Introduction:
Step Down Units (SDUs) provide an intermediate level of care between the ICU and the general medical-surgical wards. The Critically ill patients who are in recovery after long-term intensive care or who require monitoring after acute abdominal surgery are admitted to SDUs. Delirium in critically ill patient is common and leads to poor clinical outcomes. It is, however, preventable if its risk factors are identified and modified accordingly.

Methods:
To determine risk factors associated with delirium in critically ill patients to admitted surgical SDU at Asan Medical Center. This is retrospective study conducted on critically ill patients who were admitted to the SDU from September 2018 to April 2019 and able to express themselves verbally. Delirium status was determined using the Short-CAM tool. Data were analyzed by SPSS 13.0 software, using t-test, Fisher’s exact test and logistic regression.

Results:
The incidence of delirium was 32.1%(25 of 78 patients) and hypoactive delirium(12case, 48.0%) was the most commonly assessed, followed by hyperactive delirium(9case, 36.0%), mixed type(4case, 5.1%). Risk factors associated with developing delirium identified from univariate analysis were age(P=0.048), admission via ICU(P=0.041), tracheostomy(P=0.037), chronic heart failure (CHF) (P=0.017), invasive hemodynamic monitoring(P=0.041), heart rate(P=0.037).
After adjusted in multivariate analysis; factors those remained statistically significant were old age (RR 1.16, 95% Confidence Interval [CI]=1.07-1.25, P=0.041), having a tracheostomy (RR 2.99, 95% CI=1.48-2.08, P=0.028), CHF (RR 4.01, 95% CI=1.98-5.23, P<0.001), and chronic renal failure (RR 4.45, 95% CI=1.12-3.23, P<0.001). Those were significant risk factors of delirium in SDU

Conclusion:
We identified risk factors consistently associated with incidence of delirium following admitted to surgical SDU. These factors help to focus on patients at risk of developing delirium, and to develop preventive interventions that are suitable for those patients.