**Online Supplement:**

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

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**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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