

Next Generation Cancer Diagnostics: Technologies and Global Markets

<https://marketpublishers.com/r/N6B587B85A80EN.html>

Date: August 2020

Pages: 318

Price: US\$ 2,750.00 (Single User License)

ID: N6B587B85A80EN

Abstracts

Report Scope:

The scope of this report includes next generation diagnostic technologies, applications, industry subsegments, major funding initiatives, patents and companies. The market sizes for next generation cancer diagnostics are given for 2019, 2020 (estimated) and 2025 (forecasted).

This report reviews the main next generation diagnostic technologies, including next generation sequencing (NGS), polymerase chain reaction (PCR), multiplex conventional, cell or extracellular vesicle capture and arrays/microfluidics. The report also discusses, in-depth, various liquid biopsy platforms and how these compare with tissue-based testing.

The report discusses several significant, large-scale research initiatives that contribute to cancer diagnostic development. Key forces driving the market are enumerated.

The structures of several important industry subsectors are reviewed, as well as major industry acquisitions and strategic alliances from Jan. 2019 through June 2020. The industry subsectors analyzed include DNA sequencing instruments, long-read DNA sequencing, informatics, PCR, droplet digital PCR, CTC capture and detection and liquid biopsy.

The market for next generation cancer diagnostics is analyzed in depth. The market is analyzed by cancer site (bladder, brain, breast, colorectal, cancer of unknown primary, gastric, gynecologic, hematologic, kidney, liver, lung, pan-cancer, pancreatic, prostate, melanoma and thyroid), by test purpose (screening/early detection, diagnosis,

monitoring, therapy guidance), by test platform (arrays/microfluidics, cell/EV capture, multiplex conventional, PCR and NGS) and by geography (North America, Europe, Asia Pacific, Rest of World).

Market data covers 2019, 2020 (estimated) and 2025 (forecasted).

There is a special section discussing the impact of COVID-19 on the market for next generation cancer diagnostics.

More than 130 companies in the next generation cancer diagnostics industry are profiled in this report.

BCC Research provides a summary of the main industry acquisitions and strategic alliances from Jan. 2019 through June 2020, including key alliance trends.

Report Includes:

22 data tables and 74 additional tables

An overview of the global market and technologies for next generation cancer diagnostics

Analyses of global market trends, with data from 2019, estimates for 2020, and projections of compound annual growth rates (CAGRs) through 2025

Analyses of the next generation cancer diagnostics market by cancer site, analysis purpose, analysis platform and region

Discussion on arrays and microfluidics (LOAC) technologies, multiplex conventional technologies, next generation sequencing technology and polymerase chain reaction (PCR) technology

Evaluation of current market trends, market size, market forecast, pipeline analysis of new products, and regulatory scenarios of the cancer diagnostics market

Discussion on factors affecting the market including cancer diagnostics needs, regulatory trends, industry structure, and patent statuses

Details of the key initiatives and programs related to the next generation cancer diagnostics market

Market share analysis of the key companies of the industry, their strategic profiling, competitive landscape, and their detailed company profiles, including Abbott Laboratories, Illumina Inc., Myriad Genetics Inc., Qiagen NV, Oche Holding AG, and Thermo Fisher Scientific Inc.

Contents

CHAPTER 1 INTRODUCTION

Study Goals and Objectives
Reasons for Doing This Study
Scope of Report
Information Sources
Methodology
Geographic Breakdown
Analyst's Credentials
BCC Custom Research
Related BCC Research Reports

CHAPTER 2 SUMMARY AND HIGHLIGHTS

CHAPTER 3 OVERVIEW

Large-Scale Initiatives and Consortia
Market Size
Liquid Biopsy as a Market Driving Force
Key Trends
Industry

CHAPTER 4 TECHNOLOGIES

Diagnostics Overview
Arrays and Microfluidics (LOAC) Technologies
DNA Microarrays
Protein Microarrays
Microfluidics
Multiplex Conventional Technologies
Next Generation Sequencing Technology
Polymerase Chain Reaction (PCR) Technology

CHAPTER 5 LIQUID BIOPSY TECHNOLOGIES

Liquid Biopsy Biomarkers
Cancer Genomics

Circulating Tumor Cell Technologies
CTC Workflow
Cell Isolation Technologies
CTC Sample Preparation Technologies
CTC Downstream Analysis Technologies
Comparison of Liquid Biopsy with Conventional Biopsy
Cancer Testing
Avatar-Driven Diagnostic Approaches

CHAPTER 6 NEXT GENERATION CANCER DIAGNOSTICS: KEY INITIATIVES AND PROGRAMS

Blood Profiling Atlas
Cancer-ID
Cancer Moon Shots
China Precision Medicine Initiative
ClinGen
CTC Trap Consortium
Early Cancer Detection Consortium
EpiFemCare
France Genomic Medicine Plan
Friends of Cancer Research Project
Human Cell Atlas
Immunomonitor Consortium
Integration of Imaging and Fluid-Based Tumor Monitoring
Liquid Biopsies and Imaging for Improved Cancer Care
Million Veteran Program
MedSeq
Next-Generation Single-Cell Analysis Program
Population Sequencing Projects
Precancer Atlas
Precision Medicine Initiative
Prompt
QuIP Project
Single-Cell Proteomics and Lipidomics Project
TopMed
Treehouse Childhood Cancer Initiative
Very Rare Cancer Consortium
Worldwide Innovative Networking (WIN) Consortium

Single-Cell Research
Cambridge Single-Cell Analysis Core Facility
Harvard Medical School Single-Cell Core
Mayo Medical Genome Facility
National Center for Single-Cell Biology
Single-Cell Analysis Core
UC San Francisco Single-Cell Analysis Center
Population Sequencing Programs

CHAPTER 7 NEXT GENERATION CANCER DIAGNOSTIC APPLICATIONS BY CANCER SITE

Introduction
Bladder Cancer
Brain Cancer
Breast Cancer
Breast Cancer Screening
Prognosis and Pharmacogenetics Tests
Breast Cancer MDx Platforms
Status of Next Generation Breast Cancer Tests
Breast Cancer Early Detection and Screening Tests
Breast Cancer Risk Tests
Response to Chemotherapy, Recurrence Probability and Subtyping
Gynecologic Cancers
Cervical Cancer
Ovarian Cancer
Colorectal Cancer
Conventional Colorectal Cancer Screening Tests
Next Generation Colorectal Cancer Diagnostic Tests
Cancer Unknown Primary
Gastric Cancer
Kidney Cancer
Hematologic Tests: Leukemia and Myeloma
Liver Cancer
Lung Cancer
Hematologic Tests: Lymphomas
Melanoma
Pan-Cancer
Prostate Cancer

Thyroid Cancer

CHAPTER 8 CANCER DIAGNOSTICS INDUSTRIES

Sequencing Instruments Industry
Long Read Sequencing Industry
Sequencing Informatics Industry
PCR Industry
Droplet Digital PCR Industry
CTC Capture and Detection Industry
Liquid Biopsy Assay Industry

CHAPTER 9 INDUSTRY ACQUISITIONS AND STRATEGIC ALLIANCES

Acquisitions
Strategic Alliances

CHAPTER 10 CANCER DIAGNOSTICS MARKETS

Forces Driving Growth
COVID-19 Impact on Cancer Diagnostic Markets
Cancer Markets
Market for Next Generation Cancer Diagnostics by Cancer Site
Bladder Cancer
Brain Cancer
Breast Cancer
Colorectal Cancer
Gynecologic Cancers
Cancer of Unknown Primary
Gastric Cancer
Hematologic Cancers
Kidney Cancer
Liver Cancer
Lung Cancer
Melanoma
Pan-Cancer
Pancreatic Cancer
Prostate Cancer
Thyroid Cancer

Market for Next Generation Cancer Diagnostics by Purpose of Analysis

Screening/Early Detection Market

Diagnosis Market

Therapy Guidance Market

Monitoring Market

Market for Next Generation Cancer Diagnostics by Test Platform

PCR Test Platform

NGS Test Platform

Array/Microfluidics Test Platform

Cells and/or EV Capture Test Platform

Multiplex Conventional Test Platform

Market for Test Platforms by Cancer Site

PCR Test Platform

NGS Test Platform

Market by Diagnostic Segment

Screening/Early Detection Market

Diagnostics Market

Monitoring Market

Therapy Guidance Market

Breast Cancer Diagnostics

Colorectal Cancer Diagnostics

Lung Cancer Diagnostics

Pan-Cancer Diagnostics

Prostate Cancer Diagnostics

Regional Market Analysis

CHAPTER 11 PATENTS

Circulating Tumor Cell Patents

Exosome Patents

Cell-free DNA (cfDNA) Patents

Biomarker-Related Patents

Patent Considerations: AI in Cancer Diagnostics

CHAPTER 12 COMPANY PROFILES

20/20 GENE SYSTEMS

ABBOTT LABORATORIES

ADAPTIVE BIOTECHNOLOGIES INC.
AGENDIA NV
AGILENT TECHNOLOGIES INC.
AKADEUM LIFE SCIENCES
AMBRY GENETICS
AMOY DIAGNOSTICS CO. LTD.
ANGLE PLC
APOCELL INC.
APOSTLE INC.
ARBOR VITA CORP.
ARCHER DX
AROCCELL AB
ARUP LABORATORIES
ASPIRA LABS
ASURAGEN, INC.
ATILA BIOSYSTEMS
AVIVA BIOSCIENCES
BECTON, DICKINSON AND CO.
BGI SHENZHEN
BIOCARTIS NV
BIOCEPT INC.
BIODESIX INC.
BIOFIDELITY LTD.
BIOFLUIDICA INC.
BIOLIDICS LTD.
BIOLOGICAL DYNAMICS INC.
BIOPROGNOS SL
BIOTHERANOSTICS INC.
BIO-TECHNE CORP.
BLUESTAR GENOMICS INC.
CANCER GENETICS INC.
CARIS LIFE SCIENCES
CASTLE BIOSCIENCES INC.
CC DIAGNOSTICS BV
CELCUITY INC.
CELLMAX LIFE
CELLULAR ANALYTICS
CELL MICROSYSTEMS INC.
CELSEE DIAGNOSTICS

CHIP DIAGNOSTICS
CHRONIX BIOMEDICAL
CIRCULOGENE THERANOSTICS
CLINICAL GENOMICS TECHNOLOGIES
CODIAK BIOSCIENCES
DANAHER CORP.
DECIPHER BIOSCIENCES
DERMTECH
DIACARTA INC.
DNALYTICS
EPIGENOMICS AG
EPIC SCIENCES INC.
EXACT SCIENCES CORP.
FLUXION BIOSCIENCES INC.
FREENOME INC.
FULGENT GENETICS INC.
GENECENTRIC THERAPEUTICS
GENEDX INC.
GENERA BIOSYSTEMS
GENESEQ BIOSCIENCES PTY LTD.
GENETRON HEALTH TECHNOLOGIES INC.
GENEOSCOPY LLC
GENEXOSOME TECHNOLOGIES INC.
GRAIL INC.
GUARDANT HEALTH INC.
HOLOGIC INC.
HTG MOLECULAR DIAGNOSTICS INC.
IDL BIOTECH
ILLUMINA INC.
IMMUNIS AI
INCELLDX INC.
INIVATA LTD.
INTERPACE BIOSCIENCES INC.
INVITAE INC.
INVIVOSCRIBE INC.
JBS SCIENCE INC.
LABORATORY CORP. OF AMERICA INC.
LEXENT BIO INC.
LUCENCE DIAGNOSTICS PTE. LTD.

LUNGLIFE AI, INC.
MDNA LIFE SCIENCES INC.
MDXHEALTH INC.
MEDGENOME INC.
MENARINI SILICON BIOSYSTEMS SPA
MIRADX
MIR SCIENTIFIC
MUTANTDX
MY PERSONAL THERAPEUTICS LTD.
MYRIAD GENETICS INC.
NEOGENOMICS LABORATORIES
NEO NEW ONCOLOGY GMBH
NODEXUS
NOVIGENIX SA
NRICH DX
NUCLEIX
NUPROBE INC.
ONCIMMUNE HOLDINGS PLC
ONCOCYTE CORP.
ONCODNA S.A.
OPKO HEALTH
OXFORD GENE TECHNOLOGY
PACIFIC EDGE LTD.
PANGAEA LABORATORY
PANGAEA ONCOLOGY
PERSONAL GENOME DIAGNOSTICS INC.
POLYMEDCO, INC.
PREDICINE INC.
PROVISTA DIAGNOSTICS INC.
QIAGEN NV
QUANTUMDX
QUEST DIAGNOSTICS INC.
RARECYTE INC.
RESOLUTION BIOSCIENCE INC.
ROCHE HOLDING AG
SAGA DIAGNOSTICS AB
SANOMICS LTD.
SIENNA CANCER DIAGNOSTICS LTD.
SINGLERA GENOMICS INC.

SISTEMAS GENOMICOS
SKYLINEDX BV
STAGE ZERO LIFE SCIENCES
STRAND LIFE SCIENCES PVT., LTD.
SYSMEX INOSTICS GMBH
THERMO FISHER SCIENTIFIC INC.
THRIVE EARLIER DETECTION CORP.
TIZIANA LIFE SCIENCES PLC
VORTEX BIOSCIENCES
VERACYTE
VOLITIONRX
XING TECHNOLOGIES LLC
YIKON GENOMICS CO. LTD.

List Of Tables

LIST OF TABLES

Summary Table: Global Market for Next Generation Cancer Diagnostics, by Cancer Site, Through 2025

Table 1: Next Generation Cancer Diagnostics: Scope of Report

Table 2: Large-Scale Initiatives: Cancer Diagnostics Industry

Table 3: Global Market for Next Generation Cancer Diagnostics, by Technology Platform, Through 2025

Table 4: Key Trends in the Market for Next Generation Cancer Diagnostics

Table 5: Next Generation Cancer Diagnostics Industry Subsectors

Table 6: Diagnostic Market Segments

Table 7: Next Generation Diagnostics: Key Analysis Platforms

Table 8: Analysis Platforms and Biomarker Types

Table 9: DNA Microarray Technologies in Cancer Diagnostics

Table 10: Design Features of Protein Microarray Technologies

Table 11: Microfluidic LOAC Types Used in Cancer Diagnostics

Table 12: Advanced Sequencing Technologies

Table 13: Illumina Next Generation Sequencing Workflow

Table 14: Thermo Fisher Scientific's Next Generation Sequencing Workflow

Table 15: Main Ingredients of PCR Technology

Table 16: PCR Process

Table 17: Advantages of Droplet Digital PCR for Single-Cell Analysis

Table 18: Liquid Biopsy Biomarker Classes

Table 19: Cancer Genomic Sequencing and Liquid Biopsy

Table 20: Single-Cell Analysis to Identify Cancer Driver Mutations

Table 21: Genomics-Based Oncology Workflow

Table 22: Unique Challenges: CTC Capture and Analysis

Table 23: CTC Workflow

Table 24: Cell Differentiators

Table 25: Cell Isolation Technologies

Table 26: CTC Sample Preparation Technologies

Table 27: Single-Cell Analysis Technologies

Table 28: Estimated Annual Solid Biopsy Procedures, U.S., Selected Cancers

Table 29: Main Risks of Needle-Based Tissue Biopsies

Table 30: Factors in Tissue Biopsy

Table 31: Approaches to Avatar-Driven Cancer Diagnostics

Table 32: R&D: Next Generation Cancer Diagnostics

Table 33: Single-Cell Core Research Facilities

Table 34: Population Sequencing Projects

Table 35: Bladder Cancer Diagnostic Tests, 2020

Table 36: Brain Cancer: Next Generation Diagnostics Tests, 2020

Table 37: Annual Breast Cancer Treatment Decisions, U.S., by Cancer Classification, 2020

Table 38: Breast Cancer MDx Technology Platforms, 2020

Table 39: Next Generation Breast Cancer Tests, 2020

Table 40: Next Generation Human Papilloma Virus and Cervical Cancer Screening and Genotyping Tests, 2020

Table 41: Ovarian Cancer Early Screening Formats, 2020

Table 42: Ovarian Cancer: Next Generation Diagnostics Tests, 2020

Table 43: CRC Screening Tests, 2020

Table 44: Colorectal Cancer: Next Generation Diagnostic Tests, 2020

Table 45: Cancer Unknown Primary: Next Generation Diagnostic Tests, 2020

Table 46: Gastric Cancer: Next Generation Diagnostic Tests, 2020

Table 47: Kidney Cancer: Next Generation Diagnostic Tests, 2020

Table 48: Leukemia and Myeloma: Next Generation Diagnostic Tests, 2020

Table 49: Liver Cancer: Next Generation Diagnostic Tests, 2020

Table 50: Five-Year Survival Rates for Non-Small Cell Lung Cancer, 2020

Table 51: Lung Cancer: Next Generation Diagnostic Tests, 2020

Table 52: Lymphoma: Next Generation Diagnostic Tests, 2020

Table 53: Melanoma: Next Generation Diagnostic Tests, 2020

Table 54: Pan-Cancer: Next Generation Diagnostic Tests, 2020

Table 55: Prostate Cancer Next Generation Diagnostic Tests, 2020

Table 56: Thyroid Cancer: Next Generation Diagnostics Tests, 2020

Table 57: Advanced Sequencing Industry Company Positioning

Table 58: End-to-End Sequencing Approaches

Table 59: Long-Read Sequencing Industry

Table 60: Sequencing Informatics Industry

Table 61: PCR Companies

Table 62: Advantages of Droplet Digital PCR for Single-Cell Analysis

Table 63: Digital PCR Liquid Biopsy Industry

Table 64: CTC Separations Industry

Table 65: Liquid Biopsy Assay Industry: Company Focus

Table 66: NGS-Based Liquid Biopsy Market Differentiation

Table 67: Cancer Diagnostics Industry Acquisitions, Jan. 2019-July 2020

Table 68: Cancer Diagnostics Strategic Alliances, Jan. 2019-July 2020

Table 69: Liquid Biopsy: Forces Driving Growth, 2020

Table 70: Limitations of Solid Biopsy in Cancer Applications

Table 71: Low-Frequency Mutation Detection

Table 72: Global Market for Next Generation Cancer Diagnostics, by Cancer Site, Through 2025

Table 73: Ovarian Cancer: Five-Year Survival Rate

Table 74: NIH Liquid Biopsy Early Detection Initiative

Table 75: Global Market for Next Generation Cancer Diagnostics, by Purpose of Analysis, Through 2025

Table 76: MRI and Liquid Biopsy Methods

Table 77: Early Detection: Tissue of Origin Approaches

Table 78: Global Market for Next Generation Cancer Diagnostics, by Test Platform, Through 2025

Table 79: FDA-Approved or CE-Marked Tests with Epigenetic Component

Table 80: Global Market for PCR-Based Cancer Diagnostics, by Cancer Site, Through 2025

Table 81: Global Market for NGS-Based Cancer Diagnostics, by Cancer Site, Through 2025

Table 82: Global Market for Next Generation Cancer Screening/Early Detection, by Cancer Site, Through 2025

Table 83: Global Market for Next Generation Cancer Diagnosis, by Cancer Site, Through 2025

Table 84: Global Market for Next Generation Cancer Monitoring, by Cancer Site, Through 2025

Table 85: Global Market for Next Generation Cancer Therapy Guidance, by Cancer Site, Through 2025

Table 86: Global Market for Breast Cancer Diagnostics, by Analysis Method, Through 2025

Table 87: Global Market for Colorectal Cancer Diagnostics, by Analysis Method, Through 2025

Table 88: Global Market for Lung Cancer Diagnostics, by Analysis Method, Through 2025

Table 89: Global Market for Pan-Cancer Diagnostics, by Analysis Method, Through 2025

Table 90: Global Market for Prostate Cancer Diagnostics, by Analysis Method, Through 2025

Table 91: Global Market for Next Generation Cancer Diagnostics, by Region, Through 2025

Table 92: Patent Activity: Circulating Tumor Cells (CTCs), by Region, Jan. 2010–June 2020

Table 93: Patent Activity: Exosomes, by Region, Jan. 2010-June 2020

Table 94: Patent Activity: cfDNA, by Region, 2010-June 2020

Table 95: Patent Activity: Cancer Biomarkers, by Region, Jan. 2010-June 2020

List Of Figures

LIST OF FIGURES

Summary Figure: Global Market for Next Generation Cancer Diagnostics, by Cancer Site, 2019-2025

I would like to order

Product name: Next Generation Cancer Diagnostics: Technologies and Global Markets

Product link: <https://marketpublishers.com/r/N6B587B85A80EN.html>

Price: US\$ 2,750.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/N6B587B85A80EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970