Characterizing infiltrating monocytes in anti-PD-1/CTLA-4 immunotherapy resistant NSCLC tumors
Karina Flores1, B. Leticia Rodriguez2, Jessica M. Konen2, Limo Chen2, Don L. Gibbons2
1Partnership: Careers in Cancer Science and Medicine, The University of Texas MD Anderson Cancer Center, Houston, TX 77030.
2Department of Thoracic/Head and Neck Medical Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX 77030.
Contact info: KFlores1@mdanderson.org, BLRodriguez@mdanderson.org

Introduction
Lung cancer is the leading cause of cancer-related mortality in the world because of its propensity to metastasize and its late-stage diagnosis. Small-cell and non-small-cell lung cancer (NSCLC) represent over 80% of lung cancer cases. NSCLC treatment options include chemotherapy, radiation therapy, hormone therapy, biological therapy, and immunotherapy. Instead of targeting the tumor cells, immunotherapy directly targets a host’s immune system by mobilizing immune cells to recognize and eliminate tumor cells. Because of primary and acquired resistance to immunotherapy we investigated the potential immune cells that may be contributing to resistance.

Methods

Fig 6. Cluster analysis of murine bone marrow derived monocytes demonstrates variable expression patterning across clusters.

Results
Fig 4. Identification of gene markers associated with monocyte cluster 1.

Conclusions
Cluster analysis of THP-1 and U937 had varied expression. Due to the large variability in expression between genes, additional genes will need to be queried for further confirmation of cluster. Identification of the monocyte clusters will contribute to understanding how they are able to differentiate and how they are contributing to immunotherapy resistance.

References
1) BioRender.com