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Copyright AJCEM 2026: <https://dx.doi.org/10.4314/ajcem.v27i4.24>**Letter to the Editor****Open Access****Molecular detection is not diagnosis: A caution for antifungal stewardship as PCR testing expands in African clinical microbiology laboratories**^{*1,2}Okeke, P. C. U., ^{1,2}Nwafia, I. N., and ^{1,2}Emeribe, S. C.¹Department of Medical Microbiology, University of Nigeria Teaching Hospital (UNTH), Ituku-Ozalla, Enugu, Nigeria²Department of Medical Microbiology, College of Medicine, Faculty of Basic Clinical Sciences, University of Nigeria, Ituku-Ozalla, Enugu, Nigeria*Correspondence to: princess.okeke@unn.edu.ng; Tel: +2348037117982; ORCID: <https://orcid.org/0009-0004-2522-2416>

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Copyright 2026 AJCEM Open Access. This article is licensed and distributed under the terms of the Creative Commons Attribution 4.0 International License <http://creativecommons.org/licenses/by/4.0/>, which permits unrestricted use, distribution and reproduction in any medium, provided credit is given to the original author(s) and the source. Editor-in-Chief: Prof. S. S. Taiwo**La détection moléculaire ne constitue pas un diagnostic: une mise en garde concernant le bon usage des antifongiques face à l'expansion des tests PCR dans les laboratoires de microbiologie clinique africains**^{*1,2}Okeke, P. C. U., ^{1,2}Nwafia, I. N., et ^{1,2}Emeribe, S. C.¹Département de Microbiologie Médicale, Centre Hospitalier Universitaire du Nigéria (UNTH), Ituku-Ozalla, Enugu, Nigéria²Département de Microbiologie Médicale, Collège de Médecine, Faculté des Sciences Cliniques Fondamentales, Université du Nigéria, Ituku-Ozalla, Enugu, Nigéria*Correspondance à: princess.okeke@unn.edu.ng; Tél.: +2348037117982; ORCID: <https://orcid.org/0009-0004-2522-2416>

Dear Editor,

Molecular diagnostics for vulvovaginal candidiasis (VVC), real-time PCR assays in particular, are becoming more accessible across African clinical microbiology laboratories, offering same-day species-level detection at sensitivities that substantially exceed conventional microscopy (1,2). This is, on balance, a welcome development for a region where non-*albicans* *Candida* (NAC) species and antifungal resistance are disproportionately prevalent and where species identification has historically depended on culture alone (3,4). We write to flag a specific risk this transition carries if adopted without an accompanying interpretive safeguard.

Molecular assays detect *Candida* nucleic acid. They do not, by themselves, distinguish active symptomatic infection from asymptomatic colonization (5). This distinction is not academic. A substantial proportion of women harbour

Candida as a vaginal commensal without symptoms at any given time, and colonization prevalence in some African cohorts has been reported to be considerable (6). As molecular testing becomes more available and more sensitive than the culture- and microscopy-based methods it is replacing, the population of women receiving a positive result will necessarily include more asymptomatic carriers than before, not because colonization is increasing, but because detection is improving.

The clinical consequence, if this is not managed deliberately, is straightforward: a positive PCR result in an asymptomatic woman, treated as if it were diagnostic of disease, produces unnecessary antifungal exposure (5). In a region already documented to have a high prevalence of intrinsically less azole-susceptible NAC species and, in at least one recent case series, direct evidence of antifungal-resistant *Candida albicans* in recurrent disease, this is

precisely the wrong direction of travel (3,4). Repeated, poorly indicated antifungal exposure is itself a resistance-selecting pressure, and the populations least able to absorb a rising resistance burden, owing to limited access to newer, non-azole systemic agents, are the ones this diagnostic transition is meant to serve (7).

We are not arguing against molecular diagnostics; the sensitivity gains are real and clinically valuable, particularly for detecting mixed infections and NAC species that culture-based algorithms in resource-limited settings may miss (1,2). We are arguing that the interpretive framework has to travel with the technology. A positive molecular result should prompt clinical correlation, not automatic treatment, and laboratories introducing PCR-based VVC testing should report results in a way that makes this explicit to the requesting clinician rather than issuing a bare "detected/not detected" result that invites reflexive prescribing.

Antifungal stewardship frameworks specific to VVC remain underdeveloped generally, and essentially undeveloped in African settings specifically (7,8). As molecular diagnostics expand across the continent, we suggest this is the moment to build the interpretive safeguard in from the start, rather than retrofitting it after a period of avoidable antifungal overuse. Concretely, we recommend that laboratories adopting PCR-based VVC testing pair every result with a standardized note stating that detection alone does not confirm disease, and that professional bodies coordinating this rollout consider issuing regional guidance on result interpretation and clinician communication before, rather than after, adoption becomes widespread.

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