# Article information:

Association of proton pump inhibitors with gastric and colorectal cancer risk: A systematic review and meta-analysis - PMC
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10060974/>

# Article summary:

1. Proton pump inhibitor (PPI) use is associated with a significantly higher risk of gastric cancer, but not colorectal cancer.

2. There is a significant positive correlation between the use of PPI and the risk of non-cardiac cancer.

3. The duration dependent effect of PPI use shows a significant trend in increasing the risk of gastric cancer, but not colorectal cancer.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article titled "Association of proton pump inhibitors with gastric and colorectal cancer risk: A systematic review and meta-analysis" aims to investigate the association between proton pump inhibitor (PPI) use and the risk of gastric and colorectal cancer. The authors collected relevant articles using various databases and included 24 studies in their final analysis. They found that PPI use increased the risk of gastric cancer but not colorectal cancer.

While the study provides valuable insights into the potential risks associated with PPI use, there are several limitations that need to be considered. Firstly, the authors acknowledge that their findings may be biased due to confounding factors. For example, patients who require long-term PPI use may have underlying health conditions that increase their risk of developing cancer. Secondly, most of the studies included in the analysis were retrospective cohort studies or case-control studies, which are prone to bias and may not provide strong evidence for causality.

Additionally, the authors do not explore potential mechanisms by which PPIs may increase cancer risk. For example, they mention hypergastrinemia as a possible risk factor but do not discuss other potential mechanisms such as changes in gut microbiota or immune function.

Furthermore, while the study notes that some epidemiological studies have found an increased risk of gastric and colorectal cancer in PPI users, it does not present counterarguments or conflicting evidence in detail. This one-sided reporting could lead readers to believe that there is a clear consensus on the risks associated with PPI use when this is not necessarily true.

Finally, it is important to note that while the study identifies potential risks associated with PPI use, it does not provide recommendations for clinical practice or suggest alternative treatments for acid-related diseases. Therefore, clinicians should consider these findings alongside other factors when making treatment decisions for their patients.

In conclusion, while this study provides valuable insights into the potential risks associated with PPI use, its limitations should be considered when interpreting the results. Clinicians should continue to monitor the evolving evidence on this topic and make treatment decisions based on individual patient needs and risk factors.

# Topics for further research:

* Mechanisms of PPI-induced cancer risk beyond hypergastrinemia
* Confounding factors in studies on PPI use and cancer risk
* Prospective studies on PPI use and cancer risk
* Gut microbiota changes and PPI use
* Immune function and PPI use
* Alternative treatments for acid-related diseases to PPIs

# Report location:

<https://www.fullpicture.app/item/b6703f1bc80ecdda0f674b77f4b34959>