MP36-05
A NOVEL METHOD OF CD31 COMBINED ABO CARBOHYDRATE ANTIGEN MICROARRAY PREDICTS ACUTE ANTIBODY MEDIATED REJECTION IN ABO-INCOMPATIBLE KIDNEY TRANSPLANTATION
Masayuki Tasaki*, Niigata, Japan; Hirosi Tateno, Takashi Sato, Azusa Tomioka, Hirokatsu Kaji, Hitoshi Narimatsu, Tsukuba, Japan; Kazuhide Saito Salt, Toshinari Aoki, Masami Kamimura, Takashi Ushki, Yutaka Yoshihida, Niigata, Japan; Kota Takahashi, Tokyo, Japan; Yoshihiko Tohita, Niigata, Japan

INTRODUCTION AND OBJECTIVE: Isohemagglutinin assays employing red blood cells (RBCs) are the most common assays used to measure antibody titer in ABO-incompatible kidney transplantation (ABOi KTx). However, ABO blood group antigens expressed on RBCs are not identical to those of the kidney due to different proteins linked to ABO carbohydrate antigens. Antibody titers measured by isohemagglutinin assays do not always correlate with clinical outcome and a new method is necessary to precisely predict acute antibody mediated rejection (ABMR) following ABOi KTx.

METHODS: We previously reported that CD31 was the most abundant protein linked to ABO carbohydrate antigens on kidney endothelial cells, and developed a new method to measure antibody titer using a microarray of recombinant CD31 (rCD31) linked to ABO carbohydrate antigens (CD31-ABO microarray. Figure 1). To confirm clinical use, a total of 252 plasma samples including volunteers, hemodialysis patients and transplant recipients were examined by both of CD31-ABO microarray and isohemagglutinin assays.

RESULTS: Mass spectrometry analysis suggested that rCD31 and native CD31 had similar ABO glycan, meaning CD31-ABO microarray will contribute to precisely predicting ABMR following ABOi KTx.

Source of Funding: This study was supported by JSPS KAKENHI Grant Number 17K11195

MP36-06
CHARACTERISTICS AND OUTCOMES OF DE NOVO PROSTATE CANCER IN THE SOLID ORGAN TRANSPLANT POPULATION AT THE UNIVERSITY OF MINNESOTA
Brent Cleveland*, Andrew Gardeck, Matthew Holten, Scott Jackson, Timothy Pruett, Christopher Warlick, Minneapolis, MN

INTRODUCTION AND OBJECTIVE: Prior research suggests genitourinary malignancies occur at a higher incidence in solid organ transplant (SOT) population compared to the general population but the incidence of prostate cancer is not increased. Most studies examining prostate cancer in the transplant population consist of small cohorts and are limited to renal transplant recipients. We aim to expand our knowledge of the characteristics and outcomes of de novo prostate cancer diagnosed in a large single-center SOT cohort.

METHODS: The University of Minnesota SOT database was queried for recipients who subsequently developed prostate cancer diagnosed in a large single-center SOT cohort.

RESULTS: Approximately 10,888 SOTs were performed during this timeframe. Of these, 139 had diagnosis code of prostate malignancy, of which 71 had confirmed diagnosis and available records. These men were predominantly Caucasian (94.4%) with a mean age at first transplant of 54.4 (±10.3) years and mean age at cancer diagnosis of 64.5 (±7.2) years. The most common transplant types were kidney (43.7%), heart (28.2%), and liver (14.1%). Median PSA at diagnosis was 7.2 ng/mL (range 1.1–91.3). Grade group 1 disease (32.4%) was most common at initial diagnosis, followed by groups 2 (23.9%) and 5 (14.1%). The distribution of initial treatments were: prostatectomy (38%), hormonal therapy (22.5%), surveillance (14.1%), radiation (8.5%), brachytherapy (4.2%), and cryotherapy (4.2%). At last known follow up, 25 patients had died (35.2%) with mean age of death of 72.4 (±7.1) years, mean time from transplant to death of 12.5 (±6.5) years, and mean overall survival after initial cancer diagnosis of 11.0 (±23.1) years.

Source of Funding: OneLegacy Foundation