AMERICAN SOCIETY FOR MICROBIOLOGY

January 2026 AAR Insights and Discussion: CLSI, EUCAST and Their Impact on Microbiology Questions Transcript

Question: How much input, both in scientific opinions and data provision do low and middle-income countries, like Nigeria, contribute to developing a consensus in EUCAST policies and recommendations?

Kahlmeter: *EUCAST:* Via the formation of National AST Committees (NACs) signing up with EUCAST and having a representative on the EUCAST General Committee, all interested countries have input. By taking part in the "General Consultation Process," all interested parties can have influence over decisions (see www.eucast.org for more information).

Question: Are CSLI guidelines translated into various languages, or are they only available in English?

Simner: Yes, CLSI has been translating the M100 documents and others into other languages. There are Spanish and Japanese versions now and likely more.

Question: Why are CLSI or EUCAST not covering rare bacteria like *Kocuria* spp.?

Kahlmeter: We [EUCAST] do our best to keep up, but have to prioritize. However, we are adding one species/species group after another and are currently dealing with anaerobic bacteria, Aggregatibacter, Capnocytophaga, atypical mycobacteria and several more.

Cantón: Also, you can consult the EUCAST document "When There Are Not Breakpoints" for guidance on these situations.

Patel: CLSI's answer is the same as EUCAST's; such identifications are increasingly made as a result of MALDI-ToF mass spectrometry, and are covered or in the process of being covered.

Simner: CLSI does cover the more rarely encountered and fastidious bacterial organisms in our M45 document, which is also freely available online. *Kocuria* spp. (I believe that is what was meant in the question stem) is found under the Micrococcus species Table 15 in the M45 document. Of note, an updated version of the CLSI M45 document, the CLSI M45, 4th Edition, should be published shortly with a lot of new and updated content, so be on the lookout for that.

Question: What new information has been added recently to CLSI?

Patel: *CLSI:* CLSI documents are regularly updated; information is available at https://clsi.org.

The updated CLSI M100-S36 document should be published on or around January 26, 2026. The annual AST update webinar, which covers the new content, will air on February 26, 2026. Here is the link to the webinar to register: https://clsi.org/shop/education/webinars/m100-webinar/.

Question: For colistin, MIC is Intermediate and resistant. What is the significance of intermediate?

Kahlmeter: In the *EUCAST* system, there are no colistin "I" since the dose/exposure cannot really be increased.

Simner: For *CLSI*, there are no "susceptible" breakpoints for this agent to indicate the uncertainty in successful clinical outcomes when using the agent for treatment of multidrug-resistant (MDR) *Enterobacterales, Pseudomonas aeruginosa, and Acinetobacter baumannii* complex. Hence, the use of Intermediate and Resistant breakpoints only. The use of an intermediate category also indicates to clinicians that alternative agents are available that are "susceptible", that they should consider those agents first.

For the intermediate category result, colistin should be given with a loading dose and maximum renally adjusted doses (see international consensus guidelines reference below).

Tsuji BT, Pogue JM, Zavascki AP, et al. International consensus guidelines for the optimal use of the polymyxins: endorsed by the American College of Clinical Pharmacy (ACCP), European Society of Clinical Microbiology and Infectious Diseases (ESCMID), Infectious Diseases Society of America (IDSA), International Society for Anti-Infective Pharmacology (ISAP), Society of Critical Care Medicine (SCCM), and Society of Infectious Diseases Pharmacists (SIDP). Pharmacotherapy. 2019;39(1):10-39. doi:10.1002/phar.2209

Question: Is there a way for microbiology to be world-recognized? In countries like Nigeria, we're being marginalized and are facing problems with our practices due to license requirements as laboratory scientists.

Patel: *CLSI:* ASM's Global Public Health Programs (GPHP) focus on strengthening laboratories in resource-limited settings in order to establish sustainable quality-assured diagnostic capacity, as well as improving quality management systems, biosafety, and biosecurity (including biological waste management and disposal), strategic planning, outbreak detection and response, and workforce development. ASM's International team implements these efforts through a combination of technical assistance, training, and mentoring approaches, and leverages our cadre of over 500 subject matter experts (SMEs) and extensive locally-based ASM members.

Question: What has been the most polarizing standards decision where you've taken different positions (breakpoints!), and are there any concrete steps proven effective for alignment or compromise?

Kahlmeter: *EUCAST*: Alignment is easiest when discussing technical issues (disk potencies, media questions, incubation, atmosphere, etc.). It is sometimes more difficult when policies and strategies are involved. Also, CLSI needs to heed and respect FDA processes, whereas EUCAST needs to cooperate with, but not "heed EMA by law".

Patel: *CLSI*: CLSI and EUCAST representatives do collaborate, and if there are differences, they are typically in active discussions about these differences before they are official. Some laboratories may use both CLSI and EUCAST breakpoints, for example, where breakpoints exist from one entity but not the other.

Simner: We didn't have time to discuss in the webinar, but laboratories may use one standard development organization (e.g., CLSI or EUCAST) as their primary methodology and guidelines in their laboratories. However, they can still use breakpoints from the other organization to try to fill gaps that may exist between the 2 organizations. For example, EUCAST labs may turn to CLSI for more extensive Stenotrophomonas maltophilia breakpoints, whereas CLSI laboratories may turn to EUCAST for trimethoprim-sulfamethoxazole (TMP-SMX) disk diffusion breakpoints for beta-hemolytic streptococci. It is important to note that you must apply the methods developed by the organization for which the breakpoint is being applied, as the method is highly coupled to the breakpoint. If you deviate from the method, you might result in inaccurate results. Of note, CLSI will introduce TMP-SMX reference BMD breakpoints for beta-hemolytic streptococci in the forthcoming M100-S36.

Question: Which is best for *Candida* spp.: BP Broth Microdilution or E-test?

Cantón: The standard broth microdilution methods for yeast are published by EUCAST and CLSI. E-test and other MIC strips have been standardized with broth microdilution. The manufacturers' recommendations should be followed when using them.

Question: What is best to preform: a BP agar or broth micro-dilution or Etest?

Kahlmeter: *EUCAST*: The broth microdilution method (ISO) is always the reference unless otherwise stated. Agar dilution is the formal alternative when BMD is not suitable. E-test/MTS requires quality control and calibration of each procedure.

Patel: *CLSI*: Additionally, there are some microorganism/drug situations where particular methods are not suitable. In addition, feasibility in individual laboratories has to be considered.

Question: Could CLSI be downloaded freely?

Simner: Yes, certain CLSI documents can be accessed for free - add your email and login - and get access to many documents: https://em100.edaptivedocs.net/Login.aspx.

Please note that CLSI also offers country-based pricing now. Country-based pricing allows greater access to products and training for under-resourced countries through discounted pricing based on national income levels (https://clsi.org/about/news/clsi-introduces-country-based-pricing-to-increase-global-access-to-laboratory-standards/#).

Question: Given the increasing attention to bacterial tolerance and adaptation to biocides, do EUCAST or SLCI envisage developing standardized recommendations or protocols for assessing biocide resistance and susceptibility in vitro?

Kahlmeter: *EUCAST*: Not in the near future. We are currently dealing with the difficult issue of setting criteria for phage testing. I am pleased to be working with EUCAST on this topic.

Simner: CLSI has not addressed biocide susceptibility testing to date.

Question: US also has veterinary surveillance.

Patel: Veterinary surveillance in the U.S. is performed by a network led by the USDA's Animal and Plant Health Inspection Service.

Kahlmeter: In Europe, the agencies monitoring this are EFSA (European Food Safety), ECDC and EMA. Much of the surveillance in veterinary medicine and food safety is performed using EUCAST ECOFFs as cutoffs between “no resistance” and “resistance”. By using ECOFFs the disadvantage of the differences between clinical breakpoints over time and between countries can be obviated.

Question: Is there a special CLSI for veterinary surveillance?

Simner: I will add that CLSI does have Veterinary AST documents and guidelines as well. The CLSI VET01S ED7:2024 is freely available online.

Question: Dr. Kahlmeter mentioned that EUCAST is absolutely adamant about not allowing breakpoints to bisect wild-type distributions to ensure testing reproducibility. However, Dr. Mathers discussed the need to 'salvage' drugs for patient care. In a setting like Pakistan, where we have high-resistance 'tails' in our wild-type distributions, how do we handle an organism that is technically 'Wild-Type' but sits right on a conservative EUCAST breakpoint? Should we prioritize the reproducibility of the lab result or the clinical hope of the drug working for a patient with no other options?

Kahlmeter: For clinical purposes, the clinical breakpoint (which may or may not coincide with the ECOFF, "rules". Stick to recommendations for clinical evaluation of resistance.

Question: Also, you need to be careful to contain the microbes. I.e., culturing and mol bio testing occurs in same facility.

Patel: Absolutely, this is critical for both quality and safety.

Question: What is the contribution of CLSI and EUCAST to the one health approach? Are there any developments geared in that direction?

Patel: Yes, as mentioned, CLSI has veterinary-specific information.

Simner: The CLSI VET01S ED7:2024 is freely available online.

Cantón: EUCAST also has a veterinary subcommittee.

Question: Since the 2019 change in definitions, how can a laboratory in a high-resistance setting like Pakistan effectively communicate to clinicians that the 'I' category now means 'Susceptible, Increased Exposure' rather than a 'buffer zone' for lab error?

Kahlmeter: There are many ways in which this can be done, but all of them require trust and respect between laboratories and clinical colleagues. This problem is not unique, and several countries in Europe have faced the same problem, declared unsolvable, and within a year or two, everyone has accepted the change.

Question: I don't agree with Amy regarding Burkholderia's breakpoints removal.

Kahlmeter: EUCAST has made the same decision – there is no information in the literature to back up the validity of clinical breakpoints for this group of species and in many ways the same is true for Stenotrophomonas. There is a recent update of the EUCAST guidance on *Stenotrophomonas* with 40 references, arriving at the conclusion that there is very little to substantiate a clinical breakpoint for any agent. In the EUCAST MIC distribution database, there are ECOFFs with which to distinguish between isolates of *S. maltophilia* with and without resistance mechanisms, so at least you can inform the clinical colleagues as to when to maybe avoid a specific agent (document). For those preferring disk diffusion, the same is true for zone diameters (document).

Question: Doxycycline had been removed for *Acinetobacter*, but in personal experience, doxycycline has a very good sensitivity on *Acinetobacter*. Why was it removed?

Kahlmeter: EUCAST could not find clinical evidence for the use of doxycycline (and for that matter for tigecycline) - both agents look promising activity-wise, but clinical data is

unconvincing. For this reason, we never introduced a breakpoint for doxycycline or tigecycline for *Acinetobacter*, and instead added "IE" (insufficient evidence) as an encouragement to industry to pursue the issue.

Simner: CLSI recently reviewed the tetracycline breakpoints for *Acinetobacter*. Based on the data, it was decided to remove the doxycycline breakpoints. Minocycline MIC and disk diffusion breakpoints were revised in the recent M100-S35 document. Further information about the revision to tetracyclines for *Acinetobacter* spp. can be found in the CLSI meeting minutes. See the June 2024 and January 2025 meeting minutes.

Question: Why should Pseudomonas have different breakout points?

Kahlmeter: The breakpoints are similar between the two committees. If you remember that an EUCAST "I" equals a CLSI "S", but with a reminder to mind exposure when treating Pseudomonas. Remember, agents are decidedly less inherently active against Pseudomonas wild-type organisms than against regular Gram-negative organisms, such as E. coli, Klebsiella, Enterobacter, etc.

Simner: As discussed, the breakpoints between the 2 organizations are similar. The primary differences really lie in the definitions used for the interpretive categories (e.g., S, I, SDD, R, etc.).

Question: Can we discuss tuberculosis?

Kahlmeter: EUCAST: I agree genomic methods are important. However, getting the correlation between pheno- and genotype is important, and to do this, a reference phenotypic MIC determination method and the identification of wild-type distributions and ECOFFs are essential. The EUCAST AMST Subcommittee is doing this as we speak. See recently released MIC distributions for antimycobacterial agents.

Question: Can we discuss epidemiological breakpoints?

Kahlmeter: EUCAST: Epidemiological cut-off values – read more in Clinical Microbiological Reviews (1) and visit the EUCAST wild type MIC and Zone diameter distribution website (2) - see below:

1. https://pubmed.ncbi.nlm.nih.gov/38038445/
2. https://mic.eucast.org

Simner: CLSI: Epidemiologic cutoff values (ECVs) simply divide the population based on the MIC that divides the wild-type (no acquired antimicrobial resistance) from the non-wild-type (isolates with acquired antimicrobial resistance).

Epidemiological cutoff values (ECVs) are based on in vitro data only, using minimal inhibitory concentration (MIC) or zone diameter distributions. ECVs are not clinical breakpoints, and the clinical relevance of ECVs for a particular patient has not yet been identified or approved by CLSI or any regulatory agency. By contrast, clinical breakpoints are established using MIC distributions, pharmacokinetic/pharmacodynamic data, and clinical outcome data, when available (as described in CLSI M23).

Question: Can we have another session just for Fungi, Mycobacteria and related organisms?

Simner: Great suggestion! There is so much to discuss. I will also note our antifungal susceptibility testing of yeasts is available for free as well CLSI M27M44S ED3:2022.