



BREATHOMICS IN LUNG CANCER: DOGS & E-NOSE

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The study of the volatile fraction of the metabolome is an emerging research field, mainly focuses on health-related volatile organic compounds (VOCs) and holds the promise to deliver non-invasive diagnostic tools.

VOCs present in human breath come from normal and abnormal cells, although in different mixture compositions. A subset of VOCs may only appear in abnormal cells. So, each disease may be characterized by a unique VOCs pattern, thus LC may have its own pattern, which could be used as a LC biomarker.

As published in our previous papers dogs are able to discriminate LC in breath samples, using an olfactory strategy called combinatorial selectivity which is common to all animals, and its resolution capacity is several orders of magnitude higher than the best technology currently available

The challenge now is to develop the proper technology (breathomics, E-Nose) to transfer this knowledge to clinical practice.