## **Supplementary Tables**

Table S1: Number of included patients per center

|                | included patients per center |
|----------------|------------------------------|
| Study Center   | Number of included patients  |
| Czech Republic |                              |
| Prague         | 22                           |
| France         |                              |
| Lyon           | 12                           |
| Toulouse       | 4                            |
| Germany        |                              |
| Heidelberg     | 102                          |
| Essen          | 36                           |
| Hamburg        | 25                           |
| Tuebingen      | 24                           |
| Stuttgart      | 18                           |
| Muenster       | 16                           |
| Berlin         | 13                           |
| Hannover       | 10                           |
| Marburg        | 9                            |
| Freiburg       | 6                            |
| Cologne        | 5                            |
| Leipzig        | 4                            |
| Memmingen      | 2                            |
| Ulm            | 2                            |
| Frankfurt      | 1                            |
| Rostock        | 1                            |
| Greece         |                              |
| Thessaloniki   | 4                            |
| Hungary        |                              |
| Budapest       | 21                           |
| Ireland        |                              |
| Dublin         | 46                           |
| Italy          |                              |
| Rome           | 118                          |
| Padua          | 33                           |
| Milan          | 23                           |
| Turin          | 13                           |
| Netherlands    |                              |
| Amsterdam      | 1                            |
| Poland         |                              |
| Warsaw         | 64                           |
| Russia         |                              |
| Moscow         | 19                           |
|                |                              |

| Spain          |    |  |
|----------------|----|--|
| Barcelona      | 3  |  |
| Switzerland    |    |  |
| Zurich         | 16 |  |
| Turkey         |    |  |
| Ankara         | 38 |  |
| Samsun         | 9  |  |
| Istanbul       | 6  |  |
| Gazi           | 2  |  |
| Izmir          | 2  |  |
| United Kingdom |    |  |
| Manchester     | 56 |  |
| Birmingham     | 13 |  |
| Nottingham     | 2  |  |
| London         | 1  |  |

Table S2: Infection subtypes in the first 2 years post-transplant

| Infection subtype           | < 6 years<br>(N=206) | 6-12 years<br>(N=278) | > 12 years<br>(N=318) |
|-----------------------------|----------------------|-----------------------|-----------------------|
| Gastroenteritis             | 83 (40.3%)           | 68 (24.5%)            | 48 (15.1%)            |
| Gastritis                   | 5 (2.43%)            | 9 (3.24%)             | 8 (2.52%)             |
| Colitis                     | 3 (1.46%)            | 8 (2.88%)             | 5 (1.57%)             |
| Peritonitis                 | 1 (0.49%)            | 1 (0.36%)             | 0 (0.00%)             |
| Lower respiratory infection | 52 (25.2%)           | 37 (13.3%)            | 26 (8.18%)            |
| Pyelonephritis              | 50 (24.3%)           | 40 (14.4%)            | 35 (11.0%)            |
| Cystitis                    | 38 (18.5%)           | 51 (18.4%)            | 46 (14.5%)            |
| ВКРуV                       | 43 (20.9%)           | 37 (13.3%)            | 30 (9.4%)             |
| CMV                         | 36 (17.5%)           | 39 (14.0%)            | 49 (15.4%)            |
| EBV                         | 65 (31.6%)           | 48 (17.3%)            | 32 (10.1%)            |
| Sepsis                      | 26 (12.6%)           | 19 (6.8%)             | 16 (5.03%)            |
| Hepatitis                   | 2 (0.97%)            | 3 (1.08%)             | 2 (0.62%)             |
| HIV                         | 0 (0.00%)            | 1 (0.36%)             | 0 (0.00%)             |
| Pneumocystis jirovecii      | 2 (0.97%)            | 0 (0.00%)             | 1 (0.31%)             |
| Other fungal infection      | 9 (4.37%)            | 7 (2.52%)             | 9 (2.83%)             |
| Other viral infection       | 76 (36.9%)           | 62 (22.3%)            | 53 (16.7%)            |

BKPyV, BK polyomavirus; CMV, Cytomegalovirus; EBV, Epstein-Barr virus; HIV, Human immunodeficiency virus

Table S3: Outcome parameters in the first two years posttransplant for patients < 2 years (N=18)

| Rejection episodes, N                      |             |
|--|-------------|
| Year 1                                     | 0           |
| Year 2                                     | 1           |
| Infections, N                              |             |
| Year 1                                     | 15          |
| Year 2                                     | 10          |
| Graft dysfunction, N                       | 2           |
| Diabetes mellitus, N                       | 0           |
| Death, N                                   | 0           |
| Cumulative hospitalization days, mean (SD) | 41.6 (40.5) |
| GFR, mean (SD)                             |             |
| Month 3                                    | 77.8 (33.3) |
| Month 12                                   | 68.7 (24.4) |
| Month 24                                   | 73.5 (25.5) |

 ${\sf GFR, estimated \ glomerular \ filtration \ rate.}$ 

Table S4: Tacrolimus exposure parameters in patients <2 years (N=18). Data are mean (SD).

| <u>. , , , , , , , , , , , , , , , , , , ,</u> |              |
|--|--------------|
| Tacrolimus trough level (ng/mL)                |              |
| Month 1-3                                      | 8.2 (2.52)   |
| Month 6-12                                     | 6.12 (1.74 ) |
| Month 18-24                                    | 5.08 (2.11)  |
| TacIPV – CV (%)                                | 24.0 (16.5)  |
| TacIPV -MAD (%)                                | 17.4 (12.6)  |
| BSA-corrected C/D ratio                        |              |
| Month 1-12                                     | 1.21 (0.60)  |
| Month 1-3                                      | 1.16 (0.73)  |
| Month 6-12                                     | 1.42 (0.73)  |
| BW-corrected C/D ratio                         |              |
| Month 1-12                                     | 26.0 (12.7)  |
| Month 1-3                                      | 25.1 (15.4)  |
| Month 6-12                                     | 32.4 (21.2)  |
| BSA-1.73m <sup>2</sup> -crrected C/D ratio     |              |
| Month 1-12                                     | 0.81 (0.36)  |
| Month 1-3                                      | 0.67 (0.42)  |
| Month 6-12                                     | 0.89 (0.45)  |

TacIPV, tacrolimus intrapatient variability; CV, coefficient of variation; MAD, mean absolute deviation; C/D ratio, concentration/dose ratio; BSA, body surface area; BW, body weight; BSA-1.73m<sup>2</sup>, BSA scaled for 1.73 m<sup>2</sup>

STROBE Statement—checklist of items that should be included in reports of observational studies

| Title and abstract   | Item<br>No.   | Recommendation  | Page<br>No. | Relevant text from manuscript |
|----------------------|---------------|---|-------------|-------------------------------|
| Title and abstract   | -             | A TO THE STATE OF | . 104       |                               |
|                      | _             | (a) Indicate the study's design with a commonly used term in the title or the abstract  | 1           | Line 1-2                      |
|                      |               | (b) Provide in the abstract an informative and balanced summary of what was done and what was   | 3           | Line 49-53                    |
|                      |               | found   |             |                               |
| Introduction         |               |   |             |                               |
| Background/rationale | 2             | Explain the scientific background and rationale for the investigation being reported  | 4           | Line 69-85                    |
| Objectives           | 3             | State specific objectives, including any prespecified hypotheses  | 4           | Line 86-93                    |
| Methods              |               |   |             |                               |
| Study design         | 4             | Present key elements of study design early in the paper   | 5           | Line 96-97                    |
| Setting              | 5             | Describe the setting, locations, and relevant dates, including periods of recruitment, exposure,  | 5           | Line 96-109                   |
|                      |               | follow-up, and data collection  |             |                               |
| Participants         | 6             | (a) Cohort study—Give the eligibility criteria, and the sources and methods of selection of   | 5           | Line 110-115                  |
|                      |               | participants. Describe methods of follow-up   |             |                               |
|                      |               | Case-control study—Give the eligibility criteria, and the sources and methods of case   |             |                               |
|                      |               | ascertainment and control selection. Give the rationale for the choice of cases and controls  |             |                               |
|                      |               | Cross-sectional study—Give the eligibility criteria, and the sources and methods of selection of  |             |                               |
|                      |               | participants  |             |                               |
|                      |               | (b) Cohort study—For matched studies, give matching criteria and number of exposed and  | NA          |                               |
|                      |               | unexposed   |             |                               |
|                      |               | Case-control study—For matched studies, give matching criteria and the number of controls per   |             |                               |
|                      |               | case  |             |                               |
| Variables            | 7             | Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers.  | 5           | Line 116-153                  |
|                      |               | Give diagnostic criteria, if applicable   |             |                               |
| Data sources/        | <b>∞</b><br>* | For each variable of interest, give sources of data and details of methods of assessment  | 5           | Line 116-153                  |
| measurement          |               | (measurement). Describe comparability of assessment methods if there is more than one group   |             |                               |
| Bias                 | 9             | Describe any efforts to address potential sources of bias   | 7           | Line 154-171                  |
| Study size           | 10            | Explain how the study size was arrived at   | 5           | Line 110-115, Figure 1        |

Continued on next page

| Quantitative     | =   | Explain how quantitative variables were handled in the analyses. If applicable, describe which            | 7        | Line 154-171          |
|------------------|-----|---|----------|-----------------------|
| variables        |     | groupings were chosen and why   |          |                       |
| Statistical      | 12  | (a) Describe all statistical methods, including those used to control for confounding                     | 7        | Line 154-171          |
| methods          |     | (b) Describe any methods used to examine subgroups and interactions                                       | 7        | Line 154-171          |
|                  |     | (c) Explain how missing data were addressed   | 7        | Line 169-171          |
|                  |     | (d) Cohort study—If applicable, explain how loss to follow-up was addressed                               | NA       |                       |
|                  |     | Case-control study—If applicable, explain how matching of cases and controls was addressed                |          |                       |
|                  |     | Cross-sectional study—If applicable, describe analytical methods taking account of sampling               |          |                       |
|                  |     | strategy  |          |                       |
|                  |     | (e) Describe any sensitivity analyses   | NA       |                       |
| Results          |     |   |          |                       |
| Participants     | 13* | (a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined        | 17       | Figure 1              |
|                  |     | for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed            |          |                       |
|                  |     | (b) Give reasons for non-participation at each stage  | 17       | Figure 1              |
|                  |     | (c) Consider use of a flow diagram  | 17       | Figure 1              |
| Descriptive data | 14* | (a) Give characteristics of study participants (eg demographic, clinical, social) and information on      | <b>∞</b> | Line 173-188, Table 1 |
|                  |     | exposures and potential confounders   |          |                       |
|                  |     | (b) Indicate number of participants with missing data for each variable of interest                       | 7        | Line 169-171          |
|                  |     | (c) Cohort study—Summarise follow-up time (eg, average and total amount)                                  | 24       | Table 1               |
| Outcome data     | 15* | Cohort study—Report numbers of outcome events or summary measures over time                               | NA       |                       |
|                  |     | Case-control study—Report numbers in each exposure category, or summary measures of exposure              |          |                       |
|                  |     | Cross-sectional study—Report numbers of outcome events or summary measures                                |          |                       |
| Main results     | 16  | (a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision       | 3        | Table 2               |
|                  |     | (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were           |          |                       |
|                  |     | included  |          |                       |
|                  |     | (b) Report category boundaries when continuous variables were categorized                                 | ∞        | Line 184-185          |
|                  |     | (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time | NA       |                       |
|                  |     | period  |          |                       |

Continued on next page

| Other analyses    | 17  | Other analyses 17 Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses | NA |              |
|-------------------|-----|--|----|--------------|
| Discussion        |     |  |    |              |
| Key results       | 18  | 18 Summarise key results with reference to study objectives  | 11 | Line 269-272 |
| Limitations       | 19  | 19 Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss       | 13 | Line 315-320 |
|                   |     | both direction and magnitude of any potential bias   |    |              |
| Interpretation    | 20  | 20 Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of        | 13 | Line 321-327 |
|                   |     | analyses, results from similar studies, and other relevant evidence  |    |              |
| Generalisability  | 21  | Generalisability 21 Discuss the generalisability (external validity) of the study results                        | 13 | Line 325-327 |
| Other information | ion |  |    |              |
| Funding           | 22  | 22 Give the source of funding and the role of the funders for the present study and, if applicable, for the      | 14 | Line 328-326 |
|                   |     | original study on which the present article is based   |    |              |

<sup>\*</sup>Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.org. checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE