Introduction:
Despite of preventive measures, the incidence of deep venous thrombosis (DVT) in ICU patients is estimated to range from 5-31%. While clinical diagnostics is unreliable, ultrasound compression test (UCT) has proven to be a highly sensitive and specific modality for the recognition of lower extremity DVT [1]. Delegating this competence to ICU nurses can increase UCT availability and enable preventive DVT screening. Therefore, we decided to conduct a clinical study to evaluate the sensitivity and specificity of UCT performed by general ICU nurse in ICU patients compared to an investigation by ICU physician certified in ultrasound.

Methods:
Prior to the study, each nurse participating in the study completed one-hour training in UCT and examined 5 patients under supervision. Then, ICU patients without known DVT underwent UCT in the femoral and popliteal region of both lower extremities performed by trained general ICU nurse. On the same day, the examination was repeated by an ICU physician. The results of the examinations of each patient were blinded to each other for both investigators until both tests were performed. In case of a positive test, the nurse immediately reported the result to the ICU physician. The sensitivity and specificity of the test performed by general nurse was calculated in comparison with the examination by a specialist.

Results:
A total of 80 patients were examined. Both lower extremities were examined in all patients. The prevalence of DVT of 11.25% has been found. The overall sensitivity of the examination performed by general nurse was 90.0%, the specificity 100% with negative predictive value of 98.61%, positive predictive value of 100% and accuracy of 98.77%.

Conclusion:
The results of our study have shown that general ICU nurses are able to perform bedside screening of DVT by compression ultrasound test with a high degree of reliability after a brief training.

References: