1163-92-833 **P. Charoentong** and **A. Konstorum*** (konstorum@uchc.edu). *Using tensor decomposition for multi-omics data in ovarian cancer.*

Tensor decomposition is an unsupervised learning method that can identify patterns in multi-dimensional data arrays. The CANDECOMP/PARAFAC (CP) decomposition factorizes a tensor into the sum of rank-1 tensors (components). We use a CP decomposition on a tensor representing multi-omics data from ovarian cancer tissue samples. Each face of the tensor corresponds to one omics experiment, such as gene expression or gene copy number variation, across all samples. The resulting component patterns identified correspond to known and novel patterns in the data, showing that tensor decomposition can serve as a useful tool to probe multi-omics datasets. (Received September 13, 2020)