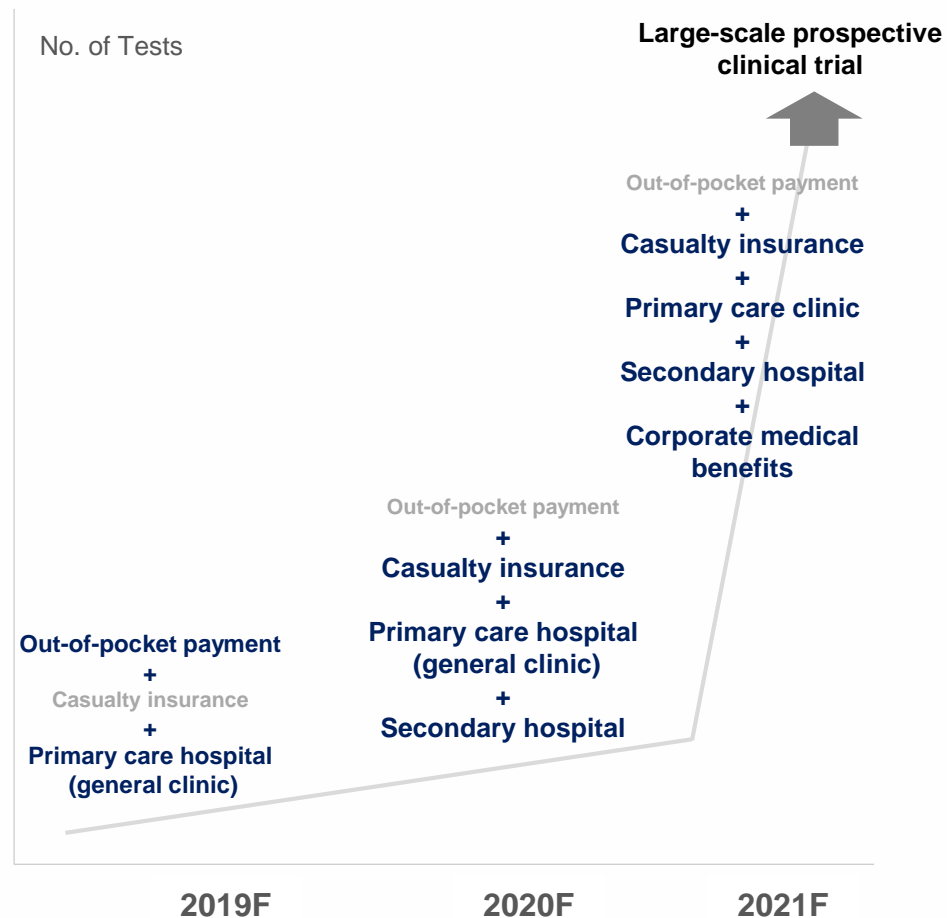
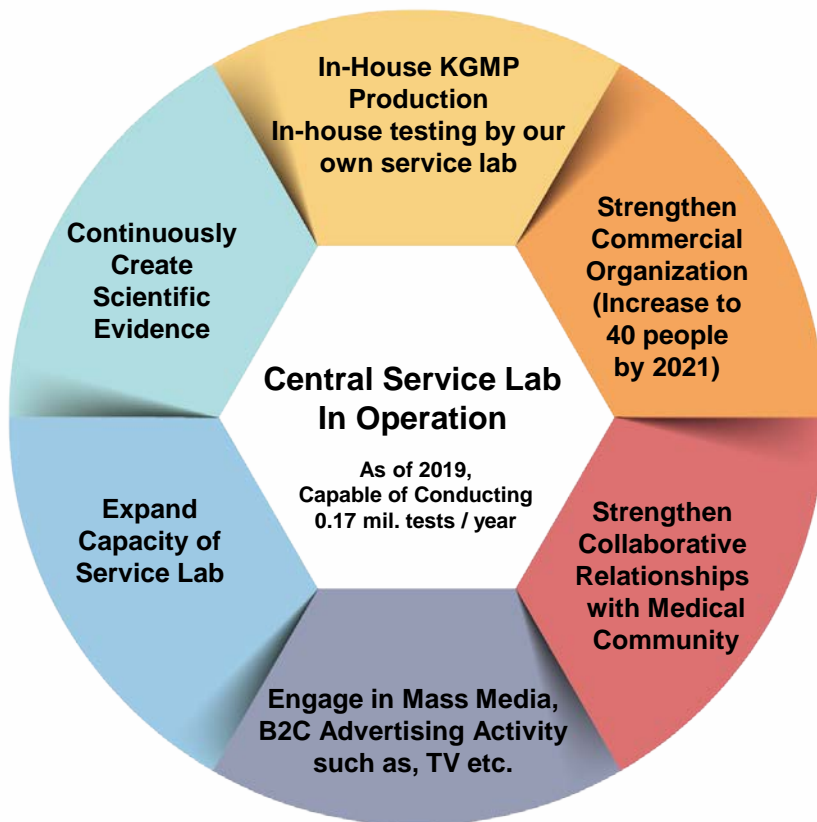
 **Genomictree**
EarlyTect® CRC

 **exact sciences**
Cologuard

Assuming **EarlyTect® Colon Cancer** is tested every three years for the population over 45 age, reimbursement is determined by cross-walk, revenue per test is estimated to be \$300 in the US, \$200 in the Europe and \$100 in Korea

02-1 Domestic Market Commercialization Strategy of CRC Early Detection Product (EarlyTect®CRC)

Target for 2019: 1) **Develop 800 Providers** (hospitals, health examination centers etc.)
2) Enhance the consumer awareness of EarlyTect

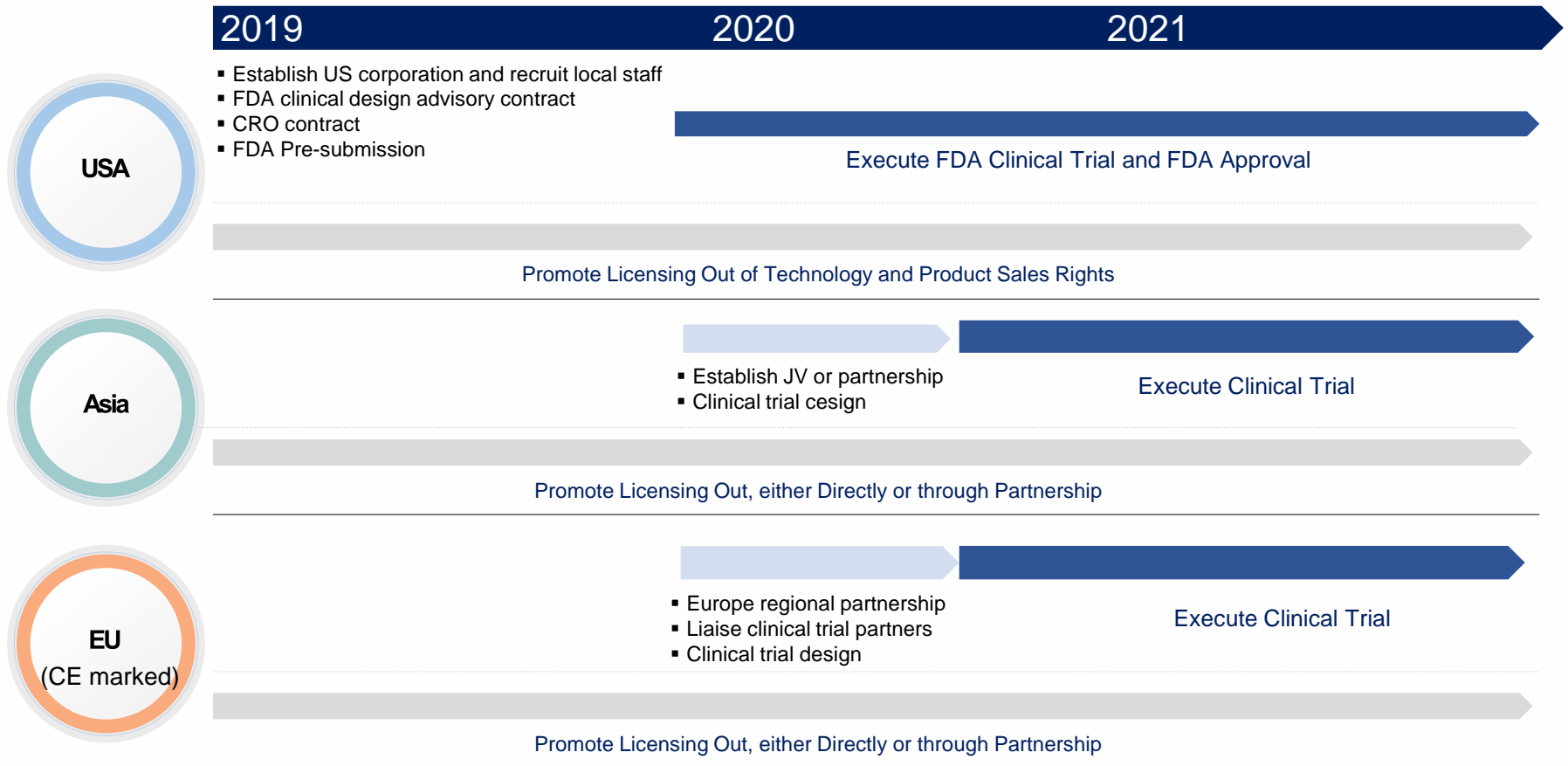


02-2. Entry Strategy to Recommend Colorectal Cancer Test

Large-scale Prospective Clinical Trial Plan Establishment of **First** Community Advisory Board in Diagnostic Industry

	Hospital	Name	Association
Post market Advisory Board	Severance Hospital, Yonsei University Health System	Kim, Nam-Kyu	The Korean Society of Coloproctology, Former Chairman / Coloproctology Research Society
	Yongin Severance Hospital, Yonsei University Health System	Han, Yoon-Dae	The Korean Society of Coloproctology / Coloproctology Research Society
	Seoul National University Hospital	Jeong, Seung-Yong	Seoul National University Cancer Hospital, Head of Colorectal Cancer Center
	Wonju Severance Christian Hospital	Kim, Hyun-Soo	Korean Society of Gastrointestinal Endoscopy, Executive
	Graduate School of Public Health Yonsei University	Ji, Sun-Ha	National Health Promotion Institute, Director of Planning
	Hospital	Name	Association
Tertiary Hospital Advisory Board (General Hospital)	Kangbuk Samsung Hospital	Park, Dong-Il	The Korean Society of Gastroenterology, Tumor Research Society, Executives
	Asan Medical Center	Byun, Jung-Sik	
	The Catholic Univ. of Korea Seoul St.Mary's Hospital	Cho, Young-Suk	
	Severance Hospital, Yonsei University Health System	Kim, Tae-Il	
	Hospital	Name	Association
Physician Advisory Board	Dr. Park's Medical Clinic	Park, Kun-Tae	Korean Physician's Association, Vice President (President of Seoul District)
	JangPyunHan Medical Clinic	Jang, Woong-Ki	Korean Physician's Association, President of Academic
	HyunDae Medical Clinic	Lee, Jeong-Yong	Korean Physician's Association, Secretary General
	HunHunHan Medical Clinic	Eun, Soo-Hoon	Korean Physician's Association, Director of Public Affairs
	Hanyang Rheumatism Clinic	Lee, Seung-Won	Korean Physician's Association, Director of Scientific Committee

03. Overseas Clinical and Advancement Plan



04. Establishment of US Corporation

Company Name	Promis Diagnostics, Inc.
Initial capital	US\$10 million (additional \$20 million planned)
Principal office	Pasadena, CA
Mission	<ul style="list-style-type: none">- Support and execute US FDA clinical trial- Promote commercialization in North America (including licensing) and manage post contract- Attract foreign investment etc.
Stage	<ul style="list-style-type: none">- Clinical trial



04

Appendix

1. Company Overview

– focusing on the Methylation Biomarker for 20 years

● General Profile

Company Name	Genomictree, Inc.
CEO	Sungwhan An
Date of Establishment	Oct. 6, 2000
Capital	KRW 10 BN
Listed	KOSDAQ (2019.03)
Net IPO proceeds	~ US\$103 MM (F/X \$1 : KRW 1,000)
No. of Employees	55
Address	- HQ : 44-6, Techno 10-ro, Yuseong-gu, Daejeon - Seoul office: Miwang Bldg, 364, Gangnam-daero, Gangnam-gu, Seoul
Main Business	<ul style="list-style-type: none"> • Molecular Diagnostic Business (Early detection of cancer) • Dielectric Analysis Service (DNA Chip, NGS etc.)

● CEO Profile



CEO An, Sungwhan

- Adjunct Professor, Cancer Research Center, Yonsei University College of Medicine
- Former Assistant Professor, Cancer Center, Yonsei University College of Medicine
- Former Post Doctorate, Stanford Univ. Medical Center
- PhD in Molecular Biology, The Univ. of Texas at Austin

● Main HR Breakdown

By Department	R&D	Production / Quality	Diagnostics service	Commercial	Business Mgmt
Total	17	4	9	18	7

02. Company History

Global Leading Corporation

- Listed at KOSDAQ in March 2019
- Overseas Expansion of Early Cancer Detection Products
- Strengthen Global Competitiveness
- Company Sales Volume of 100 billion

2000~2007

Building R&D Foundation

Oct 2000	Genomictree Inc. established
Feb 2001	Research Institute certified
May 2001	Microarray operation system constructed
Sep 2001	Certified as venture company
Sep 2002	Developed methylation biomarker discovery engine
Nov 2003	Acquired ISO9001 QMS certification
May 2004	Performed project of MOHW (Colorectal cancer)
May 2005	Performed project of MOHW (Lung cancer)
Dec 2005	Secured investment (KDB Capital etc.)
May 2007	Performed project of MOTIE (Bladder cancer)

2008~2014

Establishing Foundation for Commercialization of Core Technology

Aug 2008	Relocated HQ (new building at Tamnip-dong)
Sep 2008	Registered factory (manufacturer of pharmaceutical related products)
Jul 2009	Recognized as Inno-biz: Grade A
Jan 2013	Acquired NET certification
Nov 2013	Awarded at Korea IP Champion Competition
Apr 2014	Medical device manufacturer (MFDS) approved
Apr 2014	EarlyTect GI Syndecan2 Methylation Assay approved
Jun 2014	Acquired KGMP certification (MFDS)
Jul 2014	Secured investment (KB Investment etc.)
Sep 2014	Awarded at Bio IP Technology Golden Bell Competition, Medical device division

2015~2018

Preparing to become Global Molecular Diagnostics Corporation

Feb 2015	Acquired ISO13485 certification
Sep 2015	Named K-Brain Power corporation
Oct 2015	Secured Investment (MAGNA Investment)
Jul 2016	Listed on KONEX (228760)
Sep 2017	Secured investment (KB Investment, SOLIDUS Investment)
Dec 2015	EarlyTect® Colon Cancer CE-IVD
Aug 2018	Secured investment (DAYLI Partners)
Aug 2018	EarlyTect® Colon Cancer manufacturing approved
Oct 2018	Completed construction of molecular diagnosis examination service center

Appendix 1. Professionalism of Company Personnel

“Details, Every time, Integrity”

Maintain Core Founding Members

Founding Members: R&D / COO

CEO An, Sungwhan
Representative Director

(PhD of The Univ. of Texas at Austin
/ Stanford Univ. Medical Center)

COO Yoon, Chi-Wang
Vice President

(KOLONeENGINEERING
/ KOLON GLOBAL PM)

Director Yoon, Dae-Kyoung

(MS of Pusan National University
/ Samsung Biomedical Research Institute)

Research Director Oh, Tae-Jeong

(PhD of SungKyunKwan University
/ Korea Atomic Energy Research Institute)

PhD Kim, Myung-Soon

(PhD of Chungnam National Univ. College of
Medicine / Samsung Biomedical Research
Institute)

Clinical / Licensing

Professional RA

Yoo, Young-Jun / Lim, Eun-Kyung

(Level 1 License / Chungnam National Univ.)

IT / Bioinformatics

PhD Kim, Chul-Hong

(PhD of Pusan National University
/ Theragen Etex)

R&D

Master's Degree: 4 people

Undergraduate: 1 person

CFO

Ahn, Chan-Ho

(KICPA / BA of Seoul National University)

US FDA Consultant

PhD Kim, Do-Hyun

(10yrs of US FDA experience)

Marketing / Sales Directors

Lee, Yong-Un CCO (MNC Pharm 21 yr)

Director Son, In-Ho (MBA, MNC Pharm 18 yr)

Director Kim, Won-Bong (MNC Pharm 20 yr)

R&D

Master's Degree: 6 people

Examination Service

Clinical Pathologist: 3 people

Procurement: 1 person (Undergraduate)

2001

2007~2014

2015~Present

Recruitment of Industry-Leading Experts with Marketing Experience in Pharmaceutical Companies Expansion of Commercial Organization

Chief Commercial Officer

Lee, Yong-Un

- Major Career (Total 21 years)
 - MNC Pharmaceutical Company
Executive Director,
Sales & Marketing
 - Novartis
 - Sanofi
 - Handok Pharmaceutical
 - Daewoong Pharmaceutical

Sales Director

Kim, Won-Bong

- Major Career (Total 20 years)
 - MNC Pharmaceutical Company
Executive Lead,
Sales & Marketing
 - Novartis
 - Schering

Marketing Director

Son, In-Ho

- Major Career (Total 18 years)
 - MNC Pharmaceutical Company
Asia Regional Executive
Marketing Lead
 - Novartis
 - BMS
 - UCB

Appendix3. Expect to Expand Business Area at Dun-gok District Science-Business Belt, Daejeon (2021)

Possible to Examine More than 1 Million Tests per year



- **Construction Name:** New Construction of Genomictree Factory, Dungok District
- **Building Owner:** Genomictree Inc.
- **Location:** (Industrial Complex 7-4) Dungok-dong, Yuseong-gu, Daejeon
- **Land Area:** 6,050 m² (1,800 pyung size)
- **Building Profile**
 - 1) 1st Floor: 2,400 m²
 - 2) 2nd Floor: 2,400 m²
 - 3) 3rd Floor: 2,400 m²
 - 4) 4th Floor: 2,400 m²
- **Construction Area:** 2,436 m²
- **Ground Floor Total Surface Area:** 9,600 m² (2,900 pyung)