



Walter+Eliza Hall

Institute of Medical Research

DISCOVERIES FOR HUMANITY

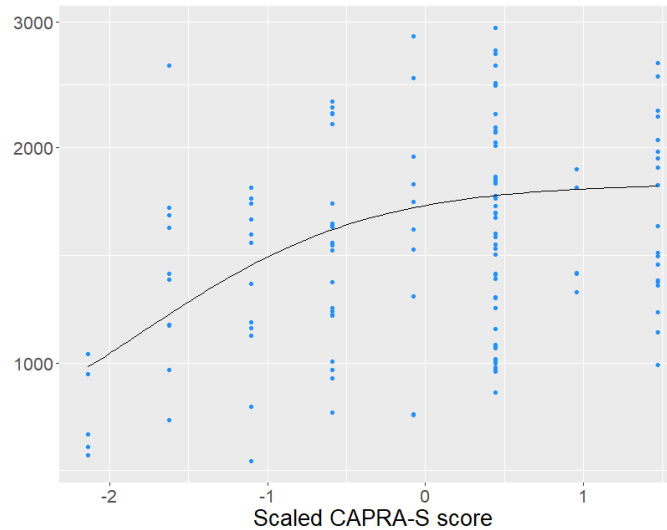
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Pseudo-temporal mapping of transcriptomics changes to prostate cancer disease progression

Read count vs CAPRA-S for C12orf49



Transcriptomic?



Transcriptome:



Gene Expression: How much gene product is being produced?



Transcription: Producing RNA from Genes



Quantified using RNAseq

Sudo-temporal changes?



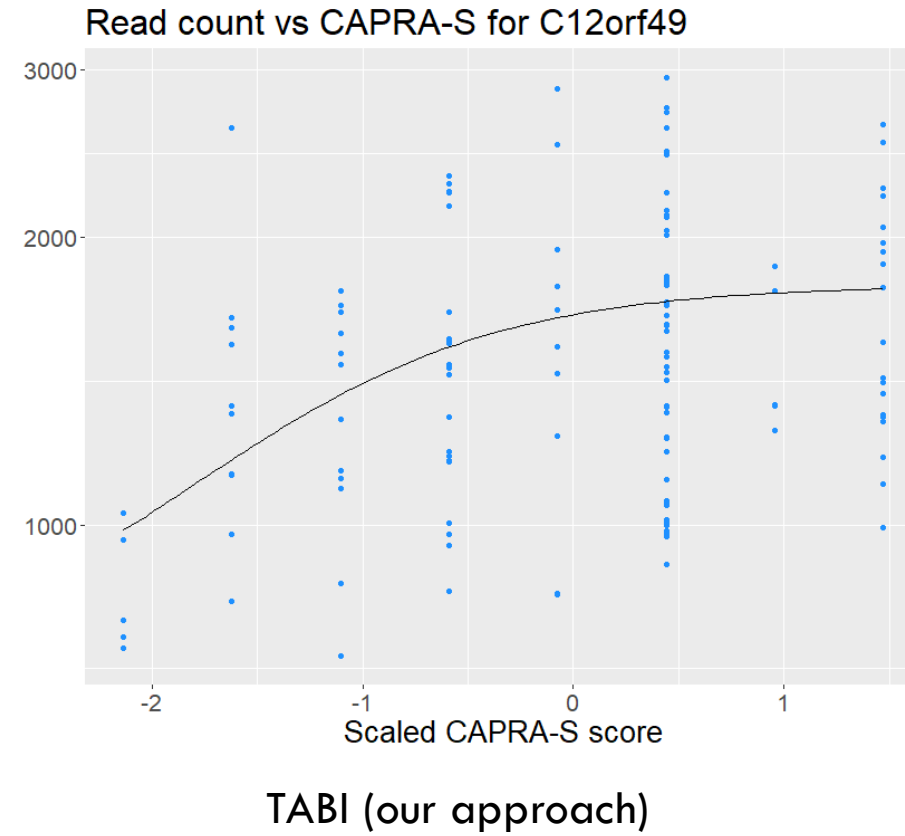
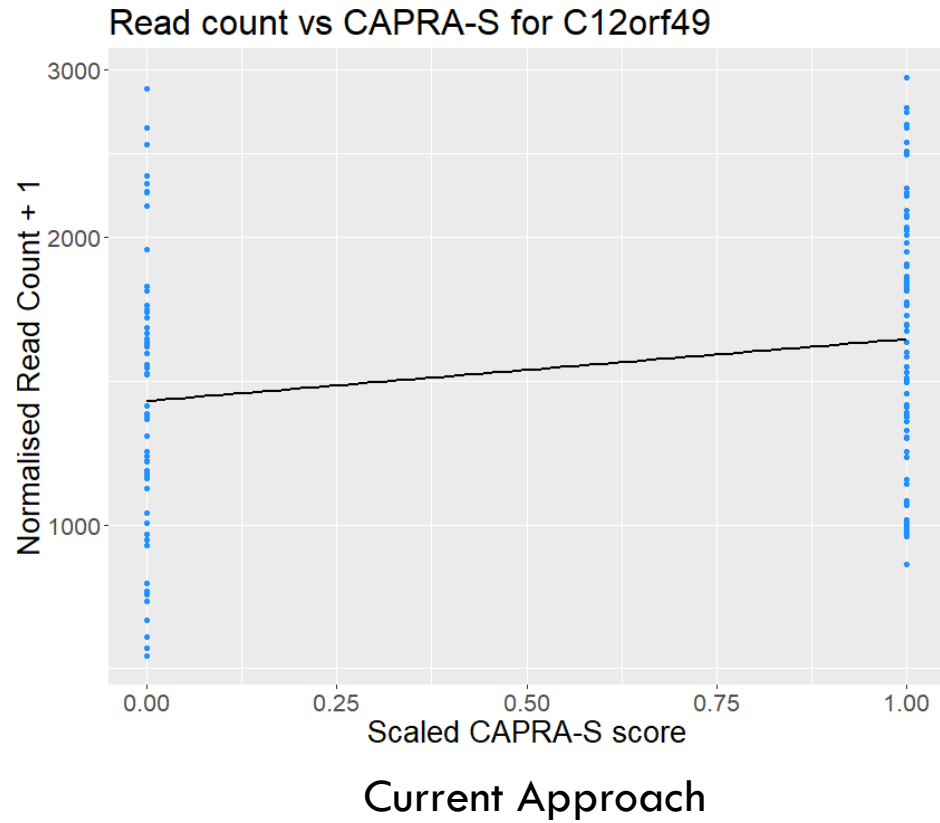
Which genes change expression?



When do these changes happen?

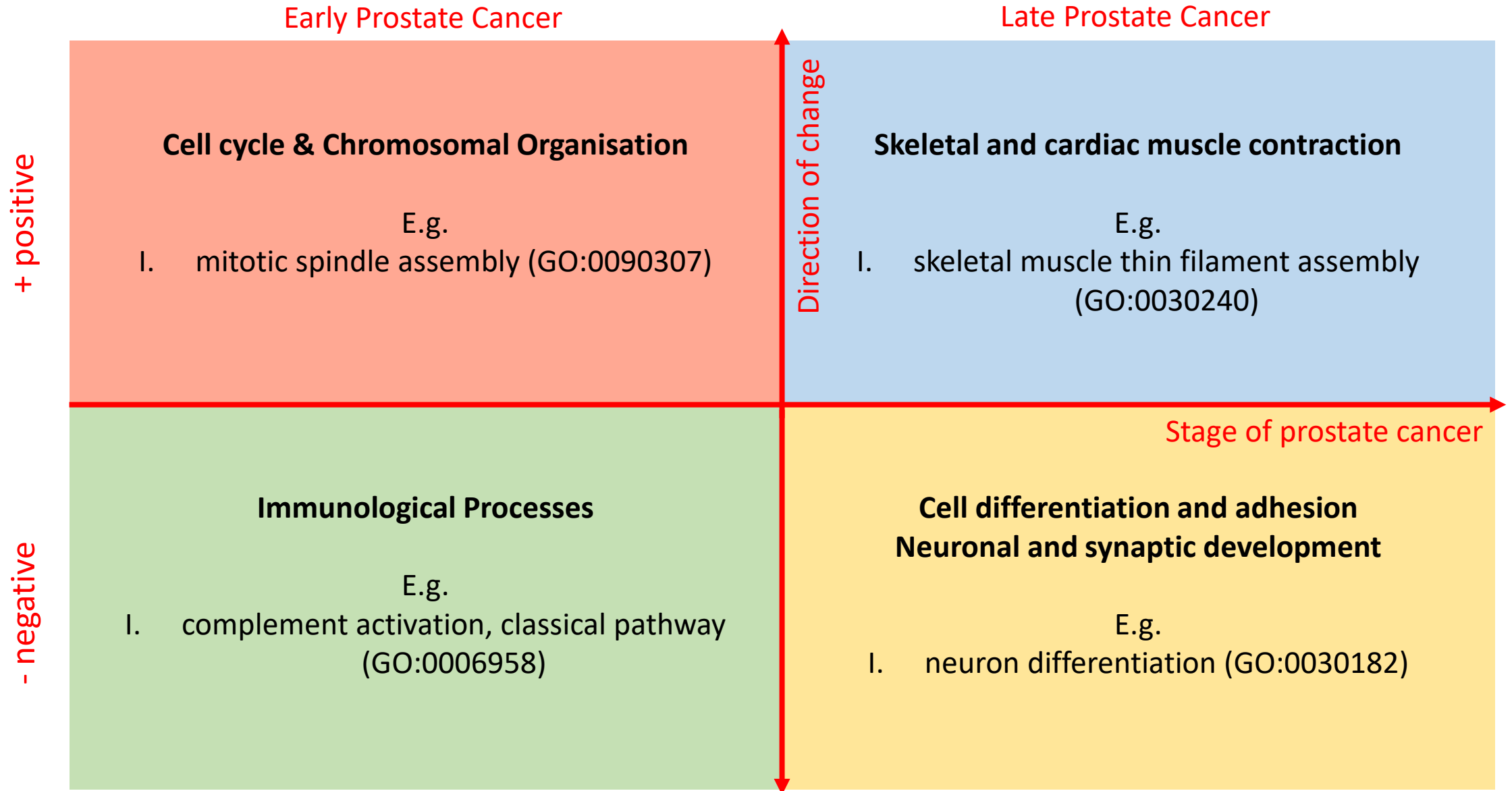


In progression of disease (prostate cancer CAPRA-S score)



How to find the when?

Results: Pattern of Gene Expression Changes



Biggest learning?



BAYESIAN STATISTICS

Conclusion:

- New approach to 'when' in gene expression
- Finding the 'what and 'when' can reveal interesting patterns and tell us a lot about disease progression

Next Steps:

- Simulating Datasets
- Expanding to different cancers / diseases

