**Supplemental Table 1. Cox regression** (*n*=146)

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|  | **crude HR** | **p-value**a |
| Study group: BioFlo® (ref. standard care) | 0.55 (0.23-1.31) | 0.168 |
| Age (one year older) | 0.93 (0.85-1.02) | 0.113 |
| Female gender (ref. male) | 0.46 (0.18-1.15) | 0.079 |
| Weight (one kg heavier) | 0.99 (0.97-1.02) | 0.700 |
| Comorbidities (ref. none): |  | 0.374 |
| - one | 0.51 (0.19-1.35) |  |
| - two or more | 0.82 (0.23-2.92) |  |
| Leucocytes <1000/µl | 0.55 (0.16-1.90) | 0.313 |
| Placement in basilic (ref. other) | 1.13 (0.42-3.04) | 0.801 |
| Subsequent device for patient (ref. first) | 0.84 (0.36-1.96) | 0.690 |
| Inserted by (ref. nurse): |  | 0.227 |
| - consultant doctor | 2.15 (0.85-5.44) |  |
| - registrar doctor | 1.97 (0.57-6.77) |  |
| Multiple insertion attempts | 1.72 (0.64-4.64) | 0.312 |
| Ultrasound guided insertion | ^ | ^ |
| Tip location: SVC (ref. SVC/RA junction) | 2.61 (1.17-5.82) | **0.024** |
| Vein size (one mm larger) | 0.81 (0.44-1.50) | 0.495 |
| Catheter size: 4fr (ref. 3fr) | 0.71 (0.24-2.08) | 0.520 |
| Treatment: Intermittent bolus medication | 2.44 (0.56-10.6) | 0.180 |
| Treatment: continuous antibiotic infusion | 0.38 (0.14-1.04) | **0.042** |
| Treatment: continuous infusion | 0.17 (0.04-0.80) | **0.007** |
| Treatment: intermittent infusion | 0.35 (0.12-1.06) | **0.046** |
| Insertion on dominant side | 0.50 (0.14-1.80) | 0.262 |
| Respiratory infection at baseline | 1.62 (0.69-3.81) | 0.273 |
| *HR = hazard ratio, including 95% confidence intervals; a likelihood ratio chi-square test to determine if the overall model is statistically significant; ^ cannot be calculated; fr = French catheter scale; SVC = superior vena cava; RA = right atrium; µl = microliter;* ***bold*** *= statistically significant at p<0.05;* | | |