Coalescent inference of HIV transmission history

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T-6: Theoretical Biology and Biophysics
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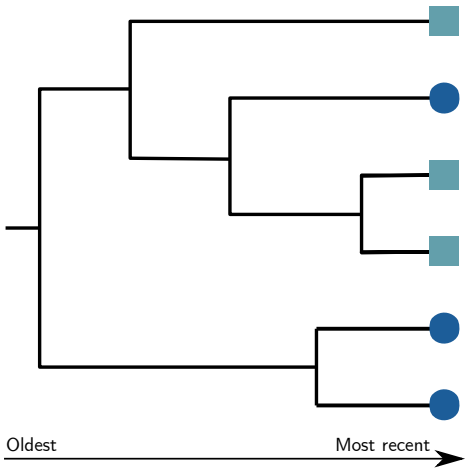
Why this project?

Wowie!

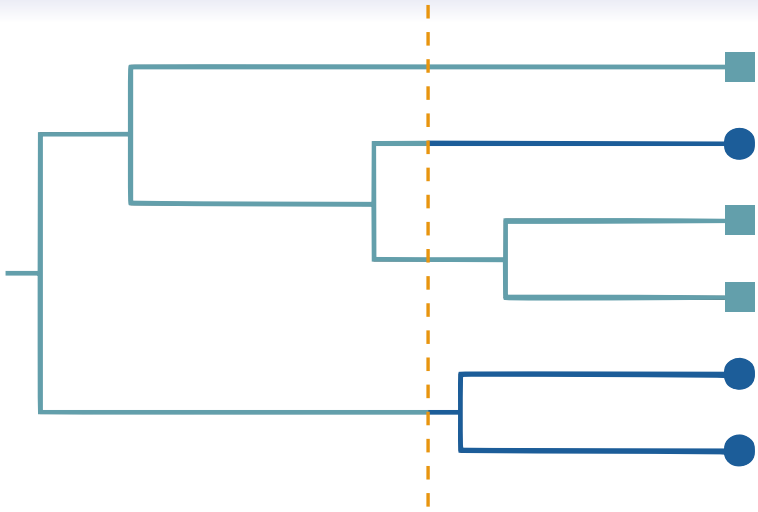
- Prevalence of HIV
- Supplementing existing tracing methods
  - Interviews
  - Contact tracing
- Finding signal in genome sequences

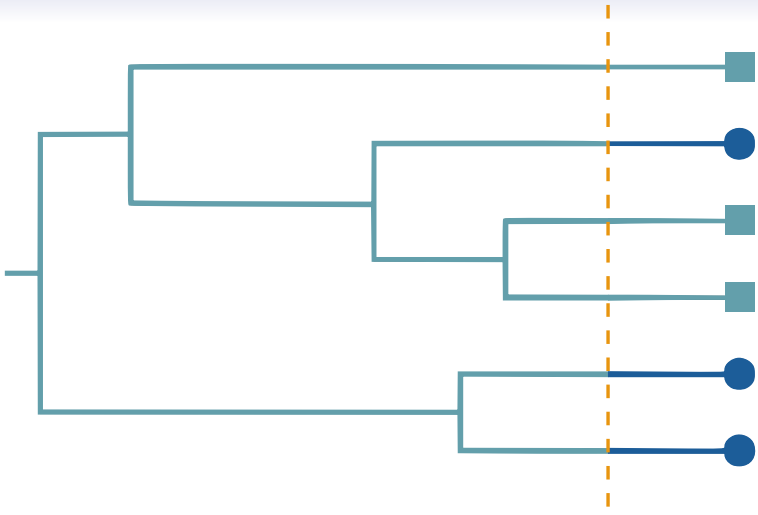
This text sure does exist...

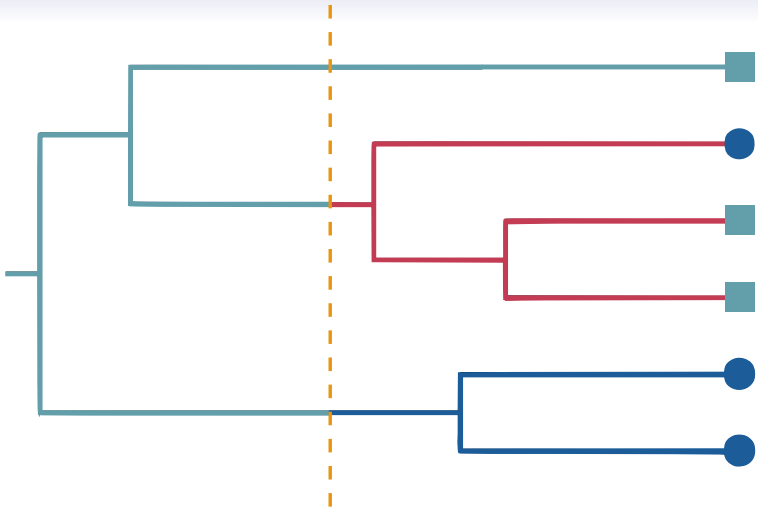
Inferring information from a tree



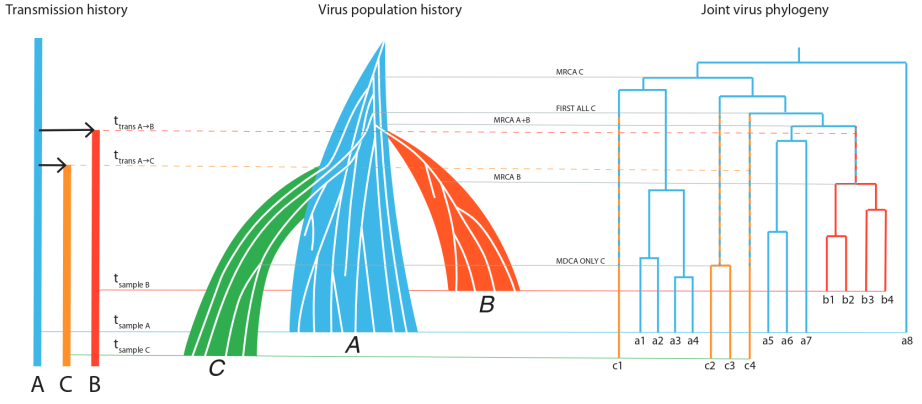
* Tips represent individual viral sequences
* Shows the evolutionary distance between individuals
* What can we infer about a single transmission time?





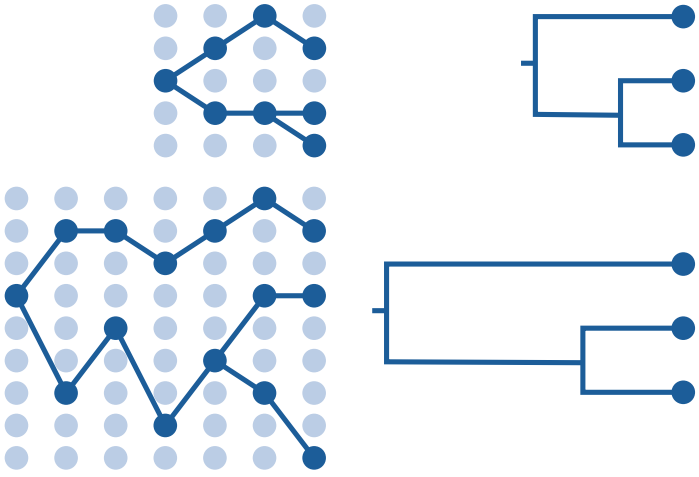


Linear population growth (IDK where this should go)



Coalescent modeling

Large N causes node times to be further apart, stretching the tree



Coalescent modeling

Main findings:

* First
* Second

Need a good example of text on here...

Predictions on a changing population

This is where I plan to put my stuff about expanding everything up to a linear model, and how it should allow us to make inferences based on how the times are changing.

Results

What I did...

Conclusion

Parting thoughts...