

Global Liquid Biopsy Market Opportunity & Technology Outlook 2020

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Abstracts

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Biopsy is conducted to diagnose a disease, or to assess its progression so as to take an effective clinical action either by removing the affected site surgically or by drawing samples from the target tissue to conduct investigative studies about the disease. This technique is widespread and has been used since 12th century. The techniques involving solid biopsy have without any doubt, improved with advancement in scanning processes and surgical advancement. However, the traditional biopsy methods are of no match when it comes to the effective diagnosis and prognosis of cancer, besides ailments like renal failure, infections, fertility and transplantation related issues.

Liquid biopsy, on the other hand has offered us new insights in the diagnosis of diseases. It is the blood sample tests in which biomarkers associated with different disease are evaluated to determine the progression of a disease. This has allowed the emergence of targeted personalized diagnosis with increased efficiency outcomes and decreased diagnostic errors.

The emergence of liquid biopsy plays a vital role in prognosis as well as diagnostic studies for cancer treatment. Cancer has been one of the most difficult to be diagnosed at an early stage due to its fast mutation capabilities, immunosurveillance evading properties, circumventing growth suppressors among others. Besides, the genomic structure of cancer is highly unstable and in response to the therapy administered, cancer undergoes changes in their antigenic properties induced by mutations to escape immune action. Repeated tissue biopsy to assess the regression of the disease becomes cumbersome and dangerous for the patient. Therefore, the need arises for targeted therapy emerges, allowing real time monitoring to ensure that the targeted

therapy is received by the cancer cells or to adopt a different biomarker in case the cancer cells mutate.

Liquid biopsy unlike normal biopsy is a non-invasive process in which samples can be drawn from blood, serum, saliva, urine or cerebral spinal fluid. Tissue biopsy on the other hand is invasive, costly, and painful and could be even risky in number of cases. Therefore, it becomes quite exciting to investigate the opportunities presented by liquid biopsies. For cancer diagnostic studies under liquid biopsy three techniques are normally used namely circulating tumor cells (CTCs), cell-free tumor nucleic acids (ctNA) and exosomes which includes small molecules like signal proteins, microRNAs, mRNAs, lipids, and exoDNA. Diagnosis of liquid biopsy is supplemented by the advancement in next generation sequencing techniques in which tumor cells, after they are captured, have their genomic and proteomic sequences run and analyzed using computational technologies to offer insight into the biomarkers associated with the respective tumor cells, which could then be in turn used for personalized diagnostic care.

“Global Liquid Biopsy Market Opportunity & Technology Outlook 2020” Report Highlights:

Introduction & Mechanism of Action of Liquid Biopsy

Diagnostic Technological Advancement Supplementing Liquid Biopsy Market

Clinical Investigation Using Cell-Free Circulating Tumor DNA for Different Indications

Combinational Analysis on the Working of Circulating Tumor Cells & Cell-Free Tumor DNA

Market Share of Different Liquid Biopsy Techniques

Business Model of Liquid Biopsy Market

Contents

1. INTRODUCTION TO LIQUID BIOPSY: A NON-INVASIVE, GAME-CHANGER DIAGNOSTIC TOOL

2. MECHANISM OF ACTION: MAJOR COMPONENTS OF LIQUID BIOPSY

2.1 Circulating Tumor Cells

2.1.1 Parameters Guiding Circulating Cell Tumors

2.2 Circulating Tumor Nucleic Acids (ctNA)

2.2.1 Cell-Free Tumor DNA

2.2.2 Other Circulatory Tumor Nucleic Acid: microRNA, mRNA & Long Non-Coding RNAs

2.3 Exosomes

3. CIRCULATORY TUMOR CELLS: A SNAPSHOT; ITS HISTORY, BIOLOGICS, SELECTION METHOD, DETECTION PROCEDURES, ENRICHMENT PROCEDURES, ANALYSIS & DISEASE MONITORING

3.1 The History & Introduction

3.2 The Selection Methods

3.3 The Analysis Methodologies

3.4 The Scope of Disease Monitoring

3.5 The Biologics of Circulatory Tumor Cells

4. DIAGNOSTIC TECHNOLOGICAL ADVANCEMENT SUPPLEMENTING LIQUID BIOPSY MARKET

4.1 Glimpses to the Next Generation Sequencing Techniques

4.2 Methodologies Involved in the Next Generation Sequencing

4.2.1 Genomics

4.2.2 Transcriptomics

4.2.3 Epigenomics

4.3 Flowchart Depicting Genomic Analysis Using Next Generation Sequencing

4.3.1 A Basic Workflow of Next Generation Sequencers

4.3.2 Integrated Data Analysis

4.4 Pricing Implications of Next Generation Sequencing On the Liquid Biopsy Market

5. CLINICAL INVESTIGATION USING CELL-FREE CIRCULATING TUMOR DNA

FOR DIFFERENT INDICATIONS

- 5.1 Lung Cancer
- 5.2 Breast Cancer
- 5.3 Colorectal Cancer
- 5.4 Melanoma
- 5.5 Gastric Cancer
- 5.6 Prostate Cancer
- 5.7 Brain Cancer
- 5.8 Detection & Monitoring of Type 1 Diabetes
- 5.9 Pancreatic Cancer
- 5.10 Renal Cancer
- 5.11 Retinoblastoma

6. COMBINATIONAL ANALYSIS ON THE WORKING OF CIRCULATING TUMOR CELLS & CELL-FREE TUMOR DNA

7. BUSINESS MODEL OF LIQUID BIOPSY MARKET: A HOTBED FOR START-UPS AND VENTURE CAPITAL FUNDING

8. OTHER MARKET MODALITIES ASSOCIATED WITH LIQUID BIOPSY

- 8.1 Accreditation through Clinical Laboratory Improvement Amendments (CLIA) Testing: Green Signal for Liquid Biopsy
- 8.2 The Impact of Service Providers in Liquid Biopsy Market
- 8.3 The Role of Liquid Biopsy In The Light Of Insurance Associated Issues

9. LIQUID BIOPSY MARKET SHARE IN NORTH AMERICA, EUROPE, ASIA-PACIFIC & REST OF THE WORLD

- 9.1 North America
- 9.2 Europe
- 9.3 Asia-Pacific
- 9.4 Rest of the World
 - 9.4.1 Africa
 - 9.4.2 South America
 - 9.4.3 Middle East

10. MARKET DRIVERS: CLINICAL UTILITIES OF LIQUID BIOPSY. WHY DO WE

NEED THEM?

- 10.1 Help Monitor Minimal Residue Disease
- 10.2 Help Track Emergence of Drug Resistance
- 10.3 Liquid Biopsy Used As a Predictive & Pharmacodynamic Biomarker
 - 10.3.1 Cell-Free Tumor DNA as Predictive Biomarker
 - 10.3.2 Cell-Free Tumor DNA as Pharmacodynamic Biomarker

11. MARKET TRENDS IN LIQUID BIOPSY. IS THE ERA OF TISSUE BIOPSY COMING TO AN END?

12. MARKET SHARE OF DIFFERENT LIQUID BIOPSY TECHNIQUES

13. MARKET CHALLENGES: LIQUID BIOPSY, A REVOLUTION IN CANCER DIAGNOSIS; A MYTH OR A REALITY?

- 13.1 Complex Immuno-Biochemical Mechanism of Cancer Cells
- 13.2 The Risk of False Positive Liquid Biopsy Test
- 13.3 The Risk of False Negative Liquid Biopsy Test
- 13.4 Inconclusive Nature of Cancer Biomarkers
- 13.5 Lack of Standardized Protocols
- 13.6 Business Model Based Challenges
- 13.7 Issues Related To Regulatory Framework

14. CONCLUSION: LIQUID BIOPSY; REAL-TIME & REVOLUTIONARY NOVEL DIAGNOSTIC TOOL

15. COMPETITIVE LANDSCAPE

- 15.1 AdnaGen (QIAGEN)
- 15.2 Agena Bioscience
- 15.3 Angle
- 15.4 ApoCell
- 15.5 Biocept
- 15.6 BioFluidica
- 15.7 Bio-Rad Laboratories
- 15.8 Boreal Genomics
- 15.9 Chronix Biomedical
- 15.10 Clearbridge BioMedics

- 15.11 Cynvenio
- 15.12 Cytotrack
- 15.13 Epic Sciences
- 15.14 Exosome Diagnostics
- 15.15 Fluidigm
- 15.16 Fluxion Biosciences
- 15.17 Genomic Health
- 15.18 Guardant Health
- 15.19 HansaBiomed
- 15.20 Horizon Discovery
- 15.21 iCellate
- 15.22 Illumina
- 15.23 Inivata
- 15.24 Janssen Diagnostics
- 15.25 Molecular MD
- 15.26 Myriad Genetics
- 15.27 Natera

List Of Figures

LIST OF FIGURES

- Figure 1-1: Limitations of Tissue Biopsy
- Figure 1-2: Hallmarks of Cancer Cells
- Figure 1-3: Advantages of Liquid Biopsy
- Figure 2-1: Major Components of Liquid Biopsy
- Figure 2-2: Properties of Circulatory Tumor Cells
- Figure 2-3: Techniques Guiding Circulating Cell Tumors Separation
- Figure 2-4: Cell-Free Tumor DNA
- Figure 2-5: Other Circulatory Tumor Nucleic Acid
- Figure 2-6: Exosomes Based Liquid Biopsy
- Figure 3-1: Introduction to Circulatory Tumor Cells
- Figure 3-2: Selection Methods of Circulating Tumor Cells
- Figure 3-3: The Analysis Methodologies for Circulatory Tumor Cells
- Figure 3-4: The Scope of Disease Monitoring With Circulatory Tumor Cell
- Figure 3-5: The Biologics of Circulatory Tumor Cells
- Figure 4-1: Methodologies Involved In the Next Generation Sequencing
- Figure 4-2: Genomics Attributes of Next Generation Sequencing
- Figure 4-3: Proteomic Attributes of Next Generation Sequencing
- Figure 4-4: Epigenomic Attributes of Next Generation Sequencing
- Figure 4-5: Flowchart Depicting Genomic Analysis Using Next Generation Sequencing
- Figure 4-6: Pricing Implications of Next Generation Sequencing On the Liquid Biopsy Market
- Figure 5-1: Liquid Biopsy for Detection of Lung Cancer
- Figure 5-2: Liquid Biopsy for Detection of Breast Cancer
- Figure 5-3: Liquid Biopsy for Detection of Colorectal Cancer
- Figure 5-4: Liquid Biopsy for Detection of Melanoma
- Figure 5-5: Liquid Biopsy for Detection of Gastric Cancer
- Figure 5-6: Liquid Biopsy for Detection of Prostate Cancer
- Figure 5-7: Liquid Biopsy for Detection of Brain Cancer
- Figure 5-8: Detection & Monitoring of Type 1 Diabetes
- Figure 5-9: Liquid Biopsy for Detection of Pancreatic Cancer
- Figure 5-10: Liquid Biopsy for Detection of Renal Cancer
- Figure 5-11: Liquid Biopsy for Detection of Retinoblastoma
- Figure 6-1: Circulating Tumor Cells & Cell-free Tumor DNA
- Figure 6-2: Differential Study of Circulating Tumor Cells & Cell-free Tumor DNA
- Figure 7-1: Liquid Biopsy for Start-Ups & Venture Capitalists; Favorable Factors

- Figure 8-1: Accreditation Program for Liquid Biopsy
- Figure 8-2: Service Providers in Liquid Biopsy Market
- Figure 8-3: Liquid Biopsy & Insurance Coverage Plans
- Figure 9-1: Liquid Biopsy Market in North America
- Figure 9-2: Liquid Biopsy Market in Europe
- Figure 9-3: Liquid Biopsy Market in Asia-Pacific Region
- Figure 9-4: Liquid Biopsy Market in Rest of the World
- Figure 10-1: Liquid Biopsy in Monitoring Minimal Residual Disease
- Figure 10-2: Liquid Biopsy in Tracking Emergence of Drug Resistance
- Figure 10-3: Liquid Biopsy as a Predictive & Pharmacodynamic Biomarker
- Figure 11-1: Market Trends in Liquid Biopsy
- Figure 12-1: Liquid Biopsy Market by Technique
- Figure 13-1: Market Challenges Associated With Liquid Biopsy

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