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Recent Advances and Trends in the Treatment and Diagnosis of Gastric Cancer

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Introduction

Gastric cancer is a perplexing cancer that has recently been shown to be on the rise globally. There has been recent progress in emerging technologies for disease diagnosis and treatment. Non-invasive diagnostic techniques such as serological tests and biomarkers have improved, resulting in a decrease in the use of invasive procedures such as endoscopy. Gastric cancer is treated using a multidisciplinary approach, with recent significant advances in systemic therapies used in conjunction with cytotoxic chemotherapies. New therapeutic targets have been identified, and clinical trials to assess their efficacy and safety are currently underway. We provide an overview of current and emerging treatment strategies and diagnostic techniques for gastric cancer in this review.

Description

As the fifth most common malignant neoplasm and the fourth leading cause of cancer-related death worldwide, there is no doubt that gastric cancer is a disease that needs more research into how to better diagnose and manage it. Geographically, the incidence of gastric cancer is highest in East Asian and Eastern European regions, accounting for roughly 60% of all GCs worldwide, with China alone accounting for 43.9%. One possible explanation for this pattern is that these areas have a high prevalence of established risk factors for GC, such as a different cytotoxic-associated gene A strain of H. pylori and a higher intake of salt-preserved or smoked foods. Smoking and excessive alcohol consumption are also risk factors for GC, Approximately one-third of patients diagnosed with gastric cancer in the United States have a distant metastasis at the time of diagnosis. Upper GI series and endoscopy are the gold standard and mainstay of early gastric cancer diagnosis in current clinical practise. In fact, using endoscopy for screening is linked to lower gastric cancer mortality. However, in the Western world, as opposed to Korea and Japan, where gastric cancer is prevalent, the use of upper GI endoscopy for screening is costly and invasive, and thus other non-invasive, cost-conscious diagnostic methods are being sought. Liquid biopsies have emerged as a non-invasive method of using bodily fluids (blood, peritoneal lavage, gastric juice/lavage, and so on) to provide early tumour diagnosis, assess prognosis, identify druggable targets, and monitor tumour progression [1].

One of the most obvious advantages of using liquid biopsies for GC screening is their lack of invasiveness when compared to the current gold standard of endoscopy. These blood tests can detect biomarkers, which are molecules associated with gastric cancer carcinogenesis, such as proteins, DNA, various types of RNA, exosomes, and so on. provides a schematic for some of the liquid biopsy markers currently being studied to diagnose gastric cancer [2]. Trefoil factor 3 is another promising biomarker. This minute peptide is secreted by goblet cells in the small and large intestines, as well as by gastric mucosa that has undergone intestinal metaplasia. According to studies, high serum TFF3 levels have an 80.9% sensitivity and an 81% specificity for gastric cancer. A meta-analysis of 17 studies evaluating TTF3's diagnostic value for GC discovered that tissue TTF3 expression was associated with an increased risk of lymph node metastasis, muscularis propria invasion, and a worse TNM stage. Furthermore, it has been demonstrated that combining the PG I/PGII ratio measurement with TFF3 had a higher positive predictive value for detecting GC than testing for each component separately [3-5].

Conclusion

Finally, there have been significant recent advances in GC detection and treatment. Although there has been progress, there are still many obstacles to overcome. Despite the fact that clinical data is increasing on a daily basis, there are currently not enough high-quality, well-designed multi-center prospective trials available. Furthermore, because of the enormous inter- and intra-tumor heterogeneity of GC across individuals and populations, there is a lag in translating current molecular research into clinical practise for patient benefit. The approaches to diagnosis and treatment used in the East and West differ significantly as well. The inconsistency of global approaches limits progress toward earlier diagnosis and more effective therapy. As a result, more cross-disciplinary and international collaboration is required in the future.

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Conflict of Interest

There are no conflicts of interest by author.

References

1. Graf, N., C. Bergeron, J. Brok and B. De Camargo, et al. "Fifty years of clinical and research studies for childhood renal tumors within the International Society of Pediatric Oncology (SIOP)." *Ann Oncol* 32 (2021): 1327-1331.
2. Van Den Heuvel-eibrink, Marry M., Janna A. Hol and Kathy Pritchard-Jones, et al. "Rationale for the treatment of Wilms tumour in the UMBRELLA SIOP–RTSG 2016 protocol." *Nat Rev Urol* 14 (2017): 743-752.
3. Dome, Jeffrey S., Norbert Graf, James I. Geller and Conrad V. Fernandez, et al. "Advances in Wilms tumor treatment and biology: progress through

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international collaboration." *J Clin Oncol* 33 (2015): 2999.

4. Cox, Sharon, Cenk Büyükünal and Alastair JW Millar. "Surgery for the complex Wilms tumour." *Pediatr Surg Int* 36 (2020): 113-127.
5. Nakayama, D. K., P. Norkool, A. A. DeLorimier and J. A. O'Neill Jr, et al. "Intracardiac extension of Wilms' tumor. A report of the National Wilms' Tumor Study." *Ann Surg* 204 (1986): 693.

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