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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** |

**Special note:**

**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)* |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | This article is a comprehensive overview of the two-faced nature of iron in cancer, highlighting its central role in immune function, tumor development, and response to therapy. It combines molecular mechanisms and clinical evidence to call for personalized iron modulation in oncology for optimal treatment outcomes. The paper also covers new strategies like iron chelation therapy and ferroptosis induction, offering thought-provoking insights for research and clinical practice going forward. Its findings are of utmost significance for clinicians and researchers aiming to improve cancer treatment protocols and patient prognosis through targeted iron metabolism modulations. |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | Yes. The title is suitable. |  |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | The introduction has some grammatical issues, but overall, it is well-written and has a good structure. |  |
| **Is the manuscript scientifically, correct? Please write here.** | It appears that the scientific content of the text is accurate and supported by appropriate references. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | Yes. Based on the text and the necessity to highlight certain scientific facts, references are sufficient and recent. |  |
| Is the language/English quality of the article suitable for scholarly communications? | Yes. |  |
| Optional/General comments | * The review thoroughly explains the bivalent function of iron in cancer, with emphasis on its essential roles in cellular functions and its opposing roles in cancer development and immune modulation. The distinction between systemic iron deficiency and localized iron overload in tumors is clearly explained, with focus on the intricacy of iron metabolism in oncology. * Add revalant references for” Clinical and Preclinical Evidence of Iron Deficiency * A growing body of clinical and preclinical studies provides evidence of how iron deficiency impacts cancer progression, immune function, and treatment efficacy.” * In my opinion, it would be beneficial to explicitly mention the molecular mechanisms through which iron levels can influence immune cell activity. * In this part (*Effect of Iron Overload on the TEM and Cancer Cells*) should incorporate additional factors and elements present in the tumor microenvironment, not just cells. * The interaction of IL-6/TNF-α with hepcidin is well documented, but the text can trivially mention other regulators of hepcidin (e.g., BMP6/SMAD pathway) for completeness.   I am pleased to confirm my agreement to publish this chapter in the book. The content is scientifically rigorous, well-referenced, and aligns with the book’s scope. Only minor edits would be needed prior to final publication. |  |

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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?** |  |  |

**Reviewer details:**

**Ilnaz Rahimmanesh, Isfahan University of Medical Sciences,**