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POSTER

An *in-vitro* study to diagnose and distinguish breast and lung cancers using the PCB technology based nanodosimeter

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Abstract

Generally, in the modern field of nanodosimetry, the Printed Circuit Board (PCB) technology based 3D positive ion detector has been identified as a device to detect cancers in lungs and breast region. In the nano environment, these cancer cells have been diagnosed by the exhalation of specific volatile organic compounds (VOCs) which serves as eminent source biomarkers for cancer diagnosis. Earlier studies reported that lungs emit various VOCs include Benzene, Ethylbenzene, Cyclohexane, methanol, ethanol, dodecane and tridecane, and the breast emit alkanes, alkenes, ketones, halogenated hydrocarbons, aldehydes, alcohols, esters, unsaturated hydrocarbons, terpenes, siloxanes, and aromates. By employing VOCs exhalation, the field of nanodosimetry aids as a direct evidence that the diagnosis of critical organs like lungs and breast cancer cells without harming the patients is possible. In our present out, we carried out in diagnosing and to distinguishing the cancer tissues of breast and lung using PCB technology based nanodosimeter.

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3D Positive Ion detector, Breast and lung cancer detection, Ion induced impact ionization, VOC.

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