



Nordic External Quality Assessment Program In Medical Mycology 2006

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External quality assessment

- 59 laboratories:
 - Denmark 12
 - Finland 8
 - Norway 19
 - Sweden 20
- 5 simulated specimens
 - To be handled as routine specimens

Media used for primary plating

- Selective medium: Sabouraud and/or chromogenic agar for culture of fungi
- Chromogenic agar 30-75% of the laboratories

Methods used for identification of yeasts

- Most laboratories combination of chromogenic agar and ID 32C (29 labs) or VITEK (17 labs)
- Few labs commercial rapid tests for *C. glabrata* and *C. krusei*



Specimen 1

Specimen type: Blood culture

Clinical info: 57 year old man.

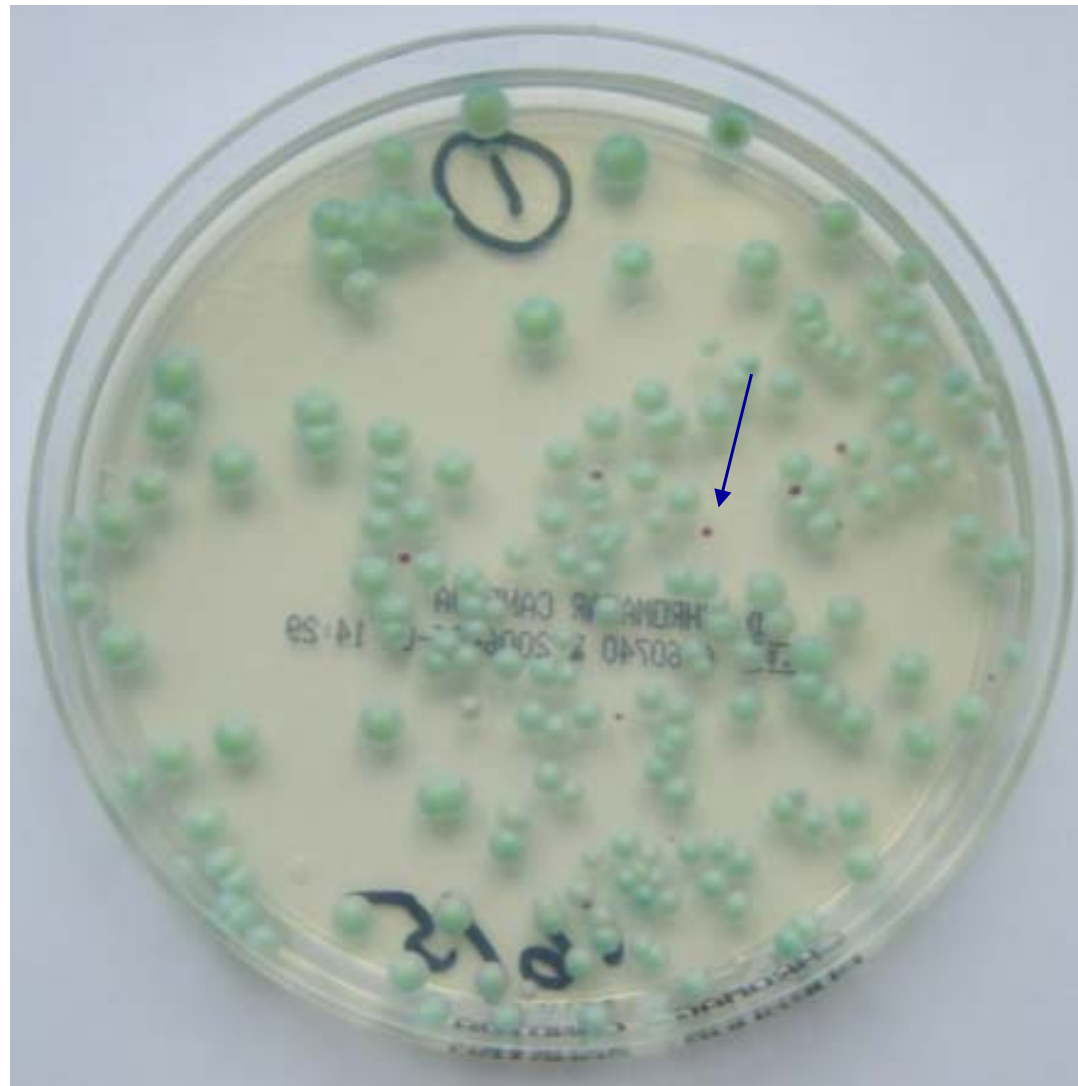
Abdominal surgery. Febrile. Treated with broad spectrum antibiotics.

Microbes: *C. albicans*, *C. glabrata*

Results specimen 1

- All labs identified *C. albicans*
- 14 labs *C. glabrata*, non-*albicans* or yeast
- 6 other species
- 39 (66%) failed
- Chromogenic agar 3 days incubation recommended for mixed cultures

C. albicans and *C. glabrata*





Specimen 2

Specimen type: Blood culture

Clinical info: 42 year old man. HIV positive. Febrile, weight loss, CD4 <150/ μ l.

Microbes: *Cryptococcus neoformans*. Fluconazole resistant.

Results specimen 2

- 48 (81%) labs *C. neoformans*
- 5 labs yeast: reference lab
- 6 labs *Candida* sp. or other *Cryptococcus* sp.
- *Cryptococcus*
 - Slimy colonies, pinkish on CHROMagar
 - Round budding cells, no hyphae
 - Capsule
 - Positive ureas test



Specimen 3

Specimen type: BAL

Clinical info: 78 year old woman. Patient in ICU.

Neutropenia. Febrile.

Microbes: *Aspergillus fumigatus*, *Enterobacter cloacae*,
C. albicans

Results specimen 3

- 32 (54%) labs *A. fumigatus*
- 12 *Aspergillus* sp., mould or *A. niger*
- 15 (25%) failed
- Awareness of pathogenic filamentous fungi in high risk patients
- Culture of BAL at least 7 days



Specimen 4

Specimen type: Peritoneal fluid obtained during surgery.

Clinical info: 61 year old man. Peritonitis. Patient re-operated three days after hemicolectomy. Broad spectrum antibiotics.

Microbes: *C. tropicalis*, *Klebsiella pneumoniae*,
Enterococcus faecium

Results specimen 4

- 46 (78%) labs *C. tropicalis*
- 8 (14%) labs *Candida* sp. or yeast
- 5 misidentified the isolate
- Selective fungal medium recommended



Specimen 5

Specimen type: Urine

Clinical info: 49 year old woman. Neutropenic.

Febrile. Treated with imipenem.

Microbes: Non.

Susceptibility testing

- 5/12 Danmark, 8/8 Finland, 15/19 Norway, 10/20 Sweden
- High overall agreement S, I/SDD and R
- Especially for AmB and caspofungin
- Azoles more variation
- 34% failed fluconazole resistance of *C. neoformans* isolate
- Reduced fluconazole susceptibility of *C. glabrata* and *C. albicans* isolate