**Supplementary Table S1.** Extended Standard-of-Care Diagnostics

|  |  |
| --- | --- |
| **Parameter** | **Patients** |
| **Blood Tests** |  |
| Complete Blood Count | All |
| CRP | All |
| PCT | All |
| Clinical Chemistry | All |
| Blood-gas Analysis | All |
|  |  |
| **Microbiology** |  |
| 2x Blood Cultures | All |
| Urine Culture | All |
| Pneumococcal and *L. pneumophila* urinary antigen testing | All |
| Nasopharyngeal Multiplex PCR swab\* | All |
|  |  |
| **Radiology** |  |
| Chest X-ray or CT | Only with clinical indication |

\*PCR on nasopharyngeal swab to detect 22 common respiratory viruses and 3 atypical pneumonia bacterial pathogens using the multiplex set NxTAG® RPP IUO (Luminex Inc., Austin, Texas)

**Sample Processing and result readout**

For each patient, 2.5 mL of whole blood was collected in a PAXgene Blood RNA tube, processed according to the manufacturers´ recommendations and stored at -80°C within two hours until transfer to Inflammatix. Gene expression measurements for the IMX-BVN-2 29-mRNA signature were generated as previously described (16), blinded to patient outcomes. Briefly, RNA was extracted from PAXgene Blood RNA samples on the QiaCube® Connect instrument using RNeasy® Plus Micro Kit (QIAGEN, Hilden, Germany). Next, using 150 ng of isolated RNA, the 29 target mRNAs and four housekeeping genes for normalization (CDIPT, KPNA6, RREB1, YWHAB) were quantitated using the reference technology NanoString nCounter® SPRINT profiler.