Supplemental Table 1 Individual Data

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Patient ID | Sex | Age | Follow up period (months) | Implant | Interval between surgery and PET/CT  (weeks) | Phase | WBC (cells/μL) | CRP (mg/L) | Duration of antibiotic treatment prior to PET/CT (days) | SUVmax | Pattern-based diagnosis | Final diagnosis |
| 1 | Female | 38 | 9 | Yes | 36 | Late | 9970 | 0.16 | 10 | 1.9 | Negative | Positive |
| 2 | Male | 78 | 106 | Yes | 4 | Early | 8920 | 3.54 | 5 | 4.3 | Positive | Positive |
| 3 | Male | 78 | 24 | Yes | 76 | Late | 8230 | 4.93 | 7 | 4.4 | Positive | Positive |
| 4 | Male | 79 | 7 | Yes | 12 | Late | 3540 | 3.34 | 7 | 5.0 | Positive | Positive |
| 5 | Male | 45 | 6 | No | 7 | Early | 7220 | 9.38 | 17 | 5.1 | Positive | Positive |
| 6 | Male | 48 | 9 | Yes | 5 | Early | 12380 | 17.86 | 18 | 5.6 | Positive | Positive |
| 7 | Male | 84 | 6 | Yes | 10 | Early | 9560 | 3.27 | 0 | 5.7 | Positive | Positive |
| 8 | Male | 74 | 31 | Yes | 32 | Late | 11440 | 4.79 | 2 | 5.8 | Positive | Positive |
| 9 | Male | 75 | 18 | Yes | 5 | Early | 10890 | 5.6 | 3 | 6.1 | Positive | Positive |
| 10 | Male | 78 | 8 | No | 4 | Early | 8230 | 1.05 | 14 | 6.6 | Positive | Positive |
| 11 | Male | 89 | 9 | No | 4 | Early | 10330 | 9.14 | 17 | 6.7 | Positive | Positive |
| 12 | Male | 70 | 71 | Yes | 64 | Late | 12100 | 0.65 | 0 | 6.7 | Positive | Positive |
| 13 | Male | 83 | 6 | Yes | 9 | Early | 8000 | 2.88 | 14 | 6.9 | Positive | Positive |
| 14 | Male | 77 | 13 | Yes | 15 | Late | 10490 | 5.41 | 0 | 7.0 | Positive | Positive |
| 15 | Male | 75 | 6 | Yes | 19 | Late | NA | 3.68 | 0 | 7.3 | Positive | Positive |
| 16 | Male | 54 | 18 | Yes | 6 | Early | 10420 | 9.37 | 4 | 7.5 | Positive | Positive |
| 17 | Male | 46 | 12 | Yes | 14 | Late | 7300 | 0.87 | 4 | 7.8 | Positive | Positive |
| 18 | Male | 75 | 16 | Yes | 4 | Early | 5690 | 14 | 4 | 7.9 | Positive | Positive |
| 19 | Male | 75 | 68 | Yes | 32 | Late | 13460 | 16.57 | 14 | 8.1 | Positive | Positive |
| 20 | Male | 24 | 24 | No | 2 | Early | 9720 | 3.59 | 9 | 8.2 | Positive | Positive |
| 21 | Male | 72 | 6 | No | 8 | Early | 8930 | 2.56 | 0 | 8.4 | Positive | Positive |
| 22 | Male | 41 | 15 | No | 2 | Early | 12130 | 4.29 | 1 | 8.7 | Positive | Positive |
| 23 | Male | 66 | 16 | Yes | 5 | Early | 9300 | 4.12 | 10 | 9.3 | Positive | Positive |
| 24 | Male | 77 | 72 | No | 17 | Late | 9190 | 7.21 | 0 | 9.8 | Positive | Positive |
| 25 | Female | 64 | 8 | No | 10 | Late | NA | 40 | 7 | 9.9 | Positive | Positive |
| 26 | Male | 81 | 36 | Yes | 14 | Late | 6190 | 2.44 | 0 | 10.1 | Positive | Positive |
| 27 | Male | 91 | 30 | Yes | 4 | Early | 13350 | 16.45 | 0 | 10.6 | Positive | Positive |
| 28 | Male | 57 | 14 | Yes | 8 | Early | 6420 | 1.56 | 10 | 11.3 | Positive | Positive |
| 29 | Male | 77 | 21 | Yes | 5 | Early | 8270 | 18.47 | 6 | 14.7 | Positive | Positive |
| 30 | Male | 38 | 24 | Yes | 64 | Late | NA | NA | 0 | 1.9 | Negative | Negative |
| 31 | Female | 68 | 80 | Yes | 4 | Early | 3710 | 0.34 | 0 | 2.1 | Negative | Negative |
| 32 | Male | 50 | 24 | Yes | 48 | Late | NA | NA | 0 | 2.4 | Negative | Negative |
| 33 | Female | 71 | 24 | Yes | 2 | Early | 4440 | 1.13 | 0 | 2.5 | Negative | Negative |
| 34 | Female | 79 | 24 | Yes | 4 | Early | 8160 | 12.6 | 0 | 2.6 | Negative | Negative |
| 35 | Male | 88 | 17 | Yes | 64 | Late | NA | NA | 0 | 2.6 | Negative | Negative |
| 36 | Female | 40 | 39 | Yes | 4 | Early | 6620 | 0.3 | 0 | 2.9 | Negative | Negative |
| 37 | Male | 77 | 12 | Yes | 22 | Late | 6210 | 0.18 | 0 | 2.9 | Negative | Negative |
| 38 | Male | 36 | 48 | Yes | 20 | Late | 8430 | 1.33 | 5 | 3.1 | Negative | Negative |
| 39 | Female | 40 | 84 | Yes | 4 | Early | 8180 | 0.59 | 0 | 3.3 | Negative | Negative |
| 40 | Male | 60 | 24 | No | 16 | Late | 7670 | 0.56 | 0 | 3.3 | Negative | Negative |
| 41 | Male | 66 | 12 | No | 4 | Early | 6310 | 0.27 | 0 | 3.3 | Negative | Negative |
| 42 | Female | 69 | 24 | No | 24 | Late | 6030 | 0.23 | 4 | 3.3 | Negative | Negative |
| 43 | Female | 87 | 25 | Yes | 4 | Early | 2920 | 0.55 | 0 | 3.4 | Negative | Negative |
| 44 | Male | 26 | 27 | Yes | 60 | Late | 7790 | 0.03 | 0 | 3.5 | Negative | Negative |
| 45 | Male | 73 | 36 | Yes | 4 | Early | 5580 | 0.41 | 0 | 3.7 | Negative | Negative |
| 46 | Male | 80 | 6 | Yes | 2 | Early | 7140 | 1.04 | 0 | 3.7 | Negative | Negative |
| 47 | Male | 65 | 35 | Yes | 1 | Early | 8870 | 4.49 | 0 | 3.7 | Negative | Negative |
| 48 | Female | 38 | 24 | Yes | 2 | Early | 8940 | 10.38 | 3 | 3.9 | Negative | Negative |
| 49 | Female | 80 | 96 | Yes | 4 | Early | 4780 | 0.3 | 0 | 4.3 | Negative | Negative |
| 50 | Female | 74 | 36 | Yes | 4 | Early | 4340 | 0.3 | 0 | 4.6 | Negative | Negative |
| 51 | Male | 64 | 24 | Yes | 8 | Early | 6030 | 0.19 | 9 | 3.2 | Negative | Indeterminant |
| 52 | Male | 65 | 19 | Yes | 2 | Early | 7510 | 2.49 | 4 | 4.9 | Positive | Indeterminant |

Phase – Early: ≤12 weeks post-surgery; Late: >12 weeks post-surgery.

WBC (white blood cell counts) and CRP (c-reactive protein) data measured at approximately same time as F-18 FDG PET/CT was performed are shown. When the values exceeded the upper limit of normal (WBC: 9,700 cells/μL; CRP: 0.3 mg/L), SSI was suspected.

SUVmax-based diagnosis – Positive: ≥5.0; Negative: <5.0. The cut off value of 5.0 was obtained from the receiver operating characteristic analysis.

Pattern-based diagnosis – Positive: when focally increased uptake was seen within the bone with higher intensity compared to the uptake in the surrounding tissue.

Final diagnosis – Positive: The diagnosis was determined when plain radiography, CT, and/or MRI imaging findings were indicative of SSI during the follow up periods, in addition to patient data which met at least one of the following:

1) Purulent drainage.

2) Organisms isolated from an aseptically obtained culture of fluid or tissue from the incision, or in the organ/space.

3) At least one of the following signs or symptoms of infection: fever, pain or tenderness, localized swelling, redness, or heat.

4) An abscess or other evidence of infection was found on direct examination, during reoperation, or by histopathologic or radiologic examination.

5) Diagnosis of SSI by a surgeon or attending physician.

Among patients who did not meet these criteria for infection, patients treated with antibiotics for more than 7 days were classified as indeterminants, even if there were no imaging findings that were indicative of SSI during the follow up period. The remaining patients were classified as non-infection.

NA: not applicable.