Rare Invasive Fungal Diseases

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Welcome to the FungiScope online questionnaire. Please choose your preferred language.

Bienvenue sur le questionnaire en ligne de FungiScope. Choisissez votre langue

Bienvenido al cuestionario online de FungiScope. Elija su idioma

Benvenuto al questionario on-line FungiScope. Selezionare la lingua

欢迎使用FungiScope在线调查表。请选择您的首选语言。

◯ English ◯ Français ◯ Castellano ◯ Italiano ◯ 官話

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General Setup

You are documenting the following patient:
ID:#u_name#

In the following questionnaire, you must often refer to the Day of Diagnosis of the invasive fungal infection (IFI).

1. Please define the **Day of Diagnosis = Day Zero**

The Day of Diagnosis is considered the day that the first positive microbiological (e.g. culture or PCR) or histological test result or a positive galactomannan antigen test result in case of aspergillosis was provided to the treating physician and after that **antifungal therapy was changed from empirical to targeted/tailored therapy**. Not the day, the samples were taken.

E.g. unspecified hyphae seen in a smear from a BAL sample taken on May 1 under the microscope **do not qualify here**. If the culture from that BAL sample reveals *Mucor* on May 6 and the lab informed the physician the same day, May 6 would be the Day Zero. ("unspecific hyphae" would be day -6, "culture Mucor" day 0)

In the case of post mortem diagnosis, the day of death is considered to be the day of diagnosis.

Inclusion and exclusion criteria

In case of any uncertainty whether a specific patient can be included, please contact Dr. Danila Seidel.

There was cultural, histological, microscopical or DNA evidence of invasive fungal infection or positive galactomannan for aspergillosis.	◯ Yes	◯ No
Infection caused by *Candida* spp., *Cryptococcus neoformans* or *Pneumocystis jiroveci* only.	◯ Yes	◯ No
Infection caused by **endemic** fungal pathogens, e.g. coccidioidomycosis or histoplasmosis, **only**.	◯ Yes	◯ No
Colonisation without proof of invasive infection (e.g. superficial skin infection - no involvement of subcutaneous tissue)?	◯ Yes	◯ No

What was the causative pathogen?
multiple answers possible

- [ ] Rare fungus (Mucorales, *Fusarium* spp., *Scedosporium*, *Trichosporon*, ...)
- [ ] *Aspergillus* spp.
- [ ] *Aspergillus* with ≥3 follow up galactomannan from day of diagnosis

Principle Investigators name:
Surname, First name (no titles)

Institution from where this case is being documented
Institute, Department, City

Country from which this case is documented
Country name in English

-- please select --

Please classify your institution according to the level of care you provide.

- ◯ Primary care (e.g. general practitioner)
- ◯ Secondary care (e.g. medical specialist)
- ◯ Tertiary care (e.g. University Hospital, Reference Center)
- ◯ Outpatient clinic
- ◯ Other. Please specify:

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Details on the fungus / fungi causing the IFI

Name of rare fungus causing the IFI (Other than *Aspergillus*)
if applicable

Aspergillus species causing the IFI
if applicable

- [ ] Aspergillosis diagnosed via **galactomannan** antigen
- [ ] *A. fumigatus*
- [ ] *A. flavus*
- [ ] *A. terreus*
- [ ] *A. niger*
- [ ] *A. fischeri*
- [ ] *A. nidulans*
- [ ] *A. oryzae*
- [ ] *A. tanneri*
- [ ] *A. ustus*
- [ ] *Aspergillus* other:

Were other causative fungal pathogens identified?

- ( ) No
- ( ) Yes. Please specify:

If the infection was imported from another country, please state from which country.
If the infection was not imported, please select "No" from the top of the list.

-- please select --

Documentation of this case in any other registries?

- ◯ No
- ◯ Yes. Please specify: _____ (e.g. CLARITY, FIND, MSG-06 Phaeohyphomycosis Registry, TriReg)

Case already published?

- ◯ No
- ◯ Yes. Please specify (digital object identifier - DOI): _____

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Patient Setup

Sex

◯ Female ◯ Male

Weight

kg

Year of infection

-- please select --

Ethnic origin

If the ethnic origin is unclear, please select *Unknown*.

-- please select --

To which age group did the patient belong at the time of diagnosis of IFI?

Child/Adolescent:

◯ Preterm
◯ Neonate (< 1 month)
◯ Infant (1 - 12 months)
◯ 1 - 6 years

- ◯ 7 - 11 years
- ◯ 12 - 16 years

Adult:

- ◯ 17 - 29 years
- ◯ 30 - 49 years
- ◯ 50 - 69 years
- ◯ 70 - 89 years
- ◯ ≥ 90 years

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Risk Factors

Which risk factors were present?

Immunosuppression

- [ ] Hematological/Oncological disease
- [ ] HIV/AIDS
- [ ] Solid organ transplantation
- [ ] Other disorder requiring or causing immunosuppression

Trauma/Intervention

- [ ] Burn
- [ ] Major surgery (not including surgery as antifungal therapy)
- [ ] Trauma

Chronic disease/Behavioral factor

- [ ] Alcoholism
- [ ] Chronic cardiovascular disease
- [ ] Chronic liver disease
- [ ] Chronic pulmonary disease
- [ ] Chronic renal disease
- [ ] Diabetes mellitus
- [ ] IV drug abuse
- [ ] Rheumatic diseases/Autoimmune disorder

Other

- [ ] Obesity (BMI >30) or Underweight (BMI <18.5), please indicate BMI:
- [ ] Premature birth

- [ ] Treatment in ICU
- [ ] Prosthetic devices (e.g. CVC, Arterial line, Urinary catheter, ECMO, heart valve)
- [ ] Viral pneumonia (within 90 days prior to diagnosis of the IFI). Causative agent: _____
- [ ] COVID-19 infection
- [ ] Other infectious diseases within 6 months prior to diagnosis of IFD. Causative agent: _____
- [ ] Other risk factors (e.g. Building construction, smoking)
- [ ] **No risk factor identified**

Duration of the inpatient stay

_____ days overall

Reason for hospitalisation

_____

Time between admission and diagnosis of IFI

_____ days

How many days was the patient on the following wards:

Normal ward	_____	days
Intermediate care	_____	days
Intensive care unit	_____	days
Bone marrow and blood stem cell transplant unit	_____	days

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Hematological/Oncological disorder

You stated the patient was diagnosed with a hematological/oncological disorder prior to diagnosis of IFI. Please provide further details on the condition of the patient.

Type of disease

- ◯ Acute Leukemia
- ◯ Aplastic Anemia
- ◯ Chronic Leukemia
- ◯ Lymphoma
- ◯ Multiple Myeloma
- ◯ Myelodysplastic Syndrome
- ◯ Solid Tumor
- ◯ Other

Details on the diagnosis

State of underlying disease at diagnosis of IFI

- ◯ De novo (First line)
- ◯ First relapse
- ◯ Second or later relapse
- ◯ Unknown

How many months prior to diagnosis of the IFI was the above reported diagnosis made?
0 if same month

month(s)

Type of treatment

- [ ] Chemotherapy
- [ ] Radiotherapy
- [ ] Hematopoietic Stem Cell Transplantation (HSCT) - Allogeneic
- [ ] Hematopoietic Stem Cell Transplantation (HSCT) - Autologous
- [ ] Surgery

Was the patient neutropenic within 30 days prior to diagnosis of IFI?
Neutropenia: Absolute neutrophil count < 500 per µl

- ◯ Yes
- ◯ No
- ◯ Unknown

For additional information on the underlying condition

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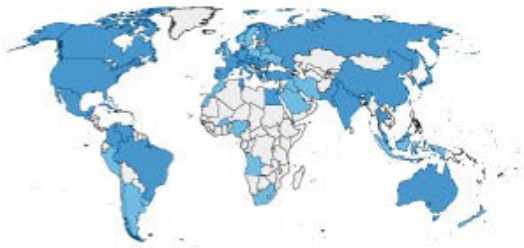

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Did the patient develop mucositis during treatment of the underlying disease within 30 days prior to diagnosis of the IFI?

	I	II	III	IV	Unknown Grade
Oral/Esophageal	○	○	○	○	○
Gastrointestinal	○	○	○	○	○
Vaginal	○	○	○	○	○
Nasal	○	○	○	○	○

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Allogeneic HSCT

You stated the patient received an allogeneic stem cell transplantation. Please provide further details.

Allogeneic HSCT - Type of transplant

- ◯ Peripheral stem cells
- ◯ Bone marrow
- ◯ Cord blood
- ◯ Other. Please specify:
- ◯ Unknown

Time span between allogeneic HSCT and diagnosis of IFI

days

Was this a myeloablative transplantation?

- ◯ Yes
- ◯ No
- ◯ Unknown

HLA matching

	Un-/related	Mismatches
Please select:		

CMV status

	Positive	Negative	Unknown

Donor	◯	◯	◯
Recipient	◯	◯	◯

Did the patient develop GvHD within 90 days prior to diagnosis of IFI?

- ◯ Yes
- ◯ No
- ◯ Unknown

If the patient developed GvHD please provide further details below.

Type of GvHD

- ◯ Acute
- ◯ Chronic
- ◯ Unknown

Considering the last 90 days prior to diagnosis of IFI, what was the maximum grade of GvHD recorded in this patient?
according to International Bone Marrow Transplant Registry (IBMTR) Severity Index

	0	I	II	III	IV	Present, but degree unknown
Eyes	◯	◯	◯	◯	◯	◯
Intestinal	◯	◯	◯	◯	◯	◯
Liver	◯	◯	◯	◯	◯	◯
Lung	◯	◯	◯	◯	◯	◯
Skin	◯	◯	◯	◯	◯	◯
Other	◯	◯	◯	◯	◯	◯

Duration of GvHD before diagnosis of IFI

[ ] days

Please elaborate if considered necessary for a better understanding of the clinical course.

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Autologous HSCT

You stated the patient received an autologous stem cell transplantation. Please provide further details.

Type of transplant

- ◯ Peripheral stem cells
- ◯ Bone marrow
- ◯ Other. Please specify:
- ◯ Unknown

Time span between autologous HSCT and diagnosis of IFI

days

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Solid Organ Transplantation

You stated the patient received a solid organ transplantation (SOT). Please provide further details.

What was the underlying condition for which the patient received SOT?

Organ(s) transplanted

- [ ] Heart
- [ ] Intestine
- [ ] Kidney
- [ ] Liver
- [ ] Lung
- [ ] Pancreas
- [ ] Other. Please specify:

Time span between SOT and diagnosis of IFI

days

Did the patient experience rejection of the transplant within 90 days prior to diagnosis of IFI?

- ( ) Yes
- ( ) No
- ( ) Unknown

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HIV/AIDS

You stated the patient was diagnosed with HIV/AIDS prior to diagnosis of IFI. Please provide further details.

Most recent CD4-cell count prior to diagnosis of IFI

- ◯ CD4 cell count in cells/µl: [ ]
- ◯ Not done

Most recent viral load prior to diagnosis of IFI

- ◯ Viral load in copies/ml: [ ]
- ◯ Below level of detection
- ◯ Unknown

Was the patient receiving Antiretroviral therapy (ART) prior to diagnosis of IFI?

- ◯ Yes. Duration: [ ] month(s)
- ◯ No
- ◯ Unknown

Could you provide the name of the antiretroviral drugs administered to the patient prior to IFI?

[ ]

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Burn

You stated the patient suffered burn injuries prior to diagnosis of IFD. Please provide further details.

Extent of burn

[ ] % of total body surface

Severity of burn

- ( ) First degree burn
- ( ) Second degree burn
- ( ) Third to fourth degree burn
- ( ) Unknown

Involved areas of body

- [ ] Arm
- [ ] Back
- [ ] Chest
- [ ] Head
- [ ] Leg
- [ ] Perianal/Genital
- [ ] Other. Please specify: [ ]
- [ ] Unknown

How many days prior to diagnosis of IFI did the burn occur?

days

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Major surgery

You stated the patient underwent major surgery prior to diagnosis of IFI. Please provide further details.

Site(s) involved in surgery

- [ ] Abdomen/Pelvis
- [ ] Cervical (Neck)
- [ ] Extremities (Lower)
- [ ] Extremities (Upper)
- [ ] Head
- [ ] Spine
- [ ] Thorax

How many days prior to diagnosis of IFI was the surgery performed?

_____ days

Further information on procedures performed

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Trauma

You stated the patient was diagnosed with trauma prior to diagnosis of IFI. Please provide further details.

Which body parts were involved in the trauma? Please indicate if the trauma was blunt or penetrating.

	blunt	penetrating	Not involved
Abdomen/ Pelvis	○	○	○
Back	○	○	○
Cervical (Neck)	○	○	○
Extremities (Lower)	○	○	○
Extremities (Upper)	○	○	○
Head	○	○	○
Spine	○	○	○
Thorax	○	○	○

Time span between trauma and diagnosis of IFI (max. 90 days)

[ ] days

Did the patient undergo trauma-related surgery?

- ○ Yes
- ○ No
- ○ Unknown

If you want to provide further details please use the space below.

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Chronic liver disease

You stated the patient suffered from chronic liver disease prior to diagnosis of IFI. Please provide further details on the disease at the time of diagnosis of IFI

Name of the disease

Duration prior to diagnosis of IFI

month(s)

Severity according to Child-Pugh Classification

- Child A
- Child B
- Child C
- Unknown

Severity according to Model for End-Stage Liver Disease (MELD) score (Calculator)

- MELD score:
- Unknown

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Chronic renal disease

You stated the patient suffered from chronic renal disease prior to diagnosis of IFI. Please provide further details on the disease at the time of diagnosis of IFI.

Name of the disease

Duration prior to diagnosis of IFI

month(s)

Current stage

- Stage I (GFR ≥ 90, albuminuria/proteinuria)
- Stage II (GFR 60-89)
- Stage III (GFR 30-59)
- Stage IV (GFR 15-29)
- Stage V (GFR < 15 or dialysis)
- Unknown

Did the patient undergo dialysis?

- Hemodialysis
- Peritoneal dialysis
- No dialysis
- Unknown

If patient was on dialysis was deferoxamine used?

- ◯ Yes
- ◯ No
- ◯ Unknown

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Chronic pulmonary disease

You stated the patient suffered from chronic pulmonary disease. Please provide further details.

Type of chronic pulmonary disease

- [ ] Asthma
- [ ] COPD
- [ ] Cystic fibrosis
- [ ] Fibrosis
- [ ] Other. Please specify:

Duration prior to diagnosis of IFI

month(s)

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Diabetes mellitus

You stated the patient suffered from Diabetes mellitus. Please provide further details.

Duration prior to diagnosis of IFI

[ ] month(s)

Insulin dependent at time of diagnosis of the IFI?

- ( ) Yes
- ( ) No
- ( ) Unknown

End-organ damage present?

- [ ] No
- [ ] Coronary artery disease
- [ ] Diabetic foot ulcers
- [ ] Nephropathy
- [ ] Polyneuropathy
- [ ] Retinopathy
- [ ] Stroke
- [ ] Other. Please provide details: [ ]

Most recent HbA1c prior to diagnosis of IFI

[ ] %

Did the patient suffer from ketoacidosis within 30 days prior to diagnosis of IFI?

- ◯ Yes
- ◯ No
- ◯ Unknown

For any additional information about the DM:

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Rheumatic/Autoimmune disease

You stated the patient was diagnosed with a rheumatic/autoimmune disease prior to diagnosis of IFI. Please provide further details.

Type of disease

Time span between onset of rheumatic/autoimmune disorder and diagnosis of IFI

month(s)

State of disease prior to diagnosis of the IFI

- Acute attack
- Chronic active
- Remission
- Not applicable
- Unknown

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Premature birth

You stated premature birth as a host factor. Please provide further details.

Gestational age at birth

weeks

Birth weight

grams

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Other risk factor(s)

You stated the patient had another risk factor. Please provide further details.

Time span prior to diagnosis of IFI

[ ] month(s)

Please provide further details on the patients risk factor(s).
e.g. exposure, diagnosis and clinical management

Was the patient neutropenic within 30 days prior to diagnosis of IFI?
Absolute neutrophil count <500 per µl

◯ Yes ◯ No ◯ Unknown

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Prior Infectious Diseases

The patient had another infectious disease in the recent past. Please provide further details.

If several infections were diagnosed prior to the current IFI, to which are you referring to?
(most clinically relevant with regard to the current fungal infection, if applicable. Additional information can be provided below.)

- [ ] Fungal infection
- [ ] Bacterial infection
- [ ] Viral infection

When was the diagnosis of the previous disease made?

[ ] day(s) before diagnosis of the current IFI

Which organs were affected then?

- [ ] Biliary system
- [ ] Blood (positive blood cultures)
- [ ] Bone
- [ ] Bowel
- [ ] Brain/Central nervous system
- [ ] Eye
- [ ] Heart
- [ ] Joint
- [ ] Kidneys
- [ ] Liver
- [ ] Lung
- [ ] Paranasal sinuses
- [ ] Peritoneum
- [ ] Foreign body (e.g. intravascular catheters, prosthetic material): [ ]
- [ ] Skin
- [ ] Deep soft tissue
- [ ] Spleen

- [ ] Vessels
- [ ] Other:
- [ ] Catheter-related bloodstream infection (CRBSI)

- [ ] **Disseminated** (positive blood culture and/or at least two non-adjacent organs affected)

Was treatment of the previous disease completed before the current IFI?

- ◯ Yes, treatment was completed (complete response) before onset of the current IFI.
- ◯ No, treatment was ongoing at time of diagnosis of the current IFI.
- ◯ Uncertain if the previous disease had complete response prior to the onset of the current IFI.

Please provide additional information that you consider appropiate in order to understand the link to the current IFI.

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Treatment in the Intensive Care Unit (ICU)

You stated the patient was treated in ICU prior to diagnosis of IFI. Please provide further details.

Reason for admission to ICU

- [ ] Medical
- [ ] Neurosurgical
- [ ] Surgical
- [ ] Unknown
- [ ] Other

Main reason for ICU admission

Which of the following were present during the ICU stay?

Baseline status:

- [ ] Creatine kinase elevated
- [ ] APACHE II Score:

Treatment:

- [ ] Central venous catheter
- [ ] Dialysis

- [ ] Extracorporeal membrane oxygenation (ECMO)
- [ ] Fludrocortisone
- [ ] Hydrocortisone
- [ ] Intra-aortic balloon pump (IABP)
- [ ] Inotropic support
- [ ] Mechanical ventilation
- [ ] Neuraminidase inhibitors (e.g. *Oseltamivir po*, *Peramivir iv* or *Zanamivir inhaled*) Please, indicate:
- [ ] Nitric oxide or high-frequency oscillation ventilation
- [ ] Parenteral nutrition
- [ ] Prone positioning > 48 hours
- [ ] Vasopressors (e.g. *Adrenaline*, *Dobutamine*, *Noradrenaline*, *Vasopressin* or a combination of them) Please, indicate:

Condition:

- [ ] Acute Respiratory Distress Syndrome (ARDS)
- [ ] Liver failure
- [ ] Renal failure
- [ ] Sepsis
- [ ] **None of the above**

Length of... (in days)

	Prior IFI diagnosis	**After IFI diagnosis**	**Total**
ICU stay			
Dialysis			
ECMO			

Mechanical ventilation			
Prone positioning			
Vasopressors			

Please elaborate if needed.

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Prosthetic Material

The fungal infection was related to a prosthetic material/catheter. Please provide further details.

Which type of prosthetic material/catheter was placed?

Vascular access devices

- [ ] Peripheral venous catheter
- [ ] Midline catheter
- [ ] Peripheral inserted central venous catheter (e.g. PICCline)
- [ ] Tunneled central venous catheters (e.g. Hickman catheter)
- [ ] Non-tunneled central venous catheter (e.g. Shaldon catheter; jugular, subclavian or femoral CVC)
- [ ] Implanted central venous catheter (e.g. Port-a-Cath)
- [ ] Peripheral arterial catheter (e.g. Radial artery line, femoral artery line)
- [ ] Lung assist device (e.g. ECMO, Novalung)

Cavitary catheters

- [ ] Indwelling peritoneal catheter (e.g. Tenckhoff catheter)
- [ ] Indwelling urinary catheter
- [ ] Drainage catheter

Prosthesis

- [ ] Heart valve
- [ ] Cardiac pacemaker
- [ ] Vascular prosthesis / Stents
- [ ] Joint prosthesis

Other prosthetic material

- [ ] Please specify:

How many days prior to the diagnosis of the fungal infection was the prosthetic material placed?

day(s) before

How many days after the diagnosis of the fungal infection was the prosthetic material/catheter removed?

day(s) after

Were cultures done from central-blood and peripheral-blood and if, which was positive for the causative fungal pathogen?

	Culture done?	Culture positive?
Central-blood culture	-- Select --	-- Select --
Peripheral-blood culture	-- Select --	-- Select --

Please provide additional information that you consider necessary in order to understand the link to the current IFI.

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Neutropenia

Please provide further details.

How many days within the last 30 days prior to diagnosis of IFI was the patient neutropenic?
Neutropenia: Absolute neutrophil count <500 per µl

[ ] days

How many days from diagnosis of IFI onwards was the patient neutropenic?
Neutropenia: Absolute neutrophil count <500 per µl

[ ] days

Did the patient receive G-CSF and/or granulocyte transfusion?

	Yes, unknown when	Yes, before IFI	Yes, after IFI diagnosis	Yes, before and after IFI diagnosis	No	Unknown
G-CSF	○	○	○	○	○	○
Granulocyte transfusion	○	○	○	○	○	○

Neutrophil count at time of diagnosis of the IFI
(e.g. 105, 225, <500, >1000 neutrophils per mm3 of blood)

[ ] cells / mm3

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COVID-19 infection

You stated the patient had COVID-19 infection. Please provide further details.

Time span prior to diagnosis of IFI

[ ] days

Please, provide details on the origin of the PCR sample for COVID-19 acute infection diagnosis
(e.g. throat swab)

Please, provide details if antibodies for COVID-19 were screened in the patient during acute phase or at cured disease
(e.g. IgA or IgG)

Please provide further details on the COVID-19 infection.
e.g. exposure, diagnosis and clinical management (anti-COVID-19 drugs, length of anti-COVID-19 treatment)

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Drugsw/in3monthsb4IFI

Did the patient receive any of the following drugs for treatment of underlying disease(s) during the last 3 months and / or antibiotics within 4 weeks prior to and including the day of diagnosis of

Please consider all drugs independent of condition or underlying diease.

How many days prior to the diagnosis of the IFI was chemotherapy for treatment of underlying hematological / oncological disease started/stopped?

Chemotherapy started _____ days before IFI diagnosis

Chemotherapy ended _____ days before IFI diagnosis

Category

Drugs (multiple selection)

Antineoplastic drugs

e.g. Busulfan, Carboplatin, Cisplatin, Cytarabine, Daunorubicin, Doxorubicin, Etoposide

- [ ] **No**
- [ ] **Unknown**
- [ ] **Yes. Please select which.**
- [ ] Bendamustine
- [ ] Bleomycin
- [ ] Busulfan
- [ ] Carboplatin
- [ ] Cisplatin
- [ ] Cladribine
- [ ] Cyclophosphamide
- [ ] Cytarabine
- [ ] Daunorubicin
- [ ] Doxorubicin
- [ ] Etoposide
- [ ] Fludarabine
- [ ] Idarubicin
- [ ] Melphalan
- [ ] Methotrexate
- [ ] Mitoxantrone
- [ ] Pentostatin
- [ ] Vincristine

Other: _____

Immunosuppressive drugs
e.g. Cyclosporine (CSA), Methotrexate, low dose Mycophenolate Mofetil, Tacrolimus

- [ ] **No**
- [ ] **Unknown**
- [ ] **Yes. Please select which.**
- [ ] Azathioprine
- [ ] Cyclophosphamide
- [ ] Cyclosporine (CSA)
- [ ] Mercaptopurine
- [ ] Methotrexate
- [ ] Mycophenolate mofetil (MMF)
- [ ] Sirolimus
- [ ] Tacrolimus
- [ ] Other:

Corticosteroids

- [ ] **No**
- [ ] **Unknown**
- [ ] **Yes. Please specify:**

Cumulative dosage:
mg (Prednisolon-equivalent)

Number of days with Corticosteroids: days

Antibodies
e.g. Bevacizumab, Cetuximab, Muromonab, Rituximab, Trastuzumab

- [ ] **No**
- [ ] **Unknown**
- [ ] **Yes. Please select which.**
- [ ] Adalimumab
- [ ] Alemtuzumab
- [ ] Anti-Thymocyte Globulin (ATG)
- [ ] Apolizumab
- [ ] Basiliximab
- [ ] Belimumab
- [ ] Bevacizumab
- [ ] Brentuximab
- [ ] Brodalumab
- [ ] Certolizumab
- [ ] Cetuximab
- [ ] Daclizumab

- [ ] Eculizumab
- [ ] Galiximab
- [ ] Gemtuzumab-Ozagamicin
- [ ] Golimumab
- [ ] Ibritumomab-Tiuxetan
- [ ] Infliximab
- [ ] Ipilimumab
- [ ] Lumiliximab
- [ ] Muromonab
- [ ] Natalizumab
- [ ] Nivolumab
- [ ] Ofatumumab
- [ ] Panitumumab
- [ ] Pembrolizumab
- [ ] Pertuzumab
- [ ] Ramucirumab
- [ ] Rituximab
- [ ] Tocilizumab
- [ ] Tositumomab
- [ ] Trastuzumab
- [ ] Ustekinumab
- [ ] Vedolizumab
- [ ] Zanolimumab
- [ ] Other:

Small molecules
e.g. Abatacept, Erlotinib, Imatinib, Lenalidomide, Sunitinib, Thalidomide

- [ ] **No**
- [ ] **Unknown**
- [ ] **Yes. Please select which.**
- [ ] Abatacept
- [ ] Anakinra
- [ ] Bortezomib
- [ ] Bosutinib
- [ ] Dasatinib
- [ ] Erlotinib
- [ ] Etanercept
- [ ] Everolimus
- [ ] Ibrutinib
- [ ] Idelalisib
- [ ] Imatinib
- [ ] Ivosidenib
- [ ] Lapatinib
- [ ] Leflunomid
- [ ] Lenalidomide
- [ ] Midostaurin
- [ ] Nilotinib

- [ ] Pazopanib
- [ ] Pomalidomide
- [ ] Regorafenib
- [ ] Ruxolitinib
- [ ] Sorafenib
- [ ] Sunitinib
- [ ] Thalidomide
- [ ] Tretinoin
- [ ] Vismodegib
- [ ] Other:

Antibiotics (4 weeks prior IFI)
e.g. cephalosporins, penicillins, tetracyclines

- [ ] **No**
- [ ] **Unknown**
- [ ] **Yes. Please select which.**
- [ ] Aminoglycosides
- [ ] Carbapenems
- [ ] Cephalosporins
- [ ] Glycopeptides
- [ ] Lincomycins
- [ ] Macrolides
- [ ] Penicillins
- [ ] Quinolones
- [ ] Sulfonamides
- [ ] Tetracyclines
- [ ] Other:

for additional information:

For help please contact us.

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Fungi scope

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Clinical Signs and Symptoms

Please state the clinical signs and symptoms that were present and potentially attributable to the fungal infection up to 7 days prior to diagnosis of the IFI.

	Yes	No	Unknown
Cough	○	○	○
Dyspnoea	○	○	○
Eschars	○	○	○
Fever	○	○	○
Haemoptysis	○	○	○
Neurological symptoms	○	○	○
Pain	○	○	○
Soft tissue swelling	○	○	○

If,

	prior day 0	after day 0
Fever was present, for how many days:		
Neutropenic fever was present, for how many days:		

Please provide further details on signs and symptoms mentioned above.

Other signs and symptoms

For help please contact us.

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Site of Infection

Please state the site(s) of infection due to IFI.
If bone, joint, deep soft tissue or vessels are affected, please specify below for a comprehensive understanding.

- [ ] Biliary system
- [ ] Blood (positive blood cultures)
- [ ] Bone
- [ ] Bowel
- [ ] Brain/Central nervous system
- [ ] Eye
- [ ] Orbit
- [ ] Heart
- [ ] Joint
- [ ] Kidneys
- [ ] Liver
- [ ] Lung
- [ ] Paranasal sinuses
- [ ] Peritoneum
- [ ] Foreign body (e.g. intravascular catheters, prosthetic material):
- [ ] Skin

- [ ] Deep soft tissue
- [ ] Spleen
- [ ] Vessels
- [ ] Other:
- [ ] Catheter-related bloodstream infection (CRBSI)

- [ ] **Disseminated** (positive blood culture and/or at least two non-adjacent organs affected)
- [ ] **Progressive to adjacent organs** (at least two adjacent organs affected) -- from which to which organ:

For additional information on sites of infection:
e.g. was the eye infected, did you refer to the eyeball or orbital soft tissue (originated from the sinuses)?

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Imaging Procedures

Please provide further details on imaging procedures performed to diagnose the IFI. Follow-up imaging procedures may be documented.

Day = Select day of procedure relative to the day of diagnosis of the IFI, e.g. 0 (day of diagnosis, **when result became available to the treating physician**) or -5 (day 5 before diagnosis) or 7 (day 7 after diagnosis).

Day of Diagnosis - Day Zero

The day of diagnosis is considered the day that the first positive microbiological (e.g. culture or PCR) or histological test result or a positive galactomannan antigen test result in case of aspergillosis was provided to the treating physician and thereby antifungal treatment changed from empirical to targeted.
In the case of post mortem diagnosis, the day of death is considered to be the day of diagnosis.

	Procedure	Region	Contrast	Signs of Day IFI	Day	Details
example:	CT	Thorax	enhanced	yes	-2	Multiple nodular infiltrates right lung, suggestive of IFD
1.						
2.						

3.

4.

5.

6.

7.

8.

Other.

If you wish to provide further information on imaging procedures, please use the space provided below.

☐ Please check box if **no imaging procedures were performed**.

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Endoscopy

Please provide further details if endoscopy was done for diagnosis of IFI and to follow up on resolution of the infection.

Day = Select day of procedure relative to the **day of diagnosis of the IFI**, e.g. 0 (day of diagnosis, **when result became available to the treating physician**) or -5 (day 5 before diagnosis) or 7 (day 7 after diagnosis).

Day of Diagnosis - Day Zero

The day of diagnosis is considered the day that the first positive microbiological (e.g. culture or PCR) or histological test result or a positive galactomannan antigen test result in case of aspergillosis was provided to the treating physician and thereby **antifungal treatment changed from empirical to targeted**.
In the case of post mortem diagnosis, the day of death is considered to be the day of diagnosis.

	Type	Signs of IFI	Day	Details
example:	Bronchoscopy	yes	0	Suspicious bronchial lesions for IFD, BAL and biopsy done
example:	Bronchoscopy	no	12	no lesions
1.				

2.

3.

4.

5.

for additional information:

☐ Please check box if **no endoscopy was performed for diagnosis of the IFI**.

For help please contact us.

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Galactomannan Antigen Test

If GM (AspAg) was tested, please document **all** test results from the first positive tested sample (GM>0.5). Please document **also the negative tested samples** (GM<0.5) until at least 3 **consecutive** tests were negative or until day 84 (which comes first).

Which Galactomannan test was used?

- ○ Platelia Aspergillus assay
- ○ Other:

#	Day	GM index	Sample
1.			
2.			
3.			
4.			

5.

6.

7.

8.

For additional information, e.g. if GM was tested more than eight times.

For help please contact us.

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Mycological Evidences

Please specify mycological efforts undertaken to diagnose the IFI and to follow up on resolution of the infection.

Day Zero - Day of Diagnosis

The day zero (= day of diagnosis) is considered the day that the first positive microbiological (e.g. culture or PCR) or histological test result or a positive galactomannan antigen test result in case of aspergillosis was provided to the treating physician and thereby **antifungal treatment changed from empirical to targeted**. It is not the day when the sample was taken but when the treating physician received the result of it.
In the case of post mortem diagnosis, the day of death is considered to be the day of diagnosis.

Day = Select day of procedure relative to the **Day Zero - Day of Diagnosis** of the IFI, e.g. 0 (day of diagnosis, when result became available to the treating physician) or -5 (day 5 before diagnosis, e.g. morphologically unspecific hyphae seen in smear) or 7 (day 7 after diagnosis).

	Procedure	Type of Sample	Detection of IFI	Day	Description of findings	Fungus identified (species)
example:	Culture	Liver	yes	-3	Beige greyish sporangia >1cm high, rhizoids, undivided hyphae	Lichtheimia corymbifera
	Culture	Liver	no	12		
1.						
2.						
3.						

4.

5.

6.

7.

8.

9.

10.

For further information on procedures done for mycological diagnosis:

Susceptibility to antifungals tested?

- ◯ YES, susceptibility results are available.
- ◯ No MICs available.

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FungiThek

Biobanking of isolates of rare fungi for centralized identification, research and exchange among FungiScope collaborators.

Are you able to contribute the fungal isolate to FungiScope?

Yes,

- [ ] I already sent it to the FungiScope central lab in Cologne.
- [ ] I will send the isolate to the FungiScope Central Lab Cologne. **(Please find details below)**
- [ ] the isolate is stored at the reference lab in my country.

No, for the following reason (e.g. no culture done, disposal, local law and regulations)

FungiScope reimburses for packaging and shipment of the respective isolate with 50 Eur.
If you wish to contribute the isolate please send it to:

University Hospital Cologne
Center for Clinical Trials 2 Infectious
Diseases
Susann Blossfeld - FungiScope
Herderstrasse 52-54
50931 Cologne
Germany

Please use this **Shipment Form**

◯ *If you need any assistance regarding shipment please check box and we will contact you. Or get in touch with us directly via Email.*

For help please contact us.

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Molecular detection

Please specify which region was sequenced to identify the fungal pathogen.

- [ ] ITS (Internal transcribed spacer)
- [ ] IGS (Intergenic spacer)
- [ ] D1/D2
- [ ] Other. Please specify:

Please provide the nucleotide sequence.

Please specify which MALDI-TOF MS system was used to identify the fungal pathogen.

- [ ] Andromas
- [ ] Bruker Biotyper
- [ ] VITEK II system
- [ ] VITEK MS
- [ ] Other. Please specify:

Histology

Which stainings were done to identify the fungal pathogen?

- [ ] None
- [ ] Calcoflour white
- [ ] GMS (Grocott-Gomori's Methenamine Silver stain)
- [ ] Hematoxylin and eosin stain
- [ ] PAS (Periodic acid-Schiff stain)
- [ ] Other. Please specify:

Was tissue invasion seen?

- ◯ Yes
- ◯ No
- ◯ Not applicable

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Susceptibility Test

	Source of isolate used for susceptibility testing	**Site of origin**
example:	Tissue (sterile site)	Lung
	-- select --	

How many days after diagnosis of the IFI were susceptibility results available?
Day = Select the day the susceptibility results were available relative to the **day of diagnosis of the IFI**, e.g. 0 (day of diagnosis, when result became available to the treating physician) or 7 (day 7 after diagnosis).

day(s)

Please provide the susceptibility (S-I-R) and the minimum inhibitory concentration (MIC) for each antifungal agent that was tested.

	Antifungal agent	**S-I-R**	**MIC**	**Method**
1.			mg/l	

2. mg/l

3. mg/l

4. mg/l

5. mg/l

6. mg/l

7. mg/l

8. mg/l

9. mg/l

Other. mg/l

If you wish to provide further information on procedures done for susceptibility test, please use the space provided below.

For help please contact us.

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Antifungal Treatment

Please provide details on the course of treatment with the distinction between **treatment of a previous fungal infection, prophylaxis, empiric, targeted treatment** and **secondary prophylaxis** after treatment of respective IFI w completed (select: Antifungal strategy).

Please specify **Start and Stop day** of each treatment relative to the day of diagnosis of the IFI, e.g. 0 (day of diagnosis, when result became available to the treating physician) or -5 (day 5 before diagnosis) or 7 (day 7 after diagnosis Before the day of diagnosis, treatment is considered prophylactic or empiric/pre-emptive. Starting from that day it is considered targeted antifungal treatment.

Day of Diagnosis - Day Zero

The day of diagnosis is considered the day that the first positive microbiological (e.g. culture or PCR) or histological test result or a positive galactomannan antigen test result in case of aspergillosis was provided to the treating physician and therefore **antifungal therapy was changed from empirical to targeted**.

In the case of post mortem diagnosis, the day of death is considered to be the day of diagnosis.

If **Drug-related adverse event(s) (AE)** occurred, please provide further details.

An Adverse Drug Reaction (ADR; adverse reaction; undesirable effect) is a response to a medicinal product, which is noxious and unintended. Adverse reactions may arise from use of the product within or outside the terms of the marketing authorisation or from occupational exposure. Centralised collection of data on adverse drug reactions has the potential to uncover formerly unknown on ADR. If you are a physician practicing in Germany, we therefore advise registration of any ADR in the European Database, accessible via the following link: http://www.adrreports.eu/de/index.html

	Antifungal strategy	Antifungal drug	GFR at initiation	Start Day	Stop Day	Dosage [mg]	Frequency		Adminis-tration	Reason for Stop	Comments e.g. AEs, other drug
example:	Empiric	Voriconazole	< 15	-12	0	250	2x	/ Day	iv	Completed treatment	Visual disturbances
1.								/			
2.								/			
3.								/			
4.								/			
5.								/			

	Antifungal strategy	Antifungal drug	GFR at initiation n	Start Day	Stop Day	Dosage [mg]	Frequency	Adminis-tration	Reason for Stop	Comments e.g. AEs, other drug
6.							/			
7.							/			
8.							/			
9.							/			
10.							/			
11.							/			
12.							/			
13.							/			
14.							/			
15.							/			
16.							/			

Any comments on antifungal treatment.
e.g. if you would like to elaborate on decisions of switching from one drug to another or in case of complex treatment regimens, which are difficult to present in the above format

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Drug levels

If drug levels were tested, please provide details below.

Note, in this page, day means the day after start of the respective drug.

If drug levels where tested at different time points, please chose the **most significant results**, e.g. first measurement, before dose adjustment, at time of failure.

				1. measurement		2. measurement		3. measurement		
	Treatment Period	**Antifungal drug**	**Sample type**	**Day**	**Drug level**	**Day**	**Drug level**	**Day**	**Drug level**	**Unit**
example:	Prophylaxis	Posaconazole	Serum	5	2200	9	1200	12	400	ng/ml
1.										
2.										
3.										
4.										

5.											
Other.											

For further information:

Please check box if **no drug levels were tested**.

For help please contact us.

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Other Antifungal Treatment

Did the patient receive additional treatment of the IFI?

Day = Please specify the **Day of procedure** (surgery, CVC removal) or **Start Day** (Iron chelator) relative to the date of diagnosis of the IFI, e.g. 0 (day of diagnosis, when result was available to the treating physician) or -5 (day 5 before diagnosis) or 7 (day 7 after diagnosis).

Day of Diagnosis - Day Zero

The day of diagnosis is considered the day that the first positive microbiological (e.g. culture or PCR) or histological test result was provided to the treating physician.
In the case of post mortem diagnosis, the day of death is considered to be the day of diagnosis.

		Day(s) e.g. -4,0,8,35	**Additional information** e.g. Surgical drainage of brain abscess
Surgery	◯ Yes. Please specify: ◯ No		
CVC removal	◯ Yes. Please specify: ◯ No ◯ Not applicable		

Iron chelator administration

- ◯ Yes. Please specify:
- ◯ No

Other

- ◯ Yes. Please specify:
- ◯ No

Please elaborate, if needed

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Outcome

Patient alive at last contact?

- ◯ Yes
- ◯ No

If alive: was antifungal therapy completed before last contact with the patient?

- ◯ Yes.
- ◯ No. Therapy is ongoing after the here documented last contact with the patient.

Lost to follow-up?

- ◯ Yes
- ◯ No

Time span between diagnosis of IFI and last contact with the patient.
If diagnosis was established post-mortem please enter "0".

[ ] days

How many days after diagnosis of the IFI was final treatment response assessed?
→ for complete response this is the day when complete response was assessed the first time (this may or may not be before the day of last contact)
If diagnosis was established post-mortem please enter "0".

[ ] days

Response to antifungal treatment

at day 14, 28, 42, 84 after diagnosis of IFI and at day of final assessment
Please refer to fungal disease only.

	Complete Response	Partial Response	Stable Disease	Progression / Failure	Unknown	Not applicable
Day 14	○	○	○	○	○	○
Day 28	○	○	○	○	○	○
Day 42	○	○	○	○	○	○
Day 84	○	○	○	○	○	○
Final assessment	○	○	○	○	○	○

State of the underlying condition

at day 14, 28, 42, 84 after diagnosis of IFI and at day of final assessment

	Complete Response	Partial Response	Stable Disease	Progression/ Uncontrolled Disease	Unknown	Not applicable
Day 14	○	○	○	○	○	○
Day 28	○	○	○	○	○	○
Day 42	○	○	○	○	○	○
Day 84	○	○	○	○	○	○
Final assessment	○	○	○	○	○	○

Neutropenia and immunosuppression status

at day 14, 28, 42, 84 after diagnosis of IFI and antifungal treatment, and at day of final assessment

Neutropenia: Absolute neutrophil count < 500 per µl

	Neutropenic	Under immunosuppression	Both	None of the above	Unknown	Not applicable
Day 14	○	○	○	○	○	○
Day 28	○	○	○	○	○	○
Day 42	○	○	○	○	○	○
Day 84	○	○	○	○	○	○
Final assessment	○	○	○	○	○	○

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Patient died

You stated that the patient died. Please provide further details.

Was the death attributable to IFI?

- ◯ Yes
- ◯ No
- ◯ Unknown

Primary cause(s) of death:

1.
2.
3.

Was diagnosis of IFI established post-mortem?

- ◯ Yes
- ◯ No

If an autopsy was performed, please provide further details.
Please be reminded that data should be anonymised to protect the patients identity.

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Additional Information

If you wish to provide additional information on your case please use the space provided below.
Please be reminded that data should be anonymised to protect the patients identity.

For help please contact us.

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