Advances in cancer biomarkers – from biochemistry to clinic for a critical revision – would represent a fast and easy contribution to rationalize the use of current and future tumor markers.

In fact, the clinician too often has expectations in terms of diagnosis, prognosis, and monitoring of therapy that the present tumor markers cannot fulfill.

These limits do not only hamper a correct therapeutic approach to the cancer patient but they have a high direct and indirect economic cost.

A lot of national and international guidelines have been published to educate physicians to rationalize the use of these important laboratory parameters, but results appear anyway disappointing.

These limited results also affect the clinical applications of the new cancer biomarkers that too often show a stimulating experimental background not followed by so positive clinical applications.

This tangled situation seems to also depend on a mere clinical approach to the old and new tumor markers while the biochemistry, physiology, and pathophysiology of the molecule, acting as tumor marker, is too often neglected. This inadequate knowledge of the molecular basis of a particular molecule/tumor marker may hamper a careful evaluation of the diagnostic/prognostic potential of these biomarkers.

The aim of this book is to illustrate not only the clinical biochemistry and clinical oncology of some important biomarkers but also to stress their physiological and pathophysiological roles. The knowledge of these roles may represent a fundamental step to really know tumor markers, ameliorating, in such a way, their use with undeniable clinical and economic advantages.

Importantly, at present there are a plethora of old and new tumor markers, and for our purpose we have considered just some that for their biochemical, laboratory, and clinical peculiarities may better represent the tangled status of these fundamental biomarkers of laboratory medicine.
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From biochemistry to clinic for a critical revision
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