1. [Gut Microbiota Exceeds Cervical Microbiota for Early Diagnosis of **Endometriosis**.](https://pubmed.ncbi.nlm.nih.gov/34950610/)

Huang L, Liu B, Liu Z, Feng W, Liu M, Wang Y, Peng D, Fu X, Zhu H, Cui Z, Xie L, Ma Y.Front Cell Infect Microbiol. 2021 Dec 7;11:788836. doi: 10.3389/fcimb.2021.788836. eCollection 2021.PMID: 34950610 **Free PMC article.**

## Abstract

The diagnosis of endometriosis is typically delayed by years for the unexclusive symptom and the traumatic diagnostic method. Several studies have demonstrated that gut microbiota and cervical mucus potentially can be used as auxiliary diagnostic biomarkers. However, none of the previous studies has compared the robustness of endometriosis classifiers based on microbiota of different body sites or demonstrated the correlation among microbiota of gut, cervical mucus, and peritoneal fluid of endometriosis, searching for alternative diagnostic approaches. Herein, we enrolled 41 women (control, n = 20; endometriosis, n = 21) and collected 122 well-matched samples, derived from feces, cervical mucus, and peritoneal fluid, to explore the nature of microbiome of endometriosis patients. Our results indicated that microbial composition is remarkably distinguished between three body sites, with 19 overlapped taxa. Moreover, endometriosis patients harbor distinct microbial communities versus control group especially in feces and peritoneal fluid, with increased abundance of pathogens in peritoneal fluid and depletion of protective microbes in feces. Particularly, genera of *Ruminococcus* and *Pseudomonas* were identified as potential biomarkers in gut and peritoneal fluid, respectively. Furthermore, novel endometriosis classifiers were constructed based on taxa selected by a robust machine learning method. These results demonstrated that gut microbiota exceeds cervical microbiota in diagnosing endometriosis. Collectively, this study reveals important insights into the microbial profiling in different body sites of endometriosis, which warrant future exploration into the role of microbiota in endometriosis and highlighted values on gut microbiota in early diagnosis of endometriosis.

**Keywords:**Lachnospiraceae Ruminococcus; Pseudomonadaceae Pseudomonas; endometriosis; gut microbiota; peritoneal fluid.