Reviewer’s report

Title: Emerging concepts in liquid biopsies

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Reviewer: Christof von Kalle

Reviewer's report:

In the first part, the manuscript presents an overview on current liquid biopsy technologies and applications with a focus on cancer. cfDNA, CTCs, and exosomes are discussed, and examples from recent literature are given. The second part deals with novel and emerging technologies for the detection of low numbers of DNA variants, epigenetic alterations and enrichment of tumor-specific exosomes. Finally, the authors provide an outlook for the potential of liquid biopsies as diagnostic tools. The chapter on mutation baseline in healthy individuals is interesting, but my feeling was that it is slightly deviating from the common theme, especially in the section where the evolution of cancer mutations is discussed. A similar logic applies for the paragraph on the functional CTC studies. These include the potential for early detection, the necessity to increase technical sensitivities and specificities despite the fact that low levels of mutated alleles can already be detected quite well with current techniques, and theoretical considerations such as the demand for a minimum of genome equivalents for ultra-sensitive detection of mutant alleles in liquid biopsies.

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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