

# Saliva liquid biopsy

March 19 2016

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Today at the 45th Annual Meeting & Exhibition of the American Association for Dental Research, researcher David Wong, University of California - Los Angeles, USA, will present a study titled "Saliva Liquid Biopsy." The AADR Annual Meeting is being held in conjunction with the 40th Annual Meeting of the Canadian Association for Dental Research.

Researchers performed a prospective blinded study on 37 non small cell lung carcinoma (NSCLC) patients to explore if [saliva](#) can be used to detect actionable epidermal growth factor receptor (EGFR) [mutations](#) in NSCLC patients at the Sichuan Lung Cancer Institute in Chengdu, China. The frequency of EGFR mutations is three times higher in Asian countries.

For each patient, both pre- and post-biopsy/surgery, [plasma](#) and saliva were collected. Codes were removed from samples and blinded. Biopsy tissues were genotyped for EGFR L858R and exon 19del by digital PCR (ddPCR) while plasma and saliva were assayed for same EGFR mutations by electric field induced released and measurement (EFIRM). The results were statistically analyzed at the MD Anderson Cancer Center for concordance analysis with the tissue-based genotyping data.

Saliva [liquid biopsy](#) (sLB) correctly predict both EGFR exon 19del and L858R status for all 37 pre- and post-surgery/biopsy saliva samples (AUC=1.0). Plasma from the same 37 patients' pre- and post-surgery/biopsy were measured by sLB with AUC=1.0 for exon 19del, and AUC=0.96 for L858R. Signals in saliva are cleaner than that in

plasma for L858R. For exon 19del, both plasma and saliva have clean separation between mutants and wild types.

This study confirmed the performance of saliva liquid biopsy for detecting epidermal growth factor receptor mutations from pre-biopsy plasma and saliva samples, providing confidence that sLB can be translationally and clinically validated.

**More information:** This is a summary of oral presentation #1552, "Saliva Liquid Biopsy," which will be presented on Saturday March 19, 2016, 8 a.m. - 8:15 a.m. at the Los Angeles Convention Center, room #407.

Provided by International & American Associations for Dental Research

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