**Online Supplement:**

**Guideline adherence predicts Survival of Candidemia in Europe: Results from the ECMM *Candida* III multinational European Observational Cohort Study**

Martin Hoenigl, Prof, 1,2,3#, Jon Salmanton-García, PhD,4,5, Matthias Egger, MD,1,3, Jean-Pierre Gangneux, Prof, 6, Tihana Bicanic, MD,7, Sevtap Arikan-Akdagli, Prof, 8, Ana Alastruey-Izquierdo, PhD, 9, Nikolai Klimko, Prof, 10, Aleksandra Barac, MD,11, Volkan Özenci, Prof, 12,13, Eelco F. J. Meijer, MD,14,15,1, Nina Khanna, MD,17, Matteo Bassetti, Prof, 18,19, Riina Rautemaa-Richardson, MD,20,21, Katrien Lagrou, Prof, 22,23, Kai-Manuel Adam, MD,16, Emin Halis Akalin, Prof, 24, Murat Akova, Prof, 25, Valentina Arsic Arsenijevic, MD, 26, Avinash Aujayeb, MD, 27, Ola Blennow, MD, 28, Stéphane Bretagne, Prof, 29, François Danion, MD,30, Blandine Denis, MD, 31, Nick Alexander de Jonge, MD,32, Guillaume Desoubeaux, Prof, 33, Lubos Drgona, MD,34, Nurettin Erben, MD,35, Andrea Gori, MD, 36,37, Julio García Rodríguez, PhD 38, Carolina Garcia-Vidal, MD, 39, Daniele Roberto Giacobbe, MD, 18,19, Anna L. Goodman, MD, 40, Petr Hamal, MD,41, Helena Hammarström, MD,42, Christina Toscano, MD, 43, Fanny Lanternier, Prof,44, Cornelia Lass-Flörl, Prof, 45, Deborah E. A. Lockhart, PhD, 46,47, Thomas Longval, MD, 48, Laura Loughlin, MD, 49, Tadeja Matos, MD, 50, Malgorzata Mikulska, Prof, 18,19, Manjusha Narayanan, FRCPath 51, Sonia Martín-Pérez, MD, 52, Juergen Prattes, MD,1,2,3,4, Benedict Rogers, MBChB 53, Laman Rahimli, MD, 4,5, Maite Ruiz, PhD,54,55, Emmanuel Roilides, Prof,56, Michael Samarkos, Prof, 57, Ulrike Scharmann, MD, 58, Uluhan Sili, Prof, 59, Ogun Resat Sipahi, Prof, 60, Alena Sivakova, MD,61, Joerg Steinmann, Prof, 58,62, Janina Trauth, MD, 63, Ozge Turhan 64, Jens Van Praet, MD, 65, Antonio Vena, PhD, 18,19, P. Lewis White, Prof, 66, Birgit Willinger, Prof, 67, Anna Maria Tortorano, PhD, 68, Maiken C. Arendrup, Prof,69,70,71, Philipp Koehler, MD,4,5,72\*, Oliver A. Cornely, Prof, 4,5,72,73\*#  -on behalf of the ECMM *Candida* III Study Group$

\* Shared Senior authorship

**Affiliations**

1Division of Infectious Diseases, Medical University of Graz, Graz, Austria

2Biotech Med, Graz

3Translational Medical Mycology Research Unit, ECMM Excellence Center for Medical Mycology, Medical University of Graz, Graz, Austria

4University of Cologne, Faculty of Medicine and University Hospital Cologne, Department I of Internal Medicine, Center for Integrated Oncology Aachen Bonn Cologne Duesseldorf (CIO ABCD) and Excellence Center for Medical Mycology (ECMM), Cologne, Germany

5University of Cologne, Faculty of Medicine and University Hospital Cologne, Cologne, Excellence Cluster on Cellular Stress Responses in Aging-Associated Diseases (CECAD),Cologne, Germany

6Univ Rennes, CHU Rennes, Inserm, EHESP, Irset (Institut de recherche en santé, environnement et travail), UMR\_S 1085, F-35000 Rennes, France

7Institute of Infection and Immunity, St George’s University of London, London, UK

8Hacettepe University Medical School, Department of Medical Microbiology, Ankara, Turkey

9Mycology Reference Laboratory, National Centre for Microbiology, Instituto de Salud Carlos III, Madrid, Spain.

10Department of Clinical Mycology, Allergy and Immunology, North Western State Medical University, St Petersburg, Russia

11 Clinic for Infectious and tropical diseases, University Clinical Center of Serbia, Faculty of Medicine, University of Belgrade, Belgrade, Serbia

12 Division of Clinical Microbiology, Department of Laboratory Medicine, Karolinska Institute, Stockholm, Sweden

13 Department of Clinical Microbiology, Karolinska University Hospital, Sweden

14 Canisius Wilhelmina Hospital (CWZ), Medical Microbiology and Infectious Diseases, Nijmegen, the Netherlands

15 Center of Expertise in Mycology Radboudumc/CWZ, Nijmegen, the Netherlands.

16 Department of Medical Microbiology, Radboud University Medical Center, Nijmegen, the Netherlands

17 Division of Infectious Diseases and Hospital Epidemiology, University Hospital of Basel, Basel, Switzerland

18 Department of Health Sciences (DISSAL), University of Genoa, Genoa, Italy

19 IRCCS Ospedale Policlinico San Martino, Infectious Diseases Unit, Genoa, Italy20Mycology Reference Centre Manchester and Department of Infectious Diseases, Wythenshawe Hospital, Manchester University NHS Foundation Trust, Manchester, UK

21 Division of Evolution, Infection and Genomics, Faculty of Biology, Medicine and Health, University of Manchester, UK

22 Laboratory of Clinical Microbiology, Department of Microbiology, Immunology and Transplantation, KU Leuven, Leuven, Belgium

23 Department of Laboratory Medicine and National Reference Center for Mycosis,, UZ Leuven, Leuven, Belgium

24 Bursa Uludag University, Faculty of Medicine, Department of Infectious Diseases and Clinical Microbiology, Bursa, Turkey

25 Hacettepe University Medical School Department of Infectious Diseases and Clinical Microbiology, Ankara, Turkey

26Faculty of Medicine University of Belgrade, Institute of Microbiology and Immunology, Medical Mycology Reference Laboratory (MMRL), Belgrade, Institute of Public Health of Vojvodina, Centre for Microbiology - Novi Sad, Serbia

27 Northumbria Healthcare NHS Foundation Trust, Northshields, UK

28 Department of Infectious Diseases, Karolinska University Hospital, Stockholm, Sweden

29 Laboratory of Parasitology and Mycology, Saint Louis University Hospital, Assistance Publique-Hôpitaux de Paris (AP-HP), Paris, France

30 Department of Infectious Diseases, CHU de Strasbourg; Université de Strasbourg, Strasbourg, France

31 Department of Infectious Diseases, Hôpital Saint-Louis, Fernand Widal, Lariboisière, Assistance Publique-Hôpitaux de Paris (AP-HP), Paris, France

32 Department ofHematology, Amsterdam University Medical Centers, Amsterdam, the Netherlands

33 Department of Parasitology-Mycology-Tropicalmedicine,CHRU de Tours, Tours, France

34Department of Oncohematology, Comenius University and National Cancer Institute, Bratislava, Slovakia

35 Eskisehir Osmangazi University, Faculty of Medicine, Department of Infectious Disease and Clinical Microbiology, Eskisehir, Turkey

36Department of Internal Medicine, Infectious Diseases Unit, Foundation IRCCS Ca' Granda Ospedale Maggiore Policlinico, 20122 Milan, Italy.

37Department of Pathophysiology and Transplantation and Centre for Multidisciplinary Research in Health Science (MACH), University of Milan, 20122 Milan, Italy.

38 Microbiology Department, La Paz University Hospital, Madrid, Spain

39 Department of Infectious Diseases, Hospital Clinic de Barcelona, Barcelona, Spain.

40 Department of Infection, Guy’s and St Thomas’ NHS Foundation Trust) but if space/capacity please add a secondary one- which is MRC Clinical Trials Unit at University College London

41 Department of Microbiology, Faculty of Medicine and Dentistry, Palacky University Olomouc, Olomouc, Czech Republic

42 Department of Infectious Diseases, Institute of Biomedicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden

43 Laboratory ofClinicalMicrobiology and Molecular Biology, Centro Hospitalar de Lisboa Ocidental, Lisboa, Portugal

44 Paris Cité Université, Necker Hospital, APHP, Paris, France

45Institute of Hygiene and Medical Microbiology Innsbruck Medical University, Innsbruck Medical University, Excellence Center for Medical Mycology (ECMM), Innsbruck, Austria

46 Department of Medical Microbiology, Aberdeen Royal Infirmary, Foresterhill, Aberdeen AB25 2ZN,, United Kingdom

47 Institute of Medical Sciences, School of Medicine Medical Sciences & Nutrition, University of Aberdeen, Aberdeen AB25 2ZD, United Kingdom

48 Centre Hospitalier de Versailles, Hématologie, Le Chesnay, France

49 Belfast Health and Social Care Trust, Belfast, United Kingdom

50 Institute of Microbiology and Immunology, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

51 Newcastle upon Tyne Hospitals NHS Foundation Trust, Newcastle upon Tyne, United Kingdom

52 Hospital Nuestra Señora de Sonsoles, Ávila, Spain

53 University Hospitals of Leicester NHS Trust, Department of Clinical Microbiology, Leicester, United Kingdom

54 Unit of Infectious Diseases and Microbiology, Institute of Biomedicine of Seville, University Hospital Virgen del Rocio, Seville, Spain

55 Centro de Investigación Biomédica en Red de Enfermedades Infecciosas, Madrid, Spain.

56 Hippokration General Hospital, Infectious Diseases Department, Medical School, Aristotle University of Thessaloniki, Thessaloniki, Greece

57 1st Department of Medicine, Laikon General Hospital, Medical School, National & Kapodistrian University of Athens, Greece

58 Institute of Medical Microbiology, University Hospital Essen, University of Duisburg-Essen, Essen, Germany

59 Department of Infectious Diseases and Clinical Microbiology, School of Medicine, Marmara University, Istanbul, Turkey

60 Ege University Medical School Department of Infectious Diseases and Clinical Microbiology, Izmir, Turkey

61 Department of Microbiology of St. Anne’s Faculty Hospital and Faculty of Medicine, Masaryk University, Brno, Czech Republic62 Institute for Clinical Hygiene, Medical Microbiology and Infectiology, Paracelsus Medical University, Klinikum Nürnberg, Nuremberg, Germany

63 Department of Medicine II, Section of Infectious Diseases, Justus-Liebig-University Giessen, Giessen, Germany

64 Akdeniz University, Faculty of Medicine, Department of Infectious Diseases and Clinical Microbiology, Antalya, Turkey

65 AZ Sint-Jan Brugge Oostende AV, Nephrology and Infectious Diseases, Brugge, Belgium

66 Public Health Wales, Microbiology Cardiff and Cardiff University, School of Medicine, Cardiff , United Kingdom

67 Division of Clinical Microbiology, Department of Laboratory Medicine, Medical University of Vienna, Vienna, Austria

68 Universita degli Studi di Milano, Milano, Italy

69Unit of Mycology, Statens Serum Institut, Copenhagen, Denmark

70Department of Clinical Microbiology, Rigshospitalet, Copenhagen, Denmark

71Department of Clinical Medicine, University of Copenhagen, Copenhagen, Denmark

72 German Centre for Infection Research (DZIF), Partner Site Bonn-Cologne, Cologne, Germany

73 University of Cologne, Faculty of Medicine and University Hospital Cologne, Clinical Trials Centre Cologne (ZKS Köln), Cologne, Germany

**§ ECMM *Candida* III Study Group contributors:**

Mario Tumbarello1, Alida Fe Talento2, Alba C Ruiz3, Zdenek Racil4, Igor Stoma5, María Calbacho6, Eric Van Wijngaerden7, Júlia Henriques8, Harriett Jordan9, Valentina Ferroni10, Ozlem Koyuncu Ozyurt11, Christopher Milacek12, Robert Krause13, Christoph Zurl13, Matthijs Backx14, Ang Li15, Raphael Seufert16, Rok Tomazin17, Yael Blankenheim 18,19 , Julio Dávila-Valls20,Paloma García-Clemente21, Tomas Freiberger22 ,Jochem Buil 23, Jacques F. Meis 24, Deniz Akyol 25, Hélène Guegan26 , Clare Logan 27

Affiliations

1Fondazione Policlinico A. Gemelli IRCCS, Rome, Italy

2Beaumont Hospital Dublin – Dublin, Ireland

3University and Polytechnic La Fe Hospital, Valencia, Spain4 Institut of Hematology and Blood Transfuzion, Prague, Czech Republic

5Minsk Scintifical and Practical Center of Surgery, Transplantology and Hematology; Gome State University, Misnk, Belarus

6 Hospital 12 Octubre, Hematology, Madrid, Spain

7Department of General Internal Medicine, UZ Leuven, Leuven, Belgium

8Laboratory ofClinicalMicrobiology and Molecular Biology, Centro Hospitalar de Lisboa Ocidental, Lisboa, Portugal

9Department of Infection, Guy’s and St Thomas’ NHS Foundation Trust, St Thomas Hospital, Westminister Bridge, London, United Kingdom

10Department of Internal Medicine Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milano, Italy

11Akdeniz University, Faculty of Medicine, Department of Medical Microbiology, Antalya, Turkey

12Department of Internal Medicine II, Division of Pulmonology, Medical University of Vienna, Vienna, Austria

13Division of Infectious Diseases, Medical University of Graz, Graz, Austria

14Public Health Wales, Microbiology, Cardiff , United Kingdom

15Newcastle Hospitals, Newcastle Upon Tyne, United Kingdom

16 Institute for Clinical Hygiene, Medical Microbiology and Infectiology, Paracelsus Medical University, Klinikum Nürnberg, Nuremberg, Germany

17 Institute of Microbiology and Immunology, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

18University of Cologne, Faculty of Medicine and University Hospital Cologne, Cologne; Excellence Cluster on Cellular Stress Responses in Aging-Associated Diseases (CECAD); Cologne, Germany

19University of Cologne, Faculty of Medicine and University Hospital Cologne, Department I of Internal Medicine, Center for Integrated Oncology Aachen Bonn Cologne Duesseldorf (CIO ABCD) and Excellence Center for Medical Mycology (ECMM), Cologne, Germany

20Hospital Nuestra Señora de Sonsoles, Ávila Spain

21La Paz University Hospital, Madrid, Spain

22Centre of Cardiovascular Surgery and Transplantation, Brno, and Faculty of Medicine, Masaryk University, Brno, Czech Republic

23Department of Medical Microbiology, Radboud University Medical Center, Nijmegen, the Netherlands

24Canisius Wilhelmina Hospital (CWZ), Medical Microbiology and Infectious Diseases, Nijmegen, the Netherlands; Center of Expertise in Mycology Radboudumc/CWZ, Nijmegen, the Netherlands.

25Ege University Medical School Department of Infectious Diseases and Clinical Microbiology, Izmir, Turkey

26 Univ Rennes, CHU Rennes, Inserm, EHESP, Irset (Institut de recherche en santé, environnement et travail), UMR\_S 1085, F-35000 Rennes, France

27Institute of Infection and Immunity, St George’s University of London, London, UK

# Corresponding author:

Prof. Dr. Martin Hoenigl, MD,

Division of Infectious Diseases, Department of Internal Medicine,

Medical University of Graz,

Auenbruggerplatz 15, 8036-Graz, Austria

Email: hoeniglmartin@gmail.com

Phone: +4331638531425

Alternate Corresponding author:

Prof. Dr. Oliver A. Cornely

University of Cologne, Faculty of Medicine and University Hospital Cologne, Translational Research, Cologne Excellence Cluster on Cellular Stress Responses in Aging-Associated Diseases (CECAD), and University of Cologne, Faculty of Medicine and University Hospital Cologne, Department I of Internal Medicine, Center for Integrated Oncology Aachen Bonn Cologne Duesseldorf (CIO ABCD) and Excellence Center for Medical Mycology (ECMM), Cologne, Germany

Herderstraße 52-54

50931 Cologne, Germany

Phone: +49 221 478 88795| Fax: +49 221 478 1421445

E-mail: oliver.cornely@uk-koeln.de

**Supplemental Table 1.** Patient Characteristics and distribution of Candida species in the overall study cohort, as well as for survivors and non-survivors at end of follow up (p-values calculated using chi-square or Mann Whitney U test as appropriate).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Study Cohort (N=632) (%)** | **Survivors (N=331)#** | **Non-survivors (N=286)#** | **p-value** |
| **Age, median (IQR), y** | 65 (53-73) | 61 (51-71) | 65 (55-75) | <0.001 |
| **Sex – no. (%)** |  |  |  |  |
|  Male | 368 (58%) | 189 (57%) | 172 (60%) | n.s. |
| **Country** |  |  |  | <0.001 |
| UK | 95 (15%) | 48 (15%) | 47 (16%) |  |
| Germany | 73 (12%) | 41 (12%) | 32 (11%) |  |
| France | 73 (12%) | 30 (9%) | 41 (14%) |  |
| Turkey | 66 (10%) | 28 (8%) | 38 (13%) |  |
| Spain | 47 (7%) | 23 (7%) | 24 (8%) |  |
| Russia | 35 (6%) | 16 (5%) | 19 (7%) |  |
| Austria | 30 (5%) | 18 (5%) | 12 (4%) |  |
| Italy | 29 (5%) | 18 (5%) | 11 (4%) |  |
| Serbia | 29 (5%) | 18 (5%) | - |  |
| Netherlands | 27 (4%) | 19 (6%) | 8 (3%) |  |
| Czech Republic | 23 (4%) | 10 (3%) | 13 (5%) |  |
| Belgium | 20 (3%) | 12 (4%) | 8 (3%) |  |
| Sweden | 20 (3%) | 9 (3%) | 10 (3%) |  |
| Greece | 18 (3%) | 11 (3%) | 7 (2%) |  |
| Portugal | 10 (2%) | 6 (2%) | 4 (1%) |  |
| Switzerland | 10 (2%) | 10 (3%) | 0 |  |
| Slovenia | 10 (2%) | 6 (2%) | 4 (1%) |  |
| Slovakia | 10 (2%) | 4 (1%) | 6 (2%) |  |
| Ireland | 4 (1%) | 2 (1%) | 2 (1%) |  |
| Belarus | 2 (0.3%) | 2 (1%) | 0 |  |
| **Risk factors for IC** |  |  |  |  |
|  SOT | 14 (2%) | 8 (2%) | 6 (2%) | n.s. |
|  BMI ≥30 | 104 (16%) | 57 (17%) | 47 (16%) | n.s. |
|  Diabetes mellitus | 139 (22%) | 69 (21%) | 68 (24%) | n.s. |
|  Prosthetic valves/ other foreign body | 78 (12%) | 40 (12%) | 38 (13%) | n.s. |
|  Total parenteral nutrition | 136 (22%) | 76 (23%) | 59 (21%) | n.s. |
|  Major surgery | 164 (26%) | 92 (28%) | 72 (25%) | n.s. |
|  ICU | 234 (37%) | 98 (30%) | 135 (47%) | <0.001 |
|  Mechanical ventilation | 151/517 (29%) | 64/271 (24%) | 87/246 (35%) | 0.003 |
|  ECMO | 15 (2%) | 7 (2%) | 8 (3%) | n.s. |
| Hematological/Oncological malignancy | 247 (39%) | 124 (37%) | 121 (42%) | n.s. |
| **Causative *Candida* species\*** |  |  |  | n.s. |
|  *C. albicans* | 287/621 (46%) | 156/323 (48%) | 123/284 (43%) |  |
|  *C. glabrata* | 133/621 (21%) | 73/323 (23%) | 58/284 (20%) |  |
|  *C. parapsilosis* | 83/621 (13%) | 42/323 (13%) | 41/284 (14%) |  |
|  *C. tropicalis* | 46/621 (7%) | 15/323 (5%) | 29/284 (10%) |  |
|  *C. krusei* | 16/621 (3%) | 8/323 (2%) | 6/284 (2%) |  |
|  *C. auris* | 16/621 (3%) | 7/323 (2%) | 9/284 (3%) |  |
|  *C. dubliniensis* | 10/621 (2%) | 7/323 (2%) | 3/284 (1%) |  |
|  *C. lusitaniae* | 6/621(1%) | 3/323 (1%) | 3/284 (1%) |  |
|  *C. kefyr* | 5/621 (1%) | 1/323 (0.3%) | 4/284 (1%) |  |
|  *C. guilliermondii* | 6/621 (1%) | 0 | 6/284 (2%) |  |
|  *Others* | 11/621 (2%) | 8/323 (2%) | 3/284 (1%) |  |
|  Not specified | 13/621 (6%) | 6/323 (6%) | 7/284 (6%) |  |
|  *C. auris* and other emerging *Candida* spp. | 49/621 (8%) | 22/323 (7%) | 27/284 (10%) | n.s. |
| **Clinical course and outcome** |  |  |  |  |
| **CRBSI** | 130 (21%) | 69 (21%) | 60 (21%) | n.s. |
| **Charlson Comorbidity Index, median (IQR)** | 5 (3-8) | 5 (3-7) | 6 (4-8) | <0.001 |
| **Complications “** |  |  |  |  |
|  Cardiac involvement | 25/224 (11%) | 12/147 (8%) | 13/76 (17%) | 0.045 |
|  Eye involvement | 19/169 (11%) | 13/129 (10%) | 6/38 (16%) | n.s. |
|  Mixed fungal infections § | 37/621 (6%) | 16/323 (5%) | 21/284 (7%) | n.s. |
| **ID/Microbiology Treatment Consultation** | 502/620 (81%) | 277/328 (84%) | 214/280 (76%) | 0.012 |
|  ID consultation | 317/620 (51%) | 177/328 (54%) | 144 /280 (51%) | n.s. |
|  Microbiology consultation | 185/620 (30%) | 100/328 (30%) | 74/280 (26%) | n.s. |
| **Start Echinocandin** | 353 (56%) | 205 (62%) | 148 (52%) | 0.011 |
| **Stepdown Fluconazole** | 186 (29%) | 136 (41%) | 50 (17%) | <0.001 |
| **Hospital Stay prolonged for parenteral antifungal therapy only** | 100/631 (16%) | 72 (22%) | 19 (7%) | <0.001 |
| **EQUAL *Candida* scores relative to max (median, IQR)** | 0.68 (0.50-0.84) | 0.77 (0.63-0.89) | 0.58 (0.41-0.77) | <0.001 |
| **Overall mortality** | 286/617 (46%) |  | 286/286 (100%) |  |
| Death attributable to IC according to investigators | 77/209 (37%) | - | 77/209 (37%) | - |
| **Abbreviations:** *IC = invasive candidiasis; SOT = solid organ transplantation; BMI = body mass index; ICU = intensive care unit; ECMO = extracorporeal membrane oxygenation; CRBSI = catheter related bloodstream infection; ID = Infectious Diseases; IQR = interquartile range; n.s. = non-significant**\*Species not reported in 11 cases; in 12 cases species identification not done; 10 had mixed Candida infections (7 with 2 Candida spp., 1 with 3 Candida spp.); Others include: Candida norvegiensis (n=1), Candida digboensis (n=1), Candida rugosa (n=3), Candida pelliculosa (n=2), Candida inconspicua (n=2), and Candida famata (n=2)**“Echocardiography performed in 224 patients; Ophthalmoscopy performed in 169 patients**# Survival status unknown for 15/632**$ Included 10 mixed Candida infections (5 C. albicans/C. glabrata, each 1 C. albicans/C. parapsilosis, C. glabrata/C. tropicalis, C. guillermondii/C. famata, C. inconspicua/C. norvegensis, and C. auris/C. tropicalis/C. parapsilosis* |

**Supplemental Figure 1.** EQUAL Candida Score Card (left) and EQUAL Candida Scores, EQUAL Candida Score variables and demographic data in survivors and non-survivors who were diagnosed >7 days after candidemia diagnosis (P-values calculated using chi-square or Mann-Whitney U test).

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