



EUCAST

EUROPEAN COMMITTEE
ON ANTIMICROBIAL
SUSCEPTIBILITY TESTING

European Society of Clinical Microbiology and Infectious Diseases



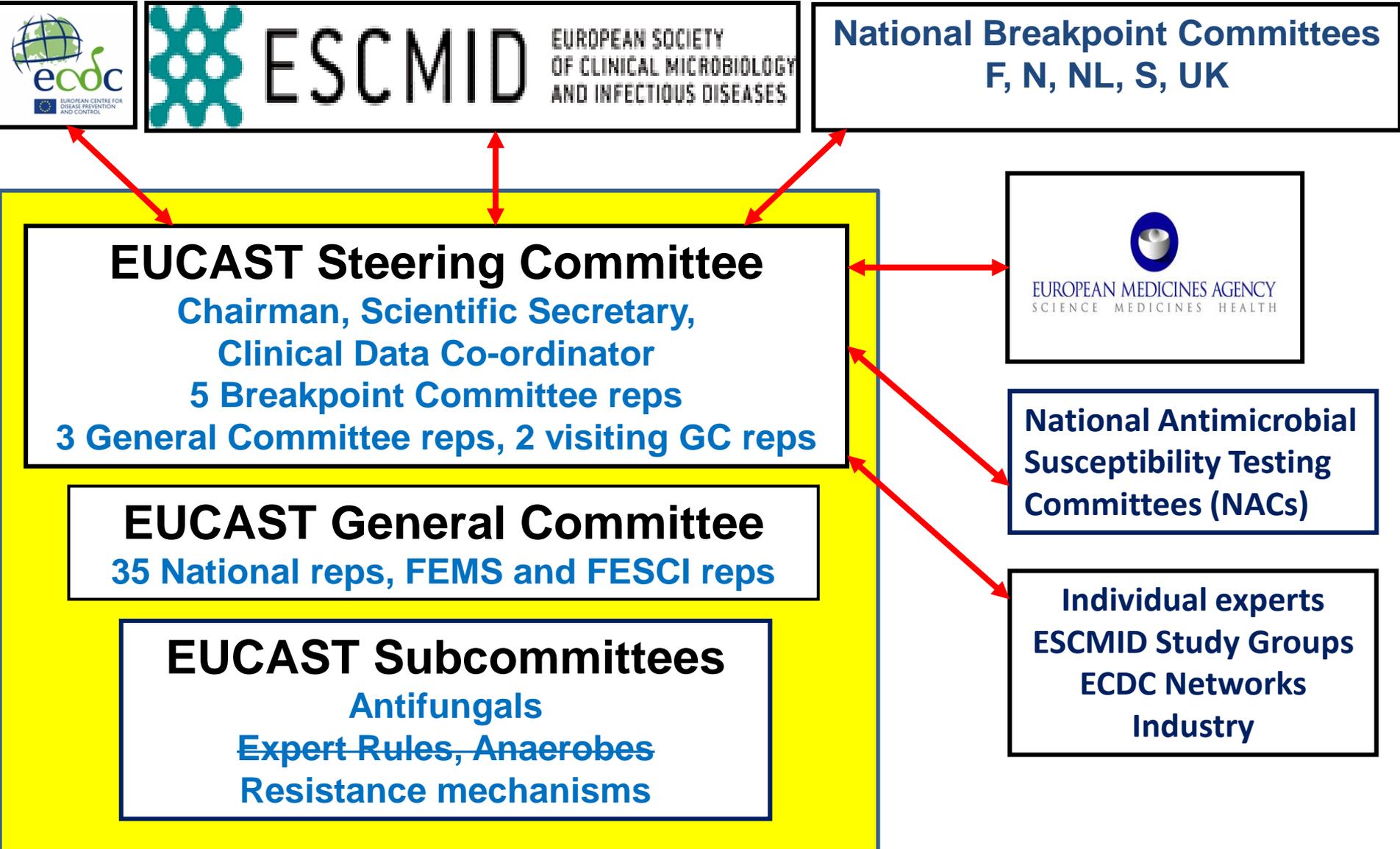
2013



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National Breakpoint Committees
F, N, NL, S, UK

EUCAST Steering Committee
Chairman, Scientific Secretary,
Clinical Data Co-ordinator
5 Breakpoint Committee reps
3 General Committee reps, 2 visiting GC reps



**National Antimicrobial
Susceptibility Testing
Committees (NACs)**

EUCAST General Committee
35 National reps, FEMS and FESCI reps

Individual experts
ESCMID Study Groups
ECDC Networks
Industry

EUCAST Subcommittees
Antifungals
Expert Rules, Anaerobes
Resistance mechanisms

ECDC contract 2011 - 2014

EUCAST is an external, expert committee for:

ECDC

To harmonise European clinical breakpoints, ECOFFs and methodology for AMR surveillance

EMA

To determine clinical breakpoints for new agents

EFSA

To consult on antimicrobial aspects of food and feed safety

EUCAST Steering Committee from May 2013

- Rafael Canton (Chairman)
- Derek Brown (Scientific secretary)
- Gunnar Kahlmeter (Clinical data coordinator)

- Johan Mouton (The Netherlands)
- Luc Debreuil (France)
- Christian Giske (Sweden)
- Alasdair MacGowan (UK)
- Martin Steinbakk (Norway)
- Sören Gatermann (Germany, GC)
- Luis Martinez Martinez (Spain, GC)
- Robert Skov (Denmark, GC)

EUCAST subcommittees

- **Antifungal susceptibility testing**
 - Chair Maiken Caveling Arendrup

- **Methods for detection of resistance mechanisms of clinical and/or epidemiological importance**
 - Chair Christian Giske

EUCAST has promoted the formation of National Antimicrobial Susceptibility Testing Committees (NACs)

- **Antimicrobial susceptibility testing**
 - Strategy at national level
 - Implementation of breakpoints and methods
 - Education (national workshops, websites)
 - Liaison and consultation with EUCAST (chairman or scientific secretary GC representative)
 - Liaison with groups involved in AMR-surveillance (ECDC, EARSS, etc)
 - Quality Assurance
- Antimicrobial use
- Antimicrobial resistance surveillance
- Antimicrobial consumption

EUCAST breakpoints, 2013



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Organization

EUCAST News

Clinical breakpoints

Information on breakpoint tables

Expert rules

Setting breakpoints

MIC distributions

The European Committee on
Antimicrobial Susceptibility Testing – EUCAST

Clinical breakpoints

European Committee on Antimicrobial Susceptibility Testing

Breakpoint tables for interpretation of MICs and zone diameters

Version 3.1, valid from 2013-02-11

Documents

Information for industry

Links

Website changes

[Clinical breakpoints - fungi \(v 6.1\) - excel file for screen \(2013-03-11\)](#)
Errata in v 6.0 (March 1 - 11, 2013) were corrected in v 6.1

→ [Previous versions of breakpoint tables.](#)

- [definitions of clinical breakpoints and epidemiological cut off values](#)
- [procedure for harmonizing and defining breakpoints](#)

New version of EUCAST breakpoint tables v3.1 (Jan, 2013)

- New agents – ceftaroline
- New microorganisms
 - Pasteurella multocida*, *Campylobacter* spp.
- Revised terminology
- New screening tests
 - *S. pneumoniae* - Oxacillin screen can give useful information on susceptibility to beta-lactam agents other than benzylpenicillin
 - *H. influenzae* - Benzylpenicillin screen can give useful information on susceptibility to beta-lactam agents

EUCAST methods

- MIC determination
 - MH-F broth validated for tests on *H. influenzae* and *S. pneumoniae*
 - Validation of gradient diffusion tests on MH-F
- Disk diffusion
 - Pasteurella multocida
 - Campylobacter jejuni and coli
 - Ceftaroline
 - New screening algorithms

Reading instructions for difficult disk diffusion tests in breakpoint tables

http://www.eucast.org/antimicrobial_susceptibility_testing/breakpoints

Stenotrophomonas maltophilia and
trimethoprim-sulfamethoxazole

Outer zone $\geq 16\text{mm}$ = S

No trace of zone = R



Reading instructions for difficult disk diffusion tests in breakpoint tables

http://www.eucast.org/antimicrobial_susceptibility_testing/breakpoints

S. aureus and benzylpenicillin

Zone diam ≥ 26 mm

Fuzzy zone edge = S

Sharp zone edge = R



Reading instructions for difficult disk diffusion tests in breakpoint tables

http://www.eucast.org/antimicrobial_susceptibility_testing/breakpoints

Enterococcus. spp. and vancomycin

Zone diam ≥ 12 mm

Sharp zone edge = S

Fuzzy zone edge = R



Data on correlation of zone diameter breakpoints with EUCAST MIC breakpoints

Extensive new data added to EUCAST website

- MIC-zone diameter distributions
- Zone diameter distributions with MIC data identified in histograms

EUCAST methods

What is coming in 2013-14?

- MIC
 - Further validation of gradient tests
- Disk diffusion
 - New agents authorised by EMA
 - *Corynebacterium* spp.
 - *Pseudomonas non-aeruginosa*
 - *Neisseria gonorrhoeae*
 - Some rapidly-growing anaerobes
- Guidance note on *Burkholderia cepacia*

Meetings and workshops 2012-2013

- ECCMID
 - General Committee meeting
 - Educational workshop
 - Meet the experts
 - Multiple EUCAST-related papers and posters
- Postgraduate Educational Workshop, Madrid, September 2012
- National meetings

EUCAST website extensively updated

Organization

EUCAST News

Clinical breakpoints

Expert rules

MIC - distributions and QC

Zone diameter distributions

EUCAST disk diffusion test

Frequently Asked Questions (FAQ)

Meetings

EUCAST Presentations

Documents

Information for industry

Links

Website changes



NEWS

EUCAST News

17 Jan 2012

Posaconazole vs. Aspergillus breakpoints and RD

12 Jan 2012

Amphotericin and itraconazole aspergillus breakpoints and RDs

31 Dec 2011

EUCAST AFST Subcommittee distributes for consultation.

24 Dec 2011

EUCAST Breakpoint Tables v 2.0

The European Committee on Antimicrobial Susceptibility Testing - EUCAST

EUCAST is a standing committee jointly organized by ESCMID, ECDC and European national breakpoint committees. EUCAST deals with breakpoints and technical aspects of phenotypic in vitro antimicrobial susceptibility testing and functions as the breakpoint committee of EMA and ECDC. EUCAST does not deal with antibiotic policies, surveillance or containment of resistance or infection control. The Steering Committee is the decision making body. It is supported by a General Committee with representatives from European and other countries, FESCI and ISC. The Steering Committee also consults on EUCAST proposals with experts within the fields of infectious diseases and microbiology, pharmaceutical companies and susceptibility testing device manufacturers.

EUCAST has a subcommittee on antifungal susceptibility testing. Subcommittees on expert rules for antimicrobial susceptibility testing and antimicrobial susceptibility testing of anaerobes have completed their tasks and have been disbanded.

Most antimicrobial MIC breakpoints in Europe have been harmonised by

Implementation of EUCAST breakpoints, January 2013

% Laboratories

 >50%

 10-50%

 <10%

 No information



Countries not on this map:

 Australia

 Iceland

 Israel

Adoption of the EUCAST disk diffusion method, January 2013

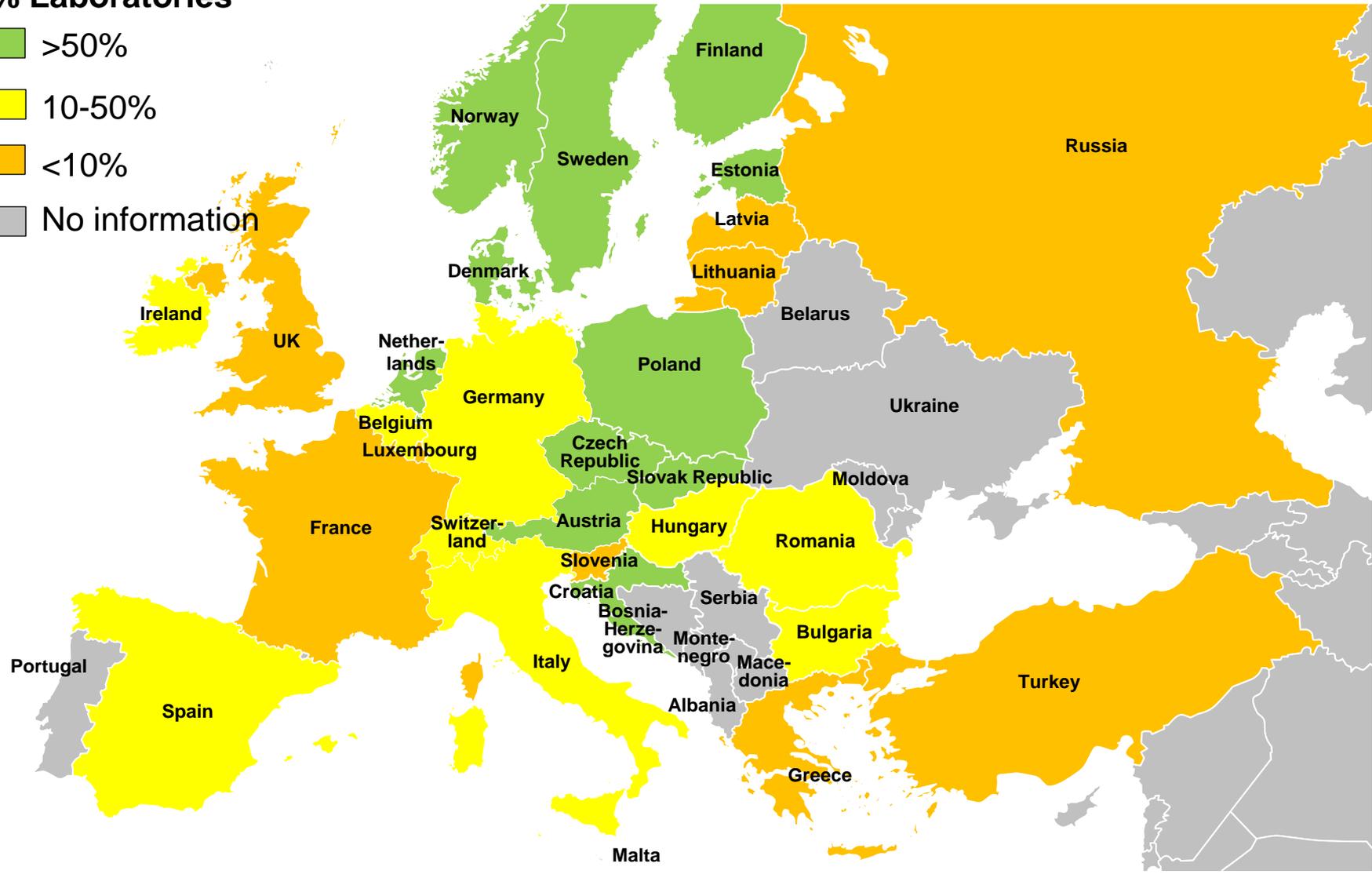
% Laboratories

 >50%

 10-50%

 <10%

 No information



Countries not on this map:

 Australia

 Iceland

 Israel

EUCAST disk diffusion method

| Manufacturer | Disks available | MH-F plates available |
|----------------------------------|--------------------------------------|---------------------------------------|
| Abtek | All | No |
| BD | All except: Ceftibuten 30 μ g | Expected September 2013 |
| Bio-Rad | All | Yes |
| bioMérieux | No disks marketed | Yes |
| I2a | All | No |
| Liofilchem | All | Yes |
| MAST Group | All | No but supply β -NAD supplement |
| Thermo Fisher Scientific (Oxoid) | All | Yes |
| Rosco | All (Neo-Sensitabs) | No |

Gradient tests: Etest

| Manufacturer | Agents in EUCAST tables but not available | Validated for MH-F | β -lactamase inhibitor format |
|--------------|--|---|--|
| bioMérieux | Cefadroxil Cefalexin Cefazolin Ceftibuten Roxithromycin Ticarcillin | Agents validated for MH-F: Amoxicillin-clavulanate Ampicillin Ampicillin-sulbactam Benzylpenicillin Cefaclor Cefotaxime Ceftriaxone Cefuroxime Doripenem Ertapenem Imipenem Meropenem Chloramphenicol Clindamycin Erythromycin Levofloxacin Moxifloxacin Ofloxacin Tetracycline Trimethoprim-sulfamethoxazole (not for <i>H. influenzae</i> and <i>M. catarrhalis</i>) Vancomycin | Fixed 2:1 ratio: Amoxicillin-clavulanate Ampicillin-sulbactam Fixed inhibitor concentration (mg/L): Piperacillin-tazobactam (4) Ticarcillin-clavulanate (2) |

What is coming in 2013-14?

- New agents authorised by EMA
- Revision of some breakpoints
- Breakpoints for topical agents
- *Corynebacterium* spp. MIC breakpoints and disk diffusion test
- *Pseudomonas non-aeruginosa* MIC breakpoints and disk diffusion test
- Guidance note on *Burkholderia cepacia*
- *Neisseria gonorrhoeae* disk diffusion test
- Disk diffusion test for some rapidly-growing anaerobes