### Supplementary Table 1 In-hospital and long-term mortalities in patients with type A AAD onset in different seasons (months)

|                | Winter N=129 | Spring N=147 | Summer N=92 | Autumn N=124 | P value |
|----------------|--------------|--------------|--------------|--------------|---------|
|                | Dec N=46     | Jan N=35     | Feb N=48     | Mar N=48     | Apr N=53 | May N=46 | Jun N=32 | Jul N=19 | Aug N=41 | Sep N=33 | Oct N=39 | Nov N=52 |
| In-hospital mortality (month, %) | 10.9 2.9 16.7 | 2.1 7.5 8.7 | 9.4 10.5 7.3 | 12.1 30.8 25.0 | <0.01 |
| In-hospital mortality (season, %) | 10.9 | 6.1 | 8.7 | 23.4 | <0.01 |
| Long-term mortality (month, %) | 4.9 5.9 2.5 | 6.4 4.1 11.9 | 10.3 5.9 5.3 | 3.4 3.7 5.1 | 0.89 |
| Long-term mortality (season, %) | 4.3 | 7.2 | 7.1 | 4.2 | 0.63 |

AAD= acute aortic dissection