Introduction:
Drug abuse is associated with immunosuppression in multiple mechanisms. Despite that, the only study retrospectively reviewing drug abusers in the ICU demonstrated less infections and better outcomes. We compared matched patient populations in order to fully understand whether drug abuse is a risk factor for infection and a predictor of poorer prognosis as is perceived by most physicians. We hypothesized that the drug abusers admitted to the ICU will fare as good as or better than non-abuser ICU patient populations.

Methods:
This is a Prospective study done between the years 2010-2012 on the entire patient population of the Detroit Medical Center. After the drug abuse population was identified, controls were matched according to age and admission ICU units. Patients charts were reviewed and data regarding baseline demographics, infectious complication and outcome was extracted.

Results:
Data was retrospectively collected for 323 drug abusers and 305 matched controls. Comorbidities and hospital admission diagnosis were significantly different between the two groups. Disease severity scores were significantly higher in the drug abuser’s patient group (DAPG) on admission and during the ICU stay. DAPG had significantly more organ failure: more need for ventilation (30.5% vs 46.4% in the DAPG (p<0.001)), more ARDS (1% vs 3.7%, p=0.03), more renal failure (33% vs 45.5%, p=0.002) and more need for renal replacement therapy (6.6% vs 11.2%, p<0.05). They had longer hospital length of stay (LOS). There was no difference in ICU or hospital mortality. Multivariable modeling did not find drug abuse to be an independent risk factor for hospital mortality, ICU mortality (Hosp: OR = 1.37, P = 0.3397; ICU: OR=1.43, PP = 0.07), but was a risk factor for a longer hospital LOS (ME=1.46, P < 0.0001).

Conclusion:
Drug abuse is not an independent risk factor for mortality or ICU LOS. Drug abusers should be evaluated like other patients based on baseline comorbidities and disease severity.