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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

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