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Disparate outcomes among Latino and non-Hispanic White (NHW) patients with metastatic clear cell renal cell carcinoma (mccRCC).

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Background: Some studies have demonstrated that Latino patients (pts) with mccRCC have worse clinical outcomes than NHW pts. It is unclear if this disparity is related to biological differences and/or social determinants of health (SDOH). Herein, we investigate clinical-genomic features and outcomes among Latinos and NHW pts with ccRCC. **Methods:** Pts with mccRCC treated at UCSD were retrospectively identified from an institutional database. Pts with genomic sequencing on tumor tissue samples were included. Pts were categorized as Latino or NHW based on self-identification. Logistic regression was applied for the presence of divergent frequencies of somatic mutations. Cox regression models evaluated the effect of additional factors, including tumor genomic alterations and clinical features, on overall survival (OS). **Results:** The analysis included 135 pts with mccRCC, of whom 62 were Latinos. There were no significant differences in age at diagnosis (61 vs 62 years), BMI (28 in both), sex (76% vs 71% males), presence of sarcomatoid/rhabdoid features (38% vs 30%), and number of metastatic sites (71% vs 68% with >1 site). Compared to NHW, Latino pts had higher rates of IMDC intermediate/poor risk disease (85% vs 59%, p<0.01) and synchronous metastatic disease (60% vs 41%, p=0.04). Latino pts were also more likely to have public health insurance (42% vs 8%, p <0.01), and reside in areas with higher deprivation indexes (43% vs 20%, p<0.01). *BAP1* (26% vs 10%, p=0.02) and *ATM*mutations (10% vs 0%, p <0.01) were more common in Latino pts, whereas *SETD2* (32% vs 8%, p <0.01) and *TERT* alterations (19% vs 6%, p=0.04) were more prevalent among NHWs. *VHL*(84% vs 78%), *PBRM1* (27% vs 36%) and *TP53* (10% vs 14%) mutation rates were comparable between Latino and NHW pts. The use of first-line immune checkpoint inhibitor (ICI) based combination therapy was similar between groups (47% in both). In those receiving first-line ICI-based therapy, 2-year OS was shorter among Latino pts compared to NHW pts (HR 4.05, p=0.04). Similarly, Latino pts had a significantly reduced 2-year OS when treated with first-line tyrosine kinase inhibitor (TKI) monotherapy compared to NHW pts (HR 9.25, p=0.03). On multivariable analysis, there was a significant difference in OS between Latino and NHWs (HR 2.7, 95%CI 1.18-6.36, p=0.02) after adjusting for age, nephrectomy status, IMDC risk group, sarcomatoid features, synchronous disease, sites of metastasis, and *BAP1*, *PBRM1*, *SETD2*, *TP53*, *TERT,* and *KDM5C* mutations. **Conclusions:** Our study demonstrates that, within our local healthcare system, Latino pts with mccRCC present with different clinical-genomic features and worse survival outcomes. These findings underscore the complex interplay between tumor biology and SDOH. Our study emphasizes the unmet need to promote diversity in future research as well as understand and bridge disparities gaps across varied ethnicities with RCC. Research Sponsor: None.