

A Silent Fight: Delays in Uterine Fibroid Treatment Among Women of Color

Long waits are common for women with fibroids, and Black and Asian and Pacific Islander patients experience the longest treatment delays.

KEY FINDINGS:

- In 2022, patients ages 18 to 65 waited an average of 3.5 years for a diagnosis after their symptoms were recorded.
- Asian and Pacific Islander patients waited an average of 19 days longer after diagnosis than White patients to receive less-invasive procedures.
- Black patients waited roughly one month longer after diagnosis than White patients for a myomectomy or hysterectomy.
- In 2022, 46% of patients with uterine fibroids treated and untreated received a lab test result likely indicative of anemia.

EXECUTIVE SUMMARY:

Uterine fibroids have been described by patients as "the silent fight." Their impact on quality of life and the high number of women affected are disproportionate to the relatively little attention this condition receives. The systemic and economic impacts of uterine fibroids are also significant — they account for <u>30 to 50% of hysterectomies</u> in the U.S. and are <u>estimated</u> to cost the country between \$6 billion and \$34 billion annually.

Uterine fibroids affect women primarily during their reproductive years and are often asymptomatic. But for those who do experience symptoms, the effects can be widespread and profound — fibroids can influence fertility and pregnancy outcomes and cause pelvic pressure, pain, and heavy bleeding that can give rise to other persistent conditions like <u>anemia</u>. Research shows that the <u>emotional and social consequences</u> of symptomatic fibroids exacerbate their physical toll with quality-of-life impacts on body image, sexuality, vaginal health, and family planning. <u>A recent survey</u> conducted by Myovant Sciences and Evidation found that one in five women with fibroids experienced symptoms so severe that she contemplated quitting her job or educational program.

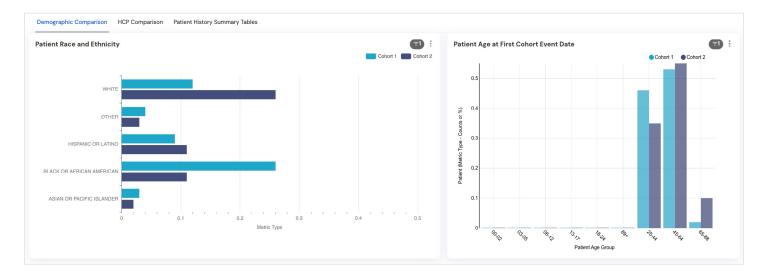
Like in many diseases, <u>these burdens do not fall equally</u>: It is estimated that Black women have an incidence of uterine fibroids that is two to three <u>times</u> that of White women. They are more likely to develop fibroids at a younger age and to have fibroids that are both symptomatic and severe. The causes of these disparities are still unclear— race alone is not the primary determining factor. A range of factors may contribute to a higher incidence and severity of uterine fibroid incidence: Socioeconomic factors, psychosocial stress, systemic racism, and environmental exposures are all <u>believed</u> to <u>contribute</u>. <u>Recent research</u> has also found that Asian-Chinese women may share a similar burden, while Hispanic or Latina patients may have a disease burden closer to that of White participants — but more research is needed.

In this report, we investigate trends in time to treatment by race and ethnicity and age to highlight any differences and further elucidate disparities in care for patients with uterine fibroids. While the majority of published research on treatment of uterine fibroids has focused on more invasive options, our analysis also includes hormone treatments and less invasive procedures.



METHODOLOGY:

This analysis was built on Komodo's new flagship offering, MapLab[™], and our Healthcare Map[™], the industry's largest and most complete database of de-identified, real-world patient journeys in the U.S. We investigated race- and age-based differences in times to treatment for uterine fibroids from recorded symptom onset to diagnosis. Treatment methods included hormone therapy and minimally invasive procedures such as uterine artery embolization (UAE) and ablation, and more invasive options like myomectomy and hysterectomy. We defined a diagnosis of uterine fibroids using ICD-9-CM and ICD-10-CM codes in 2022 and defined treatments through a combination of NDCs, HCPCS, CPTs, and ICD-10-PCS codes. We aggregated and calculated time to treatment from diagnosis in 2022 and stratified by age and race and ethnicity. We also looked at the risk for iron-deficiency anemia from uterine fibroids through our new MapEnhance[™] offering; we evaluated a subset of uterine fibroid patients and analyzed hematocrit and hemoglobin lab results to assess anemia risk.



This analysis was performed in collaboration with the Black Dragons Affinity Group at Komodo Health, which serves to both highlight and help close gaps in care faced by patients of color through robust analysis and thoughtful conversation.

RESULTS:

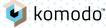
In 2022, patients ages 18 to 65 waited an average of 3.5 years for a diagnosis after their symptoms were recorded.

Patients age 66 and above were diagnosed one year sooner than those 65 and younger, likely reflecting the added challenge of identifying fibroids in menstruating women. Older patients are more likely to visit the doctor more frequently and present with symptoms that are abnormal for their age group, such as irregular bleeding and pelvic pain.

Among patients who received hormone treatment, 24% waited six months or more after diagnosis for treatment. Among patients who received minimally invasive procedures (either ablation or UAE), 29% waited six months for more, and among patients who received more invasive procedures (myomectomy or hysterectomy), 16% waited six months or more. The time from the first recording of symptoms to diagnosis likely underestimates the true delay, as research has shown that symptoms like heavy menstrual bleeding are probably underestimated by providers, <u>especially in women of color</u>, and that many women may live with chronic fibroid symptoms <u>without seeking care</u>.

Delays in treatment among patients in each treatment category

	Hormone Treatment	Minimally Invasive Procedures	More-Invasive Procedures
Treated within six months of diagnosis	76%	71%	84%
Treated six months or more after diagnosis	24%	29%	16%

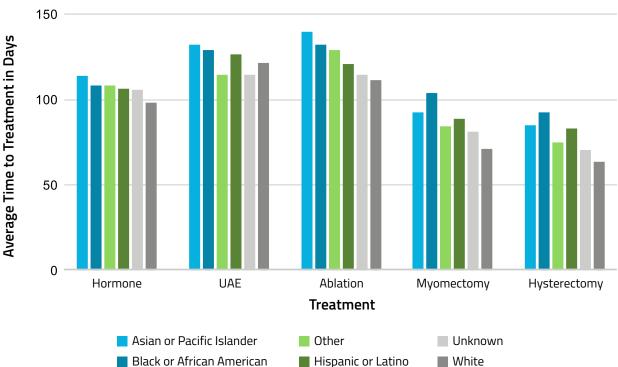


Asian and Pacific Islander patients waited an average of 19 days longer after diagnosis than White patients to receive less-invasive procedures.

Of all racial and ethnic groups, these patients waited the longest to receive less-invasive treatment, including UAE or ablation. Black patients waited an average of 11 days longer, and Hispanic patients waited an average of 9 days longer. Ablation procedures had greatest disparities in wait times: Asian and Pacific Islander patients were treated 28 days later on average than White patients, and Black and Hispanic patients were treated 20 days and 9 days later, respectively. Looking at treatment with hormone medication, we found that Asian and Pacific Islander patients had the longest delay, receiving treatment 16 days later than White patients. Black patients waited an average of 10 days longer, and Hispanic patients waited an average of 8 days longer.

Black patients waited roughly one month longer after diagnosis than White patients for a myomectomy or hysterectomy.

Black patients experienced the greatest treatment delays after diagnosis for these more invasive procedures, waiting over 50% longer than White patients — 32 and 29 days later, respectively. Asian and Pacific Islander patients likewise waited about 40% longer, or 21 and 22 days. This is despite a higher likelihood of severe disease in Black patients, and possibly in Asian and Pacific Islander patients. Hispanic patients and "Other" patients experienced shorter delays, 38% and 27% shorter, respectively, but still waited longer than White patients, who, on average, waited the least amount of time after diagnosis.



Average Time to Treatment by R&E and Treatment Type

Younger patients with fibroids had significantly longer wait times than older patients for certain treatments.

Patients ages 18 to 35 waited significantly longer on average than older age groups (36+) for both hormone treatments (125 days vs. 92 days, respectively) and more invasive procedures (97 vs. 66 days, respectively). They waited the same amount of time on average for less-invasive procedures (133 days). These differences likely reflect disparities in their reproductive goals, including the preservation of reproductive function whenever possible and desired. In recent years, less-invasive treatment options have become more common for those prioritizing preservation of fertility.

In 2022, 46% of patients with uterine fibroids — treated and untreated — received a lab test result likely indicative of anemia.

Using Komodo's MapEnhance, which includes results from hundreds of types of clinical lab tests, we found that 46% of patients with uterine fibroids had below-normal levels of hemoglobin (defined as any value less than 12.1 g/dL), potentially indicative of anemia. Additionally, nearly 39% had below-normal levels of hematocrit (defined as <36%). This rate dwarfs the prevalence of anemia seen among the entire population of women in Komodo's Healthcare Map, at 7%.



MapEnhance, one of Komodo's newest solutions, extends the power of our Healthcare Map by combining it with other real-world data sources — including claims, EHRs, lab results, genomics, patient registries, insurance, and other demographic characteristics — from our network of specialty partners or our new proprietary data enhancements, providing customers with the most complete picture of the U.S. healthcare system available in the market today.

DISCUSSION:

Similar but troubling trends become apparent when looking at a variety of treatments for uterine fibroids: Black and Asian and Pacific Islander women experience longer delays than White patients in nearly all treatment modalities.

Our analysis contributes to the limited but emerging research on racial disparities among the non-invasive and less-invasive fibroid treatments. The longest delays for both these and for more-invasive treatments were experienced by Asian and Pacific Islander patients, who may also experience greater severity of disease, and by Black patients, whose higher disease burden is well-documented. These trends highlight the need for both further exploration, and addressing the gaps in treatment likely caused by systemic racism. Improvements can be made through targeted physician education and strengthening patient-provider relationships, especially for patients on <u>publicly funded health plans</u>. Education specific to the presentation of uterine fibroids should aim to identify and reduce racial and gender biases among providers in order to improve time to diagnosis and intervention. While racial disparities in the U.S. are deeply rooted, immediate changes in the healthcare system's approaches can mean significant improvements in care for these populations.

Our solutions can only be as strong as the data that informs them; data quality is key for improving health outcomes in marginalized populations. The most powerful insights come from racial and ethnic inclusion and representation in clinical trials as well as ensuring objectivity in the data upon which tools are built. By elucidating and quantifying the experiences of fibroid patients across age groups and race and ethnicity, we can support the creation of the most effective interventions for addressing multifaceted biases against women of color to minimize treatment delays, improve health outcomes, and remove unnecessary burdens for patients and their families.

AUTHORS:

Raquel Freeman, Clinical Product Specialist Akylah Langley, Customer Success Associate Tolu Falana, Senior Customer Success Associate Tabby Khan, MD, MPH, Director, Clinical Product Anna Druet, Senior Science Writer

About Black Dragons

Black Dragons' mission is to cultivate a safe space for Dragons of color to be themselves, form genuine connections, and learn from colleagues. They bring forward the unique experiences of Black professionals and support one another as they navigate both challenges and opportunities. The group also aims to increase the representation of Black employees at Komodo through a proactive approach to recruitment, building relationships with community organizations, and educating fellow Dragons through service activities, webinars, and events.

About Komodo Health

Komodo Health is a technology platform company creating the new standard for real-world data and analytics by pairing the industry's most complete view of patient encounters with enterprise software and machine learning to connect the dots between individual patient journeys and large-scale health outcomes. Across Life Sciences, payers, providers, and developers, we help our customers unearth patient-centric insights at scale — marrying clinical data with advanced algorithms and Al-powered software solutions to inform decision-making, close gaps in care, address disease burden, and help enterprises create a more cost-effective, value-driven healthcare system. For more information, visit komodohealth.com.

