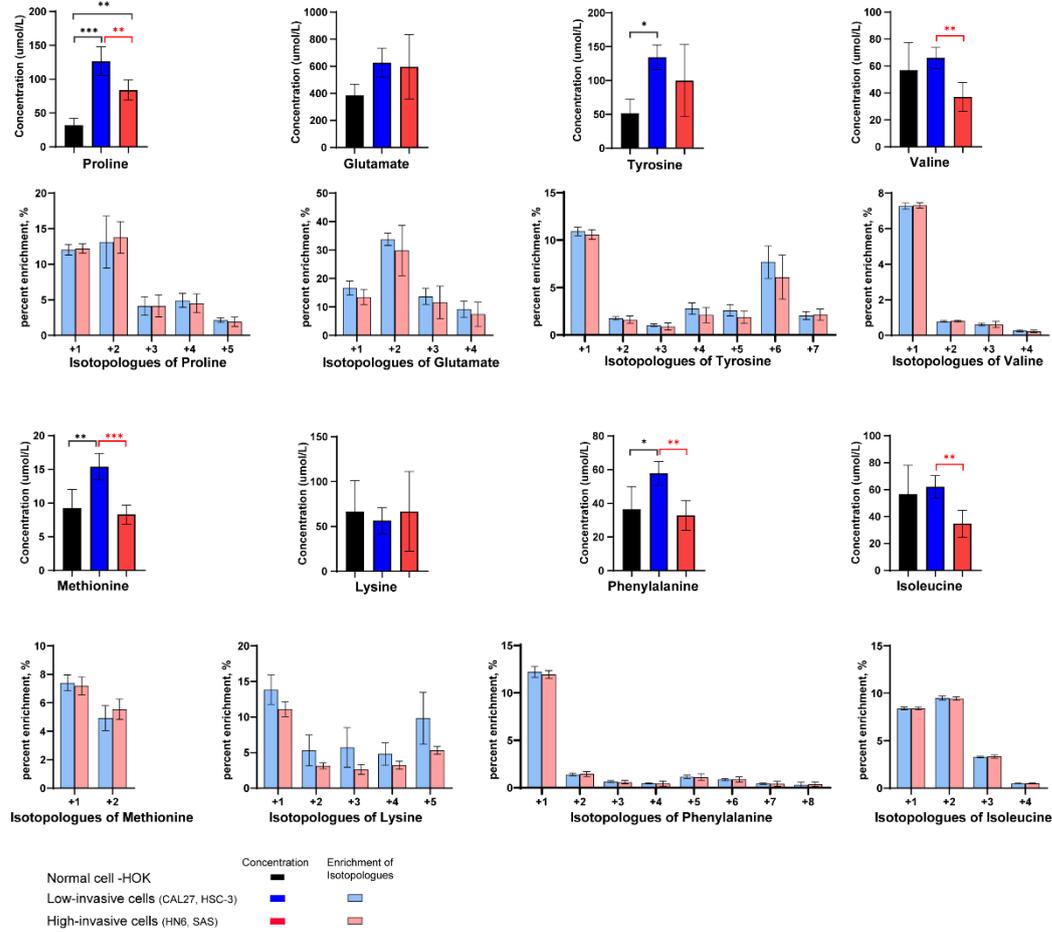


Supplementary Information



Supplementary Figure S1: The intracellular amino acids metabolic differences between high-invasive cells (HN6, SAS) and low-invasive cells (CAL27, HSC-3). Bar plots demonstrated absolute concentrations of amino acids. Black represents normal cell, blue represents low-invasive cells, red represents high-invasive cells. Pink and light blue bar plots showed the enrichment fractions of ^{13}C -amino acids from $[\text{U-}^{13}\text{C}_6]$ glucose.