

PULSE EXPERIENTIAL TEAM ASSIGNMENT

Team #: 5

1. Title of your PULSE experiential assignment. Provide a creative and informative title.
A Matter of Medical Misogyny
2. Please summarize your PULSE experiential assignment (max 300 words). Provide a non-technical (lay) summary of your PULSE assignment. Prompts to think about: What is the topic? What is the format? Why did you choose this topic and format? The summary for lay audience is a brief and accessible summary of the assignment that is used to explain complex ideas, technical writing and scientific terms to people who do not have prior knowledge of the subject (e.g., high school science level). This summary should include the importance, impact, and content of your assignment to a broader audience. [Team 23 is an example of an informative lay summary.]
We chose endometriosis because it is a common neoplasia of menstrual tissue affecting an estimated 2-10% of reproductive aged women¹. Still it remains underdiagnosed, misunderstood and often misattributed to “normal period pain.”^{2, 3, 4} This topic clearly connects top course concepts as chronic inflammation, benign vs. malignant neoplasia, immune dysregulation, and the impact of misdiagnoses on prognosis. Endometriosis also illustrates broader systemic issues, including gender bias in medicine, disparities in pain recognition, and the social determinants of health. All influence how patients are treated and how diseases are managed.
3. Provide up to 6 keywords relevant to your PULSE experiential assignment. 3-6 keywords are ideal.
Endometriosis; gender-bias; medical misogyny; misdiagnosis
4. Identify the course topic with which your PULSE assignment most aligns. Refer to the various topics outlined under ‘Course content and Schedule’ in the syllabus (e.g. Inflammation).
Female genital tract.
5. What are the learning outcomes? There should be a minimum of 2 learning outcomes for your assignments. For further information on learning outcomes, the Centre for Teaching and Learning offers information: https://teaching.uwo.ca/curriculum/coursedesign/learning-outcomes.html
1. Articulate the pathology of endometriosis, including its signs and symptoms, etiology, pathogenesis, clinical manifestations, sequelae, and prognosis, in a manner appropriate for both lay and professional audiences. 2. Describe the anatomical variations and differences in clinical manifestations of endometriosis across individuals, including variations within and between sexes. 3. Identify and apply key clinical terminology to accurately recognize and communicate features of endometriosis when adopting different perspectives (e.g., patient, clinician, or trainee).
6. Why did the team select the chosen topic and the medium? How will the topic and medium of choice help learners?

The team selected endometriosis due to its high prevalence, significant impact on quality of life, and frequent misdiagnosis. Its association with comorbid conditions and resulting functional impairment make it a clinically relevant topic within pathology.

The team chose a comic-based medium following a suggestion from Dr. Kum and a shared preference for an engaging and accessible format. The use of a simple stick-figure style reduces visual complexity while maintaining clarity.

This approach supports learning by presenting complex medical concepts in a clear, visually guided, and easy-to-follow format, which is particularly beneficial for visual learners. The narrative format emphasizes broader clinical context while remaining grounded in peer-reviewed scientific evidence.

7. Did the team use an artificial intelligence (AI) technology tool? If so, which AI technology tool(s) did the team use? What other technology tools did the team use? Is the technology tool novel? Is the team using this technology tool in a novel fashion? If the team did not use technology tool, why did the team decide against using the technology tool(s)?

Please include details (e.g., for what purpose was the tool used for? Why was the tool the best tool to use for your assignment? Are there alternative tools that were considered?)

Yes, the team used ChatGPT-4.0. Other technology tools included Zoom for online meetings, Google Docs as a shared working platform, and a messaging application as our primary communication medium.

Within our group, there were mixed perspectives regarding the use of AI. In our view, this balance of perspectives was healthy. It required us to recognize and respect differences in individual understanding, personal preferences, and backgrounds. While we value these differences, we also need to remain flexible enough to listen to one another and find common ground when making decisions. The main challenge was determining how to incorporate everyone's perspectives into a shared approach.

For example, some group members raised valid concerns that overreliance on AI for creative work could reduce the natural creativity that each individual brings to a project. We collectively agreed with this concern. However, from a teammate's personal perspective, managing academic responsibilities alongside personal commitments can be challenging, particularly while navigating ADHD and the pressure of meeting deadlines. Because of this, as an admin of the group she used AI primarily as an organizational tool rather than a creative one. She consulted ChatGPT to estimate the approximate time required for each stage of the project. This helped our team to develop a tentative timeline by taking each individual's schedule into consideration and organizing meeting times that worked for everyone.

We considered other ways of planning our timeline, such as manually estimating deadlines or using general task management methods, but ChatGPT allowed us to quickly generate a structured starting point that we could then adjust collaboratively.

8. How is your PULSE experiential assignment innovative and/or novel?

Describe what about the PULSE assignment is innovative/novel. Is there a particular component or content that is innovative/novel? How is it different from other content that already exists?

Our team would not describe our project as innovative in the sense of introducing entirely new scientific findings, since our work was based on existing research and previously published information. Instead, the most innovative aspect of our assignment was the way we translated complex medical terminology into everyday language that a general audience could more easily understand. Some teammates had other opinions, they thought that acting as “translators” of medical terminology—simplifying complex concepts while preserving their scientific accuracy—should itself be considered a novel contribution.

Another distinctive feature of our project was the visual style we chose. A teammate strongly advocated for using an extremely simple comic format with stick figures, despite the many other visual approaches we could have taken. This decision ultimately shaped the tone and accessibility of the final product.

Personally, we found that this simple format reduced the pressure to create something visually perfect. The use of stick-figure drawings made the project feel more approachable and enjoyable, since anyone can draw a stick figure without needing advanced artistic ability. This helped create an environment where contributing felt less intimidating and more collaborative.

In this way, our assignment differs from many other forms of academic content. In pre-medical environments, there is often strong pressure to perform at a very high level. By intentionally choosing a simple and approachable comic format, we created something that may feel more accessible to learners who are still building their understanding, rather than something that emphasizes perfection.

9. If you used an AI tool, please copy and paste the prompt(s)/question(s) used along with the output(s)/answer(s) from the AI tool.

The response here is to allow others to replicate the team’s work. If the prompts/outputs are lengthy (over 1 page), please attach it as a separate document and note below [Please see attached document].

[Please see Team #5 - Note](#)

10. If you did not use an AI tool, please attach a copy of the team’s notes to the assignment.

The response here is to allow others to observe the ‘behind the scenes’ team’s work.

[Please see Team #5 - Note](#)

11. How did the team ensure the veracity of the information presented in the PULSE assignment?

The response should highlight how the team has ensured that the information presented in the assignment is evidence-based and not spreading misinformation. You should specifically mention which databases (if any) or textbook materials you used, and how you kept track of the sources/references for each claim. If AI provided you with false information, please describe how the team has fact-checked the AI response and the legitimate (scientific) sources you used. A reference document should be provided in the reference section (15. References) below. Please ensure to include in-text citations in your assignment where applicable.

Because our PULSE assignment focuses on the sensitive topic of misogyny and dismissal in women’s healthcare, particularly in the context of endometriosis, it was especially important for our team to ensure that all information presented was accurate, evidence-based, and not contributing to misinformation. Even small inaccuracies could significantly affect how the issue is understood and represented. To maintain accuracy, we relied primarily on peer-reviewed research articles, scientific journals, and reputable medical/public health sources rather than informal websites or unsupported online claims.

Our main sources included literature and reports from trusted publishers such as the Human Reproduction, Yeungnam University Journal of Medicine, and npj Women’s Health.^{1,2,5} These sources were used to support key claims related to the prevalence of endometriosis, diagnostic

delay and symptom presentation. We also used some publicly available case examples to help reflect the emotional reality of the condition, but all medical facts were cross-checked with scientific literature.

Throughout the drafting process, our team kept track of the source for each factual claim by cross-checking information across multiple references and linking specific dialogue points or educational statements back to supporting literature. This was particularly important because the way symptoms, diagnostic challenges, and physician responses were portrayed in the script needed to reflect both medical accuracy and realistic patient experience. We had several discussions and revisions while writing to make sure the dialogue did not exaggerate or misrepresent the issue, and that our interpretation remained consistent with the evidence we found.

Overall, the team ensured veracity by using credible scientific databases, cross-checking claims, revising the script collaboratively, and maintaining careful reference tracking so that all major factual statements could be supported with in-text citations.

12. Write a meaningful team reflection about the PULSE session (max 250 words).

Prompts to help your team write the reflection: Were there any team/individual biases that surfaced when creating content for the assignment? Did the team implement any practices to ensure the content was equitable, diverse, and/or inclusive? How has the PULSE assignment helped with the team's learning? If the team had to estimate, how long did the assignment take? What worked well for your team? What would the team do differently next time? What were the opportunities and challenges with creating the PULSE assignment to help others' learning? Were there any barriers or limitations?

Our team worked together to create the pulse assignment, which focused on endometriosis using stick figures. During the early stages of the meeting, while brainstorming for different ideas and topics, we discussed common issues of misdiagnoses in patients and came up with a case study of how often patients with endometriosis are misdiagnosed in the real world. This helps form our storyline where patients' initial symptoms are dismissed by doctors as standard period, highlighting potential biases and medical misogyny in health care settings, especially how women's reproductive health concerns may sometimes be underestimated or misinterpreted.

To ensure the content we are presenting is equitable and inclusive, we focused on presenting the patient experience/ symptoms realistically while also including educational information about disease etiology, pathogenesis, symptoms, and treatments for endometriosis to create a resource that has both scientific validity as well as is accessible to both students and non-expert so that they can understand the condition.

Our team maintained strong communication throughout the project by scheduling and attending regular Zoom meetings, setting up tentative deadlines regarding the project, and staying in constant touch through messages. Tasks were divided based on individual strength, and we brainstormed storylines together during Zoom meetings to ensure everyone was on the same page. One of the challenging tasks we faced while creating this assignment was drawing each panel because we wanted it to be engaging while still conveying accurate information related to endometriosis. Additionally, time management was also difficult due to midterms and the fact that each member of the group is in a different program and has a different schedule.

Overall, our team's motivation and consistent participation made the process much easier. The pulse assignment also helped our team to better understand endometriosis, including issues such as medical misogyny and misdiagnosis, while improving our ability to explain complex medical concepts in a clear and engaging way to a wide range of audiences.

13. Write the contributions of individual team members using unique initials.

Example: All team members contributed to the design of the prompts used in the technology tool, ChatGPT (GPT-3.5). T.K and T.K2 fact checked the information presented by ChatGPT using published literature on PubMed (PMID 29211319, 32477271). Y.Z finalized and formatted the final infographic and compiled the prompts and outputs. P.E was involved in...

All team members contributed to planning and researching about the topic, writing and drafting the script and storyboard, and drawing parts of the final comic.

Member 1: Drew panels 18-35, designed the characters, directed the overall visual style, the final format, and topic. Brought a perspective from the medical field to group discussions. Wrote Annotated bibliography for citation #8.

Member 2: Drew panels 1–17, found the case study which helped shape patient narrative, and identified contradictory viewpoints to ensure the project stayed on track both scientifically and creatively. She used Brightspace forums to connect with teaching assistants and also worked on entry 6 of the bibliography.

Member 3: Drew panels 39-49, contributed to narration, storyline plot, dialogue design, and assisted in character design, worked on annotated bibliography for reference 6

Member 4 was responsible for project administration and coordination, including managing timelines, organizing meetings, and facilitating group communication. She contributed to the written component by drafting responses for Questions 1–10 and assisting with formatting the final document. In addition, she developed the initial project structure, created thumbnail sketches for the comic, and prepared annotated bibliography entries for references 1–5.

14. Other comments (Optional)

Any comments the team would like to let the coordinator and/or TAs know.

[Please see Team #5 - Note](#)

15. References

1. Dunselman, G. A. J. *et al.* ESHRE guideline: management of women with endometriosis. *Hum. Reprod.* **29**, 400–412 (2014). <https://doi.org/10.1093/humrep/det457>
2. Lee, S.-Y., Koo, Y.-J. & Lee, D.-H. Classification of endometriosis. *Yeungnam Univ. J. Med.* **38**, 10–18 (2021). <https://doi.org/10.12701/yujm.2020.00444>
3. Vercellini, P., Trespidi, L., De Giorgi, O., Cortesi, I., Parazzini, F. & Crosignani, P. G. Endometriosis and pelvic pain: relation to disease stage and localization. *Fertil. Steril.* **65**, 299–304 (1996). PMID: 8566252
4. Macer, M. L. & Taylor, H. S. Endometriosis and infertility: a review of the pathogenesis and treatment of endometriosis-associated infertility. *Obstet. Gynecol. Clin. North Am.* **39**, 535–549 (2012). <https://doi.org/10.1016/j.ogc.2012.10.002>
5. Kirk, U. B., Bank-Mikkelsen, A. S., Rytter, D. *et al.* Understanding endometriosis underfunding and its detrimental impact on awareness and research. *npj Women's Health* **2**, 45 (2024). <https://doi.org/10.1038/s44294-024-00048-6>
6. Frankel, L. R. A 10-Year Journey to Diagnosis With Endometriosis: An Autobiographical Case Report. *Cureus* (2022). <https://doi.org/10.7759/cureus.21329>
7. Daniell, J. & Christianson, C. Combined laparoscopic surgery and danazol therapy for pelvic endometriosis. **35**, 521–525 [https://doi.org/10.1016/S0015-0282\(16\)45493-2](https://doi.org/10.1016/S0015-0282(16)45493-2)
8. Dehlendorf, C. *et al.* Evolving the preconception health framework. *Obstetrics and Gynecology* **137**, 234–239 (2021).

16. Annotated Bibliography

1. Dunselman, G. A. J. *et al.* ESHRE guideline: management of women with endometriosis. *Hum. Reprod.* **29**, 400–412 (2014). <https://doi.org/10.1093/humrep/det457>

This article provides an updated clinical guideline for the management of endometriosis, including 83 recommendations covering diagnosis, treatment, prevention, and long-term management. The guideline is based on a systematic literature review, quality assessment of studies, and expert consensus with patient input. It concludes that management primarily involves hormonal therapy and surgical interventions, with treatment individualized according to patient needs. Due to the non-specific nature of symptoms, diagnosis relies on a combination of clinical presentation, imaging, and laparoscopic confirmation, which often leads to delayed diagnosis. The guideline also highlights that many recommendations are based on limited evidence, indicating gaps in current research.

This source is highly credible, as it is published in *Human Reproduction* and developed by the European Society of Human Reproduction and Embryology, a leading authority in reproductive medicine. Its strengths include a comprehensive, evidence-based approach and transparency in distinguishing between strong evidence and expert opinion. However, some recommendations rely on limited data, which may affect certainty in certain areas.

This article is relevant to our assignment as it provides foundational, evidence-based information on endometriosis, particularly regarding diagnostic challenges and treatment approaches, which informed both the scientific content and narrative of our comic.

2. Lee, S.-Y., Koo, Y.-J. & Lee, D.-H. Classification of endometriosis. *Yeungnam Univ. J. Med.* **38**, 10–18 (2021). <https://doi.org/10.12701/yujm.2020.00444>

The article looks at several classification systems used for endometriosis, including rASRM, ENZIAN, the endometriosis fertility index (EFI), and the developing AAGL system. It shows that endometriosis does not present in just one consistent way, which makes it difficult to classify. Right now, there isn't a true gold standard. Each system has its own strengths. For example, rASRM is simple and widely used, ENZIAN gives more detailed information about deep infiltrating disease, and EFI focuses on predicting fertility outcomes. However, these systems don't always match what patients actually experience, especially when it comes to pain or infertility. This makes it clear that a more complete and clinically meaningful system is still needed.

This source is credible because it is a peer-reviewed review article published in *Yeungnam University Journal of Medicine*. One thing it does well is compare different systems in a way that is easy to follow, while also pointing out their limitations. At the same time, since it is a review, it does not include new experimental data and instead relies on existing studies.

We used this article in our assignment because it helps explain why endometriosis can be confusing to diagnose. It supports the idea that symptoms don't always line up with what clinicians expect, which fits well with how we showed diagnostic challenges in our comic.

3. Vercellini, P., Trespidi, L., De Giorgi, O., Cortesi, I., Parazzini, F. & Crosignani, P. G. Endometriosis and pelvic pain: relation to disease stage and localization. *Fertil. Steril.* **65**, 299–304 (1996). PMID: 8566252

The study explores how endometriosis relates to pelvic pain, with a focus on whether symptom severity is linked to disease stage or lesion location. The authors analyzed data from 244 patients diagnosed through laparoscopy or laparotomy, evaluating dysmenorrhea,

nonmenstrual pain, and deep dyspareunia using several pain assessment scales. Their findings suggest that pain severity does not consistently correspond with disease stage. Instead, the location of lesions appears to play a more important role, with deep infiltrating vaginal lesions associated with more severe dyspareunia. Published in *Fertility and Sterility*, a peer-reviewed journal, the study draws on a relatively large clinical sample, which supports its credibility. At the same time, the sample consists primarily of patients already seeking care for pain, which may introduce selection bias and limit generalizability.

Even with this limitation, the article was useful for our assignment. It highlights the mismatch between disease severity and symptoms, helping explain why endometriosis is often misunderstood or dismissed as normal menstrual pain. This directly supports our narrative that diagnosis is complex and not always straightforward.

4. Macer, M. L. & Taylor, H. S. Endometriosis and infertility: a review of the pathogenesis and treatment of endometriosis-associated infertility. *Obstet. Gynecol. Clin. North Am.* **39**, 535–549 (2012). <https://doi.org/10.1016/j.ogc.2012.10.002>

This review article looks at the pathogenesis, mechanisms, and treatment of endometriosis-associated infertility. It brings together several possible causes of the disease, such as retrograde menstruation, immune dysfunction, genetic factors, and stem cell involvement, showing that endometriosis is not driven by a single mechanism but is instead multifactorial. The paper also explains how the disease can affect fertility in different ways, including impacts on gametes, embryo development, fallopian tube function, and endometrial receptivity. In addition, it outlines current treatment options such as surgery, hormonal therapy, and assisted reproductive technologies.

It is written by researchers from Yale School of Medicine and published in a reputable clinical journal, which supports its credibility. One of its strengths is that it pulls together a wide range of studies into a clear overview of current understanding. However, since it is a review article, it does not present new experimental data and instead relies on the quality of the studies it includes.

We used this source during our background research when deciding on a topic, as it helped us understand the broader complexity of endometriosis. It also supported our idea that the condition is often misunderstood and difficult to diagnose, reinforcing why we chose to present it in a way that is more accessible through our comic.

5. Kirk, U. B., Bank-Mikkelsen, A. S., Rytter, D. et al. Understanding endometriosis underfunding and its detrimental impact on awareness and research. *npj Women's Health* **2**, 45 (2024). <https://doi.org/10.1038/s44294-024-00048-6>

The article focuses on the underfunding of endometriosis research and the impact that has on awareness and progress. Even though endometriosis affects a large number of people, it still does not receive as much research attention or funding as other conditions. The authors explain that this gap contributes to ongoing problems like delayed diagnosis, limited treatment options, and low awareness in both the public and healthcare settings. Instead of only looking at the biology of the disease, the paper takes a step back and looks at the bigger picture, showing how research priorities can shape how a condition is understood and managed. The article is published in *npj Women's Health*. It is a peer-reviewed journal connecting funding issues to real-world outcomes, which makes the argument feel more relevant. However, it is more of a

discussion-based article which does not present new experimental data and relies on existing research.

We also used this article during our background research when narrowing down our topic. It supported the idea that endometriosis is still often misunderstood, which made us feel that this is a condition that needs more attention. This perspective aligns with our goal of presenting the pathology in a more accessible way through our comic strip.

6. Frankel, L. R. A 10-Year Journey to Diagnosis With Endometriosis: An Autobiographical Case Report. *Cureus* (2022). <https://doi.org/10.7759/cureus.21329>

This article presents a personal case report of the author's experience with ovarian endometriosis, offering both a detailed explanation of the disease and a powerful patient-centred perspective. It gives a dual insight of the disease using the patient's story who herself is in the medical field. It highlights the long delay many patients face before receiving an accurate diagnosis, despite endometriosis being a relatively well-studied condition. The source effectively illustrates the progression of the disease by describing early symptoms, the impact on daily life, symptom management, and the author's ten-year journey living with the condition.

This source is credible because it was published in the peer-reviewed medical journal *Cureus* and includes a DOI, indicating it is a formally published academic article. However, because it is an autobiographical case report based on one patient's experience, its main strength lies in providing insight into the lived experience of endometriosis rather than broad scientific generalizations.

This was especially valuable for our project because our comic strongly focused on the patient's perspective. We used this article to help shape the dialogue, emotional tone, and symptom progression in our comic, particularly regarding pain, delayed diagnosis, and cyst-related experiences.

7. Daniell, J. & Christianson, C. Combined laparoscopic surgery and danazol therapy for pelvic endometriosis. **35**, 521–525 [https://doi.org/10.1016/S0015-0282\(16\)45493-2](https://doi.org/10.1016/S0015-0282(16)45493-2)

The above article investigates the effectiveness of combining laparoscopic surgery with danazol therapy in treating infertility associated with Endometriosis. The study examined 66 patients who underwent laparoscopic removal or treatment of endometrial lesions followed by danazol therapy for 4–6 months.. The authors found that this combined approach was particularly effective for patients with mild to moderate disease. Additionally, complications from danazol were minimal, and follow-up laparoscopy often revealed reduced residual disease.

Overall, the study supports the idea that combining surgical and hormonal therapy improves fertility outcomes and symptom management in patients with endometriosis. This source is credible because it provides clinical data from actual patients, making the findings reliable and evidence-based and is useful in understanding treatments involving danazol and laparoscopy, also it is credible as it was published by *Fertility and sterility* which is a peer-reviewed international journal.

This article is valuable for our comic strip project because it supports how we portrayed treatment for Endometriosis in our dialogue. In our comic strip in Scene 5, Panels 3 and 4, we included a dialogue about prescribing danazol (200–800 mg/day for several months), followed by laparoscopy. The article strengthens the authenticity of this dialogue by showing that both

danazol therapy and laparoscopic surgery are commonly used approaches for managing symptoms and improving outcomes in patients with endometriosis. By using this source, we ensured that our dialogue presents medically accurate information for the readers.

8. Dehlendorf, C. *et al.* Evolving the preconception health framework. *Obstetrics and Gynecology* **137**, 234–239 (2021). <https://doi.org/10.1097/AOG.0000000000004255>

This article provides a citable source for the existence of gender disparities in the medical field, biasing both treatment and research directions.

The source is credible because it was published in "Obstetrics & Gynecology", the official publication of the American College of Obstetricians and Gynecologists. It pertains to gender bias in the field of sexual health, which is very much relevant to the fields of Obstetrics and Gynecology.

The premise/importance of our entire project revolves around the idea that women's sexual health often goes unrecognized, so a scholarly source acknowledging this disparity is helpful for both direction and direct reference to the inequality.