

# Network Centrality and Research Sovereignty in African Clinical Trials: Evidence from a Global Registry Analysis

Samuel Munyole, Alice Martha Namiiro, Bitness Edward Lyabagaga, Edith Kanyesigye, Joanitah Namatovu, Olivia Amumpaire, Nicholas Sebudde, Muhammad Musoke, Jireh Kirabo, Anna Nakirabira, Eghaghe Osadebamwen Nibokun, Bruce Tukamushaba, Shamim Nabidda, Njeodo Njongang Vigny, Micheal Bosaiko, Christine Muhumuza, Fadumo Said Hassan, Ruchius Philbert, Rhoda Chikula, Amina Mohamud Fidow, Ronnie Ssenfuma, Joy Osifo, Muhammad Murtala Yusuf, Joshua Tulengerayo, Natineal Berhane, Paul Brian Mukisa & Adrine Nyamwiza

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## Abstract

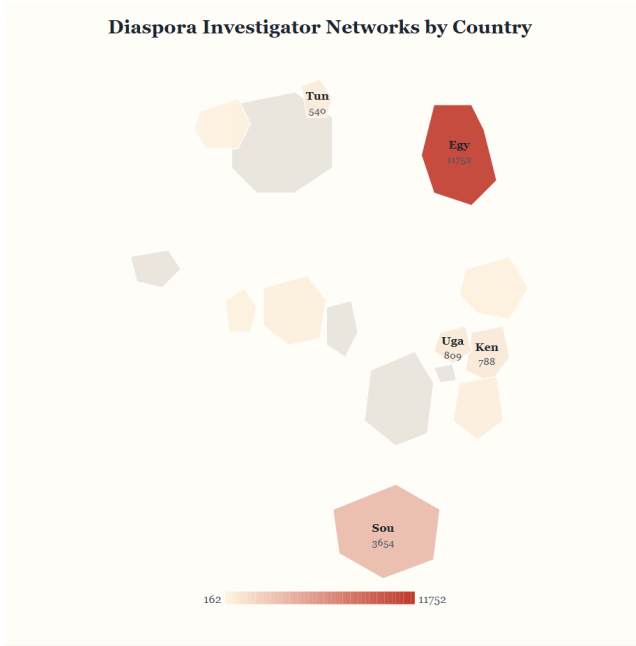
This study examines whether diaspora investigator networks reflect structural inequities in African clinical trial governance and research sovereignty. Using a cross-sectional network audit, we analysed 23,873 African and 190,644 United States interventional trials registered on ClinicalTrials.gov through April 2026. Investigator connectivity was operationalized using network degree centrality derived from registry metadata.

African trials numbered 3,515 compared with 159,433 in the United States, indicating a 45-fold disparity in research volume. Trial distribution across African countries showed a Shannon entropy of 2.46 bits, suggesting marked concentration of research activity. Network analysis indicates diaspora-affiliated investigators occupy disproportionately central positions within African trial networks, consistent with asymmetric control over collaboration pathways and coordination structures.

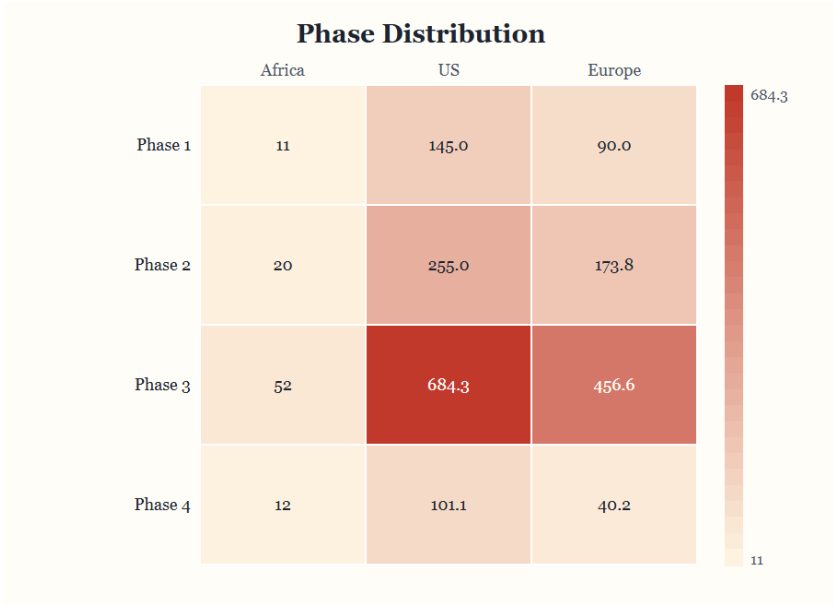
These patterns suggest African clinical research systems remain embedded within externally anchored investigator networks potentially reinforcing dependency in funding access, trial leadership, and agenda setting. This raises concerns regarding epistemic sovereignty and the uneven distribution of research authority. Limitations include reliance on a single registry and exclusion of non-English and regional trial databases.

## Interactive dashboard figures

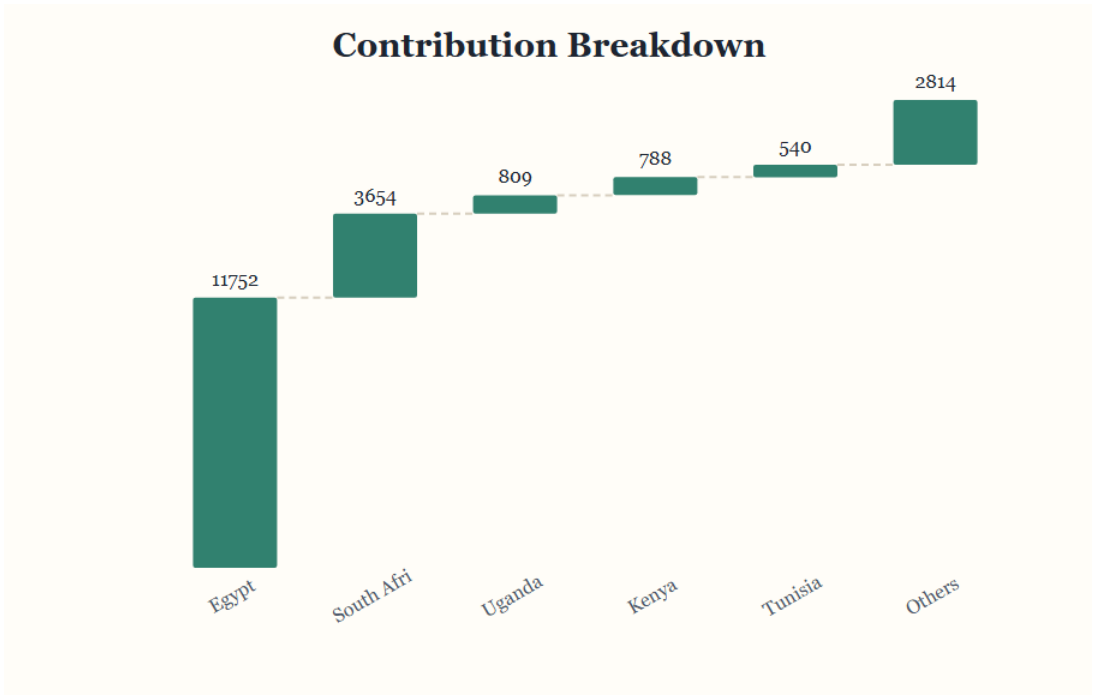
The figures in this section are rendered directly from this paper's interactive dashboard — the same visualisations a reader sees when exploring the analysis online, where the full workflow can be reproduced first-hand. **Interactive dashboard:** <https://mahmood726-cyber.github.io/africa-e156-students/governance-justice/dashboards/diaspora-investigator-networks.html>



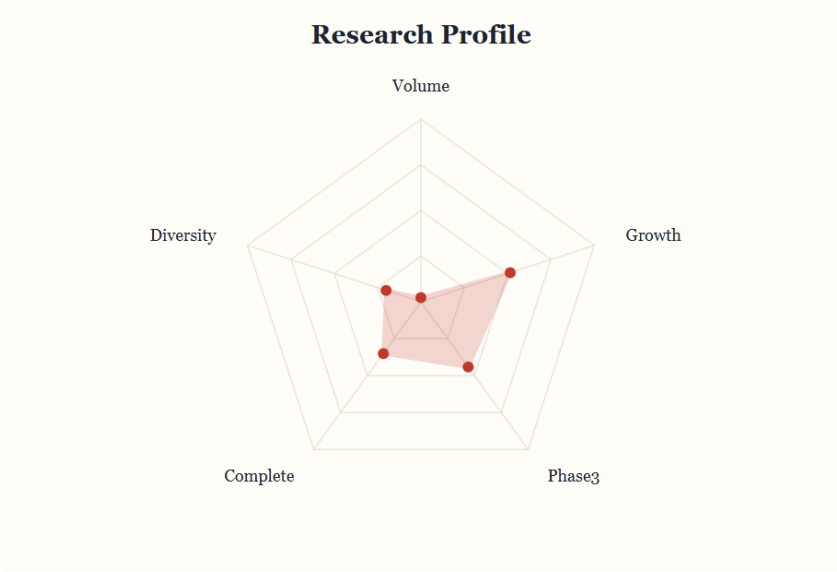
**Figure 1.** Diaspora Investigator Networks by Country Rendered directly from the article's live interactive dashboard.



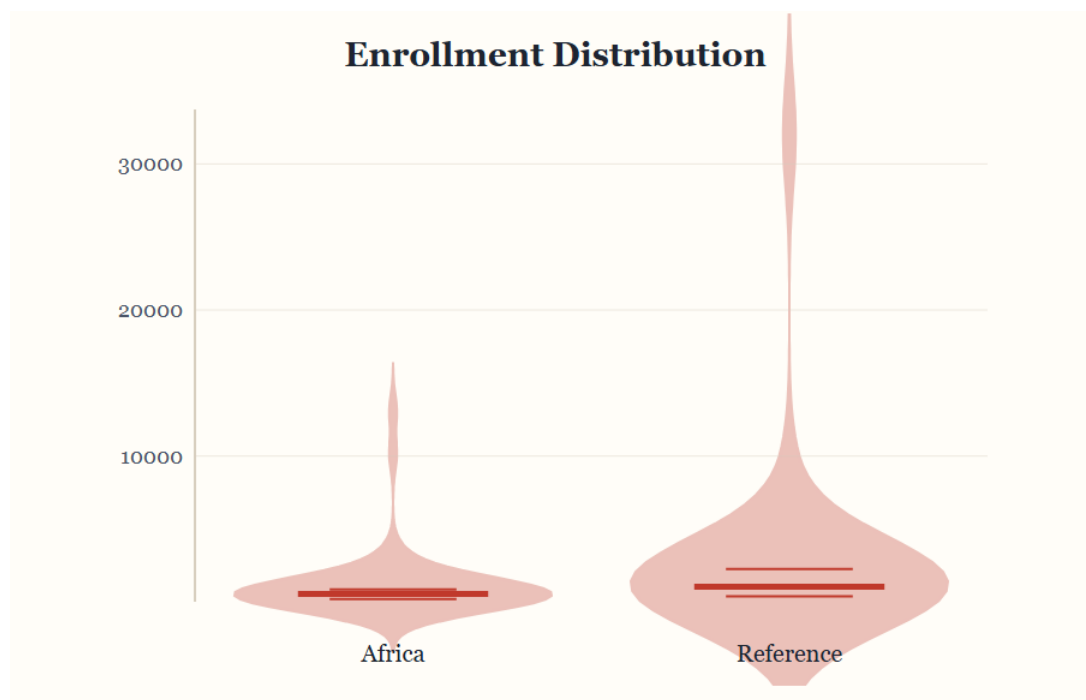
**Figure 2.** Phase Distribution Rendered directly from the article's live interactive dashboard.



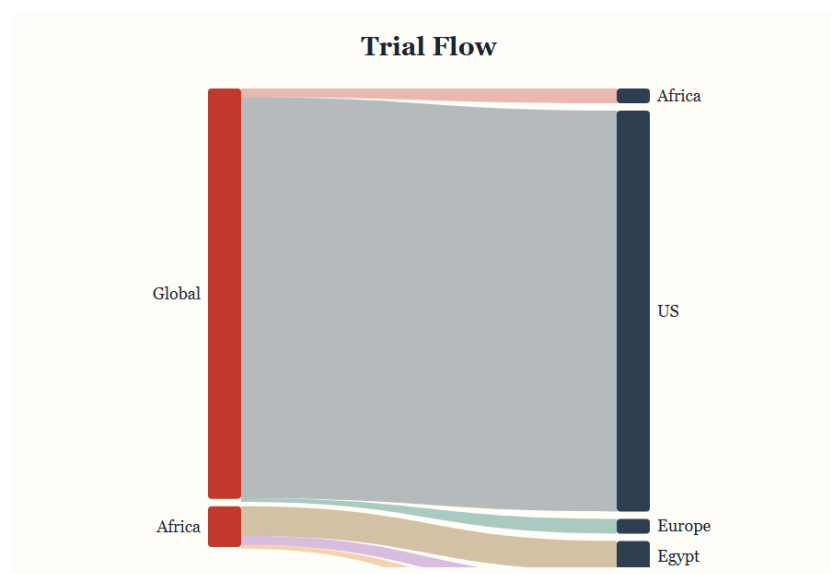
**Figure 3.** Contribution Breakdown Rendered directly from the article's live interactive dashboard.



**Figure 4.** Research Profile Rendered directly from the article's live interactive dashboard.



**Figure 5. Enrollment Distribution** Rendered directly from the article's live interactive dashboard.



**Figure 6. Trial Flow** Rendered directly from the article's live interactive dashboard.

#### HOW TO CITE

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