Supplement

Methods

Data extraction and selection

Databases searched were the Web of Science Core Collection with Arts & Humanities Citation Index (A&HCI), Book Citation Index, Conference Proceedings Citation Index, Science Citation Index Expanded (SCI-EXPANDED), Social Sciences Citation Index (SSCI), KCI-Korean Journal Database (KJD), MEDLINE®, Russian Science Citation Index (RSCI) and SciELO Citation Index. The first search was performed in May 2017 (Table S4) and updated by a second search in February 2019 (Table S5). Overlapping search results from both searches and publications prior to our pre-defined study period were excluded.

Time span was defined as publication date between January 1, 2000 and February 28, 2019 to include recent studies. Given progressive changes in clinical and microbiological diagnostic methods, older studies were not included for lack of relevance and comparability.

The main objective was to acquire reports on the epidemiology of candidaemia in adult patients. Inclusion criteria were: appropriate data on total cases, study duration, incidence, speciesand/or mortality rates. If there were two surveys from the same surveillance study with overlapping study time spans, only the prior published was included after meeting inclusion criteria to avoid double assessment of cases. Depending on the primary source of data, clinical versus microbiological, the cases were defined as quantity of patients with positive blood culture for *Candida* spp. (clinical assessment) or quantity of blood cultures with isolation of *Candida* spp. (microbiological assessment).

First, articles recalled by the search algorithm were checked for fulfilment of inclusion criteria. Missing data were recalculated based on predefined schemes (see formulary).

Manuscripts were searched the term “prospective” study design. If found in title, abstract or methods of the paper they were graded as “prospective”. If the term “retrospective” was found in title, abstract or methods of the paper or if no definition was found, they were termed “retrospective”. During the observed publication period from 2000 to 2019, the first study was initiated in 1983,[53] and the latest study was completed in 2017.[127,138] Concerning mortality analysis, we differentiated between crude mortality and Day 30 (D30) mortality rates. If the manuscript did not clarify whether the crude or D30 mortality rate was given, rates were classified as crude mortality. If studies reported both crude and D30 mortality rates, only the D30 mortality rate was used for analysis. Complete datasets were included and categorized into population-based and hospital-based epidemiological studies and were analysed separately. For hospital-based studies, we differentiated studies reporting on teaching hospitals (tertiary care centres – ICU patients included), on both, teaching and general hospitals(referred to as *mixed group*, for lack of studies reporting only on general hospitals – ICU patients included), and on studies solely being conducted in ICU setting.

Formulary

Where needed, for population based studies, the total population (p) of a survey was calculated by use of given total candidaemia rate (n_c) and incidence rate (I):

$$N_p = \frac{(n_c * 100{,}000)}{I_p}$$

Likewise, for hospital-based studies, the number of admissions (a) was calculated where needed:

$$N_a = \frac{(n_c * 1{,}000)}{I_a}$$

In articles not reporting incidence rates, these were calculated by:

$$I = \frac{(n_c * 1{,}000)}{\{N_p or\ N_a\}}$$

Three studies did provide annual but not total I. In these cases, we calculated the mean annual incidence rate across years ($y_1 \ldots y_n$) for an estimation of the total population.[15,106,139]

$$I = \frac{(I_{y1} + I_{y2} + \cdots + I_{yn})}{n_{y1 + y2 + \cdots + yn}}$$

55 If studies reported fungemia (f), we calculated the appropriate candidaemia cases with the
56 related admission or population numbers and calculated a corrected incidence rate by
57 subtraction of non-candida fungaemia (nc).

58 $$n_c = n_f - n_{nc}$$

59 $$I = \frac{n_c}{n_f} * I_f$$

60 If studies gave episode-based incidence rates (I_e), we calculated an approximation of the
61 patient-based incidence rate (I) by dividing number of patients (n_p) by the number of episodes
62 (n_e) and multiplying the ratio with the given, episode-based incidence rate (I_e).

63 $$I = \frac{n_p}{n_e} * I_e$$

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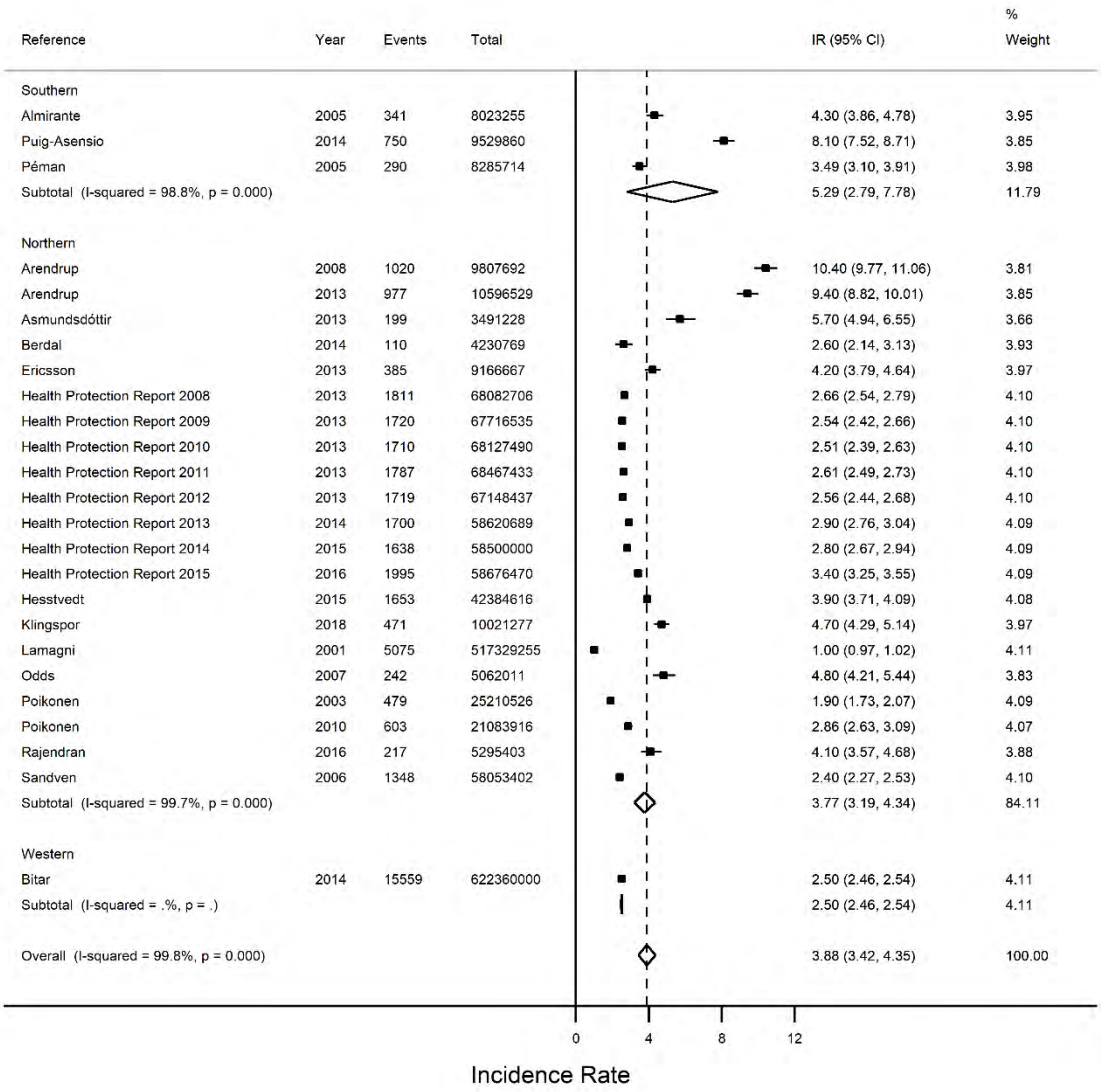

Figure S1: Forest plot of the incidence of candidaemia in population-based studies by region.

Studies are identified by the name of the first author and year of publication. Sorted alphabetically. Total=admissions. Events=candidaemia cases. IR=incidence rate. CI=confidence interval. Weights are from random-effect analysis. Size of squares are analogous to the study's weight. Diamonds represent the pooled incidence rates.

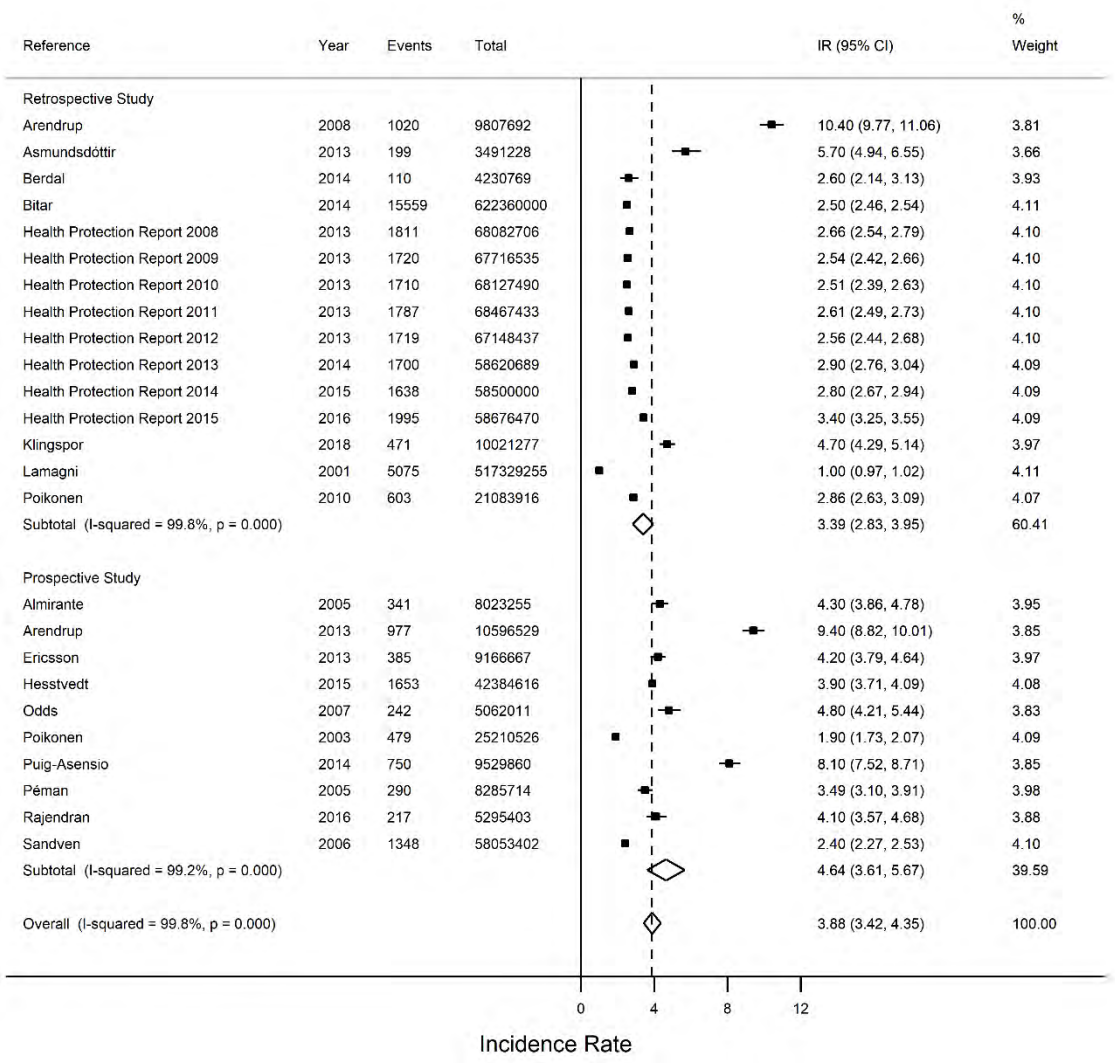

Figure S2: Forest plot of the incidence of candidaemia for population-based studies by scenario.

Studies are identified by the name of the first author and year of publication. Sorted alphabetically. Total=admissions. Events=candidaemia cases. IR=incidence rate. CI=confidence interval. Weights are from random-effect analysis. Size of squares are analogous to the study's weight. Diamonds represent the pooled incidence rates.

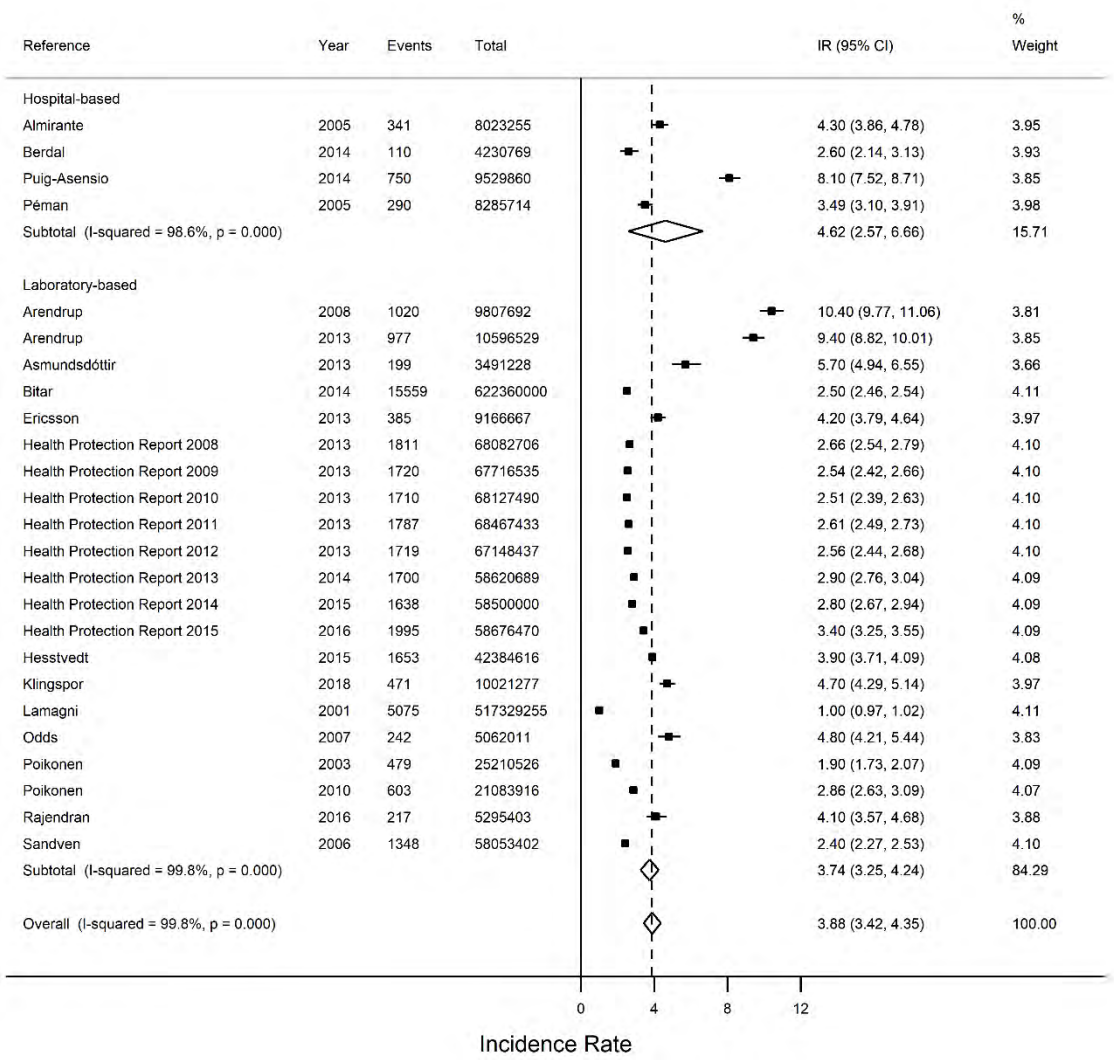

Figure S3: Forest plot of the incidence of candidaemia for population-based studies by type.

Studies are identified by the name of the first author and year of publication. Sorted alphabetically. Total=admissions. Events=candidaemia cases. IR=incidence rate. CI=confidence interval. Weights are from random-effect analysis. Size of squares are analogous to the study's weight. Diamonds represent the pooled incidence rates.

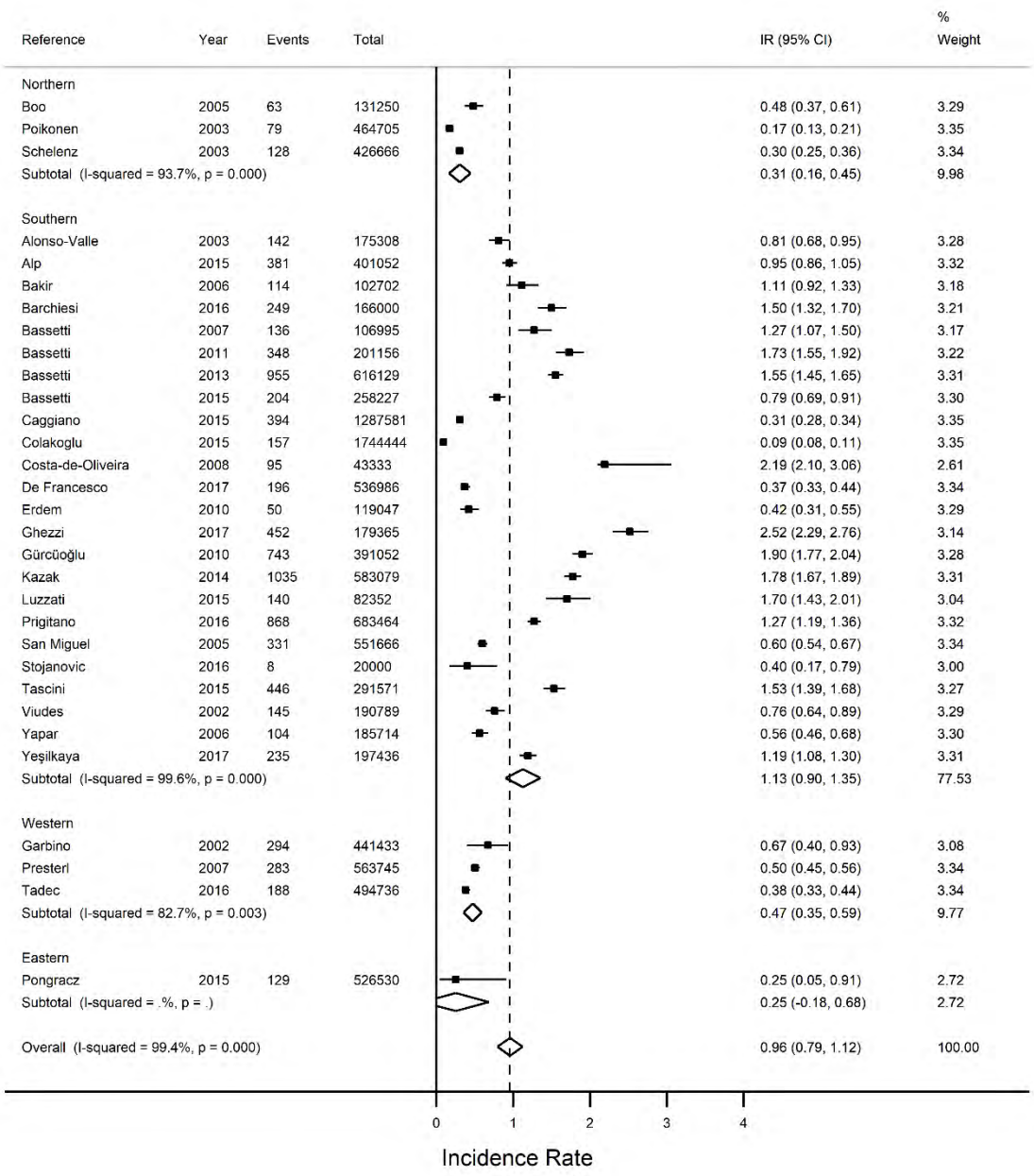

Figure S4: Forest plot of the incidence of candidaemia for studies on teaching hospitals by region.

Studies are identified by the name of the first author and year of publication. Sorted alphabetically. Studies reporting solely on ICU are excluded. Total=admissions. Events=candidaemia cases. IR=incidence rate. CI=confidence interval. Weights are from random-effect analysis. Size of squares are analogous to the study's weight. Diamonds represent the pooled incidence rates.

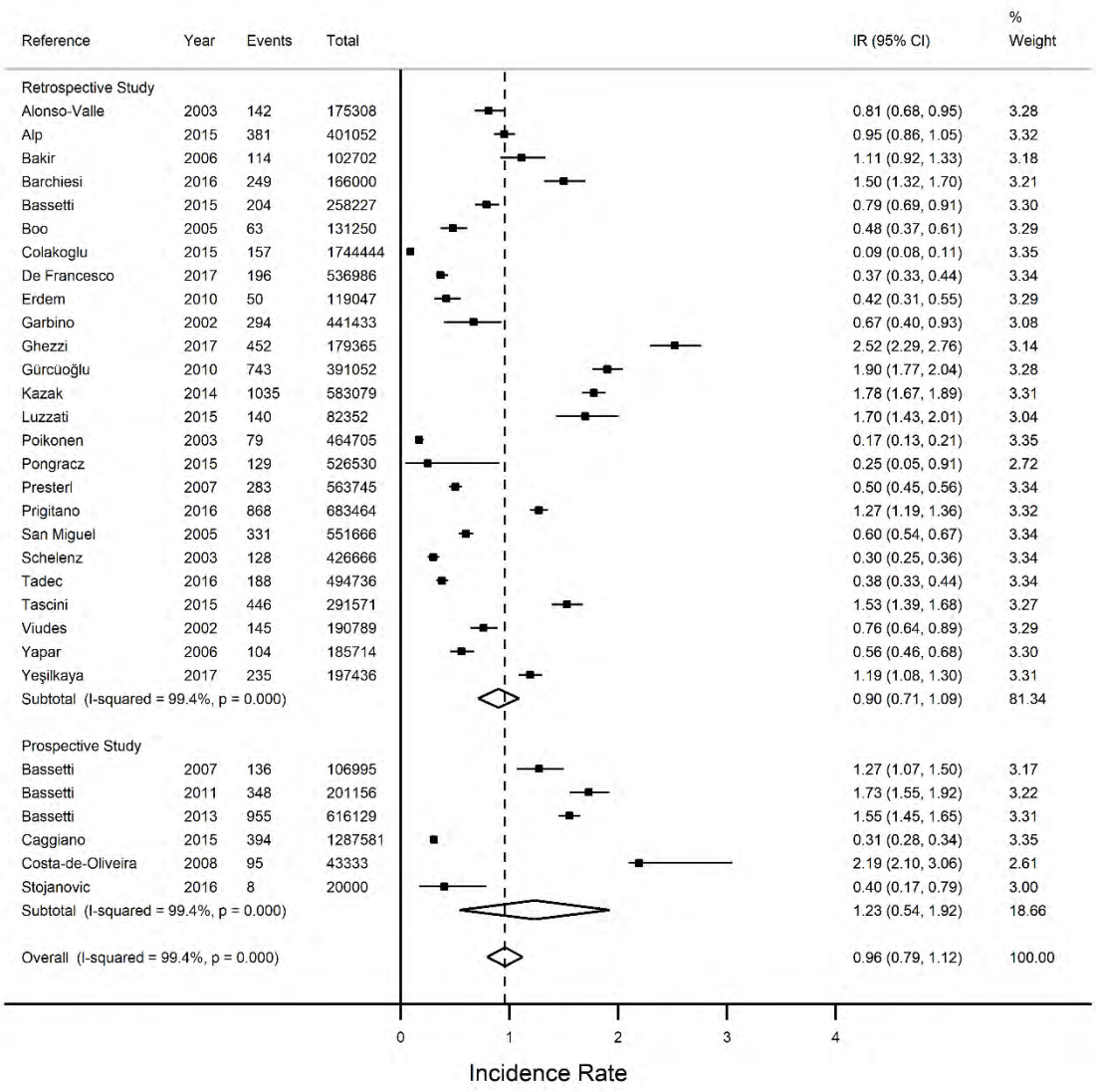

Figure S5: Forest plot of the incidence of candidaemia for studies on teaching hospitals by scenario.

Studies are identified by the name of the first author and year of publication. Sorted alphabetically. Studies reporting solely on ICU are excluded. Total=admissions. Events=candidaemia cases. IR=incidence rate. CI=confidence interval. Weights are from random-effect analysis. Size of squares are analogous to the study's weight. Diamonds represent the pooled incidence rates.

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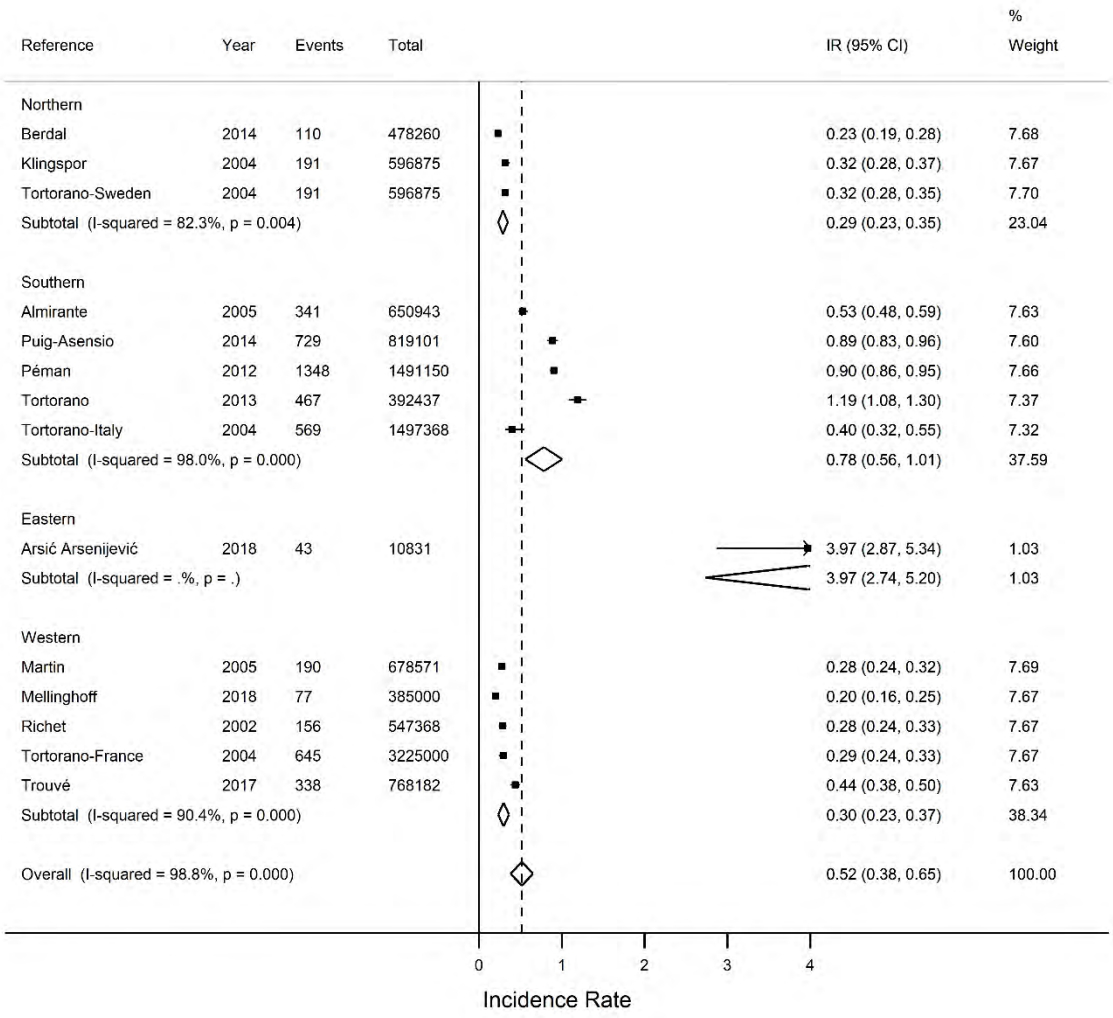


Figure S6: Forest plot of the incidence of candidaemia for studies on the mixed group (general and teaching hospitals) by region.

Studies are identified by the name of the first author and year of publication. Sorted alphabetically. Studies reporting solely on ICU are excluded. Total=admissions. Events=candidaemia cases. IR=incidence rate. CI=confidence interval. Weights are from random-effect analysis. Size of squares are analogous to the study's weight. Diamonds represent the pooled incidence rates.

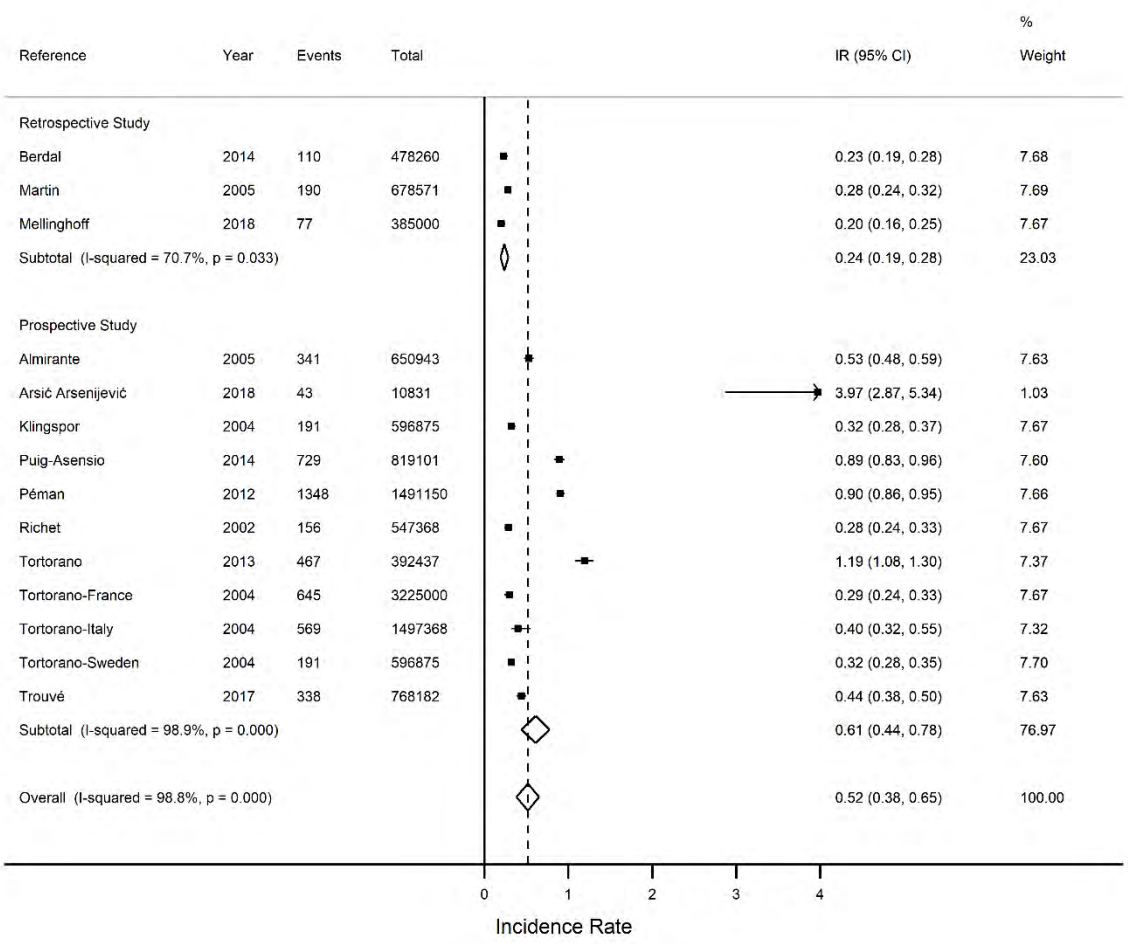


Figure S7: Forest plot of the incidence of candidaemia for studies on the mixed group (general and teaching hospitals) by study scenario.

Studies are identified by the name of the first author and year of publication. Sorted alphabetically. Studies reporting solely on ICU are excluded. Total=admissions. Events=candidaemia cases. IR=incidence rate. CI=confidence interval. Weights are from random-effect analysis. Size of squares are analogous to the study's weight. Diamonds represent the pooled incidence rates.

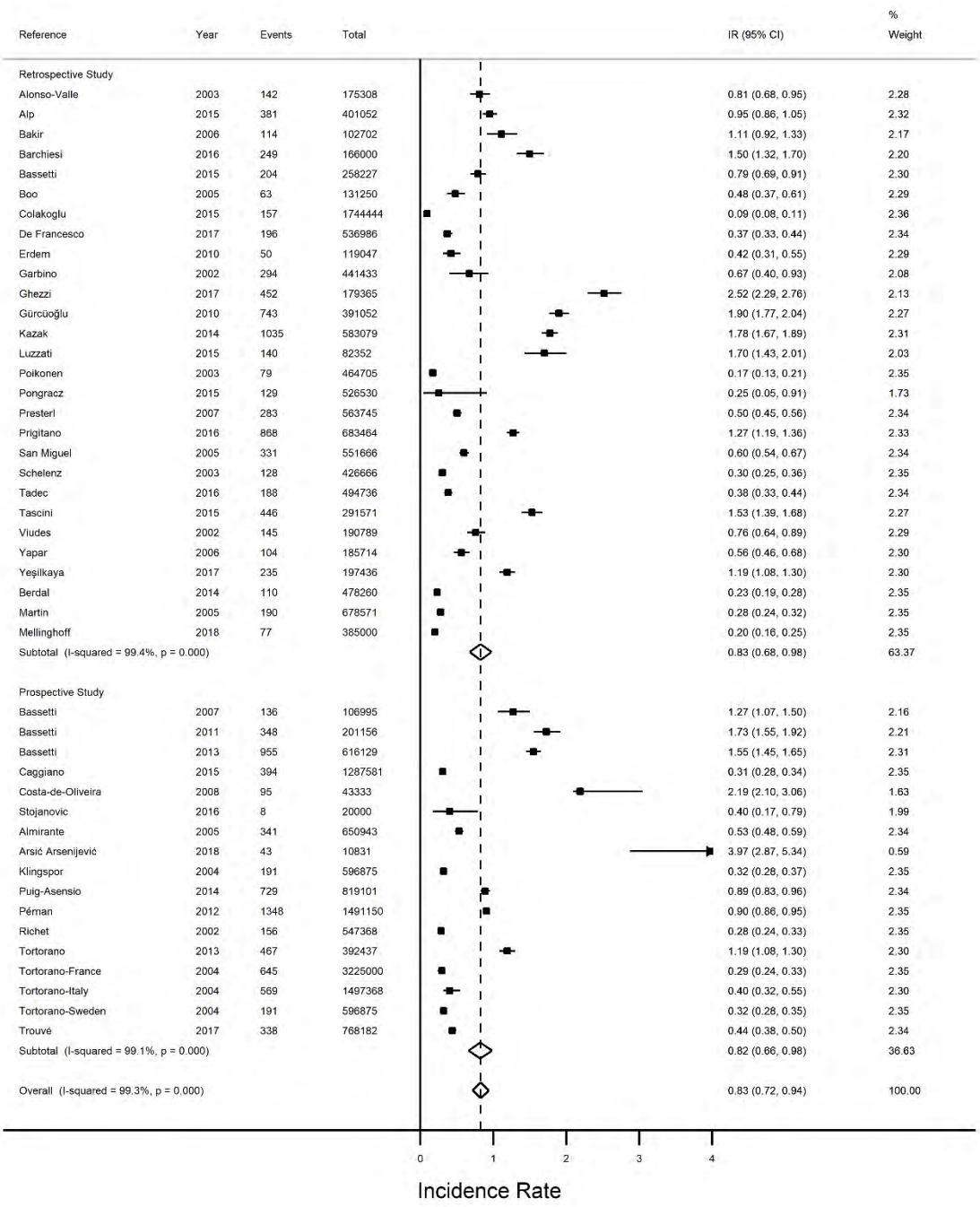


Figure S8: Forest plot of the incidence of candidaemia for studies in hospitals by scenario.

Studies are identified by the name of the first author and year of publication. Sorted alphabetically. Combination of studies reporting on teaching hospitals and the mixed group. Studies reporting solely on ICU are excluded. Total=admissions. Events=candidaemia cases. IR=incidence rate. CI=confidence interval. Weights are from random-effect analysis. Size of squares are analogous to the study's weight. Diamonds represent the pooled incidence rates.

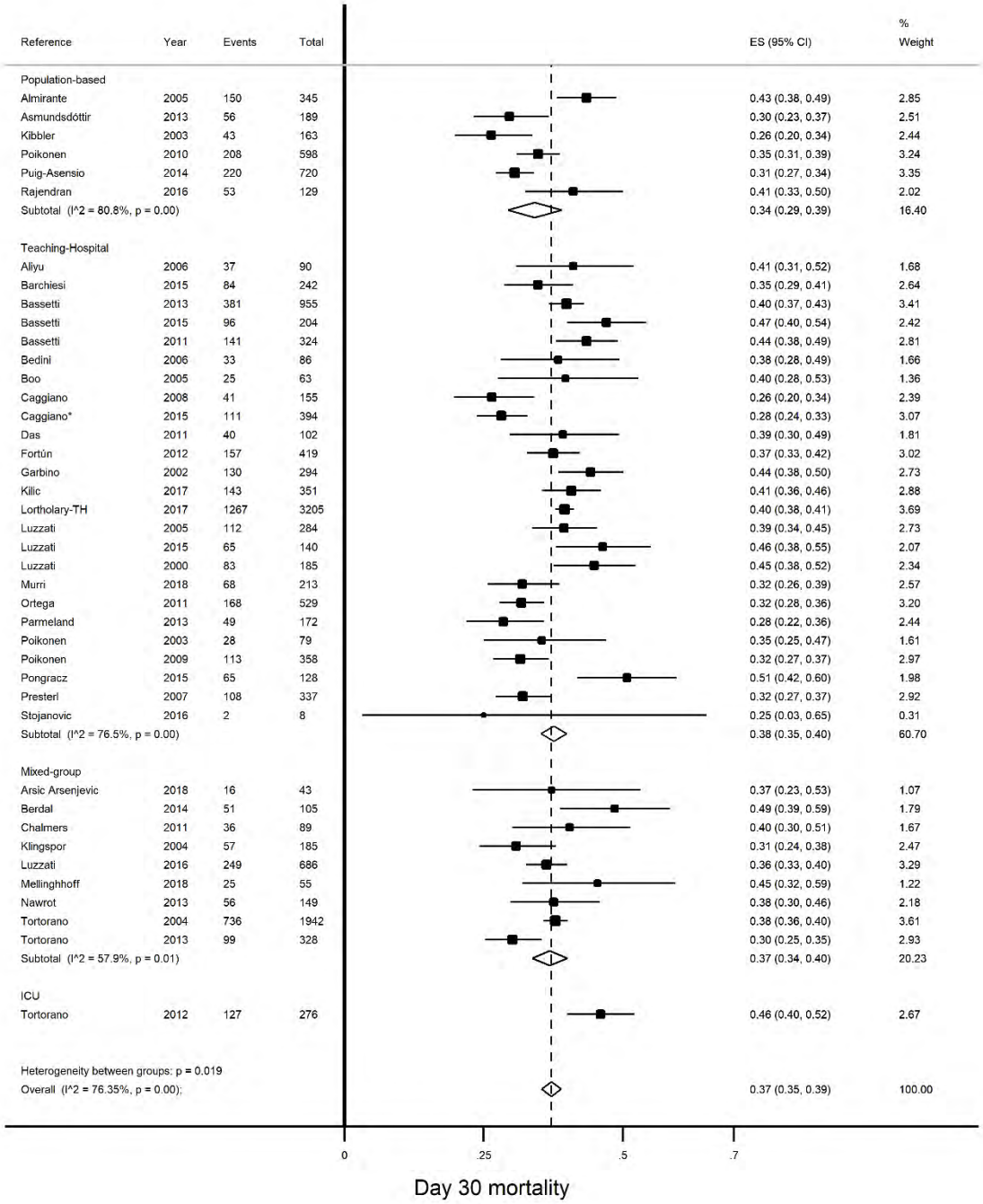


Figure S9: Forest plot of the day 30 mortality of candidaemia by setting.

Studies are identified by the name of the first author and year of publication. Sorted alphabetically. Total=cases. Events=deaths. ES=effect estimates. CI=confidence interval. Weights are from random-effect analysis. Size of squares are analogous to the study's weight. TH/ICU=respective subgroups of total study population. Diamonds represent the pooled day 30 mortality rates.

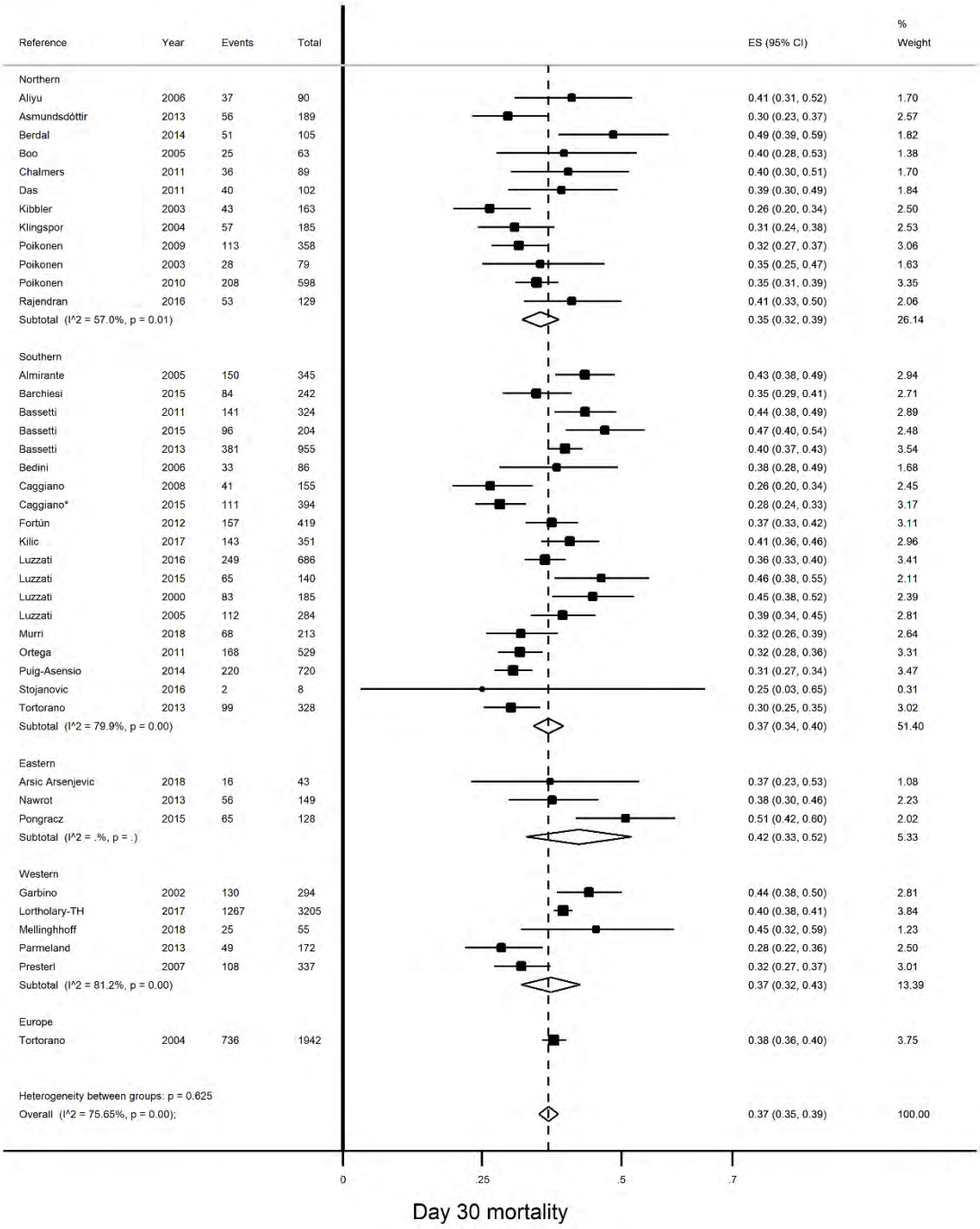
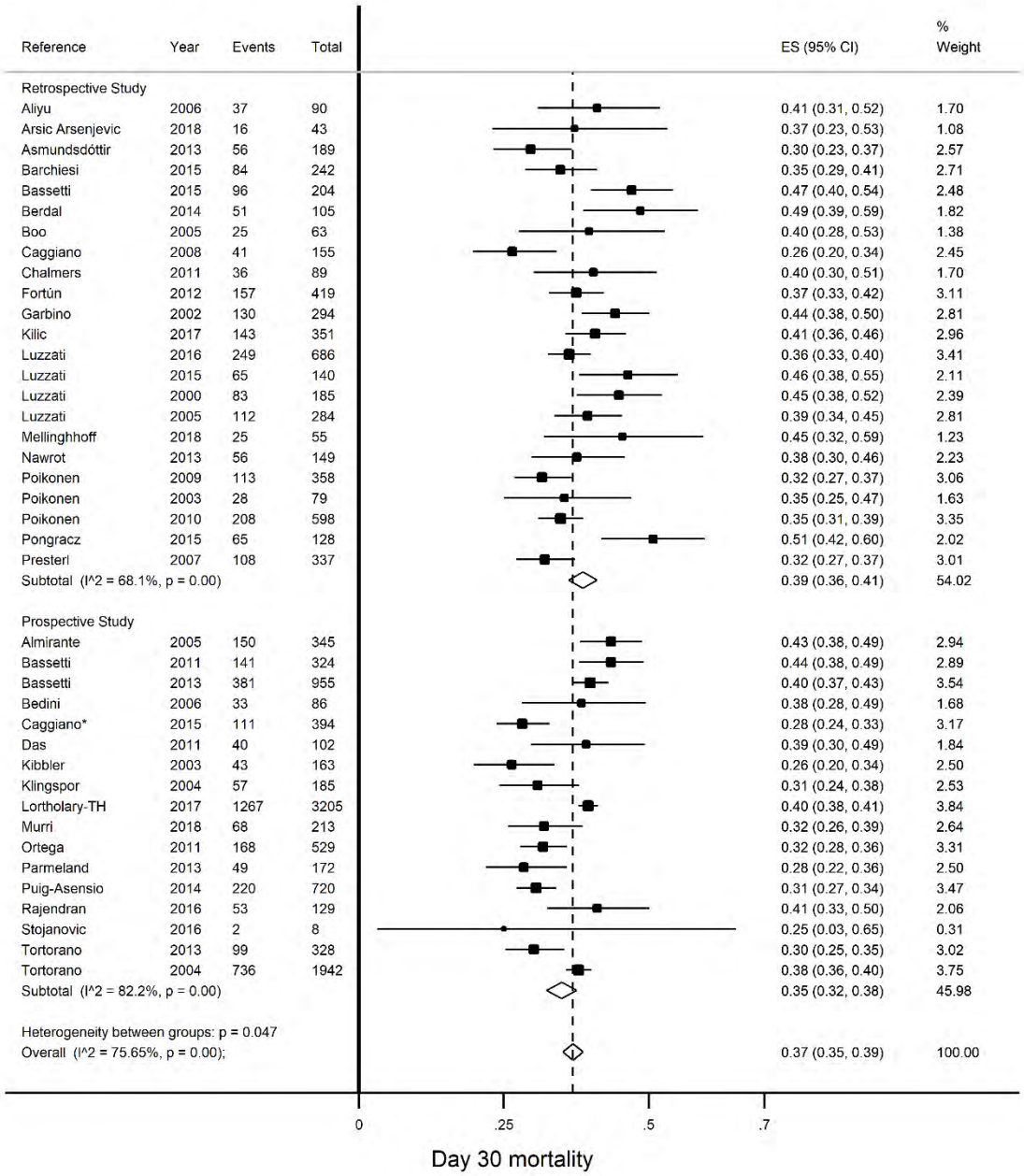


Figure S10: Forest plot of the day 30 mortality of candidaemia by region.

Studies are identified by the name of the first author and year of publication. Sorted alphabetically. Studies reporting solely on ICU are excluded. Total=cases. Events=deaths. ES=effect estimates. CI=confidence interval. Weights are from random-effect analysis. Size of squares are analogous to the study's weight. TH=subgroup of total study population. Diamonds represent the pooled day 30 mortality rates. *=reported Day 20 mortality.



153

154 **Figure S11: Forest plot of the day 30 mortality of candidaemia by scenario.**

155 Studies are identified by the name of the first author and year of publication. Sorted
156 alphabetically. Studies reporting solely on ICU are excluded. Total=cases. Events=deaths.
157 ES=effect estimates. CI=confidence interval. Weights are from random-effect analysis. Size
158 of squares are analogous to the study's weight. TH=subgroup of total study population.
159 Diamonds represent the pooled day 30 mortality rates. *=reported Day 20 mortality.

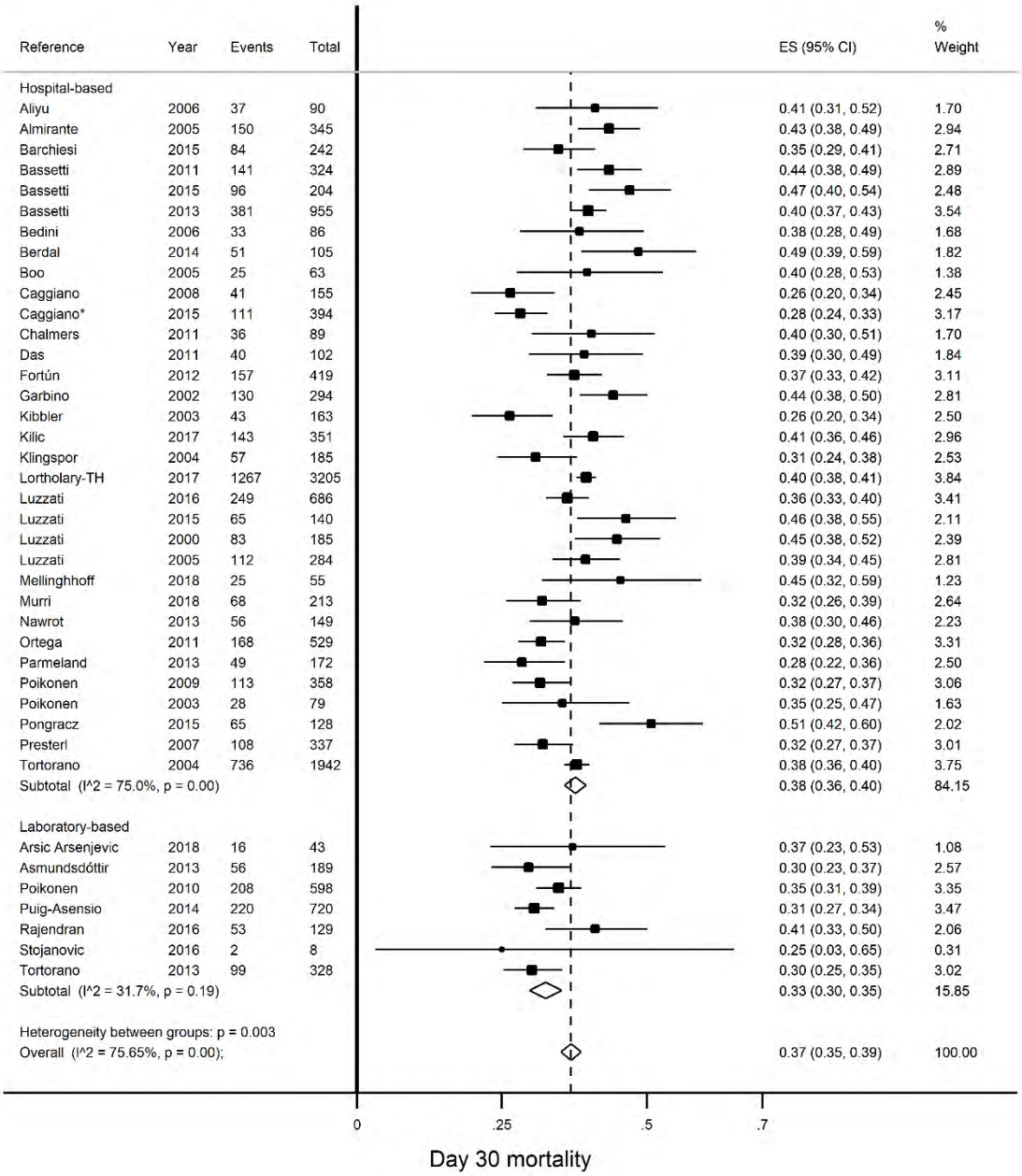
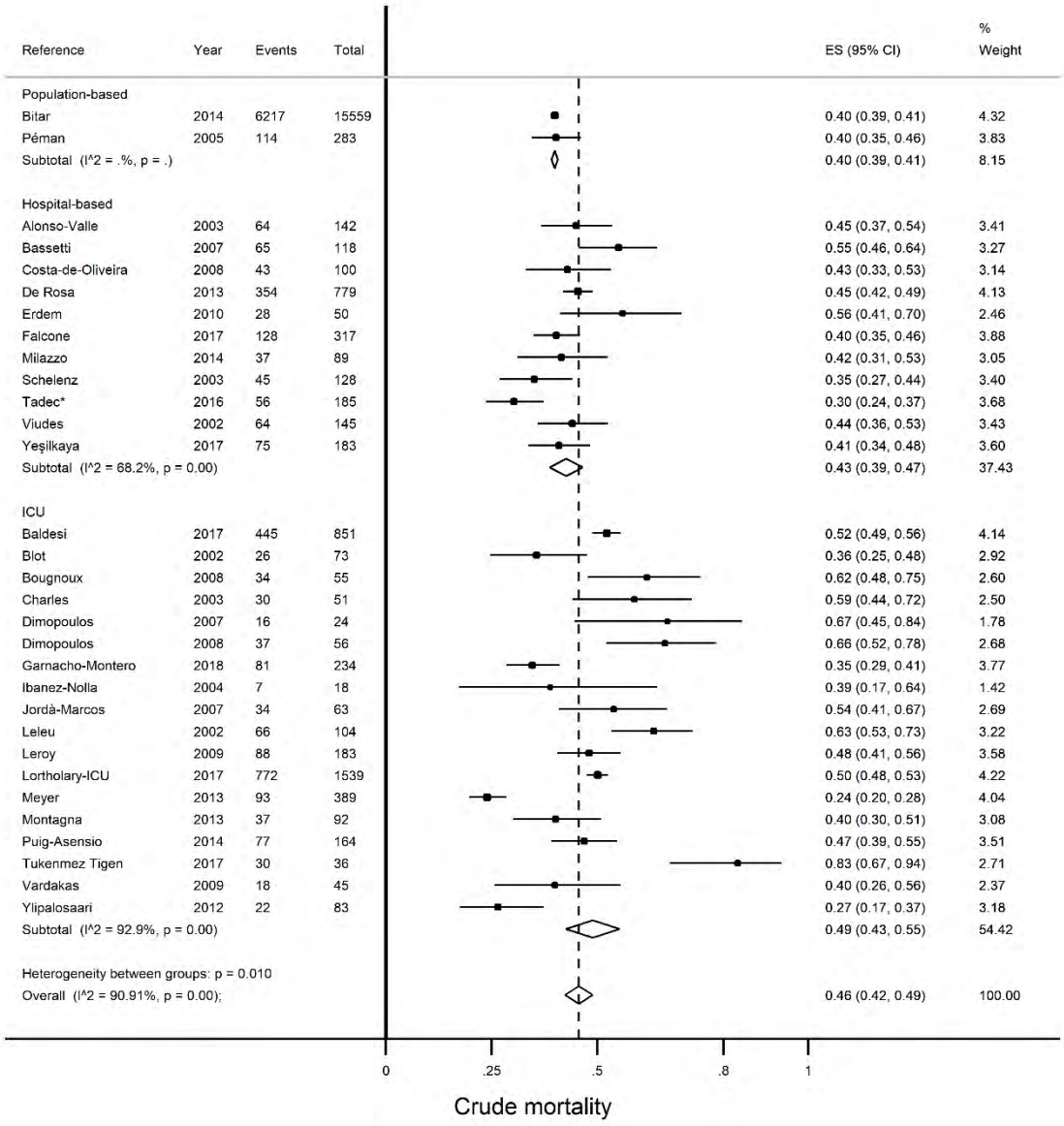


Figure S12: Forest plot of the day 30 mortality of candidaemia by type of study.

Studies are identified by the name of the first author and year of publication. Sorted alphabetically. Studies reporting solely on ICU are excluded. Total=cases. Events=deaths. ES=effect estimates. CI=confidence interval. Weights are from random-effect analysis. Size of squares are analogous to the study's weight. TH=subgroup of study population. Diamonds represent the pooled day 30 mortality rates. *=reported Day 20 mortality.



168

169 **Figure S13: Forest plot of the crude mortality of candidaemia by setting.**

170 Studies are identified by the name of the first author and year of publication. Sorted
171 alphabetically. Total=cases. Events=deaths. ES=effect estimates. CI=confidence interval.
172 Weights are from random-effect analysis. Size of squares are analogous to the study's weight.
173 Diamonds represent the pooled crude mortality rates. *=reported 12 week mortality.

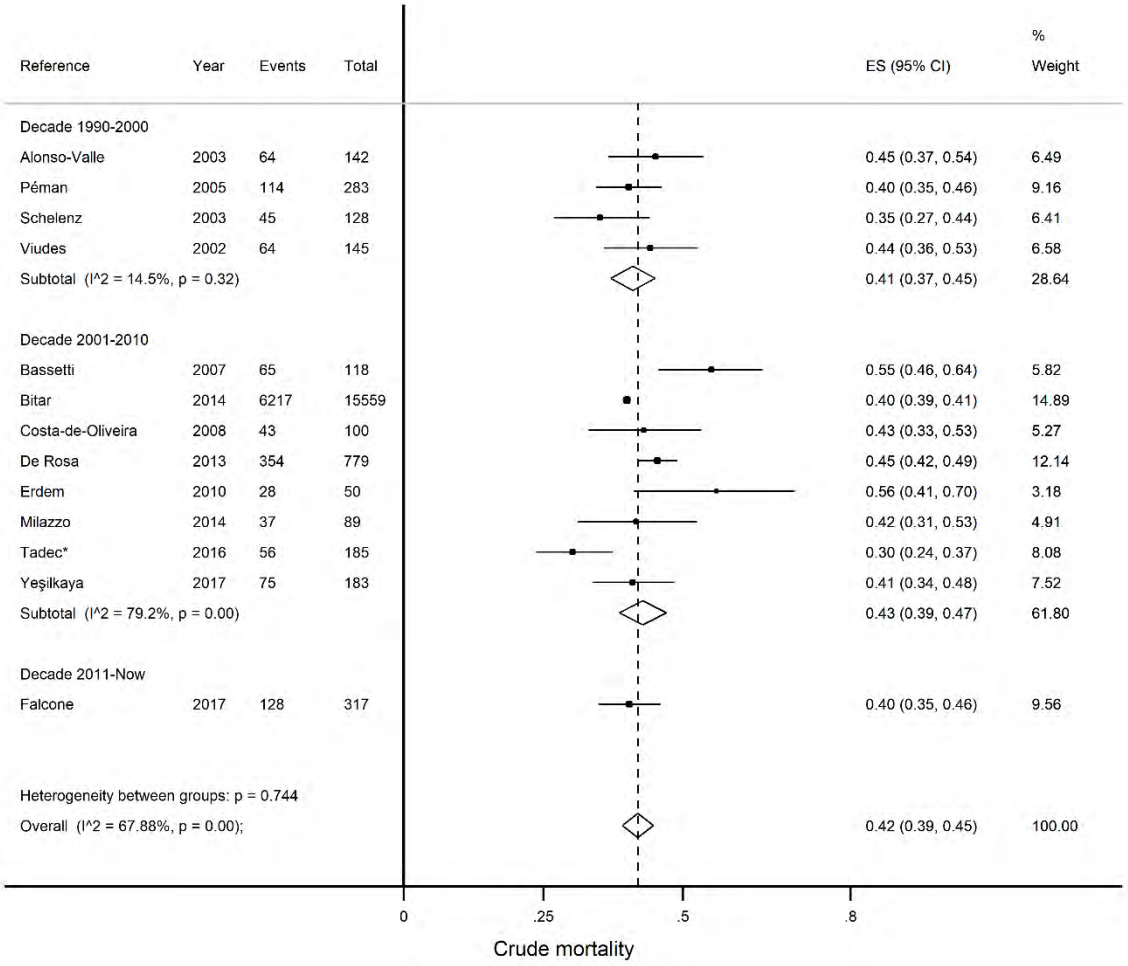


Figure S14: Forest plot of the crude mortality of candidaemia by decade.

Studies are identified by the name of the first author and year of publication. Sorted alphabetically. Studies reporting solely on ICU are excluded. Total=cases. Events=deaths. ES=effect estimates. CI=confidence interval. Weights are from random-effect analysis. Size of squares are analogous to the study's weight. Diamonds represent the pooled crude mortality rates. *=reported 12 week mortality.

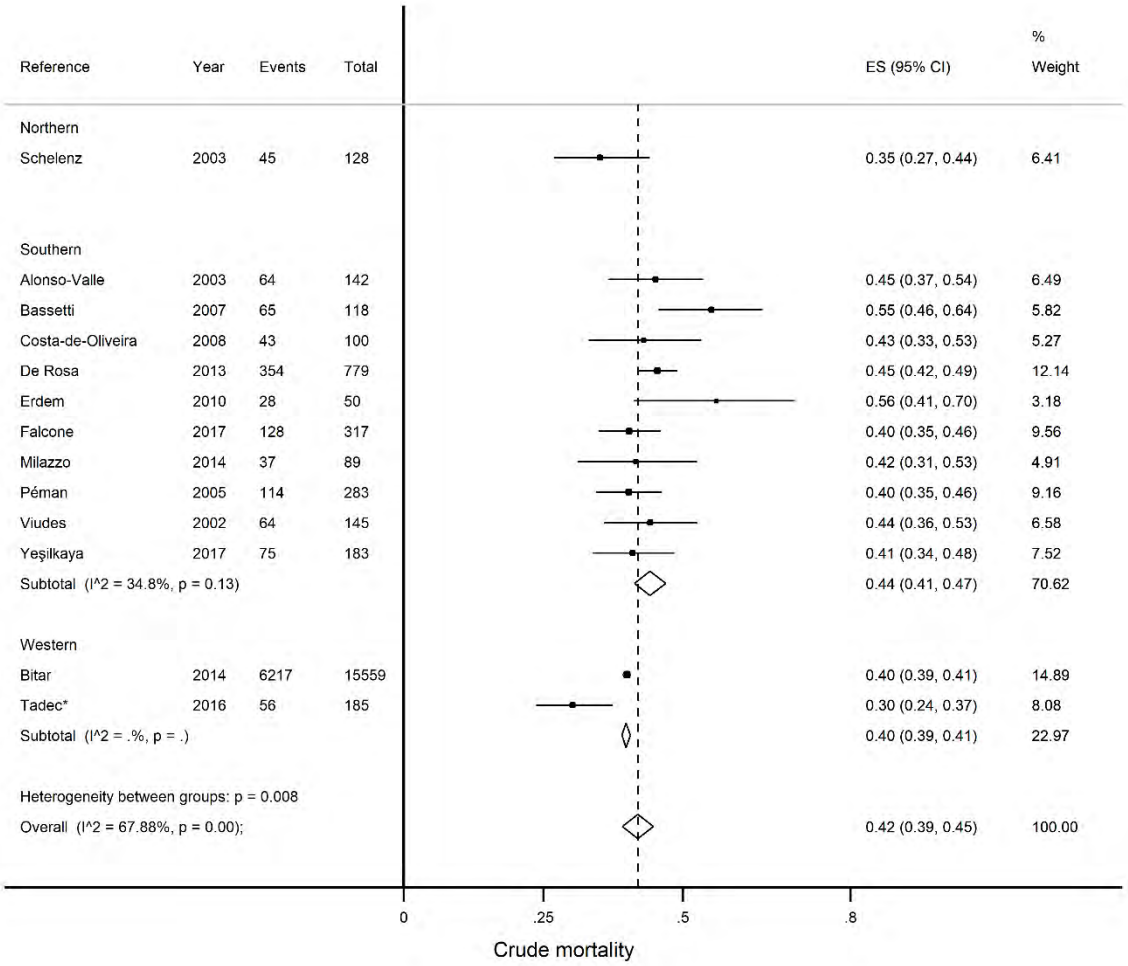


Figure S15: Forest plot of the crude mortality of candidaemia by region.

Studies are identified by the name of the first author and year of publication. Sorted alphabetically. Studies reporting solely on ICU are excluded. Total=cases. Events=deaths. ES=effect estimates. CI=confidence interval. Weights are from random-effect analysis. Size of squares are analogous to the study's weight. Diamonds represent the pooled crude mortality rates. *=reported 12 week mortality.

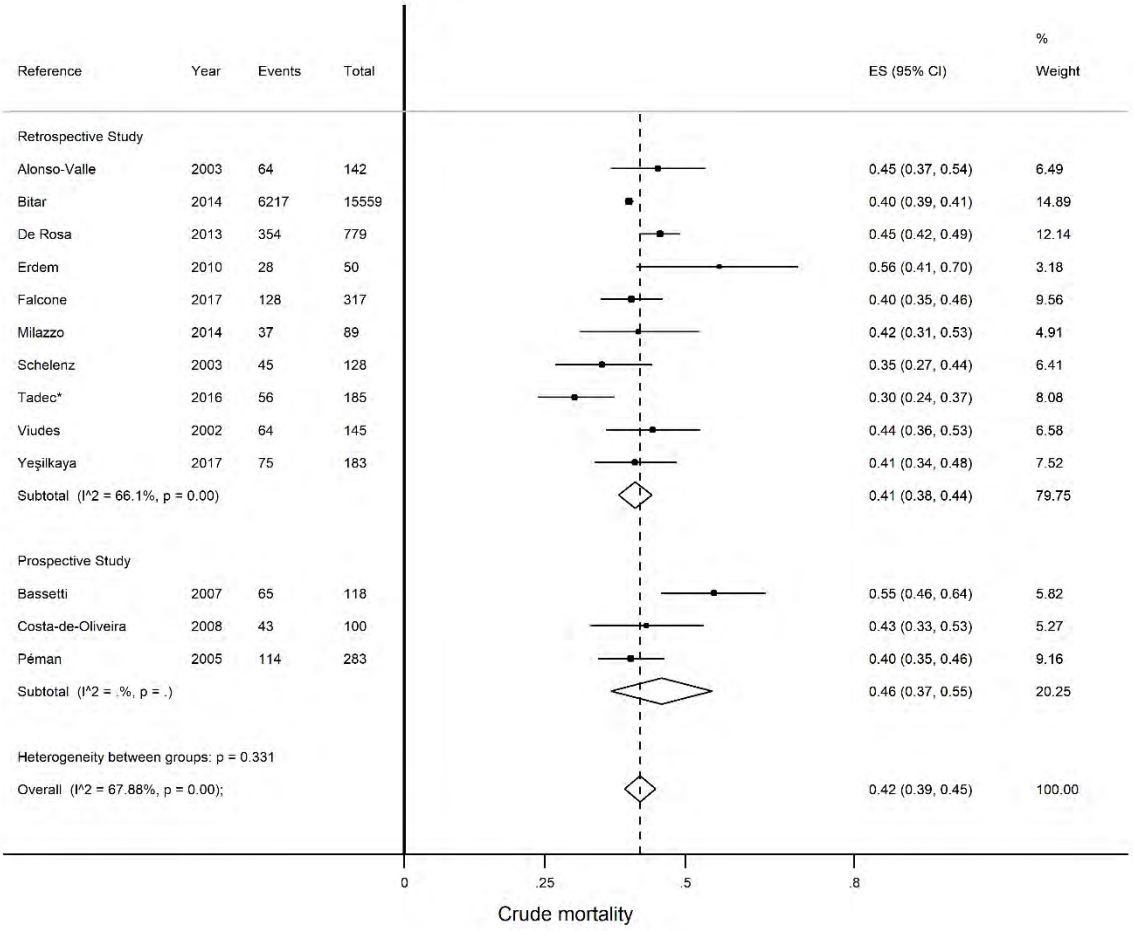


Figure S16: Forest plot of the crude mortality of candidaemia by scenario.

Studies are identified by the name of the first author and year of publication. Sorted alphabetically. Studies reporting solely on ICU are excluded. Total=cases. Events=deaths. ES=effect estimates. CI=confidence interval. Weights are from random-effect analysis. Size of squares are analogous to the study's weight. Diamonds represent the pooled crude mortality rates. *=reported 12 week mortality.

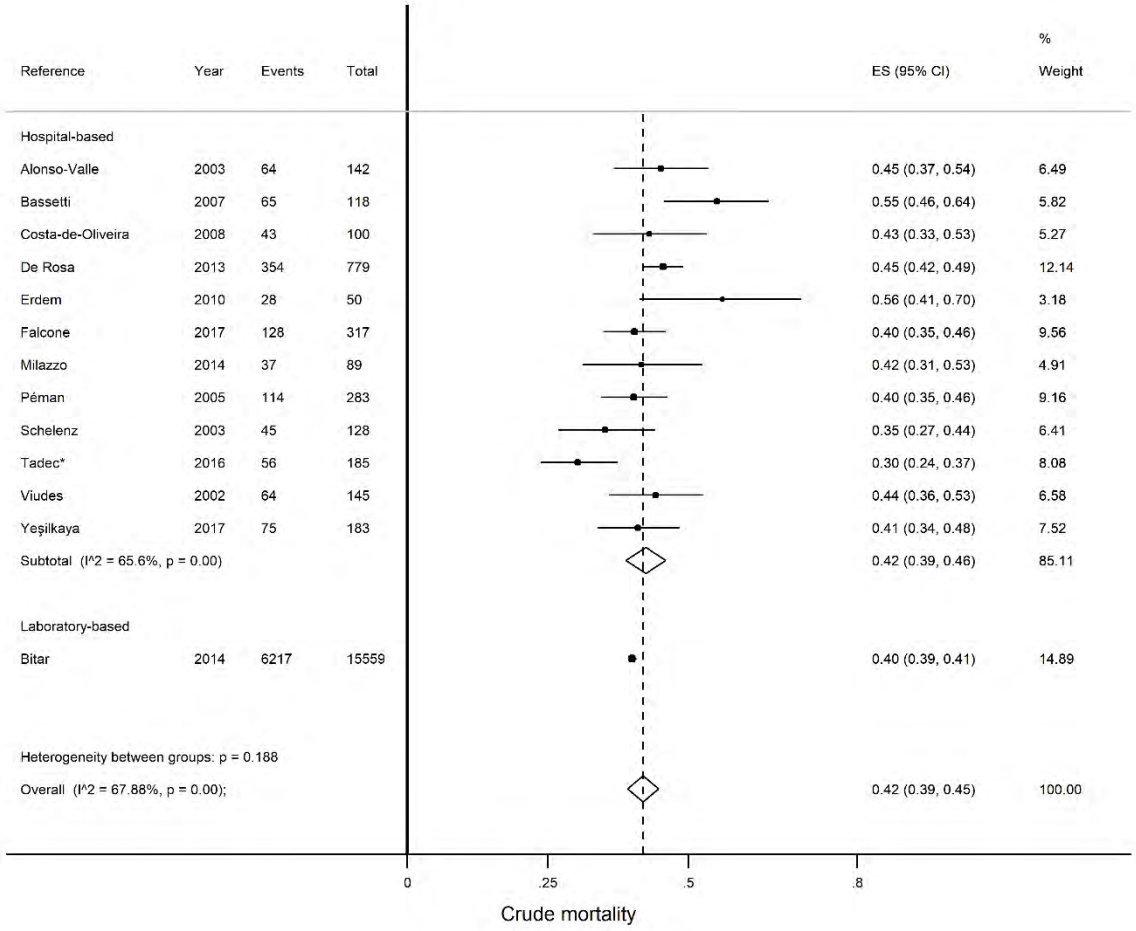
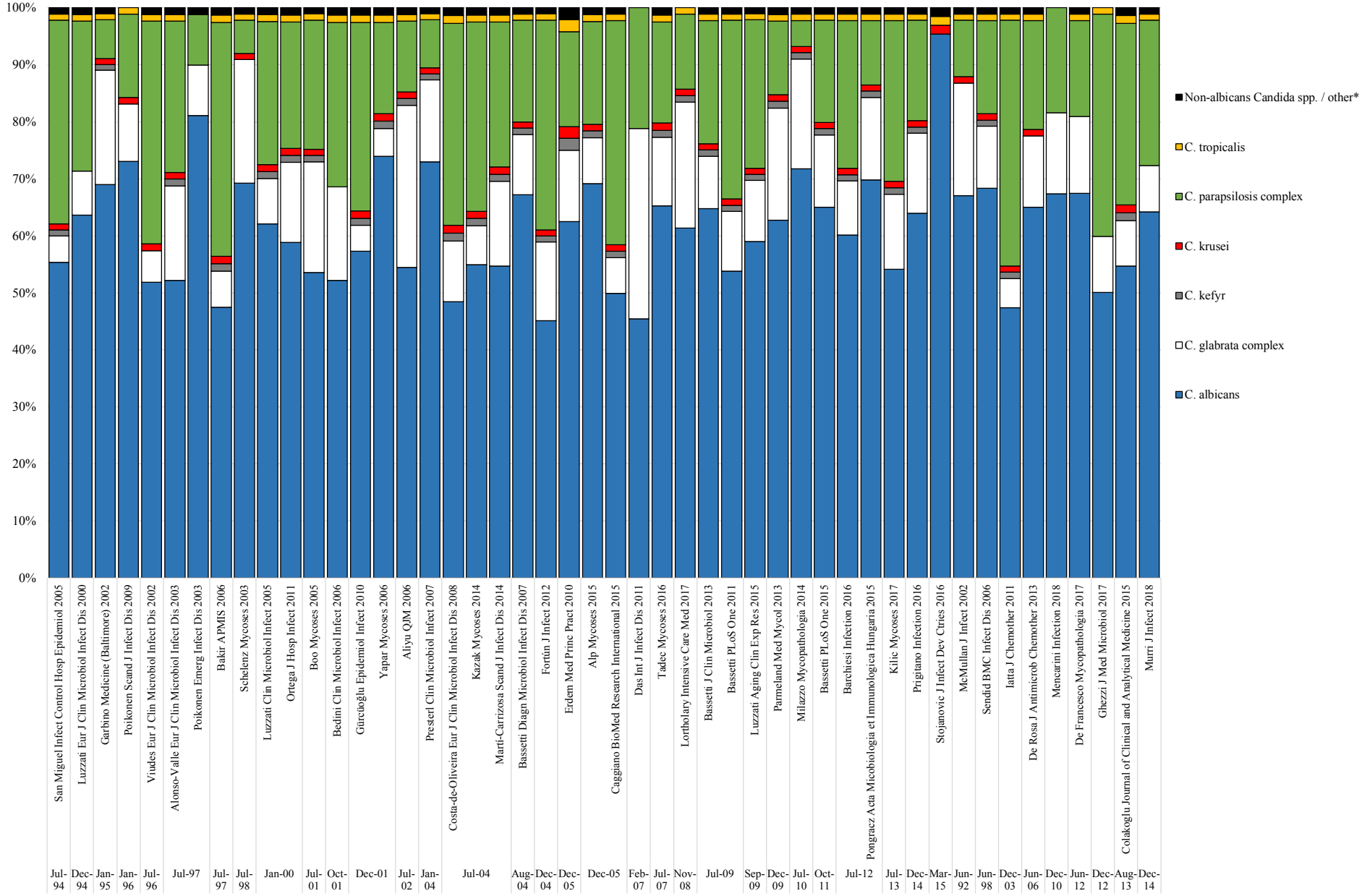


Figure S17: Forest plot of the crude mortality of candidaemia by type of study.

Studies are identified by the name of the first author and year of publication. Sorted alphabetically. Studies reporting solely on ICU are excluded. Total=cases. Events=deaths. ES=effect estimates. CI=confidence interval. Weights are from random-effect analysis. Size of squares are analogous to the study's weight. Diamonds represent the pooled crude mortality rates.*=reported 12 week mortality.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Non-albicans Candida spp. / other*
C. tropicalis
C. parapsilosis complex
C. krusei
C. kefyr
C. glabrata complex
C. albicans
San Miguel Infect Control Hosp Epidemiol 2005
Luzzati Eur J Clin Microbiol Infect Dis 2000
Garbino Medicine (Baltimore) 2002
Poikonen Scand J Infect Dis 2009
Viudes Eur J Clin Microbiol Infect Dis 2002
Alonso-Valle Eur J Clin Microbiol Infect Dis 2003
Poikonen Emerg Infect Dis 2003
Bakir APMIS 2006
Schelenz Mycoses 2003
Luzzati Clin Microbiol Infect 2005
Ortega J Hosp Infect 2011
Boo Mycoses 2005
Bedini Clin Microbiol Infect 2006
Gürcüoğlu Epidemiol Infect 2010
Yapar Mycoses 2006
Aliyu QJM 2006
Presterl Clin Microbiol Infect 2007
Costa-de-Oliveira Eur J Clin Microbiol Infect Dis 2008
Kazak Mycoses 2014
Martí-Carrizosa Scand J Infect Dis 2014
Bassetti Diagn Microbiol Infect Dis 2007
Fortún J Infect 2012
Erdem Med Prine Pract 2010
Alp Mycoses 2015
Caggiano BioMed Research International 2015
Das Int J Infect Dis 2011
Tadec Mycoses 2016
Lortholary Intensive Care Med 2017
Bassetti J Clin Microbiol 2013
Bassetti PLoS One 2011
Luzzati Aging Clin Exp Res 2015
Parmeland Med Mycol 2013
Milazzo Mycopathologia 2014
Bassetti PLoS One 2015
Barchiesi Infection 2016
Pongracz Acta Micobiologia et Immunologica Hungaria 2015
Kilic Mycoses 2017
Prigitano Infection 2016
Stojanovic J Infect Dev Ctries 2016
McMullan J Infect 2002
Sendid BMC Infect Dis 2006
Iatta J Chemother 2011
De Rosa J Antimicrob Chemother 2013
Mencarini Infection 2018
De Francesco Mycopathologia 2017
Ghezzi J Med Microbiol 2017
Colakoglu Journal of Clinical and Analytical Medicine 2015
Murri J Infect 2018
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Oct-11
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Jul-13
Dec-14
Mar-15
Jun-92
Jun-98
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Jun-06
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Jun-12
Dec-12
Aug-13
Dec-14

Figure S18: *Candida* species differentiation by study in teaching hospitals.
Studies are identified by the name of the first author, the journal and year of publication. Sorted by chronologically by median of study period from left to right.
*=*C. ciferrii*, *C. dubliniensis*, *C. famata*, *C. guilliermondii*, *C. humicola*, *C. inconspicua*, *C. kefyr*, *C. lipolytica*, *C. lusitaniae*, *C. norvegensis*, *C. pelliculosa*, *C. rugusa*, *C. sake*, *C. utilis,* unidentified, declared as other or *Candida* spp., or non-specified *Candida*.

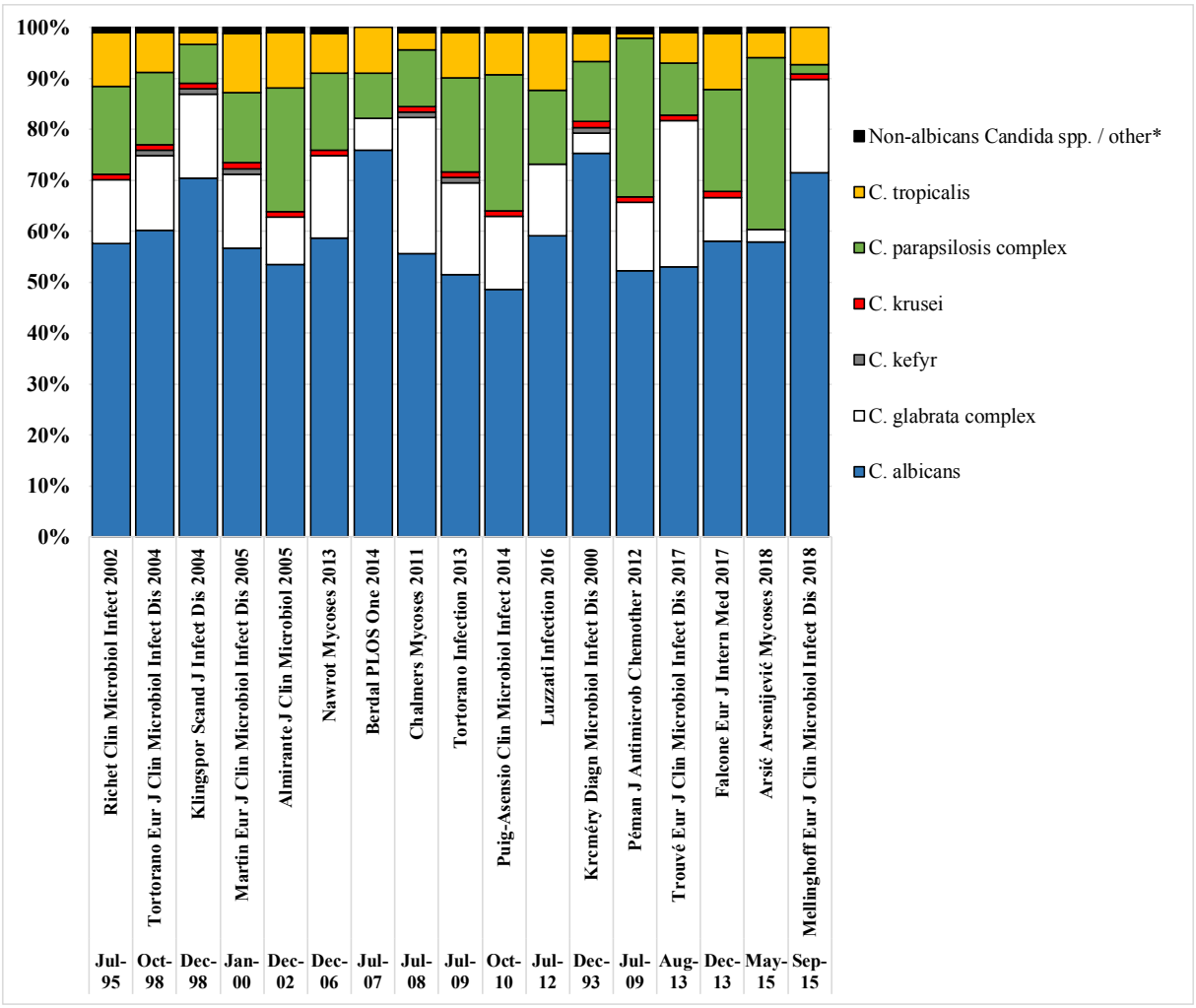

Figure S19: *Candida* species differentiation by study in the composite cohort.
Studies are identified by the name of the first author, the journal and year of publication. Sorted by chronologically by median of study period from left to right. *=*C. ciferrii*, *C. dubliniensis*, *C. famata*, *C. guilliermondii*, *C. humicola*, *C. inconspicua*, *C. kefyr*, *C. lipolytica*, *C. lusitaniae*, *C. norvegensis*, *C. pelliculosa*, *C. rugusa*, *C. sake*, *C. utilis*, unidentified, declared as other or *Candida* spp., or non-specified *Candida*.

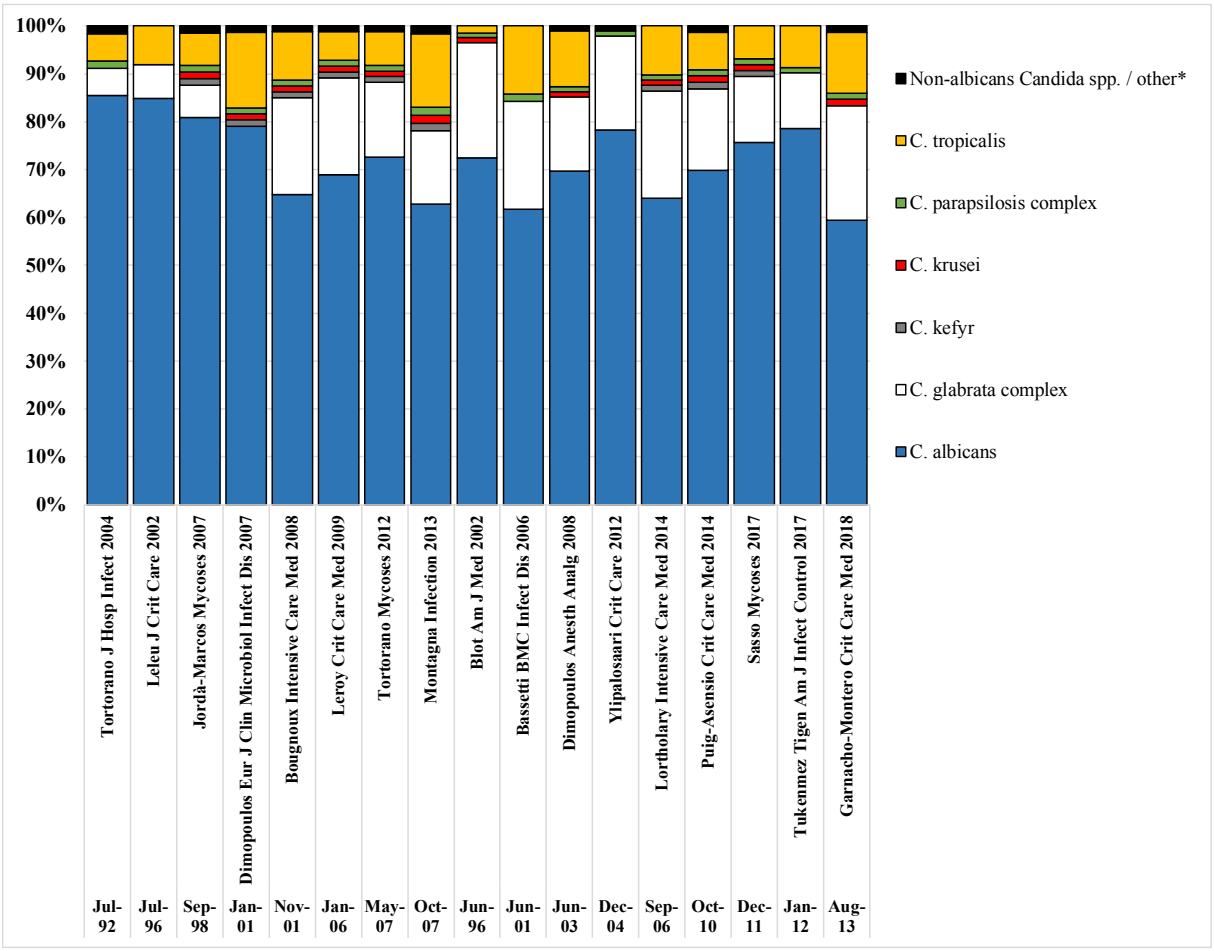

Figure S20: *Candida* species differentiation by study in the ICU cohort.
Studies are identified by the name of the first author, the journal and year of publication. Sorted by chronologically by median of study period from left to right. *=*C. ciferrii*, *C. dubliniensis*, *C. famata*, *C. guilliermondii*, *C. humicola*, *C. inconspicua*, *C. kefyr*, *C. lipolytica*, *C. lusitaniae*, *C. norvegensis*, *C. pelliculosa*, *C. rugusa*, *C. sake*, *C. utilis*, unidentified, declared as other or *Candida* spp., or non-specified *Candida*.

230

	Study period				Geography		Scenario			
Reference	Start	End	Median	Years	Country	European Region	Pro – vs Retrospective	Lab vs. Hospital-based	Number of Patients	Total
Teaching Hospital										
De Francesco Mycopathologia 2017[115]	Jan 09	Dec 15	Jun 12	7.0	Italy	Southern	retrospective	hospital-based	196	536,986.3
Yeşilkaya Mycoses 2017[136]	Jan 07	Aug 14	Oct 10	7.7	Turkey	Southern	retrospective	hospital-based	235	197,436
Ghezzi J Med Microbiol 2017[120]	Jan 10	Dec 15	Dec 12	6.0	Italy	Southern	retrospective	hospital-based	452	179,365.1
Tadec Mycoses 2016[55]	Jan 04	Dec 10	Jul 07	7.0	France	Western	retrospective	hospital-based	188	494,736.8
Stojanovic J Infect Dev Ctries 2016[56]	Sep 14	Sep 15	Mar 15	1.1	Serbia	Southern	prospective	laboratory-based	8	20,000
Prigitano Infection 2016[57]	Jan 14	Dec 15	Dec 14	2.0	Italy	Southern	retrospective	laboratory-based	868	683,464.6
Barchiesi Infection 2016[58]	Jan 10	Dec 14	Jul 12	5.0	Italy	Southern	retrospective	hospital-based	249	180,000
Colakoglu Journal of Clinical and Analytical Medicine 2015[114]	Jan 12	May 15	Aug 13	3.4	Turkey	Southern	retrospective	hospital-based	157	1,744,444.4
Tascini Mycology 2015[52]	Jan 12	Dec 13	Dec 12	2.0	Italy	Southern	retrospective	hospital-based	446	291,571
Pongracz Acta Micobiologia et Immunologica Hungaria 2015[59]	Jan 10	Dec 14	Jul 12	5.0	Hungary	Eastern	retrospective	hospital-based	129	526,530.6
Luzzati Aging Clin Exp Res 2015[60]	Jan 08	Jun 11	Sep 09	3.5	Italy	Southern	retrospective	hospital-based	140	85,294.1
Caggiano BioMed Research International 2015[61]	Jan 98	Dec 13	Dec 05	16.0	Italy	Southern	prospective	hospital-based	394	1,287,581.7
Bassetti PLoS One 2015[62]	Jan 09	Jun 14	Oct 11	5.5	Italy	Southern	retrospective	hospital-based	204	258,227.8
Alp Mycoses 2015[63]	Jan 01	Dec 10	Dec 05	10.0	Turkey	Southern	retrospective	hospital-based	381	401,052.6
Kazak Mycoses 2014[66]	Jan 96	Dec 12	Jul 04	17.0	Turkey	Southern	retrospective	hospital-based	1,035	590,000
Bassetti J Clin Microbiol 2013[16]	Jan 08	Dec 10	Jul 09	3.0	Italy and Spain	Southern	prospective	hospital-based	955	616,129

	Study period				Geography		Scenario			
Reference	Start	End	Median	Years	Country	European Region	Pro – vs Retrospective	Lab vs. Hospital-based	Number of Patients	Total
Bassetti PLoS One 2011[71]	Jan 08	Dec 10	Jul 09	3.0	Italy	Southern	prospective	hospital-based	348	201,156.1
Erdem Med Princ Pract 2010[13]	Jan 04	Dec 07	Dec 05	4.0	Turkey	Southern	retrospective	hospital-based	50	119,047.6
Gürcüoğlu Epidemiol Infect 2010[14]	Jan 96	Dec 07	Dec 01	12.0	Turkey	Southern	retrospective	hospital-based	743	392,724
Costa-de-Oliveira Eur J Clin Microbiol Infect Dis 2008[73]	Jan 04	Dec 04	Jul 04	1.0	Portugal	Southern	prospective	hospital-based	95	43,333.3
Bassetti Diagn Microbiol Infect Dis 2007[74]	Feb 04	Jan 05	Aug 04	1.0	Italy	Southern	prospective	hospital-based	136	106,995
Presterl Clin Microbiol Infect 2007[15]	Jan 01	Dec 06	Jan 04	6.0	Austria	Western	retrospective	hospital-based	283	563,745
Bakir APMIS 2006[77]	Jan 94	Dec 00	Jul 97	7.0	Turkey	Southern	retrospective	hospital-based	114	102,702.7
Yapar Mycoses 2006[75]	Jan 00	Dec 03	Dec 01	4.0	Turkey	Southern	retrospective	hospital-based	104	185,714.3
Boo Mycoses 2005[81]	Jan 99	Dec 03	Jul 01	5.0	Ireland	Northern	retrospective	hospital-based	63	131,250
San Miguel Infect Control Hosp Epidemiol 2005[79]	Jan 88	Dec 00	Jul 94	13.0	Spain	Southern	retrospective	hospital-based	331	551,666.7
Alonso-Valle Eur J Clin Microbiol Infect Dis 2003[83]	Jan 95	Dec 99	Jul 97	5.0	Spain	Southern	retrospective	hospital-based	142	176,543.2
Poikonen Emerg Infect Dis 2003[22]	Jan 95	Dec 99	Jul 97	5.0	Finland	Northern	retrospective	hospital-based	79	464,705.9
Schelenz Mycoses 2003[82]	Jan 95	Dec 01	Jul 98	7.0	Great Britain	Northern	retrospective	hospital-based	128	426,666.7
Garbino Medicine (Baltimore) 2002[85]	Jan 89	Dec 00	Jan 95	12.0	Switzerland	Western	retrospective	hospital-based	294	441,433
Viudes Eur J Clin Microbiol Infect Dis 2002[84]	Jan 95	Dec 97	Jul 96	3.0	Spain	Southern	retrospective	hospital-based	145	190,789.5
Mixed Group										
Mellinghoff Eur J Clin Microbiol Infect Dis 2018[127]	Jan 14	Jun 17	Sep 15	3.5	Germany	Western	retrospective	hospital-based	77	385,000

	Study period				Geography		Scenario			
Reference	Start	End	Median	Years	Country	European Region	Pro – vs Retrospective	Lab vs. Hospital-based	Number of Patients	Total
Arsić Arsenijević Mycoses 2018[109]	Dec 14	Nov 15	May 15	1.0	Serbia	Eastern	prospective	laboratory-based	43	10,831.2
Trouvé Eur J Clin Microbiol Infect Dis 2017[134]	Mar 13	Feb 14	Aug 13	1.0	Belgium	Western	prospective	hospital-based	338	768,181.8
Berdal PLOS One 2014[93]	Jan 02	Dec 12	Jul 07	11.0	Norway	Northern	retrospective	hospital-based	110	478,260.9
Puig-Asensio Clin Microbiol Infect 2014[36]	May 10	Apr 11	Oct 10	1.0	Spain	Southern	prospective	laboratory-based	729	844,943.8
Tortorano Infection 2013[102]	Jan 09	Dec 09	Jul 09	1.0	Italy	Southern	prospective	laboratory-based	467	392,437
Péman J Antimicrob Chemother 2012[130]	Jan 09	Jan 10	Jul 09	1.1	Spain	Southern	prospective	hospital-based	1348	1,491,150.4
Almirante J Clin Microbiol 2005[34]	Jan 02	Dec 03	Dec 02	2.0	Spain	Southern	prospective	hospital-based	341	650,943.4
Martin Eur J Clin Microbiol Infect Dis 2005[105]	Jan 98	Dec 01	Jan 00	4.0	France	Western	retrospective	laboratory-based	190	2,367,857.1
Klingspor Scand J Infect Dis 2004[107]	Jan 98	Dec 99	Dec 98	2.0	Sweden	Northern	prospective	hospital-based	191	596,875
Tortorano Eur J Clin Microbiol Infect Dis 2004 – France[106]	Sep 97	Dec 99	Oct 98	2.3	France	Western	prospective	hospital-based	645	3,225,000
Tortorano Eur J Clin Microbiol Infect Dis 2004 – Italy[106]	Sep 97	Dec 99	Oct 98	2.3	Italy	Southern	prospective	hospital-based	569	1,497,368.4
Tortorano Eur J Clin Microbiol Infect Dis 2004 – Sweden[106]	Sep 97	Dec 99	Oct 98	2.3	Sweden	Northern	prospective	hospital-based	191	596,875
Richet Clin Microbiol Infect 2002[108]	Jan 95	Dec 95	Jul 95	1.0	France	Western	prospective	hospital-based	148	476,718
ICU										
Baldesi J Infect 2017[110]	Jan 04	Jun 13	Sep 08	9.5	France	Western	prospective	hospital-based	851	245,608
Tukenmez Am J Infect Control 2017[135]	Jan 11	Jan 13	Jan 12	2.1	Turkey	Southern	retrospective	hospital-based	36	20,454.5

	Study period				Geography		Scenario			
Reference	Start	End	Median	Years	Country	European Region	Pro – vs Retrospective	Lab vs. Hospital-based	Number of Patients	Total
Tascini Mycology 2015[52]	Jan 12	Dec 13	Dec 12	2.0	Italy	Southern	retrospective	hospital-based	92	16,918
Montagna Infection 2013[51]	Feb 07	Jul 08	Oct 07	1.5	Italy	Southern	retrospective	hospital-based	92	5,575.8
Tortorano Mycoses 2012[19]	May 06	Apr 08	May 07	2.0	Italy	Southern	prospective	hospital-based	276	27,381
Bougnoux Intensive Care Med 2008[46]	Jun 01	May 02	Nov 01	1.0	France	Western	prospective	hospital-based	57	8,507.5
Jordà-Marcos Mycoses 2007[48]	May 98	Jan 99	Sep 98	0.8	Spain	Southern	prospective	hospital-based	63	1,765
Tortorano J Hosp Infect 2004[106]	Jan 83	Jan 02	Jul 92	19.1	Italy	Southern	retrospective	hospital-based	28	4,605
Ibanez-Nolla J Infect 2004[122]	Sep 88	Oct 95	Mar 92	7.2	Spain	Southern	prospective	hospital-based	18	3,389
Charles Intensive Care Med 2003[113]	Jan 90	Dec 00	Jun 95	11.0	France	Western	retrospective	hospital-based	66	34,676
Leleu J Crit Care 2002[49]	Jan 95	Dec 97	Jul 96	3.0	France	Western	retrospective	hospital-based	104	52,000
Blot Am J Med 2002[112]	Jan 92	Dec 00	Jun 96	9.0	Belgium	Western	retrospective	hospital-based	73	29,727
Population-based										
Klingspor Mycoses 2018[123]	Sep 15	Aug 16	Feb 16	1.0	Sweden	Northern	retrospective	laboratory-based	471	10,021,276.6
Rajendran Frontiers in Microbiology 2016[87]	Mar 12	Feb 13	Aug 12	1.0	Scotland	Northern	prospective	laboratory-based	217	5,295,403
PHE Health Protection Report 2016[88]	Jan 15	Dec 15	Jul 15	1.0	England, Wales and Northern Ireland	Northern	retrospective	laboratory-based	1,995	58,676,470.6
Hesstvedt Clin Microbiol Infect 2015[90]	Jan 04	Dec 12	Jul 08	9.0	Norway	Northern	prospective	laboratory-based	1,653	4,2384,615.4
PHE Health Protection Report 2015[89]	Jan 14	Dec 14	Jul 14	1.0	England, Wales and Northern Ireland	Northern	retrospective	laboratory-based	1,638	58,500,000
Bitar Emerg Infect Dis 2014[92]	Jan 01	Dec 10	Dec 05	10.0	France	Western	retrospective	laboratory-based	15,559	622,360,000
Berdal PLOS One 2014[93]	Jan 02	Dec 12	Jul 07	11.0	Norway	Northern	retrospective	hospital-based	110	4,230,769.2

	Study period				Geography		Scenario			
Reference	Start	End	Median	Years	Country	European Region	Pro – vs Retrospective	Lab vs. Hospital-based	Number of Patients	Total
Puig-Asensio Clin Microbiol Infect 2014[36]	May 10	Apr 11	Oct 10	1.0	Spain	Southern	prospective	hospital-based	773	9,529,860.2
PHE Health Protection Report 2014[91]	Jan 13	Dec 13	Jul 13	1.0	England, Wales and Northern Ireland	Northern	retrospective	laboratory-based	1,700	58,620,689.7
Arendrup Clin Microbiol Infect 2013[25]	Jan 10	Dec 11	Dec 10	2.0	Denmark	Northern	prospective	laboratory-based	995	10,596,529.3
Asmundsdóttir J Clin Microbiol 2013[20]	Jan 00	Dec 11	Dec 05	12.0	Iceland	Northern	retrospective	laboratory-based	199	3,491,228.1
Ericsson Clin Microbiol Infect 2013[21]	Sep 05	Aug 06	Feb 06	1.0	Sweden	Northern	prospective	laboratory-based	385	9,166,666.7
PHE Health Protection Report 2013[94]	Jan 12	Dec 12	Jul 12	1.0	England, Wales and Northern Ireland	Northern	retrospective	laboratory-based	1,719	67,148,437.5
PHE Health Protection Report 2013[94]	Jan 11	Dec 11	Jul 11	1.0	England, Wales and Northern Ireland	Northern	retrospective	laboratory-based	1,787	68,467,433
PHE Health Protection Report 2013[94]	Jan 10	Dec 10	Jul 10	1.0	England, Wales and Northern Ireland	Northern	retrospective	laboratory-based	1,710	68,127,490
PHE Health Protection Report 2013[94]	Jan 09	Dec 09	Jul 09	1.0	England, Wales and Northern Ireland	Northern	retrospective	laboratory-based	1,720	67,716,535.4
PHE Health Protection Report 2013[94]	Jan 08	Dec 08	Jul 08	1.0	England, Wales and Northern Ireland	Northern	retrospective	laboratory-based	1,811	68,082,706.8
Poikonen BMC Infect Dis 2010[26]	Jan 04	Dec 07	Dec 05	4.0	Finland	Northern	retrospective	laboratory-based	603	21,083,916.1
Arendrup CMI 2008[95]	Jan 04	Dec 06	Jul 05	3.0	Denmark	Northern	retrospective	laboratory-based	1,040	9,807,692.3
Odds J Med Microbiol 2007[96]	Mar 05	Feb 06	Aug 05	1.0	Scotland	Northern	prospective	laboratory-based	242	5,062,011
Sandven J Clin Microbiol 2006[97]	Jan 91	Dec 03	Jul 97	13.0	Norway	Northern	prospective	laboratory-based	1,393	58,053,402.2
Almirante J Clin Microbiol 2005[34]	Jan 02	Dec 03	Dec 02	2.0	Spain	Southern	prospective	hospital-based	341	8,023,255.8

	Study period				Geography		Scenario			
Reference	Start	End	Median	Years	Country	European Region	Pro – vs Retrospective	Lab vs. Hospital-based	Number of Patients	Total
Péman Eur J Clin Microbiol Infect Dis 2005[98]	Sep 97	Aug 99	Aug 98	2.0	Spain	Southern	prospective	hospital-based	290	8,285,714.3
Poikonen Emerg Infect Dis 2003[22]	Jan 95	Dec 99	Jul 97	5.0	Finland	Northern	retrospective	laboratory-based	479	25,210,526.3
Lamagni Epidemiol Infect 2001[100]	Jan 90	Dec 99	Dec 94	10.0	England and Wales	Northern	retrospective	laboratory-based	5,175	517,329,255.9

Table S1: Summary of studies included in the study for analysis of incidence.
Studies are identified by the name of the first author, the journal and year of publication. Sorted by setting and year of publication.

236

	Study period				Geography		Scenario			
Reference	Start	End	Median	Years	Country	European Region	Pro – vs Retrospective	Lab vs. Hospital-based	Deaths	Cases
Teaching Hospital										
Murri J Infect 2018*	Jan 13	Dec 16	Dec 14	4.0	Italy	Southern	prospective	hospital-based	68	213
Yeşilkaya Mycoses 2017†[129]	Jan 07	Aug 14	Oct 10	7.7	Turkey	Southern	retrospective	hospital-based	75	183
Lortholary Intensive Care Med 2017*[37]	Oct 02	Dec 14	Nov 08	12.3	France	Western	prospective	hospital-based	1,267	3,205
Kilic Mycoses 2017*[138]	Jan 10	Dec 16	Jul 13	7.0	Turkey	Southern	retrospective	hospital-based	143	351
Tadec Mycoses 2016 (reported 12 week mortality)[55]	Jan 04	Dec 10	Jul 07	7.0	France	Western	retrospective	hospital-based	56	185
Stojanovic J Infect Dev Ctries 2016*[56]	Sep 14	Sep 15	Mar 15	1.1	Serbia	Southern	prospective	laboratory-based	2	8
Barchiesi Infection 2016*[58]	Jan 10	Dec 14	Jul 12	5.0	Italy	Southern	retrospective	hospital-based	84	242
Pongracz Acta Micobiologia et Immunologica Hungaria 2015*[59]	Jan 10	Dec 14	Jul 12	5.0	Hungary	Eastern	retrospective	hospital-based	65	128
Luzzati Aging Clin Exp Res 2015*[60]	Jan 08	Jun 11	Sep 09	3.5	Italy	Southern	retrospective	hospital-based	65	140
Caggiano BioMed Research International 2015[61] (reported Day 20 Mortality)	Jan 98	Dec 13	Dec 05	16.0	Italy	Southern	prospective	hospital-based	111	394
Bassetti PLoS One 2015*[62]	Jan 09	Jun 14	Oct 11	5.5	Italy	Southern	retrospective	hospital-based	95.8	204
Milazzo Mycopathologia 2014†[64]	Jan 08	Dec 12	Jul 10	5.0	Italy	Southern	retrospective	hospital-based	37	89
De Rosa J Antimicrob Chemother 2013†[116]	Jan 04	Dec 08	Jun 06	5.0	Italy	Southern	retrospective	hospital-based	354	779
Bassetti J Clin Microbiol 2013*[16]	Jan 08	Dec 10	Jul 09	3.0	Italy and Spain	Southern	prospective	hospital-based	381	955
Parmeland Med Mycol 2013*[67]	Jan 09	Dec 10	Dec 09	2.0	France	Western	prospective	hospital-based	49	172

	Study period				Geography		Scenario			
Reference	Start	End	Median	Years	Country	European Region	Pro – vs Retrospective	Lab vs. Hospital-based	Deaths	Cases
Fortún J Infect 2012*†[68]	Jan 00	Dec 09	Dec 04	10.0	Spain	Southern	retrospective	hospital-based	157.1	419
Bassetti PLoS One 2011*[71]	Jan 08	Dec 10	Jul 09	3.0	Italy	Southern	prospective	hospital-based	141	324
Das Int J Infect Dis 2011*[70]	Oct 05	Jun 08	Feb 07	2.8	Great Britain	Northern	prospective	hospital-based	40	102
Ortega J Hosp Infect 2011*[69]	Jan 91	Dec 08	Jan 00	18.0	Spain	Southern	prospective	hospital-based	168	529
Erdem Med Princ Pract 2010†[13]	Jan 04	Dec 07	Dec 05	4.0	Turkey	Southern	retrospective	hospital-based	28	50
Poikonen Scand J Infect Dis 2009*[72]	Jan 87	Dec 04	Jan 96	18.0	Finland	Northern	retrospective	hospital-based	113	358
Costa-de-Oliveira Eur J Clin Microbiol Infect Dis 2008†[73]	Jan 04	Dec 04	Jul 04	1.0	Portugal	Southern	prospective	hospital-based	43	100
Bassetti Diagn Microbiol Infect Dis 2007†[74]	Feb 04	Jan 05	Aug 04	1.0	Italy	Southern	prospective	hospital-based	65	118
Presterl Clin Microbiol Infect 2007*†[15]	Jan 01	Dec 06	Jan 04	6.0	Austria	Western	retrospective	hospital-based	108	337,5
Aliyu QJM 2006*†[78]	Aug 00	Jul 04	Jul 02	4.0	Great Britain	Northern	retrospective	hospital-based	37.4	90
Bedini Clin Microbiol Infect 2006*[76]	Jan 00	Aug 03	Oct 01	3.7	Italy	Southern	prospective	hospital-based	32.9	86
Boo Mycoses 2005*[81]	Jan 99	Dec 03	Jul 01	5.0	Ireland	Northern	retrospective	hospital-based	25	63
Luzzati Clin Microbiol Infect 2005*[80]	Jan 98	Dec 01	Jan 00	4.0	Italy	Southern	retrospective	hospital-based	112.2	284
Alonso-Valle Eur J Clin Microbiol Infect Dis 2003†[83]	Jan 95	Dec 99	Jul 97	5.0	Spain	Southern	retrospective	hospital-based	64	142
Poikonen Emerg Infect Dis 2003*[22]	Jan 95	Dec 99	Jul 97	5.0	Finland	Northern	retrospective	hospital-based	28	79
Schelenz Mycoses 2003†[82]	Jan 95	Dec 01	Jul 98	7.0	Great Britain	Northern	retrospective	hospital-based	45	128
Garbino Medicine (Baltimore) 2002*[85]	Jan 89	Dec 00	Jan 95	12.0	Switzerland	Western	retrospective	hospital-based	130	294
Viudes Eur J Clin Microbiol Infect Dis 2002†[84]	Jan 95	Dec 97	Jul 96	3.0	Spain	Southern	retrospective	hospital-based	64	145

	Study period				Geography		Scenario			
Reference	Start	End	Median	Years	Country	European Region	Pro – vs Retrospective	Lab vs. Hospital-based	Deaths	Cases
Luzzati Eur J Clin Microbiol Infect Dis 2000*[86]	Jan 92	Dec 97	Dec 94	6.0	Italy	Southern	retrospective	hospital-based	83	185
Mixed Group										
Mellinghoff Eur J Clin Microbiol Infect Dis 2018*[127]	Jan 14	Jun 17	Sep 15	3.5	Germany	Western	retrospective	hospital-based	25	55
Arsić Arsenijević Mycoses 2018*[109]	Dec 14	Nov 15	May 15	1.0	Serbia	Eastern	prospective	laboratory-based	16	43
Falcone Eur J Intern Med 2017†[118]	Dec 12	Dec 14	Dec 13	2.1	Italy	Western	retrospective	hospital-based	128	317
Luzzati Infection 2016*[101]	Jan 11	Dec 13	Jul 12	3.0	Italy	Southern	retrospective	hospital-based	249	686
Berdal PLOS One 2014*[93]	Jan 02	Dec 12	Jul 07	11.0	Norway	Northern	retrospective	hospital-based	51	105
Puig-Asensio Clin Microbiol Infect 2014*[36]	May 10	Apr 11	Oct 10	1.0	Spain	Southern	prospective	laboratory-based	220	720
Nawrot Mycoses 2013*[103]	Jan 06	Dec 07	Dec 06	2.0	Poland	Eastern	retrospective	hospital-based	56	149
Tortorano Infection 2013*[102]	Jan 09	Dec 09	Jul 09	1.0	Italy	Southern	prospective	laboratory-based	99	328
Chalmers Mycoses 2011*[104]	Jan 08	Dec 08	Jul 08	1.0	Great Britain	Northern	retrospective	hospital-based	36	89
Klingspor Scand J Infect Dis 2004*[107]	Jan 98	Dec 99	Dec 98	2.0	Sweden	Northern	prospective	hospital-based	57	185
Tortorano Eur J Clin Microbiol Infect Dis 2004*[106]	Sep 97	Dec 99	Oct 98	2.3	Austria, France, Germany, Italy, Spain, Sweden and the UK	EUROPE	prospective	hospital-based	736	1,942
ICU										
Garnacho-Montero Crit Care Med 2018†[119]	Jan 11	Apr 16	Aug 13	5.3	Spain	Southern	retrospective	hospital-based	81	234
Baldesi J Infect 2017†[110]	Jan 04	Jun 13	Sep 08	9.5	France	Western	prospective	hospital-based	445	851
Tukenmez Am J Infect Control 2017†[135]	Jan 11	Jan 13	Jan 12	2.1	Turkey	Southern	retrospective	hospital-based	30	36

	Study period				Geography		Scenario			
Reference	Start	End	Median	Years	Country	European Region	Pro – vs Retrospective	Lab vs. Hospital-based	Deaths	Cases
Lortholary Intensive Care Med 2017†[37]	Oct 02	Dec 14	Nov 08	12.3	France	Western	prospective	hospital-based	772	1,539
Puig-Asensio Crit Care Med 2014†[131]	May 10	Apr 11	Oct 10	1.0	Spain	Southern	prospective	hospital-based	77	164
Meyer Euro Surveill 2013†[18]	Jan 06	Dec 11	Dec 08	6.0	Germany	Western	retrospective	hospital-based	93	389
Montagna Infection 2013†[51]	Feb 07	Aug 08	Nov 07	1.6	Italy	Southern	retrospective	hospital-based	37	92
Tortorano Mycoses 2012*[19]	May 06	Apr 08	May 07	2.0	Italy	Southern	prospective	hospital-based	127.5	276
Ylipalosaari Crit Care 2012†[137]	Jan 00	Dec 09	Dec 04	10.0	Finland	Northern	retrospective	hospital-based	22	83
Leroy Crit Care Med 2009†[50]	Oct 05	May 06	Jan 06	0.7	France	Western	prospective	hospital-based	88	183
Vardakas Clin Microbiol Infect 2009†[54]	Jan 01	Jun 07	Mar 04	6.5	Greece	Southern	retrospective	hospital-based	18	45
Bougnoux Intensive Care Med 2008†[46]	Jun 01	May 02	Nov 01	1.0	France	Western	prospective	hospital-based	34	55
Dimopoulos Anesth Analg 2008†[117]	Jan 01	Dec 05	Jun 03	5.0	Greece	Southern	prospective	hospital-based	37	56
Dimopoulos Eur J Clin Microbiol Infect Dis 2007†[47]	Feb 00	Jan 02	Jan 01	2.0	Greece	Southern	prospective	hospital-based	16	24
Jordà-Marcos Mycoses 2007†[48]	May 98	Jan 99	Sep 98	0.8	Spain	Southern	prospective	hospital-based	34	63
Ibanez-Nolla J Infect 2004†[122]	Sep 88	Oct 95	Mar 92	7.2	Spain	Southern	prospective	hospital-based	7	18
Charles Intensive Care Med 2003†[113]	Jan 90	Dec 00	Jun 95	11.0	France	Western	retrospective	hospital-based	30	51
Leleu J Crit Care 2002†[49]	Jan 95	Dec 97	Jul 96	3.0	France	Western	retrospective	hospital-based	66	104
Blot Am J Med 2002†[112]	Jan 92	Dec 00	Jun 96	9.0	Belgium	Western	retrospective	hospital-based	26	73

	Study period				Geography		Scenario			
Reference	Start	End	Median	Years	Country	European Region	Pro – vs Retrospective	Lab vs. Hospital-based	Deaths	Cases
Population-based										
Rajendran Frontiers in Microbiology 2016*[87]	Mar 12	Feb 13	Aug 12	1.0	Scotland	Northern	prospective	laboratory-based	53	129
Bitar Emerg Infect Dis 2014†[92]	Jan 01	Dec 10	Dec 05	10.0	France	Western	retrospective	laboratory-based	6,217	15,559
Puig-Asensio Clin Microbiol Infect 2014*[36]	May 10	Apr 11	Oct 10	1.0	Spain	Southern	prospective	hospital-based	220	720
Asmundsdóttir J Clin Microbiol 2013*[20]	Jan 00	Dec 11	Dec 05	12.0	Iceland	Northern	retrospective	laboratory-based	56	189
Poikonen BMC Infect Dis 2010*[26]	Jan 04	Dec 07	Dec 05	4.0	Finland	Northern	retrospective	laboratory-based	208	598
Almirante J Clin Microbiol 2005*[34]	Jan 02	Dec 03	Dec 02	2.0	Spain	Southern	prospective	hospital-based	150	345
Péman Eur J Clin Microbiol Infect Dis 2005†[98]	Sep 97	Aug 99	Aug 98	2.0	Spain	Southern	prospective	hospital-based	114	283
Kibbler J Hosp Infect 2003*[99]	Sep 97	Dec 99	Oct 98	2.3	Great Britain	Northern	prospective	hospital-based	43	163

Table S2: Summary of studies included in the study for the analysis of mortality.
Studies are identified by the name of the first author, the journal and year of publication. Sorted by setting and year of publication. *D30 mortality, †crude mortality.

241

Reference	Isolated *Candida* Strains (n)	*C. albicans* n (%)	*C. parapsilosis* complex n (%)	*C. glabrata complex* n (%)	*C. tropicalis* n (%)	*C. krusei* n (%)	*C. kefyr* n (%)	Non-albicans *Candida** n (%)
Teaching Hospital								
Murri J Infect 2018[129]	212	126 (59.4)	50 (23.6)	16 (7.5)	13 (6.1)	0 (0)	0 (0)	7 (3.3)
Mencarini Infection 2018[128]	1,091	668 (61.2)	183 (16.8)	141 (12.9)	0 (0)	0 (0)	0 (0)	0 (0)
De Francesco Mycopathologia 2017[115]	196	118 (60)	29 (15)	24 (12)	12 (6)	0 (0)	0 (0)	11 (5.5)
Ghezzi J Med Microbiol 2017[120]	514	233 (45.4)	181 (35.3)	46 (8.9)	36 (7)	0 (0)	0 (0)	0 (0)
Lortholary Intensive Care Med 2017[37]	3,666	1,988 (54.2)	427 (11.6)	715 (19.5)	345 (9.4)	118 (3.2)	73 (2)	0 (0)
Kilic Mycoses 2017[138]	351	169 (48.1)	88 (25.1)	41 (11.7)	3 (0.9)	15 (4.3)	6 (1.7)	29 (8.3)
Tadec Mycoses 2016[55]	197	103 (52.3)	28 (14.2)	19 (9.6)	19 (9.6)	8 (4.1)	5 (2.5)	15 (7.6)
Stojanovic J Infect Dev Ctries 2016[56]	8	5 (62.5)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (37.5)
Prigitano Infection 2016[57]	868	514 (59.2)	142 (16.4)	113 (13)	60 (6.9)	15 (1.7)	1 (0.1)	23 (2.6)
Barchiesi Infection 2016[58]	270	146 (54.1)	63 (23.3)	23 (8.5)	28 (10.4)	2 (0.7)	0 (0)	8 (3)
Colakoglu Journal of Clinical and Analytical Medicine 2015[114]	157	62 (39.5)	36 (22.9)	9 (5.7)	22 (14)	6 (3.8)	3 (1.9)	19 (12.1)
Pongracz Acta Micobiologia et Immunologica Hungaria 2015[59]	136	86 (63)	14 (10.2)	18 (13)	13 (9.3)	5 (3.7)	1 (0.7)	2 (1.5)
Luzzati Aging Clin Exp Res 2015[60]	138	77 (55.8)	34 (24.6)	14 (10.1)	6 (4.3)	0 (0)	0 (0)	7 (5.1)
Caggiano BioMed Research International 2015[61]	394	174 (44.2)	137 (34.8)	22 (5.6)	19 (4.8)	11 (2.8)	0 (0)	31 (7.9)
Bassetti PLoS One 2015[62]	204	123 (60.3)	34 (16.7)	24 (11.8)	13 (6.4)	0 (0)	0 (0)	10 (4.9)
Alp Mycoses 2015[63]	381	222 (58.3)	58 (15.2)	26 (6.8)	51 (13.4)	5 (1.3)	0 (0)	0 (0)
Milazzo Mycopathologia 2014[64]	99	63 (64)	4 (4)	17 (17.2)	6 (6.1)	0 (0)	0 (0)	5 (5.1)
Kazak Mycoses 2014[66]	1,062	465 (43.8)	281 (26.5)	58 (5.5)	89 (8.4)	62 (5.8)	26 (2.4)	81 (7.6)

Reference	Isolated *Candida* Strains (n)	*C. albicans* n (%)	*C. parapsilosis* complex n (%)	*C. glabrata complex* n (%)	*C. tropicalis* n (%)	*C. krusei* n (%)	*C. kefyr* n (%)	Non-albicans *Candida** n (%)
Martí-Carrizosa Scand J Infect Dis 2014[65]	357	155 (43.4)	72 (20.2)	42 (11.8)	52 (14.6)	4 (1.1)	0 (0)	10 (2.8)
Parmeland Med Mycol 2013[67]	189	102 (54)	21 (11.1)	32 (16.9)	13 (6.9)	8 (4.2)	0 (0)	13 (6.9)
Bassetti J Clin Microbiol 2013[16]	957	558 (58.3)	186 (19.4)	79 (8.3)	89 (9.3)	0 (0)	0 (0)	45 (4.7)
De Rosa J Antimicrob Chemother 2013[116]	779	447 (57.4)	131 (16.8)	86 (11)	52 (6.7)	2 (0.3)	0 (0)	5 (0.6)
Fortún J Infect 2012[68]	419	177 (42.2)	144 (34.4)	54 (12.9)	20 (4.7)	7 (1.7)	0 (0)	19 (4.5)
Bassetti PLoS One 2011[71]	348	170 (48.9)	99 (28.4)	33 (9.5)	23 (6.6)	9 (2.6)	0 (0)	14 (4)
Das Int J Infect Dis 2011[70]	107	45 (42.1)	21 (19.6)	33 (30.8)	0 (0)	0 (0)	0 (0)	0 (0)
Ortega J Hosp Infect 2011[69]	529	252 (47.6)	95 (18)	60 (11.3)	74 (14)	23 (4.3)	6 (1.1)	19 (3.6)
Iatta J Chemother 2011[121]	374	162 (43.3)	147 (39.4)	18 (4.7)	22 (5.9)	5 (1.3)	1 (0.3)	10 (2.8)
Erdem Med Princ Pract 2010[13]	50	15 (30)	4 (8)	3 (6)	7 (14)	0 (0)	3 (6)	18 (36)
Gürcüoğlu Epidemiol Infect 2010[14]	761	343 (45.1)	198 (26)	27 (3.5)	52 (6.8)	53 (7)	19 (2.5)	68 (8.9)
Poikonen Scand J Infect Dis 2009[72]	408	265 (65)	53 (13)	37 (9)	8 (2)	20 (5)	0 (0)	0 (0)
Costa-de-Oliveira Eur J Clin Microbiol Infect Dis 2008[73]	117	41 (35)	30 (25.6)	9 (7.7)	15 (12.8)	0 (0)	0 (0)	5 (4.3)
Bassetti Diagn Microbiol Infect Dis 2007[74]	136	83 (61)	22 (16.2)	13 (9.6)	7 (5.1)	2 (1.5)	0 (0)	8 (5.9)
Presterl Clin Microbiol Infect 2007 [15]	283	198 (70)	23 (8.1)	39 (13.8)	14 (4.9)	0 (0)	0 (0)	9 (3.2)
Aliyu QJM 2006[78]	95	44 (46.3)	10 (10.5)	23 (24.2)	5 (5.3)	4 (4.2)	0 (0)	9 (9.5)
Bedini Clin Microbiol Infect 2006[76]	94	38 (40.4)	21 (22.3)	12 (12.8)	15 (16)	3 (0)	0 (0)	5 (5.3)
Bakir APMIS 2006[77]	140	52 (37.1)	45 (32.1)	7 (5)	17 (12.1)	1 (0.7)	4 (2.9)	14 (10)
Yapar Mycoses 2006[75]	104	60 (57.7)	13 (12.5)	4 (3.8)	21 (20.2)	1 (1)	0 (0)	5 (4.8)
Sendid BMC Infect Dis 2006[133]	430	264 (61.5)	63 (14.7)	42 (9.8)	39 (9)	17 (4)	2 (0.5)	3 (0.7)
Boo Mycoses 2005[81]	66	33 (50)	14 (21.2)	12 (18.2)	4 (6.1)	0 (0)	0 (0)	3 (4.5)

Reference	Isolated *Candida* Strains (n)	*C. albicans* n (%)	*C. parapsilosis* complex n (%)	*C. glabrata complex* n (%)	*C. tropicalis* n (%)	*C. krusei* n (%)	*C. kefyr* n (%)	Non-albicans *Candida** n (%)
Luzzati Clin Microbiol Infect 2005[80]	314	163 (51.9)	66 (21)	21 (6.7)	16 (5.1)	1 (0.3)	1 (0.3)	46 (14.6)
San Miguel Infect Control Hosp Epidemiol 2005[79]	331	169 (51.1)	109 (32.9)	14 (4.2)	14 (4.2)	3 (0.9)	0 (0)	22 (6.6)
Alonso-Valle Eur J Clin Microbiol Infect Dis 2003[83]	143	63 (44.1)	32 (22.4)	20 (14)	8 (5.6)	0 (0)	0 (0)	12 (8.4)
Poikonen Emerg Infect Dis 2003[22]	79	55 (69.6)	6 (7.6)	6 (7.6)	0 (0)	0 (0)	0 (0)	12 (15.2)
Schelenz Mycoses 2003[82]	129	83 (64.3)	7 (5.4)	26 (20.2)	11 (8.5)	1 (0.8)	0 (0)	1 (0.8)
Garbino Medicine (Baltimore) 2002[85]	308	203 (65.9)	20 (6.5)	59 (19.2)	9 (2.9)	9 (2.9)	3 (1)	5 (1.6)
Viudes Eur J Clin Microbiol Infect Dis 2002[84]	148	65 (43.9)	49 (33.1)	7 (4.7)	9 (6.1)	10 (6.8)	0 (0)	5 (3.4)
McMullan J Infect 2002[126]	144	88 (61.1)	13 (9)	26 (18.1)	9 (6.3)	2 (1.4)	0 (0)	7 (4.9)
Luzzati Eur J Clin Microbiol Infect Dis 2000[86]	213	116 (54.5)	48 (22.5)	14 (6.6)	11 (5.2)	0 (0)	0 (0)	24 (11.3)
Mixed Group								
Mellinghoff Eur J Clin Microbiol Infect Dis 2018[127]	55	39 (70.9)	1 (1.8)	10 (18.2)	4 (7.3)	1 (2.5)	0 (0)	0 (0)
Arsić Arsenijević Mycoses 2018[109]	43	24 (55.8)	14 (32.6)	1 (2.3)	2 (4.7)	0 (0)	0 (0)	2 (4.7)
Falcone Eur J Intern Med 2017[118]	317	163 (51.4)	56 (17.7)	24 (7.6)	31 (9.8)	8 (2.5)	0 (0)	35 (11)
Trouvé Eur J Clin Microbiol Infect Dis 2017[134]	355	179 (50.4)	35 (9.8)	97 (27.3)	20 (5.6)	4 (1.2)	0 (0)	21 (5.8)
Luzzati Infection 2016[101]	686	378 (55.1)	93 (13.5)	89 (13)	72 (10.5)	0 (0)	0 (0)	55 (8)
Berdal PLOS One 2014[93]	112	85 (75.9)	10 (8.9)	7 (6.3)	10 (8.9)	0 (0)	0 (0)	0 (0)
Puig-Asensio Clin Microbiol Infect 2014[36]	766	348 (45.4)	191 (24.9)	103 (13.4)	59 (7.7)	15 (2)	0 (0)	50 (6.5)
Tortorano Infection 2013[102]	464	226 (48.7)	81 (17.5)	79 (17)	39 (8.4)	8 (1.7)	1 (0.2)	15 (3.2)

Reference	Isolated *Candida* Strains (n)	*C. albicans* n (%)	*C. parapsilosis* complex n (%)	*C. glabrata complex* n (%)	*C. tropicalis* n (%)	*C. krusei* n (%)	*C. kefyr* n (%)	Non-albicans *Candida** n (%)
Nawrot Mycoses 2013[103]	312	159 (51)	41 (13.1)	44 (14.1)	21 (6.7)	20 (6.4)	0 (0)	27 (8.7)
Péman J Antimicrob Chemother 2012[130]	1,348	615 (45.6)	366 (27.2)	158 (11.7)	11 (0.8)	27 (2)	0 (0)	69 (5.1)
Chalmers Mycoses 2011[104]	97	50 (51.5)	10 (10.3)	24 (24.7)	3 (3.1)	1 (1)	0 (0)	9 (9.3)
Almirante J Clin Microbiol 2005[34]	351	178 (50.7)	81 (23.1)	31 (8.8)	36 (10.3)	14 (4)	0 (0)	11 (3.1)
Martin Eur J Clin Microbiol Infect Dis 2005[105]	198	98 (49.5)	24 (12.1)	25 (12.6)	20 (10.1)	21 (10.6)	1 (0.5)	9 (4.5)
Klingspor Scand J Infect Dis 2004[107]	191	128 (67)	14 (7.3)	30 (15.7)	4 (2.1)	2 (1)	0 (0)	8 (4.2)
Tortorano Eur J Clin Microbiol Infect Dis 2004[106]	2,089	1,178 (56.4)	278 (13.3)	284 (13.6)	152 (7.3)	40 (1.9)	10 (0.5)	95 (4.5)
Richet Clin Microbiol Infect 2002[108]	156	82 (52.5)	25 (15.8)	18 (11.4)	15 (9.5)	7 (4.4)	0 (0)	2 (1.3)
Krcméry Diagn Microbiol Infect Dis 2000[124]	288	191 (66.3)	30 (10.4)	10 (3.5)	14 (4.9)	18 (6.3)	0 (0)	7 (2.4)
ICU								
Garnacho-Montero Crit Care Med 2018[119]	231	107 (46.3)	51 (22.1)	43 (18.6)	23 (10)	4 (1.7)	0 (0)	3 (1.3)
Sasso Mycoses 2017[132]	53	33 (62.3)	5 (9.4)	6 (11.3)	3 (5.7)	3 (5.7)	3 (5.7)	0 (0)
Tukenmez Am J Infect Control 2017[135]	36	27 (75)	2 (5.6)	4 (11.1)	3 (8.3)	0 (0)	0 (0)	0 (0)
Lortholary Intensive Care Med 2014[125]	1,169	668 (57.1)	106 (9.1)	234 (20)	106 (9.1)	35 (3)	20 (1.7)	0 (0)
Puig-Asensio Crit Care Med 2014[131]	173	90 (52)	41 (23.7)	22 (12.7)	10 (5.8)	7 (4)	1 (0.6)	2 (1.2)
Montagna Infection 2013[51]	98	37 (37.8)	34 (34.7)	9 (9.2)	9 (9.2)	0 (0)	0 (0)	3 (3.1)
Tortorano Mycoses 2012[19]	238	145 (60.9)	38 (16)	31 (13)	14 (5.9)	4 (1.7)	0 (0)	7 (2.9)
Ylipalosaari Crit Care 2012[137]	83	60 (72.3)	5 (6)	15 (18.1)	0 (0)	0 (0)	0 (0)	3 (3.6)
Leroy Crit Care Med 2009[50]	305	174 (57)	23 (7.5)	51 (16.7)	15 (4.9)	16 (5.2)	11 (3.6)	0 (0)

Reference	Isolated *Candida* Strains (n)	*C. albicans* n (%)	*C. parapsilosis* complex n (%)	*C. glabrata complex* n (%)	*C. tropicalis* n (%)	*C. krusei* n (%)	*C. kefyr* n (%)	Non-albicans *Candida** n (%)
Bougnoux Intensive Care Med 2008[46]	57	31 (54.2)	8 (13.5)	10 (17)	5 (8.5)	2 (3.5)	0 (0)	0 (0)
Jordà-Marcos Mycoses 2007[48]	63	36 (57.1)	11 (17.5)	3 (4.8)	3 (4.8)	0 (0)	0 (0)	10 (15.9)
Dimopoulos Anesth Analg 2008[117]	56	36 (64.3)	3 (5.4)	8 (14.3)	6 (10.7)	1 (1.8)	0 (0)	2 (3.6)
Dimopoulos Eur J Clin Microbiol Infect Dis 2007[47]	24	15 (62.5)	2 (8.3)	0 (0)	3 (12.5)	2 (8.3)	0 (0)	2 (8.3)
Bassetti BMC Infect Dis 2006[111]	182	74 (40.7)	42 (23.1)	27 (14.8)	17 (9.3)	0 (0)	0 (0)	0 (0)
Tortorano J Hosp Infect 2004[53]	28	15 (53.6)	8 (28.6)	1 (3.6)	1 (3.6)	0 (0)	0 (0)	3 (10.7)
Leleu J Crit Care 2002[49]	104	87 (84)	0 (0)	7 (7)	8 (8)	0 (0)	0 (0)	0 (0)
Blot Am J Med 2002[112]	73	51 (69.9)	3 (4.1)	17 (23.3)	1 (1.4)	1 (1.4)	0 (0)	0 (0)
Population-based								
Klingspor Mycoses 2018[123]	484	266 (55)	44 (9.1)	96 (19.8)	18 (3.7)	14 (2.9)	5 (1)	41 (8.5)
Rajendran Frontiers in Microbiology 2016[87]	280	115 (41)	32 (11.5)	98 (35)	10 (3.6)	0 (0)	0 (0)	25 (8.9)
PHE Health Protection Report 2016[88]	1,995	889 (44.6)	196 (9.8)	457 (22.9)	75 (3.8)	24 (1.2)	9 (0.5)	345 (17.3)
Hesstvedt Clin Microbiol Infect 2015[90]	1,724	1,168 (67.7)	74 (4.3)	255 (14.8)	112 (6.5)	23 (1.3)	7 (0.4)	62 (3.6)
PHE Health Protection Report 2015[89]	1,638	732 (44.7)	164 (10)	422 (25.8)	46 (2.8)	37 (2.3)	8 (0.5)	229 (14)
Puig-Asensio Clin Microbiol Infect 2014[36]	776	348 (44.8)	191 (24.6)	103 (13.3)	59 (7.6)	15 (1.9)	0 (0)	50 (6.4)
PHE Health Protection Report 2014[91]	1,700	831 (48.9)	172 (10.1)	448 (26.4)	61 (3.6)	22 (1.3)	2 (0.1)	152 (8.9)
Arendrup Clin Microbiol Infect 2013[25]	1,030	537 (52.1)	49 (4.8)	288 (28)	42 (4.1)	49 (4.8)	6 (0.6)	49 (4.8)
Asmundsdóttir J Clin Microbiol 2013[20]	222	124 (55.9)	11 (5)	36 (16.2)	28 (12.6)	0 (0)	0 (0)	23 (10.4)
Ericsson Clin Microbiol Infect 2013[21]	403	245 (60.8)	36 (8.9)	81 (20.1)	8 (2)	5 (1.2)	0 (0)	28 (6.9)
PHE Health Protection Report 2013[94]	1,719	831 (48.3)	168 (9.8)	425 (24.7)	70 (4.1)	23 (1.3)	5 (0.3)	197 (11.5)

Reference	Isolated *Candida* Strains (n)	*C. albicans* n (%)	*C. parapsilosis* complex n (%)	*C. glabrata complex* n (%)	*C. tropicalis* n (%)	*C. krusei* n (%)	*C. kefyr* n (%)	Non-albicans *Candida** n (%)
PHE Health Protection Report 2013[94]	1,787	873 (48.9)	170 (9.5)	443 (24.8)	70 (3.9)	32 (1.8)	5 (0.3)	201 (11.2)
PHE Health Protection Report 2013[94]	1,710	873 (51.1)	157 (9.2)	412 (24.1)	64 (3.7)	23 (1.3)	11 (0.6)	170 (9.9)
PHE Health Protection Report 2013[94]	1,720	900 (52.3)	170 (9.9)	381 (22.2)	63 (3.7)	26 (1.5)	5 (0.3)	140 (8.1)
PHE Health Protection Report 2013[94]	1,811	937 (51.7)	194 (10.7)	368 (20.3)	67 (3.7)	25 (1.4)	0 (0)	220 (12.1)
Poikonen BMC Infect Dis 2010[26]	603	406 (67.3)	32 (5.3)	112 (18.6)	11 (1.8)	19 (3.2)	0 (0)	23 (3.8)
Arendrup CMI 2008[95]	1,112	678 (61)	45 (4)	232 (20.9)	52 (4.7)	47 (4.2)	0 (0)	58 (5.2)
Odds J Med Microbiol 2007[96]	293	156 (53.2)	35 (11.9)	68 (23.2)	6 (2)	3 (1)	0 (0)	25 (8.5)
Sandven J Clin Microbiol 2006[97]	1,415	987 (69.8)	82 (5.8)	187 (13.2)	95 (6.7)	22 (1.6)	7 (0.5)	7 (0.5)
Almirante J Clin Microbiol 2005[34]	351	178 (50.7)	81 (23.1)	31 (8.8)	36 (10.3)	14 (4)	0 (0)	11 (3.1)
Boo Mycoses 2005[81]	250	180 (72)	37 (14.8)	18 (7.2)	9 (3.6)	0 (0)	0 (0)	6 (2.4)
Péman Eur J Clin Microbiol Infect Dis 2005[98]	290	127 (43.8)	86 (29.7)	25 (8.6)	30 (10.3)	9 (3)	0 (0)	12 (4.3)
Poikonen Emerg Infect Dis 2003[22]	479	335 (69.9)	27 (5.6)	41 (8.6)	13 (2.7)	40 (8.4)	0 (0)	23 (4.8)
Lamagni Epidemiol Infect 2001[100]	5,157	3,104 (60.2)	545 (10.6)	484 (9.4)	195 (3.8)	78 (1.5)	9 (0.2)	742 (14.4)

Table S3: Summary of studies included in the study for *Candida* species distribution.
Studies are identified by the name of the first author, the journal and year of publication. Sorted by setting and year of publication. *=*C. ciferrii, C. dubliniensis, C. famata, C. guilliermondii, C. humicola, C. inconspicua, C. kefyr, C. lipolytica, C. lusitaniae, C. norvegensis, C. pelliculosa, C. rugusa, C. sake, C. utilis,* unidentified, declared as other or *Candida* spp., or non-specified *Candida*.

Set	Results	Description
# 17	1,815	#14 AND #13 Refined by: [excluding] DOCUMENT TYPES: (REVIEW) AND LANGUAGES: (ENGLISH AND GERMAN) Indexes=SCI-EXPANDED, SSCI, A&HCI Timespan=2000-2017
# 16	1,893	#14 AND #13 Refined by: [excluding] DOCUMENT TYPES: (REVIEW) Indexes=SCI-EXPANDED, SSCI, A&HCI Timespan=2000-2017
# 15	2,075	#14 AND #13 Indexes=SCI-EXPANDED, SSCI, A&HCI Timespan=2000-2017
# 14	52,309	TI=Candid* Indexes=SCI-EXPANDED, SSCI, A&HCI Timespan=2000-2017
# 13	2,677	#12 OR #11 OR #10 OR #9 OR #8 OR #7 OR #6 OR #5 OR #4 OR #3 OR #2 OR #1 Indexes=SCI-EXPANDED, SSCI, A&HCI Timespan=2000-2017
# 12	431	TS=(candida NEAR epidemiolog*) Indexes=SCI-EXPANDED, SSCI, A&HCI Timespan=2000-2017
# 11	201	TS=(candida NEAR surveillance) Indexes=SCI-EXPANDED, SSCI, A&HCI Timespan=2000-2017
# 10	750	TS=(candida NEAR mortality) Indexes=SCI-EXPANDED, SSCI, A&HCI Timespan=2000-2017
# 9	357	TS=(candida NEAR outcome) Indexes=SCI-EXPANDED, SSCI, A&HCI Timespan=2000-2017
# 8	510	TS=(candida NEAR incidence) Indexes=SCI-EXPANDED, SSCI, A&HCI Timespan=2000-2017
# 7	454	TS=(candida NEAR prevalence) Indexes=SCI-EXPANDED, SSCI, A&HCI Timespan=2000-2017
# 6	54	TS=(candid$emia NEAR prevalence) Indexes=SCI-EXPANDED, SSCI, A&HCI Timespan=2000-2017
# 5	239	TS=(candid$emia NEAR incidence) Indexes=SCI-EXPANDED, SSCI, A&HCI Timespan=2000-2017
# 4	213	TS=(candid$emia NEAR outcome) Indexes=SCI-EXPANDED, SSCI, A&HCI Timespan=2000-2017
# 3	393	TS=(candid$emia NEAR mortality) Indexes=SCI-EXPANDED, SSCI, A&HCI Timespan=2000-2017
# 2	84	TS=(candid$emia NEAR surveillance) Indexes=SCI-EXPANDED, SSCI, A&HCI Timespan=2000-2017
# 1	238	TS=(candid$emia NEAR epidemiolog*) Indexes=SCI-EXPANDED, SSCI, A&HCI Timespan=2000-2017

Table S4. Web of Knowledge™ - Predefined search algorithm (Last run 03.05.2017).

Set	Results	Description
# 15	1,394	#14 AND #13 Databases= WOS, KJD, MEDLINE, RSCI, SCIELO Timespan=2000-2019
# 14	1,784,741	TS= (retrospective OR prospective) Databases= WOS, KJD, MEDLINE, RSCI, SCIELO Timespan=2000-2019
# 13	5,719	#12 OR #11 OR #10 OR #9 OR #8 OR #7 OR #6 OR #5 OR #4 OR #3 OR #2 OR #1 Databases= WOS, KJD, MEDLINE, RSCI, SCIELO Timespan=2000-2019
# 12	955	TS=(candida NEAR epidemiolog*) Databases= WOS, KJD, MEDLINE, RSCI, SCIELO Timespan=2000-2019
# 11	337	TS=(candida NEAR surveillance) Databases= WOS, KJD, MEDLINE, RSCI, SCIELO Timespan=2000-2019
# 10	1,485	TS=(candida NEAR mortality) Databases= WOS, KJD, MEDLINE, RSCI, SCIELO Timespan=2000-2019
# 9	654	TS=(candida NEAR outcome) Databases= WOS, KJD, MEDLINE, RSCI, SCIELO Timespan=2000-2019
# 8	1,395	TS=(candida NEAR incidence) Databases= WOS, KJD, MEDLINE, RSCI, SCIELO Timespan=2000-2019
# 7	1,069	TS=(candida NEAR prevalence) Databases= WOS, KJD, MEDLINE, RSCI, SCIELO Timespan=2000-2019
# 6	92	TS=(candid$emia NEAR prevalence) Databases= WOS, KJD, MEDLINE, RSCI, SCIELO Timespan=2000-2019
# 5	397	TS=(candid$emia NEAR incidence) Databases= WOS, KJD, MEDLINE, RSCI, SCIELO Timespan=2000-2019
# 4	339	TS=(candid$emia NEAR outcome) Databases= WOS, KJD, MEDLINE, RSCI, SCIELO Timespan=2000-2019
# 3	636	TS=(candid$emia NEAR mortality) Databases= WOS, KJD, MEDLINE, RSCI, SCIELO Timespan=2000-2019
# 2	120	TS=(candid$emia NEAR surveillance) Databases= WOS, KJD, MEDLINE, RSCI, SCIELO Timespan=2000-2019
# 1	367	TS=(candid$emia NEAR epidemiolog*) Databases= WOS, KJD, MEDLINE, RSCI, SCIELO Timespan=2000-2019

Table S5. Web of Knowledge™ Web of Science Core Collection, KCI-Korean Journal Database MEDLINE®, Russian Science Citation Index, SciELO Citation Index - Predefined search algorithm (Last run 28.02.2019).

	Univariate meta-regression			Multivariable meta-regression		
	Coefficient	95% CI	p-value	Coefficient	95% CI	p-value
Decade						
1990-2000						
2001-2010	1.01	0.96-1.06	0.656	1.01	0.96, 1.06	0.780
2011-Now	1.05	0.99-1.12	0.109	1.03	0.96, 1.12	0.364
European Region						
South						
East	1.05	0.98-1.15	0.272	1.03	0.93, 1.14	0.527
North	0.98	0.94-1.03	0.492	0.99	0.93, 1.05	0.709
West	0.99	0.94-1.06	0.980	1.01	0.94. 1.07	0.934
Setting						
Hospital-based						
ICU	1.09	0.96-1.23	0.199	1.11	0.97, 1.26	0.137
Mixed Group	0.98	0.93-1.03	0.440	0.98	0.93, 1.04	0.471
Population-based	0.97	0.91-1.04	0.375	0.98	0.91, 1.06	0.658
Scenario						
Retrospective						
Prospective	1.04	0.99-1.08	0.068	1.38	1.26-1.51	0.205

Table S6. Results from random-effect univariate and multivariable meta-regression analysis between covariates and day 30 mortality.