Overview of the strategies that can be used to inhibit glycolysis as a cancer therapy. This includes targets at the transcriptional level, targets of the metabolic process itself and its end-products including enzymes and transporters as well as Na+/H+ exchanger.

### The Warburg Effect Considerations
- Glycolysis + OXPHOS -> O2 dependant in normal cells
- Glycolysis to obtain energy even with O2 preferred in cancer cells leading to lactate production
- Up to 30x normal rate in cancer cell
- Lead to intratumoral acidification responsible for drug resistance while intracellular pH is alkaline
- Acidic microenvironment = increased metastatic potential + selective advantages over normal cell population

### Background
- Rate limiting steps offering the best strategies: HK, PFK, PK
- Glycolysis = energy + building blocks with intermediates shuttled toward other pathway providing also building blocks
- pH sensitive mechanism
- Transcription factors involved

### Conclusion
Inhibition of glycolysis gave promising results so far. Broad application and interesting outcomes in combination with chemotherapy and radiotherapy. Necessity to overcome challenges: selectivity, toxicity and potency. Nanomaterials with pH sensitive delivery system might be a solution. Considerations toward the possible activation of other pathways triggered by glycolysis inhibition.