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Editorial

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The Missed Opportunity: HIV, Hepatitis C Virus (HCV), and Hepatitis B Virus (HBV) Positive Patients in Neoadjuvant and Perioperative Immunotherapy Clinical Trials for Lung Cancer

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Abstract

This editorial addresses a critical oversight in recent clinical trials on neoadjuvant or perioperative immunotherapy for lung cancer, the exclusion of patients with human immunodeficiency virus (HIV), hepatitis C virus (HCV), and hepatitis B virus (HBV). The ethical implications of this exclusion are highlighted, demonstrating how it undermines principles of inclusivity and equity in clinical research. We emphasize the necessity to include these patients to enhance the generalizability of trial findings. We suggest that trial eligibility criteria be revised, and collaborations with patient advocacy groups be initiated to ensure more inclusive future trials. This approach aims to uphold ethical research practices, yielding robust, representative data, and ultimately improving patient care in oncology.

Categories: Internal Medicine, HIV/AIDS, Oncology
Keywords: neoadjuvant, global health, clinical trials, inclusivity, immunotherapy, bioethics and ethics in research, hbv, hcv, hiv, lung cancer

Editorial

The field of oncology has missed a significant opportunity in the recently published clinical trials on neoadjuvant and perioperative immunotherapy for lung cancer [1-4]. Various prominent studies failed to incorporate patients with human immunodeficiency virus (HIV), hepatitis C virus (HCV), and hepatitis B virus (HBV) infections [1-4] despite the guidance issued by the U.S. Food and Drug Administration (FDA) [5] and the National Comprehensive Cancer Network [6] advocating for their inclusion.

This oversight undermines the ethical principles of inclusivity and equity in clinical research but also hampers the generalizability of trial findings to the broader population of lung cancer patients. Excluding this population denies them access to potentially lifesaving therapies and deprives clinicians of much-needed critical evidence to guide treatment decisions. The exclusion of these individuals overlooks the higher incidence of cancer in this group compared to the general population [7-10]. Emerging data from real-world observations and certain focused studies suggest that immunotherapy can be safely and effectively administered to patients with HIV, HCV, and HBV, especially when their viral infections are well-managed [11-17]. This approach necessitates close collaboration with infectious disease specialists to ensure that the viral status is optimally managed. For HBV and HCV, this includes pre-treatment screening and regular monitoring. HIV patients should have a stable condition, as indicated by specific viral load and CD4+ T-cell counts, prior to starting immunotherapy [7]. Adjusting clinical trial eligibility criteria to include these patients when their infection is effectively managed could enhance the relevance and applicability of the trial outcomes, fostering a deeper understanding of the benefits and risks of these treatments in a more diverse patient population.

Future trials in immunotherapy for lung cancer should actively include patients with HIV, HCV, and HBV. This can be achieved by revising trial eligibility criteria and ensuring that trial designs accommodate the unique medical needs of these populations. Expanding eligibility criteria to include patients with chronic viral infections will enhance the validity of study results and the understanding of immune checkpoint inhibitors. Collaborating with patient advocacy groups and community healthcare providers can also help ensure the representation of these populations in clinical research.

Additional Information

Author Contributions

All authors have reviewed the final version to be published and agreed to be accountable for all aspects of the work.

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References

1. Forde PM, Spicer J, Lu S, et al.: Neoadjuvant nivolumab plus chemotherapy in resectable lung cancer . N Engl J Med. 2022, 386:1973-85. 10.1056/NEJMoa2202170
2. Wakelee H, Liberman M, Kato T, et al.: Perioperative pembrolizumab for early-stage non-Small-cell lung cancer. N Engl J Med. 2023, 389:491-503. 10.1056/NEJMoa2302983
3. Provencio M, Nadal E, González-Larriba JL, et al.: Perioperative nivolumab and chemotherapy in stage III non-small-cell lung cancer. N Engl J Med. 2023, 389:504-13. 10.1056/NEJMoa2215530
4. Heymach JV, Harpole D, Mitsudomi T, et al.: Perioperative durvalumab for resectable non-small-cell lung cancer. N Engl J Med. 2023, 389:1672-84. 10.1056/NEJMoa2304875
5. Cancer Clinical Trial Eligibility Criteria: Patients with HIV, Hepatitis B Virus, or Hepatitis C Virus Infections . (2020). Accessed: December 16, 2023: https://www.fda.gov/regulatory-information/search-fda-guidance-documents/cancer-clinical-trial-eligibility-criteria-p....
6. NCCN Clinical Practice Guidelines in Oncology: Cancer in People with HIV. Version 1.2024 . (2023). Accessed: December 24, 2023: https://www.nccn.org/professionals/physician_gls/pdf/hiv.pdf.
7. Tapia Rico G, Chan MM, Loo KF: The safety and efficacy of immune checkpoint inhibitors in patients with advanced cancers and pre-existing chronic viral infections (Hepatitis B/C, HIV): a review of the available evidence. Cancer Treat Rev. 2020, 86:102011. 10.1016/j.ctrv.2020.102011
8. Shiels MS, Islam JY, Rosenberg PS, Hall HI, Jacobson E, Engels EA: Projected cancer incidence rates and burden of incident cancer cases in HIV-infected adults in the United States through 2030. Ann Intern Med. 2018, 168:866-73. 10.7326/M17-2499
9. Hernández-Ramírez RU, Shiels MS, Dubrow R, Engels EA: Cancer risk in HIV-infected people in the USA from 1996 to 2012: a population-based, registry-linkage study. Lancet HIV. 2017, 4:e495-504. 10.1016/S2352-3018(17)30125-X
10. Meijide H, Pértega S, Rodríguez-Osorio I, et al.: Increased incidence of cancer observed in HIV/hepatitis C virus-coinfected patients versus HIV-monoinfected. AIDS. 2017, 31:1099-107. 10.1097/QAD.0000000000001448
11. Spano JP, Veyri M, Gobert A, et al.: Immunotherapy for cancer in people living with HIV: safety with an efficacy signal from the series in real life experience. AIDS. 2019, 33:F13-19. 10.1097/QAD.0000000000002298
12. El Zarif T, Nassar AH, Adib E, et al.: Safety and activity of immune checkpoint inhibitors in people living with HIV and cancer: a real-world report from the cancer therapy using checkpoint inhibitors in people living with HIV-International (CATCH-IT) Consortium. J Clin Oncol. 2023, 41:3712-23. 10.1200/JCO.22.02459
13. Pasello G, Pavan A, Attili I, et al.: Real world data in the era of Immune Checkpoint Inhibitors (ICIs): increasing evidence and future applications in lung cancer. Cancer Treat Rev. 2020, 87:102031. 10.1016/j.ctrv.2020.102031
14. Pertejo-Fernandez A, Ricciuti B, Hammond SP, et al.: Safety and efficacy of immune checkpoint inhibitors in patients with non-small cell lung cancer and hepatitis B or hepatitis C infection. Lung Cancer. 2020, 145:181-5. 10.1016/j.lungcan.2020.02.013
15. Pu D, Yin L, Zhou Y, Li W, Huang L, Cai L, Zhou Q: Safety and efficacy of immune checkpoint inhibitors in patients with HBV/HCV infection and advanced-stage cancer: a systematic review. Medicine (Baltimore). 2020, 99:e19013. 10.1097/MD.0000000000019013
16. Gonzalez-Cao M, Morán T, Dalmau J, et al.: Assessment of the feasibility and safety of durvalumab for treatment of solid tumors in patients with HIV-1 infection: the Phase 2 DURVAST study. JAMA Oncol. 2020, 6:1063-7. 10.1001/jamaoncol.2020.0465
17. Lavole A, Mazieres J, Schneider S, et al.: Assessment of nivolumab in HIV-Infected patients with advanced non-small cell lung cancer after prior chemotherapy. The IFCT-1602 CHIVA2 phase 2 clinical trial. Lung Cancer. 2021, 158:146-50. 10.1016/j.lungcan.2021.05.031