Objective
To evaluate the correlation between urine protein/creatinine ratio (UPCR) and 24-hour urine collection and to calculate the predictive accuracy of different cut-offs of UPCR for the diagnosis of proteinuria.

Methods
This is a retrospective cohort study of women, admitted for suspected pre-eclampsia (PET) in a single medical center and had a proteinuria assessment by both 24-hour urine collection and UPCR from 2011 to 2016. Women with known renal disease, pre-pregnancy proteinuria>300mg/24h or chronic hypertension were excluded.

Results
Overall, 528 women were evaluated and 458 (86%) met inclusion criteria. Mean maternal age was 32.9±5.8 years, pre-pregnancy BMI was 23.9±5.2 kg/m2, gestational age at evaluation was 34.0±3.4 weeks and the rate of Nulliparity was 65.5%. Median UPCR was 0.5 (0.2-1.0) and 68.8% of women had protein collection ≥300mg/24h. The accuracy of UPCR in predicting different levels of proteinuria using 24-hour urine collection was relatively high, as reflected by the area under the ROC curve (0.895-0.955, p<0.001). Using fixed UPCR cutoff of 0.3 and other outcome-specific cutoffs according to the area under the ROC curve, predictive accuracy parameters of UPCR for the detection of proteinuria (either >300mg or >5000mg) in 24h urine collection were calculated. UPCR had a sensitivity of 79.0-91.4%, specificity of 59.4-90.6%, PPV of 82.7-95.5% and NPV of 63.0-73.0% for the detection of proteinuria >300mg/24h depending on the outcome-specific cutoff used. 5. The predictive accuracy was unaffected by gestational age at examination (<34 vs. ≥34 weeks).

Conclusion
UPCR is strongly correlated with proteinuria levels obtained by 24-hour urine collection. This correlation is not affected by gestational age at examination.