1. Title
    a. Applications for visualization of the relationship between serum vitamin D and colorectal cancer incidence
2. Research Question
    a. How do serum levels of vitamin D (1,25-dihidroxycholecalciferol) predict the incidence/risk of colorectal cancer?
3. Objectives
    a. Create and modify coding tools to analyze and visualize vitamin D levels associated with healthy (no CRC) and unhealthy (CRC) individuals.
4. Approach
    a. Transform vitamin D serum levels into standardized quantities (number values) and compare to incidence of CRC (yes or no). Comparisons will include graphic visualizations and statistical analyses (R^2). Further analysis will include additional factors, such as age of onset, years of cancer, if death occurred, and these will be standardized and compared to vitamin D levels and graphed. Data will be taken from the references (or generated by ChatGPT).
5. Selected References
    a. Na, Soo-Young et al. 2022. Vitamin D and Colorectal Cancer: Current Perspectives and Future Directions. Journal of Cancer Prevention. 27(3), 147-156. https://doi.org/10.15430/JCP.2022.27.3.147
    b. Kim, Yejin et al. Serum 25-Hydroxyvitamin D Levels and Risk of Colorectal Cancer: An Age-Stratified Analysis. Gastroenterology. 165(5), 920-931. 10.1053/j.gastro.2023.06.029
    c. Barber, Lauren E et al. 2021. Predicted Vitamin D Status and Colorectal Cancer Incidence in the Black Women's Health Study. Cancer Epidemiol Biomarkers Prev. 30(12), 2334-2341. 10.1158/1055-9965.EPI-21-0675