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Poster Session VI
Molecular diagnosis and epidemiology of staphylococcal infections

DETECTION OF METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS AND STAPHYLOCOCCUS AUREUS FROM NASAL SPECIMENS OF PATIENTS FROM HVIDOVRE DENMARK AND REGENSBURG GERMANY WITH THE COBAS® MRSA/SA TEST

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Objectives: *Staphylococcus aureus* (SA) and methicillin-resistant SA (MRSA) strains are major sources of hospital-associated infections, imposing a tremendous financial burden for healthcare systems. Molecular detection provides rapid turn-around time which is important for successful screening and treatment strategies. The objective of this study was to evaluate performance characteristics of the newly developed **cobas®** MRSA/SA Test using prospectively collected nasal swab specimens representative of typical screened patients from Hvidovre and Regensburg.

Methods: 379 patients suspected of colonization with MRSA or candidates for preoperative SA screening were selected for participation in the study. Nasal swab specimens were collected with a FLOQ swab into MSwab media vials for MRSA and SA culture and PCR. Swabs were removed prior to loading directly on the automated **cobas®** 4800 system for processing, PCR setup, amplification and detection. Patients were also sampled with an Xpert® SA Nasal Complete collection kit and evaluated by the Xpert® SA Nasal Complete Test, a comparator molecular method.

Results: The MRSA culture positive rate was 4.2% and for SA 33.2%. The **cobas®** MRSA/SA Test displayed a sensitivity and specificity of 94% and 95% respectively, for detection of MRSA when compared to direct culture, where the Xpert® SA Nasal Complete Test was 88% and 96%. Detection of SA with the **cobas®** MRSA/SA Test displayed a sensitivity and specificity of 96% and 89% compared to direct culture, where the Xpert® SA Nasal Complete Test was 97% and 88%.

Conclusion: The cobas® MRSA/SA Test, run on the fully automated cobas® 4800 system, displayed excellent performance when compared with direct culture for MRSA/SA, and a comparator molecular method.