

Tumor biomarker

A cancer [biomarker](#) refers to a [substance](#) or process that is indicative of the presence of [cancer](#) in the body.

A biomarker may be a molecule secreted by a tumor or a specific response of the body to the presence of cancer. Genetic, epigenetic, proteomic, glycomic, and imaging biomarkers can be used for cancer diagnosis, prognosis, and epidemiology. Ideally, such biomarkers can be assayed in non-invasively collected biofluids like blood or serum.

Increasing evidence has revealed that [lncRNAs](#) will emerge as promising cancer [biomarkers](#) or therapeutic targets in cancer treatment. lncRNA-ATB, a Long non-coding RNA activated by [TGF- \$\beta\$](#) , was found to be abnormally expressed in certain cancers and participate in the development and progression of tumors. In addition, aberrant lncRNA-ATB expression was also associated with the clinical characteristics of tumors ¹⁾.

While numerous challenges exist in translating biomarker research into the clinical space; a number of gene and protein based biomarkers have already been used at some point in patient care; including, AFP (Liver Cancer), BCR-ABL (Chronic Myeloid Leukemia), BRCA1 / BRCA2 (Breast/Ovarian Cancer), BRAF V600E (Melanoma/Colorectal Cancer), CA-125 (Ovarian Cancer), CA19.9 (Pancreatic Cancer), CEA (Colorectal Cancer), EGFR (Non-small-cell lung carcinoma), HER-2 (Breast Cancer), KIT (Gastrointestinal stromal tumor), PSA (Prostate Specific Antigen) (Prostate Cancer), S100 (Melanoma), and many others.

Mutant Proteins themselves detected by Selected Reaction Monitoring (SRM) have been reported to be the most specific biomarkers for cancers because they can only come from an existing tumor.

[Germ cell tumor biomarker](#)

[Beta-human chorionic gonadotropin](#)

[Alpha-fetoprotein](#)

[Placental alkaline phosphatase](#)

Glioma biomarker

see [Glioma biomarker](#).

¹⁾

Tang F, Xu Y, Wang H, Bian E, Zhao B. lncRNA-ATB in cancers: what do we know so far? Mol Biol Rep. 2020 Apr 4. doi: 10.1007/s11033-020-05415-5. [Epub ahead of print] Review. PubMed PMID:

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