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Molecular diagnostic biomarkers in oncology using the liquid biopsy

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The fundamental goal of molecular diagnostics in oncology is to accurately identify the cancer. Recent trends in genetics, molecular diagnostics and the liquid biopsy are shaping every aspect of oncology today. Liquid biopsy and related technologies have expanded the study of tumor dynamics and mutational drift over time. Liquid biopsy provides a useful surrogate for traditional tissue biopsy as an easy, non-invasive access to molecular information about the tumor genome. It helps to identify therapeutic targets, follows acquired resistance mechanisms and serves as a diagnostic/screening tool. This presentation will discuss the current status of liquid biopsy, its trends, its limitations and its future potential in oncology. Over the past six years discoveries in molecular diagnostics coupled with developments in the biotechnology of liquid biopsy, have led to enormous progress in the diagnosis and treatment of patients with cancer. These advances have improved the detection limits of cancer and have greatly improved treatment decisions. As the spectrum of genes implicated in cancer expands and the technologies used in liquid biopsy grow, there is every reason to expect that there will be more improvement in the diagnosis and treatment of cancer.

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