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| Book Name: | [Medical Science: Recent Advances and Applications](https://bookstore.bookpi.org/product/medical-science-recent-advances-and-applications-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_5353** |
| Title of the Manuscript:  | **The Impact of Iron on Cancer-Related Immune Functions in Oncology: Molecular Mechanisms and Clinical Evidence** |
| Type of the Article | **Book chapter** |

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**A research paper already published in a journal can be published as a Book Chapter in an expanded form with proper copyright approval.**

**Source Article:**

**This chapter is an extended version of the article published by the same author(s) in the following journal.**

**Cancers 2024,**

**DOI:** [**https://doi.org/10.3390/cancers16244156**](https://doi.org/10.3390/cancers16244156)

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| PART 1: Comments |
|  | Reviewer’s comment**Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | Author’s Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
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| Is the language/English quality of the article suitable for scholarly communications? |  |  |
| Optional/General comments | **The Impact of Iron on Cancer-Related Immune Functions in Oncology: Molecular Mechanisms and Clinical Evidence** **General Feedback on the Chapter**This book chapter is comprehensive, well-researched, and demonstrates a strong command of the topic. The scientific terminology is appropriate, and the structure is logically organized. However, several areas would benefit from revision to improve clarity, flow, and conciseness.**General Recommendations:****Language and Style:**The scientific tone is well-maintained, but some sentences are overly long and complex. Simplifying sentence structures will improve readability and comprehension.**Repetitions:**Key concepts (e.g., iron overload, immune suppression, ferroptosis) are repeated across multiple sections. These repetitions could be reduced through concise phrasing or cross-referencing within the text.**Paragraph Transitions:**Some transitions between sections (e.g., from T-cells to Macrophages) are abrupt. Adding short transitional sentences would improve the narrative flow.**Figure Descriptions:**Descriptions such as those for “Figure 1” and “Figure 2” are overly detailed and interrupt the text’s flow. Consider placing these in figure legends or summarizing more briefly in the main text.**Specific Observations and Suggested Edits:****Abstract:**The sentence starting with “Iron metabolism plays a dual role in cancer…” is too long and should be split into two.**This phrase:**“…between iron levels within the serum or in the microenvironment and cancer therapy has been covered…”**Could be simplified to:**“…between iron levels in the serum or tumor microenvironment and cancer therapy is explored…”**Introduction:**The phrase “This duality highlights the complex interplay…” is slightly repetitive when followed by “In oncology, the management of iron presents a complex challenge…”The paragraph discussing immune therapy repeats the same message (impact of iron deficiency on ICIs and CAR-T therapy) multiple times. Consolidation is recommended.**Section: Iron Deficiency in Cancer Patients:**The explanation in “Figure 1” is too lengthy and would be clearer if divided into two sentences.**This phrase could be improved:**“…rendering it unavailable for critical processes like erythropoiesis…”**To:**“…making it unavailable for erythropoiesis and other vital functions…”**Sections on T-Cells and Macrophages:**The paragraph beginning with “When a T-cell encounters a tumor cell…” contains excessive technical detail. Consider breaking it into subsections on energy metabolism and epigenetic regulation.The phrase “M1 macrophages rely heavily on iron to generate ROS…” is accurate, but the follow-up discussion would benefit from clearer emphasis on how iron deficiency impairs this function.**Ferroptosis:**Well explained, but the paragraph starting with “The fundamental difference between ferroptosis…” repeats information previously covered. A summary with cross-reference to earlier content is suggested.**Clinical and Preclinical Evidence:**The examples are valuable, such as in breast and glioblastoma cancer, but more precise citation or clarification of study origin would improve credibility (e.g., "In which study was this shown?").**Conclusion:**The phrase “Clinical and preclinical studies provide valuable insights…” is too generic as an opening. Consider a stronger, more engaging summary, such as:“Personalized iron management may become a cornerstone of integrated oncology protocols…”**Final Comments:**This is a high-quality chapter with solid scientific merit. The suggestions above aim to enhance readability, remove redundancies, and strengthen the overall message. Once revised, this chapter will serve as an excellent and insightful resource on iron metabolism in oncology. |  |

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| **PART 2:**  |
|  | Reviewer’s comment | Author’s comment *(if agreed with the reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Are there ethical issues in this manuscript?**  | *(If yes, Kindly please write down the ethical issues here in detail)* |  |

**Reviewer details:**

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