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LETTER TO THE EDITOR

# A Letter to Editor Regarding the Article "Identification of Differentially Expressed Proteins from Smokeless Tobacco Addicted Patients Suffering from Oral Squamous Cell Carcinoma"

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Dear Editor,

We recently had an opportunity to read a valuable research by UU Malik et al., who published an original article in Pathology & Oncology Research in which they extensively analyzed the protein biomarkers in the tissue samples obtained from histopathologically diagnosed patients of oral squamous cell carcinoma (OSCC) [1]. The study included OSCC tissue sampling from those subjects who were addict smokeless tobacco users for past 12 years or more. This study not only highlighted the variety of different onco-protien markers of OSCC but, also improved our knowledge about some diagnostic markers among them. Despite the fact that this article is primarily focused around biomarkers of OSCC, we fail to understand that why they've used the word 'Addicted' in their title to define their targeted population but, haven't mentioned the utilization of any addiction/dependence scale or criteria to label them as addicted.

To the best of our understanding, the reason why authors have mentioned the word 'Addicted' for the patients who used smokeless tobacco was to emphasize on the fact that extensive or prolonged smokeless tobacco exposure was the primary cause of OSCC in their sampled population. There are numerous risk factors that influence the development of oral squamous cell carcinoma such as exposure to viruses like human papilloma virus (HPV) or Epstein-Barr virus (EBV), ethinicity, alcohol and tobacco use [2]. Therefore, it is important to define the study population on the basis of widely accepted criteria or an assessment tool. Other way around is an attempt to exclude the exposure of at least other major risk factors that contribute to pathogenesis of OSCC which is also clearly lacking in the research conducted by Malik UU et al.

There are numerous tested scales for assessing the dependency of smokeless tobacco. Ebbert JO et al. in their study modified the Fagerstorm test for nicotine dependence-smokeless tobacco (FTND-ST) to specifically evaluate the dependence of smokeless tobacco which has now opened doors for the fine assessment of dependence in patients who frequently abuse it. Similarly, Oklahoma Scale for Smokeless Tobacco Dependence (OSSTD) is a multidimensional tool which is also used for evaluation of dependence on smokeless tobacco. Tobacco Dependence Screener for Smokeless Tobacco (TSD-ST) is another scale based on DSM-IV for measurement of dependence in tobacco addicted patients. Within past few years, dependence or addiction measurement scales such as Fagerstrom Test have been in a spotlight and are playing a key role in various studies and researches. The remarkable psychometric properties of such tools have proved them as fairly helpful and conclusive enough to reach the diagnosis of addiction [3, 4]. Unfortunately, there was no mentioning of utilization of such tools which creates a slight confusion here as to what actually helped Malik UU and associates to conclude that extracted tissue samples were obtained from smokeless tobacco addicted patients?

The reason why it is important here to obtain an evidence based diagnosis of smokeless tobacco addiction is due to the fact that authors have clearly associated the diagnosis of OSCC in the sampled patients to the usage of smokeless tobacco. In the first paragraph of discussion section, they've clearly stated in the sixth line that '*smokeless tobacco associated oral carcinoma subjects*'. This particular statement is sufficient to understand that authors have already hypothesize an association between discussed pathology and exposure of smokeless tobacco which was merely on the basis of history without mentioning any specific statistical test which might

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have strengthened the association between risk exposure and pathology.

Hoppin JA et al. critically highlighted the possibility of selection bias with tissue sampling in molecular research. They explain how diagnostic clinical approach choose subjects for sampling with dissimilar exposure prevalence than general population in case-control studies which lead to selection bias. Hoppin JA et al. has particularly emphasized to avoid selection bias while sampling the tumor tissue in epidemiological molecular studies [5].

We would like to sum up our argument with an emphasis on the importance of considering selection bias in tissue sampling studies, as the diagnostic part is not in control of molecular researchers. Moreover, we believe that any such constraints should be mentioned in the limitations section which would help future researchers to avoid such bias. Lastly, detailed explanation about study population inclusion criteria is important especially when the population is particularly specified within the title of research article. Nevertheless, we're thankful for the efforts of author in identifying and thoroughly analyzing the specific biomarkers related to OSCC.

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## References

1. Malik, U. U., Siddiqui, I. A., Ilyas, A., Hashim, Z., Staunton, L., Kwasnik, A., . . . Zarina, S. (2019). Identification of differentially expressed proteins from smokeless tobacco addicted patients suffering from Oral squamous cell carcinoma. Pathol Oncol Res, 1–9
2. Rivera C (2015) Essentials of oral cancer. Int J Clin Exp Pathol 8(9): 11884–11894
3. Ebbert JO, Patten CA, Schroeder DR (2006) The Fagerström test for nicotine dependence-smokeless tobacco (FTND-ST). Addict Behav 31(9):1716–1721
4. Mushtaq N, Huque R, Beebe LA, Shah S, Siddiqi K (2019) Evaluation of tobacco dependence measures in south Asian smokeless tobacco users. Drug Alcohol Depend 203:66–71
5. Hoppin JA, Tolbert PE, Taylor JA, Schroeder JC, Holly EA (2002) Potential for selection bias with tumor tissue retrieval in molecular epidemiology studies. Ann Epidemiol 12(1):1–6