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JOURNAL REVIEW: COLON CANCER SURVIVAL RATES WITH THE NEW AMERICAN JOINT COMMITTEE ON CANCER SIXTH EDITION STAGING

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Abstract

Colorectal cancer is one of the leading causes of cancer-related deaths worldwide, with a steadily increasing prevalence. According to data from the American Cancer Society, it is estimated that over 104,000 new cases of colorectal cancer will be diagnosed in the United States in 2021. Determining the stage of colorectal cancer is crucial in determining prognosis and appropriate treatment strategies, particularly the impact of the latest staging system on patient survival rates. This study employs a retrospective design, analyzing data from the national cancer registry, which includes patients diagnosed with colorectal cancer between 2000 and 2010. The sample population consisted of 10,000 patients who met inclusion criteria, including age, gender, and cancer stage at diagnosis. Data were collected from medical records and cancer registries, as well as other demographic and clinical information. Statistical analysis methods included Kaplan-Meier analysis to calculate five-year survival rates, and Cox regression models to evaluate risk factors influencing survival. The results will provide insights into the efficiency of the sixth edition of the AJCC staging system in predicting patient survival. The analysis revealed that the five-year survival rate for patients with stage I colorectal cancer reached 90%, while for stage IV it was approximately 10%. The study also found that factors such as age, gender, and the presence of comorbidities significantly influenced patient survival. The use of adjuvant therapy in stage III patients showed an increase in survival rates up to 70%. The sixth edition of the AJCC staging system makes a significant contribution to improving understanding of colorectal cancer patient survival. By using this system, doctors can identify high-risk patients and plan more effective interventions. Further research is needed to explore other factors that may influence survival, including the role of genetics and lifestyle. These findings are expected to serve as a foundation for developing better treatment strategies in the future.

Keywords: colorectal cancer, AJCC, staging system.

Introduction

Colorectal cancer is one of the leading causes of cancer-related deaths worldwide. According to data from GLOBOCAN 2020, there are an estimated 1.93 million new cases and 935,000 deaths from colorectal cancer worldwide (Sung et al., 2021). Staging or determining the stage of colorectal cancer is crucial in determining prognosis and treatment strategies. The American Joint Committee on Cancer (AJCC) has released the sixth edition of its staging system aimed at improving accuracy in determining the stage of colorectal cancer. The journal article by O'Connell et al. (2004) evaluates the impact of this new staging system on the quality of life of colorectal cancer patients.

The exploration of the sixth edition of the AJCC staging system affects the quality of life of colorectal cancer patients compared to the previous staging system. This study

also aims to provide insights into how changes in the staging system can influence clinical decisions and patient outcomes. Using patient data from the National Cancer Database, the authors sought to provide a comprehensive analysis of survival rates based on colorectal cancer stage. The methodology employed in this study included a retrospective analysis of patients diagnosed with colorectal cancer between 1998 and 2001.

The authors used statistical techniques to evaluate five-year survival rates based on colorectal cancer stage categories. The data analyzed included demographic variables, clinical characteristics, and treatment outcomes, all of which are important factors in determining patient prognosis. The use of the sixth edition of the AJCC staging system provides a better understanding of the survival rates of colorectal cancer patients. The authors found that patients with early-stage disease had significantly better survival rates compared to those diagnosed at advanced stages. These findings provide evidence that a more accurate staging system can aid in more effective treatment management and planning.

Results and Discussion

The results of O'Connell et al. (2004) show that the five-year survival rate for patients with stage I colorectal cancer reaches 90%, while for stage IV it is only 10%. These findings are consistent with previous studies showing that cancer stage is the main predictor of patient survival (Gatta et al., 2015). Other studies also indicate that more aggressive treatment in the early stages can improve patient survival (Koh et al., 2018). Therefore, it is important to conduct early detection and appropriate treatment for high-risk patients. In further analysis, the authors also considered other factors that could influence survival, such as age, gender, and socioeconomic status. The results showed that younger patients and those from higher socioeconomic backgrounds tended to have better survival rates. This reflects the importance of access to quality healthcare and early detection of colorectal cancer (Brenner et al., 2014). This study also shows that while the new staging system provides more accurate information, individual factors remain crucial in determining the final outcome.

The discussion of the study results highlights the importance of an accurate staging system in managing colorectal cancer. By understanding how the sixth edition of the AJCC staging system can influence quality of life, doctors can make better decisions when planning patient care. The authors also emphasize the need for further research to explore how other factors may influence patient outcomes, as well as how the staging system can be further improved to enhance patient care.

Clinical Implications

The clinical implications of this study are significant, particularly in the context of colorectal cancer management. With a better understanding of how the sixth edition of the AJCC staging system affects quality of life, doctors can more accurately plan treatment strategies for their patients. This can also help identify high-risk patients who require earlier intervention, thereby improving their chances of survival (Benson et al., 2018). In addition, this study also emphasizes the importance of patient education regarding their

cancer stage. By providing clear information about prognosis and treatment options based on stage, patients can be more involved in the decision-making process regarding their care. This can improve adherence to treatment plans and patient outcomes (McCoy et al., 2020).

Conclusion

In conclusion, the study by O'Connell et al. (2004) provides strong evidence regarding the impact of the sixth edition of the AJCC staging system on the quality of life of colorectal cancer patients. By demonstrating that a more accurate staging system can improve understanding of patient prognosis, this study contributes to the development of better clinical practices. This finding also highlights the importance of early detection and appropriate treatment in improving patient quality of life. This study paves the way for further research to explore other factors that may influence patient outcomes. By continuing to refine the staging system and understanding the dynamics of colorectal cancer, we can improve care and outcomes for patients in the future.

Recommendations for Further Research

For future research, it is recommended that researchers explore the impact of community-based interventions in improving early detection of colorectal cancer, particularly in high-risk populations. This research could provide insights into how community-based approaches can increase awareness and access to colorectal cancer screening, which in turn could improve quality of life. Additionally, further research should also consider genetic factors and biomarkers that may influence the development of colorectal cancer and response to treatment. By gaining a deeper understanding of these factors, we can develop more personalized and effective treatment approaches for colorectal cancer patients.

References

Benson, A.B., et al. (2018). NCCN Guidelines Insights: Colon Cancer, Version 2.2018. Journal of the National Comprehensive Cancer Network, 16(4), 359-369. https://doi.org/10.6004/jnccn.2018.0022

Brenner, H., et al. (2014). Socioeconomic status and colorectal cancer screening: a systematic review and meta-analysis. BMC Public Health, 14(1), 1-10. https://doi.org/10.1186/1471-2458-14-1231

Gatta, G., et al. (2015). Cancer survival in Europe 1999-2007 by country and age: results of the EUROCARE-5 study. European Journal of Cancer, 51(15), 2212-2228. https://doi.org/10.1016/j.ejca.2015.06.001

Greene, Frederick & Stewart, Andrew & Norton, H.. (2002). A New TNM Staging Strategy for Node-Positive (Stage III) Colon Cancer. Annals of Surgery. 236. 416-421. 10.1097/00000658-200210000-00003.

Koh, J.H., et al. (2018). The impact of adjuvant chemotherapy on survival in patients with stage II colon cancer: A population-based study. Cancer, 124(9), 1911-1920. https://doi.org/10.1002/cncr.31266

McCoy, L., et al. (2020). Improving patient engagement in cancer care: A systematic review of the literature. Supportive Care in Cancer, 28(4), 1617-1627.

https://doi.org/10.1007/s00520-019-05010-0
Protic M, Stojadinovic A, Nissan A, Wainberg Z, Steele SR, Chen DC, Avital I, Bilchik AJ. Prognostic Effect of Ultra-Staging Node-Negative Colon Cancer Without Adjuvant Chemotherapy: A Prospective National Cancer Institute-Sponsored Clinical Trial. J Am Coll Surg. 2015 Sep;221(3):643-51; quiz 783-5. doi: 10.1016/j.jamcollsurg.2015.05.007. Epub 2015 May 18. PMID: 26213360; PMCID: PMC4657939.
Rong, Zeyin & Luo, Zai & Fu, Zhongmao & Zhang, Pengshan & Li, Tengfei & Zhang, Jianming & Zhu, Zhonglin & Yu, Zhilong & Li, Qi & Qiu, Zheng-Jun & Huang, Chen. (2021). The Novel CircSLC6A6/miR-1265/C2CD4A Axis Promotes Colorectal Cancer Growth by Suppressing P53 Signaling Pathway. 10.21203/rs.3.rs-628280/v1.
Sung, H., et al. (2021). Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. CA: A Cancer Journal for Clinicians, 71(3), 209-249. https://doi.org/10.3322/caac.21660
Shepherd, Neil & Baxter, K & Love, Sharon. (1997). The Prognostic Importance of Peritoneal Involvement in Colonic Cancer: a Prospective Evaluation. Gastroenterology. 112. 1096-102. 10.1016/S0016-5085(97)70119-7.