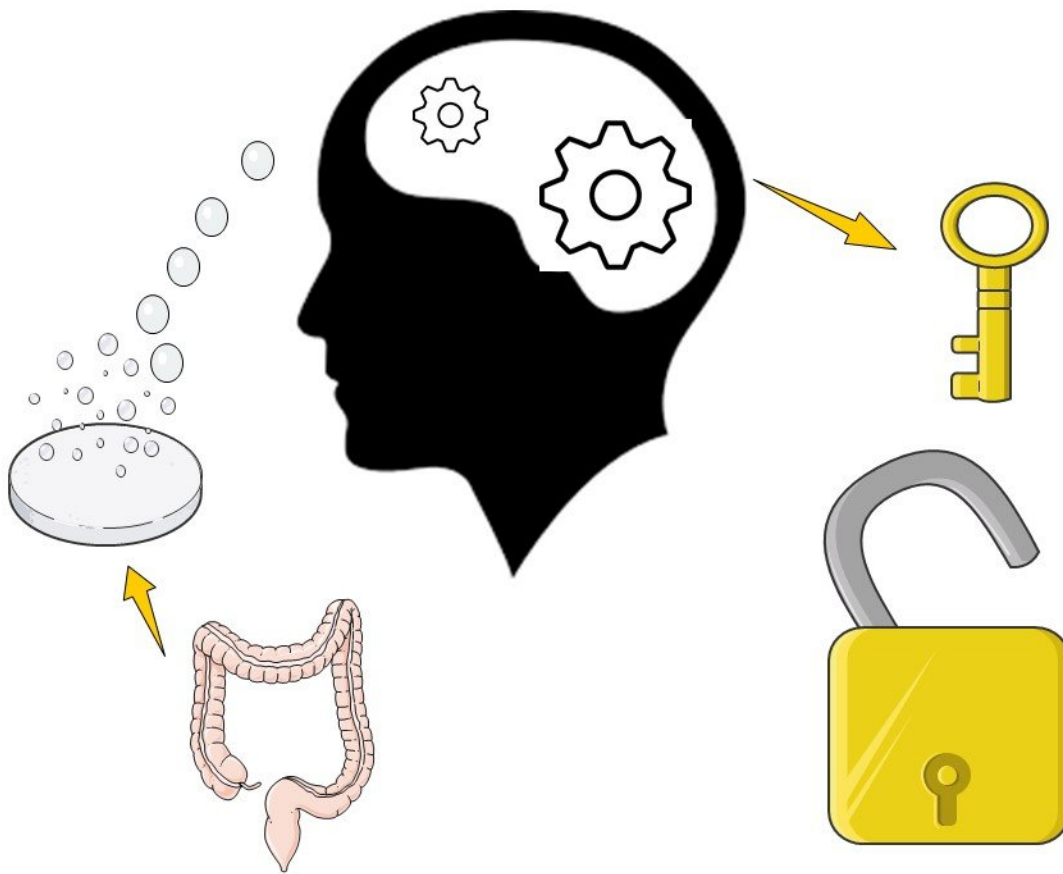# Can artificial intelligence be used to study gut microbes in patients?

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Can artificial intelligence be used to study gut microbes in patients? Credit: Dr Espinoza

A new *Journal of Internal Medicine* article proposes that artificial intelligence tools, such as machine learning algorithms, have the potential for building predictive models for the diagnosis and treatment of diseases linked to imbalances in gut microbial communities, or microbiota.

The article focuses mainly on patients with cancer, who often undergo treatments that can cause profound alterations in the gut microbiota and potentially contribute to the development of complications.

Because research on the human microbiome is an emerging science and the application of artificial intelligence in medicine is in its infancy, it is important to consider ethical, legal, and social issues simultaneously with technical refinements required for applying these technologies to the clinic.

"Artificial intelligence algorithms have the potential to change the everyday medical practices and offer the prospect of identifying new associations not yet detected by humans, which will be very useful for better understanding the complexity of the human microbiota," said author Dr. J. Luis Espinoza, of the Kindai University Faculty of Medicine, in Japan.

  More information: J. Luis Espinoza, Machine learning for tackling microbiota data and infection complications in immunocompromised patients with cancer, *Journal of Internal Medicine* (2018). DOI: 10.1111/joim.12746

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