**2018 ATC Abstract Submission**

**Title:** Validation of Edmonton Symptom Assessment Survey in Kidney Transplant Recipients (KTR)

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**Background:** Patient-reported outcomes provide important information about symptom and illness experience of patients with chronic medical conditions. The Edmonton Symptom Assessment System (ESAS) is a reliable and valid tool for symptom evaluation in dialysis patients. In this studyweevaluate the validity of the ESAS to assess symptom burden among KTR.

**Methods:** A convenience sample of adult KTR who were 90+ days post-transplant was recruited. The ESAS and a set of legacy questionnaires [Kidney Disease Quality of Life-36 (KDQOL-36), Patient Health Questionnaire (PHQ-9), Generalized Anxiety Disorder 7-Item Scale (GAD-7)] was completed during clinic visit. Individual ESAS symptom scores were combined into a physical score (pain, tiredness, drowsiness, nausea, lack of appetite, shortness of breath) and emotional score (depression, anxiety). Internal consistency and convergent validity was evaluated for ESAS physical, emotional and global scores. ESAS global scores were compared between patients with low vs high hemoglobin (<120 g/dL vs >133 g/dL) and with high vs low eGFR (<44 mL/min/1.73m2 vs >67 mL/min/1.73m2).

**Results:** A total of 157 kidney transplant patients were enrolled [mean(±SD) age 50(±16) years, 89(57%) males]. Mean(±SD) hemoglobin and eGFR levels were 126(±16) g/L and 59(±24) mL/min/1.73m2, respectively. The physical, emotional and global scores of the ESAS demonstrated good internal consistency (α =0.83, 0.84 and 0.87, respectively). The overall ESAS distress score was strongly correlated with the KDQOL-36 overall symptom score (*rs* = -0.64). The ESAS emotional score was moderately correlated with the SF-12 mental health composite score (*rs* = -0.58) and the ESAS physical score was strongly correlated with KDQOL physical functioning score (*rs* = -0.61). ESAS anxiety was strongly correlated with GAD-7 (*rs* = 0.65) and ESAS depression was moderately correlated with PHQ-9 (*rs* = 0.56). The ESAS global score was significantly higher in patients with low versus high hemoglobin [12(IQR 4-23) vs 4(IQR 0-15.5), p<0.05]. No significant difference was detected between symptom scores of patients with low versus high eGFR levels.

**Conclusions:** This study demonstrates that ESAS is a valid and reliable screening tool for physical and psychological symptoms in KTR. Further work is needed to determine the impact of symptom burden on outcomes.