# Non-white Race is Associated with Increased Odds of Late-Stage Presentation in Patients with Pathology Confirmed Endometriosis

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## Endometriosis Background

- Average 4 to 11 year delay in diagnosis.[1,2]
- Affects from 10-15% of all women of reproductive age, and 35-50% of women with pelvic pain and/or infertility.[8]
- Interestingly, previous literature has shown that the likelihood of diagnosis appears to differ among women from different racial/ethnic backgrounds.[3]

Our **objective** was to analyze the relationship between white or non-white race/ethnicity and severity of endometriosis at the time of diagnosis.

## Methods

- 789 patients underwent minimally invasive surgery at a single institution by a single surgeon from 2011-2022.
- Included patients (n=**539**) were found to have pathology confirmed endometriosis with documented staging.[5]
  - Non-white, n=151 (28%)
  - White, n=388 (72%)
- Demographics and evaluation/treatment data were collected.
- Stage 1 & 2 endometriosis was defined as "**early-stage**" while Stage 3 & 4 was defined as "**late-stage**."

## Results & Conclusion

In this 10-year, single center study, non-white race conferred **over two times increased odds** of a late-stage (Stage 3 or Stage 4) endometriosis diagnosis when compared to white patients.

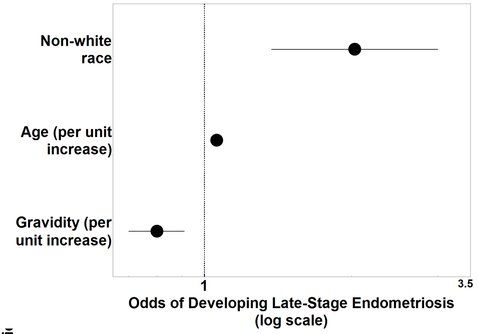


**Figure 1.** Non-white race is associated with significantly greater odds of having stage 3 or 4 endometriosis at the time of diagnosis.

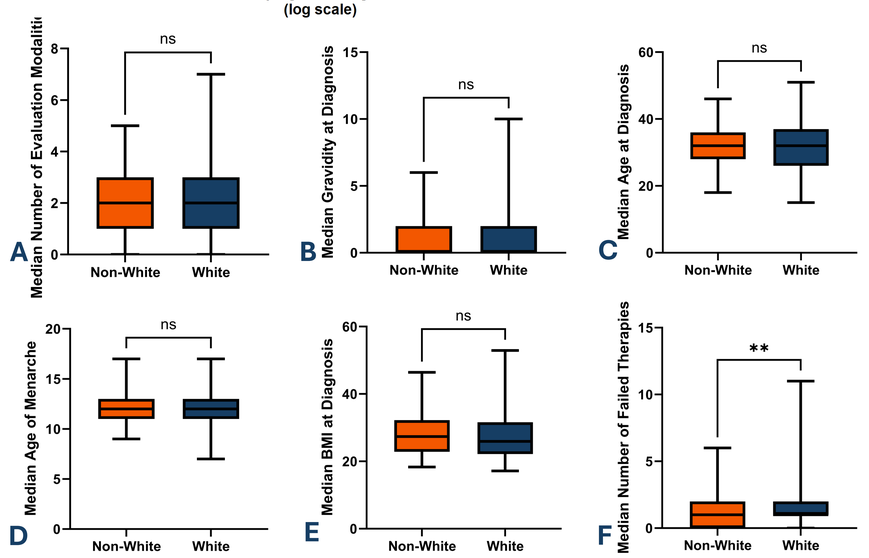


**Figure 2.** No significant difference existed between white and non-white race with regard to number of evaluation modalities (A), gravidity (B), age (C), age of menarche (D), or BMI (E). Number of failed therapies (F) showed a statistically significant difference between groups, but likely minimal clinical significance.

**Table 1.** Odds of developing late-stage endometriosis. Statistically significant results are bolded.

| Variable | Odds ratio | 95% Confidence interval | p-value |
|---|---|---|---|
| **Non-white race** | **2.03** | 1.37-3.00 | **<0.001** |
| **Age (per unit increase)** | **1.06** | 1.03-1.09 | **<0.001** |
| **Gravidity (per unit increase)** | **0.80** | 0.70-0.91 | **<0.001** |

- Non-white patients are being diagnosed at a more advanced stage of their disease and thus **much later in the disease timeline**.
- Non-white patients may face **additional challenges** in accessing timely diagnoses and effective treatment modalities.
- **Increased provider awareness** of the factors that are most predictive of endometriosis and earlier treatment and intervention can help to **reduce racial disparities**.

## References

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