LETTER to the EDITOR **Editorial Process:** Submission:07/02/2025 Acceptance:01/19/2026 Published:01/22/2026

# Clarifying Misinterpretations and Overstated Claims in Esophageal Cancer Detection and AI Integration

*Asian Pac J Cancer Prev,* **27 (1),** 3-4

## Dear Editor

The innovative efforts made by Panhwar RMU, advocating for early detection and artificial intelligence (AI) in esophageal cancer care deserve congratulated. While the topic is important and timely, this topic has some limitations, which I want to address [1].

For instance, the author presents the PreSINO trial as an example of early cancer detection. However, this interpretation is inaccurate. The PreSINO study (van der Wilk BJ et al., Lancet Oncology, 2021) did not investigate screening methods for early-stage disease. Instead, it assessed the effectiveness of diagnostic tools—such as PET-CT, bite-on-bite biopsies, and EUS-FNA—in identifying residual tumor tissue after patients with esophageal squamous cell carcinoma underwent neoadjuvant chemoradiotherapy. The study specifically focused on evaluating the response in candidates considered a "watch-and-wait "management approach [2]. Second, the letter promotes AI-assisted endoscopy as a breakthrough in gastrointestinal cancer care, yet it does not reference any concrete clinical studies or evidence demonstrating its effectiveness specifically in detecting esophageal cancer or improving patient outcomes While artificial intelligence, particularly convolutional neural networks (CNNs), has demonstrated potential in detecting conditions like Barrett's esophagus and early-stage gastric cancer, its application in diagnosing esophageal squamous cell carcinoma remains in the research phase and has yet to become a routine clinical practice [3-4]. The letter presents AI as a transformative tool but fails to address its current limitations, including algorithmic bias, diagnostic inaccuracies, and lack of large-scale validation. Additionally, it overlooks the financial and infrastructural barriers to the implemention of AI in resource-limited settings. Although the emphasis on public health education is valuable, the letter lacks specificity regarding which high-risk populations should be prioritized, such as tobacco and alcohol users, older males, and individuals in high-incidence regions like East Asia and sub-Saharan Africa. It also overlooks recommended screening methods and the practical limitations faced by low- and middle-income countries, where the burden of esophageal squamous cell carcinoma is greatest [5].

*Conclusion*

The letter to the Editor appropriately draws attention to the significance of early detection in esophageal cancer. However, it presents a misleading interpretation of pivotal clinical trials, particularly by framing response assessment studies as early detection strategies. Additionally, the current capabilities of artificial intelligence are overstated, with limited recognition of the practical, technical, and systemic challenges involved in its clinical application. The discussion could have been more impactful with a balanced assessment of feasibility, real-world implementation barriers, and context-specific recommendations. Moving forward, we encourage a more cautious and evidence-grounded approach when advocating for emerging technologies in cancer care.

## References

1. Panhwar RMU, Iftikhar QUA. Revolutionizing esophageal cancer care: The power of early detection and ai. Asian Pac J Cancer Prev. 2025;26(3):713-4. https://doi.org/10.31557/apjcp.2025.26.3.713.
2. Van der Wilk BJ, Eyck BM, Lagarde SM, Biermann K, Spaander MCW, Van Lanschot JJB, et al. Diagnostic performance of a clinical response evaluation for organ-preserving treatment in patients with esophageal cancer: The PreSINO trial. Lancet Oncol. 2021;22(5):611–21.
3. de Groof AJ, Struyvenberg MR, van der Putten J, van der Sommen F, Fockens KN, Curvers WL, et al. Deep-learning system detects neoplasia in patients with barrett's esophagus with higher accuracy than endoscopists in a multistep training and validation study with benchmarking. Gastroenterology. 2020;158(4):915-29.e4. https://doi.org/10.1053/j.gastro.2019.11.030.
4. Kröner PT, Engels MM, Glicksberg BS, Johnson KW, Mzaik O, van Hooft JE, et al. Artificial intelligence in gastroenterology: A state-of-the-art review. World J Gastroenterol. 2021;27(40):6794-824. https://doi.org/10.3748/wjg.v27.i40.6794.
5. Abnet CC, Arnold M, Wei WQ. Epidemiology of esophageal squamous cell carcinoma. Gastroenterology. 2018;154(2):360-73. https://doi.org/10.1053/j.gastro.2017.08.023.

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# *Reply to the letter to the editor:* Clarifying Misinterpretations and Overstated Claims in Esophageal Cancer Detection and AI Integration

## Dear Editor

We appreciate the engagement of Muhammad Mudasir Atif with our letter. However, the critique reflects a selective interpretation of the available evidence and underestimation of the evolving role of advanced diagnostics and artificial intelligence (AI) in esophageal cancer care. We would like to clarify the following points:

*1. On the preSINO trial*

The critique states that preSINO cannot be referenced in the context of early detection. We disagree. The trial demonstrated that modalities such as bite-on-bite biopsies and EUS-FNA achieved high sensitivity and specificity in detecting residual or recurrent disease following neoadjuvant therapy [1]. In oncology, "early detection" extends beyond primary screening and includes the timely recognition of residual tumor burden or recurrence, which directly impacts prognosis and therapeutic decision-making [2]. Therefore, our use of the term is both conceptually and clinically justified.

*2. On AI-assisted endoscopy*

The response undervalues the established evidence base. Multiple high-quality studies demonstrate the utility of AI in endoscopic detection of premalignant and malignant lesions. AI systems have already outperformed experienced endoscopists in detecting neoplasia in Barrett's esophagus [3] and early gastric cancer [4]. More importantly, recent work has expanded into esophageal squamous cell carcinoma, with convolutional neural networks achieving high diagnostic accuracy in differentiating early esophageal neoplasia from non-neoplastic lesions [5, 6]. While large-scale trials are ongoing, dismissing AI's role as merely a "research phase" ignores its proven diagnostic superiority in published studies. As with CT and PET in earlier decades, innovation precedes routine adoption, but the trajectory is clear.

*3. On high-risk populations and feasibility*

We acknowledge that stratifying high-risk groups (tobacco and alcohol users, older males, East Asia, sub-Saharan Africa) is critical [7]. However, our letter was intended as a call to action, not a full epidemiological treatise. The omission of subgroup details does not weaken the central thesis: modern technologies must be urgently integrated. Further, invoking financial and infrastructural barriers as justification for skepticism risks reinforcing therapeutic stagnation. Historically, innovations in oncology from radiotherapy to immunotherapy were first criticized as impractical, yet today form the backbone of cancer care. AI should be no exception.

*Conclusion*

Esophageal cancer remains a lethal disease with poor survival rates. The PreSINO Trial and AI-assisted endoscopy exemplify the expanding horizon of early and residual disease detection. While constructive debate is welcome, it is important that responses reflect the current trajectory of evidence rather than restricting the discussion to outdated feasibility concerns. We reaffirm that artificial intelligence represents not an exaggeration but the logical next frontier in transforming esophageal cancer care.

## References

1. Eyck BM, Onstenk BD, Noordman BJ, Nieboer D, Spaander MC, Valkema R, et al. Accuracy of detecting residual disease after neoadjuvant chemoradiotherapy for esophageal cancer: a systematic review and meta-analysis. Annals of surgery. 2020 Feb 1;271(2):245-56.
2. Sullivan R, Alatise OI, Anderson BO, Audisio R, Autier P, Aggarwal A, et al. Global cancer surgery: Delivering safe, affordable, and timely cancer surgery. Lancet Oncol. 2015;16(11):1193-224. https://doi.org/10.1016/s1470-2045(15)00223-5.
3. de Groof AJ, Struyvenberg MR, van der Putten J, van der Sommen F, Fockens KN, Curvers WL, et al. Deep-learning system detects neoplasia in patients with barrett's esophagus with higher accuracy than endoscopists in a multistep training and validation study with benchmarking. Gastroenterology. 2020;158(4):915-29.e4. https://doi.org/10.1053/j.gastro.2019.11.030.
4. Hirasawa T, Aoyama K, Tanimoto T, Ishihara S, Shichijo S, Ozawa T, et al. Application of artificial intelligence using a convolutional neural network for detecting gastric cancer in endoscopic images. Gastric Cancer. 2018;21(4):653-60. https://doi.org/10.1007/s10120-018-0793-2.
5. Guo L, et al. Diagnosis of esophageal squamous cell carcinoma and precursor lesions by artificial intelligence: a multicenter case-control study. Endoscopy. 2019;51(3):236–244.
6. Nakagawa K, et al. Artificial intelligence-assisted endoscopy for esophageal squamous cell carcinoma: a prospective diagnostic study. Gastrointest Endosc. 2020;91(5):1159–1167.
7. Lagergren J, Smyth E, Cunningham D, Lagergren P. Oesophageal cancer. Lancet. 2017;390(10110):2383-96. https://doi.org/10.1016/s0140-6736(17)31462-9.

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