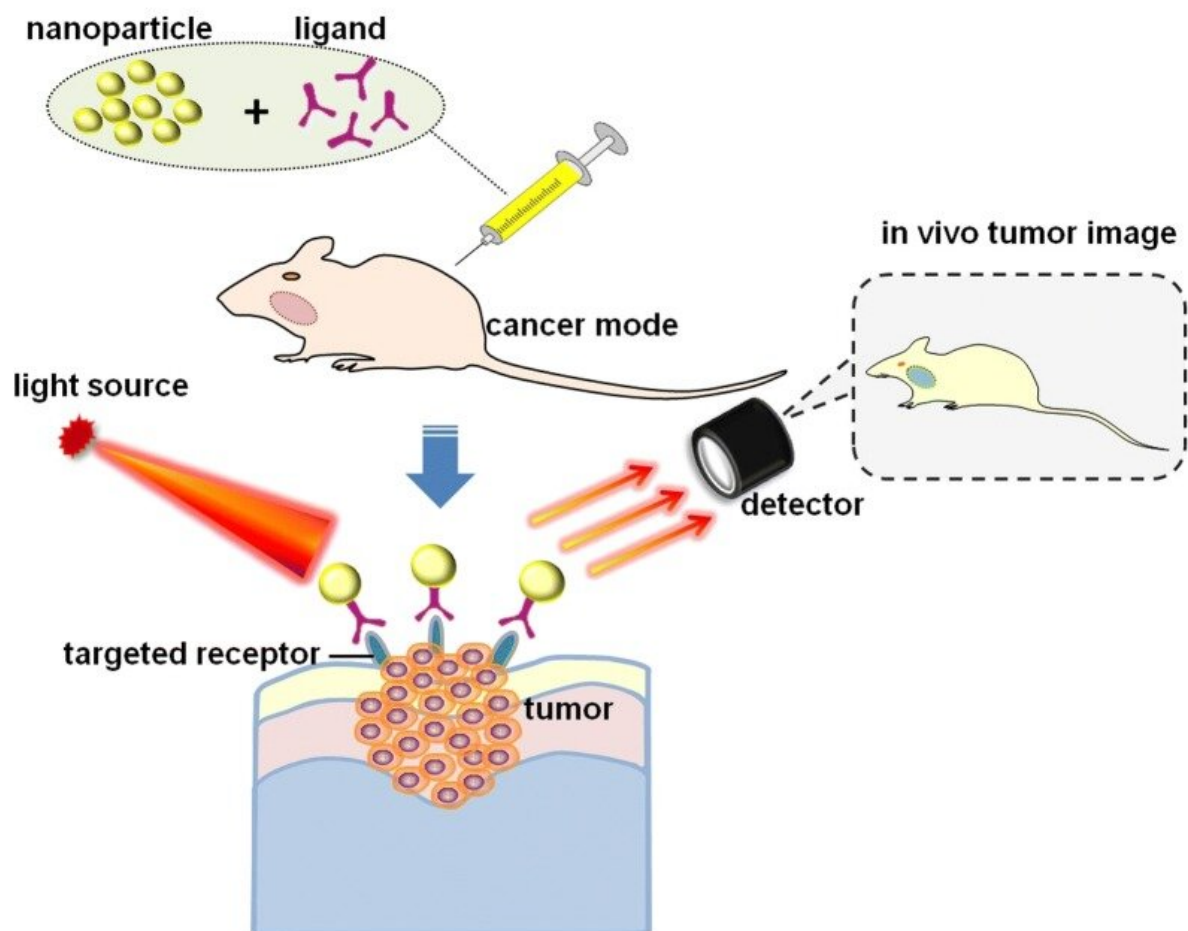
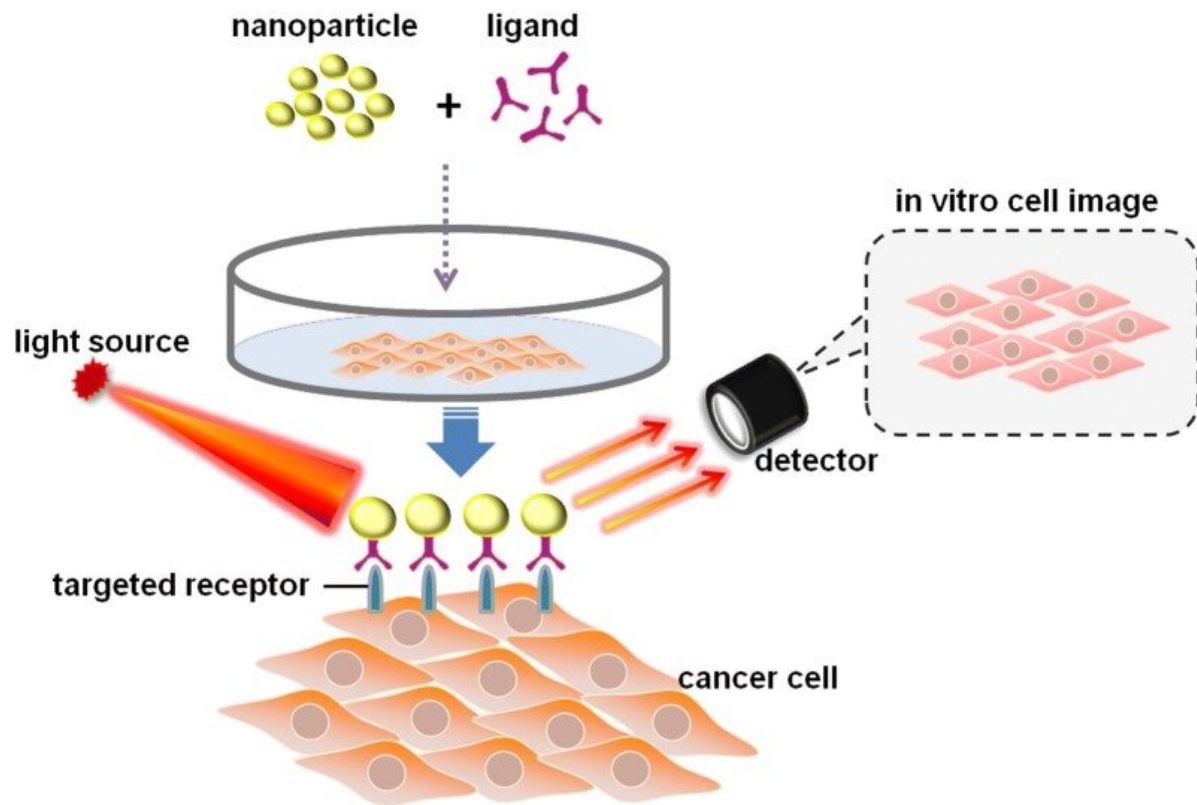


# Detecting tongue cancer

January 25 2021, by David Bradley

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The application of nanotechnology for in vitro and in vivo bioimaging of oral cancer. *International Journal of Biomedical Engineering and Technology* (2021). DOI: 10.1504/IJBET.2020.112424

Progress in image processing has allowed many advances in medicine. Work published in the *International Journal of Biomedical Engineering and Technology* now shows how an efficient and optimized system for image processing can be used to distinguish cancerous lesions on the tongue from other non-cancerous features.

Mahnoor Rasheed, Ishtiaq Ahmad, Sumbal Zahoor, Muhammad, and Nasir Khan of The University of Lahore in Pakistan, point out that [tongue](#) cancer is a rare form of cancer, but nevertheless can be very debilitating and in the worst cases just as lethal as other cancers. Advanced and precise early detection of cancer of any kind can lead to a better prognosis and outcome for the patient.

The new approach to tongue cancer detection involves a two-step process. In the first, advanced filtering techniques are applied to "clean" images by removing noise from the micrographs obtained from tissue cultures. In the second phase, the image is segmented to allow the computer algorithm to analyze the details in the image and discern those features associated with cancer. The team tested three segmentation and detection techniques and while all three worked well, the most efficient and accurate was the marker controlled watershed method.

The team explains that the field of medical science for the detection of cancerous cells in different parts of the body is vast and challenging. An iteration of this sort focusing on a specific form of [cancer](#) takes

medicine a step forward in this ongoing battle.

**More information:** Mahnoor Rasheed et al. An efficient and optimized system for detection of cancerous cells in tongue, *International Journal of Biomedical Engineering and Technology* (2021). [DOI: 10.1504/IJBET.2020.112424](https://doi.org/10.1504/IJBET.2020.112424)

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