

**Table S1.** Evaluation of risk factors for bloodstream infections (BSI) in neutropenic patients undergoing hematopoietic stem cell transplantation (HSCT) in bivariate and multivariate logistic regression models.

| Regression models                     | Bivariate regression                         |                 | Multivariate regression <sup>a</sup>                  |                 |
|---------------------------------------|--|-----------------|---|-----------------|
|                                       | Odds ratio<br>(95% confidence inter-<br>val) | <i>p</i> -value | Adjusted odds ratio<br>(95% confidence inter-<br>val) | <i>p</i> -value |
| Levofloxacin prophylaxis              |  |                 |   |                 |
| Period with prophylaxis (2016 – 2018) | Ref.   |                 | Ref.  |                 |
| Period without prophylaxis (2019)     | 3.31 (1.84 – 5.94)                           | <0.001          | 3.76 (2.00 – 7.06)                                    | <0.001          |
| Gender                                |  |                 |   |                 |
| Female                                | Ref.   |                 | Ref.  |                 |
| Male                                  | 1.94 (1.07 – 3.50)                           | 0.03            | 2.14 (1.13 – 4.04)                                    | 0.02            |
| Age                                   | 0.99 (0.97 – 1.01)                           | 0.14            |   |                 |
| HSCT modality                         |  |                 |   |                 |
| Autologous                            | Ref.   |                 |   |                 |
| Allogeneic                            | 0.91 (0.45 – 1.83)                           | 0.79            |   |                 |
| Underlying disease                    |  |                 |   |                 |
| Multiple myeloma                      | Ref.   |                 | Ref.  |                 |
| Lymphoma                              | 2.23 (1.14 – 4.39)                           | 0.02            | 2.21 (1.06 – 4.60)                                    | 0.03            |
| Leukemia                              | 1.28 (0.48 – 3.39)                           | 0.62            | 0.74 (0.24 – 2.32)                                    | 0.61            |
| Others                                | 0.48 (0.19 – 1.21)                           | 0.12            | 0.40 (0.15 – 1.08)                                    | 0.07            |
| Duration of neutropenia (days)        | 1.05 (1.01 – 1.10)                           | 0.03            | 1.05 (0.99 – 1.11)                                    | 0.06            |

<sup>a</sup> Variables that showed a *p* value <0.1 on the bivariate logistic regression were selected to be included in the multivariate regression model.

**Table S2.** Evaluation of risk factors for death during hospitalization in neutropenic patients undergoing hematopoietic stem cell transplantation (HSCT) in bivariate and multivariate logistic regression models.

| Regression models                     | Bivariate regression                    |                 | Multivariate regression <sup>a</sup>             |                 |
|---------------------------------------|---|-----------------|--|-----------------|
|                                       | Odds ratio<br>(95% confidence interval) | <i>p</i> -value | Adjusted odds ratio<br>(95% confidence interval) | <i>p</i> -value |
| Levofloxacin prophylaxis              |   |                 |  |                 |
| Period with prophylaxis (2016 – 2018) | Ref.                                    |                 | Ref.   |                 |
| Period without prophylaxis (2019)     | 0.52 (0.15 – 1.87)                      | 0.32            | 0.23 (0.06 – 0.95)                               | 0.04            |
| Gender                                |   |                 |  |                 |
| Female                                | Ref.                                    |                 |  |                 |
| Male                                  | 1.61 (0.58 – 4.47)                      | 0.36            |  |                 |
| Age                                   | 0.97 (0.94 – 1.01)                      | 0.10            |  |                 |
| HSCT modality                         |   |                 |  |                 |
| Autologous                            | Ref.                                    |                 | Ref.   |                 |
| Allogeneic                            | 6.05 (2.21 – 16.58)                     | <0.01           | 5.40 (1.28 – 22.83)                              | 0.02            |
| Underlying disease                    |   |                 |  |                 |
| Multiple myeloma                      | Ref.                                    |                 | Ref.   |                 |
| Lymphoma                              | 2.44 (0.44 – 13.65)                     | 0.31            | 0.80 (0.12 – 5.27)                               | 0.81            |
| Leukemia                              | 9.05 (1.67 – 49.08)                     | 0.01            | 1.14 (0.12 – 11.00)                              | 0.91            |
| Others                                | 4.32 (0.85 – 21.98)                     | 0.08            | 3.26 (0.52 – 20.55)                              | 0.21            |
| Duration of neutropenia (days)        | 1.09 (1.03 – 1.15)                      | 0.001           | 1.04 (0.97 – 1.12)                               | 0.24            |
| Bloodstream infection                 | 5.34 (1.97 – 14.50)                     | 0.001           | 11.72 (3.16 – 43.43)                             | <0.001          |

<sup>a</sup> Variables that showed a *p* value <0.1 on the bivariate logistic regression were selected to be included in the multivariate regression model and levofloxacin prophylaxis was forced in the multivariate model since it was the main independent variable of interest.

**Table S3.** Logistic regression analyses evaluating the association between the use of quinolone prophylaxis and 30-day mortality of bloodstream infections (BSI) in neutropenic patients undergoing hematopoietic stem cell transplantation (HSCT) after adjustment for each possible confounding factors in separate.

| Regression models  | Odds ratio<br>(95% confidence interval) | <i>p</i> -value |
|--|---|-----------------|
| <b>Model 1: Age</b>  |   |                 |
| Levofloxacin prophylaxis   | Ref.                                    |                 |
| Period with prophylaxis (2016 – 2018)                              | Ref.                                    |                 |
| Period without prophylaxis (2019)                                  | 0.10 (0.01 – 0.85)                      | 0.04            |
| Age  | 0.97 (0.92 – 1.02)                      | 0.23            |
| <b>Model 2: Type of BSI</b>  |   |                 |
| Levofloxacin prophylaxis   | Ref.                                    |                 |
| Period with prophylaxis (2016 – 2018)                              | Ref.                                    |                 |
| Period without prophylaxis (2019)                                  | 0.10 (0.01 – 0.83)                      | 0.03            |
| Type of BSI  | Ref.                                    |                 |
| Related to central venous catheter                                 | Ref.                                    |                 |
| Related to mucosal barrier injury                                  | 1.04 (0.23 – 4.74)                      | 0.96            |
| <b>Model 3: HSCT modality</b>                                      |   |                 |
| Levofloxacin prophylaxis   | Ref.                                    |                 |
| Period with prophylaxis (2016 – 2018)                              | Ref.                                    |                 |
| Period without prophylaxis (2019)                                  | 0.11 (0.01 – 0.95)                      | 0.04            |
| HSCT modality  | Ref.                                    |                 |
| Autologous   | Ref.                                    |                 |
| Allogeneic   | 3.45 (0.69 – 17.36)                     | 0.13            |
| <b>Model 4: Underlying diseases</b>                                |   |                 |
| Levofloxacin prophylaxis   | Ref.                                    |                 |
| Period with prophylaxis (2016 – 2018)                              | Ref.                                    |                 |
| Period without prophylaxis (2019)                                  | 0.06 (0.01 – 0.58)                      | 0.02            |
| Underlying disease   | Ref.                                    |                 |
| Other diseases (except lymphoma)                                   | Ref.                                    |                 |
| Lymphoma   | 0.26 (0.05 – 1.32)                      | 0.10            |
| <b>Model 5: 3<sup>rd</sup> generation cephalosporin resistance</b> |   |                 |
| Levofloxacin prophylaxis   | Ref.                                    |                 |
| Period with prophylaxis (2016 – 2018)                              | Ref.                                    |                 |
| Period without prophylaxis (2019)                                  | 0.10 (0.01 – 0.93)                      | 0.04            |
| 3 <sup>rd</sup> generation cephalosporin resistance                | Ref.                                    |                 |
| No resistance to 3 <sup>rd</sup> generation cephalosporin          | Ref.                                    |                 |
| Resistance to 3 <sup>rd</sup> generation cephalosporin             | 1.29 (0.27 – 6.12)                      | 0.75            |
| <b>Model 6: Carbapenem resistance</b>                              |   |                 |
| Levofloxacin prophylaxis   | Ref.                                    |                 |
| Period with prophylaxis (2016 – 2018)                              | Ref.                                    |                 |
| Period without prophylaxis (2019)                                  | 0.11 (0.01 – 0.99)                      | 0.048           |
| Carbapenem resistance  | Ref.                                    |                 |
| No resistance to carbapenem  | Ref.                                    |                 |
| Resistance to carbapenem   | 4.78 (0.89 – 25.48)                     | 0.068           |

**Table S4.** Evaluation of risk factors for 30-day mortality of bloodstream infections (BSI) in neutropenic patients undergoing hematopoietic stem cell transplantation (HSCT) in bivariate and multivariate logistic regression models.

| Regression models   | Bivariate regression                    |                 | Multivariate regression <sup>a</sup>             |                 |
|---|---|-----------------|--|-----------------|
|   | Odds ratio<br>(95% confidence interval) | <i>p</i> -value | Adjusted odds ratio<br>(95% confidence interval) | <i>p</i> -value |
| Levofloxacin prophylaxis                                  |   |                 |  |                 |
| Period with prophylaxis (2016 – 2018)                     | Ref.                                    |                 | Ref.   |                 |
| Period without prophylaxis (2019)                         | 0.10 (0.01 – 0.82)                      | 0.03            | 0.12 (0.01 – 1.08)                               | 0.06            |
| Gender  |   |                 |  |                 |
| Female  | 0.57 (0.14 – 2.42)                      | 0.45            |  |                 |
| Male  |   |                 |  |                 |
| Age   | 0.97 (0.92 – 1.02)                      | 0.18            |  |                 |
| Type of BSI   |   |                 |  |                 |
| Related to central venous catheter                        | Ref.                                    |                 |  |                 |
| Related to mucosal barrier injury                         | 0.71 (0.17 – 2.96)                      | 0.64            |  |                 |
| HSCT modality   |   |                 |  |                 |
| Autologous  | Ref.                                    |                 | Ref.   |                 |
| Allogeneic  | 4.30 (0.94 – 19.58)                     | 0.06            | 2.80 (0.51 – 15.21)                              | 0.23            |
| Underlying disease  |   |                 |  |                 |
| Other diseases (except lymphoma)                          | Ref.                                    |                 |  |                 |
| Lymphoma  | 0.52 (0.12 – 2.31)                      | 0.39            |  |                 |
| 3 <sup>rd</sup> generation cephalosporin resistance       |   |                 |  |                 |
| No resistance to 3 <sup>rd</sup> generation cephalosporin | Ref.                                    |                 |  |                 |
| Resistance to 3 <sup>rd</sup> generation cephalosporin    | 2.34 (0.54 – 10.05)                     | 0.25            |  |                 |
| Carbapenem resistance                                     |   |                 |  |                 |
| No resistance to carbapenem                               | Ref.                                    |                 | Ref.   |                 |
| Resistance to carbapenem                                  | 6.00 (1.25 – 28.74)                     | 0.03            | 4.03 (0.72 – 22.59)                              | 0.11            |

<sup>a</sup> Variables that showed a *p* value <0.1 on the bivariate logistic regression were selected to be included in the multivariate regression model.