Urea cycle; arginine- proline- metabolism Late vs Early N-acetylarginine -5-aminovalerate citrulline ornithine p.adj 0.01 N-acetylornithine 0.05 trans-4-hydroxyproline -0.10 0.50 arginine -Condition Early Late urea argininosuccinate proline · dimethylarginine (SDMA + ADMA) -Log2FC (TvN)