

Editorial



Latest Insights From Multiple Disciplinary Approaches to Manage Gastric Cancer

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Humans typically consider up to 5 variables when making decisions [1]. In the management of cancer patients, rapidly changing evidence, new drug approvals, and scientific guideline updates make it difficult for a single expert to make the best decision. Therefore, efforts to combine multiple disciplines are valuable and beneficial, emphasizing the importance of multidisciplinary teamwork [1,2]. Depending on how multiple disciplines work together, the terms “multidisciplinary,” “interdisciplinary,” and “transdisciplinary” are used [3].

The *Journal of Gastric Cancer* explores these multiple disciplinary approaches in this issue, presenting review articles on the roles of these approaches for the prevention, diagnosis, and treatment of gastric cancer.

A multidisciplinary approach integrates insights from various disciplines while remaining within the confines of those specific fields [3]. In the area of gastric cancer management, a multidisciplinary approach that includes surgical treatment and systemic therapy is being implemented. For resectable gastric cancer, advancements in surgical techniques aim to achieve “minimally invasive” and “function preservation.” This issue includes a review that considers reduced-port gastrectomy, a spectrum of procedures aimed at minimal invasiveness and improved post-operative recovery [4]. Advancements in systemic therapies for managing unresectable gastric cancer, emphasizing targeted therapies based on molecular profiles, are also introduced [5]. That review article highlights the promising outcomes of human epidermal growth factor receptor 2 (HER2)-targeted therapy and explores the standard treatments for HER2-negative cases, incorporating cytotoxic chemotherapy with immunotherapy and programmed cell death protein 1/programmed cell death ligand 1 (PD-1/PD-L1) inhibitors. Additionally, that review introduces ongoing research on emerging biomarkers, such as PD-L1 expression, Epstein-Barr virus, microsatellite instability, tumor mutational burden, and treatments targeting claudin-19, and fibroblast growth factor receptor 2.

Endoscopic procedures play a powerful role in the multidisciplinary treatment of gastric cancer, especially in managing post-gastrectomy complications, including anastomotic leakage and fistulas. A review in this issue highlights the diverse options for controlling anastomotic leakage, such as clipping, stent insertion, internal drainage, suturing, vacuum therapy, and tissue sealants, with their unique advantages and considerations [6]. Meanwhile, treatment for early gastric cancer should satisfy both oncologic safety and functional preservation requirements, resulting in a gray zone between the indications

for endoscopic submucosal dissection and surgical resection. Another review [7] explores recent advances in endoscopic techniques, such as submucosal tunnelling, endoscopic full-thickness resection, and laparoscopic and endoscopic cooperative surgery for gastric subepithelial tumors. That review also provides an assessment of their potential as future alternatives for the gray zone of early gastric cancer.

Multidisciplinary approaches are advancing not only in the treatment, but also in the prevention and diagnosis of gastric cancer. This issue includes a review of worldwide trends in gastric cancer, highlighting the decline in overall cases but a rise in cardia gastric cancer [8]. That review explores key risk factors, such as *Helicobacter pylori* infection and obesity, and lifestyle-related factors, such as smoking, alcohol consumption, and dietary habits, in the etiology of gastric cancer. Furthermore, a review in this issue delves into rare or uncommon histological variants, such as papillary adenocarcinoma and micropapillary carcinoma, which pose diagnostic and therapeutic challenges [9]. The review underscores the importance of understanding rare variants for accurate diagnosis and treatment planning, despite difficulties in drawing clear boundaries due to overlapping phenotypes.

An interdisciplinary approach emphasizes interaction and collaboration in the context of a deeper level of cooperation, compared to a multidisciplinary approach [10]. The commercialization of technologies, such as next-generation sequencing (NGS), has enabled an interdisciplinary approach, with proteomics and genomics collaborating in oncology.

This issue includes a review that explores the growing significance of liquid biopsy in gastric cancer research, examining the role of various biosources (blood, saliva, gastric juice, and more) to identify biomarkers for early diagnosis, disease monitoring, and treatment response prediction [11]. In addition, NGS has enabled comprehensive investigation of the human gastrointestinal microbiome. This issue also reviews the impact of chemotherapy and immunotherapy on the gut microbiome and the potential benefits of probiotics, such as *Bifidobacterium* and *Lactobacillus*, on post-operative recovery in gastric cancer patients [12].

A transdisciplinary approach incorporates natural, social, and health sciences into a humanities framework, surpassing the traditional boundaries of each discipline [13]. This holistic approach may be useful in the future care of patients with gastric cancer. To enhance the quality of life of patients, it is crucial to explore and implement both medical and non-medical disciplines, including diet management and physical activities. The *Journal of Gastric Cancer* aims to serve as a bridge between multiple disciplines until the transdisciplinary approach becomes standard practice.

REFERENCES

1. Berardi R, Morgese F, Rinaldi S, Torniai M, Mentrasti G, Scortichini L, et al. Benefits and limitations of a multidisciplinary approach in cancer patient management. *Cancer Manag Res* 2020;12:9363-9374.
[PUBMED](#) | [CROSSREF](#)
2. Whitfield K, Reid C. Assumptions, ambiguities, and possibilities in interdisciplinary population health research. *Can J Public Health* 2004;95:434-436.
[PUBMED](#) | [CROSSREF](#)
3. Choi BC, Pak AW. Multidisciplinarity, interdisciplinarity and transdisciplinarity in health research, services, education and policy: 1. Definitions, objectives, and evidence of effectiveness. *Clin Invest Med* 2006;29:351-364.
[PUBMED](#)

4. Kim JW. Current issues in reduced-port gastrectomy: a comprehensive review. *J Gastric Cancer* 2024;24:57-68.
[CROSSREF](#)
5. Kim IH. Emerging targets for systemic treatment of gastric cancer: HER2 and beyond. *J Gastric Cancer* 2024;24:29-56.
[CROSSREF](#)
6. Kim JY, Chung H. Endoscopic intervention for anastomotic leakage after gastrectomy. *J Gastric Cancer* 2024;24:108-121.
[CROSSREF](#)
7. Kim CG. Endoscopic treatment for gastric subepithelial tumor. *J Gastric Cancer* 2024;24:122-134.
[CROSSREF](#)
8. Ko KP. Risk factors of gastric cancer and lifestyle modification for prevention. *J Gastric Cancer* 2024;24:99-107.
[CROSSREF](#)
9. Shin J, Park YS. Unusual or uncommon histology of gastric cancer. *J Gastric Cancer* 2024;24:69-88.
[CROSSREF](#)
10. Jennings C, Astin F. A multidisciplinary approach to prevention. *Eur J Prev Cardiol* 2017;24:77-87.
[PUBMED](#) | [CROSSREF](#)
11. Han HS, Lee KW. Liquid biopsy: an emerging diagnostic, prognostic, and predictive tool in gastric cancer. *J Gastric Cancer* 2024;24:4-28.
[CROSSREF](#)
12. Park CH. Unveiling the gastrointestinal microbiome symphony: insights into post-gastric cancer treatment microbial patterns and potential therapeutic avenues. *J Gastric Cancer* 2024;24:89-98.
[CROSSREF](#)
13. Soskolne C. Transdisciplinary approaches for public health. *Epidemiology* 2000;11:S122.