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## Unraveling the Immunological Nexus: Implications of Monocytes in the Context of HIV and Fibroids - A Critical Review

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### Abstract

This critical review investigates the intricate interplay between monocytes, HIV, and fibroids, aiming to unravel the immunological complexities that influence disease progression in women. The paper critically examines existing literature, highlighting the multifaceted role of monocytes and their implications on the pathogenesis of both HIV and fibroids. Special attention is given to the impact of monocytes on disease progression, offering critical insights into their role as key orchestrators in the complex relationship between HIV and fibroids. Furthermore, the review explores the immunomodulatory potential of monocytes, providing a critical assessment of therapeutic strategies that target monocyte-mediated pathways. The analysis includes a balanced critique of current challenges and gaps in understanding, along with suggestions for future research directions. In conclusion, this review underscores the crucial role of monocytes in shaping the immunological landscape of HIV-positive women with fibroids and emphasizes the need for continued research to uncover novel therapeutic interventions at the intersection of women's health, HIV, and fibroids.

**Keywords:** *Monocytes, HIV, Fibroids, Immunological Interplay, Disease Progression, Women's Health, Immune Modulation, Inflammation*

### Introduction

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The intersection of HIV infection and the presence of fibroids in women constitutes a complex and intriguing field of study, implicating various immunological factors in disease progression. Among these factors, monocytes emerge as pivotal players, orchestrating intricate mechanisms that potentially contribute to the severity of both conditions. This critical review aims to provide an in-depth exploration of the implications of monocytes in the context of HIV and fibroids, shedding light on their multifaceted role and their impact on the immunological landscape of affected women. Understanding the immunological dynamics of monocytes is paramount in comprehending the broader implications of their involvement in the progression of HIV and fibroids. Monocytes, as key components of the innate immune system, play a crucial role in maintaining immune homeostasis and responding to various pathological stimuli. Their ability to migrate to inflamed tissues and modulate immune responses positions them at the forefront of the interplay between chronic viral infections and benign tumors such as fibroids.<sup>1-14</sup>

In the context of HIV, monocytes have been implicated in viral dissemination and persistence, contributing to chronic inflammation and immune dysfunction. Concurrently, fibroids, benign tumors originating from the uterine muscle, present a unique challenge in the realm of women's health. The intricate relationship between monocytes, HIV, and fibroids remains underexplored, necessitating a critical examination of existing literature to unravel the interconnected immunological processes. In light of the growing prevalence of both HIV and fibroids globally, unraveling the implications of monocytes in this context carries significant implications for clinical management and therapeutic interventions.<sup>15-19</sup>

## **Monocytes in HIV and Fibroids**

Monocytes, as integral components of the immune system, play a multifaceted role in the complex interplay between HIV infection and the presence of fibroids in women. In the context of HIV, monocytes have garnered attention for their pivotal role in viral dissemination and persistence. These cells act as a reservoir for the virus, facilitating its spread throughout the body. Moreover, monocytes contribute to chronic inflammation, a hallmark of HIV infection, by releasing pro-inflammatory cytokines and interacting with other immune cells. The sustained activation and dysfunction of monocytes contribute to immune dysregulation, fostering an environment conducive to viral replication and hampering effective immune responses. Simultaneously, the influence of monocytes extends to the realm of fibroids, benign tumors arising in the uterine muscle. While the precise mechanisms are still being elucidated, studies suggest that monocytes may contribute to the inflammatory milieu within fibroid tissues. Inflammation is recognized as a potential factor in fibroid development and growth, and the immunomodulatory functions of monocytes could play a role in shaping the microenvironment conducive to fibroid pathogenesis.<sup>21-34</sup>

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The crosstalk between monocytes, HIV, and fibroids is an area that warrants further exploration. Monocytes may serve as a common link in influencing the progression of both conditions, and understanding their behavior in this context is essential for a comprehensive grasp of disease mechanisms.<sup>35</sup> The interactions between monocytes and these disparate conditions underscore the complexity of the immune response and highlight the need for nuanced investigations to decipher the specific pathways and mediators involved. As research progresses, insights into monocyte dynamics in HIV and fibroids could hold therapeutic implications. Targeting monocyte-mediated pathways may offer novel approaches for managing both HIV infection and fibroids, presenting opportunities for integrated and tailored therapeutic interventions. Ultimately, unraveling the intricate roles of monocytes in the context of HIV and fibroids contributes not only to our understanding of immunological processes but also paves the way for innovative strategies in women's health and infectious disease management.<sup>36-45</sup>

### **Disease Progression and Immunological Dynamics**

The progression of diseases such as HIV and fibroids involves a complex interplay of immunological dynamics, with monocytes playing a pivotal role in shaping the trajectory of these conditions. In the context of HIV, disease progression is characterized by a dynamic interplay between the virus and the host immune system. Monocytes, as part of the innate immune response, are intricately involved in this process. Initially recruited to sites of infection, monocytes can become infected by HIV and subsequently serve as reservoirs for the virus. This viral persistence within monocytes contributes to ongoing inflammation and immune activation, driving the progression of HIV from acute to chronic stages. The continual interaction between monocytes and HIV underscores the critical role these cells play in shaping the immunological landscape during disease progression. Similarly, in the realm of fibroids, the immunological dynamics are closely linked to disease evolution. Chronic inflammation is recognized as a contributing factor to fibroid development and growth. Monocytes, with their ability to secrete pro-inflammatory cytokines and modulate immune responses, are implicated in creating a pro-inflammatory microenvironment within fibroid tissues. This immune modulation may influence the proliferation of fibroid cells and contribute to the structural changes observed in these benign tumors.<sup>46-60</sup>

The immunological dynamics of disease progression extend beyond monocyte involvement. Interactions between various immune cells, cytokines, and signaling pathways contribute to the intricate balance between host defense mechanisms and the pathogenic processes associated with HIV and fibroids. The chronic activation of the immune system, often observed in both conditions, can lead to immune exhaustion, impaired function, and dysregulation of inflammatory responses. Understanding the immunological dynamics of disease progression in the context of HIV and fibroids is critical for developing targeted therapeutic strategies. Research aimed at elucidating the specific mechanisms by which monocytes and other immune cells contribute to disease evolution holds the potential to identify novel intervention points. By modulating these immunological processes, it may be possible to mitigate the impact of chronic diseases on affected individuals, leading to improved outcomes and quality of life.<sup>61-72</sup>

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## **Immunomodulatory Potential and Therapeutic Insights**

The immunomodulatory potential of monocytes in the context of HIV and fibroids opens new avenues for therapeutic insights, offering a unique angle for intervention strategies that target the intricate immune responses associated with these conditions. Monocytes, as versatile immune cells, possess the ability to modulate immune responses by secreting various cytokines and interacting with other immune cells. In the realm of HIV, exploiting the immunomodulatory potential of monocytes could represent a promising avenue for therapeutic development. Strategies aimed at controlling the chronic inflammation and immune activation associated with HIV progression might involve targeting specific monocyte-mediated pathways. By attenuating the pro-inflammatory cytokine release and regulating the activation status of monocytes, therapeutic interventions could potentially mitigate the adverse effects of chronic immune activation in HIV-positive individuals.<sup>73-82</sup>

In the context of fibroids, the immunomodulatory functions of monocytes also offer potential therapeutic insights.<sup>83</sup> As chronic inflammation is implicated in fibroid pathogenesis, modulating the immune response may be a viable strategy.<sup>84</sup> Targeting monocytes to regulate the local inflammatory milieu within fibroid tissues could influence the growth and development of these benign tumors. Investigating the specific mechanisms by which monocytes contribute to fibroid-associated inflammation may provide therapeutic targets for controlling fibroid progression and alleviating associated symptoms. Exploring immunomodulation as a therapeutic strategy requires a nuanced understanding of the balance between immune activation and regulation. Harnessing the potential of monocytes for therapeutic insights necessitates a comprehensive grasp of their behavior and functional plasticity in response to different microenvironments associated with HIV and fibroids. Furthermore, any therapeutic interventions must be carefully tailored to avoid unintended consequences and to ensure a beneficial impact on overall health. As research continues to unravel the immunomodulatory potential of monocytes, the development of targeted therapies holds promise for improving clinical outcomes in individuals with HIV and fibroids. Innovative approaches that leverage the inherent capabilities of monocytes to regulate immune responses may represent a paradigm shift in disease management. By refining our understanding of the immunological nuances involved and translating these insights into therapeutic strategies, we may pave the way for more effective and tailored interventions in the complex intersection of women's health, infectious disease, and benign tumor pathogenesis.

## **Conclusion**

The implications of monocytes in the context of HIV and fibroids reveal a dynamic and intricate interplay within the immunological landscape, influencing disease progression in women. This critical review has provided a comprehensive examination of the multifaceted roles played by monocytes, shedding light on their involvement in the pathogenesis of both HIV and fibroids. The immunological dynamics surrounding monocytes in HIV highlight their central role in viral dissemination, persistence, and chronic inflammation, contributing to the complex journey from

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acute to chronic stages of the infection. Simultaneously, in the realm of fibroids, monocytes contribute to the inflammatory milieu within the tumor microenvironment, suggesting their potential involvement in the growth and development of these benign uterine tumors.

The crosstalk between monocytes, HIV, and fibroids opens avenues for therapeutic insights. The immunomodulatory potential of monocytes presents an intriguing target for intervention strategies, offering opportunities to mitigate chronic inflammation, immune dysregulation, and disease severity in affected individuals. As research progresses, the identification of specific monocyte-mediated pathways and the development of targeted therapies may revolutionize the management of both HIV and fibroids.

### References

1. FitzPatrick AM. Is Estrogen a Missing Culprit in Thyroid Eye Disease? Sex Steroid Hormone Homeostasis Is Key to Other Fibrogenic Autoimmune Diseases—Why Not This One? *Frontiers in Immunology*. 2022; 13:898138.
2. Ifeanyi OE, Uzoma OG. A Review on Fibroid and Haptoglobin. *Int. J. Curr. Res. Med. Sci.* 2018;4(6):38-49.
3. Ifeanyi OE, Uzoma OG. A Review on Cystatin C and Fibroid. *Int. J. Curr. Res. Med. Sci.* 2018;4(5):1-20.
4. Nnatuanya IN, Obeagu EI, Obeagu GU, Nnatuanya CI, Chukwudi EO. Evaluation of serum cystatin C levels in fibroid patients in Elele. *Arch Med Vol.* 2017(9).
5. Nnatuanya IN, EI O, Obeagu GU, Nnatuanya CI, Idem EE. Evaluation of Serum Haptoglobin in Fibroid Patients at Elele, Rivers State, Nigeria. *Genetics*. 2017;1:R7-13.
6. Obeagu EI, Obeagu GU, Musiimenta E. Post partum haemorrhage among pregnant women: Update on risks factors. *Int. J. Curr. Res. Med. Sci.* 2023;9(2):14-7.
7. Obeagu EI, Njar VE, Obeagu GU. Infertility: Prevalence and consequences. *Int. J. Curr. Res. Chem. Pharm. Sci.* 2023;10(7):43-50.
8. Obeagu EI, Okwuanaso CB, Edoho SH, Obeagu GU. Under-nutrition among HIV-exposed Uninfected Children: A Review of African Perspective. *Madonna University journal of Medicine and Health Sciences*. 2022;2(3):120-127.
9. Obeagu EI, Alum EU, Obeagu GU. Factors associated with prevalence of HIV among youths: A review of Africa perspective. *Madonna University journal of Medicine and Health Sciences*. 2023;3(1):13-18. <https://madonnauniversity.edu.ng/journals/index.php/medicine/article/view/93>.
10. Obeagu EI. A Review of Challenges and Coping Strategies Faced by HIV/AIDS Discordant Couples. *Madonna University journal of Medicine and Health Sciences*. 2023 ;3(1):7-12. <https://madonnauniversity.edu.ng/journals/index.php/medicine/article/view/91>.
11. Obeagu EI, Obeagu GU. An update on premalignant cervical lesions and cervical cancer screening services among HIV positive women. *J Pub Health Nutri.* 2023; 6 (2). 2023; 141:1-2. [links/63e538ed64252375639dd0df/An-update-on-premalignant-cervical-lesions-and-cervical-cancer-screening-services-among-HIV-positive-women.pdf](https://doi.org/10.21960/jphn.v6i2.141).

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12. Ezeoru VC, Enweani IB, Ochiabuto O, Nwachukwu AC, Ogbonna US, Obeagu EI. Prevalence of Malaria with Anaemia and HIV status in women of reproductive age in Onitsha, Nigeria. *Journal of Pharmaceutical Research International*. 2021;33(4):10-19.
13. Omo-Emmanuel UK, Chinedum OK, Obeagu EI. Evaluation of laboratory logistics management information system in HIV/AIDS comprehensive health facilities in Bayelsa State, Nigeria. *Int J Curr Res Med Sci*. 2017;3(1): 21-38.DOI: [10.22192/ijcrms.2017.03.01.004](https://doi.org/10.22192/ijcrms.2017.03.01.004)
14. Obeagu EI, Obeagu GU, Musiimenta E, Bot YS, Hassan AO. Factors contributing to low utilization of HIV counseling and testing services. *Int. J. Curr. Res. Med. Sci*. 2023;9(2): 1-5.DOI: [10.22192/ijcrms.2023.09.02.001](https://doi.org/10.22192/ijcrms.2023.09.02.001)
15. Obeagu EI, Obeagu GU. An update on survival of people living with HIV in Nigeria. *J Pub Health Nutri*. 2022; 5 (6). 2022;129. [links/645b4bfcf3512f1cc5885784/An-update-on-survival-of-people-living-with-HIV-in-Nigeria.pdf](https://doi.org/10.22192/ijcrms.2023.09.02.001).
16. Offie DC, Obeagu EI, Akueshi C, Njab JE, Ekanem EE, Dike PN, Oguh DN. Facilitators and barriers to retention in HIV care among HIV infected MSM attending Community Health Center Yaba, Lagos Nigeria. *Journal of Pharmaceutical Research International*. 2021;33(52B):10-19.
17. Obeagu EI, Ogbonna US, Nwachukwu AC, Ochiabuto O, Enweani IB, Ezeoru VC. Prevalence of Malaria with Anaemia and HIV status in women of reproductive age in Onitsha, Nigeria. *Journal of Pharmaceutical Research International*. 2021;33(4):10-19.
18. Odo M, Ochei KC, Obeagu EI, Barinaadaa A, Eteng UE, Ikpeme M, Bassey JO, Paul AO. TB Infection Control in TB/HIV Settings in Cross River State, Nigeria: Policy Vs Practice. *Journal of Pharmaceutical Research International*. 2020;32(22):101-119.
19. Obeagu EI, Eze VU, Alaebob EA, Ochei KC. Determination of haematocrit level and iron profile study among persons living with HIV in Umuahia, Abia State, Nigeria. *J BioInnovation*. 2016; 5:464-471. [links/592bb4990f7e9b9979a975cf/DETERMINATION-OF-HAEMATOCRIT-LEVEL-AND-IRON-PROFILE-STUDY-AMONG-PERSONS-LIVING-WITH-HIV-IN-UMUAHIA-ABIA-STATE-NIGERIA.pdf](https://doi.org/10.22192/ijcrms.2023.09.02.001).
20. AlAshqar A, Reschke L, Kirschen GW, Borahay MA. Role of inflammation in benign gynecologic disorders: from pathogenesis to novel therapies. *Biology of reproduction*. 2021;105(1):7-31.
21. Ifeanyi OE, Obeagu GU. The values of prothrombin time among HIV positive patients in FMC owerri. *International Journal of Current Microbiology and Applied Sciences*. 2015;4(4):911-916. [https://www.academia.edu/download/38320140/Obeagu\\_Emanuel\\_Ifeanyi\\_and\\_Obeagu\\_Getrude\\_Uzoma2.EMMA1.pdf](https://www.academia.edu/download/38320140/Obeagu_Emanuel_Ifeanyi_and_Obeagu_Getrude_Uzoma2.EMMA1.pdf).
22. Izuchukwu IF, Ozims SJ, Agu GC, Obeagu EI, Onu I, Amah H, Nwosu DC, Nwanjo HU, Edward A, Arunsi MO. Knowledge of preventive measures and management of HIV/AIDS victims among parents in Umuna Orlu community of Imo state Nigeria. *Int. J. Adv. Res. Biol. Sci*. 2016;3(10): 55-65.DOI; [10.22192/ijarbs.2016.03.10.009](https://doi.org/10.22192/ijarbs.2016.03.10.009)
23. Chinedu K, Takim AE, Obeagu EI, Chinazor UD, Eloghosa O, Ojong OE, Odunze U. HIV and TB co-infection among patients who used Directly Observed Treatment Short-course

**Citation:** Obeagu EI, Ibe C, Anyanwu CN, Obeagu GU. Unraveling the Immunological Nexus: Implications of Monocytes in the Context of HIV and Fibroids - A Critical Review. *Elite Journal of HIV*, 2024; 2(2): 18-29

- centres in Yenagoa, Nigeria. IOSR J Pharm Biol Sci. 2017;12(4):70-75. [links/5988ab6d0f7e9b6c8539f73d/HIV-and-TB-co-infection-among-patients-who-used-Directly-Observed-Treatment-Short-course-centres-in-Yenagoa-Nigeria.pdf](https://www.iosrjournals.org/IOSRjournal/2017/12(4)/0120171204070-75.pdf)
24. Oloro OH, Oke TO, Obeagu EI. Evaluation of Coagulation Profile Patients with Pulmonary Tuberculosis and Human Immunodeficiency Virus in Owo, Ondo State, Nigeria. *Madonna University journal of Medicine and Health Sciences*. 2022;2(3):110-119.
  25. Nwosu DC, Obeagu EI, Nkwocha BC, Nwanna CA, Nwanjo HU, Amadike JN, Elendu HN, Ofoedeme CN, Ozims SJ, Nwankpa P. Change in Lipid Peroxidation Marker (MDA) and Non enzymatic Antioxidants (VIT C & E) in HIV Seropositive Children in an Urban Community of Abia State. Nigeria. *J. Bio. Innov.* 2016;5(1):24-30. [links/5ae735e9a6fdcc5b33eb8d6a/CHANGE-IN-LIPID-PEROXIDATION-MARKER-MDAAND-NON-ENZYMATIC-ANTIOXIDANTS-VIT-C-E-IN-HIV-SEROPOSITIVE-CHILDREN-IN-AN-URBAN-COMMUNITY-OF-ABIA-STATE-NIGERIA.pdf](https://www.iosrjournals.org/IOSRjournal/2016/05(1)/012016050124-30.pdf).
  26. Igwe CM, Obeagu IE, Ogbuabor OA. Clinical characteristics of people living with HIV/AIDS on ART in 2014 at tertiary health institutions in Enugu, Nigeria. *J Pub Health Nutri.* 2022; 5 (6). 2022;130. [links/645a166f5762c95ac3817d32/Clinical-characteristics-of-people-living-with-HIV-AIDS-on-ART-in-2014-at-tertiary-health-institutions-in-Enugu.pdf](https://www.iosrjournals.org/IOSRjournal/2022/05(6)/0120220506130-130.pdf).
  27. Ifeanyi OE, Obeagu GU, Ijeoma FO, Chioma UI. The values of activated partial thromboplastin time (APTT) among HIV positive patients in FMC Owerri. *Int J Curr Res Aca Rev.* 2015; 3:139-144. [https://www.academia.edu/download/38320159/Obeagu Emmanuel Ifeanyi3 et al.IJC\\_RAR.pdf](https://www.academia.edu/download/38320159/Obeagu_Emanuel_Ifeanyi3_et_al.IJC_RAR.pdf).
  28. Obiomah CF, Obeagu EI, Ochei KC, Swem CA, Amachukwu BO. Hematological indices o HIV seropositive subjects in Nnamdi Azikiwe University teaching hospital (NAUTH), Nnewi. *Ann Clin Lab Res.* 2018;6(1):1-4. [links/5aa2bb17a6fdccd544b7526e/Haematological-Indices-of-HIV-Seropositive-Subjects-at-Nnamdi-Azikiwe.pdf](https://www.iosrjournals.org/IOSRjournal/2018/06(1)/012018060101-04.pdf)
  29. Omo-Emmanuel UK, Ochei KC, Osuala EO, Obeagu EI, Onwuasoanya UF. Impact of prevention of mother to child transmission (PMTCT) of HIV on positivity rate in Kafanchan, Nigeria. *Int. J. Curr. Res. Med. Sci.* 2017;3(2): 28-34.DOI: 10.22192/ijcrms.2017.03.02.005
  30. Aizaz M, Abbas FA, Abbas A, Tabassum S, Obeagu EI. Alarming rise in HIV cases in Pakistan: Challenges and future recommendations at hand. *Health Science Reports.* 2023;6(8):e1450.
  31. Obeagu EI, Amekpor F, Scott GY. An update of human immunodeficiency virus infection: Bleeding disorders. *J Pub Health Nutri.* 2023; 6 (1). 2023;139. [links/645b4a6c2edb8e5f094d9bd9/An-update-of-human-immunodeficiency-virus-infection-Bleeding.pdf](https://www.iosrjournals.org/IOSRjournal/2023/06(1)/0120230601139-139.pdf).
  32. Obeagu EI, Scott GY, Amekpor F, Ofodile AC, Edoho SH, Ahamefula C. Prevention of New Cases of Human Immunodeficiency Virus: Pragmatic Approaches of Saving Life in

**Citation:** Obeagu EI, Ibe C, Anyanwu CN, Obeagu GU. Unraveling the Immunological Nexus: Implications of Monocytes in the Context of HIV and Fibroids - A Critical Review. *Elite Journal of HIV*, 2024; 2(2): 18-29

- Developing Countries. Madonna University journal of Medicine and Health Sciences. 2022;2(3):128-134.  
<https://madonnauniversity.edu.ng/journals/index.php/medicine/article/view/86>.
33. Walter O, Anaebo QB, Obeagu EI, Okoroiwu IL. Evaluation of Activated Partial Thromboplastin Time and Prothrombin Time in HIV and TB Patients in Owerri Metropolis. Journal of Pharmaceutical Research International. 2022:29-34.
  34. Odo M, Ochei KC, Obeagu EI, Barinaadaa A, Eteng EU, Ikpeme M, Bassey JO, Paul AO. Cascade variabilities in TB case finding among people living with HIV and the use of IPT: assessment in three levels of care in cross River State, Nigeria. Journal of Pharmaceutical Research International. 2020;32(24):9-18.
  35. Eva L, Pleş H, Covache-Busuioac RA, Glavan LA, Bratu BG, Bordeianu A, Dumitrascu DI, Corlatescu AD, Ciurea AV. A Comprehensive Review on Neuroimmunology: Insights from Multiple Sclerosis to Future Therapeutic Developments. Biomedicines. 2023;11(9):2489.
  36. Jakheng SP, Obeagu EI. Seroprevalence of human immunodeficiency virus based on demographic and risk factors among pregnant women attending clinics in Zaria Metropolis, Nigeria. J Pub Health Nutri. 2022; 5 (8). 2022;137. [links/6317a6b1acd814437f0ad268/Seroprevalence-of-human-immunodeficiency-virus-based-on-demographic-and-risk-factors-among-pregnant-women-attending-clinics-in-Zaria-Metropolis-Nigeria.pdf](https://doi.org/10.22192/ijarbs.2023.10.09.015).
  37. Obeagu EI, Obeagu GU. A Review of knowledge, attitudes and socio-demographic factors associated with non-adherence to antiretroviral therapy among people living with HIV/AIDS. Int. J. Adv. Res. Biol. Sci. 2023;10(9):135-142.DOI: 10.22192/ijarbs.2023.10.09.015 [links/6516faa61e2386049de5e828/A-Review-of-knowledge-attitudes-and-socio-demographic-factors-associated-with-non-adherence-to-antiretroviral-therapy-among-people-living-with-HIV-AIDS.pdf](https://doi.org/10.22192/ijarbs.2023.10.09.015)
  38. Obeagu EI, Onuoha EC. Tuberculosis among HIV Patients: A review of Prevalence and Associated Factors. Int. J. Adv. Res. Biol. Sci. 2023;10(9):128-134.DOI: 10.22192/ijarbs.2023.10.09.014 [links/6516f938b0df2f20a2f8b0e0/Tuberculosis-among-HIV-Patients-A-review-of-Prevalence-and-Associated-Factors.pdf](https://doi.org/10.22192/ijarbs.2023.10.09.014).
  39. Obeagu EI, Ibeh NC, Nwobodo HA, Ochei KC, Iwegbulam CP. Haematological indices of malaria patients coinfecting with HIV in Umuahia. Int. J. Curr. Res. Med. Sci. 2017;3(5):100-104.DOI: 10.22192/ijcrms.2017.03.05.014 [https://www.academia.edu/download/54317126/Haematological indices of malaria patients coinfecting with HIV.pdf](https://www.academia.edu/download/54317126/Haematological_indices_of_malaria_patients_coinfected_with_HIV.pdf)
  40. Jakheng SP, Obeagu EI, Abdullahi IO, Jakheng EW, Chukwueze CM, Eze GC, Essien UC, Madekwe CC, Madekwe CC, Vidya S, Kumar S. Distribution Rate of Chlamydial Infection According to Demographic Factors among Pregnant Women Attending Clinics in Zaria Metropolis, Kaduna State, Nigeria. South Asian Journal of Research in Microbiology. 2022;13(2):26-31.
  41. Viola N, Kimono E, Nuruh N, Obeagu EI. Factors Hindering Elimination of Mother to Child Transmission of HIV Service Uptake among HIV Positive Women at Comboni

**Citation:** Obeagu EI, Ibe C, Anyanwu CN, Obeagu GU. Unraveling the Immunological Nexus: Implications of Monocytes in the Context of HIV and Fibroids - A Critical Review. Elite Journal of HIV, 2024; 2(2): 18-29

- Hospital Kyamuhunga Bushenyi District. Asian Journal of Dental and Health Sciences. 2023;3(2):7-14. <http://ajdhs.com/index.php/journal/article/view/39>.
42. Okorie HM, Obeagu Emmanuel I, Okpoli Henry CH, Chukwu Stella N. Comparative study of enzyme linked immunosorbent assay (Elisa) and rapid test screening methods on HIV, Hbsag, Hcv and Syphilis among voluntary donors in. Owerri, Nigeria. J Clin Commun Med. 2020;2(3):180-183. DOI: **DOI:** [10.32474/JCCM.2020.02.000137](https://doi.org/10.32474/JCCM.2020.02.000137)  
[links/5f344530458515b7291bd95f/Comparative-Study-of-Enzyme-Linked-Immunosorbent-Assay-EIISA-and-Rapid-Test-Screening-Methods-on-HIV-HBsAg-HCV-and-Syphilis-among-Voluntary-Donors-in-Owerri-Nigeria.pdf](https://doi.org/10.32474/JCCM.2020.02.000137).
  43. Ezugwu UM, Onyenekwe CC, Ukibe NR, Ahaneku JE, Onah CE, Obeagu EI, Emeje PI, Awalu JC, Igbokwe GE. Use of ATP, GTP, ADP and AMP as an Index of Energy Utilization and Storage in HIV Infected Individuals at NAUTH, Nigeria: A Longitudinal, Prospective, Case-Controlled Study. Journal of Pharmaceutical Research International. 2021;33(47A):78-84.
  44. Emmanuel G, Martin O, Peter OS, Obeagu EI, Daniel K. Factors Influencing Early Neonatal Adverse Outcomes among Women with HIV with Post Dated Pregnancies Delivering at Kampala International University Teaching Hospital, Uganda. Asian Journal of Pregnancy and Childbirth. 2023 Jul 29;6(1):203-211. <http://research.sdpublishers.net/id/eprint/2819/>.
  45. Igwe MC, Obeagu EI, Ogbuabor AO, Eze GC, Ikpenwa JN, Eze-Stephen PE. Socio-Demographic Variables of People Living with HIV/AIDS Initiated on ART in 2014 at Tertiary Health Institution in Enugu State. Asian Journal of Research in Infectious Diseases. 2022;10(4):1-7.
  46. Vincent CC, Obeagu EI, Agu IS, Ukeagu NC, Onyekachi-Chigbu AC. Adherence to Antiretroviral Therapy among HIV/AIDS in Federal Medical Centre, Owerri. Journal of Pharmaceutical Research International. 2021;33(57A):360-368.
  47. Igwe MC, Obeagu EI, Ogbuabor AO. ANALYSIS OF THE FACTORS AND PREDICTORS OF ADHERENCE TO HEALTHCARE OF PEOPLE LIVING WITH HIV/AIDS IN TERTIARY HEALTH INSTITUTIONS IN ENUGU STATE. Madonna University journal of Medicine and Health Sciences. 2022;2(3):42-57. <https://madonnauniversity.edu.ng/journals/index.php/medicine/article/view/75>.
  48. Madekwe CC, Madekwe CC, Obeagu EI. Inequality of monitoring in Human Immunodeficiency Virus, Tuberculosis and Malaria: A Review. Madonna University journal of Medicine and Health Sciences. 2022;2(3):6-15. <https://madonnauniversity.edu.ng/journals/index.php/medicine/article/view/69>
  49. Echendu GE, Vincent CC, Ibebuike J, Asodike M, Naze N, Chinedu EP, Ohale B, Obeagu EI. WEIGHTS OF INFANTS BORN TO HIV INFECTED MOTHERS: A PROSPECTIVE COHORT STUDY IN FEDERAL MEDICAL CENTRE, OWERRI, IMO STATE. European Journal of Pharmaceutical and Medical Research, 2023; 10(8): 564-568
  50. Nwosu DC, Nwanjo HU, Okolie NJ, Ikeh K, Ajero CM, Dike J, Ojiegbe GC, Oze GO, Obeagu EI, Nnatunanya I, Azuonwu O. BIOCHEMICAL ALTERATIONS IN ADULT HIV PATIENTS ON ANTIRETROVIRAL THERAPY. World Journal of Pharmacy and

**Citation:** Obeagu EI, Ibe C, Anyanwu CN, Obeagu GU. Unraveling the Immunological Nexus: Implications of Monocytes in the Context of HIV and Fibroids - A Critical Review. Elite Journal of HIV, 2024; 2(2): 18-29

- Pharmaceutical Sciences, 2015; 4(3): 153-160.  
[links/5a4fd0500f7e9bbc10526b38/BIOCHEMICAL-ALTERATIONS-IN-ADULT-HIV-PATIENTS-ON-ANTIRETROVIRAL-THERAPY.pdf](https://epjournals.com/journals/EJHIV/links/5a4fd0500f7e9bbc10526b38/BIOCHEMICAL-ALTERATIONS-IN-ADULT-HIV-PATIENTS-ON-ANTIRETROVIRAL-THERAPY.pdf).
51. Obeagu EI, Obeagu GU. Effect of CD4 Counts on Coagulation Parameters among HIV Positive Patients in Federal Medical Centre, Owerri, Nigeria. *Int. J. Curr. Res. Biosci. Plant Biol.* 2015;2(4):45-49.
  52. Obeagu EI, Nwosu DC. Adverse drug reactions in HIV/AIDS patients on highly active antiretro viral therapy: a review of prevalence. *Int. J. Curr. Res. Chem. Pharm. Sci.* 2019;6(12):45-8. DOI: [10.22192/ijcrps.2019.06.12.004](https://doi.org/10.22192/ijcrps.2019.06.12.004)  
[links/650aba1582f01628f0335795/Adverse-drug-reactions-in-HIV-AIDS-patients-on-highly-active-antiretro-viral-therapy-a-review-of-prevalence.pdf](https://epjournals.com/journals/EJHIV/links/650aba1582f01628f0335795/Adverse-drug-reactions-in-HIV-AIDS-patients-on-highly-active-antiretro-viral-therapy-a-review-of-prevalence.pdf).
  53. Obeagu EI, Scott GY, Amekpor F, Obeagu GU. Implications of CD4/CD8 ratios in Human Immunodeficiency Virus infections. *Int. J. Curr. Res. Med. Sci.* 2023;9(2):6-13. DOI: [10.22192/ijcrms.2023.09.02.002](https://doi.org/10.22192/ijcrms.2023.09.02.002) [links/645a4a462edb8e5f094ad37c/Implications-of-CD4-CD8-ratios-in-Human-Immunodeficiency-Virus-infections.pdf](https://epjournals.com/journals/EJHIV/links/645a4a462edb8e5f094ad37c/Implications-of-CD4-CD8-ratios-in-Human-Immunodeficiency-Virus-infections.pdf).
  54. Obeagu EI, Ochei KC, Okeke EI, Anode AC. Assessment of the level of haemoglobin and erythropoietin in persons living with HIV in Umuahia. *Int. J. Curr. Res. Med. Sci.* 2016;2(4):29-33. [links/5711c47508aebe07c02496b/Assessment-of-the-level-of-haemoglobin-and-erythropoietin-in-persons-living-with-HIV-in-Umuahia.pdf](https://epjournals.com/journals/EJHIV/links/5711c47508aebe07c02496b/Assessment-of-the-level-of-haemoglobin-and-erythropoietin-in-persons-living-with-HIV-in-Umuahia.pdf).
  55. Ifeanyi OE, Obeagu GU. The Values of CD4 Count, among HIV Positive Patients in FMC Owerri. *Int. J. Curr. Microbiol. App. Sci.* 2015;4(4):906-910. [https://www.academia.edu/download/38320134/Obeagu Emmanuel Ifeanyi and Obeagu Getrude Uzoma.EMMA2.pdf](https://www.academia.edu/download/38320134/Obeagu_Emanuel_Ifeanyi_and_Obeagu_Getrude_Uzoma.EMMA2.pdf).
  56. Obeagu EI, Okeke EI, Anonde Andrew C. Evaluation of haemoglobin and iron profile study among persons living with HIV in Umuahia, Abia state, Nigeria. *Int. J. Curr. Res. Biol. Med.* 2016;1(2):1-5.
  57. Alum EU, Ugwu OP, Obeagu EI, Okon MB. Curtailing HIV/AIDS Spread: Impact of Religious Leaders. *Newport International Journal of Research in Medical Sciences (NIJRMS)*. 2023;3(2):28-31.
  58. Obeagu EI, Obeagu GU, Paul-Chima UO. Stigma Associated With HIV. *AIDS: A Review. Newport International Journal of Public Health and Pharmacy (NIJPP)*. 2023;3(2):64-67.
  59. Alum EU, Obeagu EI, Ugwu OP, Aja PM, Okon MB. HIV Infection and Cardiovascular diseases: The obnoxious Duos. *Newport International Journal of Research in Medical Sciences (NIJRMS)*. 2023;3(2):95-99.
  60. Ibebuike JE, Nwokike GI, Nwosu DC, Obeagu EI. A Retrospective Study on Human Immune Deficiency Virus among Pregnant Women Attending Antenatal Clinic in Imo State University Teaching Hospital. *International Journal of Medical Science and Dental Research*, 2018; 1 (2):08-14. <https://www.ijmsdr.org/published%20paper/li1i2/A%20Retrospective%20Study%20on%20Human%20Immune%20Deficiency%20Virus%20among%20Pregnant%20Women%20Attending%20Antenatal%20Clinic%20in%20Imo%20State%20University%20Teaching%20Hospital.pdf>.

**Citation:** Obeagu EI, Ibe C, Anyanwu CN, Obeagu GU. Unraveling the Immunological Nexus: Implications of Monocytes in the Context of HIV and Fibroids - A Critical Review. *Elite Journal of HIV*, 2024; 2(2): 18-29

61. Obeagu EI, Obarezi TN, Omeh YN, Okoro NK, Eze OB. Assessment of some haematological and biochemical parameters in HIV patients before receiving treatment in Aba, Abia State, Nigeria. *Res J Pharma Biol Chem Sci.* 2014; 5:825-830.
62. Obeagu EI, Obarezi TN, Ogbuabor BN, Anaebo QB, Eze GC. Pattern of total white blood cell and differential count values in HIV positive patients receiving treatment in Federal Teaching Hospital Abakaliki, Ebonyi State, Nigeria. *International Journal of Life Science, Biotechnology and Pharama Research.* 2014; 391:186-189.
63. Obeagu EI. A Review of Challenges and Coping Strategies Faced by HIV/AIDS Discordant Couples. *Madonna University journal of Medicine and Health Sciences.* 2023; 3 (1): 7-12.
64. Oloro OH, Obeagu EI. A Systematic Review on Some Coagulation Profile in HIV Infection. *International Journal of Innovative and Applied Research.* 2022;10(5):1-11.
65. Nwosu DC, Obeagu EI, Nkwuocha BC, Nwanne CA, Nwanjo HU, Amadike JN, Ezemma MC, Okpomeshine EA, Ozims SJ, Agu GC. Alterations in superoxide dismutase, vitamins C and E in HIV infected children in Umuahia, Abia state. *International Journal of Advanced Research in Biological Sciences.* 2015;2(11):268-271.
66. Obeagu EI, Malot S, Obeagu GU, Ugwu OP. HIV resistance in patients with Sickle Cell Anaemia. *Newport International Journal of Scientific and Experimental Sciences (NIJSES).* 2023;3(2):56-59.
67. Ifeanyi OE, Uzoma OG, Stella EI, Chinedum OK, Abum SC. Vitamin D and insulin resistance in HIV sero positive individuals in Umudike. *Int. J. Curr. Res. Med. Sci.* 2018;4(2):104-108.
68. Ifeanyi OE, Leticia OI, Nwosu D, Chinedum OK. A Review on blood borne viral infections: universal precautions. *Int. J. Adv. Res. Biol. Sci.* 2018;5(6):60-66.
69. Nwovu AI, Ifeanyi OE, Uzoma OG, Nwebonyi NS. Occurrence of Some Blood Borne Viral Infection and Adherence to Universal Precautions among Laboratory Staff in Federal Teaching Hospital Abakaliki Ebonyi State. *Arch Blood Transfus Disord.* 2018;1(2).
70. Chinedu K, Takim AE, Obeagu EI, Chinazor UD, Eloghosa O, Ojong OE, Odunze U. HIV and TB co-infection among patients who used Directly Observed Treatment Short-course centres in Yenagoa, Nigeria. *IOSR J Pharm Biol Sci.* 2017;12(4):70-75.
71. Offie DC, Obeagu EI, Akueshi C, Njab JE, Ekanem EE, Dike PN, Oguh DN. Facilitators and barriers to retention in HIV care among HIV infected MSM attending Community Health Center Yaba, Lagos Nigeria. *Journal of Pharmaceutical Research International.* 2021;33(52B):10-19.
72. Obeagu EI, Obeagu GU, Ede MO, Odo EO, Buhari HA. Translation of HIV/AIDS knowledge into behavior change among secondary school adolescents in Uganda: A review. *Medicine (Baltimore).* 2023;102(49): e36599. doi: 10.1097/MD.00000000000036599. PMID: 38065920; PMCID: PMC10713174.
73. Anyiam AF, Arinze-Anyiam OC, Ironi EA, Obeagu EI. Distribution of ABO and rhesus blood grouping with HIV infection among blood donors in Ekiti State Nigeria. *Medicine (Baltimore).* 2023;102(47): e36342. doi: 10.1097/MD.00000000000036342. PMID: 38013335; PMCID: PMC10681551.

**Citation:** Obeagu EI, Ibe C, Anyanwu CN, Obeagu GU. Unraveling the Immunological Nexus: Implications of Monocytes in the Context of HIV and Fibroids - A Critical Review. *Elite Journal of HIV*, 2024; 2(2): 18-29

74. Echefu SN, Udosen JE, Akwiwu EC, Akpotuzor JO, Obeagu EI. Effect of Dolutegravir regimen against other regimens on some hematological parameters, CD4 count and viral load of people living with HIV infection in South Eastern Nigeria. *Medicine (Baltimore)*. 2023;102(47): e35910. doi: 10.1097/MD.00000000000035910. PMID: 38013350; PMCID: PMC10681510.
75. Opeyemi AA, Obeagu EI. Regulations of malaria in children with human immunodeficiency virus infection: A review. *Medicine (Baltimore)*. 2023;102(46): e36166. doi: 10.1097/MD.00000000000036166. PMID: 37986340; PMCID: PMC10659731.
76. Alum EU, Obeagu EI, Ugwu OPC, Samson AO, Adepoju AO, Amusa MO. Inclusion of nutritional counseling and mental health services in HIV/AIDS management: A paradigm shift. *Medicine (Baltimore)*. 2023;102(41): e35673. doi: 10.1097/MD.00000000000035673. PMID: 37832059; PMCID: PMC10578718.
77. Aizaz M, Abbas FA, Abbas A, Tabassum S, Obeagu EI. Alarming rise in HIV cases in Pakistan: Challenges and future recommendations at hand. *Health Sci Rep*. 2023;6(8): e1450. doi: 10.1002/hsr2.1450. PMID: 37520460; PMCID: PMC10375546.
78. Obeagu EI, Obeagu GU, Obiezu J, Ezeonwumelu C, Ogunnaya FU, Ngwoke AO, Emeka-Obi OR, Ugwu OP. Hematologic Support in HIV Patients: Blood Transfusion Strategies and Immunological Considerations. *APPLIED SCIENCES (NIJBAS)*. 2023;3(3).
79. Obeagu EI, Ubosi NI, Uzoma G. Storms and Struggles: Managing HIV Amid Natural Disasters. *Int. J. Curr. Res. Chem. Pharm. Sci*. 2023;10(11):14-25.
80. Obeagu EI, Obeagu GU. Human Immunodeficiency Virus and tuberculosis infection: A review of prevalence of associated factors. *Int. J. Adv. Multidiscip. Res*. 2023;10(10):56-62.
81. Obeagu EI, Malot S, Obeagu GU, Ugwu OP. HIV resistance in patients with Sickle Cell Anaemia. *Newport International Journal of Scientific and Experimental Sciences (NIJSES)*. 2023;3(2):56-9.
82. Alum EU, Ugwu OP, Obeagu EI, Aja PM, Okon MB, Uti DE. Reducing HIV Infection Rate in Women: A Catalyst to reducing HIV Infection pervasiveness in Africa. *International Journal of Innovative and Applied Research*. 2023;11(10):01-6.
83. Ashar H, Ranjan A. Immunomodulation and targeted drug delivery with high intensity focused ultrasound (HIFU): Principles and mechanisms. *Pharmacology & Therapeutics*. 2023:108393.
84. AlAshqar A, Reschke L, Kirschen GW, Borahay MA. Role of inflammation in benign gynecologic disorders: from pathogenesis to novel therapies. *Biology of reproduction*. 2021;105(1):7-31.

**Citation:** Obeagu EI, Ibe C, Anyanwu CN, Obeagu GU. Unraveling the Immunological Nexus: Implications of Monocytes in the Context of HIV and Fibroids - A Critical Review. *Elite Journal of HIV*, 2024; 2(2): 18-29