Invasive mould infections

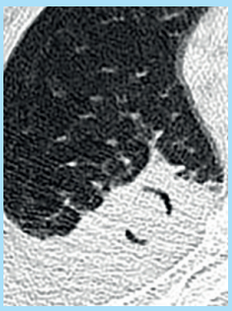
Any immunosuppressed, neutropenic, GvHD, steroid exposed patient is at risk.

Radiological and clinical pictures often caused by invasive mould infection

Halo sign

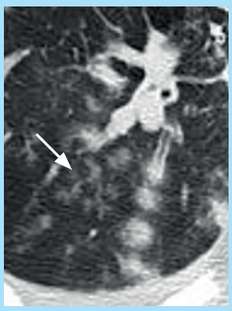
Area of consolidation (nodule or mass) surrounded by ground-glass opacity

Air crescent sign



Area of consolidation with crescent shaped airspace separating the mass from chest wall

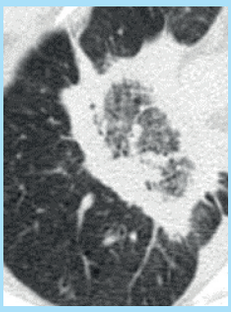
Tree-in-bud



Centrilobular nodules and linear branching opacities with or without bronchiectasis

Aspergillosis

Reversed halo sign



Central ground-glass opacity surrounded by a crescent or ring shaped consolidation

Skin manifestation

Eschar
Erythematous lesion with black necrotic centre

Mucormycosis

Skin manifestation

Violaceous or erythematous, flat, indurated plaques disseminated mainly on extremities

Fusariosis

Diagnostic work-up

Biopsy (C+M+H+P), Blood culture (C), BAL (C+M+P), Aspirates (C+M+P), Sputum (C+M), CSF (C+M+P), Corneal scraping (C+M+P), Serology

Culture **M**icroscopy with optical brighteners **H**istopathology **P**CR

Diagnosis	Aspergillosis	Mucormycosis	Fusariosis	Scedosporiosis
Histopathology	Non-pigmented, septate hyphae (3-8 µm), regular acute-angle branching (45°)	Non-pigmented, rarely septate hyphae (6-25 µm), irregular right-angle branching (>45 - 90°)	Non-pigmented, septate hyphae (3-8 µm), regular acute-angle branching	Non-pigmented, septate hyphae (2-5 µm), irregular acute-angle branching
Blood culture	Negative	Negative	Positive in some cases of disseminated disease Prolonged incubation necessary!	Positive in some cases of disseminated disease Prolonged incubation necessary!
Molecular tests	*Aspergillus*-specific PCR Panfungal PCR	Mucorales-specific PCR Panfungal PCR	Panfungal PCR	Panfungal PCR
Serology	GM index (BAL, serum) ≥1	-	(1-3)-β-D-glucan ↑	(1-3)-β-D-glucan ↑
Dissemination (frequently affected organs)	Brain, eye, GI tract, heart, kidney, liver, lung, paranasal sinuses, skin, spleen	Bone, brain, deep soft tissue, eye, GI tract, kidney, liver, lung, paranasal sinuses, skin, spleen	Blood, deep soft tissue, eye, liver, lung, paranasal sinuses, skin Blood and skin lesions!	Blood, bone, brain, deep soft tissue, eye, kidney, liver, lung, paranasal sinuses, skin

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History

FungiScope™ – Global Emerging Fungal Infection Registry was established in 2003 with the aim to improve knowledge on epidemiology, clinical manifestations and treatment strategies for invasive infections with so-called "emerging fungi". Today, collaborators from 70 countries have entered more than 850 cases. We also provide diagnostic support, collect and identify clinical isolates and provide a search engine for the database (www.fungiquest.net).
Results are presented at international conferences and published in a joint effort in peer-reviewed journals.[1-8]

[1-8] Rüping MJ et al. J Antimicrob Chemother. 2010. Mucormycosis
Pagano L et al. Haematologica 2013. Mucormycosis
Nucci M Clin Microbiol Infect. 2014. Fusariosis
Marty FM et al. Lancet Infect Dis. 2016. Isavuconazole
Pana Z et al. BMC Infect Dis. 2016. Mucormycosis
Hassler A et al. Pedriat. Infect Dis J. 2016. Fusariosis
Durán Graeff L et al. Mycoses. 2017. Saprochaete and Geotrichum
Seidel D et al. Mycoses. 2017. FungiScope

FungiScope™ provides

- Web-based registry
- Documentation of cases via www.clinicalsurveys.net
- Cooperation with other centers for joint analysis.
- Prior to sharing of samples or data, approval of the contributors of the respective cases will be obtained.
- Authorship for contributing centers, if cases are included in an analysis
- Compensation: 100 €/case

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How to collaborate

You want to contribute a case of rare invasive fungal infection* confirmed by culture, histology, microscopy, DNA evidence

Contact us
Fungiscope@uk-koeln.de

↓ you receive login data to access the online questionnaire

Document your case
Online Case Report Form
Retrospective, anonymized

↓ you document patient info:
Demographics
Underlying conditions
Diagnosis of fungal infection
Treatment and response
Outcome

Send us the fungal isolate
Species identification, susceptibility test

↓ **Case Validation**
we validate the case with possible inquiries

Analyses
Joint publications

*Invasive infection caused by e.g. *Acremonium, Alternaria, Cladosporium, Cryptococcus* other than *neoformans, Curvularia, Exophiala, Fusarium, Geotrichum,* Paecilomyces, *Penicillium, Scedosporium, Trichosporon* species
NOT *Aspergillus* spp., *Candida* spp., endemic fungi

Fungiscope

Global Emerging Fungal Infection Registry

Established in 2003

Research on rare invasive fungal infections
www.fungiscope.net

Join FungiScope™
Become a collaborator
Contribute your case
Publish together

ClinicalTrials.gov Identifier NCT01731353