Impact of Smoking and Alcohol on Cancer Pain Management

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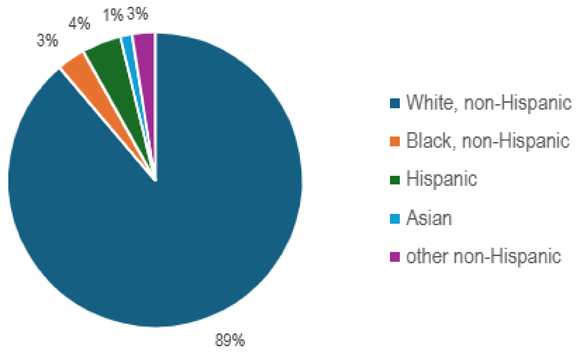
INTRODUCTION

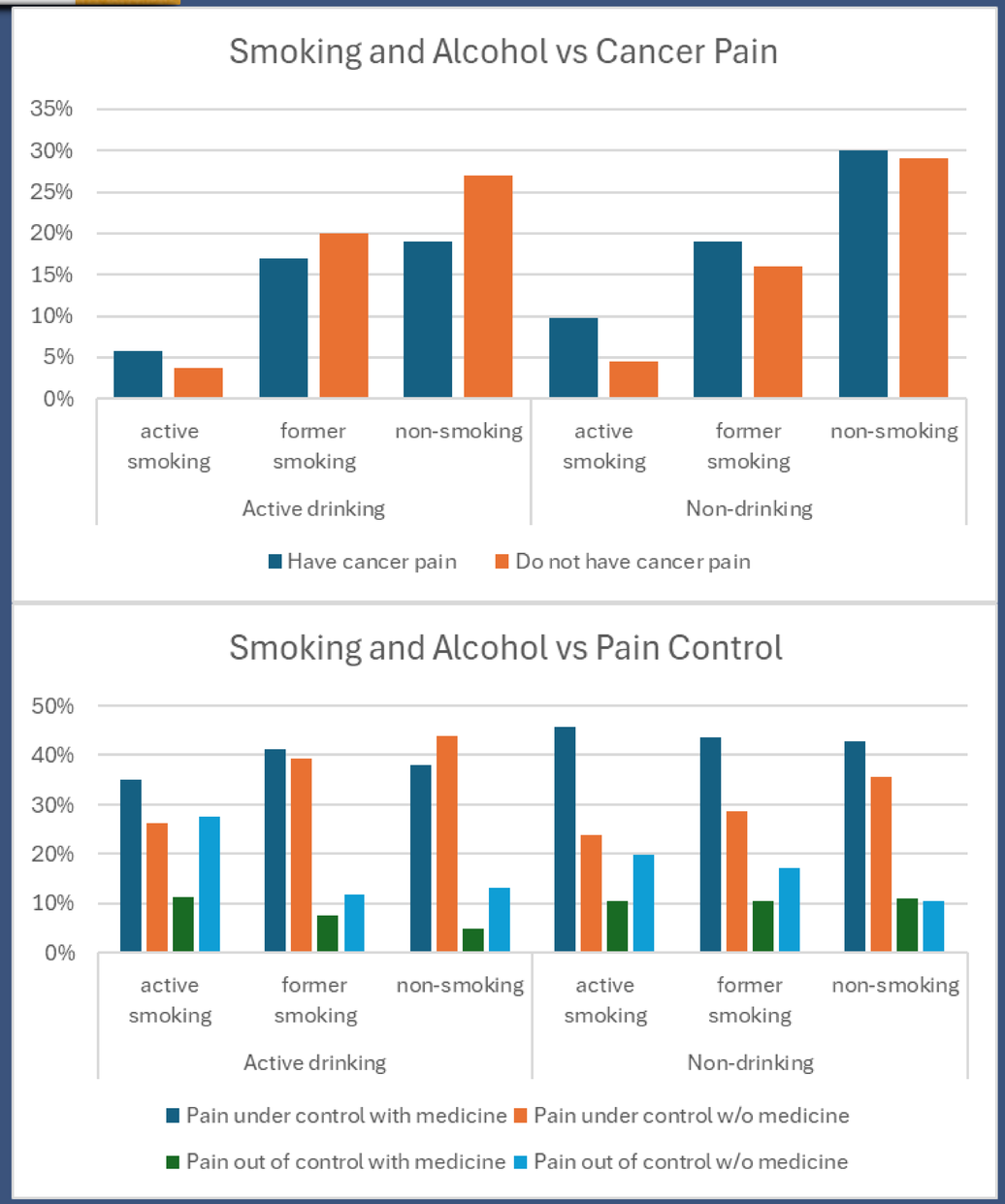
According to the CDC, West Virginia has the highest smoking rate nationwide and a significant excessive drinking problem, both lead to greater health risks. Studies have shown that active smoking status and lower alcohol consumption are associated with higher pain expression within cancer patients (Dev et al., 2018; Calvert et al., 2022). This study will examine the effects of smoking and alcohol use together on pain expression and control in cancer patients.

METHODS

- N =15,032 Individuals who reported their smoking status, alcohol use, and cancer diagnosis in the 2022 Behavioral Risk Factor Surveillance System (BRFSS).
- Cross tabulations and a two -step hierarchical binary logistic regression were performed.
- 55.8% were females
- 85.6% were urban residents



Smoking makes cancer pain Worse



RESULTS

The overall model was significant, $x^2(5) = 292.90$, $p<.001$. Drinking was associated with a decreased chance of having pain from cancer or cancer treatment ($OR=0.85$, 95% CI[.786, .925], $p<.001$), whereas smoking appeared to increase such chance ($OR=1.244$, 95% CI[1.147, 1.349], $p<.001$).

Among the 1,466 cancer patients who reported having pain from cancer or cancer treatment, those who drank alcohol had a higher chance of maintaining their pain under control without medication or treatment. Smoking significantly increased the likelihood that pain would be out of control without medication or treatment.

DISCUSSION

Our results aligned with the patterns observed in prior studies. Smoking and alcohol use seemed to exert opposite effects on cancer pain expression and control. However, due to the limitations of the BRFSS questionnaire, this study did not assess the magnitude of smoking and alcohol use effects on cancer pain. Future research should investigate these effects across different types of cancer.

References:

Calvert, C. M., Burgess, D., Erickson, D., Widome, R., & Jones-Webb, R. (2022). Cancer pain and alcohol self-medication. *Journal of Cancer Survivorship*, *17*(6), 1561–1570. https://doi.org/10.1007/s11764-022-01215-x

Dev, R., Kim, Y. J., Reddy, A., Hui, D., Tanco, K., Liu, D., Park, M., Williams, J., Carmack, C., & Bruera, E. (2018). Association between tobacco use, pain expression, and coping strategies among patients with advanced cancer. *Cancer*, *125*(1), 153–160. https://doi.org/10.1002/cncr.31783

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