

**P0148 Evaluation of Wako beta-glucan test performance in diagnosing invasive fungal infections**

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**Background:** Nowadays the beta-D-glucan (BDG) assay is widely used worldwide as biomarker for diagnosing invasive fungal infections and it has gained a pivotal role especially for ruling out invasive candidiasis and in guiding decisions to antifungal agent de-escalation in high risk patients. Very recently, the Wako  $\beta$ -glucan test (GT) was launched in Europe. We conducted a comparative analysis of the Wako  $\beta$ -Glucan Test and the Fungitell Assay in serum samples from 328 patients.

**Materials/methods:** To evaluate the performance of Wako GT test, serum samples with suspected candidosis, aspergillosis, pneumocystosis and belonging to the negative control group, were tested using Fungitell and Wako BDG test in the same day, accordingly to the protocol supplied by the manufacturers. The data obtained from the colorimetric or turbidimetric assays were analysed at first using cut-off values of BDG test Fungitell and Wako at 80 pg/mL and 11 pg/ml respectively and afterwards a cut-off value of 7 pg/ml was used for Wako GT evaluation.

**Results:** Sera collected from the 328 patients included in the study were divided into four groups including candidiasis, aspergillosis, pneumocystosis and negative controls, according to the clinical and microbiological data. Sensitivity for Fungitell and Wako GT test were 98.8% and 91.5% for candidiasis, 88.1% and 71.4% for aspergillosis, 100% for pneumocystosis, respectively. By lowering cut-off values of Wako GT at 7 pg/ml we observed an improvement of sensitivity at 97.6% and 83.8% for candidiasis and aspergillosis, respectively.

**Conclusions:** The Wako  $\beta$ -glucan test when analyzed lowering cut-off values for positivity at 7 pg/ml, shows a good performance as biomarker for candidiasis with a sensitivity comparable to the Fungitell assay. Moreover, due to its easy setup, the Wako GT could be indicated even in laboratories with a reduced routine workflow.